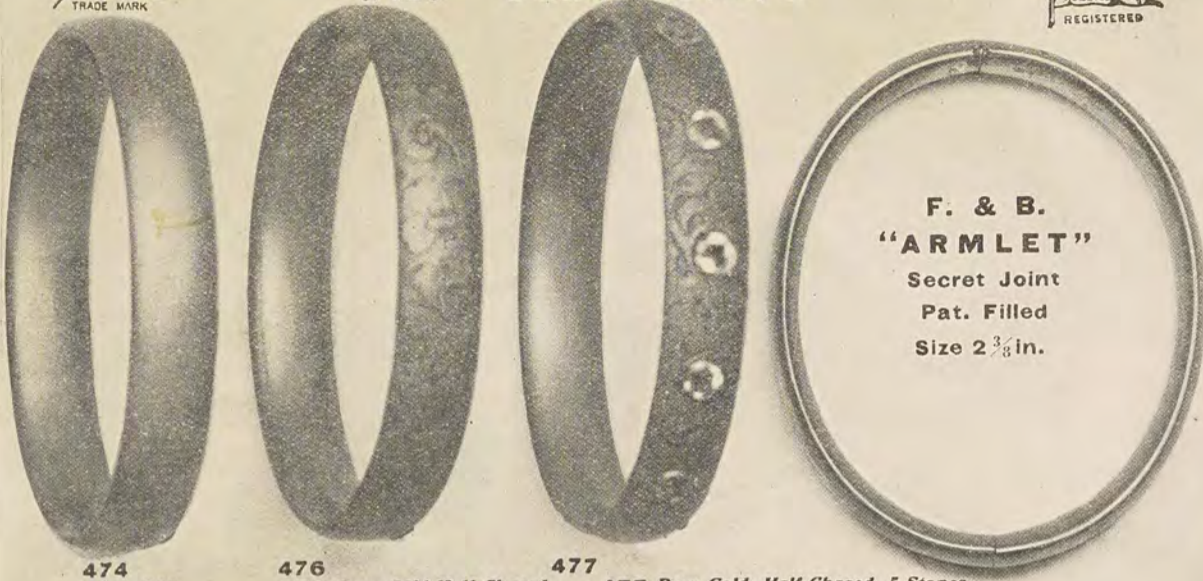


Established 1873



REGISTERED

The "ARMLET"



F. & B.
"ARMLET"
Secret Joint
Pat. Filled
Size 2 3/8 in.

- | | | |
|-----------|---------------------------|--------------------------------------|
| 474 | 476 | 477 |
| 474 POL. | 476 Rose Gold Half Chased | 477 Rose Gold, Half Chased, 5 Stones |
| 475 ROM. | 507 O. E. | 522 O. E. |
| 506 O. E. | 530 Rose Gold Full | 546 Rose Gold " " 6 Brillants |
| | 538 O. E. | |

Color of stones as ordered, Amethyst, Ruby, Sapphire, Olivene, Topaz, Aquamarine, Almondine, Turquoise and Rose Stones.
Bracelets made with secret joint and push catch. High-grade Seamless Gold-filled Stock. Each bracelet in fine leatherette covered box.



BRACELET 473 ROSE.
COLOR OF STONES AS ORDERED.

Amethyst, Ruby, Sapphire, Olivene, Topaz, Aquamarine and Turquoise.
Two of the above Bracelets snapped together, makes a nice dog collar 14 in. long.



Locket
2825
Rose



Pin
3632
Rose and Green
Brilliants



Pin
3647 Pearls
3648 Brilliants
3649 Turquoise



Pin
3629
Baroque Pearls
and Brilliants



Locket
2826
Rose



Hair Barrette
3660 Pearls
3659 Brills.



Cuff Pin
3624
Roman



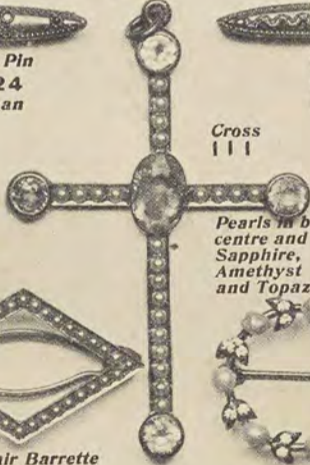
Cuff Pin
3622
Roman



Hair-Barrette
3652 Pearls
3651 Brills.



Hat Pin
710
Rose and Green
Polish Signet



Cross
111

Pearls in bars,
centre and ends.
Sapphire,
Amethyst
and Topaz



Hat Pin
705
Rose
Polish Signet



Links
751 Rose



Hair Barrette
3658 Pearls
3657 Brilliants



Pin
3603 Baroque Pearls
and Brilliants



Links
758 Green
757 Rose

These are only a few examples of our new goods; see our complete lines.

Theodore W. Foster & Bro. Co.

MANUFACTURING JEWELERS AND SILVERSMITHS,

100 Richmond Street, Providence, R. I.

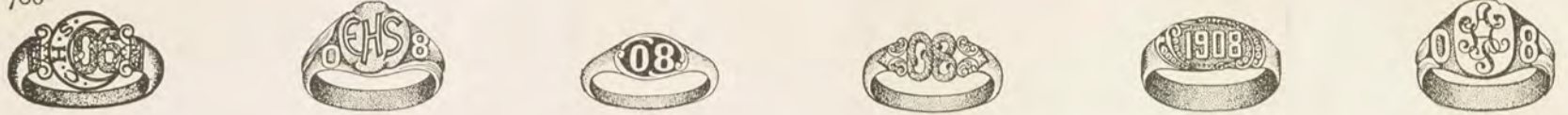
See our lines of goods
for articles suitable
for gifts

A full line of PHOTO.
FRAMES in both Sterling
Silver and 14 K. Gold Filled.
CROSSES, PENDANTS,
NECK CHAINS, LORG-
NETTE CHAINS, LOCK-
ETS, CHARMS, VEST,
DICKENS and FOB
CHAINS, BRACELETS,
PINS, BROOCHES, EAR-
RINGS, LINK BUTTONS,
SCARF PINS, HAT PINS,
BARRETTE PINS, WAIST
SETS, HAIR CHAIN
MOUNTINGS, DOG COL-
LARS and BELT BUCKLES.
RIBBON BOOK-MARKS
and a large variety of useful
Sterling Silver Novelties.

MANICURE and TOILET
SETS and pieces, also DESK
SETS, SEWING SETS,
TRAVELING SETS,
SHAVING SETS, SMOK-
ING SETS, FLASKS and
other goods suitable for gentle-
men's use.

Do not fail to order a few
of our new bracelets
"The Armlet"

May 1906



YOU
 CAN SECURE THAT
 CLASS PIN ORDER
 BY SHOWING
 OUR DESIGNS AND SAMPLES.
 WE ARE HEADQUARTERS.
 WRITE TO EITHER FACTORY.
 WENDELL & COMPANY,
 103-105 WILLIAM ST.
 NEW YORK.
 57 WASHINGTON ST.
 CHICAGO.

ANNIVERSARY

707

May 1st ushered us into our fifteenth year as **Jobbers of Watches and Chains.** The practice of our motto

“Right Goods
sold at
Right Prices
in
Right Ways”

has built us up from a small Watch Jobbing House, to one of the **largest users of watches and chains in this country.** In 1892 we **partially** covered Pennsylvania and Ohio, **now** we cover nearly every State East of the Mississippi River, having lately taken in the Southern States with headquarters at Atlanta, Ga.

We thank our many patrons for the many favors received from them in the past and want to assure you that we are going to continue the same business methods in the future and we solicit a continuance of your favors, for we realize that it is owing to **you** and **YOU** and **YOU** that we are what we are to-day.

Our Lines :
 WATCHES, CHAINS,
 RINGS, CLOCKS,
 Oneida Community Silver

The Non-Retailing Company
 Jobbers in Watches and Chains
 Lancaster, Pa.

Clement Combined Lathe Attachment

For Watchmakers
 (Patented)

Fitted to any lathe

Complete as shown

\$40.00
 strictly NET

New Catalog just out

Fully illustrated

Attachment sent on trial free

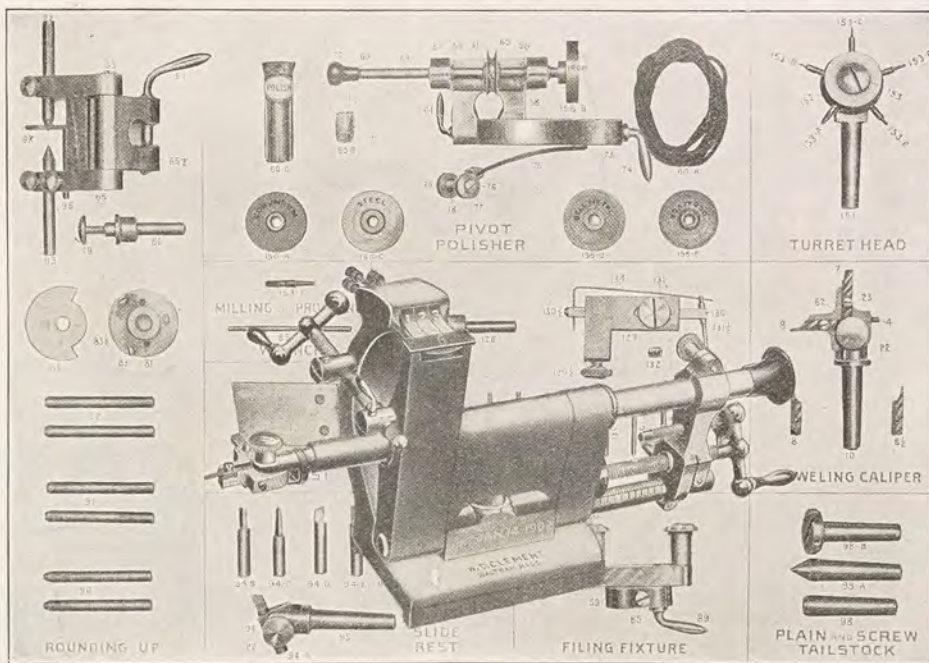
Replacing

- 1—Plain Tailstock
- 2—Screw Tailstock
- 3—Swing Rest
- 4—Slide Rest
- 5—Pivot Polisher
- 6—Filing Fixture
- 7—Rounding-up Tool
- 8—Milling Fixture
- 9—Rusty Pinion Polisher
- 10—Profiling Fixture
- 11—Turret Head
- 12—Table Rest

Does

- Turning
- Facing
- Recessing
- Shouldering
- Boring
- Reaming
- Milling
- Drilling
- Tapping
- Counterboring
- Sawing
- Filing
- Stoning
- Surfacing
- Jeweling
- Traverse grinding
- Polishing
- Snailing
- Damasking
- Rounding up
- Etc.

NEW CATALOG



Oh! that you might put in a day at our factory

You would buy this attachment as sure as you live

We know this from what all other visitors have done.

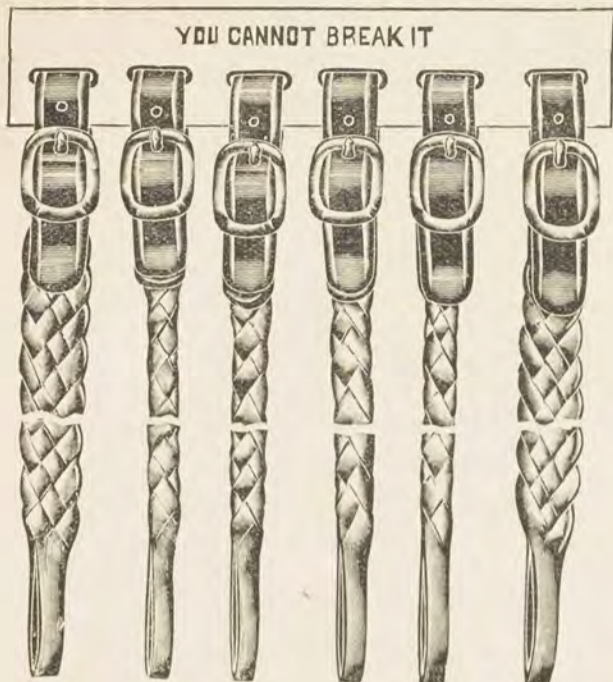
OF THE LAST 50 SENT ON TRIAL, NOT ONE HAS BEEN RETURNED

Have it on trial; at your own store; on your own lathe; there to decide

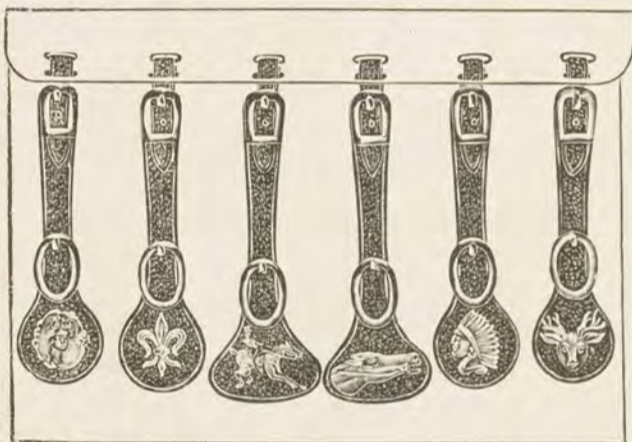
JOBBERs, remember your **SIGNED AGREEMENT** about not giving discount on our attachments.

WE SHALL BRING SUIT AGAINST YOU IF YOU BREAK IT.

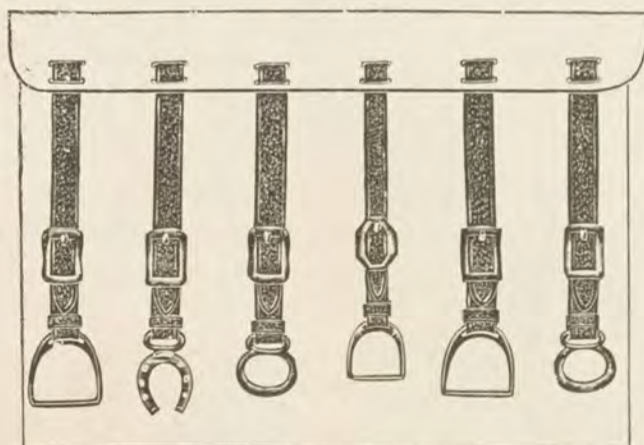
Note the recent decisions on this question in the courts.



E. & J. S. LEATHER VEST, No. 47
 Unbreakable and safe. One of the best selling 25-cent chains ever made.
 Price, \$2.00 per dozen



SEAL LEATHER FOB ASSORTMENT, No. 78
 Made of finest Black Seal Leather, with heavy Gun-Metal Buckles and Silver Ornaments. On neat easel display cards holding one-half dozen Fobs.
 Per dozen, \$4.50



SEAL LEATHER FOB ASSORTMENT, No. 74
 Heavy Black Seal Leather of fine grade, with Gun-Metal Buckles and Charms.
 One-half dozen on easel display card.
 Per dozen, \$2.00

YOUR TOOL, MATERIAL and OPTICAL ORDERS
 are solicited with every confidence that we can fill them to please you. Our ample stock and well-trained is force at your command. Give us a trial.

Springtime and Summer are the seasons when **Leather Chains** are in greatest demand. Do not overlook them because they make a petty sale, but supply your customer if he wants one and will have nothing else. It's good business not to let your trade go to a competitor even for a leather chain. We list below some desirable styles and assortments. In addition to these we have the staple styles in stock at lowest prices.



LEATHER FOB CHAIN, No. 186
 Made of fine Black and Brown Leather, assorted, with Nickel-Plated Charms.
 Price per dozen, 88 cents



LEATHER FOB No. 187
 Black and Brown Leather, assorted, with Nickel-Plated Charms.
 Price per dozen, 88 cents



LEATHER FOB, No. 255
 Leather, Black and Brown, with assorted Gilt and Nickel Charms.
 Price per dozen, \$2.00



LEATHER FOB ASSORTMENT, No. 18
 On neat display card.
 Per card of one dozen, 88 cents
 One of the best assortments we carry.



LEATHER CHAIN ASSORTMENT, No. 35
 Per card of one dozen, \$1.00
 Leather Chain of Assorted Colors, with Gilt and Nickel Trimmings.



LEATHER CHAIN AND FOB ASSORTMENT, No. 7
 Per card of one dozen, \$1.44
 Assorted Color Chain, with Gilt and Nickel Trimmings.

Ask for our Tool, Material and Optical Catalogue

E. & J. SWIGART, Cincinnati, Ohio

ABSOLUTE

Equity



20 DWT. = 1 OZ.
12 OZ. = 1 LB.
WITH US

This one word embodies practically the foundation and success of our business. The universal and unqualified satisfaction to our patrons is our proudest achievement. It has been the corner stone of our business, the inspiration and basic principle of our methods, the secret of our growth and the builder of our success. Why not make us a trial consignment of

Old Gold, Silver, Sweeps—

anything containing Gold, You run NO risks. We make accurate valuations and hold consignments subject to your acceptance. We stand the expense of re-shipment if valuation is not satisfactory. Returns for old gold and silver made same day as received. Returns for sweepings within five days of receipt.

GOLDSMITH BROS.

Sweep Smelters, Refiners and Assayers

Offices—63 & 65 Washington St.

Works—Fifty-Eighth & Throop Sts.

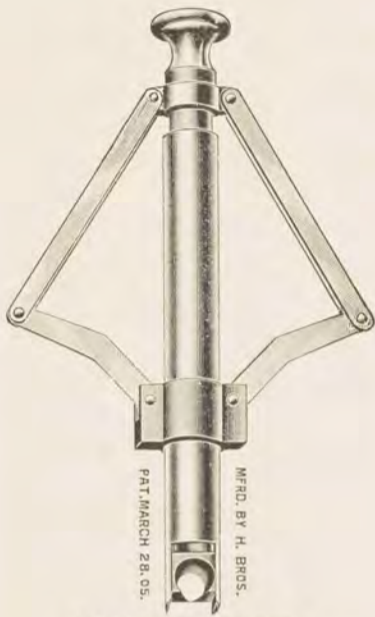
Chicago, Ill.

**We are paying 55 cents an
ounce for Old Silver**

HARDINGE BROS.,

1036 Lincoln Ave.
Chicago, Ill.

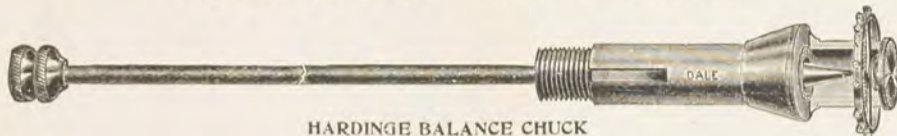
Reduced in Price



ELLIS HAND REMOVER

We are now prepared to fill orders for this most convenient and practical tool. You will see by the illustration that this tool presses on the dial a good distance from the center hole and remains still, while the part that draws the hands off pulls vertically and steadily, thus never cracking the dial, as the contact is constantly changing with the pressure.

Price, nicely nickel-plated, \$1.00

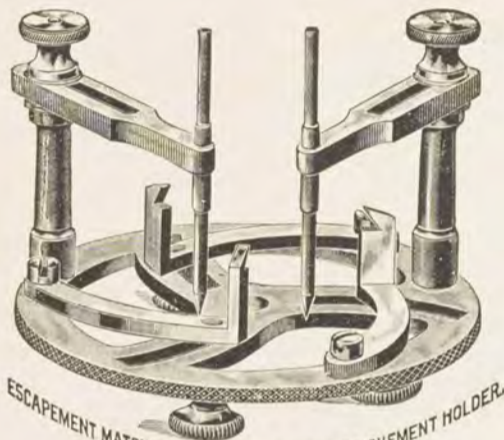


HARDINGE BALANCE CHUCK

We have reduced the price of this chuck to \$3.75 from \$5.00. Do not be misled by poor substitutes of this article. Every one is properly made and is true. No other style is so convenient as this. We have sold this chuck for the past ten years, giving universal satisfaction, and it is no experiment. Made for all standard watchmakers' lathes.



WIRE CHUCKS
60c. Each



ESCAPEMENT MATCHING TOOL, DEPTHING TOOL & MOVEMENT HOLDER

Price, Two Arm \$2.50
Price, Three Arm 3.25

CARBORUNDUM WHEEL AND MOUNT
Price, fitted to any standard watchmaker's lathe, \$3.50



We manufacture and carry in stock a full line of highest grade Platinum Pyrography Points. If interested, write for particulars.



The **WB & C** Glasses

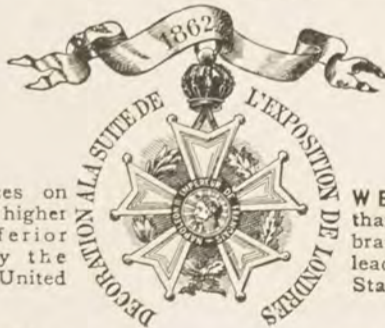
WATCH GLASSES

are known to be the BEST

They are guaranteed to be strictly first quality glass without bubbles or scratches



The only medal at the Chicago World's Fair for watch glasses was awarded to the W B & C brand.



The prices on are not higher much inferior sold by the of the United lows:

Genevas	per gross, \$3.60
Mi-Concaves	" " 4.00
Mi-Concaves, Extra Thick	" " 9.00
Flat Parallels	" " 7.20
Lentilles	" " 12.00
Flat Concaves	" " 12.00
Flat Concaves, Extra Thick	" " 15.00
Patent Genevas	" " 7.20
Lunettes	" " 3.00

WB & C glasses than other and brands, and are leading jobbers States as fol-



The only medal at the Paris Exposition of 1900 for watch glasses was awarded to the W B & C brand.

Over 25 Silver and Gold Medals awarded to the **W B & C** Glasses at the Different Exhibitions of the World Since 1826

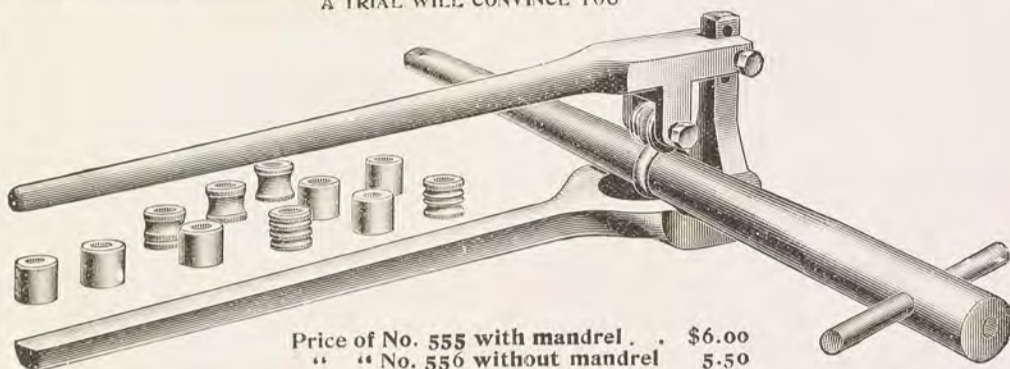
Everybody knows that the **W B & C** glasses **HAVE BEEN, ARE, AND WILL ALWAYS BE** the leading brand of glasses in the market. Their finish, clearness, flexibility and correctness of size make them so that the leading jobbers in the United States will use no others at any price. Four-fifths of the case manufacturers are using them on account of their accuracy and perfect roundness. They used to buy a cheaper grade of goods, but soon found out the wisdom of the old proverb, "The Best is the Cheapest at the End."
WATCHMAKERS! If you wish to save time and money and give good satisfaction to your customers (if you are not using them), try the **W B & C** and don't be deceived by bluffing and humbugging advertisements, showing a lot of nonsensical figures. The **W B & C** glasses are in existence over sixty years, and during that time a great many brands have sprung up in one day, and never heard from afterwards. **IT IS A GOOD AND RELIABLE GLASS YOU WANT, WHICH IS THE W B & C**

Ring Expander No. 555 (PATENT APPLIED FOR)

A perfect tool, that will expand a ring without in any way injuring same and making no other work necessary on the article, except ordinary buffing.

This tool is supplied with twelve rolls as follows: Six grooved, hardened, for different shapes and sizes of bands, one plain, for use on flat rings and five flat, soft, which are to be tempered and polished after being cut to any desired shape the operator may require, for the special shapes he may have in his stock. The tool is made in the best possible manner, polished and nickel plated. As many jewelers have a supply of mandrels, price is given with and without same, but using only a good smooth mandrel is advised. It will expand either set or band rings, from a fraction of a size to four sizes, according to the weight of the ring, in three to five minutes and the ring will then be ready for the customer.

A TRIAL WILL CONVINCe YOU

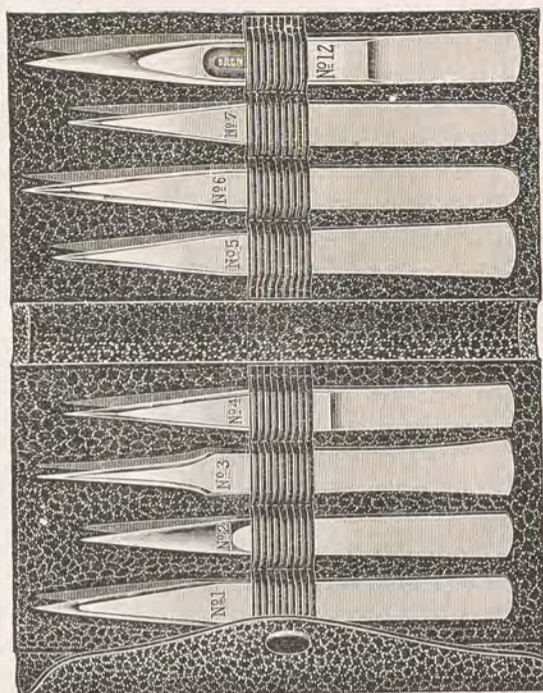


Price of No. 555 with mandrel . . \$6.00
 " " No. 555 without mandrel 5.50

GENERAL INSTRUCTIONS—Place large end of mandrel in ordinary bench vise; select roll to fit band to be expanded; place roll in tool, as shown in cut; place ring on mandrel, pushing it up until it fits tightly; adjust handles of tool, so as to secure a good, even grip and produce pressure to suit the weight of the ring being expanded. Place the fingers of the left hand under the tool and the ring, always keeping the ring tight on the mandrel; grasp both levers of the tool with the right hand, using pressure as the hardness and thickness of the ring may require. Work tool up and down, turning ring at the same time, so that it will expand evenly all around. Repeat operation until the desired size is reached. Turn the ring on the mandrel and repeat the operation, so that the ring will be the same size on both edges; repolish with a rouge buff and the ring is ready for delivery. As the rolling process produces an extra temper or hardness in the gold it may be necessary, in some cases, to anneal the ring, where it is to be expanded two or more sizes. This will be evident by the ring not expanding readily.

Do not compare this expander with any device where the ring is not always completely filled with the mandrel as one of the main advantages of this tool is its ability to expand evenly keeping the ring round and without lumps, at all times.

IT IS ALL IN THE POINTS

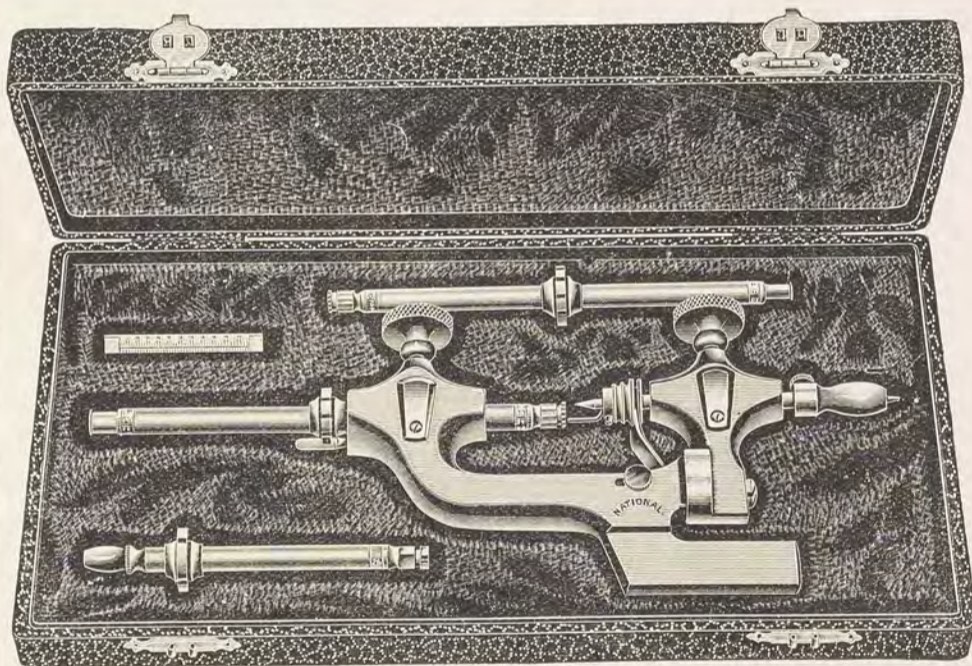


Combination of Tweezers, No. 1120

Consisting of eight Boley & Leinen superior quality, full tempered nickel-plated tweezers. A welcome companion on your bench. Put up in strong leather case, protecting the points.

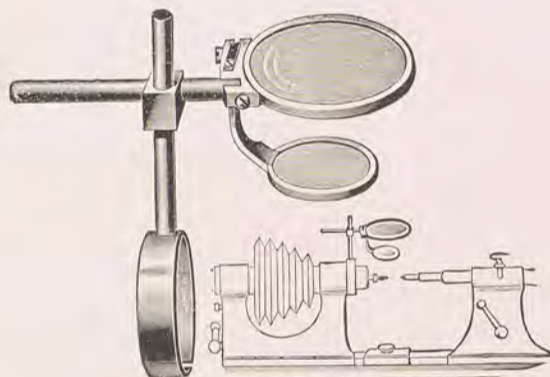
Price per set of eight, \$3.25

ALUMINUM PIVOT LATHE



New construction, larger than the regulation pivot lathe; very light, easy to handle. All steel parts and screws run in hard bronze bearings. Pulley has three speeds and is supplied with adjustable carrier. The carrying collet is movable by means of slide provided in bed of lathe. This supplants the former guiding screw operated from back of lathe. The most perfect lathe ever brought on the market.

Price, \$12.00



Lathe Loupe, No. 25

(PATENT APPLIED FOR)

A most useful article, devised by a practical watchmaker. Easily applied to any make lathe. If great power is required, bring into action the two lenses; otherwise swing the small lens out of place.

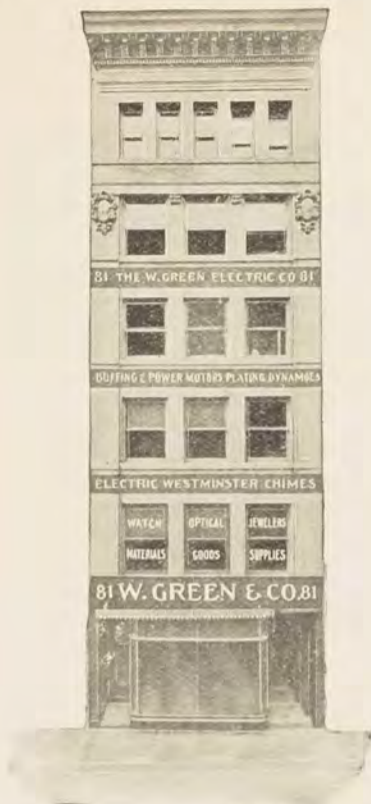
Rings of two different sizes are furnished with each loupe to meet all requirements. The loupe will enable anyone to inspect the work without bending close to it as with ordinary eye-loupe.

Price, \$1.25 each

For sale by all jobbers in the United States and Canada

**HAMMEL,
 RIGLANDER & CO.**

47 & 49 Maiden Lane, NEW YORK



REMOVAL NOTICE

¶ Having outgrown our quarters at 6 Maiden Lane and to take care of our rapidly increasing business, we are pleased to announce that we have removed to 81 Nassau Street, where with double the floor space and additional room for storage purposes, we are provided with greater facilities for filling orders with the utmost promptness and accuracy.

¶ Our new salesrooms are among the finest in New York City in our line.

¶ With us prompt service is possible by reason of a large and complete stock and perfect organization. We have everything needed for manufacturing and repairing, in addition to an ample assortment of each particular article, and a large staff of practical, competent employees to execute orders.

¶ We handle nothing but the best. Inferior goods have no place in our stock. We are too jealous of our reputation to jeopardize it by selling an unsatisfactory article.

¶ We do not, however, overlook the importance of right prices. Quality for quality, we are glad to have our prices compared with any. All goods are so classified and arranged that they can be selected in the shortest possible time. Every department is thoroughly systematized. **Mail orders are our specialty.**

¶ We are always pleased to welcome out-of-town visitors, and we invite them to make use of the conveniences of our establishment when in New York City.

¶ During the coming year we shall try our utmost more firmly to cement our relations with business friends of many years' standing, and to establish new connections with those who are not at present our customers.

¶ **SPECIAL NOTE:**—For the better handling of the Electric Motors, Dynamometers, Dynamotors, Drills, Demagnetizers, Westminster Chimes, etc., we have organized this specialty as a separate branch of our business and under the distinctive name of "THE W. GREEN ELECTRIC CO."

Yours very truly,

W. GREEN & CO., 81 Nassau Street
NEW YORK, U.S.A.

Importers, Exporters, Jobbers, Manufacturers of

WATCH MATERIALS, TOOLS, JEWELERS', ENGRAVERS' and OPTICIANS' SUPPLIES

Bulletin 325

The W. Green Electric Co.'s PLATING DYNAMOTORS

A Plating Dynamo and Power Motor combined in one, self-operated by any Direct Current, Light or Power Circuit. (No motor, belts or pulleys required.)

(Fully Warranted)

For Gold, Silver, Nickel and Copper Plating, Etc.

Our Dynamotors are wound to run on 110, 220 or 500-volt circuits, and will deliver to the tank a 5-volt current for plating exactly like the regular Plating Dynamos. As they run by their own power, no motor, belting, or pulley is required, and they may be placed in any position, either vertical or horizontal.

SPECIAL NOTICE:—When ordering, always give the voltage of your light or power circuit.

Cost to run 1 to 8 cents per day according to size
Complete ready for use (F.O.B., N. Y.,) as follows:

Type and Size of Dynamotor	Output in Amperes at 5 Volts	Amount of Gold in Dwts. deposited per hour	Capacity of Silver in Quarts	Capacity of Silver in Square Feet per hour	Capacity of Nickel in Gallons	Capacity of Brass and Copper in Gallons	Lighting Capacity at 5 Volts of 4 C. P. Incandescent Lamps or their equivalent in larger or smaller lamps	Approximate Speed	Approximate Shipping Weight in pounds	Net Price of Dynamo	Net Price of Current Regulator (not always necessary)	Chemical White Enamel Iron Plating Tanks Complete with Rods and Connections
												Gallons Net Price
17A	1 to 5	6	60	3 1/2	55	30	8	1800	70	\$35.50	\$9.00	4 \$ 6.50
17B	2 to 10	11	120	6 1/2	90	50	15	1800	110	40.50	9.00	1.3 8.25
17C	3 to 15	15	160	9	160	85	22	1800	130	57.00	9.00	20 12.00
17D	4 to 25	25	220	15	275	200	30	1800	225	81.00	9.00	3.5 21.00
												100 70.00

(Arrangement copyrighted by The W. Green Electric Co., New York, U.S.A.)

Like our Dynamos, the Plating and Lighting Dynamotors, 17A to 17D are compound wound, have phosphor-bronze bearing sleeves, Self-Oiling Bearings and extra large Commutators and Brushes. The design and improvement of these Dynamotors make a distinct advance in Electric Art, and the most casual inspection of our machines will demonstrate without question that we are years ahead of all competition in perfection of design, workmanship and efficiency.

The Armature, with its bearings and brush rigging, can be quickly and readily removed for examination or repair by loosening the screws on one side of the machine, which is a new and valuable patented feature in the manufacture of Dynamotors.

It is only necessary to connect the wires from the regular switch cut-out to the primary end of the machine; close the switch and it will run like a motor, delivering the regular plating current of 5 volts or less at the secondary terminals.

The strength of the current may be controlled to any desired extent in the plating current, with our regular tank rheostat, while the voltage may be reduced to any extent by means of a speed controller connected to the primary or motor end of the machine.

These dynamotors are made to run only from a direct-current light and power current, and cannot be used with the alternating-current system. If alternating current is only to be procured our plating dynamo, shown on Bulletin 310, attached to a power motor must be used, unless a motor generator is desired consisting of an alternating-current motor and a plating dynamo mounted on one base and coupled together. (Particulars of which will be sent on application.)

Our Dynamotors are capable of much finer control than is possible with any Dynamo, and for this reason it is specially valuable in connection with Gold Plating and Coloring equipments. The current from our Dynamotors cannot be reversed under any condition of load or adjustment. As it is self-operating, it may be placed in any desired position without regard to shafting or belting, and occupies only one-half space of a separate motor and dynamo. Complete instructions for the care of our apparatus, with diagrams showing every connection and detail of the wiring are sent with each machine. These are so simple and easily understood that the most inexperienced can successfully set up and start our machines in practical operation.

The Dynamotors are built of the very best material, and by experts of many years' experience. They will run for years, 10 hours per day, without requiring repairs or skilled attention. Our bulletin shows sizes suitable for smallest repair shops or largest manufacturing jewelers.

PERFECT CURRENT REGULATION so important in Gold Plating can be readily secured in our machines; they are free from sparking and heating at the brushes and commutators always found in inferior designs and makes.

The W. Green Electric Co., Manufacturers of Polishing, Buffing and Power Motors, Dynamos, Dynamotors, Demagnetizers, Electric Chimes, Etc.
81 NASSAU STREET, NEW YORK, U.S.A.



"Patented in the United States and all Foreign Countries"

SPECIAL NOTICE

713

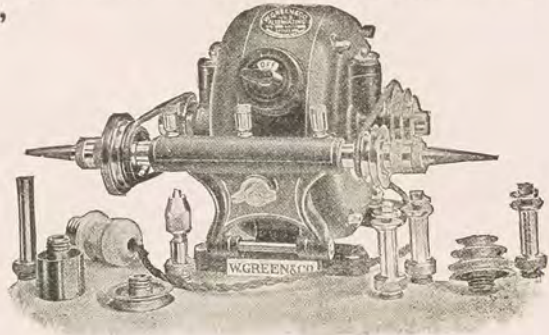
To Progressive Jewelers, Silversmiths, Opticians, Dentists, Etc.

Antiquities and relics may have a value in the salesroom, but they are expensive and bothersome in the laboratory and workshop when new methods, ideas and improvements are on the market; therefore, you need our **Model of 1906** enclosed **Dust-Proof Direct and Alternating Current, Electric Polishing, Buffing, Drilling, Grinding and Lapping Motor Lathes.**



This is our No. 4, 1905 Model Direct-Current Lathe

Our
Models
of 1905



This is our No. 9, 1905 Model, 6 speed Alternating Lathe with complicated pulleys and belts

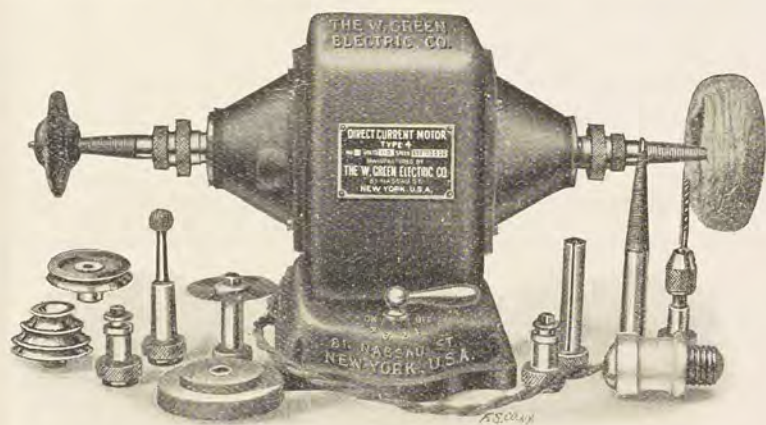
These were all right and good enough in their day, but we live in a progressive electrical age and have made remarkable changes in our Motors, therefore the 1905 Models are **SUPERSEDED by our latest improved**

1906 MODELS

Made in all sizes and for all purposes from 1-10 to 2 Horse-Power For both Direct and Alternating Current

Patent applied for

Patent applied for

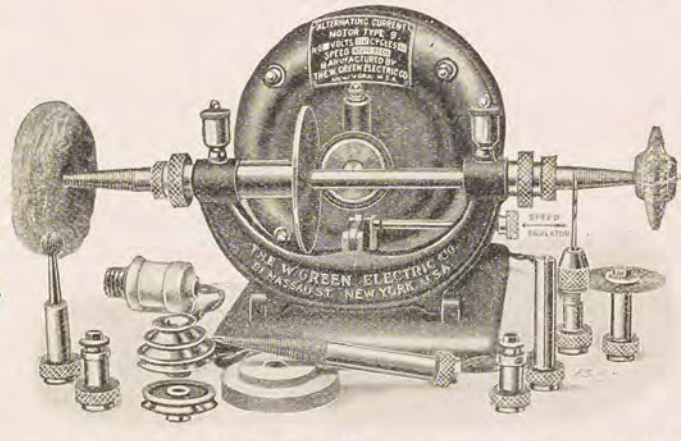


This is our new No. 4 Model of 1906 Direct-Current Lathe; 4 variable SPEEDS, 600 to 3500 R. P. M., dust-proof, air and water-tight; ball-bearing type. No oiling or lubricating necessary. Strongest motor made. Will last a lifetime.

Our
New
Models
of 1906

Made in our up-to-date factory with all modern equipments.

Sold at 1906 PRICES.



This is our new No. 9 Model of 1906 Alternating-Current Lathe, with 10 or more variable SPEEDS, 700 to 3500 R. P. M. as desired. No pulleys, belts or other complicated attachments; dust-proof, air and water-tight, substantial, convenient and simple. Speed changed in one second by a simple turn of regulating screw shown in cut.

The difference between The W. Green Electric Co.'s 1906 Models over their 1904 and 1905 Models, and the "other kinds on the market" is very marked.

What Our 1906 Models Will Do

- 1st. They will run for months with no attention to the bearings or brushes.
- 2d. They will run cool under all conditions of load.
- 3d. They will do more work with a wider range of speed than any of the old designs or other kinds on the market.

What Our 1906 Models Will Not Do

- 1st. They won't get uncomfortably hot after a short run and annoy the operator, or perhaps burn out.
- 2d. If overloaded on the high speed, they won't stop suddenly and run in the reverse direction and surely burn out.
- 3d. The lubricant or oil won't leak out of the motor, nor into the commutator and brushes, spoil the bearings and armature.
- 4th. In our Alternating-Current, Variable-Speed Lathe, the belts won't get loose or break, nor the pulleys come off, for we use neither; yet the speed can be instantly set anywhere from 700 to 3500 R. P. M.

OTHER DISTINCTIVE FEATURES

The enclosing cover can be readily removed while the motor is running for inspection or cleaning, without disturbing the bearings, brushes or armature. The design is symmetrical, the shaft is long and heavy, and there is plenty of room all around the wheel. The armature, winding commutator, bearings and brushes are larger and much more durable than in other types. You know this means long life, no repairs and perfect satisfaction. The workmanship, finish and material is of the highest grade. Our 1906 Models covers the greatest advance yet made in electric art. Long, practical experience and skilled engineering talent have been happily combined with a modern factory equipment, perfect in every detail and devoted entirely to the rapid and exact production of The W. Green Electric Co.'s Specialties.

Compare our 1906 Models with other styles, and you will see in a moment why we are years ahead of all other makes.

One word more,

OUR PRICES ARE RIGHT. SEND FOR THEM

Owing to factory facilities we are prepared to make very prompt deliveries.

The W. Green Electric Co., Manufacturers of Polishing, Buffing and Power Motors, Dynamos, Dynamotors, Demagnetizers, Electric Chimes, Etc.
81 NASSAU STREET, NEW YORK, U.S.A.



EXTRA **X** ★ **F** FINE



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FOR WATCHMAKERS, JEWELERS, FINE TOOL MAKERS, DIE SINKERS AND OTHERS
WHOSE WORK REQUIRES GOOD TOOLS



THEY ARE SUPERIOR TO ALL OTHERS OF DOMESTIC OR FOREIGN MANUFACTURE
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Yes!

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We Replate any article you want in Gold, Silver, Nickel, Bronze, Brass, Oxidized Silver, Old Bronze, Statuary Bronze, and all the Antique or Old Finishes, etc.

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Old Gold and Silver Filings, Polishings, Sweeps, Hand Washings, etc. We will make accurate valuations and hold consignment subject to your acceptance. If valuation is not satisfactory, we reship to you at our expense.

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16 K. 64c. "	6 K. 24c. "
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12 K. 56c. "	16 K. 72c. "
18 K. 80c. per dwt.	

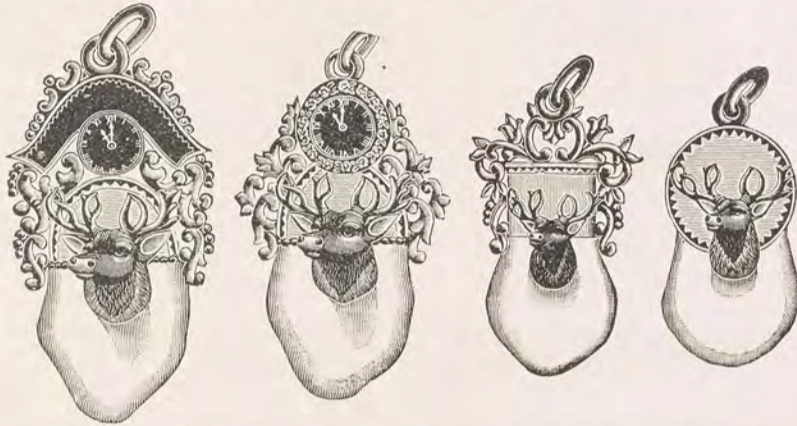
Gold and Silver Solder, either from formulas furnished or our own. "T. B. H." Alloy, 25c. per oz. Guinea Gold, 75c. per lb. Shot Copper, 40c. per lb. We will send tables for alloying without charge. They save figuring.

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Manufacturers of

HIGH-CLASS EMBLEMS OF ALL ORDERS

If your jobber
does not handle
our goods, write
to one who does
or send to us
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All our goods stamped
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It is a guarantee on which
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The above are a few genuine Elk tooth charms. Their extreme beauty, fine workmanship, high quality of material utilized and their substantial weight is the cause of their phenomenal success. In manufacturing these charms we use nothing but 14 K. gold, best French enamel where enamel is shown and the finest of perfect Elk teeth, and still we do not ask any more for this high class of goods than others do for inferior articles. We are continually adding new designs to our already enormous stock. Write for memorandum selection or if you have not received catalogue No. 24 a postal will bring it to you. Be sure and get same, as it will interest you.

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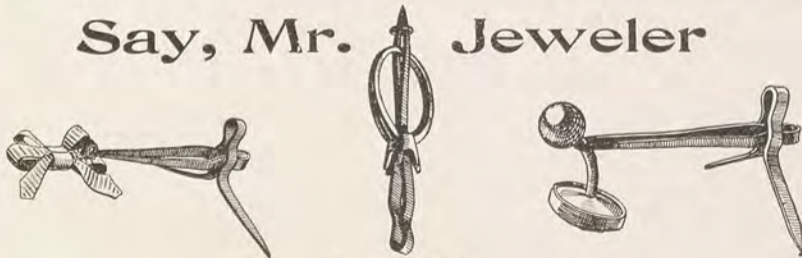
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Patent applied for

Here is a handy little tool that you have been wanting for some time. A **Soldering Clamp** that is simple and effective. It is **Something** that every jewelry repairer should have on his bench, because it saves time, trouble and temper. It is a **Good** thing, because it has no screws or nuts to work loose, or unnecessary parts to get lost. The illustrations show a few of the many uses to which it can be put. Sent postpaid to any address on receipt of price, **50 cents**. Address all orders to

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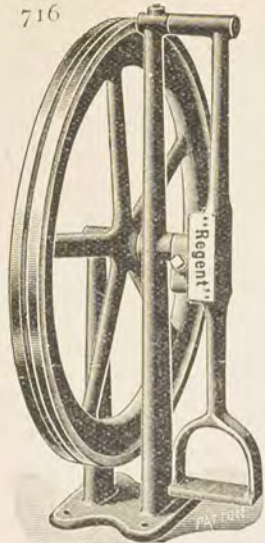
SUCCESS is the best recommendation a school can have

That the **ST. LOUIS WATCHMAKING SCHOOL** is the most successful school in the United States is attested to by a growing patronage that has now exceeded our most sanguine expectations, and continuously growing patronage we deem of all testimonials the most substantial.

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Regent Foot Wheel, Improved
\$5.50

MAIN SPRINGS



Regent Mainsprings
\$1.00 dozen; \$10.50 per gross

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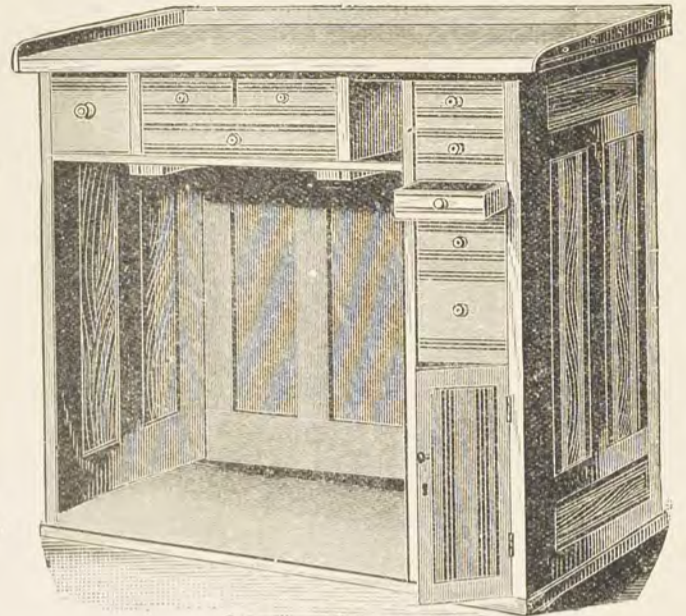


Regent Balance Jewels
75c. dozen; \$7.50 per gross

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Regent Balance Staffs
75c. dozen; \$7.50 per gross



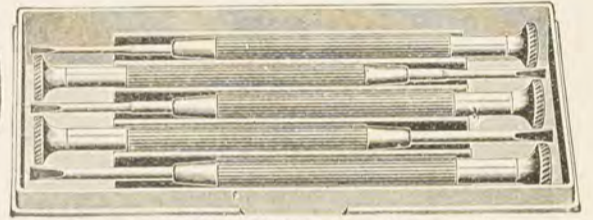
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Webster-Whitcomb Lathe and
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Set of 5 Nickel-Plated Screw Drivers. 40c.

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Price, \$4.50

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this furnace will melt up to two pounds of gold or silver in a few minutes, starting all cold.

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 Guaranteed true and accurate sizes. Highly
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 Ruby and Sapphire, price, \$1.25 doz.; \$15.00 gross.
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 For all American Watches. Accurate
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H.S. MEISKEY,
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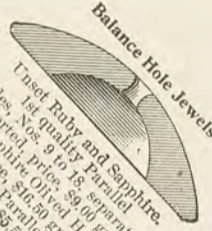
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IT WILL INTEREST YOU.



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 Unset Ruby and Sapphire.
 Holes 1st quality Parallel
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PERFECT CONSTRUCTION

IN EVERY DETAIL

HARD SPINDLES RUNNING IN
HARDENED
STEEL
BUSHINGS



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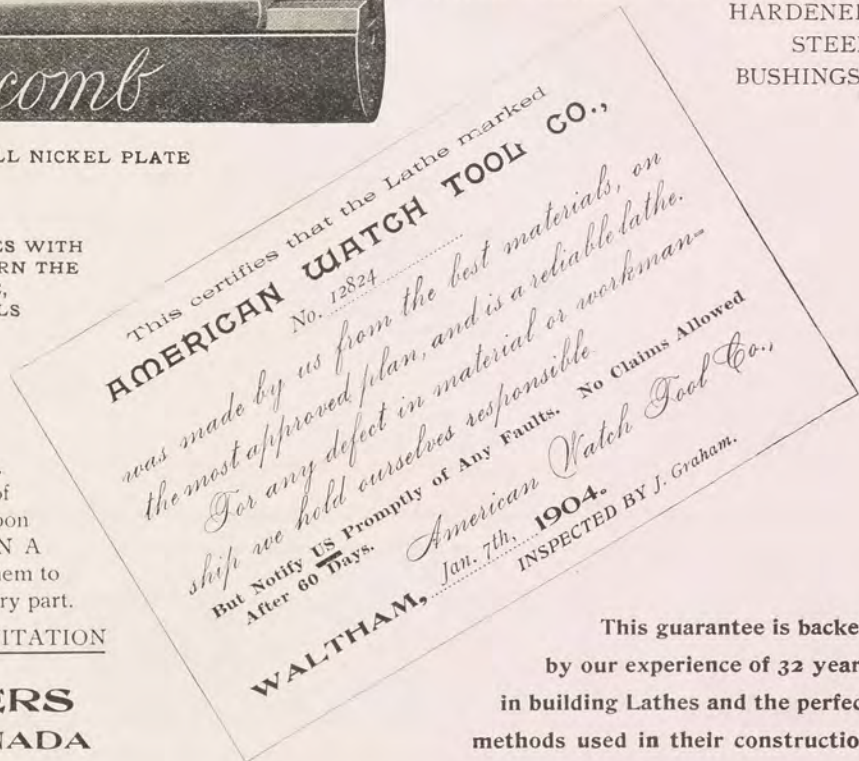
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Lathe, including Taper and Screw Chuck,
6 Cement Chucks and belting . . . \$29.00
Extra Wire and Wheel Chucks75 each

A CHUCK MAY LOOK ALL RIGHT, YET BE ALL WRONG. Our Chucks are made of the very best steel and absolute concentricity of cone, thread and hole is obtained by the most improved methods based upon years of experience. We use no Dies for the threads, but CUT THEM ON A LATHE; nor do we file and polish the cone, body or hole, but GRIND them to a standard on special grinding machinery and guarantee perfection in every part. WE CAUTION YOU AGAINST THE IMPERFECTIONS OF THE IMITATION

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THE TRUE BLUE

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French Watch Glasses




"CLEAR AND BRIGHT AND LABELED RIGHT"

HIGHEST QUALITY, FINISH, CORRECT SHAPE AND ACCURATE SIZING

The Crown Watch Glass



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TO THE RETAILER:—If you expect to stay where you are and hold the old trade, you can not afford to sell second-class goods.

The BRYANT RINGS will hold the old customers, and every ring you sell will be an advertisement that will attract new ones. They are the Best Made and Best Known Rings in the market.



Trade-Mark

M. B. BRYANT & CO.

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The STANDARD for QUALITY and STYLE



The "ADMIRAL" Jewelers' Plate-Glass Case
The most "practical" jewelers' case made

The Easter Number of The Keystone illustrates two handsome jewelry stores fitted with our "ADMIRAL" Cases. See pages 459 and 461. The plans and outfits shown on these pages came from "WINTER," the High-Grade Fixture Makers.

Send for our catalogue entitled "Winter's Encyclopedia Americana of Modern Store Fixtures," a 310-page book full of new designs. Sent postpaid on receipt 25c postage.

THE LINE OF QUALITY. Not how cheap, not how much, but how good. At prices that are right. Ask our customers. Anything from a store stool to the most complete outfit.



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Portraits, Views of Buildings and Landscapes, Inscriptions in Ornamental Raised Letters, Emblems, Club and Heraldic Devices and Autographs on Souvenir Spoons, Prize Cups for Regattas, Tennis and Bowling Tournaments and other Sporting Events.



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Gold and Silver Refiners
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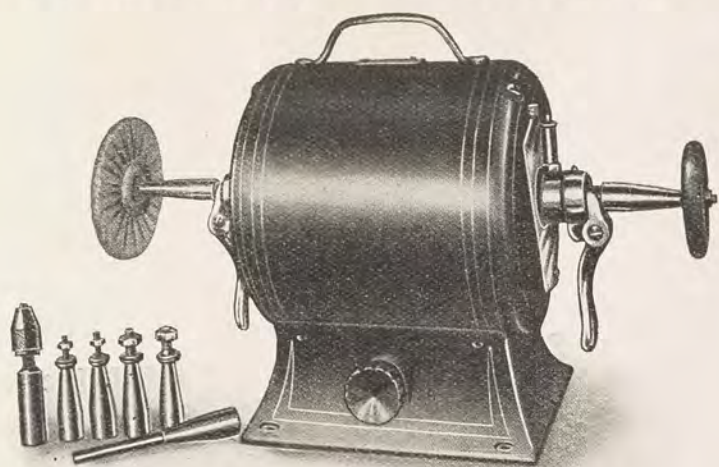
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"Quick Sales" Show Cases

Will increase your sales



Let us show you how *"Quick Sales"* Show Cases may be used to advantage and profit in your particular business. This information will be valuable to you and the opportunity to present it valuable to us. We have some convincing facts to offer. You are interested. So we invite you to write at once telling us your line and by return mail, or as quickly as possible, we will send you valuable suggestions, showing the application of the "Quick Sales Idea" to your business. Write us to-day. Simply say, "Show me how 'Quick Sales' Cases can make money for me"—and tell us the kind of goods you sell. We will do the rest. Address Dept. C.

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HERBERT MALOTT, Sec'y and Treas.

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ESTABLISHED 1889

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W. H. ROGERS' Celebrated Knives, Forks and Spoons
 A brand that is noted the world over for Quality and Finish



All our spoons and forks have an extra heavy plate on all parts most exposed to wear, for which we make no extra charge.

This cut shows sectional plate spoon which is extra heavily plated on wearing parts.

We also carry a complete line of choice Hollowware

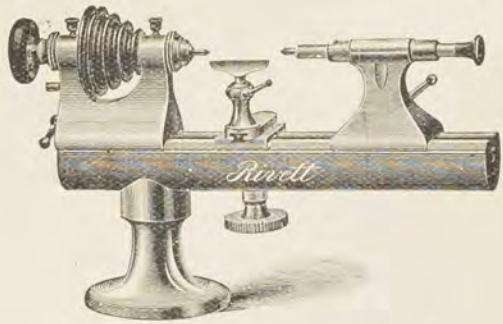


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Write for prices

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The Rivett Lathe is the Standard



If you want a lathe to last you a lifetime
tell your dealer you want the **Rivett**
and no other make.

As we are very busy and have orders ahead which we will not be able to fill until August you may have to wait a short time for your order but you will be repaid by waiting. You will know that you have a Lathe which is the latest and finest product on the market and you will have your money's worth.

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Just address:

Rivett Lathe, Brighton, Boston, Mass., U.S.A.

New K. & D. Roller and Hand Remover, with parallel jaws

This tool is exceptionally well made and finished, and has all of the modern requirements in its make-up. It will remove successfully either double or single rollers of any size; the only tool of its kind with parallel adjustable jaws. Roller rests flat on inside of jaws which obviates danger of breaking pivots. It has four plungers, two for removing watch hands; plungers are fitted with taper (no screws) and are easily and quickly changed with pin, as illustrated. Recess in end of handle for extra plungers. The jaws open and close by turning knurled disk either way.



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FOR SALE BY ALL JOBBERS



KENDRICK & DAVIS, Lebanon, N. H.



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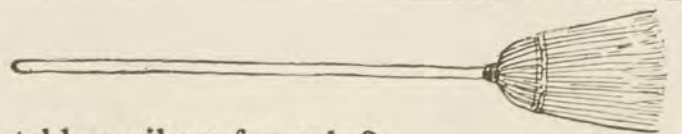
Have you any old gold or silver for sale?
Are you satisfied with your past returns?

You don't know how valuable your sweeps are if you have not tried us. We have enlightened hundreds of your brother jewelers on this point—and greatly to their benefit. All our patrons are satisfied patrons. Many of them tried all others before coming to us; some of them tried others after; but all are still with us. Full and prompt returns or goods returned at our expense without delay.

Howard S. Kennedy

Sweep Smelter and Assayer

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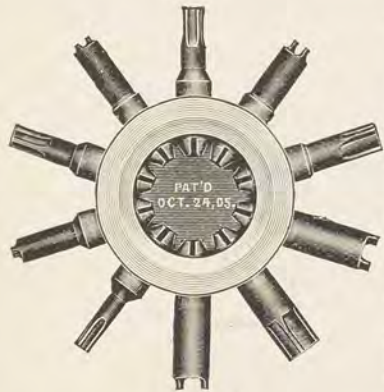




No: _____ Size: _____ Style: _____

Try the Sensible Recoiling Mainsprings

The best in the market. Expert watchmakers pronounce them to be perfect in every respect. Order from your jobber. If he is unable to supply you, write us and we will inform you who can. **\$1.00 Dozen; \$12.00 Gross.**

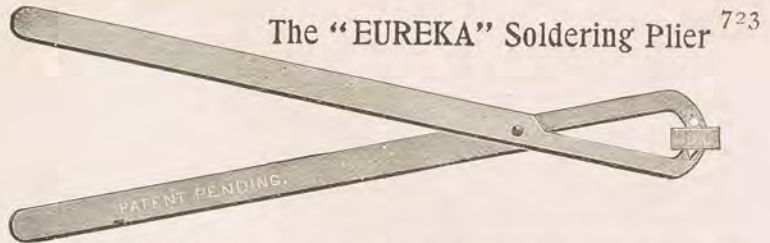


The Newark Watch Case Material Co.'s

Improved 10-Prong Patent Sleeve Wrench

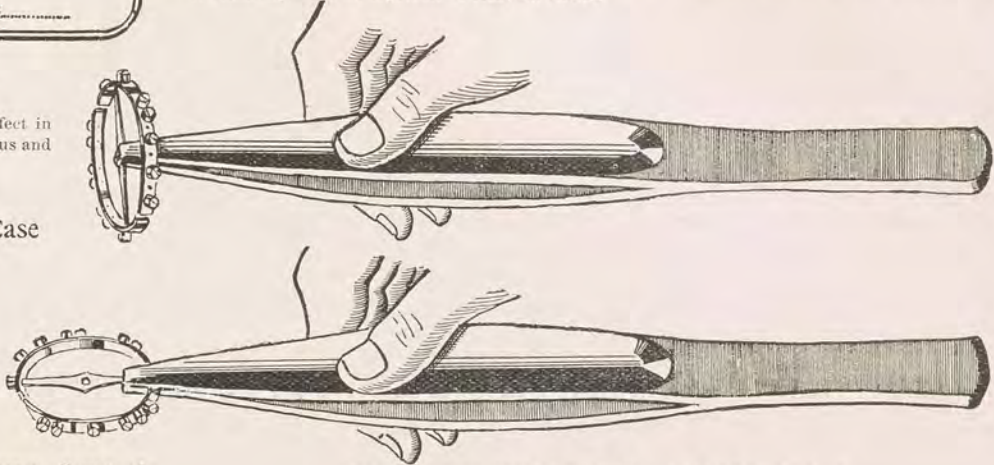
This is the only practical Sleeve Wrench on the market. Every key is measured accurately, so they will fit all makes of sleeves. Beware of imitations and see that our patent number is stamped on the key you buy.

We are sole agents for this wrench. Beware of imitations. None genuine unless bearing date of patent shown in illustration. This is the only accurate and practical tool of its kind on the market.



The "EUREKA" Soldering Plier ⁷²³

Takes the place of half dozen ordinary Pliers; the extra length of the jaws and the same being supplied with the grooves lengthwise and crosswise will enable one to hold together almost any size and shape pieces from nothing up to one inch or more. The above half-size cut shows a square piece of brass with a small round piece of wire being held on the top of it preparatory to soldering the same together. **Price, 25 Cents.**



Perfection Balance Truing Tweezer

Pat. July 26, 1904

The only Balance Truing Tweezer on the market that will hold arm of balance without touching staff or rim—as per illustration.

It is also useful for holding Hands, Pivots, etc. Made of heavy steel, nickel finish, concave side to prevent slipping. **Price, 50 cents.**

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SPECIAL OFFER

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Star Brand, "85 " " "

Balance Staffs—Gem Brand, gray finish, \$.60 per dozen, net.
Star Brand, polished, 1.00 " " "

FREE—A nice Oak Cabinet with 12 bottles, with an order for 6 dozen Jewels or Staffs, either Gem or Star Brand.

Star American Mainsprings \$.85 per dozen, net.
Star American Mainsprings 10.00 " gross, "

FREE—A fine Oak M.S. Cabinet with 20 drawers, worth \$6.00, with an order for one gross mainsprings.

Stevens Optical Goods—We carry a complete line of Stevens 12 K. Gold Filled Frames and Rimless Mountings at right prices.

H. B. Peters & Co., 87 Nassau St., New York



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when dissolved in water make a Plating solution at once ready for work and **always correct shades.**

Know that we are the originators and manufacturers of

Dark Green Gold Salts (Antique) and other Shades of Green

Likewise the

Rose and Orange Rose Gold Salts

used for single and double gilding, and of a good many other shades now on the market.

Our Roman Gold Salts produce an almost bright deposit, requiring little or no scratch brushing. French Gray, 14 or 18 K. Gold, Old English Gold, Silver Ebonizer, in fact any shade wanted can be had of us.

Write for circular.

The AUTOMATIC ELECTRO-PLATING MACHINES

Specially designed for the small manufacturing and the retail Jeweler, will be of interest to them. Send for Pamphlet.

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Besides benches we make Watch Repair Cases, Jewelry Repair Cases, Material Cabinets, Material Cases, Glass Cabinets, Mainspring Cabinets, Optical Cabinets, Lens Cabinets, etc. We make to order special benches and woodware of every description that an up-to-date watchmaker needs.

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Send for our new illustrated catalogue and order what you want through your Jobber. **Insist upon getting our make.** Our name-plate is on every article we make.

Almost all Jobbers handle our goods.



Our Latest Flat-Top Bench, No. 8

Made in Walnut, Quarter-sawed Oak, Plain Oak and Birch

JESSEN & ROSBERG, 397 to 405 W. Kinzie St., Chicago

LIQUID AMBER JEWELERS' CEMENT



Get the Genuine

Don't accept cheap substitutes; there is nothing else so good.

Sold by every Material Dealer in America

Price, 25c.

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The **Southern Jeweler** who wants satisfactory values and **prompt shipments** should remember

that—
Baltimore being the natural distributing point for the **South** saves you from twenty-four to forty-eight hours on your orders.

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JEWELRY FOR THE JEWELER

WATCHES and DIAMONDS

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Selection packages sent upon request

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Waist Sets, Bracelets, Collarettes, Barrettes, Combs, and Signet Goods are selling.

A new house and a new line of



Ormolu Gold and French Gray Silver Jewel Boxes, Handkerchief Boxes, Candle Sticks, Ink Stands, Etc.

All new patterns. Our goods are strictly high grade, both in quality and finish

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A
Good
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A
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4 1/2-INCH NICKEL-PLATED SEAMLESS CASE

Alarms **INTERMITTENTLY** every twenty seconds for fifteen minutes on a four-inch bell-metal gong on back of clock. Alarm can be stopped by turning a switch.

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The New Haven Clock Co.

New Haven, Conn.

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Diamond Ring Mountings

in Gold and Platinum

Diamonds and Precious Stones

Makers of **HIGH-GRADE JEWELRY**

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VICTORY

Patentees and Makers of

Victory Button Backs

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Victory Automatic Catch

NO STOCK COMPLETE WITHOUT THEM

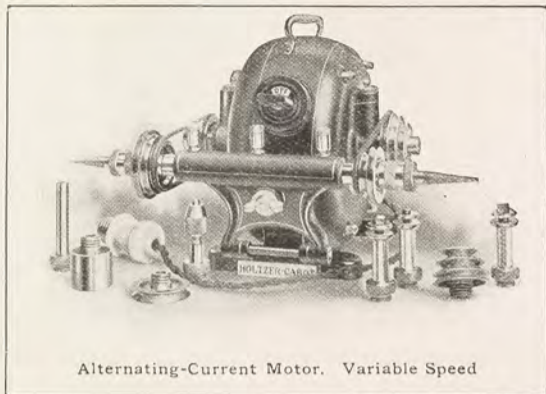
Send for samples and price-list

GEBHARDT BROS.

Lion Bldg., CINCINNATI

HOLTZER-CABOT JEWELERS' MOTORS

For BUFFING and GRINDING

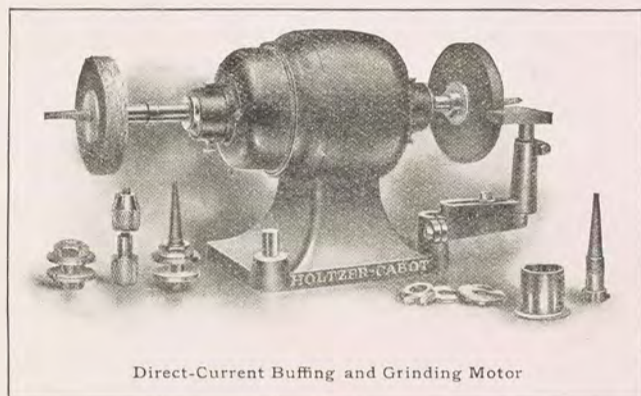


Alternating-Current Motor. Variable Speed

have had a four-years' trial in practically all classes of work.

Made for Alternating and Direct-Current Circuits, in sizes—1-5 to 1 H. P.—to carry buffing and grinding wheels up to 10 inches diameter.

A full line of chucks for all requirements.



Direct-Current Buffing and Grinding Motor

All our motors are covered by a guarantee of one year

Write and tell us what class of work you would like to do and we will send you our Form 410, "SPECIAL ANNOUNCEMENT AND PROPOSITION TO JEWELRY PEOPLE—A LATHE MOTOR ON TRIAL"

The Holtzer-Cabot Electric Company, Boston (Brookline), Mass.

Chicago Office, 395-7 Dearborn Street



Edison Goods A Money-Making Side Line

Every jeweler can conveniently handle Edison Phonographs and Records as a side line. It will not interfere with your business; on the contrary help it by attracting a desirable line of trade to your place. There is a handsome profit on every dollar invested in Edison goods, with no competition to meet as prices are strictly maintained. Owners of Edison Phonographs always want the latest Records, and become continuous customers.

Then again our extensive advertising has created an unequalled demand for Edison goods so that it will be an easy matter for you to make sales.

Start in now with a complete stock and make money all year round.

National Phonograph Co., 55 Lakeside Ave., Orange, N. J.

31 Union Square, NEW YORK

304 Wabash Ave., CHICAGO, ILL.



It may be possible to make a better polish for silver and cut glass than **Wright's Silver Cream**, but up to the present time it has never been done.

For 33 years Silver Cream has been used by the best families in the land with perfect satisfaction.

Sold by all jobbers or direct

J. A. WRIGHT & COMPANY, Keene, N. H.

Ask J. A. Wright & Co. or your jobbers for our 1906 advertising proposition; it will interest every jeweler



No. 2
50 cts.

"CLINCH"

Hoffman's Safety Catch for Scarf Pins

Simplest and Most Practical Scarf Pin
Fastener on the Market

IT WILL NOT MAR THE PIN

Fits any size pin. Has a grip like a vise. No broken finger
nails. Nothing to get out of order.

ORDER NOW

For sale by all leading jobbers and material houses, or

THE HOFFMAN NOVELTY CO.

Box 314, ALBANY, N. Y.

PRICES TO THE TRADE

No. 1. Gold plated, \$1.50 doz.
No. 2. 14 K. gold plate, 2.25 doz.

The wholesale jobbing trade supplied by
Sussfeld, Lorsch & Co., 37 Maiden Lane, New York

ESTABLISHED
1871

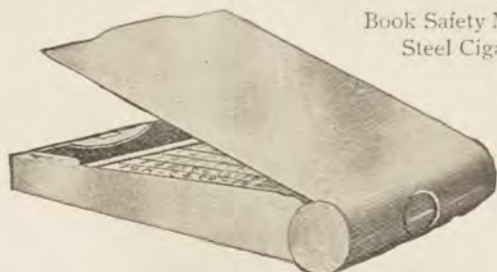
Factory and Office: Newark, N. J.

INCORPORATED
1900

CARRINGTON & CO.

Patent Pocket Match Box

14 K.
ONLY



Book Safety Matches with
Steel Cigar Cutter
Patented

Sales Agent: 7 Maiden Lane, New York

JEWELERS' SAWS

Joh. Zeuner, of St. Goar, Germany, is famous
as the maker of

THE BEST SAWS

and has appointed us his SOLE AGENTS for the
UNITED STATES AND CANADA

Ask your Jobber for **ZEUNER SAWS**
if you want **THE BEST**

or write to us

When in need of **Fine Files**, kindly remember
"American Swiss"—our own make

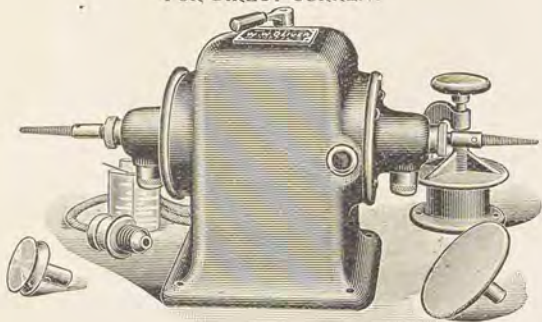
E. P. REICHELME & Co.

23 John Street, New York

The Jewelers' Motor Polishing Heads

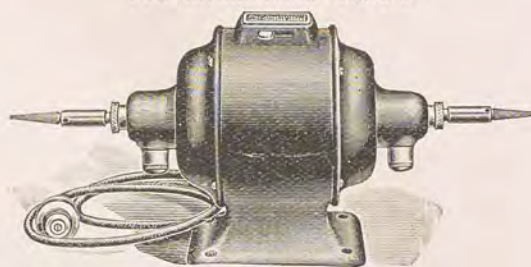
727

FOR DIRECT CURRENT



These Heads are the result of many months' study and thought. They embody all the essential features necessary for strictly high-grade, efficient and durable machines. With each machine can be furnished

FOR ALTERNATING CURRENT



- 2 Brush Chucks
- 1 Pulley Chuck for connection with a dynamo
- 1 Disk Chuck, mounted with carborundum cloth

- Assorted carborundum cloth on paper disks
- 1 Screw Press for use in mounting disks
- 1 Can of Cement

READ WHAT ONE OF THE MANY USERS OF THESE MOTORS SAY ABOUT THEM:

HAGER & HETSCH

Manufacturers of Fine Jewelry and Diamond Setters

W. W. OLIVER MFG. CO., Buffalo, N. Y.

Gentlemen:—Your letter of the 5th inst. received. Yes, we have been using two (2) of your 1-5 horse-power Motors for the past nine months, and will say that we consider them perfect. We had some little trouble with them at first, but will say frankly that said trouble was due mainly through our inexperience with Motors. Having become accustomed to them, we certainly would not be without them, as we do not think we could possibly find any Motor more suitable for our line of business.

Very respectfully,

Louisville, Ky., Jan. 9, 1906.

HAGER & HETSCH.

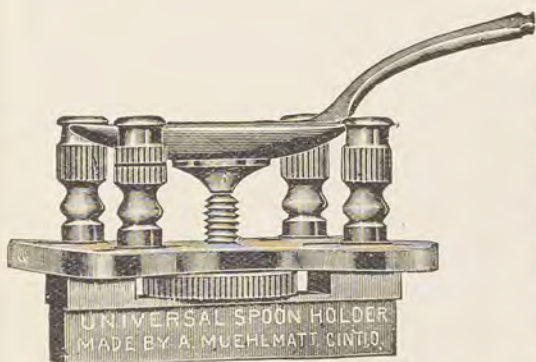
Our No. 5 Bulletin (just issued) will give a full description as to dimensions, prices, etc. Do not fail to send for it.

W. W. Oliver Manufacturing Co., Manufacturers
1490-1492 Niagara St., BUFFALO, N. Y., U.S.A.

UNIVERSAL IN EVERY WAY

Muehlmatt's Universal Spoon-Holder

FITS ALL ENGRAVING BLOCKS



Will hold all sizes of spoons from the smallest to the largest, either the bowl or the handle. It will fit any engraving block and may be used for holding Forks, Knives, Medals, Coins, Locketts, etc., and requires neither key nor wrench to operate. The workmanship and material are of the best. The work support has half-inch vertical adjustment, and is provided with a ball joint adjusting itself readily to any shaped article placed upon it. The four posts are provided with steel flanges, the under side of which are faced with fibre washers, offering a splendid surface for adjusting the work without injury to same. The flange posts are quickly adjusted to position, and one post only needs to be moved to insert articles of the same size. When inserting articles to be engraved the post should be brought to the work before raising the work support. Lower the work support before releasing the post when removing work from holder.



Made by ADOLPH MUEHLMATT, Cincinnati, Ohio

The maker's name stamped upon the HOLDER carries with it a full guarantee as to its practicability and finish.

Price, \$3.00 each



Muehlmatt's Improved Ring-Holder

This illustration conveys a fair idea of the working principles of this new Engraving Block Attachment; it is adjustable to all sizes of rings, and will fit all makes of Engraving Blocks. Engravers who have experienced difficulty in holding rings while engraving the inside will appreciate this attachment.

Made by ADOLPH MUEHLMATT, Cincinnati, Ohio

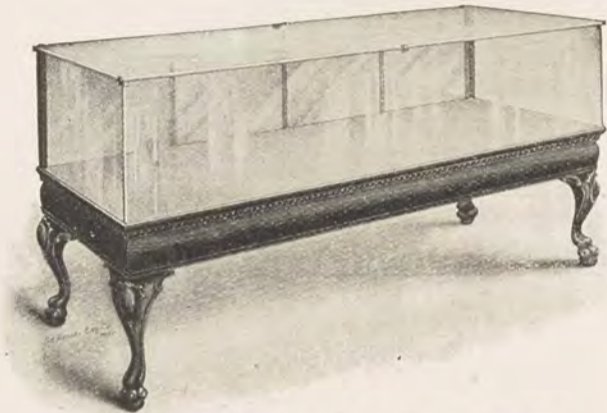
Price, \$1.00 each

SUSSFELD, LORSCH & CO., WHOLESALE AGENTS, 37 MAIDEN LANE
NEW YORK

Start Your Inquiries NOW for Your Fall Re-Outfitting

It is always best to give the designer all the time you can afford, so that his sketches embody your and his own best thought.

It is also imperative to insure good delivery that construction, and especially finish, be not slurred. As you know, high-grade work demands extra care and extra time.



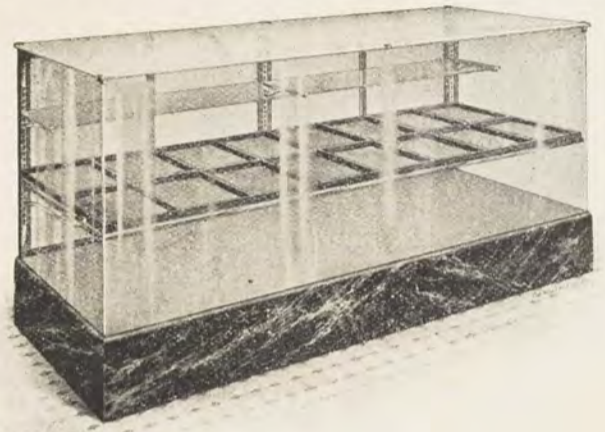
Our "AMERICAN BEAUTY" Table Case, No. 410

Our designers are **all artists.**

Their sketches are the talk of the fixture world.

We solicit the **highest grade work.**

Consult us and you will be the gainers thereby.



Our "AMERICAN BEAUTY" Floor Case, No. 403

Send for copy of our special jewelers' catalogue, and folders accompanying same.

The Grand Rapids Show Case Company, Grand Rapids, Mich.

THE LARGEST SHOW CASE PLANT IN THE WORLD

Some Facts About Our Watch School which we will gladly prove to any one interested

FOUNDED at La Porte, Ind., in 1886, by J. R. Parsons as Parsons' Horological Institute, the pioneer watch school.

REMOVED to Peoria, Ill., in 1892. Became Horological Department of Bradley Polytechnic Institute in 1897.

Nearly **3000 STUDENTS** have gone out from our school and are now at work in 44 States and Territories and several in foreign countries.

OUR HOROLOGICAL BUILDING AND EQUIPMENT is unequaled by any other in the world for space, light, ventilation and perfect fitness for the purpose. This building and its equipment cost over \$38,000 and is occupied only by the Horological Department.

OUR INSTRUCTORS are experts and specialists and can give you all the worth knowing in the various branches. We have the largest horological faculty in America.

THE DEMAND ON US FOR WORKMEN has been greater the last year than ever before, showing that students from a good school are thoroughly appreciated by the wide-awake jeweler. Our graduates never fail to find good places.

OUR STUDENTS say they can learn more with us in a year than in a store in seven years; and further, that they learn things better than they ever could in a store. This is the expression of students who have had several years' store experience.

We teach **WATCH WORK, ENGRAVING, JEWELRY AND OPTICS.**

ARE YOU INTERESTED? Send for our catalogue and ask us all the questions you like; we'll tell you the truth and let you judge for yourself.



Horological Department, Bradley Polytechnic Institute, Peoria, Ill.



AN AUTOMOBILE FREE



Old Reliable W. & S. B. ★

1866—————1906

Forty years ago W. & S. Blackinton made the first gold filled, hard soldered, fancy link vest chains. By way of celebrating our

FORTIETH BIRTHDAY

we beg to announce a plan of direct interest to the entire jewelry trade. Blackinton Old Reliable 1-10 chains are the best known chains in the world, and we want every jeweler to handle them, for they have no superior in design, finish or wearing qualities. As an incentive to the retail jeweler, we announce the following:

In January, 1907, we will give to the retail jeweler who uses the greatest number of Blackinton chains between May 1, 1906, and January 1, 1907, an Automobile Touring Car of standard grade and 1907 model.

To the retail jeweler who uses the second greatest number we will give an Automobile Runabout of standard grade and 1907 model.

To the retail jeweler who ranks third in this contest we will give a Motorcycle of standard grade and 1907 model.

The retail jeweler who ranks fourth in this competition will receive an American Watch Lathe of latest design.

All other retail jewelers who use Blackinton chains will share in the following provisions:—

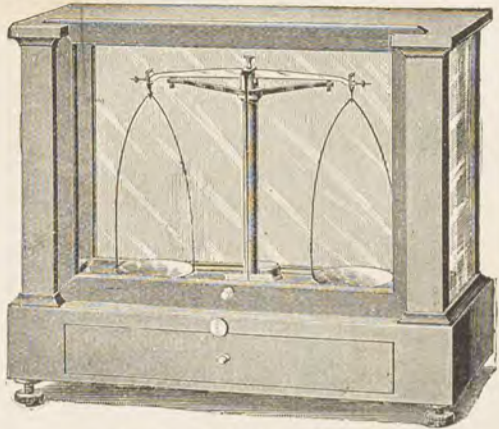
Between May 1, 1906 and January 1, 1907, every Blackinton Old Reliable W. & S. B. ★ 1-10 or Globe Filled $\frac{1}{8}$ vest or Dickens chain will bear an aluminum tag, illustrated herewith. These tags have a definite value and should be preserved.

Upon receipt of forty tags from any retail jeweler, we will send free of charge one of our Globe one-eighth gold filled vest chains. For seventy-five tags we will send two Globe chains and for one hundred tags we will give three Globe chains. Retailers should preserve the tags as fast as goods are placed in stock and should decline to receive from jobbers chains that do not bear the coupon tag.

We offer a choice of twelve patterns of Globe one-eighth gold filled chains in selecting premiums, and premium lists will be mailed free on request. Globe one-eighth gold filled chains are guaranteed to assay one-eighth, are gold soldered and are warranted to give satisfaction for twenty years. Old Reliable W. & S. B. ★ 1-10 chains are gold soldered, and are the perfection of design, finish and durability. All Blackinton chains are made by the Wearbest process which hardens the gold and greatly increases the wearing qualities. This process is owned by us and no other chains are made in this manner.

Retailers who find difficulty in obtaining Blackinton chains may, upon written request, receive a list of jobbers handling the goods in their territory, or a selection package will be sent through any jobber whom the retailer may designate. For further particulars, address the manufacturers and watch this space.

W. & S. Blackinton Co., North Attleboro, Mass.



No. C. DIAMOND BALANCE

HERMAN KOHLBUSCH, SR.

MANUFACTURER OF

Fine Balances and Weights

FOR EVERY PURPOSE
WHERE ACCURACY IS REQUIRED

194 Broadway, New York, N. Y.

SEND FOR CATALOGUE



UPRIGHT POCKET DIAMOND SCALE

NEW
IMPROVED



DETACHED



ATTACHED
ACTUAL SIZE

THIS PART is buttoned through the cuffs and then attached through base to lower button with a snap fastener same as a glove.

THIS PART is a ball top Collar Button and used same as any sleeve button. The ball holds at any angle when attached.

"ITSOEZIE"

(IT-IS-SO-EASY)

BUTTON CUFF FASTENER

Snaps Together A simple device for attaching and detaching cuffs.

For Sale by All Leading Jobbers

The Gold Plate Cuff Fasteners are put up in handsome glass-top display cases holding 3 dozen pairs, each pair in a small individual box.

Price \$24.00 per Gross Sets

Less 6 per cent. 10 days; 5 per cent. 30 days

Also made in Nickel to Retail for 10 cents a set

Chicago Cuff Holder Co., 185-191 Adams Street, Chicago



DETACHED.

HOLDS
IN ANY
POSITION



FIRE

SEND AT ONCE

for the most complete Catalogue of Fire and Police Department Badges ever published

THE C. G. BRAXMAR CO.

Manufacturers No. 10 Maiden Lane, NEW YORK

POLICE

United States Smelting and Refining Works

L. & M. WOLLSTEIN

Office: 16 John Street, New York

Telephone, 5644 Cortlandt

Works: 17 John St., New York

Sweep Smelters and Assayers

Refiners of all kinds of Gold, Silver, Platinum, Waste
Manufacturers of Sterling Silver

Highest prices paid for Old Gold, Old Silver, Platinum Scraps
Ore and Bullion Assays a specialty

Proprietor of Platina Melting Furnace and Gold and Platina
Filing Separating Process of greatest advantage to manufacturers
of Platina Jewelry

The Matchless Pocket Cigar Lighter

The only perfected cigar lighter on the market

Made in Gun Metal, Aluminum, Brass, Silver Plate
Gold Plate and Solid Gold

Write for Prices

The Matchless Cigar Lighter
Manufacturing Co.

Office and Salesroom

16 John Street

New York, N. Y.



E. H. H. SMITH SILVER CO.

"THE OAK"

Silversmiths' Bldg.
Chicago, Ill.

BRIDGEPORT, CONN.

Manufacturers of

Sterling Effects

in Plate

A GOLDEN RULE

Trade with us as you would have others trade with you

Get on our satisfied list and get the refining end of your business off your mind

THE BROWN & DEAN COMPANY

Gold and Silver Refiners

102 and 104 Richmond Street

Providence, R. I.

Art Metal Ceilings

FOR INTERIOR FINISH



Write us for information and prices

The Canton Steel Roofing Co.

CANTON, OHIO

New York Branch, 525 West Twenty-third Street
Minneapolis Branch, 253 Second Ave. S.

Very attractive.
Admit of highest degree of ornamentation.
A nice ceiling at low cost.
Will not crack, burn, peel or fall off.
The right kind for every jewelrystore.
Insist upon having "Canton" Metal Ceilings when you remodel your room. You will never regret it.



SAMS' FLUX is the best for hard soldering

SAMS' SAFETY

BLOWPIPE OUTFIT FOR JEWELERS

The original Sams'— Greatly improved

FOR SALE BY ALL JOBBERS

- Outfit complete . . . \$12.50
- Outfit without bellows, 8.50
- Generator (B) . . . 6.00
- Blowpipe (A) . . . 2.50
- Foot Bellows (C) . . . 4.00
- Sams' Flux25

Metal Specialties Mfg. Co.
(Sole Mfrs.)
18-24 W. Randolph St., CHICAGO



Generator. Size 8 1/2" high, 5 1/2" diam.

C. O. BAKER, Pres.

C. W. BAKER, Vice-Pres.

PLATINUM

and its alloys, made expressly for jewelers' use

GRAND PRIZE, UNIVERSAL EXPOSITION

St. Louis, 1904

GOLD MEDAL, Lewis and Clark Centennial Exposition
Portland, Oregon, 1905

Awarded

BAKER AND CO., INC.

Newark, N. J.

120 Liberty St., New York City



More money for jewelers

There's plenty of money in selling *Victor Talking Machines and Records*, and the majority of jewelers have salesmen with plenty of time which they can profitably use in this way. You might just as well get your share of this business, for your rent and expenses keep right on even in your dull seasons when people are not buying jewelry.

Victor Talking Machines and Victor Records

are advertised every month to 49,000,000 magazine readers, and dealers in all parts of the country are reaping the benefit. One dealer in a town of 25,000 population ordered \$100,000 worth of *Victor* goods in one year.

Let the people in your locality know you have those *Victor Talking Machines and Records* they see advertised, and you can count on working up a splendid trade for yourself. Every *Victor* you sell means a liberal profit and many subsequent sales of *Victor Records*—new records are issued every month.

Think it over, and remember prices are fixed—no cutting—and profits are larger than on any other.

Let us send you full particulars—use the attached coupon.

Victor Talking Machine Co.
Camden, N. J.

FILL OUT
Victor Talking Machine Company, Camden, N. J.
Please send me illustrated catalogue of Victor Machines and Records, with full trade information and names of my nearest distributors.

CUT OFF
MAIL TODAY

Name _____
Street _____
City _____
State _____



EVERY SMOKER WANTS ONE

The most useful pocket lighter ever invented. **Throw away your matches.** The "Instanto" produces a steady flame, **without matches**, by simply removing the cover, as shown in illustration. Lights a cigar, gas jet, kindles a fire, or shows the way in the dark. Useful every day and night of the year.

The "Instanto" Pocket Cigar Lighter

("Instanto")
Trade-Mark

("Instanto")
Trade-Mark



Pat. June 27, '05

IGNITED BY AIR

Will not ignite unless exposed to the air. Absolutely safe. Always dependable. Conveniently carried in the vest pocket. With ordinary care is practically indestructible. Nickel-Plated Lighter, Gun Metal, Sterling Silver, Solid Gold and Gold Filled, plain, etched and engraved. Special prices upon application.

The Public and Trade are cautioned against purchasing other Cigar Lighters of a similar nature. Law suits are now pending. The jewelry trade, wholesale and retail, will find the "Instanto" an unusually good seller, as it is extensively advertised in all the leading magazines. *Salesmen Wanted*

G. L. STEINREICH & CO.

Dept. 21 190-196 West Broadway, NEW YORK

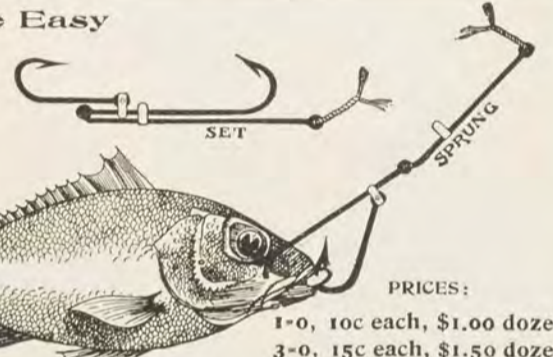
All infringements will be vigorously prosecuted.

1/2 size.

Fishing Made Easy

By using

THE GREER PAT. LEVER HOOKS



PRICES:

1-0, 10c each, \$1.00 dozen
3-0, 15c each, \$1.50 dozen

THE BEST FISHHOOK ON EARTH for Sea, Lake and River Fishing. No losing bait. Nor coming home without your largest fish. No breaking loose or tearing out. No one can afford to fish without one. No springs to get out of order. It is simple and strong, being a LEVER, the harder a fish pulls the stronger it will hold him. It is easily adjusted to all kinds of fishing by sliding the little clamp on the rod. We claim for the LEVER HOOK that a fish does not have to be hooked on the bait hook to get him, if he pulls on the bait the larger hook will spear him.

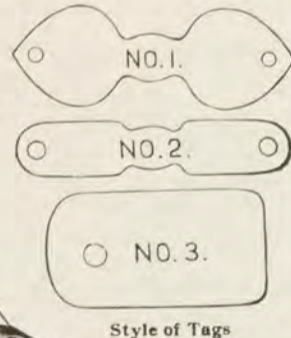
Made in two sizes only, 1-0 and 3-0. If you cannot get them from your local dealer order direct from us. How to send money: 1c. and 2c. stamps or postal order, not personal checks.

GREER MFG. CO., Atlanta, Ga.

"THE" Machine for Tagging Rings, etc.

Complete Outfit consists of { Our Eyelet Machine, 1000 Celluloid Tags, 1 Bottle Ink

Price complete, \$5.00 net



Style of Tags

Hand Pliers are Useless for Tagging Rings



Pat. applied for

The HOLD-ON CLUTCH

Best Safest Simplest

YOU slide the Clutch on— IT does the rest



Pat. May 20, '02

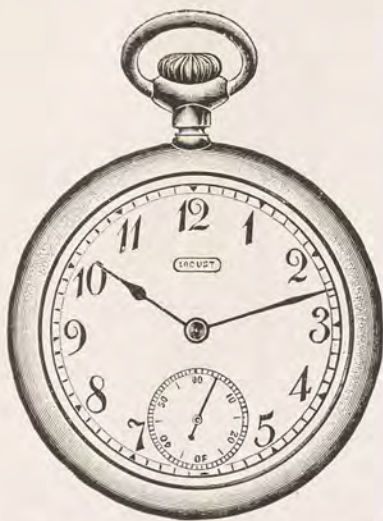
A Splendid Seller Retailing at 50c.

Scarf Pin Insurance

Ask your Jobber or write to

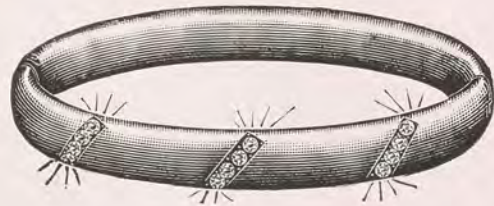
Hold-On Clutch Co., 33 Gold St., NEW YORK

**Diamonds, Watches
Clocks, Jewelry
Silverware
and Novelties**



733

**Watchmakers' Tools
and Materials
Jewelers' Supplies and
Optical Goods**



The new 20-year Thin Model S. B. & B. American Case with Swiss Lever Escapement, Pendant-Set Movement. Price, complete, \$5.50 net

Our representatives on the road carry a complete line of Solid Gold and Gold Filled Rings, Brooches, Scarf Pins, Bracelets, Chains, Fancy Combs, American and Swiss Watches and American Cases, etc., for your inspection and immediate delivery.

Our new line of Bracelets contain an endless variety of the latest and most attractive designs. Memorandum Packages of Jewelry sent to any reliable jeweler.

Our representatives are now in New York and New England States.

We fill orders from any Catalogue on the market. Mail Orders filled promptly and accurately.

KORONES BROS., 32 Maiden Lane and 38 Chrystie Street, New York

This is How it Happened



Some few years ago we determined that first of all we were going to make the best CUCKOO CLOCKS that brains and skilled craftsmanship could put together; then we were going to sell them for as little as we could.

The expected happened. Quality won out as it always does. We have a country-wide reputation for making the best CUCKOO CLOCKS that have ever been produced, and with that reputation has come the largest CUCKOO CLOCK business in the world.

WRITE FOR OUR CATALOGUE AND LITERATURE

AMERICAN CUCKOO-CLOCK COMPANY
Cuckoo Clocks and Unusual Clocks
STATION S. PHILADELPHIA

Established in 1888

L. P. TARBOX

Baltimore Jewelers' Supply Co.

- A Webster-Whitcomb Lathe, tip-over rest, 10-chuck combination
- A Speed Countershaft, nickel-plated
- A Foot-wheel, swing treadle, 40 pounds

All for \$40.65, net



- | | |
|--|-----------------|
| Staffs | Per Doz. \$1.00 |
| " Polished | 1.25 |
| 3-inch Round or Square Files | 1.00 |
| Imperial Main-springs | 1.00 |
| Paradis Main-springs | 1.00 |
| Fine C. and F. Jewels | 1.00 |
| Jobbing Stones | |

TOOLS AND MATERIALS

210 E. Baltimore St., Baltimore, Md.

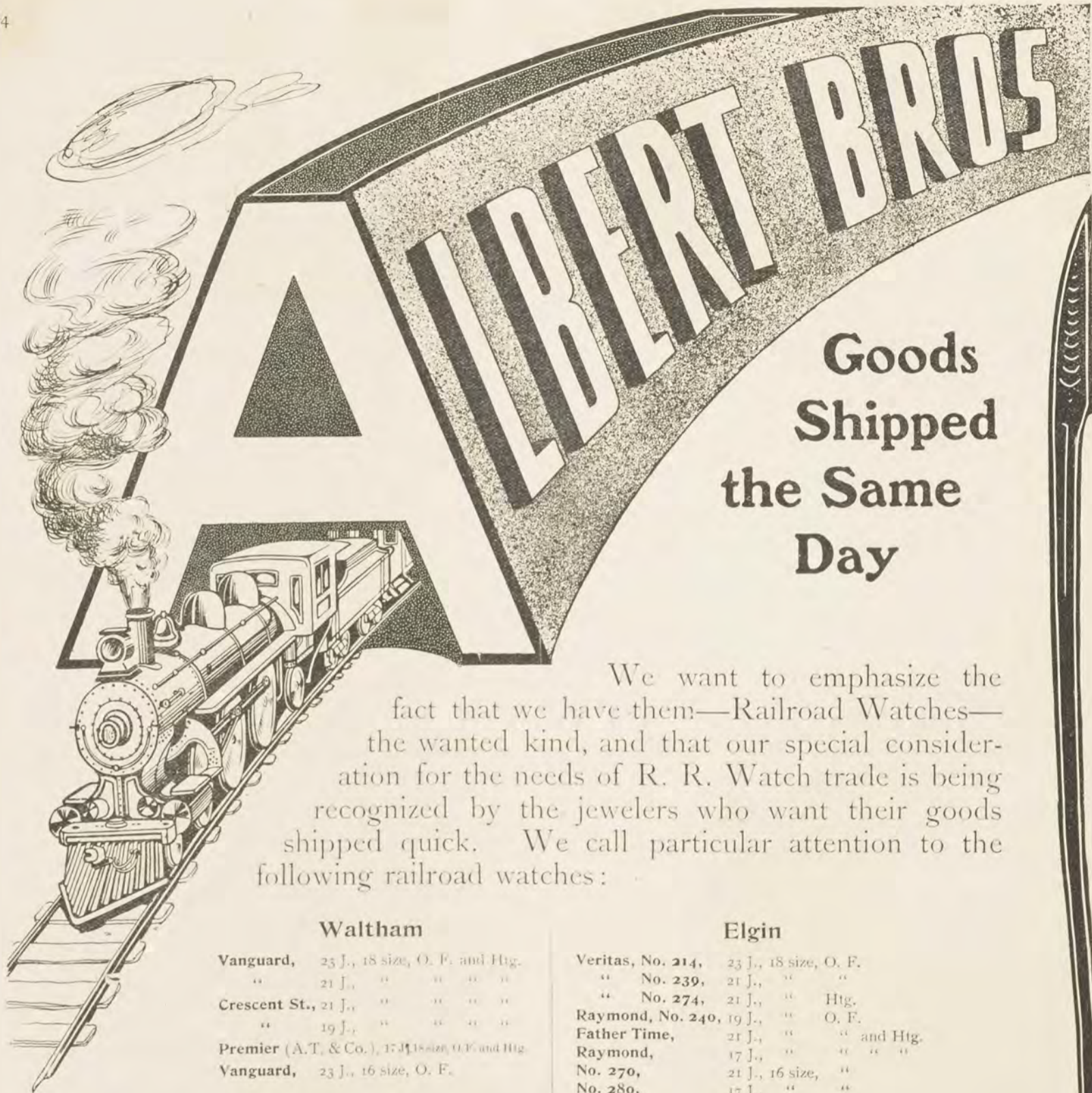


A Square Deal To All

That's the reason our factory is **always** running **full time**. The latter part of May our salesmen start out with **some** new goods that are corkers.

ASK TO SEE THEM

IRONS & RUSSELL, 20th Century Charm Makers
New York Office 11 MAIDEN LANE Main Office and Factory 95 Chestnut St., PROVIDENCE, R. I.



**Goods
Shipped
the Same
Day**

We want to emphasize the fact that we have them—Railroad Watches—the wanted kind, and that our special consideration for the needs of R. R. Watch trade is being recognized by the jewelers who want their goods shipped quick. We call particular attention to the following railroad watches:

Waltham

Vanguard,	23 J., 18 size, O. F. and Htg.
"	21 J., " " " "
Crescent St.,	21 J., " " " "
"	19 J., " " " "
Premier (A.T. & Co.),	17 J., 18 size, O. F. and Htg.
Vanguard,	23 J., 16 size, O. F.

Elgin

Veritas, No. 214,	23 J., 18 size, O. F.
" No. 239,	21 J., " "
" No. 274,	21 J., " Htg.
Raymond, No. 240,	19 J., " O. F.
Father Time,	21 J., " " and Htg.
Raymond,	17 J., " " " "
No. 270,	21 J., 16 size, "
No. 280,	17 J., " "

Consult our 1906 Catalogue for details and prices

ALBERT BROTHERS

WHOLESALE JEWELERS

N. E. Cor. 4th & Plum Streets, CINCINNATI, OHIO

The Quick-Delivery House





L. S. & CO.

Trade-Mark

THE SECURITY OF A STAMPING LAW

Is found in our trade-mark. It means a fixed standard quality with the additional assurance of distinctive style and faultless construction. Never was our supremacy in chain manufacture so evident as in the new line prepared for this season and now in the hands of the jobbers. If you are dissatisfied with the sale and profits of your chain stock, this line affords you the remedy. Insist on seeing our new patterns.

LOUIS STERN & CO.

Chainmakers and Silversmiths

PROVIDENCE R. I.

1906
1847

59

We emphasize 1847 in the trade-mark "1847 ROGERS BROS." for a number of reasons:

It was in 1847 that Rogers Bros. discovered their process of electro-silver plating.

The standard set then has been maintained by the makers of

"1847 ROGERS BROS."

for 59 years.

Old age isn't everything, but honored old age comes pretty near to being that.

The reputation of "1847 ROGERS BROS." has been growing steadily since 1847. The buying public have found it to be indeed

"Silver Plate That Wears"

They demand "1847 ROGERS BROS." goods of the dealers.

The dealer knows that in handling "1847 ROGERS BROS." goods he has silver backed by the makers—the largest and best known in the world. Moreover, he knows that he will be aided during twelve months of the year by the liberal co-operative advertising of the makers. If the dealer so desires, he is helped in his local advertising with electrotypes, show cards, circulars, signs and posters.

Meriden Britannia Co.

(International Silver Co., Successor)

Meriden, Conn.

There have been many "big years" in sales of "1847 ROGERS BROS." goods, but 1906 is far ahead of all others.

1906
1847

59

1906
1847

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1906
1847

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1906
1847

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1906
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A monthly journal devoted to the interests of the Watch, Jewelry and Optical Trades. The purpose and policy of this journal are the protection and promotion of all trade interests. A rigid censorship assures the reliability and worth of all reading matter, and the exclusion of all that is not trustworthy or relevant. We decline to insert advertisements that are unreliable, or misleading in representation, defamatory in statement or detrimental to the welfare of the trade.

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THE KEYSTONE

A Monthly Journal Devoted to the Interests of the Watch, Jewelry and Optical Trades

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THE KEYSTONE PUBLISHING CO.

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In the Cause of Organization

THE American Retail Jewelers' Association has taken a wise step in suggesting a convention of all the trade for the purpose of forming a truly national organization, or, at least, one sufficiently comprehensive to justify its title. Many considered that the adoption of the title "American" by the Michigan Association was somewhat gratuitous, in as much as some of the older organizations were blandly ignored, and these latter not unnaturally resented the appropriation of so broad a title by a mere State or sectional association. Realizing its mistake, the American Association now proposes to hold a general trade convention at Rochester, N. Y., on August 3d and 4th, the two days following the convention of the American Association of Opticians, "for the purpose of merging the organization into a representative national association, which shall be composed of representatives from every association."

This is the logical course to pursue, if it is desired to make the present movement general and effective. The American Association also makes the following excellent suggestion: "That the delegates from the various associations represented at the convention, and the retail jewelers who may be present from such States as do not have any State or local association, shall have such standing in the convention as may be determined upon by a committee on credentials, with the approval of the convention." The convention, if such be held, should be wide open to all of the trade who wish to attend, irrespective of present organizations, and from these the best material should be chosen for the purpose of nationalizing the movement and giving it representative strength and vitality. The place suggested for the convention, Rochester, N. Y., is inconveniently situated for the Western trade, but this will be offset by the larger attendance and favorable railroad rates, which will be assured by the simultaneity of the opticians' convention.

California's Appalling Visitation

OF all the mysterious phenomena of nature the earthquake is the most awesome and terrifying. Against most other calamitous visitations some precautionary measure can be taken, but in the presence of nature in violent convulsion man, with all his boasted power and intelligence, stands helplessly aghast. Even the dread volcano gives some measure of warning of its eruption, but no subterranean rumbling or tremor heralded the seismic upheaval which on the morning of April 18th shook to fragments the very heart of the beautiful city by the Golden Gate and precipitated the conflagration which reduced two-thirds of its entire extent to smouldering ruins. The destruction of San Francisco has gone on record as the greatest disaster of its kind in the history of the country, and, in the aggregate loss of property, probably the greatest in all recorded time, for be it remembered that the area of destruction was not confined to the ruined city, but extended over a goodly section of the State.

Considering that the upheaval took place in the very heart of a populous city it seems providential that the loss of life should have been limited to less than 300 souls. Compared with the Johnstown flood in which 3000 met their death and the Galveston flood in which 7000 perished, San Francisco has cause to be thankful even in its great sorrow. The latest estimates place the loss of property at the enormous total of \$300,000,000, but as the payments by insurance companies will likely aggregate nearly half this sum the net loss to the city will be materially reduced and the insurance money itself will form a building fund of goodly proportions. Of course no estimate can be made of the vast loss accruing from the sudden cessation of business and the far-reaching trade demoralization incident thereto. Loss by fire is an actual loss, whether or not it be covered by insurance, and the effects of the San Francisco calamity will be felt more or less in all the ramifications

of business. It is gratifying that the insurance companies have expressed their willingness to pay all obligations without respect to saving clauses.

RECALLING the momentous events of the past two weeks that which deserves particularly to be enshrined in story is the magnificent outburst of generosity prompted by the disaster. Never in the history of earthly calamity did the humane instincts of any people respond so promptly and generously to the cry of distress as did the people of the United States in this dreadful visitation. The government of the country, of the State, of the city and the village—each vied with the other in hastening relief to the afflicted sufferers. Rich and poor, organizations and individuals, church and school, the man of wealth and the struggling toiler, the parent and the child—all made common cause in the great national effort to alleviate the anguish and privations of the homeless thousands. The banks, the railroads, the corporations, the trusts—all forms of organized industry emphatically belied their "soulless" reputation by most bountiful assistance. Our country has given many unique manifestations of its peculiar greatness, but none that will shine so luminously in the pages of history or reflect greater glory on our beneficent institutions than this most magnificent rally to the rescue of the stricken city. The contributions at this date—one week after the disaster—amount to the enormous total of \$20,000,000, and this takes no account of free transportation of railroad and steamship and vast donations of all manner of supplies.

No less worthy of admiration than the national generosity was the almost superhuman management that brought order out of chaos, averted crime and pestilence and reduced personal discomfort to an incredible minimum. A fortunate circumstance was the presence of the military, whose vigorous enforcement of law and order inspired a salutary fear in the lawless and a sense of security in the law-abiding that greatly facilitated the control of the situation. Indeed in their mastery of the exigency the authorities gave the world such an exhibition of coolness, courage and executive efficiency as is without parallel in the annals of human catastrophe.

BUT most startling of all, as an exhibition of stalwart Americanism, is the magnificent preparatory work already being accomplished in the restoration and rebuilding of the city. While the flames were still devouring palace and hovel, the initial steps for reconstruction were taken, and before the bricks had cooled or the smoke had cleared away the ruined district had assumed the

appearance of a human beehive, where no drones were tolerated. Money by the million was rushed to the banks, which opened for business in crude quarters, architects and draughtsmen were invited from all parts of the country, tradesmen from anywhere and everywhere were offered flattering wages for their services, immense orders were placed for constructive material and a new city planned which will vie in beauty, if it does not excel, any city in the world. The water supply and the lighting and drainage systems have already been attended to, the street cars are running, railroad lines are being laid into the heart of the burned district to remove the debris and deliver the materials, and in a few weeks the birth of the new and greater San Francisco will be announced. In the whole story of human effort, there is no parallel for this spontaneous ebullition of well-directed energy. Even the dread forces of nature itself seem to collide in vain with the irrepressibility, resourcefulness and virility of American manhood.

Jewelry Trade Leads in Relief Work

THE same noble spirit which inspired the magnificent outburst of national generosity, referred to in the preceding article, was manifested in even greater degree in the consideration and liberal treatment proffered the jewelers of the stricken city by the manufacturing and wholesale branches of the trade. Instances are known to us in which not merely the necessary credit, but substantial financial aid was promptly offered by individual companies and firms, and all have been assured of the most extreme leniency in the discharge of their obligations. Letters before us from the wholesale and manufacturing trade manifest the deepest solicitude and eagerness to know individual needs, so that there may be no delay in proffering a helping hand. This fraternal spirit, coupled with large contributions, will do much to alleviate the terrible blow suffered by the trade. The contributions of the trade to their afflicted brethren were of magnificent proportions.

The International Silver Co. contributed \$5000, to be distributed by their San Francisco agents, Morgan & Allen Co. and A. I. Hall & Son. The Dennison Mfg. Co. also contributed \$5000, each of their five offices donating \$1000. Tiffany & Co. also contributed \$5000. Perhaps the most unique contribution from a member of the trade was that of the Oneida Community, Ltd., who forwarded a carload of preserved vegetables. Immediately after the disaster, the company wired to the mayor of San Francisco asking if supplies of this sort were

needed, and upon receipt of an affirmative reply, they quickly made arrangements for packing and dispatching a carload of vegetables by fast-train schedule. It may be news to some of our readers, that the efforts of this company are not confined to the manufacture of silverware, for which they are so noted. In addition to silverware, they manufacture several other lines of goods, and preserve fruits and vegetables, and it is said that their line of these goods is the largest on the market, and like their silver-plated ware it has a very high reputation for quality. The carload of preserved vegetables sent to San Francisco was valued at upwards of \$1500, and it is in the best possible form for immediate use. Its receipt will, no doubt, be greatly welcomed by the relief authorities in the stricken city, and it is a splendid testimonial of the generosity of the directors of this company.

In recording the generosity of the trade, distinctions would be invidious. All came promptly to the rescue, as magnificently shown in the lists of contributors which follow. And in regard to these lists, we wish it to be understood that they are by no means complete, and do not contain the contributions of the trade in Pittsburg, Cincinnati, St. Louis, Kansas City, etc., as the names from these cities had not reached us at the time of going to press.

The trade campaign of organized relief was promptly inaugurated by the Jewelers' Board of Trade, of New York, who issued an urgent call for contributions and appointed the following committee to take charge of the work:

C. G. Alford	of C. G. Alford & Co.
H. A. Bliss	of Gorham Mfg. Co.
O. G. Fessenden	of Hayden W. Wheeler & Co.
Wm. T. Gough	of Carter, Howe & Co.
Chas. R. Jung	of Jung, Staiger & Klitz.
F. H. Larter	of Larter & Sons.
Samuel H. Levy	of L. & M. Kahn & Co.
Max J. Lissauer	of Lissauer & Co.
Ludwig Nissen	of Ludwig Nissen & Co.
A. K. Sloan	of Sloan & Co.
Geo. W. Street	of Geo. O. Street & Sons.
Leopold Stern	of Stern Bros. & Co.
Seth E. Thomas	of Seth Thomas Clock Co.
Leo Wormser	of Julius King Optical Co.

The response to this call was prompt and liberal, as the following list of contributions shows:

\$1,000 each.	Whiting Mfg. Company
Kryn, Jac. & Wanters Bros.	Van Wezel, S. L.
Gorham Mfg. Co.	Van Dam, Eduard
Frankel's, Jos. Sons	\$350 each
Kahn, L. & M. & Co.	Edward E., Watch Co.
Oppenheimer Bros. & Veith	\$250 each.
Stern Bros. & Co.	Barrows, H. F. & Co.
Strasburger's, L. Son & Co.	Benedict Bros.
Lorsch, Albert & Co.	Fink, Jos. H. & Co.
Arnstein Bros. & Co.	Gattle, Ettinger & Hammel
Wood, J. R. & Sons	Jacobson Bros.
Tiffany, Louis C.	Larter & Sons
Black, Starr & Frost	Richardson, Enos & Co.
\$500 each.	Dreicer, J. & Son
New York Standard Watch	Scheer, William
Co. and Employees	Van Antwerpen, Vanden
Ansonia Clock Co.	Bosch & Co.
Brühl Bros. & Henius Co.	Starr, Theodore B.
Keller, Chas. & Co.	Gattle, E. M.
Untermeyer, Robbins & Co.	\$200 each.
Carter, Howe & Co.	Bowden, J. B. & Co.
Eisenmann Bros.	Bryant, M. B. & Co.
Jewelers Relief Association	Hammel, Riglander & Co.
Nissen, Ludwig & Co.	
Sussfeld, Lorsch & Co.	
Billings, Chester & Son	
Robbins & Appleton	

\$150 each.
Roy Watch Case Co.
Wheeler, Hayden W. & Co.

\$125 each.
Prager, Morris & Co.

\$100 each.
Beinhauer, F.
Ciner & Seeleman
Friedlander, Jos. & Bro.
Hirsch & Flashner
Katz, A. R. & Leudan Co.
Adler's, Chas. Sons
Alford, C. G. & Co.
American Watch Case Co.
Barthman, Wm.
Battin & Co.
Eichberg & Co.
Goldsmith, Ingomar & Co.
Goodfriend Bros.
Hahn, Rud C. & Co.
Hedges, W. S. & Co.
Holbrook, John S.
Jewelers' Circular Pub. Co.
Jung, Staiger & Klitz
Ketcham & McDougall
King, Julius Opt. Co. (N. Y. Office)
Kohn, Frank & Shire
Lambert Bros.
Lindenborn, Sol.
Lissauer & Co.
Marx, Kossuth & Co.
Mathey Bros., Mathez & Co.
Mount & Woodhull
Nordlinger's, H. Sons
Oppenheimer, Z. A.
Oppenheimer, H. Z. & H.
Richardson, J. W. & Co.
Silberman, Kohn & Walenstein
Sloan & Co.
Street, Geo. O. & Sons
Thomas, Seth E.
Wallach, A. & Co.
Waterbury Clock Co.
White, N. H. & Co.
Wood, C. F. & Co.
Zimmerman, Henry & Co.
Armeny & Marion Co.
Brotherhood of Traveling Jewelers
Champanois & Co.
Freund, Henry & Bro.
Gesswein, F. W. & Co.
Hedges, A. J. & Co.
Kaufman, Fred
Kinscherf, Wm.
Reichhelm, E. P. & Co.

Schwob, Adolphe
Shafer & Douglas
Shiebler, George W. & Co.
Shiman Bros. & Co.
Smith, C. Sydney & Co.
Rudolph & Snedeker
Snow & Westcott
Strasburger, B. L. & Co.
Tannenbaum, L. & Co.
Townsend, David C. & Co.
Van Gelder, Kahn & Co.
Wise, Wm. & Son
Wodiska, Julius
Woodside Sterling Co.
Zimmerman, Rees & Co.
Cross & Bequelin
Allsopp Bros.
Carrington & Co.
Cohn, S. & Co.
Durand & Co.
Oppenheimer, Henry E. & Co.

\$75 each.
Globe Optical Co.

\$50 each.
Du Bois Watch Case Co.
Smith, Wm. & Co.
Zugsmith, A.
Bodenheimer & Jaskow
Day, Clark & Co.
Freundenheim Bros. & Levy
Friedlander, R. L. & M.
Goldsmith, Chas. P. & Co.
Heller, L. & Son
Henrich, H.
Kaiser, David & Co.
Kaufman, Louis & Co.
Marx, Charles
Merritt, H. D. Co.
Peckham Seamless Ring Mfg. Co.
Racine, Jules & Co.
Sexton, Wm. L. & Co.
Smith & North
Straus, Jacob & Sons
Trout, Chas. L. & Co.
Belais, H. & E. O.
Benedict & Warner
Bernstein, J.
Braxmar, C. G. Co.
Brogan, Thos. E. Co.
Chupp & Sons
Cokefair, Isaac W.
Howard & Cockslaw
Didisheim, Hipp. & Bro.
Farrand, O. M.
Gilbert, Wm. L. Clock Co.
Hicks, W. S. Sons

Hirsch & Hyman
Koch, Jonas
Kohn, Alois & Co.
Lawson, Samuel
Low & Florenzie
Mamluck, Julius & Co.
Marchand Freres
Ollendorff, I. Co.
Osmun-Parker Mfg. Co.
Perley Bros.
Quayle, T. & Co.
Saunders, Meurer & Co.
Wolfsheim & Sachs
Belais, & Cohn
Goertz, C. P.

\$25 each.

Allsopp & Allsopp
Baum, Herman
Caesar, Julius & Co.
May, Frank T. Co. (The)
Korones Bros.
Meyrowitz, E. B.
Rosenbaum & Adler
Schappel, Schanbacher & Bros.
Webster, A. A. & Co.
Boesse, F. J.
Boston Optical Company
Bulova, J.
Englander, S.
Froehlich, H. & Co.
Geiger & Bauer
Grinberg, A. J. & Son
Hirschberg, Sig.
Hodenpyl & Walker
Jonassohn, Osear T. & Co.
King, Raichle & King
Kleinschmidt, Howland & Co.
Levy, Manasseh & Co.
Link & Angell
Little, C. W.
Queen City Ring Manfg. Co.
Tarrant & Gismond
Spencer Opt. Co.
Adler, L. & Son
Bernheim & Beer
Brunner, F. I.
Brunner's, Jos. Sons
Elbe, Isidor
Goddard, Ira
Goldsmith, A. & Son
Greason, J. R.
Hahn & Co.
Hayes Bros. Co., The
Keim, Frederick
Henckel, G. A. & Co.
Heyman & Kramer
Kent & Woodland

Kinna, Wm. H.
Lamont, John & Son
Leonhardt Mfg. Co., The
Long & Koch Co., The
Marsellus, Pitt & Co.
May, Morris & Co.
Powell, S. G. & Co.
Price, Cyrus
Renzichausen, Wm. F. Co.
Robert, E. E.
Rosenberg, A.
Schenkein, H. & Sons
Spier & Forsheim
Sterne, L. H.
Thomas, Seth E., Jr.
Treibs Bros.
Weinberg, E. M. & Co.
Yawger-Demmer Co., The
American Morocco Case Co.
Arch Crown Mfg. Co.
Cash
Corey Bros. Co.
Felger, P. & F.
Harrison Bros.
Higham, Lindley J. Co.
Kautzman & Sussfeld
Laubheim Bros.
Reeves & Browne
Rose, S. Co. (The)
Western Clock Mfg. Co.

\$20 each.

Weinberg, Isaac H.
Avery & Brown
Reichman, Arthur
Frolichstein, England & Klein
Keller Mfg. Company
Langjahr, F. & Company
Leimbach, F. S.
Roede, B.

\$10 each.

Mehrlust, Jacob.
Oppenheimer & Strauss.
Urbach, Sol.
Washburne, C. I.
Wrone & Wrone.
Brown's, F. W. Son
Crossman, Chas. S. & Co.
Curtis, J. S.
Goldsmith, Leo
Karsch, Bernard
Kroll, Lazar
Noel, Rudolph & Co.
Roe, I. J.
Sackett, F. W.
Shiebler, W. F.
Silberfeld, Henry

Stevens & Co.
Vreeland, J. W.
Blancard & Co.
Block, J. W.
Cash
Cooper, G. E. & Bro.
Eisler & Laubheim
Eliassof Bros. & Co.
Ewoldt, Julius
Guntzburger, I.
Karsch, Henry
Kleinberg & Probststein
Koontz, Wm.
Kuehne, Fred.
Malliet & Maxwell
Merrill Bros. Co.
Rosenbaum, D. & Son
Roseman, A.
Stoll, R.
Weintraub, Fred.
Witsenhausen, L.
Wollstein, L. & M.
Karsch, Bernard (Additional)
Lehman, Amalie, Estate
Ludwig, A. & Son
Nabmans, Andrew P.
Rosenberg, Nathan
Stern, M. E.

\$5 each.

Lowenstein, Gothard.
Murphy, John C.
Weber, Wm. C.
Alberts, I.
Gray, Chas. N.

Moskowitz Bros.
Proudman, Edward H.
Pryor Novelty Co.
Steel & Taylor Co.
M. B.
Baskin, David
Freiman, I.
Goeltz, Henry
Hurd, W. Wallace
Klein, Julius
Marsh, E. L.
Sohn & Hyman
Sugarman, B. S.

Miscellaneous Subscriptions.

Seckles, Wm. \$15.00
Goldstein, Leo. 3.00
Vogel, Corby & Avesche 2.00
Shiebler, Geo. W. & Co., Employees of 42.55
Larsch, Albert & Co., Employees of 30.00
Kaiser, David & Co's Employees. . . 29.50
Cross & Bequelin's Employees 19.00
Barnett, L. & Co. . . 15.00
Frolichstein, Eng-land & Klein's Employees 9.00
McAllister, E. W. . . 2.00

The Chicago jewelry and optical trades rivaled the Eastern metropolis in the promptness and liberality of their aid. Nearly \$6000 was raised from April 20th to April 24th, with many still to be heard from. The work of raising the subscriptions from the trade was under the auspices of the jewelry and optical divisions of the Chicago Commercial Association. The following gentlemen acted as committee for the jewelry division: Harry W. Hahn, chairman; Ben. C. Allen, William F. Juergens, Morris Berg and



View of the Business District of San Francisco, Destroyed by Earthquake and Fire

Geo. A. Jewett, and Edward E. Swadener for the optical division. The following is list of donations of the above trades up to noon of April 24th :

\$500 each. Elgin National Watch Co.	Smith, A. H. & Co. Western Watch Case Co. Wilson & Co. Fuller, Geo. H. & Sons Co. Lijman, A. Gordon & Morrison
\$250 each. Juergens & Andersen Co. Hahn, H. F. & Company Allen, Benj. & Co. Young, Otto & Co. Peacock, C. D.	\$20 each. Milhening, J. Ft. Dearborn Watch & Clock Co. Williams, A. L. & Co. Lazarus, S. & Co.
\$200 each. Hyman, Berg & Co.	\$10 each. Son, S. J. Spies Bros. Lane, H. M. Paulson, Henry & Co. Pick, Emil Kellogg, W. O. Green, Max R. Newman, M. Morstrom, W. G. & Co. Hirsch & Oppenheimer Mertz, John Beygeh, Robt. & Bro. Ballenbach, Hy. Schoenthaler, J. A. Eisman, M. A. & Bro. Cash Kennon, F. V. Kleine Optical Co. McIntosh Stereopticon Co. Peerless Optical Co. Boyle, Loren L. Englehard, Benj. M. Goldberg, Geo. Carle, H. M. Kirschberg, E. Jewett, G. A. Schuette, B. Scott Bros. Co. Limbach, J. A. Nouvelle, Maison Grieshaber, B. & Co. Happel, F. C. Chicago Chatelaine Bag Co. Hawten Engraving Co. Cash Levey, Abe, W.
\$150 each. Hardy, F. A. & Co.	\$5 each. Richter, I. D. Fay, W. A. Huston, S. K. Schwarz, E. Twooger, Miss DeMarriam, J. Gross, Max Schmidt, F. W. H. Blackburn, F. E. & Co.
\$125 each. Lapp & Flesher	\$2 each Kennedy, J. S.
\$100 each. Becken, A. C. Gorham Mfg. Co. Hardy, F. A. (personal) Robbins & Appleton Knights, C. H. & Co. Mead, M. A. & Co. Sereomb, A. L. Loffis Bros. Manheimer, Louis & Bros. Buchsbaum, S. & Co. Sproehle & Co. Lebolt & Co. Kunstadter Bros. Moore & Evans Stone Bros.	Miscellaneous Subscriptions. Employees, Hyman, Berg & Co. \$ 76.30 Employees of Seth Thomas Clock Co. 21.25
\$50 each. Despres, Bridges & Noel Reinhard, H. A. Stein & Ellbogen Co. Marshall, Geo. E., Inc. Staritz Bros., Inc. Allen, Herbert W. Norris, Alister & Co. Swartchild & Co. Klein, Fred & Bro. Rowe Bros. Keil & Hettick Coe, Almer Geneva Optical Co. Julius King Optical Co. Ziehme, A. E. & Co.	
\$25 each. McIntosh Battery & Optical Co. Coulter, A. Optical Co. N. Watry Company Texas Company Schaefer, L. H. & Co. Borsch, H. & Co. Wendell & Co. Lunt, E. M. Schraeder-Wittstein Co. Barger, M. F. & Co. Sheidan, Frederick R. Noble, F. H. & Co. Ansonia Clock Co., The Waterbury Clock Co. Hirsch, A. & Co.	

In Philadelphia there was no separate collection of contributions by the jewelers, but the individual members contributed quite liberally to the general fund, as the following list will show :

Keystone Watch Case Co., The, and Employees. 750.00	Bonsbur & Holmes (as firm and individuals) 100.00
Philadelphia Watch Case Co., and Employees 530.00	Diesinger, Charles. 50.00
Bailey, Banks & Biddle Co. 500.00	Williams, Brown & Earle 50.00
Employees Bailey, Banks & Biddle Co. 120.00	McIntire, Magee & Brown 50.00
Caldwell, J. E. & Co. 500.00	G. S. Lovell Clock Co. 50.00
Rumpp & Sons, C. F. 250.00	Harburger Bros. 35.00
Riverside Metal Co. 200.00	Hurlburt, H. O. & Sons 25.00
Simons, Bro. & Co. and Employees. 125.00	White, L. P. 25.00
Queen & Co. 100.00	Koshland & Italic Co. 25.00
Wright, Tyndale & Van Roden. 100.00	Williams, B. F. Co. 25.00
Pfaelzer, Morris. 100.00	Brown, D. V. 25.00
Sickles & Sons, M. 100.00	Bedichimer, I. & Co. 25.00
Kind & Son, S. 100.00	Mitchell, T. S. 25.00
Keystone Publishing Co., The, and Employees. 100.00	Coombes & Van Roden 25.00
	Roden 25.00
	Martin, Alexander. 25.00
	Reinold, Wm. F. 25.00
	Breitinger, Fred L. 20.00
	Pinder, Victor. 10.00
	Pinkstone, Richard 5.00

In Providence and the Attleboros prompt measures were taken to collect subscriptions, and the manufacturers responded with great liberality. We are unable at this writing to get anything like complete lists of the contributors, but the following subscriptions were promptly handed in :

Providence Subscriptions. Foster, Theodore W. & Bro. Co. 100.00 Employees of Theodore W. Foster & Bro. Co. 77.75 Waite-Thresher Co. 100.00 Potter & Buffinton Co. 100.00 Hancock, C. E. Co. 100.00 Copeland, Martin & Co. 100.00 Cahoone, Geo. H. 100.00 Dover, Geo. W. & Co. 100.00 Green, Max R. 100.00 Newman, M. 100.00 Morstrom, W. G. & Co. 50.00 Hirsch & Oppenheimer 25.00 Potter, E. A. & Co. 25.00 Arnold, Thomas F. 10.00 Chapin & Hollister Co. 100.00 Briggs, J. & Sons Co. 100.00 Cash 100.00 Salzberger Bros. 100.00 Holmes, George H. & Co. 50.00 Bassett Jewelry Co. 50.00 Irons & Russell. 100.00 Watkins, D. M. & Co. 100.00 Parks Bros. & Rogers 100.00 Manchester Mfg. Co. 100.00 Manchester Mfg. Co.'s Employees. 42.75 Conley & Straight. 50.00 Thornton Bros. 50.00 Holden, E. W. 25.00 Crossin & Co. 25.00 Holmes, Geo. H. Co.'s Employees. 45.00 Devereux, O. C. Co. 25.00 Devereux, O. C. Co.'s Employees. 16.00 Schofield, Baitty & Co. 50.00 Quayle, T. & Co. 50.00 Otis Bros Co. 50.00 Lenzen & Rueckerl 25.00 Payton & Kelley Co. 25.00 Waite, Mathewson & Co. 25.00 Thompson & Thompson 10.00	Chapin & Hollister Co.'s Employees. 27.25 Gorham Mfg. Co.'s Employees 458.68 Ballou, B. A. 500.00 Greene, A. A. & Co. 200.00 Austin, Arthur E. 100.00 Lundol, H. C. & Co. 100.00 Hamilton & Hamilton, Jr. 100.00 Smith, C. Sydney Co. 100.00 Champlin, S. B. Co. 100.00 Champlin, George B. 100.00 Hutchison & Huestis 100.00 Ostby & Barton Co. 100.00 Foster, J. A. Co. 100.00 Foster, J. A. Co.'s Employees 40.00 Wightman & Hough Co. 100.00 Wilcox, Dutee 100.00 Harvey & Otis 100.00 Palmer, Julius 100.00 Palmer, John S. 100.00 Thayer, P. E. 25.00 Wolstenholme Mfg. Co. 50.00 Gorham Mfg. Co.'s Cutlery Dept. Employees 25.00 Remington, Horace & Sons Co. 50.00 Brady, John F. 50.00 Linton, Philip 50.00 Gorham Mfg. Co.'s Chasers 50.00 Bassett Jewelry Co.'s Employees. 40.00 Grover, S. K. Co. 25.00 Wildprett & Saacke 100.00 United Wire & Supply Co. 100.00 Cory, J. P. 25.00 Baker, George M. 25.00 Warren & Williams 25.00 Williams & Payton 25.00 Frost, Walter B. 10.00 Hope Glass Works 10.00 Baker & Freeman. 10.00 Darling, L. B. 5.00 Wachenheimer Bros. 5.00 Tilden-Thurber Co. 50.00
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The Attleboros Simmons, R. F. Co. \$500.00 Employees of R. F. Simmons Co. 95.00 Simmons, R. F. Mutual Relief Association 50.00 Bigney, S. O. & Co. 500.00 Sturdy, Albert W. 200.00 Makepeace, D. E. Co., The, and Employees 145.00 Briggs, D. F. Co. 100.00 McRae & Keeler. 100.00 Daggett & Clap Co., The 100.00 Smith & Crosby. 100.00 Horton Angell Co., The 100.00 Regnell, Bigney & Co. & Employees. 100.00 Bay State Optical Co. & Employees. 84.00 Fontneau & Cook Co. 50.00 Allen McNeerney & Co. 50.00 Allen, C. H. & Co. Employees of C. H. Eden Co., Attleboro Aluminum Co. & Atlantic Comb Co. (joint contribution) 110.00 Watson & Newell Co. and Employees 336.90 Sadler, F. H. & Co. 100.00 Attleboro Mfg. and Employees 182.25 Standard Button Co. and Employees 145.20 Smith & Crosby. 100.00 Employees of 50.00 Bliss Bros Co. and Employees 100.00	Cartier, Ovarnstrom Remington and Employees 64.50 Allen, C. H. Co. 50.00 Bay State Optical Co. and Employees 84.50 Hayward, Walter E. 50.00 Richards, W. E. & Co. and Employees 38.50 Rothschild Bro. Co. 10.00 Stowe, W. B. 10.00 Gilmore & Co. E. D. and Employees 32.00 Weaver, F. W. & Co. 25.00 Bushee, A. & Co. and Employees. 12.00 Webster, G. K. Co. 100.00 Webster, G. K. Co.'s Employees 36.50 Cheever, Tweedy & Co. 100.00 Cheever, Tweedy & Co.'s Employees. 47.25 Smith, T. I. Co. 100.00 Smith, T. I. Co.'s Employees 38.65 Blackinton, R. & Co. 100.00 Blackinton, R. & Co.'s Employees. 27.25 Whiting, F. M. & Co.'s Employees. 52.00 Franklin, E. I. & Co. 50.00 Franklin, E. I. & Co.'s Employees. 43.75 Clarke, W. G. & Co. 50.00 Clarke, W. G. & Co.'s Employees. 13.75 Sommer, J. J. & Co. 50.00 Sommer, J. J. & Co.'s Employees. 38.75 Bugbee, Niles Co., Inc. 50.00
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Bugbee, Niles Co., Employees 18.50	Freeman, B. S. Co. 10.00
Doran, Bagnall & Co. and Employees 33.00	Fisher, W. N. & Co. and Employees 100.00
Cutler, F. H. & Co. and Employees 32.00	Bonnett, J. P. & Son and Employees 38.75
Bliss, A. H. & Co. 25.00	Mason Box Co. and Employees 40.00
Bliss, A. H. & Co.'s Employees 27.00	Gilbert's, F. S. Employees 15.75
Sturtevant & Whiting 25.00	Curtis Co., H. H. and Employees 14.00
Sturtevant & Whiting's Employees. 37.00	Blackington, V. H. & Co. and Employees 65.50
Frothingham, T. G. & Co. 25.00	Frothingham, T. G. & Co.'s Employees 11.50
Sturdy, Fred E. 100.00	Sturdy, H. K. 100.00
Sturdy, Frank W. 100.00	Sturdy's, J. F. Sons 100.00
Barrows, H. F. Co.'s Employees 38.50	Codding & Heilborn Co. and Employees 50.00
Paye & Baker Mfg. Co. 50.00	Paye & Baker Mfg. Co.'s Employees. 37.95
Paine, Geo. L. Co. and Employees. 33.00	Furbish, Swift & Fisher 10.00
Straker & Freeman and Employees. 23.80	

In Newark there was no regular trade collection, but substantial subscriptions were contributed to the general fund, among the contributors being the following :

Riker Bros. 250.00	American Oil Supply Co. 50.00
Employees of Riker Bros. 103.00	New Jersey Aluminum Co. 50.00
Hansen & Van Winkle Co. 100.00	Holt, Frank & Co. 25.00
Raker & Co. 100.00	Rae, William T. & Co. 25.00
Employees of Day, Clark & Co. 85.00	Seabaring & Co. 25.00
Employees of Larter & Sons. 75.00	Nessler & Co. 25.00
Durand & Co. 55.00	Clairaux, Henry. 25.00
Wiss, J. & Sons. 50.00	Stratton, M. of Al-ling & Co. 10.00



Sample Product of Preserved Vegetables sent to the San Francisco Sufferers by the Oneida Community

San Francisco Orders Wedding Rings

WHAT was probably the first order for jewelry received in the East from San Francisco following the disaster was contained in a telegram received on April 27th by J. R. Wood & Sons, of New York. The order, which came from John H. Drumgold, retail jeweler, asked that 160 wedding rings of various sizes be sent in a hurry. It is supposed that the demand comes from couples whose marriages are being hastened because of the catastrophe. Mr. Drumgold's store and home escaped with but little damage.

There is but little reliable news as we go to press in regard to the damage done to the trade of the stricken city, but we can well believe that it is most serious. The unfortunates can rely on every possible aid from the manufacturing and wholesale trade.

Stamping Bill Passes the House

THE trade will be much gratified by the news that the stamping bill introduced and engineered in Congress by Representative Vreeland, passed the House on April 16th by the decisive vote of 138 to 35. The discussion on the floor of the House was very similar in character to that before the committee on interstate and foreign commerce, the opponents of the measure not basing their objections to it on the provisions of the bill itself, but on the broad constitutional grounds of unjustifiable federal interference with matters of State jurisdiction. Representative Vreeland ably responded in favor of the measure, covering the same grounds as in his speech before the committee, and his argument was evidently satisfactory to over two-thirds of the members present. A gratifying feature of the vote was its non-party character, the House manifestly accepting the trade view that it is a measure in the interest of honesty and merits support as such irrespective of party considerations. The approval of the House has materially brightened the prospects of the measure, which we hope in the near future to see incorporated in the law of the land.

IN connection with the above, it is interesting to note that what may probably be the last suit instituted under a State stamping law, was decided in New York last month. The defendant in the case was accused of selling spoons made of base metal, plated with silver and stamped "Extra coin silver plated," the words "extra" and "plated" standing out prominently with the words "coin silver," in small characters, between. It was charged that this was in violation of the section of the State stamping law, which reads thus:

Any person, firm, corporation or association who makes or sells, or offers to sell or dispose of, or has in his, her or its possession with intent to sell or dispose of, any article of merchandise marked, stamped or branded with the words "coin silver," or incased or inclosed in any box, package, cover or wrapper, or other thing in, or by which the said article is packed, inclosed or otherwise prepared for sale or disposition, having thereupon any engraving or printed label, stamp, imprint, mark or trade-mark, indicating or denoting by such marking, stamping, branding, engraving or printing that such article is coin or coin silver, unless 900-1000 part of the component parts of the metal of which the said article is manufactured is pure silver, is guilty of a misdemeanor.

Counsel for the defendant company maintained that the stamp, "Extra coin silver plated," could not be construed as deceptive, and the court upheld this contention; adding, however, that it was immaterial whether the complainant was deceived or not, if the statute forbade the use of the words "coin" or "coin silver," irrespective

of associated words upon the articles under consideration. Said the court:

There could be no doubt of guilt if the words "coin silver" standing alone were imprinted on spoons of the character and quality of those in evidence; or those words were used in any way capable of deceiving the ordinary intelligent and observing purchaser. If the style of the mark had been changed so that "extra plate" appeared in scarcely legible letters and "coin silver" had been in capitals easily read, there might be some foundation for assuming an intent to defraud. If the Legislature intended that the foregoing words should not appear in any connection on articles less than nine-tenths pure silver, such intent should have been expressed directly and with few words. This has not been done, and an examination of the whole section does not admit of a conclusion that any such intention existed when the section was enacted.

The decision has special significance at this time, in that it emphasizes the necessity of purging the Vreeland bill of all ambiguity, and removing, while there is yet an opportunity, every flaw which might in any way nullify its utility as a law.

A Watch Dealer's Scheme Exposed in Congress

THE watch industry has recently been the subject of considerable discussion in the press and in Congress. This was primarily due to the charge made by Charles A. Keene, of New York, and repeated in Congress by Congressman Rainey, of Illinois, that American watches were sold much cheaper abroad than at home. It has been Mr. Keene's boast that he could purchase exported American watches in Europe, pay the cost of re-shipment to this country, and then sell them at a lower figure than the wholesale trade could procure the same grade of watch here, and still make a profit. This sensational statement was exploited in Congress with much show of documentary proof, but the trick, well known to Mr. Keene's competitors, did not go long unexposed. Congressman Boutell, also of Illinois, explained the scheme from which Keene obtained so much valuable free advertising, as follows:

Mr. Rainey did not call attention to the fact that Mr. Keene does not sell a watch movement without a case, and that he does not, generally speaking, advertise the price of the cases. The evidence furnished me shows that, generally speaking, Mr. Keene adds to the price of the watch cases all that he apparently takes off the price of the movements. The only real test is to take the price of a complete watch sold by Keene and compare it with the price of a reputable retail dealer for the same complete watch. I have here a number of exhibits which will illustrate my point very clearly. The first are two bills from Keene for complete watches purchased from him at \$25 each, either of which can be purchased, I am assured, from any ordinary retail dealer for not to exceed \$15. I have also here six Waltham movements in various styles of cases, with the affidavits of the persons who purchased them, and in most cases the receipted bills which were rendered with the watches.

I have also an affidavit from the proprietor of A. C. Benedict & Co., 28 Bowery, New York,

stating the price at which he would sell the same entire watches in the ordinary course of business, from which it appears that the prices of A. C. Benedict & Co. for two of the watches are the same as those of Keene and for three of the watches are much less than those of Keene, and in one instance only is Keene's price less than that of Benedict.

Mr. Rainey asserted that all the watches in Keene's store had been reimported from England. As a matter of fact, only a very small part of them, and almost none of the high-grade movements were ever so imported, most of them being bought in this country, as shown by the following facts and by much other evidence. In one or more of Mr. Keene's advertisements it has been asserted that he bought abroad within two years thousands of all grades of Elgin watches, including the Elgin Veritas, a twenty-three and twenty-one jewel, and Elgin B. W. Raymond and Father Time. The fact is that within the last five years not a single Elgin Veritas twenty-three jewel or Elgin B. W. Raymond has been exported to Europe, and only thirty-seven in all of the two other grades mentioned were exported by the company.

Pellets of Mercantile Wisdom

A WRITER in *Printers' Ink* furnishes the following pellets of store-keeping philosophy which may be digested with benefit by many a jeweler:

People like to do business with a man who is prompt. Be there when you say you will. Punctuality is the courtesy of kings.

Like master, like man. Many a good clerk has been spoiled by the wrong sort of employer, while many a poor clerk has made good under the right kind of instruction and example.

Every window display should be so made that each observer will go away with one idea in mind that will do you good.

It's easy to begin well—a new broom always sweeps clean, but it is in the home-stretch that races are won.

No matter what you are advertising, write the ad. with the women in mind. Ninety-nine times in a hundred the woman controls the household spending. She is the power behind the pocketbook.

In choosing a clerk, don't forget that politeness is a prime qualification. The polite clerk will bring back customers who are hard to please. He will make friends where you yourself may have failed.

The cigarette clerk is a poor proposition for himself or his employer. Give him his choice between the cigarette and his job—the result will be to your advantage either way.

Treat your clerks like honest men, but don't tempt them with loose cash-handling methods. Even honesty has its limitations.

Waltham Watches

12 Size Hunting or Open-Face
Pendant Setting

Riverside Maximus, Nickel—21 diamond and ruby jewels; 2 pairs diamond caps; both balance pivots running on diamonds; raised gold settings; jewel pin set without shellac; double roller escapement; steel escape wheel; exposed sapphire pallets; compensating balance accurately adjusted to temperature, isochronism and five positions and carefully timed; patent Breguet hairspring, hardened and tempered in form; patent micrometric regulator; tempered steel safety barrel; exposed winding wheels; gold train; steel parts chamfered; fine glass hand-painted dial of the most modern and artistic design. The superior construction of this movement adapts it to the most exacting service.

Riverside, Nickel—19 fine ruby jewels; raised gold settings; double roller escapement; steel escape wheel; exposed sapphire pallets; compensating balance, adjusted to temperature and three positions; patent Breguet hairspring, hardened and tempered in form; patent micrometric regulator; tempered steel safety barrel; exposed winding wheels; red gold center wheel.

Royal, Nickel—17 jewels; red gold settings; exposed pallets; compensating balance, adjusted to temperature; patent Breguet hairspring, hardened and tempered in form; patent micrometric regulator; tempered steel safety barrel; exposed winding wheels.

No. 225, Nickel—17 jewels; red gilded settings; exposed pallets; cut expansion balance; patent Breguet hairspring, hardened and tempered in form; patent micrometric regulator; tempered steel safety barrel; exposed winding wheels; red gilded center wheel.

No. 220, Nickel—15 jewels; settings; exposed pallets; cut expansion balance; patent Breguet hairspring, hardened and tempered in form; patent micrometric regulator; tempered steel safety barrel; exposed winding wheels.

No. 210, Nickel—7 jewels; exposed pallets; cut expansion balance; patent Breguet hairspring, hardened and tempered in form; tempered steel safety barrel; exposed winding wheels.

MANUFACTURED AND WARRANTED BY

American Waltham Watch Company
WALTHAM, MASS.

Prices for Repair Work

THE movement inaugurated by this journal to bring about a material advance in the prices charged for repair work has created universal interest among the trade. We have received scores of letters commending our action and urging us to continue the agitation until our object has been attained. Some of these letters contain very practical suggestions and well merit publication. One such is the following:

ED. KEYSTONE:—It is with sincere pleasure that I read your price-list for watch repairing and the arguments why such prices should be charged. Of all trades, watch repairing is one of the most difficult and expensive to learn, and is at present the poorest paid. For the last few years I have made it a practice to charge my trade customers at the rate of 50 cents per hour for all such repairing as is not included in regular charges. For instance, some watches need eight or ten pivots polished, and perhaps three or four holes closed up. The balance needs truing and other repairs. But many of my customers claim that they cannot get a profit out of my work, as they include all such work in the cleaning charges of \$1, not over \$1.25. While you are doing such good work by trying to raise the present low prices, I hope you will give some attention and advice to us all in the matter of taking in jobs and of guaranteeing same. My idea is that no price should be given until the job is done and then charge at the rate of time consumed. At least no price should be given for a good order job unless the watch has been taken apart and every piece has been inspected. No job should be guaranteed unless put in good order, and then only under certain restrictions.

Another point on which all watchmakers should stand together like one man, is the condemning of all cheap imported watches, all mis-stamped movements of all makes, imported and American watches which have been bought from mail-order houses and fakirs. None of these watches should be taken in by reliable watchmakers for any kind of repairs. The customer should have the explanation that such watches are worthless and that to repair them in anywhere near good order would cost more than a good movement. I think that self-interest should bring and hold together all watchmakers on these questions.

Yours truly,
St. Louis, Mo. C. CULMAN.

IT will be remembered that in our article on this subject last month we quoted a Kansas jeweler's denunciation of a competitor who advertised "watches cleaned for 50 cents." This elicited the following very interesting communication from a subscriber who believes that he was the competitor referred to:

ED. KEYSTONE:—In answer to your article headed, "Fixing Prices for Repairs," in your April issue, being a Kansas jeweler, I take it upon myself to defend what I may presume is a "jost on me." I commenced business about three years ago on the lower end of the main business street here with about \$1000 worth of stock and kept up prices as per your list for about a year, and at the end of that time I practically did not make even enough to pay for the services of my watchmaker. Thinking it a wise and up-to-date idea I commenced advertising a reduction for cleaning and mainsprings to 50 cents, which resulted in an enormous increase in repair work, and at the same time I secured so many new patrons for jewelry in all lines that it caused me to remove to larger, costlier and more centrally-located quarters, and to-day I pride myself upon having one of the best and most up-to-date stores in Kansas. I employ three watchmakers who net me over and above all expenses enough to maintain my entire business—this after paying top wages to my employees, something, perhaps, that every man in the business does not do.

Every man manages his business according to his own ideas, but most of the trade in Kansas are

not possessed of up-to-date ideas. They are contented to remain unprogressive and "knock" because some one from out the State comes into their midst with his progressiveness and has to educate the other merchants in all lines that in order to secure business they must get down from their high horses, come out of their Rip Van Winkle-like stupor and follow in the footsteps of the up-to-date fellow like myself. There is also abundance of all lines of business out here, for example, we have lately added to our business houses a five and ten-cent store hailing from New York, which sells articles for ten cents that other merchants had for years been selling at a quarter, but competition forced the other fellows to the same price, ten cents, still claiming to make a fair profit. What do the Kansas merchants expect? I would like to hear from some progressive man in the trade who has competition to advise me how I can benefit myself by keeping up the standard price of 600 per cent. profit (barring cleaning). If so I am willing to get into the band wagon with the other fellows. My competitors here are always dispensing with the services of some of their employees; I always keep mine going and have one man at the bench that I keep busy putting in mainsprings, and he is generally behind in his work. Just think of the profits in this one branch alone. I would like to know in what way a refractory brother may be disciplined, who already has gained by his 50-cent mainspring ideas and is satisfied with one-third the profits on all repairing, and at that not able to keep up with the amount of repairs on hand, making money hand over fist, and what more does a merchant want? Let the others follow my ideas if they are not prospering and watch results. Hoping you see this in the right light, I remain

Yours respectfully,

Topeka, Kans.

"SUBSCRIBER."

As nothing succeeds like success, our correspondent would seem to have the best of the argument. The growth in his repair business is, indeed, a striking tribute to the potentiality of enterprise and advertising.

An East Pittsburg, Pa., subscriber wishes to know whether he can obtain a copy of the "Uniform Price-List of Repairs," published on page 649 of our April issue. "I think," he writes, "if it were framed and placed in the store where all customers could see it, it would be a good thing for the trade." Copies can be had from C. L. Hofer, secretary of the American Horological Society, 151 Wabash Avenue, Chicago.

Unique Advertising of Diamond Goods

THE most suggestive manifestation of the prosperous conditions now prevailing is the remarkable predominance of diamond announcements in the current newspaper advertising of the trade. In the small town as in the large city the king of gems is being aggressively exploited and profitably sold. It is worth noting that the wealth of diamond advertising is no less remarkable than its character, as most of the samples sent us are unusually effective in appearance and forceful in argument. The continuous advance in the price of the gems, their value as an investment, their beauty, the prestige they bring the wearer—such are the subjects usually covered by the announcements, but the unique feature is the inducements held out to purchasers. In this the diamond fever seems to have created an extreme of rivalry that is

questionably judicious. It was customary some time ago to offer to buy back diamond goods at the full purchase price less ten per cent., but the continuous advance in the price of the gems gave courage to the trade, and the original price less five per cent. was offered. This was further improved on by an offer to buy back the stone in one year at full price, but the latest irresistible offer is to buy back the stone and pay the customer a profit. On page 825 of this issue we reprint a newspaper advertisement in which this offer is made:

A rare and brilliant stone weighing $2\frac{3}{8}$ less $\frac{1}{4}$ carats, and which was originally cut out of a seven-carat stone. It could not be replaced for less than \$750. Now consider this offer. We will sell it for \$500 and buy it back for \$550 at the expiration of two years from the date of purchase, if the buyer wishes to return it.

This offer is startling in its liberality and we candidly question its wisdom. Many would be disposed to doubt its bona fides, and this is never to the interest of the advertiser. One purpose which it serves, however, is to impress the public with the worth of diamonds as an investment and the practical certainty of their increasing value.

A Suggestive Incident

WE related in our last issue several instances of the reckless daring and shrewd planning of the modern jewelry thief. As the unusual activity of the fraternity at this time is a serious menace to the trade, the following incident is worth recording for the lesson which it teaches. Some weeks ago several burglars made an attack on a bank in Lodus, N. Y., but were fortunately discovered by the town watchman. It has since transpired that the same robbers some days before paid a visit to the jewelry store of A. C. Norton, of Holly, N. Y., carefully surveying the store before leaving. There could be only one purpose for this visit, but as Mr. Norton is a member of the Jewelers' Security Alliance, the robbers, no doubt, deemed it wise to operate elsewhere. The jeweler is convinced that it was his door-plate and prominently-displayed certificate which saved him, and he seems justified in the conviction, as several other places were successfully burglarized before the attack was made on the bank. The criminal records for 1905 show that a total of forty jewelers' safes were attacked last year, and of these only four were members of the alliance, the inference being that membership therein affords real protection. As the "yeggmen" of the time operate in gangs of from five to seven or more, they are often able to overawe the policemen or watchman, and this makes it imperative on the trade to use every available precaution.

GORHAM BRONZE

MEMORIAL TABLETS

During recent years the bronze memorial tablet whether commemorative of the virtues of the dead or of the munificence of the living, has markedly increased in popularity. In Churches, Hospitals, Libraries, State or Municipal Buildings it occupies a prominent place.

To those jewelers, therefore, who may be consulted in this regard, the Gorham Mfg. Co. desires to point out that the designing and fashioning of artistic Memorial Tablets form a very noteworthy branch of the Gorham Bronze Foundry.

Suggestions, attractive sketches or competent models in wax as well as careful estimates of the cost of Memorial Tablets of any description will be very gladly furnished should occasion arise.

GORHAM M'F'G CO.

Silversmiths and Goldsmiths

Fifth Avenue and 36th Street, New York

BRANCHES



CHICAGO
137 Wabash Ave.

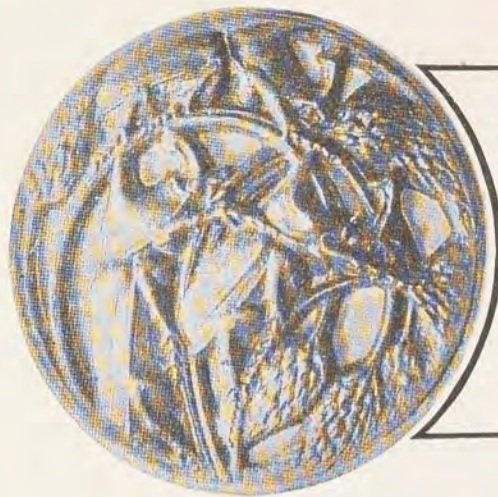
NEW YORK
23 Maiden Lane

SAN FRANCISCO
120 Sutter St.



LONDON
Ely Place

WORKS: Providence and New York

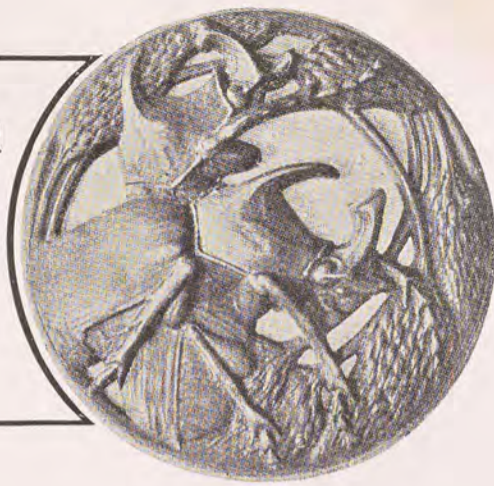


Box in carved horn

The Jewel as treated by M. René Lalique

From the French of
Gustave Geoffroy

By IRENE SARGENT



Box in carved horn

Since society has existed there have been jewels and jewels. As far as we can penetrate the obscurity of pre-historic times, we find necklaces, bracelets and rings. As soon as man had found simple means to defend his own life, together with that of his wife and his children, he desired to adorn his dwelling and his person. Perhaps even while the primitive man was engaged in combat with a wild beast, or with some human neighbor quite as ferocious as the animal itself, the primitive woman, remaining in her cave-dwelling, employed her rudimentary artistic powers in composing a necklace from shells or animals' teeth. In these personal ornaments of a period lost in the impenetrable depths of time, we recognize the symbols of feminine slavery. The cultured women of advanced civilization have continued to bear gaily these proofs of their ancient condition of servitude, although, in the meantime, they have taken a certain revenge.

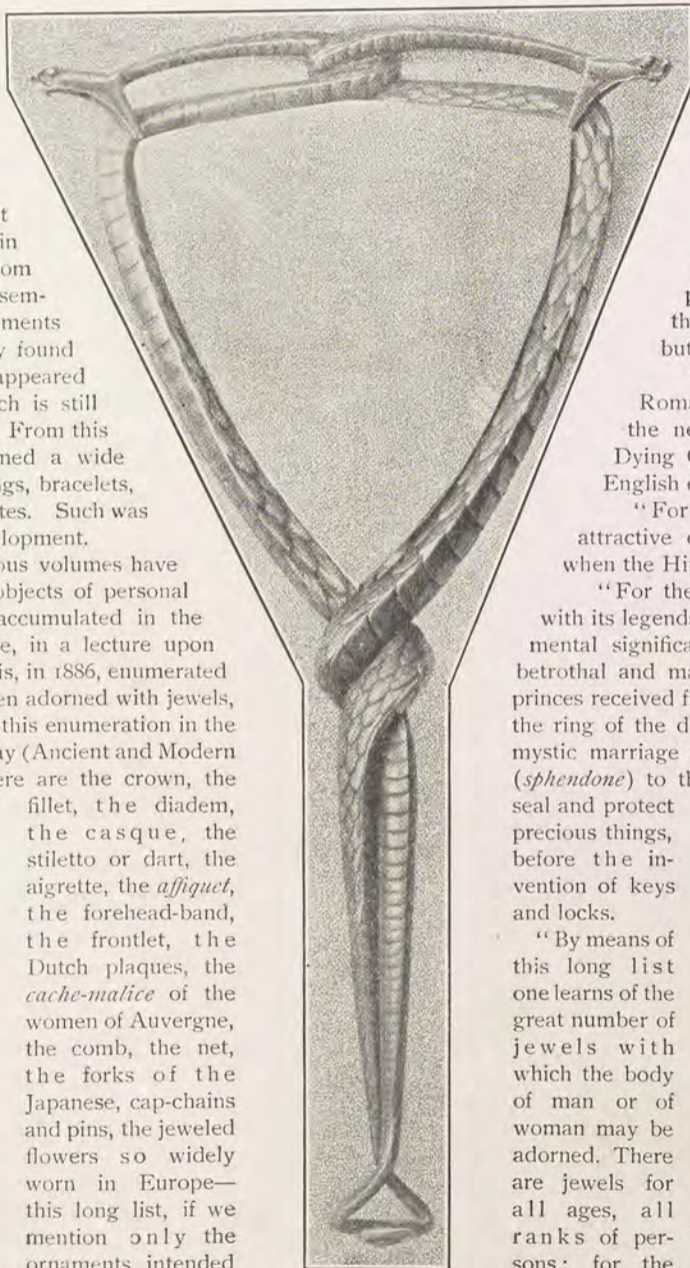
It is beyond dispute that decorative art was born in the cave-dwelling or hut, in which our ancestors sought protection from constantly impending peril. There, they assembled shells, animals' teeth and tusks, fragments of bone, of alabaster, of quartz, which they found in their wanderings; everything which appeared beautiful to their childish sense, and which is still beautiful to the men and women of to-day. From this indeterminate refuse our ancestors fashioned a wide range of personal ornaments: necklaces, rings, bracelets, ear-drops, headbands, girdles, and breastplates. Such was the beginning of a long and interesting development.

Parts of Body Decorated

Dictionaries and ponderous volumes have been written upon the objects of personal ornament which have accumulated in the passing ages. M. Falize, in a lecture upon jewels, delivered at the Forney Library, Paris, in 1886, enumerated the parts of the human body which have been adorned with jewels, and M. Victor Champiez thus summed up this enumeration in the preface of a book written by Eugène Fontenay (*Ancient and Modern Jewels*, Paris, 1887): "For the head there are the crown, the fillet, the diadem, the casque, the stiletto or dart, the aigrette, the *affiquet*, the forehead-band, the frontlet, the Dutch plaques, the *cache-malice* of the women of Auvergne, the comb, the net, the forks of the Japanese, cap-chains and pins, the jeweled flowers so widely worn in Europe—this long list, if we mention only the ornaments intended for women. But



Hat Pin: engraved horn and gold



Mirror: chased silver

men have also their crowns, the symbols of power; their gold or silver helmets, the emblems of war; the tiara and the mitre, full of ecclesiastical significance, and even the favor (*l'enseigne*), that rarely graceful jewel of the fifteenth and sixteenth centuries.

"For the ears there are rings, studs, and pendants, fitted to the style of beauty which they are intended to heighten.

"For the neck we have the necklace, the chain, the gorget, the carcanet, the medallion, the reliquary, the cross, the locket, beads, amulets, and the *bull*, that charming jewel in disuse since the Roman period. Still, adorning the neck, or the covered breast, we have the brooch, the pin, the clasp, the *fibula*, the *plaque de corsage*, hooks, the cope-clasp, the *patera*, breast and bosom plates, buttons, *ferrets* (jeweled tags), the reliquary, the medallion, the crosses, chains, and jewels of chivalric orders.

"For the waist there are the girdle, the clasp, the buckle, the chain, the chaplet, the pouch (*l'escarcelle*), the watch, the *chapelaine*, the key-ring, clasp-plates, *netzkes* (Japanese, for button), and scent bottles.

"For the arms there are rings and armlets, Roman or Gallic *torques* (twisted circlets, such as the neck ornament worn by the statue of 'The Dying Gaul'), chains, and *manicles* (no satisfactory English equivalent).

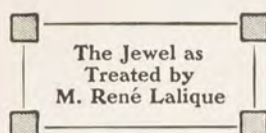
"For the legs we find anklets or annulets, and those attractive ornaments which sound in musical cadence when the Hindoo dancing-girl treads her graceful measures.

"For the hand there is, above all, the exquisite ring with its legends and symbols, attractive because of its sentimental significance, or of its austere attributes: from the betrothal and marriage ring to the ring of investiture which princes received from the pope; from the ring of Saint Peter to the ring of the doge thrown into the Adriatic in token of the mystic marriage of Venice with the sea; from the sling-ring (*sphendone*) to the ring set with an engraved gem, serving to seal and protect precious things, before the invention of keys and locks.

"By means of this long list one learns of the great number of jewels with which the body of man or of woman may be adorned. There are jewels for all ages, all ranks of persons: for the child, the young



Box in carved horn



girl, the mother; there are others also intended only for the man, whether the citizen or the soldier, the freeman or the slave, the savage or the refined individual of high civilization. There are jewels for the king, the prince, the commander and the page; for the bishop and the priest; there are those which are destined to adorn idols and even the bodies of the dead. This enormous mass of jewels, civil and religious, royal and military, sacred and mortuary, goes on subdividing itself, according to the period, the age of the destined wearer, style and fashion, wealth or caprice, thus extending to infinite variety."

Wealth and Variety of Jewelry

If the jewels of all ages and countries could be assembled, they would make in truth a mountain of glittering things; for all the men and women who have lived, or who now exist, have in their possession some ornament, precious, or at least prized. Women own such ornaments in abundance, and the ordinary man opposed to display, wears a watch, a ring and a scarf pin. The cases of museums are filled with jewels from Egypt and Assyria, from Greece, Etruria, Rome and Byzantium, with jewels representing the Romanesque, the Gothic and the Renaissance periods in Italy, France, the Low Countries, and Germany. But how many others have disappeared! The precious materials entering into their composition invite destruction, or rather, they afford a fertile excuse for transformation.

Since the period of the Renaissance, jewels have multiplied; but it is admitted that they have declined and degenerated; that the diamond and pearl have assumed greater importance than the materials wrought and stamped with the individual taste and mark of an artist. During the nineteenth century, there was a renaissance in France. There were indeed two revivals, in the second of which Monsieur René Lalique participated. It is this artist who has restored to honor—and in a manner constantly becoming more individual—the jewel in which any metallic or mineral substance, if suited to the scheme, may play a part, whether the substance be exceptionally rare and costly, or yet of the most ordinary nature.

Characteristics of Lalique Jewelry

Above monetary worth M. Lalique placed aesthetic value. By means of his power of invention and his skill in arrangement he gave to his jewels the mark of his personality. Following M. Lalique's very distinctive style, other artists produced objects closely resembling his, and it escaped the attention of the public to demand the signature of these works of art. Then, M. Lalique, since he possessed the creative gift to a high degree, gave birth almost immediately to another species of jewels.

These are not always jewels adapted for personal use. They are sometimes treasures to be kept locked in a casket, or to be shown behind the

crystal of a case. The cause of this fact may be sought in the use for which the first works of the goldsmith were intended. In the opening years of his activity he designed and made jewels for great dramatic artists: emphasizing his effects to the point of violence, seeking pronounced forms and colors, composing strange decorative *motifs* with which to ornament stage jewels.

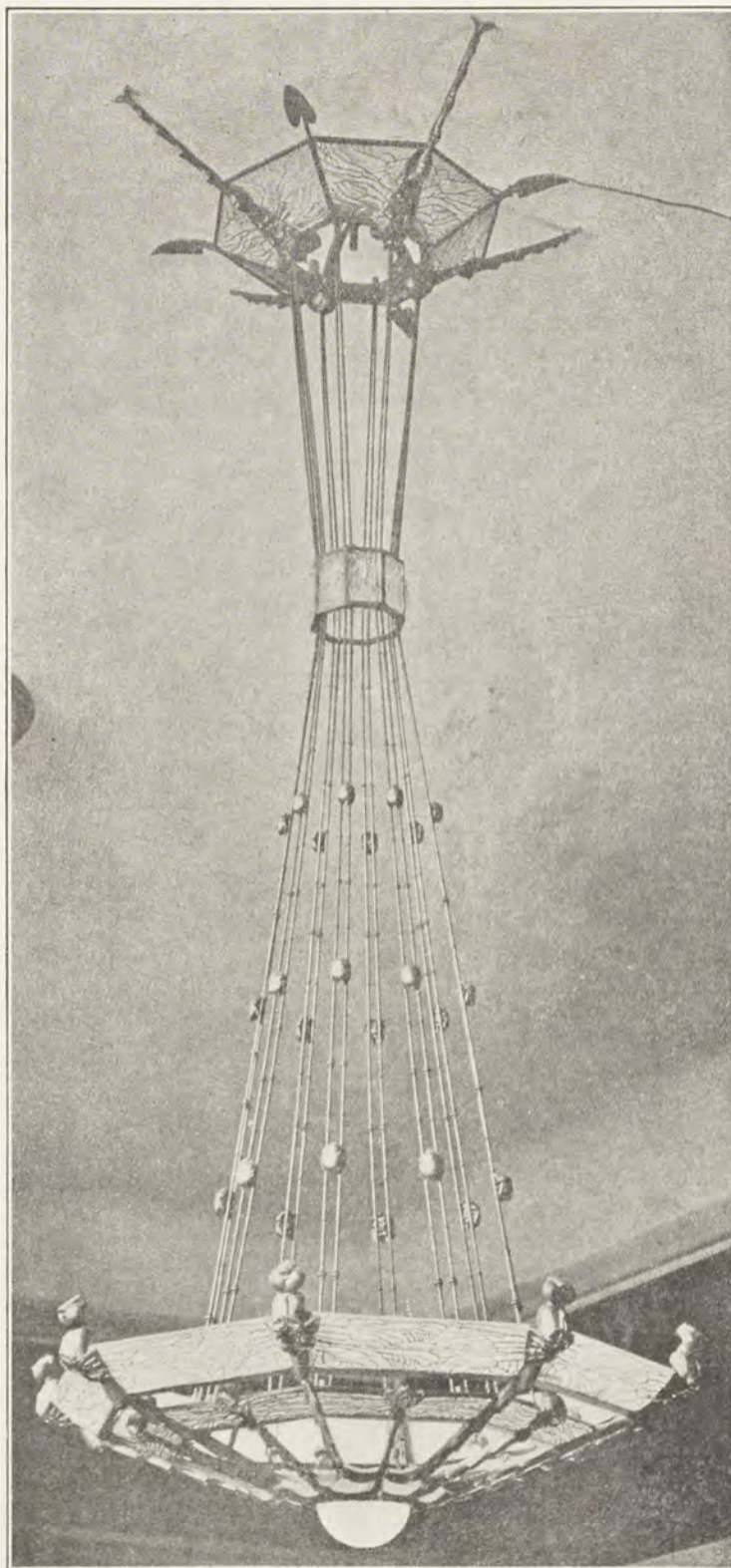
In order to feel the force of this criticism one must study his crown for Sardou's Théodora with its eaglets flat of head and fierce of beak, spreading their wings and raising them above the dome-shaped skull-cap, almost to the height of the Greek cross which forms the summit of the piece. The same is true of another coronet composed of a writhing, twisted mass of angry vipers with crests erect and wide-open throats.

Traces of this Byzantine taste, of this emphasis peculiar to the footlights, were slow in disappearing from the work of the artist. But the alert intelligence, the subtle power of observation possessed by M. Lalique saved him from the dangers offered by spectacular jewelry. He created slowly another type of art, because he more closely studied life outside of scenes of display—or rather, factitious sumptuousness—since, alas, the decorations and the accessories of dramatic art are not intended for close scrutiny, and the empresses of a brief hour may tread the mimic scene wearing pasteboard crowns, while the auditorium remains unconscious or careless of the deceit. And it is even better so, since the truth of dramatic art is not dependent upon the reality of such ornaments.

Spectacular Stage Jewels

The jewels destined for the theatre, in which, first of all, M. Lalique displayed his learning and his imagination, could retain something of their original character in passing from the stage to the auditorium, from the possession of the crowned empress to that of the occupant of the proscenium box. The woman who voluntarily exposes herself to the detailed examination of the multitude of glasses leveled at her, to the musketry, so to speak, of thousands of admiring and of envious eyes—this woman is also an actress performing her part, and displaying her powers of attraction. She is therefore forced to adopt more or less sumptuous and emphatic ornament, and to seek striking effects, since she occupies her conspicuous place equally to be seen and to see. Quite

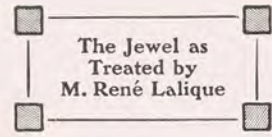
willingly too, she oversteps the mark; adorning herself lavishly and indiscriminately, so that she resembles nothing so much as the figure of some eastern idol, or mediaeval saint. The confused murmur mounting to her from the floor of the theatre is not wholly that of applause. In large part it is the hiss of envy and the whisper of slander, but from her height this unsalaried actress hears nothing but a low inarticulate sound, which, misapprehended as to its meaning, flatters her vanity. Furthermore, the women who consent to play the queens of society, understand the unavoidable trials, as well as the possible advantages attendant upon these titular parts. So they spare no means of emphasis or effect, and load their brows, their necks, their ears,



Chandelier: bronze with engraved and enameled crystal



Corsage jewel: engraved crystal and gold enamel



This first principle M. Lalique does not misapprehend. He shows more and more that he accepts established forms, such as were created by requirements, and have been sanctioned by long use. He recognizes that it is useless to make hazardous experiments, since he knows definitely that each jewel has a fixed form, and may be subjected to decoration of infinite variety. Decorative material exists in Nature in inexhaustible abundance, and it will never refuse to

serve those who have eyes to discover it. All artists who have learned this truth, and who possess, together with judgment and the selective faculty, the gift of brilliant, skilful, and rapid execution, will always be resourceful, and from them we may expect not only fertility, but also a perennial renewal of vitality.

Thus it has been in the case of M. Lalique, and he has gradually diminished the number of his compositions bearing the mark of momentary public caprice and of fashionable art.

More rarely do we see in his work the filleted female head with closed eyes and symbolic expression. Rarer also are the "spotty," the overcrowded effects, the meagre lines which sometimes characterized his earlier work. Constantly his strength has increased with his pliancy. More and more he recognizes the beauty of material as superior to all the demands of a *subject*. But nevertheless he has not eliminated the *subject* from his work. He has simply differentiated it from all morbid passion for the singular and the fantastic.

At the last autumn *Salon* (1905), M. Lalique exhibited examples of moths and of dragon-flies which are living jewels. The quiver of the wing, the fevered agitation, one might almost say the chirping note, show a strange and unique power, altogether different, for example, from the motionless devitalized art of Egypt, which represented scarabs and sphinxes in forms grave, serene, and as if embalmed. The modern artist, who is linked with the distant tradition of Egyptian sculptors by his sense of truth, has learned further from the Japanese masters

wrists, and fingers with the most striking and eccentric ornaments, which are illuminated to profuseness by the gleam of pearls and the fire of diamonds.

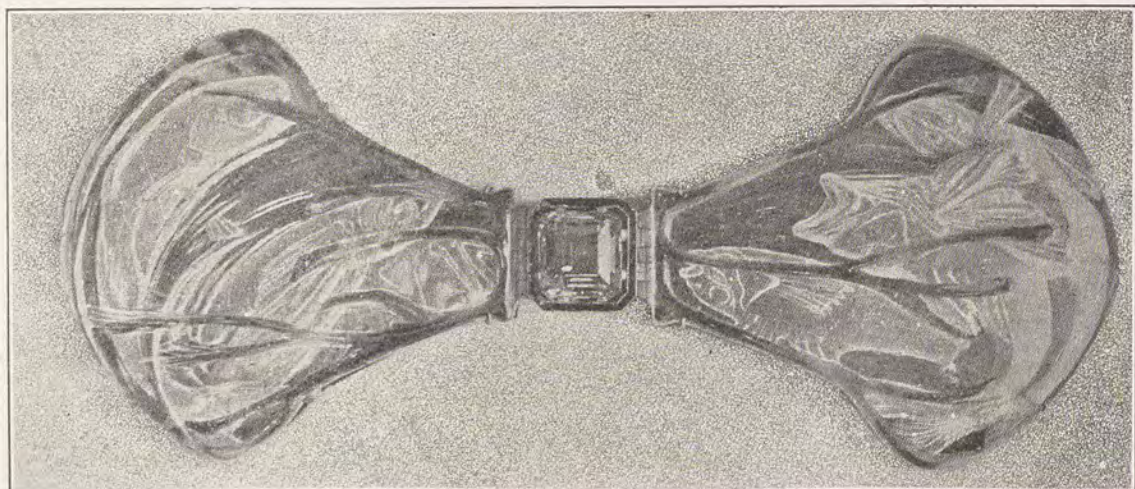
Jewels for Many Occasions

But even those who play the principal parts in the social world do not pass all their evenings at great functions. There are more quiet pleasures and less brilliant reunions, and for such occasions, as jewels are always permissible, personal ornaments must be chosen, which are in harmony with the surroundings of the wearer and with the character of the people whom she meets. At these more or less intimate reunions, everything is plainly seen. Brilliancy and emphasis are no longer effective. These qualities are disproportionate and inharmonious, when introduced into scenes such as these. Here the woman adorned with jewels, is viewed under a softened light, and she must affirm in her garments and her ornaments an individual taste and the existence of mental characteristics peculiar to herself. This taste and these signs of temperament are usually sought in the shops, in which all objects are catalogued, and differ among themselves only through price. Nor can one demand to-day of the woman eager to express herself in her jewels, that she fashion them herself, in imitation of her ancestor, the cave-dweller. For the principle of personal ornament is invariable, and if the general form of each object destined for such use, has been always practically the same, one cannot revert to the use of primitive elements of composition, such as shells, pebbles, and horn. These substances can indeed enter into modern work, but they must be set into other material, and the object of which they form a part must have a meaning quite different from that of primitive art.

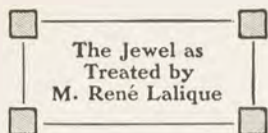
The function of the jewel being recognized—that is, its decorative purpose—it is further necessary that the special object retain its original and traditional character: that the ring be a hoop to encircle the finger; that a bracelet take the shape of the wrist; that a diadem adapt itself to the brow, to the hair, to the contour of the head; that a watch be fitted to the circle of the dial. Under no pretext should decoration be allowed to change the first natural and necessary form of the object; rather should it be subjected to the structural demands of the specific case; and never allowed to usurp its place as a secondary element. The stricter this subjection and adaptation, the more fully does this object attain its purpose.



Pendant: gold, engraved enamel, and topazes

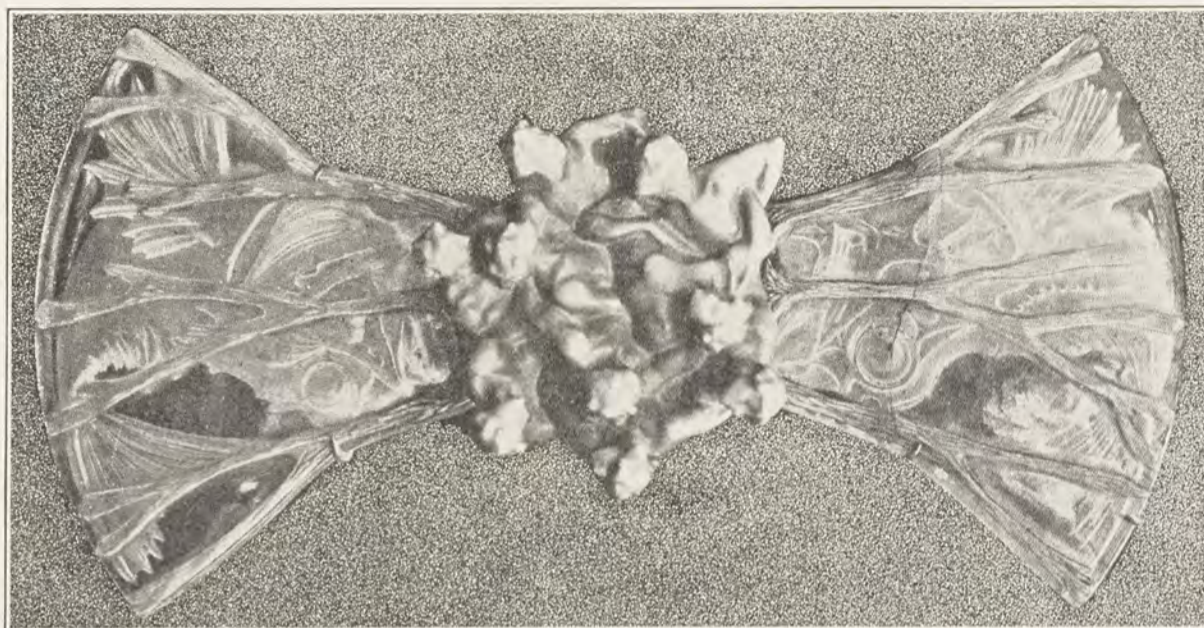


Corsage jewel: emerald, with engraved and enameled crystal



the secret of animating the world of the waters, the earth, and the air. Among specimens of his work illustrating types of life drawn from the animal kingdom, I will cite a small box made from horn, the cover of which, in pierced work, forms the frame for a fish. The work is a wonderful picture of nature, and the spark of life burns in the little being which, maddened, struggles in the narrow space circumscribing him, as if he were caught in the weir of a fisherman. With his threatening jaws, his great startled eye, his writhing, muscular body, his darts, fins, and bristling scales, the creature presents a type of impotent anger, which, like the Japanese masterpieces, is so perfectly proportioned as to lead the mind of the examiner away from the sense of its smallness.

Furthermore, this rendering of energy does not alter the artist's exact appreciation of form. He renders the liveliest movements; he fixes in his medium of work, whatever it may be, the fleeting expressions of individuals of the animal kingdom: insects, fish, reptiles, and birds. He reflects too the various expressions of plants: their vigor, their delicacy, their coquettishness. He has produced other objects similar to the one already described; other boxes of horn upon the cover of which the beautiful insects called stag-beetles, are represented as flitting about amid the tufted flowers of the clover. And again M. Lalique uses fish as the principal *motif* for a belt-buckle clasped by an emerald. These fish, engraved and modeled in a crystal which imitates the calm sweep and the eddies of water, are seen behind *algae* in green enamel, which have the actual appearance of wet plants swept along by the current. This piece presents an exquisite harmony in green and white; while another ornament, a neck pendant, is composed of topazes surrounded with wheat-ears: thus offering notes of gold and of deep, clear honey-yellow. There is another girdle-clasp, showing marine



Corsage jewel: carved ivory, with engraved and enameled crystal

monsters and *algae* combined with a group of human figures, which is too compact, and gives the ornament an undue appearance of weight.

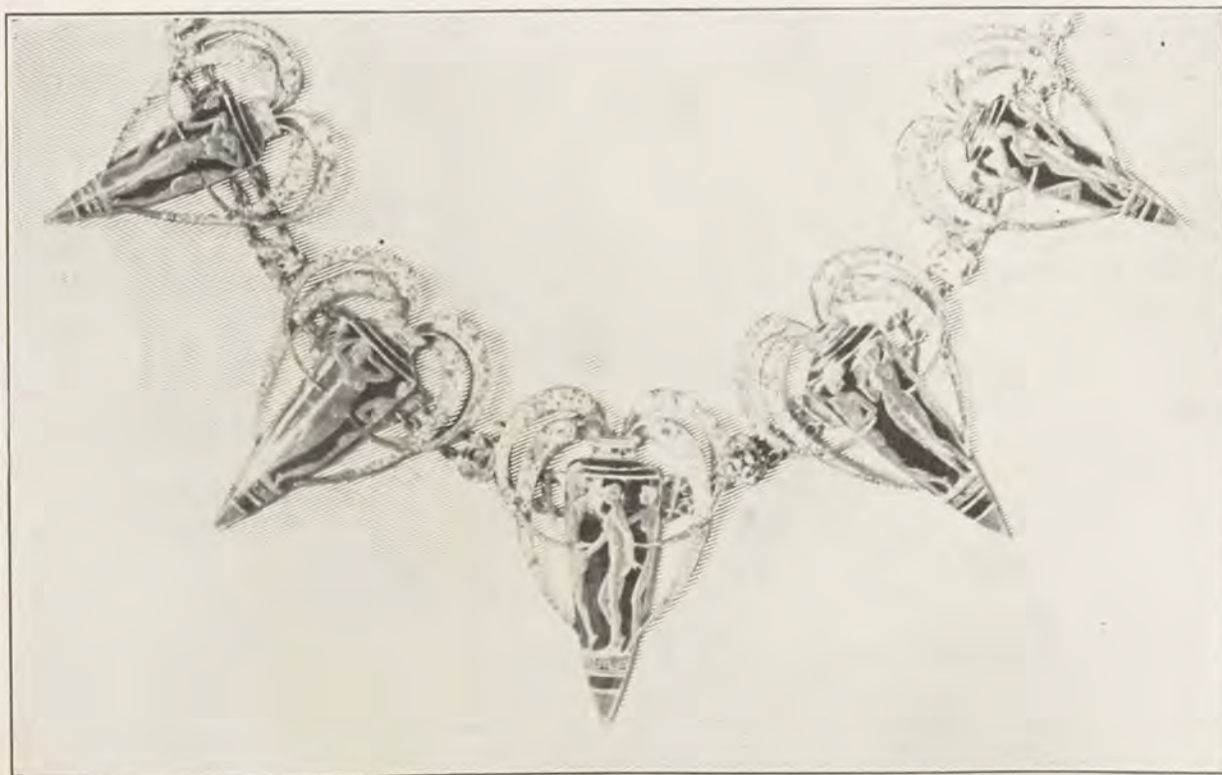
A Unique Necklace

Further, there is an exquisite necklace composed of crystal vases, upon which are engraved female figures in the style of the nymphs and naiads of the Renaissance. The outlines of the vases are emphasized and enriched by the long drooping leaves of the eucalyptus plant, which seem to spring from the interior of the pointed vessels. This object offers a harmony in white, and the grace of the composition is perfect: the delicate leaves, curved backward and falling like handles from the neck to the sides of the vases, chording with the elongated Praxitelian figures lightly traced in the hard, transparent crystal, which has the purity of a mountain spring.

The necklace is an ornament necessary to women, and, in the example just described, M. Lalique has expended his talent, as often before, in making it attractive and lovely through delicacy of detail and lightness of general effect. But how many other necklaces has he prepared for the slaves of fashion, and with equal aesthetic sense and skill! He understands how to combine pale yellow with greenish gold. He knows how to apportion color. How to place pearls that they may form points of luminosity. He has a restrained taste, and he treats with exquisite sensitiveness the honeysuckle, the violet, and the white pink. He renders what may be called the pathology of the fading flower, the effect of the petal falling, or about to fall.

In the animal world he is equally happy in his treatments, as, for example, in his miniature bats, gray-blue with gold heads, and posed in groups separated by little stars. Reptile forms are his favorites, and so diligently does he expend his talents in fashioning serpent-diadems as to make us believe that he would willingly have dressed the hair of the Gorgon. But if the use of the terrifying Medusa is to-day permissible, it should not be too assertive. M. Lalique who is not simply a jeweler, but a goldsmith, a designer, and a maker of many kinds of decorative objects, upon occasion employs his serpents in framing a mirror; forcing them into rigid lines and necessary curves. Then, as well, he leaves

(Continued on page 752)



Necklace: engraved crystal and diamonds

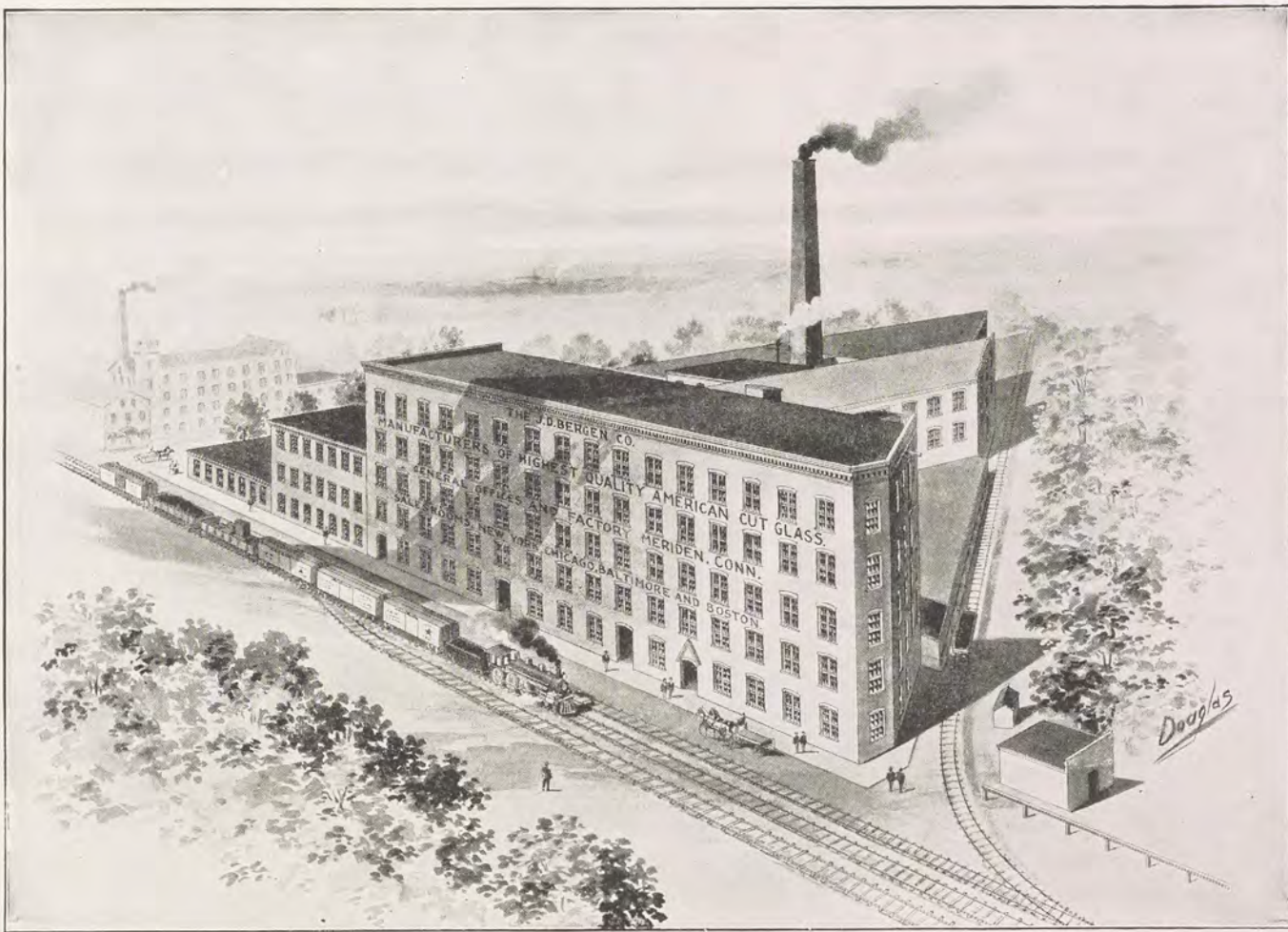
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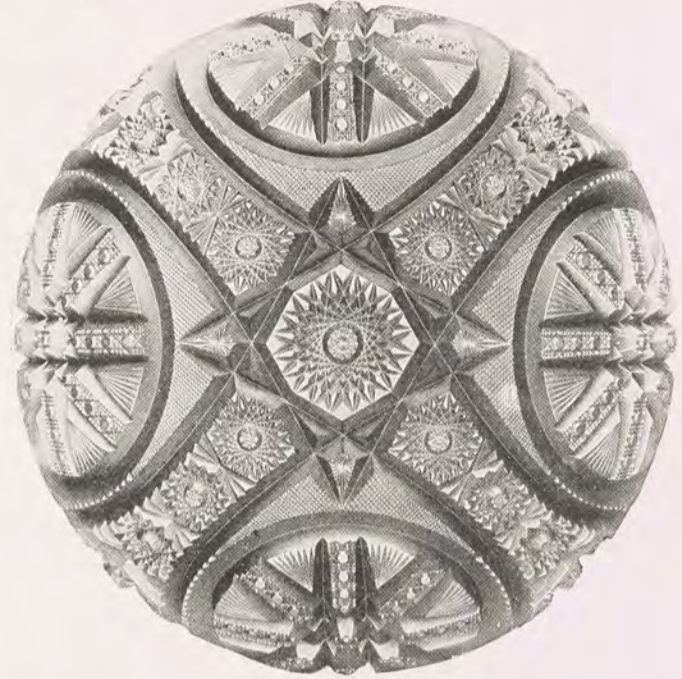
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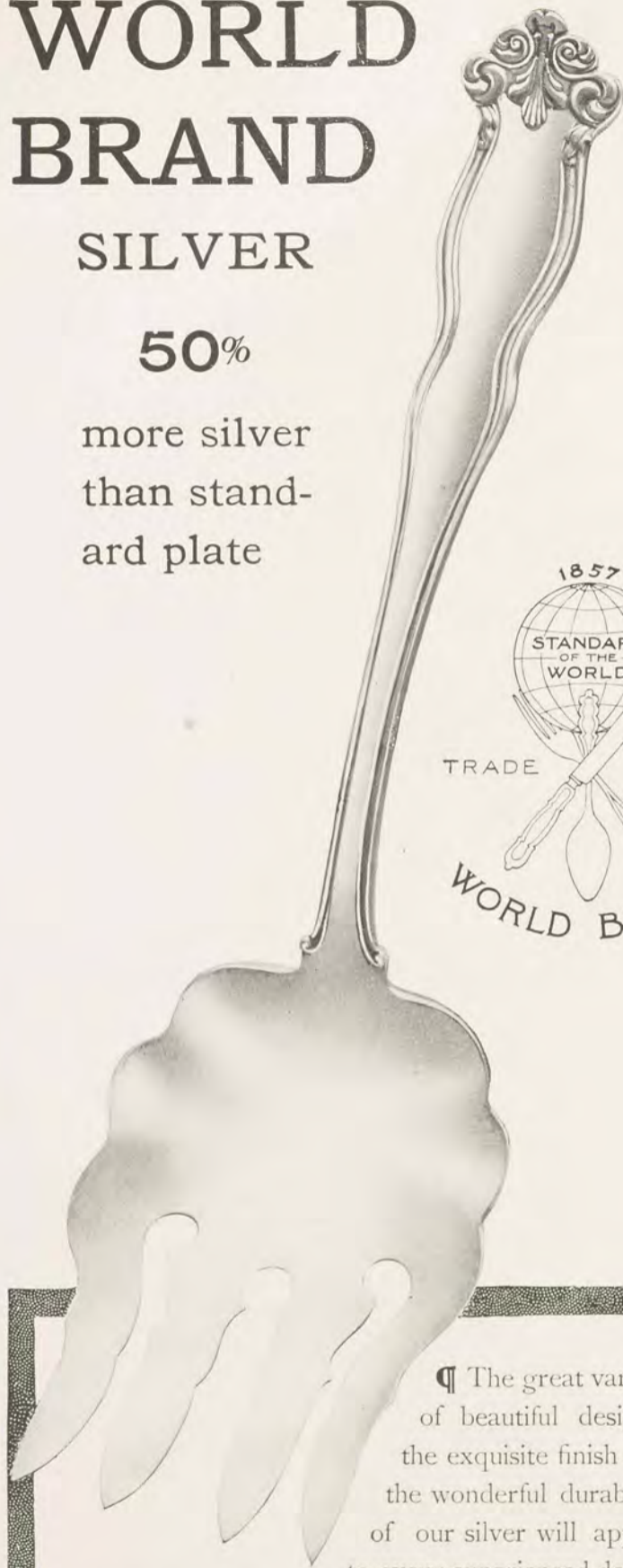
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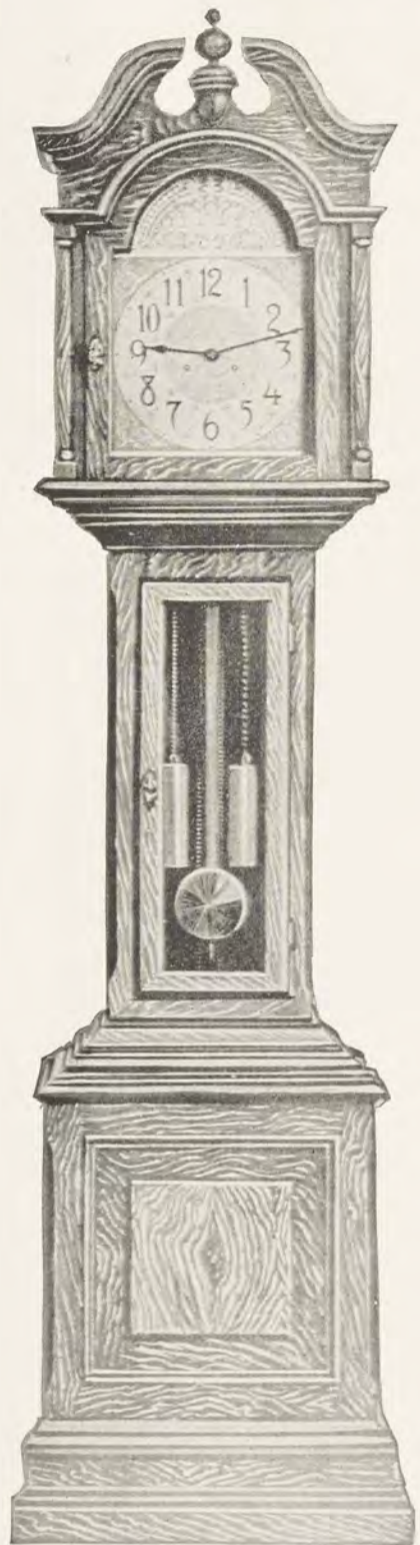
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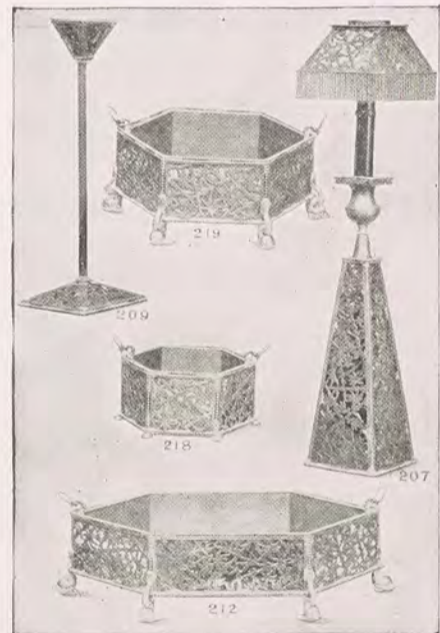
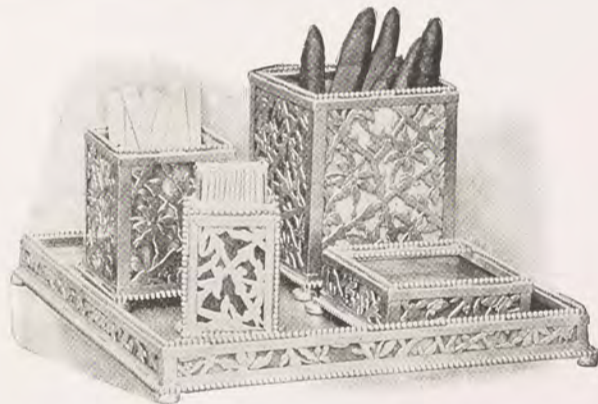
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Made since
1847

The Jewel as Treated by M. René Lalique

(Continued from page 748)

the society of his dear reptiles to seek that of his quivering dragon-flies, from which he may demand not only the winged lightness of a lady's jewel, but also the strong decorative *motif* of a chandelier.

Realistic Reproduction of Insects

As treated by M. Lalique, the dragon-fly is magnified to giant proportions, but, at the same time, it retains its slenderness, and shows with emphasis its slender body divided into sections like the stalk of the bamboo. The insect puts forth an enormous head, and extends long crackled wings, which serve as screens against a too brilliant light. Meanwhile, *coleoptera* with their round bodies and slow movements, are seen quietly climbing the metal cords which suspend the chandelier, without giving the slightest attention to the gauzy, iridescent robes behind them, which float and shimmer in the incandescent light.

Great praise should be given M. Lalique for having honored through the jewel the animal world, which has been almost neglected in French art. In sculpture and in objects of ornament we find few results of the close study of Nature. There are animals in Gothic art, such as birds, fish, and crabs, which we see carved on the portals of cathedrals. There are animals on the *faïence* plaques of Bernard Palissy. The horse, the lion and the dog enter into sculpture. But a rule is not composed of exceptions. Was not great surprise expressed when, during the first part of the nineteenth century, Barye showed himself to be above all an animal sculptor? He re-established the great traditions of the Assyrians and the Egyptians, but threw himself into opposition with the idealistic and heroic sculpture of his time, which had fallen into convention by reason of having attempted to over-refine symbols and ideas. Moreover, Barye did not confine himself to the so-called noble animals: the great carnivores and spirited horses. In moments of gaiety he condescended to model even the round, humorous face and the long ears of Jack-rabbit.

M. Lalique would be as free from prejudice as the great artist just cited. M. Paul Neveux has written that his friend Lalique was born and passed his childhood in La Fontaine's country, and that he owes to his native region his love for the little inhabitants of the air and of the fields. The brief descriptions of the fabulist, intoxicated with the poetry of Nature, are, in truth, themes ready at hand for an artist who wishes to learn by exact observation the movements, the habits, the characteristics of animals. Nevertheless, it seems more natural to believe that M. Lalique was subject to a plastic influence, and that his real masters are the Japanese, themselves such near relatives of the French La Fontaine that an edition of the *Fables* has been published at Tokio, illustrated by various artists of the empire.

Oriental Artists Portray Animals

The Japanese have not disdained to study the animal, and I remember the charming study written upon this subject by the lamented Ary Renan, for "Artistic Japan," edited by M. Bing. The former possessed of accurate knowledge of the Far East, demonstrated in his delicate, appreciative style, that the Japanese had observed everything in animate Nature; that they had not only noted exactly the flight of the bird, but also that of the winged insect, and even the motion of the most minute creatures gliding along

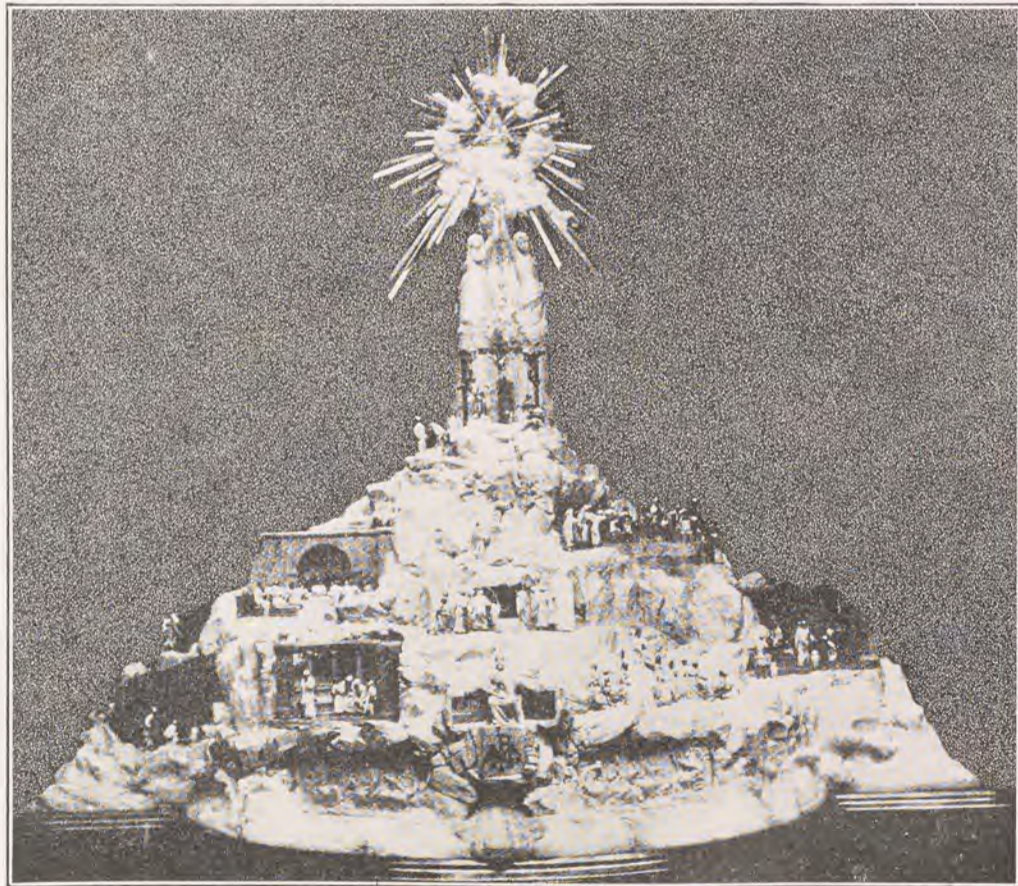
the ground, beneath the grass. In fact, the living poetry through which the Japanese picture the animal world, is an innovation in art without a parallel. With what surprising intelligence they represent birds of all species, walking on the earth, hopping from branch to branch, or skimming through the air; fish darting between two waves, or mounting through the foaming water of a cascade; butterflies, dragon-flies, and wasps, describing slow or rapid circles about flowers; indeed, all other creatures whose names appear in the genealogies of natural history. By these species so observed and reported, we can illustrate the learned scientist M. Buffon no less than the poet La Fontaine. The art of Japan in itself alone, in all that concerns animals, is a complete course in natural history, and the objects of ornament produced in that empire are at once incomparable works of art and scientific records of absolute reliability.

M. Lalique should be congratulated for having thus understood teachings which, it must be confessed, are far from being appreciated. The eyes of Occidentals are not yet accustomed to such living truth, and we hear on all sides the opinion that the drawings and the carvings of the Japanese are strange works, a trifle chimerical; that their art is the world upside down—an art of flower-pots and screens. It is not very long since that a learned man of distinction thus judged with great candor an art which contains one of the best existing lessons in realism. This lesson M. Lalique has been able to master and to use, not as a limited copyist, but as an intelligent disciple of the school. For, like the Japanese, he has surprised the secrets of Nature, who always replies to those wise enough

to question her, and patient enough to listen attentively to her answer, which is always the same: "See and understand!" Everything that lives is of necessity constituted to live. Every form, every movement has its logic, is in harmony with a controlling center, and commands a specific manner of action. The artist must observe this logic and obtain this harmony. The expressions of life are infinite in number, since each being has its own. They all resemble one another and yet all are different. Absolute unity permits variety everywhere and always. There is no fear that subjects and material for observation and reflection will ever fail. The laboratory of life is unceasingly in action, and a man's existence cannot exhaust the product of its labor. If we reflect seriously, we find that art has always merely skimmed over the surface of Nature. The immensity, tumultuous with movement, vibrating with life, constantly creating forms and phenomena, has been scarcely perceived by the dazzled eyes of artists, and these artists have been great only to have recorded a slight portion of what exists, and of what they have observed and felt. Let us imitate them in this!

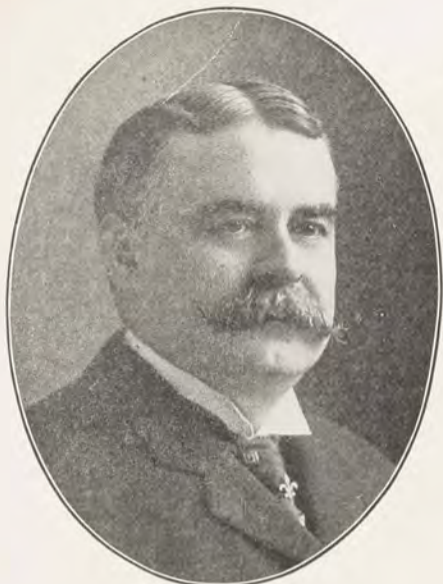
The artist who is here concerned has probably heard and comprehended this lesson, because he has vitalized the delicate objects of his creation.

I speak of the art of M. René Lalique in a state which I believe to be final, now when he resorts to that inexhaustible Nature, which art must constantly recall and struggle to equal. I have the conviction that if the artist whom we have studied, should submit his productions to the critical sense which must exist in him, he would classify his own efforts, his errors, fancies, and successes better than I can do.



"The Way of Life"—A Sermon in Precious Stones

This curious example of the goldsmith's art, recently exhibited in London, has occupied M. Channet, the Paris jeweler, for thirty years. The basis of the work is marble, and around it runs the River of Life, in onyx. The small tableaux all represent incidents in the life of Christ, from Bethlehem to Calvary, and among the scenes depicted are: "The Sermon on the Mount," "The Marriage at Cana," "The Raising of Lazarus," "The Last Supper," "The Agony in Gethsemane," "The Trial of Jesus" and "The Crucifixion." The figures are fashioned in ivory, metal and precious stones, and above all is a symbol of the Trinity.



The Late
M. S. BENEDICT
Founder of M. S. Benedict Mfg. Co. in 1883

BENEDICT MFG. Co.

INCORPORATED

Factories and Main Office, East Syracuse, N. Y.

CHICAGO
153 Wabash Avenue

SALESROOMS

NEW YORK
409 Broadway

MANUFACTURING

The most representative line of Silver-
Plated Hollowware, Flatware and
Art Metal Goods made
in any one factory

Re-organized: Syracuse business men of considerable note and means having become interested in the BENEDICT MFG. Co., business is resumed with the sole idea of manufacturing a line of goods that cannot fail to please.

Satisfaction is absolutely guaranteed. Every article leaving the factory from this date forward will be made and finished by the most skilled labor obtainable. None but the best of our workmen have been retained, vacancies having been filled by artisans from the large factories of the East.

The office management has been most thoroughly re-organized. A department created for the one purpose of caring for our customers who buy from catalogue, and for reaching that trade which our large force of traveling salesmen cannot possibly see often. All **Mail Orders** and inquiries will have especial attention.

We cover the entire United States with a most capable force of traveling salesmen. The representative for your territory will see you in a short time, and it will be to your interest to hold your orders. If you intend placing your order at once, drop us a postal, and we will direct our salesman to call.

We can furnish any of the goods you have used in the past, and are adding new patterns every day.

Drop us a postal for our **FIVE NEW CATALOGUES**
We will send them **EXPRESS PREPAID**

Effective Window Trim for a Jeweler

A jeweler's show-window display may be of two kinds: to simply call attention to the store, as a litter of puppies; or to *sell goods*. I believe that the best display has for its object the selling of goods, the sensational or artistic quality being subsidiary to the commercial value. However, a combination of all three has in it most of the desirable qualities of show-window display. I designed for my holiday window what I consider a very good representative of the desired combination and will describe it, so that anyone may make it.

How to Construct It

My window is 6 feet 3 inches wide, 3 feet 6 inches deep and 6 feet 6 inches to the

bar dividing glass horizontally. I made nine frames of $\frac{3}{4}$ x $\frac{3}{4}$ -inch pine, two of which, for the front and back, were four-sided; the others, three-sided, thus, \square . These were set 5 inches apart, being held at top and bottom by notched pieces well secured. The five frames nearest the window were trimmed on three sides with red crepe tissue (Dennison's R 3) 10 inches wide, the paper being fastened *lengthwise* to the frame with Le Page's glue, the edges projecting toward the center of window, like a stage "fly," and were filled by stretching the edge.

A Cheap Background

The sixth frame had a cross-piece 24 inches from the bottom, to which was suspended the paper for a background for the goods, the width of paper at sides and top being increased 2 inches. The seventh and eighth frames had cross-pieces 28 x 32 inches high respectively, from which a short piece of paper was hung, the sides and top having 16 and 20-inch borders to correspond; this gave the desired effect of depth. The ninth frame was covered completely, giving a neat finish to the inside toward the store and forming a background for the whole window. The paper was not pasted at bottom, in order that ingress might be had to remove goods; the same idea caused the lower part of No. 6 to be left unpasted. In the bottom of the window I built a platform 5 inches high, with front sloping at an angle of 45 degrees. This was covered with the paper.

The lighting was the feature. Electric lamps were wired in such a manner as not to be visible, care being taken not to allow globes to touch the paper. Five of the regular 16 c. p. 110-volt lamps were used, the wiring being done by myself, though the assistance of an electrically-inclined friend might be useful. You will need 50 feet of double-covered flexible wire, one switch, five sockets, bicycle tape to cover joints, etc. The wiring should be done as indicated in the sketches, especially No. 1, in order not to short circuit, the joints being scraped and soft soldered and well covered with tape. On display I had two "electric portables" connected

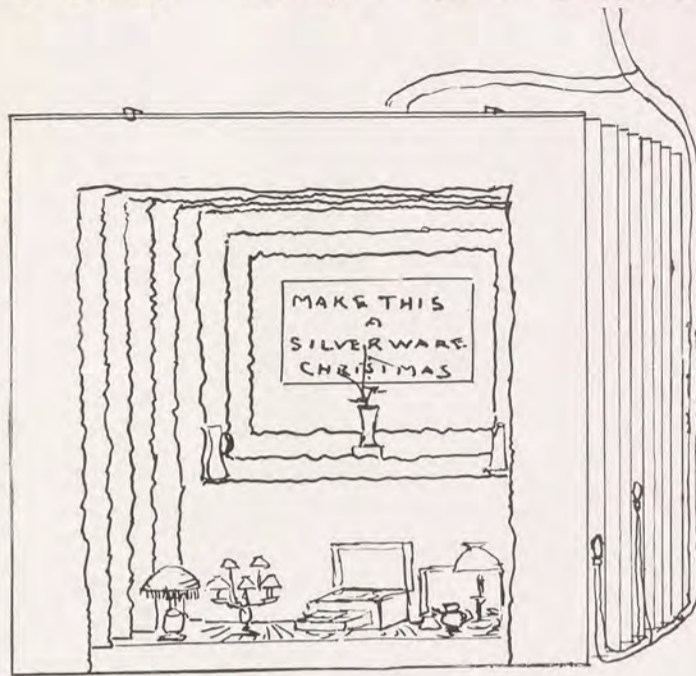
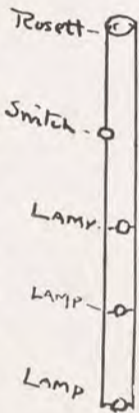


Diagram of Plan



The expenses were 200 feet of strips, \$1.00; 12 rolls of tissue, \$1.20; wire, 75 cts.; switch, 25 cts. and sockets, \$2.50. The time taken in making this trim was the evenings of one week.

—H. L. Whited, Ashland, Oregon.

A Handsome Jewelry Store

Activity in store improvement continues unabated. Photographs of improved interiors reach us almost daily, but limitation of space compels discrimination in reproduction. We show on this page the pretty store of Frank C. Hyde & Co., Appleton, Wis. This store in its present form is the result of a radical transformation made in these premises some seven months ago. Accordingly, its equipment is practically new and its arrangement in harmony with the most modern ideas of storekeeping. Upon entering the store there is a seat upholstered in leather for the accommodation of customers—a feature much appreciated by weary shoppers, more especially by ladies. The remainder of the wall space at this side of the store is occupied by three handsome wall cases, the first devoted to cut glass, the second to clocks and the third to silverware.

These commodious cases afford the firm a much-desired opportunity to display a considerably-increased stock. The other cases are of the most improved variety, all except one being new and that one was retained for its superior merits. The electric lighting facilities are excellently devised, the interior of the cases being capable of very effective illumination. A hot-water heating system has been installed, a feature of which the proprietors are rather proud, and the ceiling is of handsomely-ornamented steel.

The new store is a monument to the energy, enterprise and business capability of the management, who have always adhered rigorously to the principle of the square deal.



Store of Frank C. Hyde & Co., Appleton, Wis.



We have kept all the little Brownies busy and some big ones too, and now we are pretty comfortably installed on the **TWELFTH FLOOR** of the "**COCKCROFT BUILDING,**" Northwest corner **NASSAU** and **JOHN STS.** We never were in such shape to hustle out your orders. Send them in and watch the result or—come up to the office and let us show you.

HENRY FREUND & BRO.

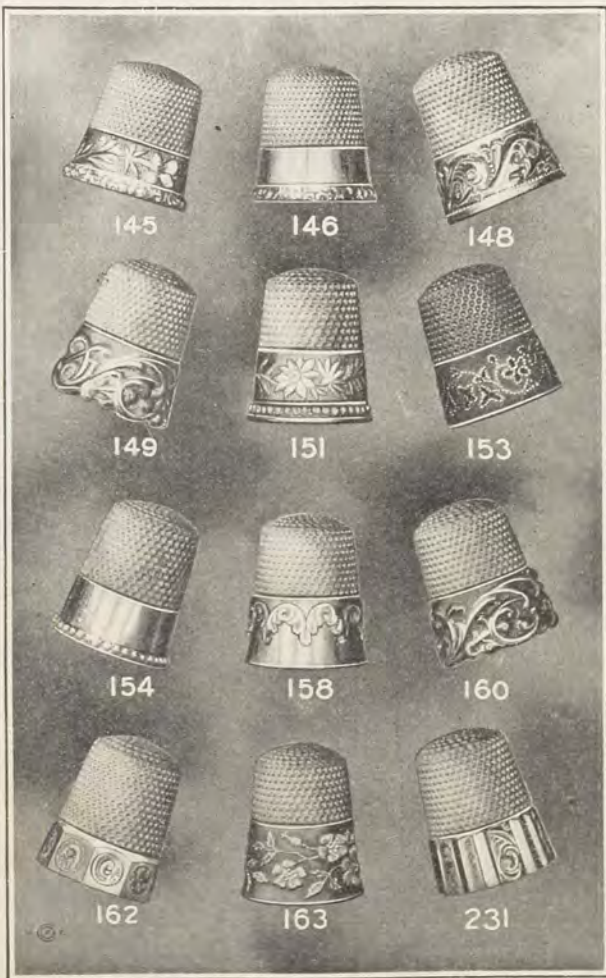
Diamonds, Watches and Jewelry

ELK and EAGLE GOODS a Specialty

71 Nassau St., corner John St., **NEW YORK**



GOLD AND SILVER THIMBLES



ESTABLISHED 1882
KETCHAM & McDOUGALL
 MANUFACTURERS
 GOLD & STERLING SILVER THIMBLES
 AUTOMATIC EYEGLASS HOLDERS
37 AND 39 MAIDEN LANE, N. Y.
SEND FOR CATALOGUE "E" "T"

The Automatic Eyeglass or Pencil Holder



Made in Gold, Silver, Rolled-Plate, Gun Metal, Royal Copper and Black Enamel. Samples sent upon request.

Banquet of the Jewelers' Bowling League of New York

Members of the Jewelers' Bowling League and their friends, to the number of about two hundred and twenty-five, brought the season's programme of that strenuous organization to a memorable close on Saturday night, April 11th, at a banquet in the



J. B. Wood

Broadway Central Hotel. One of the most pleasing and interesting features of the banquet was the presentation of prizes to the winning teams and individual players. There was an abundance of mirth, music and hilarity, all befitting a social climax to an athletic tourney.

The wisdom of the executive in having the words of a dozen popular choruses printed on the menu programme was melodiously vindicated by the spontaneous outbursts of the lusty diners, which anon made the welkin ring according as one or another of the following artistic favorites appealed to them: "Starlight," "Everybody Works But Father," "Nobody," "Good-Bye Sweet Marie," "Sympathy," "Rufus Rastus Johnson Brown," "Wait Till the Sun Shines, Nellie," "Give My Regards to Broadway," "He's Nobody's Friend, Not Even His Own," "My Irish Mollie O," "The Yankee Doodle Boy," and "Nothin' from Nothin' Leaves You." And the verses of this anonymous ode, entitled "The Dream of the Bowling Jeweler," found many a joyous echo throughout the evening:

"O, Jewelry Men! for just to-night
The Bowling Ball is dead!
And in its place, resplendent, bright,
The High Ball reigns instead.

"Strike up the Band, come one, come all,
There's plenty and to spare;
Let's don our happiest 'frame' of mind
And banish all our care.

"An even 'break' 'twixt meat and drink:
Fall to, my merry men!
Bow down the bottles—Waiter! here,
Just 'set 'em up again.'

"Let nought be 'missed'—'spare' not the spread
Pitch in and give it fits!
We're 'King-pins' all—He woke! Oh Gosh!
Where's those Red Raven 'Splits'?"

The spacious hall was handsomely draped with the national colors, the tables were thoughtfully arranged, the one reserved for the guests of honor being placed in the center so that all could witness the formalities incident to the awarding of the prizes.

The following reception committee made the guests welcome upon arrival: E. H. Dean, C. F. Brinck, G. A. Blindenhofer, A. C. Capouilliez, S. A. Tickell, Platt Adams, W. G. Wood, H. A. Finn, R. C. Riddell, A. L. Brown, F. N. Whitney, W. L. Stone, C. S. Hemingway, C. E. Roll, R. H. Woodrow, H. Laboureur, C. P. Holker, H. Graham and E. W. Brinkman.

The merits of the games formed a congenial topic for the guests for about an hour, after which the reception committee led the way to the tables

and all filed off to their seats, while a pianist played a stirring air. An elaborate menu was served and during the progress of the feast there was a merry din of laughter and conversation, broken now and again by the strains of "The Star-Spangled Banner," or "Yankee Doodle," which brought the diners to their feet and caused patriotic demonstrations.

Naturally the suggestion of speech-making was foreign to the occasion, and, consequently, the formal presentation of the prizes by President J. B. Wood was marked by some witty verbal interchanges only. When coffee had been served, President Wood announced that the first team prize was won by the club representing his firm, C. F. Wood & Co. He took occasion to state, to the delight of the guests, that the victory of the team was largely due to his, the speaker's skill. He frankly admitted, however, that probably no one but himself would believe this, for he confessed his best achievement in the game was 219.

He added: "I now present this loving cup to C. F. Wood & Co.'s team, of which I am not a member." On behalf of the winner, W. G. Wood accepted the trophy.

The second prize and the Avery team strike prize were won by the team of the Dennison Mfg. Co., and in awarding these trophies Mr. Wood said that the recipients were well worthy of a better position. "Our boys know it," he remarked, "for we bowled off the tie with you." On behalf of the Dennison team, G. W. Hough received the prizes.



E. H. Dean

The third prize was awarded to the team of Tiffany & Co., and was received on their behalf by G. S. Hemingway.

H. Laboureur accepted the fourth prize on behalf of the team of Joseph Fahys & Co., and R. H. Woodrow the fifth on behalf of the Cross & Beguelin players. The sixth prize went to the Alfred H. Smith & Co. team and was formally accepted by W. C. Gruner. The making of each reward was followed by applause, and each recipient appropriately expressed his thanks. More enthusiastic demonstrations followed the presentation of the individual average prizes, the recipients of which, with their records follow: First prize, C. E. Roll, of N. H. White & Co., 178 $\frac{1}{4}$; second prize, E. E. Wood, brother to President Wood, 172 $\frac{3}{4}$; third prize, W. G. Wood, the president's nephew, 171 $\frac{3}{4}$; fourth prize, C. P. Holker, of Julius King Optical Co., 168 $\frac{3}{4}$; fifth prize, Platt Adams, of Dennison Mfg. Co., 167 $\frac{1}{2}$; sixth prize, F. Martens, of Joseph Fahys & Co., 167 $\frac{3}{8}$, and A. C. Capouilliez, of Alfred H. Smith & Co., 160 $\frac{1}{2}$.

The spare prizes were awarded as follows: First, H. H. Dillingham, 4.452; second, H. Siebert, 4.307; third, G. A. Blindenhofer, 4.238.

G. V. S. Carroll, of the Dennison Mfg. Co., received the first prize for individual high score, and the second prize went to John Hall, of Joseph Fahys & Co. Avery & Brown's players were awarded the team score for a total of 890. Brief acknowledgments were made by F. P. Seymour, of the Dennison Co., and Mr. Brown, of Avery & Brown.

Then followed a few words from Herman Ehler, proprietor of the alleys in Brooklyn, in which the games were held, and this cleared the way for a splendid vaudeville entertainment, the cast being made up of Mabel Bennett, "Coon Shouter";

Madge Maitland in comic songs; Billy Carter black-face comedian, with a banjo; H. B. Riggs in monologues; Harry Thompson in his character sketch, "The Mayor of the Bowery"; Joe Macey, pianist.

The varied and amusing exhibitions thus afforded brought the banquet to a close. The dinner committee, composed of E. H. Dean, C. F. Brinck, G. A. Blindenhofer and A. C. Capouilliez, are to be congratulated upon its success, as are also the officers, president, J. B. Wood; vice-president, F. P. Seymour; treasurer, E. H. Dean, and secretary, J. F. Schierloh, who aided them in their labors.

Association Notes

Illinois Society

A meeting to inaugurate a State society was held at Springfield, on April 10th. Whether it was that the event was poorly advertised or for some other reason, the attendance was disappointingly meagre, and enthusiasm in the movement fell much short of anticipation. S. M. Strain, of Nokomis, was elected president and H. C. Watts, of Forrest, secretary. No steps were taken to have the new society affiliate with the American Association, and the latter announced its willingness to transfer its membership in Illinois to the State society. A similar policy, it was stated, would be pursued in regard to its membership from other States having their own organizations. An executive committee was selected to draft a constitution and by-laws which would be submitted for adoption at the first annual meeting, which will be held July 11th, in Springfield.

Massachusetts Society

A number of the prominent Massachusetts jewelers met at the American House, in Boston, and organized an association for the mutual benefit and protection of their interests. W. F. Newhall, of Lynn, was chosen president, and Edward H. Dunbar, of Norwood, secretary and treasurer. A committee was appointed on by-laws, to report May 10th at the American House, where the balance of the officers will be elected and the organization perfected.

Organization for North Carolina

R. C. Bernau, of Greensboro, N. C., and A. P. Staley, of High Point, in the same State, both well-known jewelers, have taken a joint initiative looking to the organization of a retail jewelers' association in North Carolina. Through the local press they have endeavored to rally their fellow-craftsmen to the cause, and there are bright prospects for its success. Jeweler Bernau appeals to the magnanimity and fraternal spirit of retailers in that State and invites them to meet in Greensboro on Tuesday, July 3d, for the purpose of organizing a State association.

The date chosen should be most opportune, as on July 4th the North Carolina Optical Society, of which Mr. Bernau is president and Mr. Staley secretary, will meet in Greensboro, and the movement to organize the jewelers should be given a favorable impetus in consequence. Meantime, those who favor organization among jewelers, are requested to communicate with either Jeweler Bernau or Jeweler Staley, as an interchange of views will no doubt facilitate preliminaries and prove otherwise desirable.

New Ideas in Selling Diamonds

CHART FOR THE GRADING OF DIAMONDS

- A. Blue white and perfect
 B. Blue white and very slightly imperfect,
 commercially perfect
 B1. Blue white and slightly imperfect
 BX. Blue white and imperfect
- C. Extra white and perfect
 D. Extra white and very slightly imperfect,
 commercially perfect
 E. Extra white and slightly imperfect
 EX. Extra white and imperfect
1. White and perfect
 2. White and very slightly imperfect,
 commercially perfect
 3. White and slightly imperfect
 3X. White and imperfect
4. Commercial white and perfect
 5. Commercial white and very slightly imperfect,
 commercially perfect
 6. Commercial white and slightly imperfect
 6X. Commercial white and imperfect
7. Good color and perfect
 8. Good color and very slightly imperfect,
 commercially perfect
 9. Good color and slightly imperfect
 9X. Good color and imperfect

Copyrighted, July, 1904, by S. C. Scott

If you want a better diamond business, you should take more interest in diamond selling.

Our copyrighted chart for grading diamonds is a great help to every retailer. By it the diamond is graded carefully for color and perfection.

We guarantee this grading, and the diamonds that are so graded are offered you at prices which will assure you of meeting any competition.

Our stock is very large, comprising all sizes and qualities. We can therefore fill all orders promptly.

Order Elsewhere and Compare Prices and Qualities

HENRY GINNEL & COMPANY

Diamonds and Watches

31 Maiden Lane, New York

Established 1835

THE COMB HOUSE

We manufacture a complete line of

Fine Mounted Combs in 14 K.,
10 K., Sterling, Gilt and Gold Filled.

Also, all kinds of

Plain, Real and Imitation Tortoise
Shell Combs

Selection Packages Sent to Responsible Jewelers

Wagner Manufacturing Co.

41 Union Square, New York

Repair Work a Specialty

Factory, Lorimer St. and Throop Ave.
Brooklyn, N. Y.

We are now over the inconvenience occasioned by the recent fire in our
factory and in a position to fill orders promptly. We are grateful for the
consideration shown us by the trade, and glad to be in a position again to
extend our usual service.

H. KROLL & CO.

MAKERS

36 & 38 John Street
NEW YORK



1064



1439



921



1072

*Mountings that help sell
Diamonds*

Combs, Hat Pins and

Waist Sets

SIGNET RINGS

(our own make) A SPECIALTY

will be the main features of our

Spring Line

*Memo. Orders
Solicited*

L. Witsenhausen

Chicago: 405 Masonic Temple
L. KATLINSKY

47-49 Maiden Lane
New York



New York Letter

New Home for Merchants' Association

The Merchants' Association of New York has issued a bulletin giving particulars regarding the building which is being erected for that body at 66 Lafayette Street. Hitherto the officers of the association have been in the New York Life Building, on Broadway, but by November next the new structure will be ready for occupancy. It will be eight stories high and the quarters of the association will occupy the entire eighth floor. Last year 9000 visiting buyers registered at its office, and this number should be increased during the present season, as the membership in the association is uniformly increasing, amounting at present to over 1100. Registration at the office of the association is of course one of the results of the special excursion rates which it obtains from the railroad companies during the buying seasons.

Customs Victory for Albert Lorsch & Co

A decision which precious-stone dealers have been awaiting with interest was reached on April 3d by the board of United States general appraisers in the reconstructed ruby case. The board sustained a protest of Albert Lorsch & Co., 37 Maiden Lane, against the action of Collector Stranahan, who classified artificial rubies as manufactured articles dutiable at 20 per cent. Under the board's decision the articles are classed for customs purposes with natural rubies dutiable at 10 per cent. While this is a victory for firms who deal in the artificial rubies, it will not be favorably received by those who deal in natural stones and to whose interest, therefore, it would be to have the two kinds of articles separately classified. It is possible that the ruby case will, as a precedent, affect other kinds of precious stones, including emeralds, which are also produced by artificial means. The dealers in natural rubies have argued that if the government should classify the artificial rubies, even under the similitude clause of the tariff law, with the natural products, the trade in the latter would suffer. Unscrupulous dealers, it is said, would be enabled by such a classification to sell the product of the factory as natural rubies, alleging that there is no difference, and pointing to the government's ruling for proof. The appraisers, however, did not take this view. General Appraiser Sharretts wrote the decision as follows:

The goods in question are invoiced as "reconstructed rubies;" the evidence taken in relation thereto, however, leaves an element of doubt as to whether they were produced by artificial means or, as the designation implies, are chips or pieces of genuine rubies molded into compact form.

Without making a specific finding upon this point, we incline to the opinion that the articles are artificial products, composed of oxide of chromium and aluminum, the composition of genuine rubies. In G. A. 5394 (T. D. 24,602) the board held that similar merchandise was dutiable at 10 per cent. ad valorem, either direct or by similitude to precious stones provided for in Par. 435 of the tariff act of 1897.

An appeal was taken from this decision by the treasury department, and the board was reversed by consent, the amount involved being too small to justify a defense of the importers. (See T. D.

26,641). Had the issue been decided on its merits we would feel constrained to follow the ruling of the court in the case cited, but we do not regard a decision by default as controlling.

In the present case abundant time was given both the importers and the Government to offer evidence in support of their respective contentions, and a record was prepared with the object of having the issues involved judicially settled.

We find on the evidence, which is concurrent, that the merchandise is known interchangeably as reconstructed rubies and artificial rubies, and that the same is either precious stones, or an article not enumerated in the present tariff act similar in material, quality and the use to which it may be applied to precious stones which it more closely resembles in the particulars mentioned than any other articles enumerated in said act.

Based upon these findings we adhere to the correctness of the conclusion reached in G. A. 5994 supra, and sustain the claim in the protest that the merchandise now in dispute is dutiable either directly or by similitude at 10 per cent. ad valorem under Par. 435, and not at 20 per cent. ad valorem under Section 6, as assessed by the collector, whose decision is reversed.

Imports of Precious Stones

The importation of precious stones at this port has developed into a succession of records, the latest being the volume for the month of March, which surpassed in value by more than \$100,000 that for the same period of 1905, which hitherto held the record. The aggregate volume for last March reached the value of \$3,789,825.05, which was made up of \$2,726,970.70 worth of cut and \$1,062,854.35 worth of uncut stones. The imports of this last-named variety are the most interesting feature of the whole, being greater by about one-half than the uncut imports for March one year ago. On the other hand, the value of the imports of cut stones was less by \$262,083.50 than those for March, 1905. According to the returns of Gen. Geo. W. Mindel, jewelry examiner at this port, the classified imports for the month of March of the past five years are as follows:

March	Cut.	Uncut.	Total.
1906	\$2,726,970.70	\$1,062,854.35	\$3,789,825.05
1905	2,989,054.20	684,329.30	3,673,383.50
1904	1,152,916.01	779,150.08	1,932,066.09
1903	2,022,804.43	848,840.97	2,871,645.40
1902	1,386,647.04	507,724.43	1,894,371.47

Cut Glass Manufacturers Meet

J. D. Bergen, of J. D. Bergen & Co., cut glass manufacturers, presided at a meeting of the American Association of Cut Glass Manufacturers, held in the Astor House on Monday, April 16th. Minimum prices on staple lines were discussed at this meeting and a list drawn up by a committee previously appointed for that purpose was submitted to the meeting. Final action thereon was deferred, however, until the annual meeting of the association which will be held in the Astor House, June 18th.

Fast Train from Mexico

Vice and Deputy Consul-General Eberhardt reports from Mexico City that the Mexican railroads in co-operation with northern roads, are making good time on their through limited train from Mexico City to St. Louis. All of the requisites necessary, including a dining car, for a first-class train are provided on this train. The time from the Mexican capital to

St. Louis is fifty-nine hours and thirty minutes. The distance is 1877 miles, and the speed for the entire trip averages thirty-two miles an hour. There are only nineteen stops at stations, and in one case 245 miles are made without a stop, which is regarded as wonderful in Mexico. The time from Mexico City to New York is ninety-five hours and fifteen minutes. The train now runs only twice a week, but has proved a success from the start.

Death of Solomon L. Van Wezel

The death of Solomon L. Van Wezel, of the diamond-cutting and importing firm of S. L. Van Wezel, 380 Canal Street, this city, occurred lately at his home in Amsterdam, Holland, in his eighty-third year. He was born in Amsterdam and there learned the diamond-polishing business. In 1874 he opened a diamond-manufacturing business in that city, and one of his sons, A. S. Van Wezel, also established a factory in Antwerp. The four other sons, Harry, Marcus, Joachim and J. S. Van Wezel, were admitted to partnership in their father's business in 1881. In 1895 deceased retired and the business founded by him has since been continued by his sons. Two of these, Marcus and Joachim, came to New York and established a factory which is still continued. The last-named son went to Amsterdam several weeks ago and was at his father's bedside during his last hours.

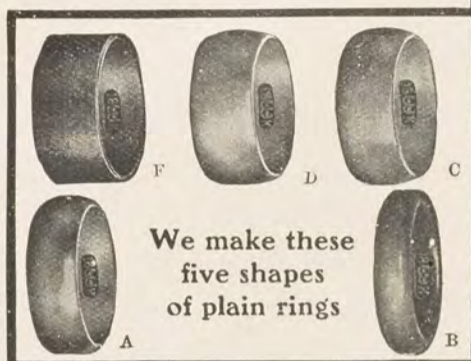
M. J. Averbeck and I. W. Cokefair, Walter G. King and Burnham W. King, the two last named of the Julius King Optical Co., all jointly constituting a realty company, have purchased the property at 10, 12 and 14 Maiden Lane, and will apportion it to accommodate their respective businesses in May, 1907, when the leases of the present tenants will have expired. The building measures 45 by 85 feet and the price paid for it is reported as \$250,000.

The well-known spectacle and eyeglass case manufacturing firm of A. Koenen & Bro., 57 Fulton Street, has been succeeded by G. E. Coope & Bro., who now continue that business at the same location. The senior partner in the new concern, George E. Coope, is a nephew to Messrs. Koenen and has been identified with his uncles in a business way for over seventeen years. His brother, Mr. Coope, Jr., has been connected with the firm for five years.

Frank Dederick, senior member of James H. Dederick's Sons, assayers and bullion dealers, 16 Maiden Lane, is rapidly recovering from a dangerous illness with pneumonia which began on March 19th. When the fever crisis had passed he was so enfeebled that a most trying operation became necessary, involving the insertion of tubes through the back to relieve the congestion of the lungs. Thanks to his splendid constitution he bore up remarkably during the experience, and his numerous friends in the trade will unite with his family in rejoicing upon his quick recovery.

C. A. Parker, formerly with William J. Ward, of this city, will take the place of the late Harry Middlebrook, representing Bates & Bacon, of Attleboro, in New York City and the Middle West.

PLAIN GOLD RINGS



We make these
five shapes
of plain rings

There is a finish and shaping to our rings that recommends them to the customer who wants to buy the best—and a guarantee for uniformly plump assay that satisfies the dealer who wants to sell the best.

As such, do you not want our line of wedding rings?



Every ring is stamped with this trade-mark, which guarantees it

HAYDEN W. WHEELER & Co.
RING MAKERS
TWO MAIDEN LANE, NEW YORK

WONDERS NEVER CEASE

THE NEW COOPER DIAMOND

Has 100 Per Cent.

More Brilliancy Than Any Other Diamond

Call and be convinced
Estimates given for recutting under our patents
Any infringement will be prosecuted

COOPER DIAMOND Co.

Cutting and Polishing Industry of America

47 & 49 Maiden Lane, NEW YORK

New York Letter

(Continued from page 755)

Fifth Avenue in High Favor

Jacob Dreicer, of Jacob Dreicer & Son, 292 Fifth Avenue, has purchased a building site situated on the southwest corner of Fifth Avenue and Forty-sixth Street, measuring 25 x 100 feet, and on which he will erect a structure that will rise to a height of ten stories, or more. Thus will be made one more addition to the number of jewelers who have acquired property on upper Fifth Avenue. This prospective building will stand one block distant from the one which Simon Frankel, of Joseph Frankel's Sons, intends to erect on the southwest corner of Fifth Avenue and Forty-seventh Street, and in which a number of jewelry firms have already engaged space.

Smuggled Rings in Oranges

A clever attempt to smuggle was discovered on April 10th, when the steamship *Germania* arrived from Italian ports. Among her passengers, according to the press reports, were Pietro Corato, a saloon keeper, of New Haven, and his prospective son-in-law, Mariana Puso. Corato left New York early last September, it is said, and promised to bring to his daughter a pretty collection of jewels for her trousseau. When the *Germania* reached her Brooklyn pier the first to leave the ship were Pietro and his companion. Customs Inspector Peter Simons was assigned to inspect their baggage. A cursory examination revealed several pieces of finery which had not been declared. These were set aside for the appraiser, and Simons gave more careful attention to the contents of Pietro's trunk. This, it was soon discovered, had a false bottom, and then the inspectors took the two Italians back on the ship to search their clothing. Nothing was found on Puso, but Corato's pockets gave up a few cheap rings and chains and three oranges. The latter were thrown aside, as they were beginning to decay, but Corato watched them so closely that the inspectors picked them up again. Each of the oranges had been stuffed with a box containing a diamond ring. The rings and the jewelry were reported to be worth, in all, about \$900. Corato was arrested for smuggling, and United States Commissioner Benedict held him in \$1000 bail for trial.

Death of John A. Deknatel

The death of John A. Deknatel, head of J. A. Deknatel & Son, pearl jewelry manufacturers, 22 Howard Street, occurred at his home on Emmons Avenue, Sheepshead Bay Road, Brooklyn, on Wednesday, April 4th, after a somewhat protracted illness. He was in his sixty-sixth year and founded the present firm in 1868, which began as a jet button manufacturing concern and so continued until 1895, when it devoted itself to the making of jewelry and imitation pearls. Henry C. Deknatel, the founder's son, was admitted to partnership in the firm in 1899, when the name J. A. Deknatel & Son was assumed. In 1903 the firm was incorporated and nearly all the stock in it assumed by the deceased and the son.

Mr. Sloan's New Office

A. K. Sloan, president of A. K. Sloan & Co., was elected president of the Maiden Lane Safe Deposit Co. at a meeting of the directors of that company held last month in its rooms at 170 Broadway, in succession to C. G. Alford, of C. G. Alford & Co., who resigned from that office and from the directorate. In addition to this office and to the presidency of A. K. Sloan & Co., Mr. Sloan is president of the Sloan & Chase

Mfg. Co., the Jewelers' Security Alliance and the Gem Turquoise & Copper Co.; vice-president of the Troy-Manhattan Copper Co. and treasurer of the Aurora Grata Council and Aurora Grata Consistory; a director of the American Waltham Watch Co., the Guardian Trust Co., the Jewelers' Board of Trade, the jewelers' Protective Union, the Jewelers' League and the United States Realty Owners' Co.

The Jewelers' Security Alliance

The regular monthly meeting of the executive committee of the Jewelers' Security Alliance was held on April 13th, the following members being present: President Sloan, Chairman Butts, Vice-presidents Wood and Champenois, Treasurer Karsch, Secretary Noyes, and Messrs. Abbott, Alford, Bowden, Brown and Stern of the committee. The following new members were accepted:

Chase & Doak, Belfast, Me.
Dubois Watch Case Co., New York City.
William Harshman, Oxford, Neb.
Jessop & Son, San Diego, Cal.
Henry Jacke, St. Paul, Minn.
Laurer & Sons, Newark, N. J.
John H. Morton, East Liverpool, Ohio.
Picard & Moss, Jamestown, N. Dak.
Smyth Bros., Reno, Pa.
J. Fedelman, New York City.
Hambright & Walsh, Los Angeles, Cal.
Ira H. Johannes Co., Washington, D. C.
Kennedy & Bro., Philadelphia, Pa.
A. R. McClintock, Griswold, Iowa.
Harry S. Murphy, New Castle, Ind.
A. F. Redfoot, Mt. Jewett, Pa.
R. J. Riles Co., Jacksonville, Fla.
Harry F. Sanger, Lima, N. Y.
P. H. Seewald, Amarillo, Texas.
E. H. Wetherhold, Allentown, Pa.
Fresno Jewelry House, Fresno, Cal.

Jas. P. Barrett, Concordia, Kans.
Crouch Bros., Los Angeles, Cal.
J. C. Faulkner, Russellville, Ark.
Geo. J. Magner, Wellsville, N. Y.
Fred. H. Mills, Carriage, N. Y.
J. T. Montgomery, Wilmington, Del.
Louis A. Ott, Mansfield, Ohio.
M. C. Petersen, Coeur d'Alene, Idaho.
Albert Pohlmann, Pierce, Neb.
A. U. Schlaudecker & Son, Erie, Pa.
Frank Lueck, Devils Lake, N. Dak.
Barnet Cohen, Elizabeth, N. J.
M. Kragens, San Francisco, Cal.
W. M. McNeal, Atlanta, Ga.
Harris Sacks, New York City.
Chas. Seesle, West Hoboken, N. J.
Robert E. Lomax, Chicago, Ill.
D. H. Abney, Kansas City, Mo.
F. P. Wynne, Gallatin, Mo.
A. D. Bliss, Albion, N. Y.
Conn & Conn, Charlestown, Ind.

S. Dessau's Sons, 180 Broadway, has been incorporated with a capital of \$50,000 and directors as follows: David Dessau, W. T. Laing and Mabel Fleury, all of New York.

Joseph C. Bigalke and Alfred C. Eckert, both hitherto connected with the A. Wittnauer Co., have entered into partnership under the name of the Bigalke & Eckert Co., and begun business as watch importers at 1 Maiden Lane. The new company will carry an elaborate stock of watches of all grades and will represent Haas, Moeux & Co., Paris and Geneva, and several other well-known watch manufacturing firms.

Geo. W. Heath & Co. have removed their offices and factory from 27 Thames Street to new quarters at Canal Street and West Broadway, where they enjoy considerably increased room and a plant four times greater in capacity than the one formerly operated. This general enlargement of plant and productive facilities has been made in response to the increasing business of this company, among whose manufactures are fine articles of gold and silver, pencil cases, penholders, bracelets, cigar holders and fountain pens.

The Frank Netschert Co., manufacturers of artificial flowers, have taken possession of their new quarters at 39 Barclay Street, which is just across the street from their old location. They will occupy the entire three floors of the building running from Barclay Street through to Park Place, where are located the freight elevators for the convenience of the shipping department. The sales-room and offices will be located on the second floor, and the two upper stories will be devoted to the manufacture of artificial flowers of all descriptions. The new quarters contain more than double

the space occupied in the old location, which was too small for the rapidly increasing business of the concern.

Jacob Strauss, of Jacob Strauss & Sons, 14 Maiden Lane, sailed for Europe on board the steamship *Kronprinz*, on April 10th.

A. Frankfield & Co., 38 W. Thirty-fourth Street, celebrated during the Easter season the fiftieth anniversary of the founding of that business. The company signalized the occasion by the display of a superb stock of Easter gifts, such as rich jewels mounted in the latest platinum settings, solid silver fashioned into a rich variety of table and toilet accessories, beautiful specimens of cut glass and selections of unique novelties. A handsomely printed announcement of the anniversary was issued by the company, containing, besides a list of its Easter offerings, a picture of its quarters in 1856 and of the handsome edifice in which it is now established.

W. H. Kinna, the popular representative of the Elgin National Watch Company, was called to his home at Sharon, Wis., last month, by the serious illness of his mother. Fortunately this took a favorable turn, although the issue was in question for a few days, and the invalid made such good gains that Mr. Kinna felt free to return to his duties, very much relieved in mind.

The Elk Jewelry Mfg. Co. began business last month, at 47 Maiden Lane, as manufacturers of the elk, eagle and other gold emblem goods heretofore made by Schickerling Bros. & Co. The company will also deal in precious stones and American pearls, and the business will be managed by Alfred Schickerling, by whom these lines of goods were designed and patented.

(Continued on page 759)



To ORDER

any Grade of Loose or Mounted

DIAMONDS



Gold and Filled Watch Cases

Elgin and Waltham Movements
New York Standard Chronographs
"New" Howard Watches
"New England" Watches
Gold and Plated Jewelry

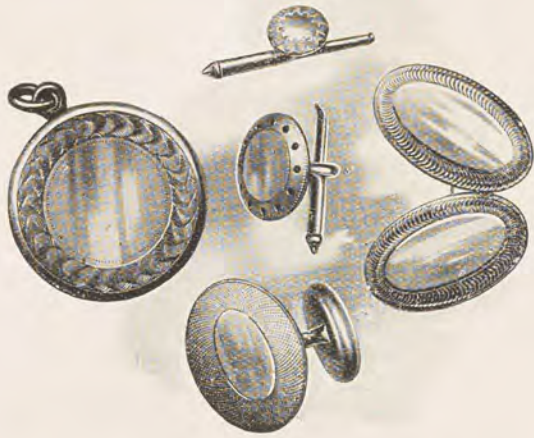
From the "ALL THE TIME" up-to-date stock of

1855—EST. 40 YEARS—1906

Lissauer & Company
IMPORTERS

2 Tulpstraat, Amsterdam

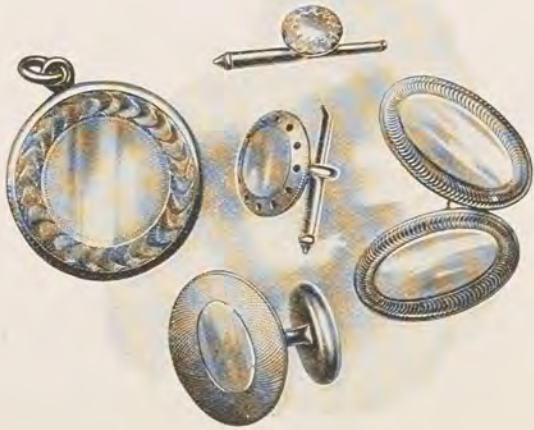
P. O. Box 1625, N. Y. 12 Maiden Lane, NEW YORK



ENGINE-TURNED JEWELRY

We have recently added a line of 14 K. Link Buttons, Stiff Bar Buttons, Larter Vest Buttons, Larter Shirt Studs, and Locketts—all with various patterns of engine-turned work.

These patterns are all put on by engine-turning lathes in our own factory, and form a new and attractive line of decoration for the above kinds of gold jewelry. Our salesmen have complete stocks of these goods.



LARTER & SONS

21-23 Maiden Lane
New York

4
over
40
years
Ring Makers



Thinking of some BIRTHDAY or WEDDING?



you can't go wrong on a

Z-K GOLD CHAIN

See that Z-K and the Karat-Mark is stamped on the chain. If not carried by your Jeweler, order from us, Ziruth-Kaiser Co., 2 Maiden Lane, New York

Greatly reduced from MAY, 1906, number of McClure's Magazine

Fill the Show Windows with PRESENTS

Your customers are going to give

Z-K GOLD CHAINS

Get your Jobber to supply you. If he delays send your order to us

ZIRUTH-KAISER CO., 2 Maiden Lane, NEW YORK



Why Do Good Jewelers Buy Our Line?

You had better investigate

OHIO CUT GLASS Co.

Factory

BOWLING GREEN, OHIO

Salesrooms

Chicago
35 E. Randolph Street
New York
25 W. Broadway
St. Louis
404 N. Fourth Street



New York Letter

(Continued from page 757)

Jewelers' Bowling League

A meeting of the Jewelers' Bowling League was held April 10th, at the office of the retiring president. The banquet committee reported the very successful affair held on April 7th, and their good work was heartily endorsed. After other routine business, the following officers were elected for the ensuing year: President, C. F. Brinck; vice-president, C. E. Roll; treasurer, E. H. Dean; secretary, A. C. Capouilliez. The question of selecting alleys on which to do next season's bowling was then discussed, and the majority favored a New York establishment in preference to Brooklyn as being more convenient. Many of the members live in New Jersey, and Manhattan would be more accessible to these, as well as the members living in New York. On motion, the new president was directed to appoint a committee to canvass the whole matter and decide on the best location. Those appointed were E. E. Wood, C. E. Roll and G. S. Hemingway. The tie game for first place having resulted in a victory for the team of C. F. Wood & Co., they won the first place and prize and left the final standing as follows:

TEAM PRIZES		SPARE PRIZE	
1. C. F. Wood & Co.	1. H. H. Dillingham . . . 4.452		
2. Dennison Mfg. Co.	2. H. Siebert . . . 4.307		
3. Tiffany & Co.	3. G. A. Blindenhofer . . . 4.238		
4. Jos. Fahys & Co.			
5. Cross & Beguelin	INDIVIDUAL HIGH SCORE		
6. Alfred H. Smith & Co.	1. G. V. S. Carroll . . . 243		
	2. John Hall . . . 239		
INDIVIDUAL AVERAGE		TEAM HIGH SCORE	
1. C. E. Roll . . . 178 1/2		Avery & Brown . . . 890	
2. E. E. Wood . . . 172 3/4			
3. W. G. Wood . . . 171 1/2		TEAM STRIKE PRIZE	
4. C. P. Holker . . . 168 3/4		(Avery Trophy)	
5. Platt Adams . . . 167 1/2		Dennison Mfg. Co. . . 568	
6. F. Martens . . . 167 1/2			
7. A. C. Capouilliez . . 160 3/4			

The regular quarterly meeting of the New York Watchmakers' Society was held in its rooms, 192 Third Avenue, last Wednesday evening, with President F. Hub in the chair. The semi-annual report of Treasurer Frank Knoll showed a prosperous financial condition and was accepted with much applause, as were the reports of Fred. Michel, financial secretary, and John A. Schmid, recording secretary. The preliminary report of the arrangements committee, Oscar Wilhelm, chairman, showed that the banquet and ball on the fortieth anniversary of this society were most successful, and the thanks of the meeting were voted the committee. A letter of thanks was ordered sent to Fuchs Bros., silversmiths, for the artistic loving cups manufactured as souvenirs for this occasion. The election of officers, being now in order, showed the following result: R. Salomon, president; Frank Knoll, treasurer; John A. Schmid, recording secretary; A. Platt, trustee. It was voted to have a May Walk in the near future; also another banquet and ball next winter.

The Gorham Mfg. Co.'s San Francisco, Cal., employees were unharmed by the recent terrible calamity in that city, according to a dispatch received by the firm. How the company's stocks fared, however, is, at this writing, not known. Its offices were located at 118 Sutter Street.

The Roy Watch Case Co., of New York City, received a wire dated the 21st inst. from their San Francisco agent, W. S. Fulton, informing them that the stock in their safe was intact, and that Fulton's temporary address was 2816 Pierce Street. Mr. Fulton is likewise the agent of Potter & Balfinton Co., jewelry manufacturers, of Providence, R. I., and had offices in the Adams Building, at 206 Kearny Street, which was greatly damaged by

the fire. It is rather curious that John Morse, the agent of the Elgin National Watch Co., who had offices in the same building, wires that their stock was destroyed, but that he and his family are safe. The Elgin Company carry a very small stock at the 'Frisco office, so that if the report is correct, their loss would not be a large one.

A. Levytansky, the Victoria, Texas, jeweler, spent a week trading in this city last month. He was buying goods for his jewelry establishment and also pushing sales on his patented spectacle guard and soldering fluid. This is the first visit that Mr. Levytansky has made to the metropolis for twenty-five years, and naturally was very much surprised at the changes which had taken place during that period, in the jewelry district in the lower section of the city especially, where the great modern sky-scrapers are congregated.

A wire was received by L. & M. Kahn & Co., of New York City, from A. Judis and M. Schussler & Co., stating that they had opened temporary offices in Oakland, and that the members of the firms and their families were safe.

His many friends in this city were rejoiced to learn by a dispatch received from him on Saturday, April 21st, that Mr. Aikin, of Aikin, Lambert & Co., who was in San Francisco, Cal., at the time of the earthquake, had safely arrived in Oakland.

The A. Wittnauer Co., 13 Maiden Lane, received tidings from T. H. Wilkinson, their traveling salesman, who was in San Francisco, Cal., during the earthquake, as early as Friday, April 20th. His dispatch stated that he was personally safe, and that the firm's stock of watches had been placed in the safe deposit vaults, where it is hoped they have remained undamaged.

Sidney H. Joseph, a well-known jewelry salesman, from this city, died suddenly at Frankford, Ky., April 13th, while on his regular Southern trip. His body was brought North by two fellow-members of the Elks. Interment was made on the 17th at Brooklyn, where deceased had his home. He leaves a wife and three children. Mr. Joseph was connected with Albert Lorsch & Co., for many years, and left their employ to go into business at Atlanta, Ga. Later he accepted a position with Fred. Kaufman, the jobber, of this city. He had a wide acquaintance in the trade and was highly esteemed.

Atlas & Fisher, Philadelphia, Pa., and Blanchard & Co., New York, were admitted to membership in the Jewelers' Board of Trade at a meeting of the directors of that body, held on Thursday, April 12th.

The factory and office of E. M. Weinberg, ring and jewelry manufacturer, are now located at 138 Mott Street, this city.

Louis Friedlander, of R., L. & M. Friedlander, 30 Maiden Lane, is visiting London and other diamond markets purchasing stock.

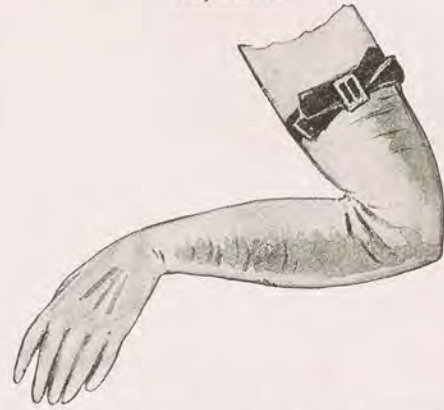
Hugo P. Keller, of L. H. Keller & Co., left April 19th for a two-months' trip to France and Switzerland. He was accompanied by his wife, but the trip is one of business.

The members of the firm of H. H. Adams & Co., who represent several Eastern houses in San Francisco, Cal., came through the terrible experiences of the earthquake unscathed, according to a wire received in this city from Edson Adams, of that firm.

A telegram received by his sister-in-law in this city from Fred. H. Levy, president of M. Schussler & Co., jewelry jobbers, 713 Market Street, San Francisco, Cal., stated that he and his wife and five children had escaped from the terrible earthquake to Oakland. No mention was made of his store or stock.

The Vesta Tilley Glove Garter

Adjustable



The Noggiest Fad of the Season

Made in

GOLD, SILVER, SILVER GILT

- | | |
|-------------|-------------------|
| Dog Collars | Belt Buckles |
| Bracelets | Collar Supporters |
| Barrettes | Brooches |
| Combs | Scarf Pins |
| Crosses | Links |
| Lavaliers | Locketts |
| Hat Pins | Fobs |
| Waist Sets | Rosaries |
| Veil Pins | Pendants |
| Rings | Elk Buttons |

NEW SPRING NOVELTIES

in Large Variety

Our lines always show
New Styles, New Articles and
New Designs in advance of
the general market.

QUALITY AND BEAUTY OF DESIGN

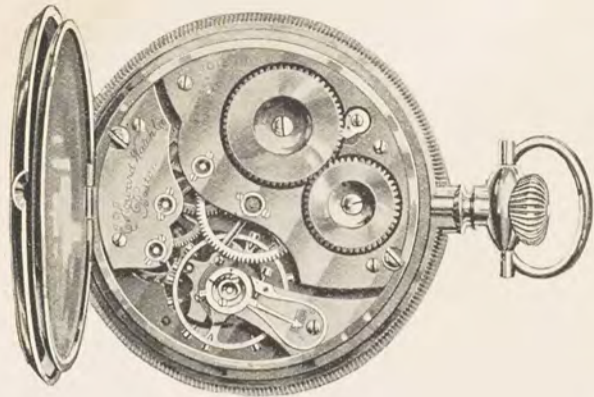
is found throughout our stock

Let us hear from you



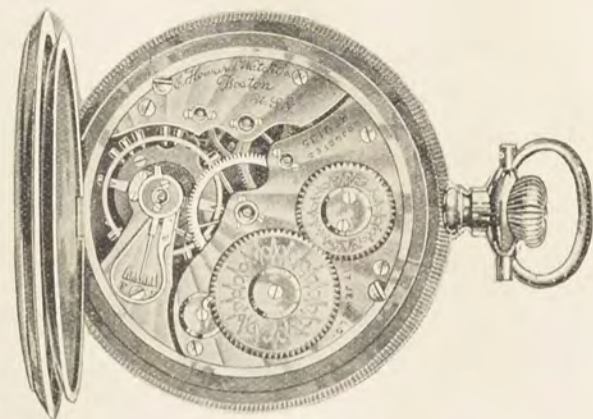
**15 Maiden Lane
NEW YORK**

760



19 Jewel

HOWARD WATCHES



17 Jewel

Complete Watches
of
Unusual Excellence

MADE IN 4 GRADES

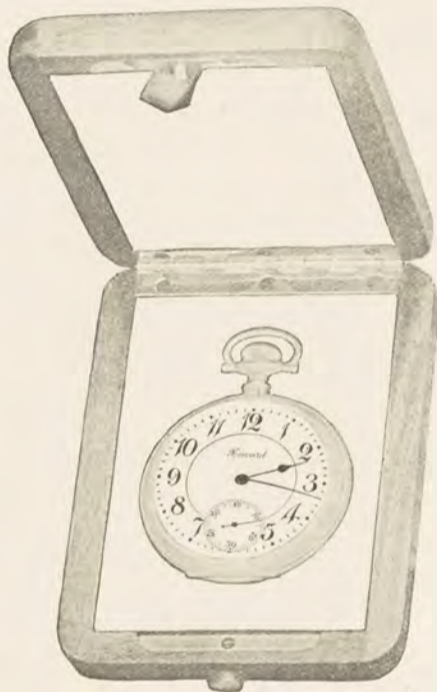
1st and 2d Grade in 17 Jewel

Also 19 and 23 Jewel
Movements

Fitted in highly finished
14 K. Solid Gold Cases,
and also in 25-year guar-
antee Gold Filled Boss or
Crescent Cases.

All Watches have the
French antique pendant
bow.

The factory has established
a retail selling price that
guarantees to the jeweler a
handsome profit.



Every Watch delivered in a
silk-lined mahogany box

They are sold
as
Complete Watches
only

WE CARRY THESE WATCHES IN STOCK

For full descriptions and prices
WRITE TO US



Plain Polished
14 K. Solid Gold
or
25-year Boss or Crescent
Gold filled

BENJ. ALLEN & CO.

Silversmiths' Bldg., CHICAGO



Engine-Turned
14 K. Solid Gold
or
25-year Boss or Crescent
Gold filled



WESTERN BUREAU OF THE KEYSTONE
ROOM 1201 HEYWORTH BUILDING
CHICAGO, April 24, 1906

Personal Mention

Harry Kohn, of Stein & Ellbogen Company, returned to headquarters, last week, after a month's trip, covering the larger cities and towns of the West and Northwest in the interests of the firm's diamond department.

E. L. Fuller, secretary of the Theodore W. Foster & Bro. Company, the widely and favorably known manufacturing house of Providence, spent most of last week in Chicago, calling on the trade in company with J. A. Limbach, the firm's Chicago and Western representative.

C. H. Knights, of C. H. Knights & Company, has been the recipient of numerous congratulations, of late, on account of the recent arrival of a son and heir at the home of his daughter, Mrs. Dan Peterkin, in this city. All of which has been quite pleasant to Mr. Knights, as this is the first time he has been honored as a "grandpa."

J. Roy Garstman, city salesman for the Gorham Manufacturing Company, met with a most painful accident at his home one evening last week. Mr. Garstman had repaired to the back porch of his apartment to clean his gloves. Having finished the job, he went indoors, and in reaching to turn on the electric light he did not notice that the gas jet right under was burning low. In an instant his right arm was on fire. When he used his left hand to put it out it also was instantly in a blaze. Before Mr. Garstman could put out the blaze from the gasoline, both of his arms, from his wrists to his elbows, were badly burned and have proved most painful since the accident. At last accounts Mr. Garstman was doing well under the circumstances, but it will be several weeks before he will be able to take up his work again.

Ed. C. Jamison, manager of the New York office of J. W. Forsinger, spent a few days, recently, at Chicago headquarters.

M. A. Mead returned early in the month from a visit to the Pittsburg branch of M. A. Mead & Company.

J. G. Swartzchild, of Swartzchild & Company, returned the early part of the month from a ten-days' outing spent in New Orleans and other parts of the South. He was accompanied by his family.

William H. Vogell, for a number of years previous to one year ago in charge of the Chicago office of Alfred H. Smith & Company, but at present in the New York office of the firm, spent several days in town last week, and was warmly greeted by his old friends in the trade.

Max Noel, of Despres, Bridge & Noel, has just returned from a visit to New York.

W. H. Kinna, New York agent of the Elgin National Watch Company, spent a day at headquarters last week, en route East from a visit to his old home in Wisconsin, where he had been called to the bedside of his mother, who has been dangerously ill. Fortunately, the crisis has been passed, and his mother is now out of danger and on her way to recovery.

Max Ellbogen, head of the Stein & Ellbogen Company, sails this week for Europe, to be absent over two months. Mr. Ellbogen will look over the world's diamond marts and select goods for the firm's fall and holiday trade.

John R. Lilja, manager of the diamond and precious stone department at Benj. Allen & Co.'s, sails from New York, to-day, on the "Caronia," one of the newest Cunarders, for a six-weeks' visit to the diamond marts of Europe. Mr. Lilja will make his first stop at London, where he will remain a short time, and then go on to Amsterdam. His trip is somewhat earlier than usual, but Mr. Lilja is anxious to be among the earlier buyers in the diamond market this season, so that he may make his firm's fall purchases before the market has been culled over by the rush of buyers later in the season. Mr. Lilja expects to make more liberal purchases than the usual to meet the rapid increase of business in their diamond department.

John Mertz has severed his connection with the Juergens & Andersen Company, and embarked in business for himself as a broker in diamonds and precious stones, in Room 1202, Stewart Building.

E. M. Lunt, Chicago and Western manager for the Towle Manufacturing Company, arrived home last Friday morning from a month's trip to the Pacific slope, in which he was combining business with pleasure. Mr. Lunt tells us that he just got away from San Francisco in time to miss the great catastrophe which befell that city last week. His brother, Geo. D. Lunt, the New York manager for the same house, was not so fortunate, however, as he and his wife were spending a few weeks in 'Frisco, visit-

ing Mrs. Lunt's people. They were all through the terrible calamity, but, happily, came out unhurt.

Ben. Chauncey Allen, of Benj. Allen & Co., is at his desk again, after a delightful two-weeks' outing spent at Lakewood, N. J., in company with his wife and baby.

A. C. Becken and family arrived home from their California outing last Saturday. They enjoyed two months of life in the extreme Southern part of California and come back home greatly benefited in health.

A. M. Rush, jeweler-optician, of Macomb, Ill., spent a day in town this week on a business trip. Mr. Rush was a pleasant caller at KEYSTONE headquarters while in town.

J. M. Seifert, of Mulberry, Ind., was in Chicago early in the month on a sad mission. A favorite nephew who had been connected with the Chicago Post Office had just died rather suddenly and Mr. Seifert was here to attend the funeral.

Peter Lapp, of Lapp & Flershem, returned yesterday from a month's tour of the Pacific Slope. Mr. Lapp's trip was one of pleasure, sightseeing and rest. He reports a delightful outing and is thanking his lucky stars that he left San Francisco two days before the earthquake and journeyed eastward.

Fred G. Thearle, of C. H. Knights & Company, Mrs. Thearle and Miss Thearle returned from their California trip last week. They spent most of their time while away at San Diego, where Mrs. Thearle and daughter have been since last Thanksgiving, Mr. Thearle going out to meet them the middle of February. Like other Chicago people who have been doing California the past month they are rejoicing that they got away from San Francisco before the terrible calamity which has overtaken that city. Mr. Thearle and family left the ill-fated city and the famous St. Francis Hotel but thirty-six hours before the catastrophe and thus escaped the terrors of the earthquake, fire and dazed panic. They all were mighty glad and thankful to get back to grand old Chicago once more.

News From the Trade

W. J. Gamm, the well-known jeweler of Madison, Wis., is about to remodel his store, put in entire new fixtures, deepen his store-room 25 feet, and his display windows will be brought up to date by the introduction of large sheets of plate glass. In fact, he proposes to make his store truly modern in every respect, and will spend \$5,000 on his improvements by the time they are completed. Mr. Gamm's present store is 40 feet deep. The new store will be 65 feet long. As one enters, to the right will be the watch repairing room; on the left will be the diamond room. Both the watch repairing room and diamond room will be entirely enclosed by glass. In the diamond room there will be seats, where customers may more leisurely examine jewelry, instead of standing at the counter, as they now do. There will be 30 feet of wall cases and 30 feet of counter cases along each side of the store. This will make a total of 120 feet of show cases for the display of goods. These fixtures will be especially fine. Mr. Gamm made all selections personally, and has purchased the very best that could be bought for money.

The new store will be made practically of solid mahogany and glass on the inside, and there will be nothing finer in the State of Wis-

(Continued on page 763)

ELGIN
 WALTHAM
 HOWARD
 UNITED STATES
 STANDARD
 NEW ENGLAND
 KEYSTONE
 JAS. BOSS
 CRESCENT
 CROWN
 ROYAL



*American Watches
 distributed
 from Coast to Coast*



M. A. MEAD & Co.

DISTRIBUTERS OF AMERICAN WATCHES
 TO THE JOBBING AND RETAIL TRADE

COLUMBUS MEMO. BLDG.
 CHICAGO

FARMERS' BANK BLDG.
 PITTSBURG

Chicago Letter

(Continued from page 761)

consin. The electric lighting will be on a par with the fixtures. Back of the store proper will be the optical room, and back of that the work room and the manufacturing room. This improvement has been made necessary by the growing trade of the store and by the growth of Madison. The ceiling of the new store will be of steel and the floor of the best quality of noiseless inlaid linoleum. There will be a recess in the back of the store, with mirrors above and below, for the display of cut glass. Mr. Gamm has been engaged in the jewelry business in Madison continuously for eleven years, coming there from Watertown, in the same State. He has been quite successful.

Dana B. Ward, the well-known Kansas City salesman, spent several days in Chicago the early part of the month, and was a congenial caller at KEYSTONE headquarters while in town. Mr. Ward brought the news that he had severed his connection with the Woodstock-Hoefer Company, with which he had been connected for the past 18 years, and expected to open a new wholesale jewelry house in Kansas City about June 1st. Few men are better acquainted with the Southwestern trade than Mr. Ward, or so favorably known, and there is no good reason why he should not make a success of his new venture. Kansas City is a growing market—the great Southwest is the seat of the greatest prosperity known to any one section of the Union at present writing. Mr. Ward's prospects are certainly bright.

Aaron Herman, head of the wholesale firm of Herman & Loeb, Cincinnati, spent a day in Chicago last week, calling on his friends in the manufacturing trade. Mr. Herman announced that he expected to sail for Europe the last week of April, to be absent two months. His trip will be mostly for health-seeking and sight-seeing. He expects to spend most of his time while abroad at Carlsbad.

E. A. Phelps, well known in the trade as a former member of the wholesale firm of Phelps & Miller, San Francisco, spent a day in town last week, en route East.

Harry Smith, of the Geneva Optical Company, has returned to headquarters from a successful Western trip.

Charles T. Higginbotham, well known in the trade as the superintendent of the South Bend Watch Company, whose lecture before the American Horological Society was announced in our last issue for the evening of May 16th, in the Schiller Building, this city, has chosen for his subject "Horology." Mr. Higginbotham will give a short history of the timepiece, from its earliest origin, and mark the development of timepieces from their beginning up to the present time. He has made a lifetime study of his subject, and undoubtedly will give an interesting talk. Everybody interested in watches—the watchmaker and the watch seller—should hear Mr. Higginbotham. All are invited.

Foster & Hoover, druggist-jewelers, of Truman, Minn., have recently put in some new fixtures and otherwise improved their store.

The regular monthly meeting of the American Horological Society was held on the evening of April 18th, in the rooms of the Chicago Jewelers' Association, in the Columbus Memorial Building. Only routine business was transacted.

A. F. Hawkins, of Blue Earth, Minn., has remodeled and refitted his store this spring, and thus has added largely to its attractiveness.

George F. Schmitt, for two years previous to his death in the retail jewelry business at Battle Creek, Mich., died in that city March 8th. For a number of years before opening up at Battle Creek, Mr. Schmitt was a retail jeweler in Chicago, and was well known in the trade here. His death was from dropsy and heart trouble, and his age was 52 years. His remains were brought to Chicago for burial. A wife and two children survive.

The Paule Jewelry Company, of Burlington, Iowa, have been making extensive improvements in their store by adding some new side and counter cases and enlarging their room. When their improvements are entirely completed they will have one of the swell stores of the Hawkeye State.

Otto Eggers, of the firm of Eggers Bros., the well-known jewelers of Atlantic, Iowa, is receiving the congratulations of his friends in the trade upon his marriage to Miss Maria Frees, at the home of her uncle in Avoca, Iowa, on April 15th, 1906.

Henry Shipley & Son have succeeded to the jewelry and stationery business of R. E. Kearney, at Sheldon, Iowa, and will continue it at the old stand. Mr. Kearney removes to South Dakota, where he will engage in farming.

L. E. Winslow, watchmaker to the trade, has been succeeded by Winslow, Krause & Co. The firm still retain their office at 407 Masonic Temple. In addition to this, the firm have opened a fine factory on the nineteenth floor of the same building. Their new price list of repairing, just issued, is a gem in its way and should be in the hands of every live jeweler. It is free for the asking.

We have a post card from Jeweler F. A. Copeland, of Elgin, Ill., which is a clever "ad." for his business. It is illustrated with a good view of the interior of his store, and we see no reason why it should not prove an effective advertisement to send out to the public.

Jeweler A. H. Frandsen, of Monmouth, Ill., is now nicely located in his handsome new store, which is strictly up with the town and the times.

S. A. Asquith, the well-known jeweler of Waterloo, Iowa, accompanied by Mrs. Asquith, spent the first three months of the year touring California, Oregon and Washington on a health and pleasure trip. They had a most enjoyable outing and have returned home greatly benefited in health.

John Reed, of Humboldt, Iowa, has recently made improvements in his store by adding some new counter and wall cases and an attractive cabinet for displaying shelf clocks, all of which has added much to the appearance of his store.

Joe Coffman, for the past twenty years head watchmaker for Jeweler E. J. Hervey, of Grand Rapids, Mich., mourns the loss of a devoted wife, who passed beyond, April 6th. Mrs. Coffman was a most estimable lady, and had a host of friends in the trade, who will be saddened to hear the news of her death.

Samuel Hall, of Hampton, Iowa, spent a week recently in South Dakota, looking after land investments. It is his opinion that the Indian Reservation, that has only recently been opened up for settlement, will prove a wonderful farming and grazing country.

Jeweler C. Jansen, of Davenport, Iowa, contemplates enlarging his store. He will also add new fixtures to keep in line with his growing trade.

H. B. McKinley is a new man on the missionary force of the Elgin National Watch Company. He has been promoted to his new position from the factory force.

H. H. Adams, of Phelps & Adams, wholesale, San Francisco, spent a day in Chicago recently, en route home from the East. Mr. Adams spent his time while here among his friends in the manufacturing trade, and left for the West

in time to reach home a day or two before San Francisco's terrible earthquake catastrophe occurred.

The Northern Illinois College of Ophthalmology and Otology is enjoying continued good attendance. Among those who have recently matriculated are John A. Dallas, Illinois; O. L. Molin, of Minnesota; Henry Helfant, of New York; A. O. Kettlekamp, of Illinois; R. C. Lillie, of Pennsylvania; Frank Tudor, of Ohio; Crosby Boak, of Illinois; M. N. Isenberg, of Chicago; Roy C. Crawford, of New Zealand; Miss F. L. Fish, of Washington; D. E. Senford, of Massachusetts, and W. W. Dean, of Michigan. The following students have recently graduated: Charles M. Brookhart, Iowa; D. G. Sinclair, Chicago; J. N. Phillippi, Ohio; David N. Shuter, Illinois; Jacob Gordon, New York; J. A. Young, Illinois, and Frank H. Speer, Ohio.

Harrison & Barton is the name of a new firm of jewelers just opening up at Concordia, Kans. Both members of the firm spent several days last week in the Chicago market, selecting their opening stock. Mr. Barton is the practical man of the firm. He was formerly in the jewelry business at Jamestown, Kans., and is well acquainted with the wants of a growing and prosperous community like Concordia, and he was buying accordingly. Mr. Harrison is an old-time merchant of Concordia, who will look after the finances of the new firm. The firm propose to open up in modern style, and anticipate doing a nice business from the start.

F. J. Neasham, Western man for C. H. Knights & Co., spent last week at headquarters, after an extended and successful trip over his territory. He is out again, this week, on his second trip for the season.

Walter Wyatt, the well-known and successful optician of Peoria, Ill., spent a few days in town the early part of the month, combining business with pleasure.

James H. Donnelly, Western traveler for Sproehle & Co., came in last week from a three-months' trip over his territory, and reports trade in the West and Southwest as fairly good for the spring season.

Ed. Baumgarten, Western traveler for M. F. Barger & Co., returned to headquarters this week, after an extended trip over his territory.

Adolph Eisenberg, head of the house of Adolph Eisenberg & Company, a well-known wholesale firm of San Francisco, spent a day in Chicago early in the month, calling on his friends in the manufacturing trade.

C. D. Wolf is just opening up a new jewelry store at Marion, Ind.

W. C. Sommer, of John C. Pierik & Co., Springfield, Ill., and Mrs. Sommer were in town for several days the first week of the month, to greet their little granddaughter, whose advent at the home of their daughter, Mrs. J. Roy Garstman, in this city, was hailed March 26. This is their first grandchild, and these good people are greatly overjoyed by its safe arrival. Roy Garstman, the father, is the city salesman for the Gorham Company, and is receiving numerous congratulations from the trade upon becoming a "papa."

R. F. Reeves, a well-known St. Louis jeweler, who has recently sold out his retail store to embark in the wholesale tool and material business, spent several days in the Chicago market the early part of the month, looking through the arrangement of our different material houses, with a view to adopting some of their ideas in fixtures and arrangement of his quarters. Mr. Reeves was pleased with what he saw, and felt that his visit to the great central market was a most profitable one.

Geo. T. Bynner, the well-known manufacturers' agent, representing the general line of plated jewelry made by Geo. Becker & Co., Providence, R. I., the gold jewelry line of the Jeannette Jewelry Company, also of Providence, and the gold ring line of F. A. Schlostein & Co., of Newark, N. J., has removed his office from the eleventh floor of the Heyworth Building to Room 1314, of the same building.

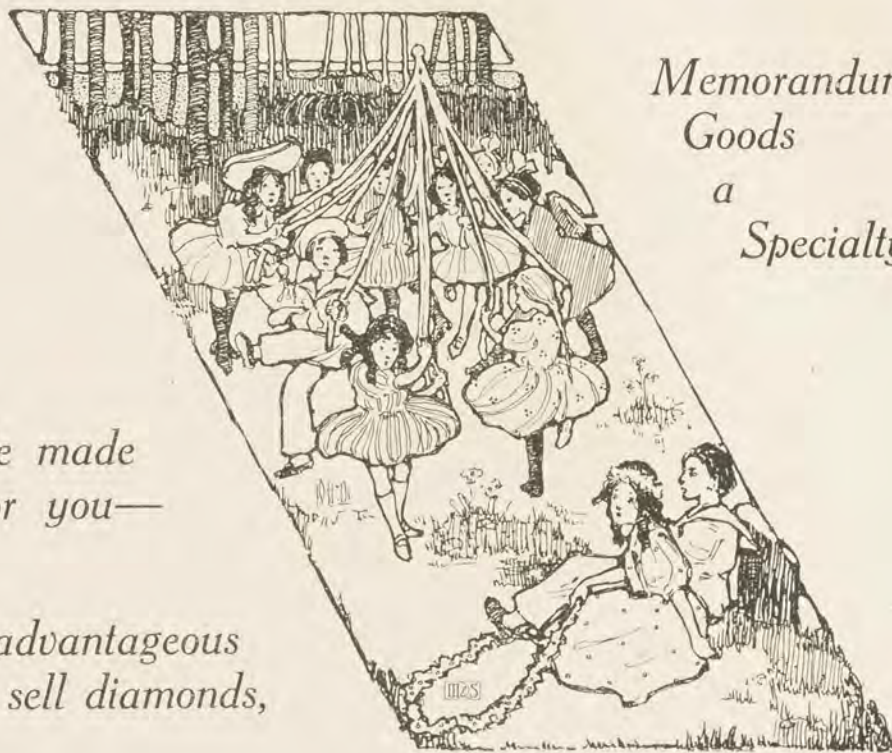
E. Bengston, the well-known jeweler of Freeport, Ill., spent a day in town the early part of the month, selecting goods for the home store. Mr. Bengston informed us that he was just moving into his new establishment. The new

(Continued on page 765)

*Maybe
May,*

*Mr. Jeweler, can be made
a banner month for you—
with our help.*

*We occupy an advantageous
position to help you sell diamonds,
because—*



*Memorandum
Goods
a
Specialty*

1. We buy ahead of the market, in liberal quantities, and thus obtain especially low prices, and save the advance which is continually being made in the cost of diamonds.

2. It is conceded that we have one of the largest stocks of mounted and unmounted diamonds in the United States.

3. We afford you personal service in selections, and promptly fill all orders—inquiries are answered the same day as received.

4. Memorandum goods are willingly sent to all jewelers who are thoroughly in earnest.

With the above four essentials—price, assortment, service, memo goods—at your command, can you doubt, Mr. Jeweler, our assertion that we will make May a banner month for you in diamond sales?

All we ask is the opportunity—is it ours?

HERBERT W ALLEN & CO

**DIAMONDS AND ALL OTHER PRECIOUS STONES
LOOSE AND MOUNTED**



203 Columbus Memorial Building
CHICAGO U S A

Long-Distance Telephone
CENTRAL 181

Chicago Letter

(Continued from page 763)

store is located on one of the prominent corners of the town, and is modern in every particular. It is fitted up with entirely new mahogany fixtures of handsome design and rich finish, steel ceiling and up-to-date show windows. Mr. Bengston is proud of his new establishment, and believes that he has one of the really swell stores of the State outside of the larger cities. We congratulate Mr. Bengston upon the expansion of his business and the success that has come to him, for he richly deserves it all.

C. H. Allen & Company, manufacturers of plated jewelry, Providence, R. I., have moved their Western office from the sixth floor of the Columbus Memorial Building to Room 704, Heyworth Building. Harley Allen is still in charge of their Chicago and Western business.

Everett Rogers, of Parks Bros. & Rogers, spent several days in town recently on a trip of rest and pleasure. He was accompanied in his rounds among the trade by Harry Kennion, the Western representative of the firm, and met with his usual warm welcome.

Quite a few out-of-town jewelers have been the guests of the Elgin National Watch Company for a day, at their big factory in Elgin, the past fortnight. Among them we will mention Jules Vautrot, Jr., of Warren, Ohio; A. Bruce Powley, from far-away Edmonton, Alberta, Canada; Albert E. Wuesteman, Champaign, Ill.; Mr. Zerwig, of the Zerwig Jewelry Company, East St. Louis, Ill.; Clyde E. Day, Preston, Minn.; William Dorer, Jr., Bellaire, Ohio, and R. F. Reeves, of St. Louis.

R. C. Demorest, well known in the trade as an Eastern manufacturer's agent, is now handling the gold line of Schwarzkoft & Dorer, Newark, N. J., and the silver novelty line of the W. H. Saart Company, Attleboro, Mass., with an office in Room 308, Columbus Memorial Building.

The R. F. Simmons Company, the widely-known chain makers, have moved their Western office from the third floor of the Columbus Memorial Building to Room 704, Heyworth Building, with the veteran, Louis E. Fay, in charge.

McRae & Keeler, Eastern manufacturers, are moving their Chicago office from the Columbus Memorial Building to Room 704 of the Columbus Memorial Building. Their Western business is still being looked after by Ben. S. Sandfelder.

Chicago News

The J. D. Bergen Company are moving from their old quarters on the second floor of the Silversmith's Building to a larger office on the same floor in the same building.

D. Wilcox & Company, the well-known makers of gold jewelry, Providence, have removed their Chicago office from the sixth floor of the Columbus Memorial Building to room 803 of the same building. Fred H. Allen, as usual, will be in charge.

S. A. Son, Chicago representative of Charles Adler's Sons, the New York diamond importers, has removed from room 602 Columbus Memorial Building to room 803 in the same building.

The D. F. Briggs Company, the well-known Eastern manufacturers, have removed their Western office from the Columbus Memorial Building to room 704 in the Heyworth Building, with E. J. Walther in charge.

E. A. Moore, well known in Chicago from his long connection with the jobbing trade, is now the Chicago and Western representative of the Sykes & Strandberg line of gold front jewelry. Mr. Moore is a popular man and his many friends will wish him success in his new connection.

Out-of-Town Visitors

Will Graff, Bascobel, Wis., spent a day or two in Chicago last week, combining business with pleasure.

Herman C. Watts, of Forrest, Ill., spent a day in Chicago, the early part of the month, on a purchasing trip. While in town Mr. Watts

called at KEYSTONE headquarters to pay his respects. He reports that trade is fairly good with him this spring, some better than last season, and that the prospects for a good spring and summer trade in his section are very good.

A. D. French, jeweler-optician, Dell Rapids, S. Dak., was a recent buyer in this market, purchasing his spring bills. When met in one of our wholesale houses he said that times were quite prosperous in his section, and they were looking for a good summer and fall trade.

J. H. Leyson, head of the J. H. Leyson Company, Salt Lake City, was a welcome trade caller here last week, while paying his respects to his friends in the wholesale and manufacturing trade.

M. A. Gaskell, jeweler-optician, of Rochester, Minn., spent a few days in the Chicago market the early part of the month, combining some buying with pleasures of a great city.

Fred. A. Marean, of Belvidere, Ill., spent a day in the great central market recently on a buying trip.

Ralph Plumb, son of Jeweler Henry Plumb, Des Moines, Iowa, spent a few days in Chicago recently, combining business with pleasure.

Clyde E. Day, of Preston, Minn., spent a few days in the great central market early in the month, attending to his spring buying.

William Dorer, Jr., jeweler-optician, of Bellaire, Ohio, was in Chicago for a day or two the middle of the month, combining business with pleasure.

Arthur Leach, buyer for S. W. Morgan, Winona, Minn., spent several days in Chicago the middle part of the month.

John Steck, manager for H. F. Steck & Co., Washington, Iowa, was in town for several days last week, selecting his spring bills.

Lockwood & Son, the well-known jewelers of Chariton, Iowa, were represented in this market by Ed. Lockwood, junior member of the firm, who was selecting goods for the home store.

R. T. Dale, of Linton, Ind., was here for a day, last week, on a buying trip.

Fred. Barnett, of Lancaster, Wis., was in Chicago for a day, last week, on a buying trip.

Schock & Hallam, the well-known jewelers of Marquette, Mich., were represented in this market, the early part of the month, by John Hallam, the junior member of the firm.

F. B. Faryer, of Merrill, Wis., was a visiting buyer in the great central market early in the month.

Dan. Jones, of Independence, Iowa, a well-known and welcome trader in the Chicago market, was here the first week in the month, selecting goods for his spring and summer trade.

Jules Vautrot, Jr., son of Jeweler Vautrot, of Vautrot & Meyers, Warren, Ohio, spent two weeks of the present month in Chicago, pursuing a post-graduate course in optics.

B. F. Spencer, of Remington, Ind., spent a day in the Chicago market, recently, on a purchasing trip.

Ezra Nuckolls, of Eldora, Iowa, spent several days in Chicago the early part of the month, stocking up for his spring and summer trade.

Frank Anschutz, of Shenandoah, Iowa, was in Chicago for several days recently, combining business with pleasure.

O. C. Boelte, of Columbus, Wis., was a visiting buyer in the Chicago market last week, selecting goods for the home store.

An Enjoyable Dinner of the Chicago Jewelers' Association

The monthly meeting of the Chicago Jewelers' Association, instead of being held at its rooms in the afternoon, was held March 27th, for variety's sake, in the evening, at 6.00 P. M., in the breakfast room of the Grand Pacific Hotel. The attendance numbered fifty-one, including the following invited guests: Honorable Charles H. Aldrich, Honorable William P. Williams, Mr. James F. Bowers and Mr. Reau Campbell. The committee in charge of the dinner was: Lem Flershem, A. L. Sercomb, and M. A. Mead. J. P. Byrne, president of the Association presided in his usual happy manner.

A unique innovation was sprung on the guests

early in the feast by the entrance of an alleged farmer-hayseed from Seldom Seen, Ind., dressed in the customary hayseed costume, which was very much enjoyed. He bore about a dozen letters of introduction to various prominent members of the Association, which he insisted upon reading before presentation, explaining that he had once presented a letter of introduction that he had not previously read, which got him kicked down two flights of stairs. The personal hits, touching the peculiarities and mild foibles of the parties of the second part, were quite spicy and greatly enjoyed.

The Honorable Charles H. Aldrich was the principal speaker of the evening. Mr. Aldrich is a prominent Chicago attorney, and, during the administration of President Harrison, was United States Solicitor-General at Washington, one of the two highest legal offices in the gift of the President. Mr. Aldrich is an earnest speaker, a serious thinker, and the Association evidently appreciated the honor conferred by his presence. In the course of his address he referred to the change that has taken place in the relations of the governed to the government. "Time was," he said, "when we were taught that the widest scope should be allowed the individual to all his activities but in late years there has been a tendency to regard the State as the universal physician and the legislature as the panacea of every evil that afflicts the body politic. The result has been an ever strengthening movement towards federal, State and municipal control of what once were regarded as private interests." These new order of things Mr. Aldrich attributed to individualism run mad. Possessed of a country of boundless wealth and opportunities, men of great ability have combined against the people and added to their own great strength of wealth and ability some of the advantages of the government through the grant of special privileges, or by corrupt means have defeated or held at bay the people's just rights. Drunk with years of success, they ceased to think or believe the people had any rights. From these abuses which abound have come our insurance investigations, proposed rate bills, abolition of private car lines, municipal ownership of public utilities, and all the varied so-called and often miscalled reforms of which we see and hear so much.

"You," said Mr. Aldrich in conclusion, "are deeply concerned in these questions. It is here proper to note the tendencies of the times. If our people have not yet reached the moral and intellectual development which would justify State socialism, that fact is important; if so, you would wish to postpone its day, for should it come prematurely it must necessarily mean tyranny or anarchy. If you would have its day of experiment postponed you are interested in everywhere seeking to abolish special privileges for yourselves as well as others, and the bringing to the bar of public opinion and justice every person or corporation guilty of the abuses which have so awakened public indignation. These abuses are dangerous, and the men who practice them are enemies to the State in the fullest sense of the term."

William P. Williams is United States Sub-Treasurer in Chicago, having in his custody about \$70,000,000.00 "real money." He is the favorite son and most brilliant toast-master of the Association, without whose presence its social functions would not be successful. Mr. Williams is an excellent speaker, as well as a witty and humorous toast-master. He was called upon for some "remarks," and enlightened the proceedings with his customary pungent and up-to-date wit.

Mr. Bowers was also drawn on for "some few remarks." He is Treasurer of the Lyon & Healy corporation and Vice President of the Chicago Public Library. He strongly advised more active interest in politics on the part of his hearers, pointing out that we often get poor government and poorer officials because "the respectable business element" positively refused to take part in city or ward politics. His remarks were warmly received and we may possibly look for some aldermen or legislators, or even a mayor, from the ranks of the Chicago Jewelers' Association at the next election. The function was voted the best informal dinner ever given by the Association.

"We never follow the Fashion, the Fashions Follow Us."

MAURICE L. POWERS



JOSH W. MAYER

Exhibition Announcement

¶ In the former issue of THE KEYSTONE, we have simply advised you of the FOURTH ANNUAL EXHIBITION to be held in our offices between August 13th and 18th inclusive. If you have not visited our former exhibitions, we now extend to you a most cordial invitation to view the remarkable display of successful Diamond Jewelry of the United States.

¶ Our Mr. Maurice L. Powers and Mr. Josh W. Mayer, who are now abroad, are securing original lots of Diamonds, Pearls, Emeralds, Rubies, Sapphires and other precious stones, to be used for our coming exhibition.

¶ We think a visit to this display will be well merited, for the reason it will introduce to the average Jeweler a new era in the line of Platinum-Diamond Jewelry of the latest and most exclusive designs and at moderately low prices. This exhibition comprises the following articles:

Diamond Necklaces (large line)
Diamond and Pearl Necklaces
Diamond Collarettes
Diamond Tiaras
Pearl Collarettes
Diamond and Pearl Collarettes
Strings of Pearls
Corsage Ornaments
Barettes
Diamond Combs

La Vallieres
Brooches (in all combinations)
Pendants (fascinating styles)
Rings for Ladies' Wear
(bewildering variety)
Rings for Men (richest ever known)
Bracelets (in magnificent designs)
Lorgnette Chains
Link Stud Buttons
Scarf Pins

POWERS and MAYER

Makers of Diamond Mounted Goods THAT SELL

258-260 Fifth Avenue

NEW YORK

We are always pleased to ship goods on memorandum when satisfactory references are given

Upon receipt of Postal Card request we will mail you our New Diamond Calculating Table



Hosts of Visitors

During the closing days of March and the opening days of April the capacity of the local hotels was taxed to the crowded point by visitors. The Indiana, Ohio, Illinois and Western Pennsylvania coal operators and miners were in joint conference. The Jubilee Convocation of the Ancient Accepted Scottish Rite of Indiana, Valley of Indianapolis, was held. The Central Electric Railway Association, The Republican State Convention and The Southern Indiana Teachers' Association were in session. Among the visiting jewelers to the Scottish Rite convocation were Rudolph C. Eisenbach, Lafayette; Howard T. Harger, of Harger & Hadley, Clinton; E. E. Mosiman, Bluffton; J. W. Garman, Fort Wayne; E. O. Collins, Franklin; Frank C. Sheldon, Shelbyville; Al Smith, Bloomington; Bernhart Maier, Edinburg; Charles Ham, Frankford; J. S. Pierce, Red Key.

A pretty home wedding took place on the afternoon of April 3d at the residence of Mr. and Mrs. Augustus P. Craft, 1712 Broadway. The charming bride was their daughter Miss Alma E. Craft and the bridegroom, E. Verne Moore. The house was beautifully decorated in ferns, white roses and carnations. Upon their return from their wedding trip to Denver, Col., Mr. and Mrs. Moore will go to housekeeping in this city. Among the ladies assisting at the wedding reception was Mrs. John Wimmer, wife of the well-known optician.

Simon Kiser, of S. L. Kiser & Co., and his talented son Raymond were star performers in a highly successful minstrel show given by the Esther Lodge, Independent Order of B'nai B'rith in this city.

A. P. Stouffer, conducted a very large and handsome display of the J. H. Stouffer Company's hand-painted china at the Claypool Hotel last month. Carl L. Rost, jeweler on North Illinois Street has been made city agent for this line.

The firm of Newlin & Schmeltz, 28 S. Illinois Street has dissolved, Ernie Newlin retiring and J. W. Schmeltz continuing at the old stand. Mr. Schmeltz is a jeweler, optician and State agent for the Grand Rapids Show Case Co.

Max Peinlich has on exhibit at the Arts and Craft shop in this city a pendant of carved ivory rarely beautiful in intricate workmanship. The design is unique. A sky of translucent blue set with tiny diamonds, representing the starry firmament, forms the center of the pendant. Over this is a poppy plant bearing delicate buds and full blown blossoms. Beneath the "sky" are two ragged edged poppy leaves, attached to the bottom of these swings a bat of golden-brown color and exquisite workmanship.

Streng & Lux's jewelry store, 217 Indiana Avenue, lost about \$500 worth of goods on the night of April 12th. Thieves broke a plate glass in the show window and carried off goods to that amount. There were 275 rings, opera glasses, watch chains and fobs among the articles. Detectives have been detailed in the case.

W. J. Hoffman, of Hoffman & Lauer, has found the Spring trade in tools and materials

very good. The firm recently increased its traveling force.

C. B. Dyer, manufacturing jeweler on Massachusetts Avenue, turned out a very fine gold badge, studded with pearls, to be presented by the Indianapolis Woman's Whist Club for the highest score at the National Convention of Woman's Whist Clubs to be held this month in St. Louis.

Frank L. Bryant removed his jewelry store, April 1st, from 133 to 137 N. Pennsylvania Street, just two doors north, where he occupies the south half of the room recently leased by Charles L. Schmidt, optician. The location in the Denison Hotel Block, is one of the best in the city. The room is large, well lighted and conveniently arranged for both parties, who are congratulated upon having secured such desirable quarters on a long lease. The space vacated by the Bryant stock has been taken by Bert Jaffe, optician, who for the past five years shared the room with Mr. Bryant. Mr. Jaffe has spread out, redecorated and rearranged the room, making it into very attractive optical parlors.

A Plausible Swindle

Carl L. Rost, jeweler and diamond merchant, recently had brought to him by a personal friend to whom they had been offered for sale, a paper of diamonds for examination. The price was reasonable and the stones had every appearance of being true "blue white," worth from \$250 to \$300 per carat. While not doubting the genuineness of the stones Mr. Rost was surprised to find them of such uniform blue color. An investigation revealed a clever fraud—the stones had been colored. A bath in a solution of wood alcohol reduced the gems to the \$100 per carat class. The coloring was most skilfully done, perfectly transparent and as hard as the original stones.

The Jewelers' Security Alliance, of New York, sent a check for \$100 and a complimentary letter to the Indianapolis police department in recognition of their promptness in capturing the messenger boys who broke the plate glass in the show window of H. Cohen & Sons and secured a number of watches. The one hundred dollars was a welcome addition to the police pension fund.

Just fourteen days after his marriage Anthony Bruning, recently with A. P. Craft & Co., died of pneumonia. His marriage was announced in last month's KEYSTONE.

The A. P. Craft Co. have placed their manufacturing shop under the efficient management of O. J. Krieger, who for eighteen years was with the well-known firm of Wendell & Co., Chicago.

H. Bloom, jeweler and pawnbroker at 229 E. Washington Street, has brightened up the exterior of his store with fresh paint and newly decorated signs.

Isador Grohs has returned from a long and successful Southern trip in the interests of the I. Grohs Jewelry Co., jobbers in the State Life Building.

Mrs. Frederike Werbe, aged 83, who recently died at the home of her son-in-law, Julius C. Walk, was one of the most widely-known German women in Indianapolis. She came to this city from Hamburg, Germany, in 1847, by way of New Orleans and made the ocean trip in a sailing vessel that took forty-nine days in the voyage. Mrs. Werbe is survived by one daughter, Mrs. J. C. Walk, and three sons, one of whom, Henry Werbe, is well known to the jewelry trade through his long connection with the house of J. C. Walk & Son.

Millions in his Mind

A number of city merchants were visited last month by a mysterious stranger who gave the name of W. H. Rubens, and ordered goods like a Cræsus. At the jewelry establishment of J. C. Sipe, he told J. C. Taylor, manager, that he was soon to marry a wealthy heiress and wanted \$4,000 worth of diamonds and jewels as presents for his fiancée and her friends. He selected and had laid away several diamonds and other jewels. Calling again the next day he added to his selection and made arrangements to take the entire lot on the day following. Meanwhile Mr. Taylor, questioning the young man's mental conditions, notified the police who began an investigation that ended in placing the stranger in the Central Hospital for the Insane. The man's hallucination is that he has a colossal fortune and in a few days he selected fine diamonds, jewelry, automobiles, clothing and furniture with such reckless abandon that his mental deficiency was suspected and in no case were the goods delivered.

The April display of vases and tiles of artistic value at the Arts and Crafts shop in this city was of unusual aesthetic interest. The ware was sent from several of the most widely-known potteries of this country, including Markham, Teco, Webb, Grueby and the Moravian potteries. Many of the pieces were made by special artists particularly for the exhibit.

Emil Kernel, watchmaker with Carl L. Rost, is building a new home on Madison Avenue.

J. H. Reed and wife will leave about May 1st for a six weeks' trip to California to visit his father and two sisters. Mr. Reed has had the trip in contemplation for some time but was detained by business just a few weeks too late to see his aged mother, whose sudden death occurred almost on the eve of his departure.

T. W. Gardner, one of the oldest and best known watchmakers in the city, has been very ill for the past two months, the result of a serious attack of pneumonia. At last accounts Mr. Gardner was slowly improving but still confined to the house.

A nugget of pure gold, weighing 3 dwt. 7 grains, was recently picked up on the 13 acre claim of Ikko Matsumoto in Morgan County, Ind. Mr. Matsumoto is just waiting for suitable weather to begin active operations.

J. E. Reagan, of the Baldwin, Miller Co., reports Spring business better than for the same time last year. Travelers have sent in very good orders and the general tone of trade has been and promises to continue good.

Charles Lauer, of C. W. Lauer & Co., has returned from Martinsville, Ill., where he sold an opening stock of jewelry to Anderson Low & Son. The firm conducts a piano business and for several years rented a part of the store room to L. Baker, jeweler. Upon the recent death of Mr. Baker his stock was sold in bulk and later Low & Son decided to add jewelry to their own stock, finding it a profitable side line.

William Beatty, West Lebanon, Ind., was a welcome buyer in this market last month. Mr. Beatty was wearing a cheerful smile and reported business excellent, especially since he enlarged his store room and put in a larger stock.

Tyler & Newton conducted a very successful auction sale in April for E. O. Collins, jeweler at Franklin, Ind. Mr. Collins was reducing stock and selling store fixtures preparatory

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Indianapolis Letter

(Continued from page 767)

to removing into a new room with up-to-date furniture and a fresh new stock of goods.

One of the very pretty Spring weddings that occurred in April was that of Edward Peter Fasnacht and Golda Marie Pond. The bride was a popular young lady of Peru, Ind., and the groom a well-known watchmaker, with friends all over the State. At present he is filling the position of watchmaker with C. N. Hetzner, jeweler of Peru.

George W. Keifner, traveling representative of Hoffman & Lauer, material jobbers, has removed his family from Loogootee, Ind., to this city for permanent residence.

Alexander Evans has purchased the jewelry store at Monticello, Ind., formerly owned and run by J. H. Randall.

Herman L. Rost, Columbus, Ind., was a recent welcome visitor to the local jobbers. While in the city he visited his brother Carl L. Rost, the well-known jeweler on North Illinois Street.

J. W. Garman, Fort Wayne, Ind., was in the city last month when he purchased bills of both jewelry and watch material. "Trade has been very good in my part of the State," was Mr. Garman's comment upon the trade conditions.

Mrs. Augusta Greyer, wife of Jeweler George Greyer of Anderson, Ind., died April 10th at Cincinnati where, less than a month ago, she attended the funeral of a sister and fell ill and was unable to return home. Mrs. Greyer was active in the affairs of the Presbyterian Church and Anderson Literary Clubs. She was forty-five years old. She is survived by her husband and two children, a daughter, and son, Harry Greyer, engaged in the jewelry business in Muncie, Ind. To the bereaved family THE KEYSTONE extends sincere sympathy.

Lon Roberts, who has just finished a course in engraving under George Dyer, of the C. B. Dyer manufacturing firm, has returned to his home in Veedersburg, Ind. Lon is the junior member of the jewelry firm of H. A. Roberts & Son, and is justly proud of the attractive new store room into which his father has recently removed.

B. F. Spencer, jeweler of Remington, Ind., has returned from a visit to North Dakota where he owns land and went to look after it.

George Davis, Colfax, Ind., visited the local wholesale market recently, selecting goods to replenish his jewelry stock.

A Dangerous Accident

An overheated silver coffee percolator in the window of Haseltine Bros., Kokomo, Ind., set fire to the window shortly before Easter. By an oversight a gas jet attached to a percolator was not turned off when the store was closed and in a short time the percolator became so hot that a silk window drapery became ignited. This caused the rubber gas tube to burn off when the flames shot up in an alarming blaze. Passers-by seeing the flames turned in the fire alarm. The prompt response of the department averted serious damage and no doubt an explosion, as the Fire Chief explained that had the blaze continued but a few minutes longer the gas in the pipes would have exploded and wrecked the entire building.

Haseltine Bros. congratulated themselves upon having escaped with only water and tarnish damage, that amounted to a little over \$100.

Charles Bernloehr, watchmaker with Chris Bernloehr & Bros., left April 30th for a trip to California. Arriving at Los Angeles he will extend his trip as far North as Portland, Oregon, and upon the return trip will stop at Denver and Salt Lake City.

Herman Burns, of Prosser & Burns, has just returned from Cincinnati, where he purchased several new pieces of machinery which will be placed in the new and enlarged quarters that this enterprising manufacturing firm have secured in the same block as their old shop.

Mr. Burns is using the electric interurban cars to make weekly trips among the trade and solicit orders and repair work.

J. H. Reed's Easter window, 38 West Washington Street, which was a beautiful creation designed and executed by his son Will Reed, received numerous comments of admiration and praise. The background, a fanciful design in scroll work, was of purple tarlatan, in which was painted, in a conventional design, large yellow tulips with green stalks. In the center of the scroll work was the firm's crest in white and just below that a silver candelabrum bearing five cathedral candles. The display of rich, brilliant and appropriate articles for the Easter season was arranged with taste and effectiveness. The entire window presented a most pleasing effect and was unique in the history of jewelry window dressing in this city.

The latest news from Charles Mayer & Albert Zoller, who are in Europe buying Fall and Holiday goods for Charles Mayer & Co., was from France, where they were buying a fine line of French clocks.

R. E. Dale, Bedford, Ind., was in town recently on a purchasing trip.

Mrs. B. Maier, Edinburg, Ind., was visiting friends and buying goods in this city, for her husband's store just after Easter.

A. A. Garner, jeweler, Lebanon, Ind., was a recent purchaser in the local wholesale market.

I. M. Rowe and P. E. Hulsman will soon begin extensive improvements on their quarters known as The Moses Optical Establishment on North Illinois Street. The exterior will be redecorated and new signs put up. The interior will undergo a thorough renovation and rearrangement.

David S. Gribben, of Gray, Gribben & Gray, has engaged passage for himself and wife and two children on a liner which will sail from New York, May 8th. The Gribben party will carry letters from the Roman Catholic Bishop of Indiana that will insure them an audience before Pope Leo X.

F. B. Westker, formerly with Hart & Raber, Anderson, Ind., has taken the position of watchmaker with Krauss & Sectors, 45 N. Illinois Street. An optical department with every modern convenience is being added. This branch of the business will be under the personal supervision of Mr. Krauss.

Charles B. Dyer is conducting a night class in "Art Nouveau" work at his manufacturing establishment on Massachusetts Avenue. The class is very enthusiastic and is turning out some very creditable work in hammered silver.

George Gray died at his home on South Audubon Road, Irvington, March 10th. He was born in Huntington, Conn., September 14th, 1836, and came to this city in 1864. He was a well-known manufacturing optician in business with the late L. W. Moses for over twenty years, but for a number of years had given up all active connection with commercial life. He left a widow and three children.

Many friends in the trade desire to extend sympathy to Jack Rogers and his daughter,

Miss Stella Rogers, upon the recent death of Mrs. Rogers, which occurred after many years of patient suffering. Mr. Rogers is one of the oldest and best known watchmakers in the city, while his daughter Stella has made an enviable success in the optical business, despite the fact that she devoted much time to the care of her invalid mother.

An unsealed envelope that bore no stamp and the simple address "Indianapolis City" was recently found in one of the city mail boxes.

Enclosed in the envelope was a note, an old fashioned gold pin and pencil holder and a \$5.00 bill. The note, written in a feminine hand, stated that the pencil holder had been stolen from a jeweler in this city in the year 1865 and requested that the \$5.00 be given the jeweler if he could be found—if not, the money should be given to some city charity. The letter received no special notice until the mail was being sorted at the main office so it was impossible to locate the box where it had been mailed. So far no jeweler has laid claim to the money or made known the fact that he ever remembered having had such a pen holder stolen from him.

Among the prizes donated by the city merchants to the Commercial Bowling League for the season's games were a handsome stein from Julius C. Walk & Son and a gold locket from Burton Jewelry Co.

C. N. Hetzner, a well-known and popular jeweler of Peru, Ind., is an enthusiastic "Noble of the Mystic Shrine." He was in the city attending the April initiation of candidates and the elaborate banquet which followed the ceremonies. He expects to make the pilgrimage on April 30th to California to attend the imperial council at Los Angeles. While in the city Mr. Hetzner visited the jobbers and did some purchasing for the home store.

E. T. Barnes, of the jewelry firm of Barnes & Foster, Spencer, Ind., has received the nomination, on the Democratic ticket, for Auditor of Owen County. Mr. Barnes has held that office for several years, his great popularity and the fact that a nomination in Owen County on the Democratic ticket is equivalent to an election make Mr. Barnes' friends feel that their congratulations are already in order.

John Taylor, whose father is a member of the jewelry installment firm of Taylor & Gray 366 Massachusetts Avenue, resigned the position of bookkeeper in the First National Bank at Madison, Ind., and removed to this city April 1st when he entered upon the duties of assistant manager of the Taylor & Gray store.

Harry S. Murphy has succeeded Mrs. E. S. Murphy in the jewelry business at Newcastle, Ind.

Bryant Lipscomb has removed his jewelry store from Dana to Cayuga, Ind., where he is nicely settled in the only jewelry store in the town.

James Tuck, who conducted a jewelry business at Wolcottville, Ind., has sold out and retired from the trade.

Louis F. Ott, Veedersburg, was a recent contributor to the fund for the famine sufferers of Japan.

Emil Kruegar, formerly in the jewelry business at Wanatah, Ind., has recently bought out A. Steinberg, at Michigan City, Ind.

A pearl that was readily sold for \$400 was recently found in the gizzard of a 40c duck, raised ten miles south of Vincennes, Ind. While it is no unusual occurrence to find particles of gold in fowls raised in Morgan and Brown Counties, Wabash river pearls in ducks is a little out of the ordinary.

Sam Beauchamp, who last January bought out Luther Davis at Fairmount, Ind., was a recent buyer in this market. Mr. Beauchamp says he has been doing nicely and is well satisfied with the business outlook.

Walter A. Beer, of Versailles, Ind., is a bachelor of Ophthalmology, having finished with much credit the course at the Northern Illinois College of Ophthalmology.

L. B. Davis has opened a watch repair shop at Irvington, the classic site of Butler College, that was recently annexed to the city of Indianapolis.



“We must not think of the things we can do with, but only of the things we cannot do without.”

There isn't a PROGRESSIVE Retail Jeweler in the trade to-day, who can afford to “do without” an assortment of

HB RINGS

The comprehensive assortment of beautiful designs; the superior workmanship and the excellence of finish, are convincing points in favor of our product. The discriminating buyer knows that goods stamped with the **HB** mark are the most salable in the RING trays to-day.

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Also GOLD FILLED RINGS, including the popular THREE CROWN

Ostby & Barton Company respectfully announce to the jobbing trade that their fall line comprising many new and original designs is now ready.

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WATCHES OF QUALITY

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twin ideals in gentlemen's and ladies' timepieces. We have a large stock of these watches now at the service of our patrons in addition to the immense stocks of all the standard makes of movements and cases.

In Diamonds and Diamond Goods

we have made a special study of the trade needs and can furnish suitable lots at unusually low rates, considering the rapidly rising prices—stones of standard quality in assorted sizes.

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“THE COLONIAL”

A model that possesses all that the name implies.

Made in 16 size—Hunting only.

A great variety of patterns particularly applicable to this style of case.

The Colonial is made with plain centers only—contrasting well with the appropriate patterns ornamenting backs of cases.

KEYSTONE 14 K. SOLID GOLD CASES ASSAY

585 THOUSANDTHS FINE

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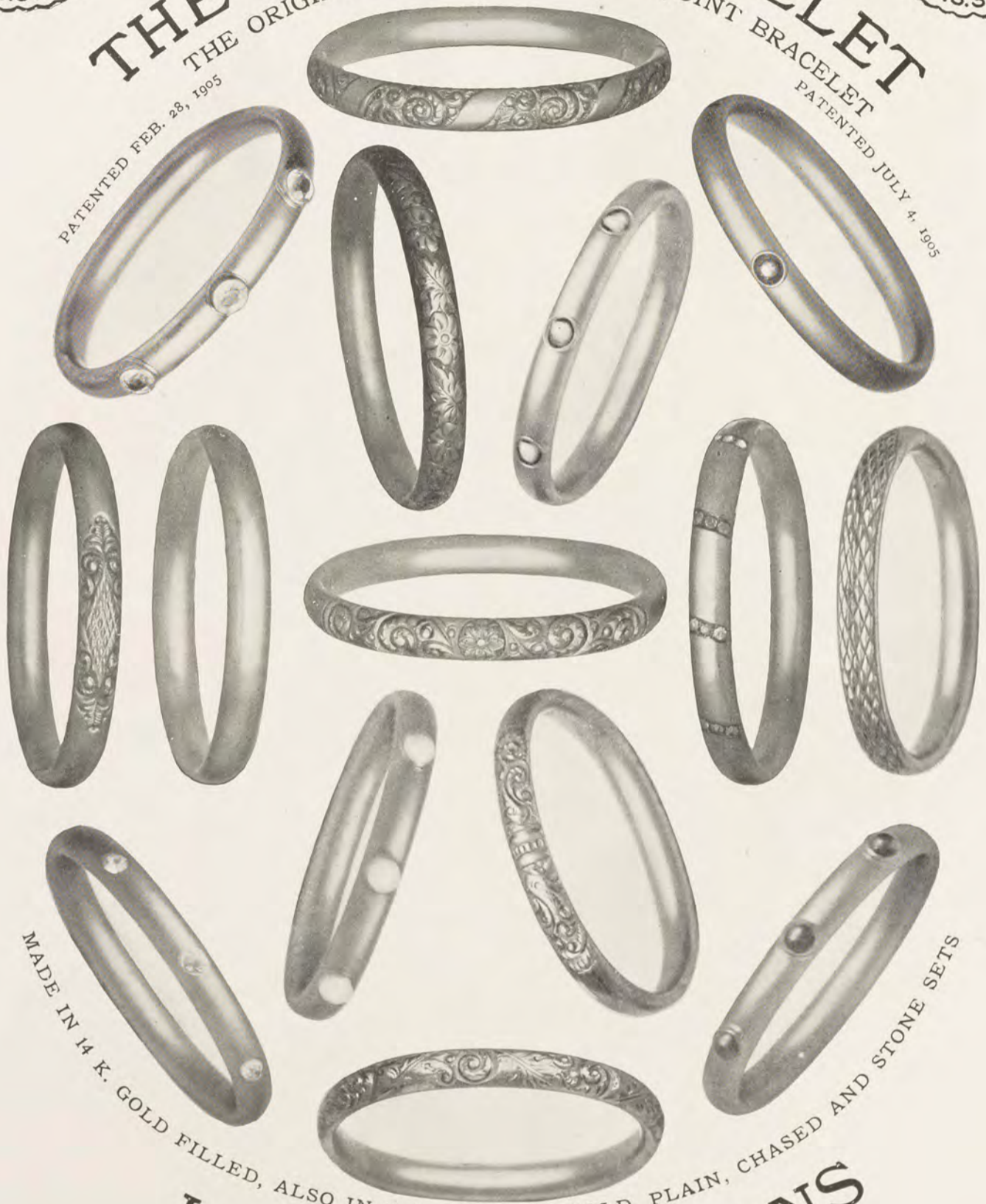


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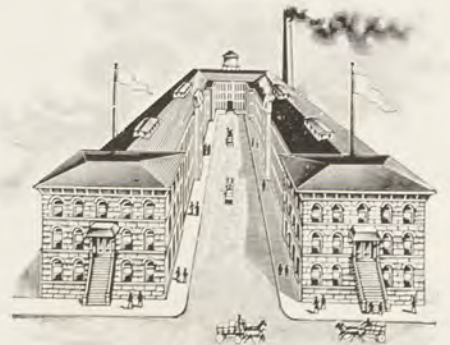
DESIGN, WORKMANSHIP, QUALITY and DURABILITY are the four factors which have made the BIGNEY CHAINS the most popular in the market to-day. They are handled and worn by more people than any other make.



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JEWELRY FOR EVERY AGE

HAT Pins, Baby Pins, Thimbles, no matter what the requirements, you are sure to find them in our line of **high-class jewelry**. Popular prices and perfection in design and finish only attainable by years of experience explain the ready sale of our productions.

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MANUFACTURERS FOR THE JOBBING TRADE EXCLUSIVELY

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Macbeth

"And keep the natural ruby of
your cheeks,
When mine is blanched
with fear."

We always keep
our lines of
Gold Staples
complete, even be-
tween seasons, and
your order can
be filled promptly
at any time

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Missouri Has Room for Five Millions and More

The Missouri Immigration Association has set its mark at 5,000,000 population for the State, and will not take less. Certainly the mark is within the range of practicable and easy attainment, and might have been placed higher with no fear of failure. S. A. Hughes, general immigration agent of the Frisco Railway system, talks interestingly on this subject in a recent interview. He said: "Missouri needs 5,000,000 people. It already has everything that could be asked for. Given this increase in population to exploit the wonderful resources of the State, nothing can dislodge Missouri as the center of the Union and the premier commonwealth. Some other States excel in special lines, but Missouri is at the front in all. Missouri is among the six leading States in every one of the twenty leading products of this country. No other State makes a showing in more than eleven products. Take agriculture and horticulture, mining, manufactures, commerce, art, education and statesmanship," said Mr. Hughes, "and you will find Missouri is first quality. For Missouri this is a good start, but only a start. It can do better fifty fold. The State has not enough people. It has 6,000,000 acres of unoccupied land, all usable but unused. This lies at the door of the best markets in the country. Missouri has room either on farm, in town or in metropolis for more people. Ten times its present population would not give it as many people to a given area as now live in England and Wales. A Five-Million Club in Missouri is a good and inspiring idea, and there is not a Missourian who should not be a member in good standing, and what is of more importance, in good working order."

St. Louis Growing in Importance as a Jewelry Market

St. Louis is reaching out and expanding her wholesale trade in every direction of the compass. As a jobbing center she is making rapid strides to the forefront. In fact, this is a growing market. This is true in the jewelry and optical trades as well as other branches of business. As an evidence of this fact, there will be no less than three new wholesale firms in jewelry and kindred lines that will open for business here in St. Louis the present month. We will mention first the Maschmier & Richards Company, who will handle solid silver and silver-plated ware, cut glass, clocks, bric-a-brac and novelties. This firm is composed of August Maschmier, who has had charge of the New York office of the R. Wallace & Sons Manufacturing Company, and D. P. Richards, for several years past manager and buyer for the A. J. Jordan Cutlery Company, this city, and formerly engaged in the retail jewelry business with his father at Columbia, Mo. Another new house is the R. F. Reeves Jewelers' Supply Company, who will embark in the wholesale watchmakers' tool and material and jewelers' supplies business. This firm has already leased quarters on the third floor of the Star Building. Still another new wholesale firm will open up in the Star Building, and will handle silverware, cut glass, clocks and novelties under the style of the McCoy & Logan Company. This firm expect to be ready for business about June 1st.

Convention of Commercial Clubs of the Southwest

The convention of commercial clubs of the Southwest, which had for its primary object to plan for the advancement of the business interests of the great Southwest in general and particularly to induce immigration into the States and Territories of the Southwest, held a two-days' session in this city April 16th and 17th under the auspices of the Business Men's League of St. Louis. It was well attended and one of the most noteworthy gatherings of the year. The most beneficial results to the Southwest are certain to follow. Plans were formulated for the effective exploitation of the resources of the Southwest and for its harmonious and energetic upbuilding. The delegates present promised a systematic and united effort to accomplish this. The convention attracted widespread attention. Over five hundred delegates were present, nearly three hundred commercial bodies being represented. The governors of five

States were present and took a hand in the proceedings. A strong and permanent body, upon a concise platform, was formed. The new organization is the "Southwestern Industrial and Development Association." Its "platform" declares that the most important question before the American people to-day is statehood for Oklahoma and Indian Territory, followed in importance by immigration, irrigation, permanent improvement of rivers and harbors and the improvement of the public roads. Six hundred guests attended the banquet the last evening of this important gathering, which formed a brilliant finale to the highly successful convention of the commercial clubs.

Fred. Marcus, for several years past with the F. H. Ingalls Mercantile Co., this city, has removed to Dennison, Texas, where he has purchased a jewelry store which he will continue.

Mrs. Ida Spieldoch, formerly with Weiss & Fassett, is now employed in the office of the E. Maritz Jewelry Manufacturing Co.

George Goldberg, Western representative of the Untermeyer-Robbins Company, the New York ring house, was in St. Louis for a few days last month, calling on the wholesale trade.

M. D. Weiss, of Weiss & Fassett, and Mrs. Weiss, celebrated the tenth anniversary of their marriage on the evening of April 28th at their home in this city. A large number of their friends joined them on the happy occasion, Chicago and other cities being represented, all of whom wished them many returns of their wedding day.

E. C. Weidlich, of Wm. Weidlich & Bro., spent a week in Chicago last month, combining business with pleasure.

Walter Emling, for the past seven years with the John Bolland Jewelry Company, has opened up a new jewelry store at Eighteenth and Sidney Streets, this city.

By a recent action of the Western railroads the cheapest home-seekers' excursions ever in effect have been assured to the Southwest, the West and Northwest during the summer and fall. Weekly excursions into the Southwest will be inaugurated for one fare plus \$2 for the round trip with a maximum of \$25 from Chicago and of \$20 from St. Louis. It is the intention of the railroad officials to carry on a vigorous colonization campaign for the Southwest.

The St. Louis wholesale houses will close their places of business at 1 P.M. on Saturdays during the season extending from April 1st to October 1st, in order to allow their employees a half holiday during the spring and summer.

The Eisenstadt Company do not expect to get into their new quarters in the Star Building much before July 1st, as the work of alteration and putting in new fixtures is proving quite an undertaking. This work is being well done and progress is necessarily slow.

The Aller-Newman-Wilmes Company finished their first business year with April 1st. Though the year for purely business reasons was a short one, it was fraught with satisfactory results to the members of the firm, and they start in their second year much encouraged.

Joseph James McKinna, known to everybody in the trade here as plain "Joe," has just returned from his annual spring trip on the road. Mr. McKenna has long been in charge of the tool and material department of the Bauman-Massa Company, and is given to making a two-weeks' road trip about twice a year—once in the spring and once in the fall. This time he tried the Southwestern territory and says he rather likes life on the road in semi-annual doses. He found the great Southwest prosperous and immigration pouring into the country rapidly. Trade he reports as being good in that section, and the outlook for prosperous spring and summer business is excellent in that country.

J. Schmelzer, of Centralia, Ill., spent a day in town the early part of last month, combining some buying with pleasure.

J. H. Loevenhart, proprietor of the Remoh Jewelry Company's store at 814 Olive Street, is opening up a new retail jewelry establishment in the Equitable Building, 411 North Sixth Street, this city.

T. Vahlman, of Vahlman & Jacobs, East St. Louis, has gone to Europe, sailing from New York May 1st. Mr. Vahlman will spend several months abroad, visiting his old home in Hamburg and in travel on the continent, stopping off at gay Paris for a week or two.

A. A. Hafner, Jr., of De Sota, Mo., was in town recently for a day, combining business with pleasure.

M. Siegel is the name of a new jeweler at Jacksonville, Ill. Mr. Siegel spent a few days in this market last month selecting his opening stock. He was formerly in business in East St. Louis.

Otto C. Stegmaier, the well-known jeweler, of Washington, Mo., spent a day in the St. Louis market last month buying goods for his Easter trade.

J. L. Fishell has recently embarked in the retail jewelry business at 3160 Easton Avenue, this city.

Wm. Bergman, of Union, Mo., was a visiting buyer in this market last month selecting goods for his spring trade.

The Dave Lerner Jewelry & Mercantile Company, for years located at Broadway and Chestnut Streets, this city, have removed their stock to El Paso, Texas, where they have embarked in business.

Adolph Eisenbeiss, Texas man for the Eisenstadt Company, mourns the loss of his Grandmother Steinmeyer, who passed away last month. The name Steinmeyer has been a familiar one in the jewelry trade of St. Louis for years, several members of the family having been connected with well-known firms. Mr. Eisenbeiss lost his mother when but an infant, and has never known any other mother but his grandmother, who raised him.

F. W. Baier is about to remove from 205 Eighth Street, to 316 North Eighth Street, opposite the Federal Building, pending the erection of a large modern structure at the address first named. The new building will be completed in about two years, and Mr. Baier will then resume occupancy of the old location.

R. F. Reeves, who has recently sold out a successful retail store, at 1621 Market Street, to Niemeier Bros., has decided to embark in the wholesale tool and material and jewelers' supplies business. He has leased quarters on the third floor of the Star Building, and will open a strictly modern jewelers' supply house. The new firm does not expect to be ready for business much before June 1st.

Klaus & Spotts is the style of the new firm of jewelers who have recently opened up for business at 3538½ Easton Avenue, this city.

M. Pilcher, Mexico, Mo., was a welcome buyer in this market for a day last month.

J. W. Howard, of Hastings, Nebr., spent several days in the St. Louis market last month, selecting goods for the spring trade.

John R. Spradling, of Farmington, Mo., was a visiting buyer in this market last month.

C. L. Glines, of Harrison, Ark., spent several days in St. Louis last month combining business with pleasure.

M. Harris, of Desloge, Mo., was here for a day last month selecting goods for the home market.

G. W. Chase, of Moberly, Mo., was a visiting buyer in the St. Louis market for a day last month.

Tompkins & Steidley is the style of a new firm of jewelers at Afton, Ind. Ter. These gentlemen spent several days in the St. Louis market last month selecting their opening bill.

Otto Miller has just opened a new store at Fredericksburg, Texas. Mr. Miller bought his opening stock in this market and his new enterprise is starting off under favorable auspices.

Ermo Dick, of New Baden, Ill., was a visiting buyer in this market last month.

Frank Horton, who has been calling on the St. Louis trade for the past thirty years in the interests of Carter, Howe & Company, the well-known gold jewelry house, of New York, was in town several days last month in the interests of his firm. Mr. Horton tells us that fine jewelry is in fairly good demand this season, really better than usual, and that the jewelers in his territory are looking forward to a prosperous fall.

The Bauman-Massa Company have again enlarged their wholesale quarters on the second floor of the Commercial Building—the third time in as many years—and for some little time to come will be enabled to transact business with greater facility and convenience to their customers. They have secured over half again as much space as they have occupied heretofore, which has enabled them to entirely change the arrangement of their store and display their stock to much better advantage. With the instalment of their additional fixtures and new arrangement of their salesrooms and offices their quarters will be thoroughly modern and second to none in the trade for good light, roominess and conveniences.

We take pleasure in announcing

OUR REMOVAL

TO NEW QUARTERS

Corner of Fifth Avenue and Smithfield Street
SECOND FLOOR, PARK BUILDING

GEO. B. BARRETT CO.
PITTSBURG, PA.

WHOLESALE DIAMONDS, WATCHES AND JEWELRY

Our new quarters mean a more desirable location,
enlarged facilities, increased stock and perfect service

THE "AMERICAN" BRACELET

For Sale by all Up-to-Date Jobbers




Made by

WM. LOEB & CO.

Manufacturers of Seamless Gold Shell Rings and Bracelets

PROVIDENCE, R. I., U.S.A.



PITTSBURG LETTER

Satisfactory Easter Trade

Jewelers have enjoyed a good Easter trade in the Pittsburg district in spite of some depressing factors. The purse of the people has not been tightened as much as was expected, and there is apparently a feeling of optimism, so far as the future goes. March was productive of the most disagreeable weather that the people have had during the whole winter season. It either rained or snowed all of the time, while mud filled the streets, blocked the country roads and made out-of-door excursions unattractive. In spite of this there has been a steady flow of buyers seeking the luxuries of life which are found in the jewelers' shops. Easter stocks, as a rule, were large and attractive. Easter-gift making, by the way, is taking a spurt in this section that is causing comment. It has gone beyond the homes of the ultra-wealthy and finds a place in the moderately circumstanced. It has passed beyond the candy shop and fancy store and has taken a look at the handsome stocks in the jewelry stores.

Beautiful Window Displays

But besides all this, there has been an undercurrent of trade that has many elements of strength. Just why, no one can say. All the dealers know is that stocks have moved better and the requirements of the people seemed to have grown apace. Novelties, of course, had a strong run. Handsome art pieces, mostly imported stock, also were in demand. The displays in the windows this spring have been superb. Such stores as Vilsack's, Hardy & Hayes' and Terheyden's have caused no end of gossip among the fair sex. Wattles', in their new location, have taken a new position in the ranks of handsomely-equipped stores and with a magnificent display window have shown some of the art goods that appeal to the lovers of the beautiful in a strong manner.

In a general way business of the Pittsburg district has been well maintained. The slight disturbance over the coal miners' strike melted away, and while there is much trouble in Central Pennsylvania and in the East, the settlement of the wage agreements in this field was made promptly and there was no serious suspension. True it is that the coal market is stagnant at this time and there is a surfeit of fuel on hand, but this is believed to be nearing an end in many quarters. In the iron and steel trade, the mills are operating to the limit of their capacity and the hundreds of thousands of skilled workmen are prosperous. Financial interests are finding the money market tight and stock exchange reports are not enthusiastic, but bankers say that there is plenty of cash for commercial requirements. Railroad construction work has been started with the more settled condition of April weather, and huge undertakings planned last fall and winter are now under way.

Pittsburg people are always most happy when they are the busiest, and as they are now about as busy as possible, they are naturally in a good mood for trade. As a whole, the trade is fairly well over the shifting process that takes place each April. The changing of locations is completed in nearly all important instances, the single exception being that of E. P. Roberts, whose new stores in Fifth Avenue are being remodeled on a most elaborate

scale and will be occupied about June 1st. This, it is claimed, will be the largest store room of any in the city and one of the largest in the State.

A Deplorable Accident

About the saddest event that has occurred in the trade in this district was the tragic death of Louise M. Terheyden, daughter of the late Charles Terheyden, formerly one of the veteran jewelers of Pittsburg and recognized as one of the standard retail houses of this district. Miss Terheyden has been associated with her brother, Henry, in the conducting of the store in Smithfield Street ever since the death of her father. She was an accomplished young woman of twenty-seven years, widely known and much loved. On Friday, March 28th, she had taken a car for home with her brother, and in the East End left the car, walking around the rear to cross the street. The unfortunate woman stepped in front of a heavy electric car coming in the opposite direction but which was hidden by the car she had just left. Before the horrified gaze of her brother, she was ground under the wheels of the car and died while pinioned to the street, badly mangled and pitifully disfigured. As an added fateful event, the horrified passengers, in rushing for a physician to come to the aid of the dying woman, found one near the scene. Not knowing who it was, they brought to the spectacle the other brother of the victim, Dr. William Terheyden. He did not know who his patient was until she was dragged from the car wheel, and then, with a manful exertion, worked heroically to prolong life. But the angel of death was there, and at the moment the end came, the physician collapsed. Miss Terheyden held her personal interest in the family estate in the store, and at her death it was found that her will provided that this would go to her brother Henry, so that the business remains the same as before. Miss Terheyden is survived by her mother, Mrs. Esther Terheyden, and three brothers, all living in Pittsburg.

Clever Swindling Scheme

During the past month, the trade has been somewhat interested in the arrest of a number of old employees of large department stores, whom the police claim have a syndicate in which each store was robbed and the stolen goods exchanged for some from another store, more desired by the first thief. Edward Mallen, for many years at the head of Joseph Horne & Company's jewelry department, was one of the arrested. Horne & Company's loss is estimated at \$20,000. The game was so cleverly worked that it is believed that it has been going on for years. All the thieving was done by employees, who secreted goods about them and took them to a clearing-house. A man in a clothing house would supply a suit to a man in a jeweler's store, who in turn would supply a clock or watch. This was the system that went through shoe houses, drug goods, art goods and many other establishments.

Many Social Functions

In social circles the spring season has been prolific of weddings. The most notable one of all was that of Rev. Dr. Maitland Alexander, of the First Presbyterian Church, the most wealthy and fashionable of the Presbyterian denomination in Pittsburg, to Miss Madeline Frances Laughlin, which took place on April 17th. As both participants are extremely wealthy and the bride comes from one of the oldest and most wealthy families of the two cities, the result was an ultra-fashionable affair with brilliant costumes and gorgeous display of jewels. The array of gifts was an elaborate one about which little or nothing was said publicly, but as a rule the trade is informed

that they represent unusual value and not a small portion had come from Pittsburg dealers. There are other weddings of much prominence scheduled during the next few weeks, and the Lenten season at an end, has started the last feverish activity of social whirl in the city, prior to the flitting away of the leisure classes for hot weather to the mountains and seaside.

M. A. Mead & Company's branch offices in Pittsburg are giving a good report of themselves at this time. Manager J. T. Montgomery notes an unusually fine showing in the reports from old Virginia. The local trade of this house is expanding also, the retailers being naturally interested in the unusually large stock of watches. The offices in the Farmers' Bank Building are the rendezvous for many of the trade from outlying districts and the heartiness of the welcome has worn away all of the newness of the house among the Pittsburg dealers.

Hall Brothers Company have occupied their fine new quarters in the new Fulton Building, in Sixth Street, and have made their initial bow to the wholesale trade. The organization of this house was referred to in THE KEYSTONE in former issues. The house is energetic, and all members of the company are well-known to the trade throughout the district.

The George B. Barrett Company are rapidly becoming settled in their handsome new quarters in the Park Building. All of the safes have been removed from the old building, and stocks, much of which are new, have been handsomely arranged in the new cases.

W. W. Wattles, the veteran jeweler, of Fifth Avenue, has occupied his new quarters in Wood Street, mentioned last month. The building is admirably located and has been remodeled entirely. The handsome front, while criticised from an architectural standpoint, is unique and attractive. It has as a basis blue marbled slate, which gives a massive appearance. The woodwork is of mahogany and the plate-glass, is large and gives the entire front a stateliness that adds lustre to the handsome displays within. The former home of this firm is vacant. Rents have advanced enormously in Fifth Avenue and practically forced their change. On the whole, however, the Wood Street site is considered equally as good, as rapid changes are being made in the business district that are forcing Wood Street to the front as a high-class retail street.

B. E. Arons, who formerly had a large store in Smithfield Street and went into bankruptcy, has started anew in Liberty Avenue, at Seventh Street. The store is a small one but in a fine location, and is passed by thousands of people hourly. The new enterprise of Mr. Arons is conducted in a most conservative manner, with a clever display of stock and with advantages that were not present in the former business.

Heeren Bros. & Company during the past month received a handsome gold medal from the jury of awards of the St. Louis Exposition for making the best display of badges at the exposition. This award was made after a careful scrutiny of many displays, and the company certainly has reason to feel proud of its record. The badge department has been one of the busiest places and has been growing and expanding from year to year. Its products are going to many foreign countries as well as to all of the insular possessions of the United States. Albert Heeren has returned from a trip to Jamaica feeling much better. Otto Heeren and his son, who have been in Europe, will be home before the end of the month.

**Seventy
People
to
Serve You**

☞ You are interested as a progressive jeweler in knowing that Class Pins, Class Rings, School Medals, Fraternity Badges and other School and College Work will be prominent this month. When you want this kind of work you want it quick and you want it good.

☞ Here is your opportunity. Improve it by finding out just what is wanted by your customers and sending to us for designs and figures on the work. Our facilities for the manufacture of

the above lines are unsurpassed and we want to co-operate with the jewelers of the Great West and Southwest in this way. Remember that we are the "Hurry-up Jewelers for Hurry-up People" and that we will be only too pleased to serve you.

DIAMONDS SENT ON MEMORANDUM

MEYER JEWELRY COMPANY, Manufacturing Jewelers
KANSAS CITY, MO.

IMPORTANT CHANGE

ON APRIL 1st WE PLACED OUR

Material Department Under Entirely New Management

We respectfully solicit a continuance of your valued patronage and promise you increased efficiency and prompter service than ever before.

We have thoroughly competent and experienced material men to fill your orders properly without any delay and if you have not favored us with any material business in the past, we hope you will give us a trial.

MEYER JEWELRY COMPANY

Hurry-Up Jewelers for Hurry-Up People

1008-1018 MAIN STREET

Kansas City, Mo.



Healthy Spring Trade

Things have taken a veritable jump since the inopportune touch of winter that turned March into January. Business is looking up in every sense of the word, and the temporary quietus which it suffered last month bids fair to break forth in the form of new energy for the spring trade. In the country, the impassable conditions of the roads has had much to do with the lapse of trade, but with the genuine opening up of spring things take on a more normal aspect. The traveling men are expecting a fine season, and at all of the wholesale houses optimism prevails. Kansas City itself is pushing ahead as usual, though that probably seems quite an old story for this growing metropolis. There is much building, and the big Long Building which is going up at the corner of Tenth and Walnut Streets, is reaching skyward with such rapidity that one can fairly see it grow. A block farther down Grand Avenue, work is being hurried on the Scarritt Building. The First National Bank is already occupying its handsome marble building, and all over town there is fine indication of the substantial growth of the city. Bank deposits are larger than ever before, and the post office each month eclipses the business records of last year. The retail jewelers report business as picking up considerably. The stores all look busy, and probably will be until after the last June bride is married off.

The Kansas City Horological College has been following an expansion policy to such an extent that it has had to double its quarters. A year ago a small room, with a few work tables, was sufficient to accommodate all of the students; but so rapid has been its growth, that the college has taken possession of additional rooms and now occupies the entire north side of the Missouri Building. New facilities have been added, and now the school is fitted to take rank with the very best institutions of the sort. Kionka & Kionka, who previously occupied the two rooms recently taken by the horological school, have moved into larger quarters in the same building.

Among the newly-elected city officials who were inaugurated April 16th, was George H. Edwards, president of the Edwards & Sloane Jewelry Company, who was elected a member of the upper house of the Common Council. Mr. Edwards was, of course, on the Republican ticket, which was victorious at the city election. His friends in the jewelry trade throughout the country have been keeping the wires hot with congratulations, and many feel that Kansas City should be congratulated, too, upon the election of such a splendid business man as a member of its highest aldermanic body.

A Dangerous Fire

A fire that might have been a very serious one, broke out, April 9th, in the building near Tenth and Walnut Streets, occupied principally by Cady & Olmstead and the Merry Optical Company. The fire originated in the fifth floor, presumably in the workshop of the Cady & Olmstead Company, who suffered the most damage. The fire depart-

ment soon extinguished the blaze, but in order to do so damaged the workshops of the jewelry firm and the Merry Company considerably by water. The loss of Cady & Olmstead was about \$1000, and that of the Merry Optical Company about \$200. The flames at no time got below the floor where they started, but if they had remained undiscovered much longer, it might have meant the complete destruction of one of Kansas City's largest retail jewelry stores and its largest wholesale optical establishment.

Herbert Koppel, who has been assistant manager of the Meyer Jewelry Company's material department for several years, has been placed in charge of that department to succeed F. J. Nevin, who recently resigned to go into business for himself. The post of assistant is being filled by Louis Hayman, who has also been an employee of the firm for several years.

T. L. Beach, the Higginsville, Mo., jeweler, has sold out his stock and gone on the road for a Detroit jewelry house.

C. W. Franey, of the Woodstock-Hoefer Watch and Jewelry Company, has gone to St. Louis, where he has accepted a position with the Burlington Railroad.

Among the new students taking the optical course at the Southwestern Optical College are E. F. Perkins, Tecumseh, Nebr.; Albert Lee Wilson, Topeka, Kans.; J. C. Haupt, Peabody, Kans.; E. A. Medley, Melbourne, Ark.; Charles P. Dawson, Kansas City, Mo.; John M. Henry, Kansas City, Mo.; H. J. Rowe, Willow Springs, Mo.

C. B. Altman, the Walnut Street jeweler, had his stock slightly damaged by smoke and water during a fire in the building where his store is located.

Mr. and Mrs. J. R. Mercer have just returned after spending several weeks at winter resorts in Texas.

The American Retail Jewelers' Association has called meetings of the jewelers of Missouri and Kansas, in Kansas City, May 9th and 10th, for the purpose of organizing State associations. Many opticians who come to Kansas City for the optical convention to be held on the same dates, will attend the retail jewelers' organization convention also. The meetings are to be held in the hall at 1114 Grand Avenue, which hall will be used by the opticians also.

D. B. Ward, for eighteen years associated with the wholesale firm of Woodstock-Hoefer Watch and Jewelry Company, has resigned his position and will go in business for himself. Mr. Ward is making arrangements for his new venture now, and hopes to open his new wholesale house about the first of June.

Walter Jaccard and Mrs. Jaccard will sail about the first of June to spend the summer in Europe.

A building permit was recently issued to H. E. Wuerth, the manufacturing jeweler, for brick store buildings at 4115-17-19-21-23 East Twenty-seventh Street. The buildings are to cost \$8000.

Margolis & Metzger are selling off a goodly portion of their stock at auction.

Benjamin F. Goar, sixty years old, died on April 8th, at his home, 100 Westport Avenue, of heart disease. He was the father of J. E. Goar and father-in-law of P. S. Harris, who form the Harris-Goar Jewelry Company, at 1207 Grand Avenue. The body was sent to Van Meter, Iowa, Mr. Goar's former home, for burial.

A new material house that will begin business about the first of May, is that of Nevin Brothers. The firm is composed of Frank J. Nevin, for many years head of the material department with the

Meyer Jewelry Company, and his brother, E. P. Nevin. Headquarters will be at 217 Altman Building, at Eleventh and Walnut Streets. The new firm will carry a full line of watchmakers', jewelers', engravers' and opticians' tools and supplies.

O. P. Bourbon, the optician, has moved from 1019 Walnut Street to 210 East Eleventh Street.

J. R. Mercer will be a member of the Commercial Club's party for its trade trip, which is to leave Kansas City May 13th.

Dr. W. C. Lane, of Mountain Grove, Mo., a nephew of Dr. S. W. Lane, of the Southwestern Optical College, has returned home after a visit to Kansas City.

C. C. Hoefer, of the Woodstock-Hoefer Watch and Jewelry Company, was on the road last month for a short trip, calling on the trade in Nebraska.

News was recently received in Kansas City of the death of C. G. Collier, of Tongawa, Okla. Ter. Mr. Collier died in Colorado, where he had gone hoping to regain his health.

C. L. Rogg, of Des Moines, was a visitor to the Kansas City wholesale houses last month.

Among the out-of-town visitors to the Kansas City wholesale jewelry houses during the last two weeks were A. Manifold, Beloit, Kans.; Dr. J. W. Phillips, Chanute, Kans.; W. H. Haupt, Bartlesville, Ind. Ter.; San Friedberg, Topeka, Kans.; L. Megede, Richmond, Mo.; E. B. Van Ness, Mound City, Kans.; W. W. White, Liberty, Mo.; H. E. Tucker, Higginsville, Mo.; J. B. Hampton, Colby, Kans.; W. H. Reed, Golden City, Mo.; J. T. Morrison, Olathe, Kans.

Origin of Gold and Silver

The question of whether the precious metals may be products of atomic disintegration has lately been discussed by a number of English scientists. Prof. Soddy, of Glasgow University, well known for his investigations in radio-activity, says that his recent visit to the gold deposits of Western Australia and New Zealand convinced him that, "in all probability, gold, like radium, is at once the product of some other parent element, and is itself changing to produce 'offspring' elements, so that its quantity, and hence its value, was fixed simply as the ratio of these two rates of change." Donald Murray calls attention to the constant association of silver and lead in the mines and hints that there is ground for the suspicion that silver is a disintegration product of lead.

Book Notice

"Lincoln: Master of Men," is the title of a most interesting book by Alonzo Rothschild, published by Houghton, Mifflin & Company, of Boston, Mass. This keen and brilliant study of Lincoln's character differs from the work of his other biographers by aiming to concentrate the reader's attention on the one element in his personality which continually grows in significance as time goes by. This is his mastery over different types of men, as well as over himself. In restricting his treatment to this aspect of Lincoln's greatness, Mr. Rothschild has opened up a field of biography which is distinctly novel. He has carefully gone over a vast amount of material in selecting and grouping the facts and qualities which his book brings out. Every man in public life, whose business or desire it is to control or sway different types of character, cannot but be greatly interested in a specialized study of this remarkable faculty in one of the greatest masters of men the world has known. The price of the book is \$3, postage extra.


 T

HE fact that an article has gained a reputation—that its worth and wearing qualities are widely known—counts for much when it comes to a question of making sales.

The reputation of

Simmons Watch Chains

which has been continually broadening for three and a half decades, makes their sale doubly easy—is an added and potent reason for carrying them.

More and more jewelers are finding out each year that the Simmons line is in every way the most satisfactory line of gold-filled chains to handle.

There's hardly a jobbing house of any prominence that doesn't carry the Simmons line.

R. F. SIMMONS COMPANY

Main Office and Works, ATTLEBORO, MASS.

Salesrooms: 9-13 Maiden Lane, New York. 103 State St., Chicago



W. E. Brown, of Boyd, Texas, attended the Methodist Educational Convention held in Dallas, lately. Mr. Brown enjoyed his stay in the city very much.

Emmit Mitchell, who for some time conducted a jewelry business at Nacogdoches, is now with W. F. Dietrich, Kaufman, Texas.

C. E. De Long, formerly connected with the Southern Horological Institute as one of the instructors of that school, having sold his interest in the school, is now with L. B. Moore, Denison, and seems to be very well satisfied with his new position.

G. K. Smith, manager of Murray & Evans jewelry store, of Honey Grove, Texas, made a pleasure trip to Dallas recently and called on the wholesale trade while in the city.

Fred. Wilhelm, formerly with Jos. Linz & Bros., of this city, is now with the J. J. Sweeney Jewelry Co., Houston, Texas.

J. A. Medlock, who conducted a jewelry business at Lewisville, Texas, for a number of years, has sold his interests at that place and has moved to Frisco, Texas, at which place he has opened a business.

Will. Willson, head watchmaker for G. A. Pfaeffe, of Greenville, Texas, recently spent a day in Dallas, visiting his brother, J. M. Wilson.

E. G. Buerger, who for a number of years was watchmaker for the defunct firm of Morgan & Hawley Co., has accepted a position with A. A. Everts, as head watchmaker.

H. J. Ritter, traveling salesman for H. H. Hawley, Dallas, recently returned from a very successful trip in South Texas.

Harry Zimmerli, formerly of the Elgin National Watch Co.'s factory, has accepted a position with H. H. Hawley as watchmaker under his father, A. Zimmerli.

J. Edwards has resigned his position with A. A. Everts and opened for himself with Joe Samuels, on Main Street, Dallas.

Mrs. H. W. Bounds, wife of H. W. Bounds, has recovered from an illness of several weeks' duration.

Mark Kelley, who worked for A. A. Everts for about five years, is now with S. F. Stewart, the up-town jeweler.

C. R. Sims, is now with J. P. Bolding, Terrell. Mr. Sims was formerly in business in Athens, Texas.

William Guthrie is now located at Terrell, Texas.

J. T. Rutherford has established a business at Miles, where the trade outlook is a very bright one. Mr. Rutherford was formerly located with Buckner & Carnes, of Moody.

R. H. McDill, of Seastrunk & McDill, of this city, has opened up a thoroughly up-to-date jewelry manufacturing and repair shop, under the name of McDill & Bagby Jewelry Co.

J. J. Prentice, formerly a jeweler of Rising Star, Texas, is now located at Brownwood and is enjoying a prosperous business at that place.

B. Z. Friedman, of Fort Worth, has recently moved into his new quarters at the corner of Houston and Seventh Streets. He is now in a position to display his stock to better advantage than before, having installed handsome new fixtures.

J. M. Boyd, formerly employed with W. S. Shuttles & Son, of this city, has accepted a position with Jos. Linz & Bros., also of this city, as one of their traveling salesmen.

Mrs. M. W. Armstrong, of the Armstrong Jewelry Co., of Brownwood, is recovering from the effects of a recent illness.

J. M. Wilson, who has opened an engraving shop for the trade, is located with H. H. Hawley, 312 Main Street.

F. E. Brasfield, formerly of Gainesville, has accepted a position with J. C. Dallas & Co., of Temple, Texas.

N. Deal, formerly of Grogan & Deal, of Arlington, is now the sole owner of that firm, conducting the business in his own name. He was one of the many visitors to Dallas recently.

W. F. Dietrich, of Kaufman, made a short stay in Dallas last month, en route to La Grange, where for some time he has been a member of the firm of Dietrich & Kregel. He decided, however, to discontinue his relationship with that firm, and has sold his interest in it to his former partner, Geo. Kregel. The business is now being run in the latter's name. Mr. Dietrich is now attending to his business in Kaufman.

R. G. Coffey, who for a number of years has been with R. C. Glover, of this city, has accepted a position with A. A. Everts. Jeweler Everts has installed a complete set of new fixtures, and is now thoroughly equipped to display his well-selected stock of jewelry and silverware.

Chas. Sorg, who for a number of years was engaged in the watchmaking business, has accepted a position with T. J. Hines, of Dallas, as watchmaker.

W. W. Mitchell, formerly of the firm of Shuttles, Mitchell & Co., of this city, has launched into the retail jewelry and watchmaking business for himself, and is enjoying a large patronage.

W. J. York, of Bonham, who for a number of years conducted a business of his own, has sold out, and is now with the firm of Saunders, Martin & Co., of that city.

J. W. Keeling, a prominent jeweler, of Mineral Wells, Texas, was one of the many jewelers who visited Dallas recently, combining business with pleasure.

R. E. Graber, watchmaker for U. Langhammer, of Brenham, Texas, was in Dallas recently buying some fill-in goods for Mr. Langhammer. He also made a visit to Abilene, Texas, prospecting.

H. C. Dunkerly, of Ennis, Texas, who finished his course in watchmaking at Dallas, with the Southern Horological Institute, has opened a repair business for himself at Ennis.

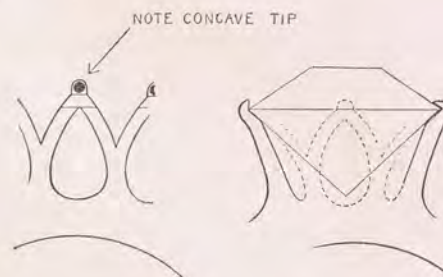
Mr. Barnes, son of R. H. Barnes, jeweler, of Cuero, Texas, is learning engraving under H. L. Dickson, formerly connected with the Southern Horological Institute.

C. H. Fisher, formerly of Terrell, Texas, is now watchmaker for J. F. Clark, of Abilene, Texas.

Theodore Stegner has resigned his position as secretary and treasurer of the American Swiss Jewelry Co., Dallas, and has canceled all business relations with that firm, the other officers of which remain as heretofore.

The following were among the recent visitors to the city: C. Holmberg, Fort Worth; Jeweler Ghormely, of Robinson & Ghormely, Arlington; Henry Emerson, with J. E. Mitchell & Co., Fort Worth; A. Weatherford, Plano; Frank Meisch, Clarksville; B. Rombach, Paris; M. A. Lesser, Fort Worth; C. A. Newlon, Fort Worth.

The Mounting of the Future



Sectional View Showing Completed Bearing

☞ The Arch Crown Mounting with completed bearing is ready to receive the stone without any cutting or filing.

☞ No special skill is required. Any jeweler or watchmaker can do a perfect job in less than five minutes.

☞ The tip is made concave on the inner side, which allows it to come readily into perfect contact with the stone.

☞ The design is striking and beautiful, yet perfectly adapted for use as a staple mounting. Its effect is graceful and rounded, and there are no straight lines or sharp angles.

☞ The brilliancy of stones is increased, as more light is admitted by the open construction of the arches.

☞ Perfect safety is assured, as the scientific arch construction affords obviously greater strength than unbraced prongs.

☞ There are no points to catch and loosen the stone or tear the garment.

☞ The quality is above criticism. Arch Crown Mountings are made by scientific machinery which insures a uniformly perfect article, far in advance of the hand-made mounting of varying size, shape and finish.

☞ Write for a sample to be submitted at our expense.

ARCH CROWN MFG. CO.

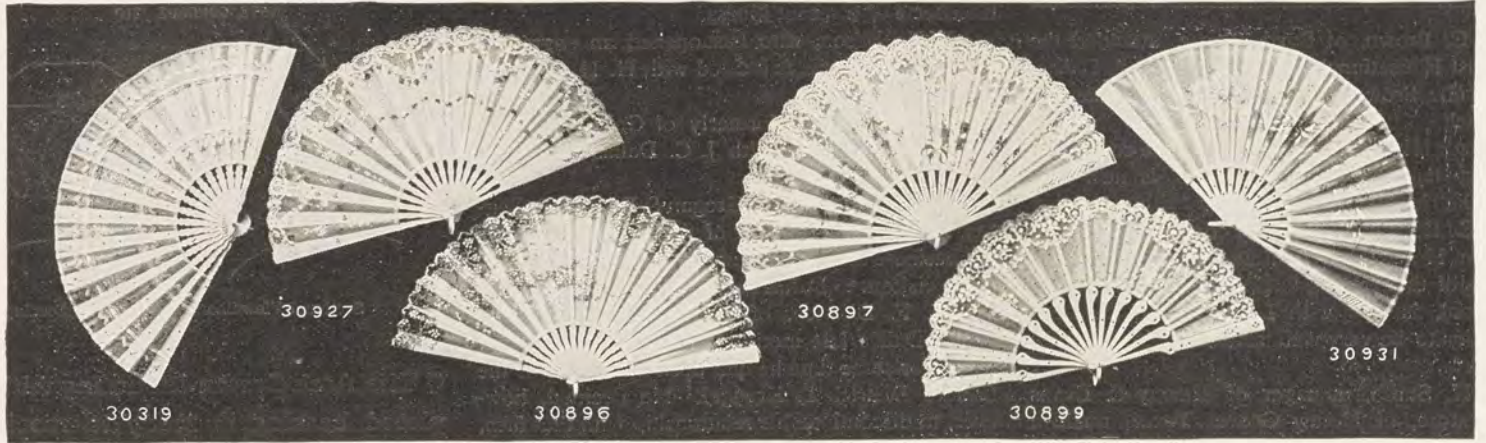
24 CAMP ST., NEWARK, N. J.

Also carried in stock by

Schrader-Wittstein Co., Chicago, Ill.
M. Schussler & Co., San Francisco, Cal.
Eisenstadt Mfg. Co., St. Louis, Mo.
Leonard Krower, New Orleans, La.

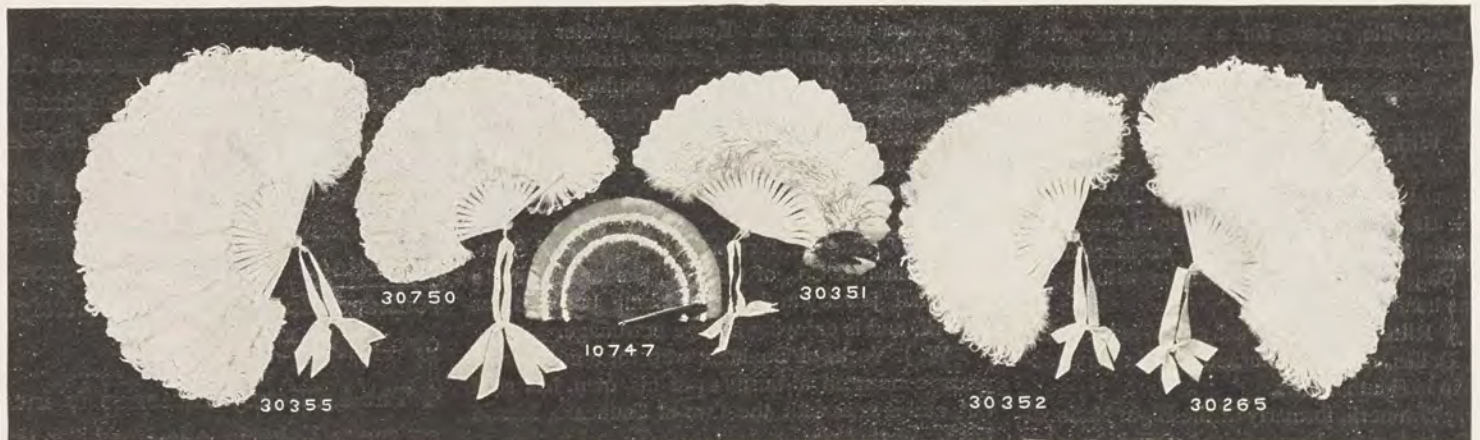
FANS FOR SUMMER USE

Selection packages to be reported in 3 days sent on request from one thousand styles, prices ranging from \$6.00 a dozen to \$15.00 each. Appropriate for wedding or commencement gifts; never get out of style. In ordering state quantity desired and prices you wish to pay.



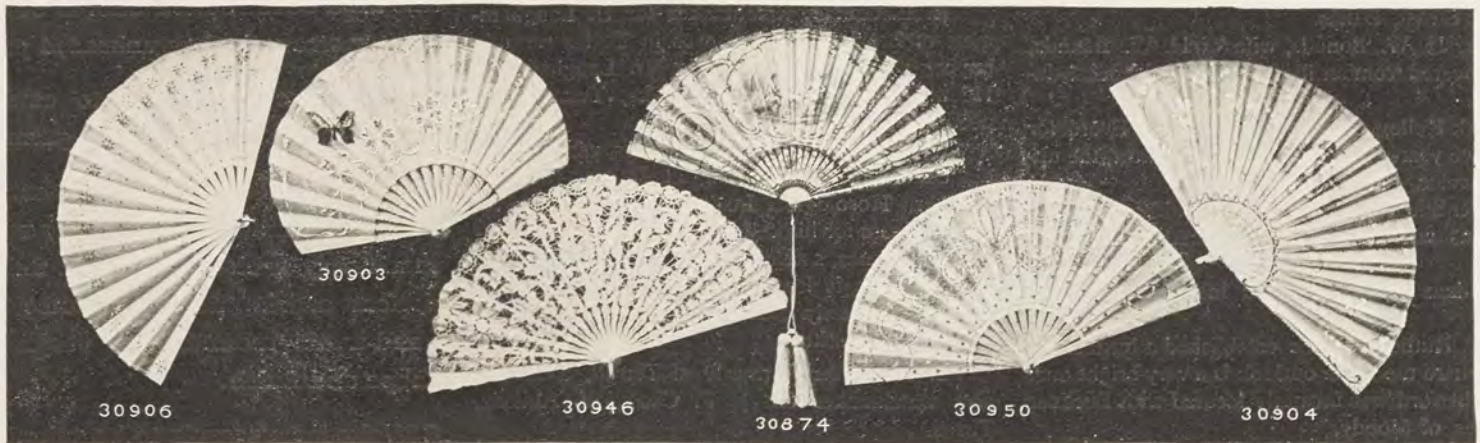
- K 30319—Handsome silk gauze, raised embroidery with lace and ribbon, handsomely painted and spangled. Silver inlaid white or light blue wood sticks . . . \$12.00 per dozen
- K 30927—Double-faced silk gauze, lace edge, fancy painted and spangled. Carved bone sticks . . . \$15.00 per dozen
- K 30896—Handsome embree fan lace edge and center and painted flowers. Carved bone sticks . . . \$21.00 per dozen

- K 30897—Silk double-faced gauze, lace edge, gold painted flower and gold inlaid bone sticks . . . \$24.00 per dozen
- K 30899—Patent folding bone stick which opens and closes. Silk gauze, lace edge and spangled . . . \$27.00 per dozen
- K 30931—Double-faced silk gauze, beautiful flower painting with spangles and inlaid spangles in bone sticks . . . \$18.00 per dozen



- K 30355—Real large fine quality white ostrich feathers, gold inlaid bone sticks . \$6.00 each
- K 30750—Genuine white ostrich feathers, with real pearl sticks . . . \$4.50 each
- K 30356—Same as 30750, larger and finer feathers . . . \$10.00 each
- K 10747—Peacock feathers, handsome green and brown combination, with celluloid shell colored sticks . . . \$1.75 each

- K 30351—White Maribou and ostrich feather fan with real brown bird raised ornaments, serpentine silver inlaid bone sticks . . . \$18.00 per dozen
- K 30352—Maribou and ostrich raised feathers, in two color effect, white and pink and white and heliotrope, inlaid serpentine wood sticks . . . \$24.00 per dozen
- K 30265—Fine quality large white ostrich feather fan, plain bone sticks . . . \$42.00 per dozen



- K 30906—Full size, double-faced silk gauze, full spangled, real white pearl sticks, \$5.00 each
- K 30903—Empire shape, double-faced silk gauze, Swiss embroidery, butterfly design, and white lace insertion, flower paintings, carved, gilt and colored feather shape bone sticks . . . \$5.00 each
- K 30946—Empire shape real Duchess lace, handsome carved bone sticks . . . \$6.00 each

- K 30874—Magnificent, antique and full hand paintings in old master colors on gauze and sticks. A beautiful gift . . . \$10.00 each
- K 30950—Full size, double-faced gauze and ettomine, full spangled, silver inlaid real pearl sticks . . . \$9.00 each
- K 30904—Beautiful artistic hand painted fan in high colors, with gold and colored bone sticks, subjects painted by popular artists . . . \$6.75 each

KUNSTADTER BROTHERS

Manufacturers and Importers Ladies' Belts, Leather Bags, Ladies' Neckwear, Hair Ornaments, Fans and Dry Goods Novelties

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P. S.—ALWAYS SOMETHING NEW



A Satisfactory Season

Business for the past month has been fairly good, although the usual spring quiet set in some weeks ago and cut down the large volume of trade which had been transacted up to that time. The retail merchants report being fairly busy, while watchmakers are still stocked up well with repair work, and indications are that the activity will continue. Traveling men from eastern points report that the business of the larger houses has fallen off considerably, but this has been due largely to the tardiness of spring. The weather opened favorably the latter part of the month, and the change to warm spring days had the effect of causing a renewed activity. Taking the season just ended, as a whole, more business was done than during the same period for some years past. It is also claimed that a larger business was done during the month of March than during the same month of last year.

The Coming Fall Festival

Elaborate preparations are now being worked out by the Fall Festival Association directors for the coming autumn event, which begins the latter part of August and continues for a period of four weeks. Two of the most prominent features, which have been decided upon as assured, are complete electrical and government exhibits. The government exhibit was secured through co-operation of Secretary-of-War Taft, who consented to allow a small but complete outfit from the government printing office to be sent here and kept in operation during the event. The electrical exhibit will include wireless telegraphy, an electrical flying machine and other features and novelties which will add to the interest and drawing power of the event. The traveling men's associations have united in arranging to boom the festival while making their respective territories.

The marriage of Miss Mathilde Louise Fischer to Frederick J. Gruen, a member of the firm of Gruen, Sons & Company, was solemnized on the evening of April 5th, at the home of the bride's parents, Mr. and Mrs. Henry Fischer, on Euclid Avenue, Mt. Auburn. The immediate relatives and a small number of friends witnessed the ceremony. Miss Henrietta Fischer, a sister of the bride, was maid of honor; while Albert Schoettinger, of Columbus, was best man. After a wedding supper the young couple left for the East and later on sailed for a two-months' cruise through the Mediterranean countries. They expect to get home early in the month of June.

A Swindler Punished

Prentice Tiller, who was arrested two months ago by the post office authorities, charged with using the United States mails for purposes of fraud, was arraigned in the federal court early in April, and after being found guilty of the charge was sentenced to serve a term of eighteen months in the Ohio penitentiary. Tiller operated at Dayton, Ohio, from which city he wrote letters to a number of the leading big retail jewelers of the East, including Tiffany, asking that special jewelry be sent on approval. He used the name of a prominent and reputable Dayton business man, and in this manner received a number of packages of jewelry worth several thousand dol-

lars. After the merchants failed to hear from Tiller, or to get any return of their wares or the payment therefor, the case was turned over to the post office inspectors, who landed Tiller and found that a beautiful young woman was receiving the benefit of the ill-gotten jewelry. Tiller is said to have been in trouble with the authorities on other occasions in the past.

The will of the late Lucia Hellebush, widow of Clemens Hellebush, a former prominent downtown jeweler, was recently filed for probate, in the probate court. The provisions are that special bequests of jewelry and personal property are made in favor of single daughters. These bequests amount to several thousand dollars. The estate, which is said to be quite large, is to be divided equally between all of the children. The executors under the will are Fred. A. and Amelia Hellebush.

Mr. and Mr. Joseph Noterman spent the latter part of the month of March at French Lick Springs. Mr. Noterman states that his house was kept busy during the early spring, supplying diamonds and other high-class set work. The demand for diamonds does not appear to have been affected in any way by the increase in the cost of the stones.

Arno Dorst, of the Dorst Company, is reported convalescing from an attack of typhoid fever, which covered a period of almost two months and which for a time threatened to leave evil results. During most of this time Mr. Dorst was confined in bed, but he has lately been enabled to get out for a short time each day.

The annual meeting of the Ohio Optical Association, which will be held at Columbus the last Monday and Tuesday in May, will be well attended by local members. A movement is said to have been started to try and bring next year's meeting to Cincinnati. Several other cities in the northern part of the State are also after the event, but local men claim to be able to show the most and best inducements to bring it here.

Eli Gutmann, of the well-known wholesale firm of Gutmann & Sons, has been making an extended trip through the South, the arrangements being for a six-weeks' absence, during which time he will make a number of Southern States.

Adolph Muehlmann, of the Lion Building, has placed in operation additional machinery with which to increase the output of his plant.

Ralph Erhart, of Davis, West Virginia, was in the city a few days ago, inquiring for a place at which to take a course in engraving. He later on decided to go to Philadelphia, where he will remain some weeks, under the tutelage of an engraving school of that city.

Cy Seymour, the champion batter of the National Baseball League and a member of the Cincinnati team, won a beautiful miniature 14-karat gold baseball, which had been offered by the Oskamp Jewelry Company, to the local player who made the first home-run. The emblem is a beauty and went to Seymour after the third game of the season, when the only run scored was that of Seymour, who drove out the home-run, and was the only player of either team to cross the home-plate.

William Pflueger, with Noterman & Co., is home from a trip up the Ohio River, and reported that business in that section was good, considering the time of the year.

Mrs. Simon Fox, mother of Henry, Sol and George Fox, of Fox Brothers & Co., of East Fourth Street, died a few weeks ago at her home on Oak Street, Walnut Hills, after a short illness due, mainly, to advanced age. Mrs. Fox was an

estimable lady and her death was mourned by a large circle of friends and relatives. The interment was in the Walnut Hills Cemetery.

The well-known wholesale house of A. G. Schwab & Bro. has completed installing all the various departments in its new quarters in the Harrison Building, on East Fourth Street, to which place they moved two months ago. The latest feature is the installation of a modern burglar-alarm system throughout their entire establishment.

J. B. Osthoff, with Noterman & Co., is arranging to build himself a handsome dwelling on Price Hill.

The marriage of I. Kahn and Miss Louise DeLeon was solemnized on the evening of April 4th, at the St. Nicholas Hotel, in the presence of at least a hundred guests and friends. Mr. Kahn is connected with a pottery house of this city, but some time ago was with Frohman & Co. The bride is well-known and popular in social circles. After the ceremony and a wedding dinner, the couple left for the East on their honeymoon trip.

Peter Vinegar is the name a fifteen-year-old colored boy gave to the police some time ago, when he was arrested on a charge that he had stolen a \$50 gold watch from the retail house of Plaut & Co., at 218 West Fifth Street. Peter was caught with the goods on him, and had to appear in the city police court, where he was given a chance to repent and deliberate on the uncertainties of life.

John A. Herschede, of the Herschede Hall Clock Company, has been touring Western States, where business is reported to be holding up well.

Henry Horman, watchmaker, who formerly conducted a shop at Fifth and Vine Streets, has become associated with George Newstedt, at the handsome new store of the latter, at Fourth and Race Streets.

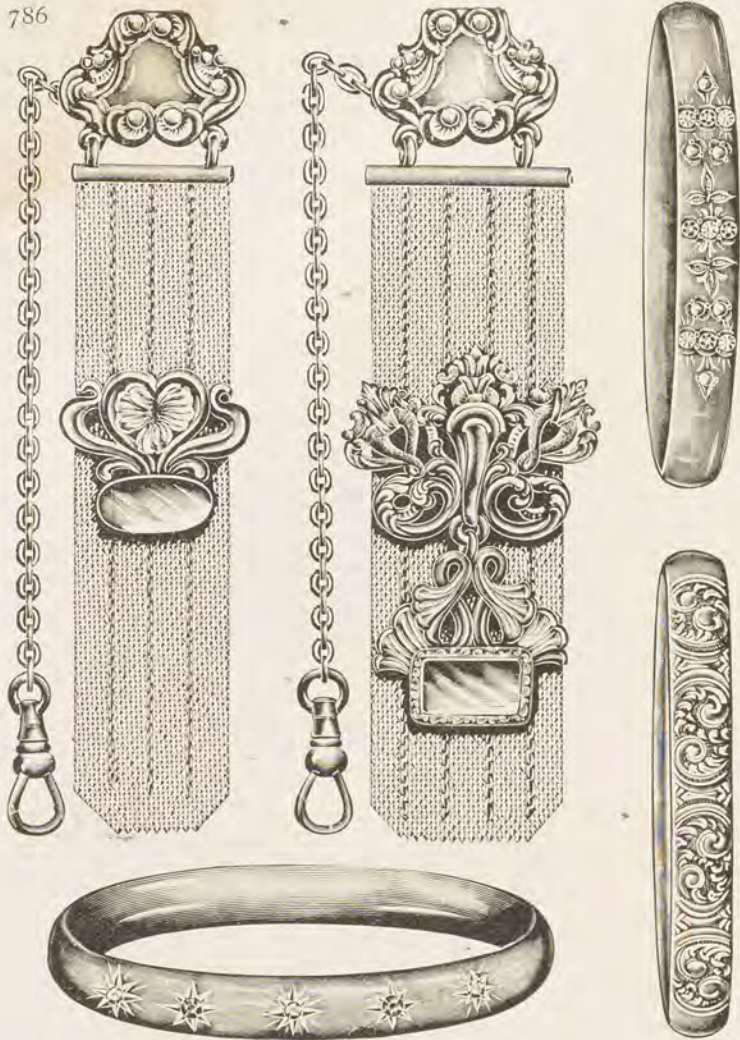
A Daring Theft

An unknown man, a few nights ago, tossed a brick through a large show window at the store of Jacob Morris, at 1227 Vine Street, and made his escape with a number of valuable set rings before persons, who had been watching him, could cause his detention. The man had the brick wrapped in a piece of newspaper, in order to deaden the sound as much as possible, and the moment he had broken the glass he snatched up a tray of rings and started away on a run. Mr. Morris had been watching the man, as the latter had passed and repassed the store in a suspicious manner. A private police officer was also near at hand, but both were taken by surprise by the boldness and agility of the thief. The act was committed at night time, just before Mr. Morris was about to close up. The thief shot into the hallway of a neighboring building and then disappeared through another hallway, scaled a fence and disappeared in the darkness of an alley. A tray containing rings to the value of about \$3000 lay beside the one which the thief stole, and Mr. Morris later congratulated himself that it was not also taken.

F. P. Loudonbach has opened a new store at Owenton, Ky., and was in this city looking after stock and fixtures. Mr. Loudonbach was formerly connected with a large Louisville house, but finds that he can buy better here than in the Falls City.

The following were among the members of the trade to visit the city during the past month:

- Ralph Erhart, Davis, W. Va.
- C. J. Hanson, Berea, Ky.
- J. Shower, Middletown, Ohio.
- Owen Sherwood, Falmouth, Ky.
- Edwin DeVoss, Wilmington, Ohio.
- S. Sanders, Springdale, Ohio.
- Mr. Duncanson, of Duncanson Bros. & Co., Lynchburg, Ohio.
- E. B. Scott, Batavia, Ohio.
- Joseph Lowe, Westfield, Ill.
- K. Brenner, Chattanooga, Tenn.
- A. Wachtel, Georgetown, Ohio.
- Charles Keller, Frankfort, Ky.
- Oscar Glutz, London, Ky.
- Henry Brenecke, of the Stief Jewelry Co., Nashville, Tenn.
- Mr. and Mrs. Zoellner, Portsmouth, Ohio.
- William Leive, Aurora, Ind.
- J. C. Bailey, Hamden Junction, Ohio.
- H. Tiffany, Xenia, Ohio.
- J. H. Spencer, Martinsville, Ohio.
- Messrs. Moffsinger and Jones, Greenup, Ky.
- L. C. Eveslage, Ripley, Ohio.
- Henry Beutel, Hamilton, Ohio.
- S. S. Sherwood, Ewing, Ky.
- A. T. Maupin, Athens, W. Va.
- Mr. Grosse, of Grosse & Kappeler, Dayton, Ohio.
- Max Kohlhaagen, with the Jaffe Jewelry Company, Birmingham, Ala.
- J. W. Tufts, Loveland, Ohio.
- J. H. Sherwood, Brookville, Ky.
- D. A. Sewall, Lynchburg, Ohio.
- Alexander Litchkoff, Pensacola, Fla.
- H. S. Froelan, Seaman, Ohio.
- A. M. Stamm, Williamsburg, Ohio.
- G. H. Hansgen, Bethel, Ohio.
- Lee Schlenker, Eaton, Ohio.
- Charles G. Schlenker, Hickman, Ky.
- G. F. Ireland, West Milton, Ohio.
- I. N. Pollock, Ashland, Ky.
- Frank B. Carey, Lebanon, Ohio.
- J. F. Zeitler, St. Louis, Mo.
- L. C. Diefenbaugh, Lewisburg, Ohio.
- J. M. Neth, Eaton, Ohio.
- J. A. Bagby, Greenup, Ky.
- E. A. Schweeting, Oxford, Ohio.



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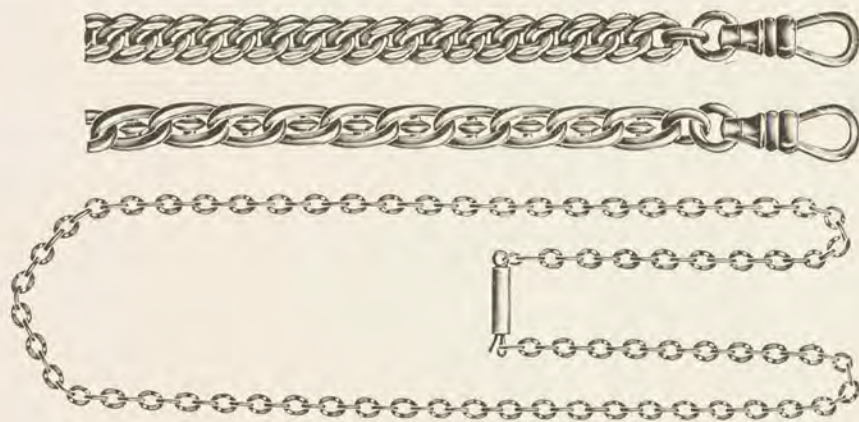


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NEW STYLES CONSTANTLY**

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Bastian Class Pins and Badges

When you handle **Bastian Bros. Class Pins and Badges**, you handle goods that are known to every intelligent person wherever English is spoken. We have advertised extensively and persistently in Leading Magazines until the name of Bastian bears the same relation to class pins that the name Elgin does to a watch.

No other manufacturer can meet our prices—it is an impossibility for him to do so—because we own the only patented process whereby one girl with one machine can do the work of six skilled workmen.

Note these prices:

- Silver-plated Pins, per doz. \$1.00
- Sterling Silver Pins, " " 2.50
- Gold Plate, . . . " " 3.00
- Solid Gold, . . . " " 15.00

25% Discount to Retailers

Silver-plated Pins retail at 10 cents and Sterling Silver at 25 cents. They are finely made of heavy metal, and on the Sterling Silver Pins the best French enamel is used.

We also make to order Badges, Medals and Buttons in either Gold, Silver, Bronze or Ribbon, and we rigidly guarantee everything we make.



Our Handsome New Catalogue
is Free to Jewelers

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United States immigration officers recently exposed a gang of clever smugglers that have been operating between Buffalo and near-by towns in Canada and between Detroit and Windsor with great success and under the very noses of the Canadian customs inspectors for the last ten years. Incidentally raids were made at Toronto and Windsor that revealed the fact that jewelry and jewelers' supplies to the value of many thousands of dollars had been smuggled from the United States into Canada by way of Detroit. Two Detroit women are accused of acting as fences for the property smuggled. Fenwick's restaurant at 99 Woodward Avenue, Detroit, was the favorite meeting place of the smugglers. Mrs. Anna B. Keisler, who is said to have been caught red-handed by Canadian customs officials, after they had been tipped off by the Detroit immigration officials, is said to have been the person most active in the work. Her husband, Gus. Keisler, with whom she is associated in the jewelry business in Toronto, is also accused. Canadian customs authorities were of the opinion that they were being systematically robbed by smugglers for years back, but persistent efforts on their part failed to attach suspicion to any party or parties. A couple of months ago Detroit officials stumbled on the case by accident, as they put it. The Keisler's had a housekeeper. She was aware of the clever game that her employers were playing, and she wanted more salary than she was receiving. Her persistent demands met with repulse. She threatened to expose the alleged illegal acts of her employers, but even this did not affect Mrs. Keisler. True to her threat, she laid bare the whole scheme and placed it in the hands of the Detroit officers, who began working on the case at once. Their efforts were awarded by the detention of Mrs. Keisler and the subsequent raid of her apartments, parlor 3, Manning House. Besides a small hand case and a sample case a large trunk filled with jewelers' supplies, including watch hands and springs and jewelry of cheap variety, was found. Doublets formed the greater part of the goods, there being about 3500 of them. On Mrs. Keisler they found a large black pearl of great value, set with diamonds. Her fingers were liberally bedecked with diamond rings, of which seven were taken from her. A telegram to the authorities in Toronto informed them of the seizure and the detention of the Keisler woman. They immediately made a raid upon the jewelry store operated by the Keislars. Two trunks, a suit case, invoices, letter files and various other devices were used to conceal the smuggled goods. The authorities of Toronto immediately wired back the result of their work and advised that the woman be allowed to proceed to Toronto under the strictest surveillance. Canadian authorities at Windsor were very close-mouthed over the affair at first, denying all knowledge of it. The exact amount of goods has not yet been determined. The investigation reveals the fact that Mrs. Anna B. Keisler is known from coast to coast in Canada as a commercial traveler. Her special line is small jewelry and jewelers' supplies, and she has been on the road for many years. The capture is all the more important when it was considered that Mrs. Keisler was making extensive preparations for a four-months'

trip. Mrs. Keisler is very mannish in appearance. She gives her age as thirty-five years. Her capture did not frighten her in the least. She left Windsor vowing vengeance.

As S. P. Flayer, 145 Grand River Avenue, Detroit, was getting down an alarm clock for a young man recently, the fellow grabbed a tray of seventeen cheap set rings valued at about \$60. The thief ran around in the alley and was followed by a patrolman. The tray was thrown away by the thief in his flight, and was found by the officer in a shed in the rear of 281 First Street. One of the rings was left in the tray. Nothing could be found that would give a clue as to who committed the robbery.

The Wayne Optical Company, Detroit, Mich., has opened up a branch store at Port Huron, Mich.

Henry Taylor, a traveling optician, of Detroit, was recently sentenced to serve six months in Ionia Penitentiary on a charge of fraud preferred against him by Mrs. M. J. Baker, of Clio, Mich.

The opening day of baseball in Detroit found W. F. King, Jr., of Adrian, in Detroit as usual. Nothing but sickness of a severe kind would keep him away on opening day. He brought about 200 rooters along with him from Adrian.

Charles C. Thoma, Battle Creek, Mich., is remodeling his store and putting in new show cases and fixtures. The interior of the store is being enlarged by the addition of forty feet more of floor space. When completed the store will be one of the best equipped in Michigan.

John A. Schirmer, Saginaw, Mich., recently moved into the store formerly occupied by F. J. Kelsey. The quarters will be remodeled and equipped with new fixtures and show cases. Mr. Schirmer has been engaged in the jewelry business at Saginaw for about thirty years.

Harry Lieberman, traveling representative for the Michigan Jewelry Co., was recently married to Miss Ida Saulson, of Detroit.

Leo W. F. Kerbs, of Wayne, was in town to see the first ball game of the season.

Max Jennings, of St. Clair, president of the American Retail Jewelers' Association, was a recent visitor in Detroit.

Mr. Burr, of the firm of Burr, Patterson & Co., manufacturing jewelers, recently attended a convention of the Phi Kappa Psi, at Washington, D. C. Mr. Burr's firm are the exclusive manufacturers of the Phi Kappa Psi fraternity emblems.

Thieves recently made an unsuccessful attempt to break into the jewelry store of H. D. Parker, Lansing, Mich. They used tools which they had stolen from a neighboring blacksmith shop. They were frightened away before they gained an entrance.

By a very clever ruse a thief recently secured two gold watches, valued at \$35 each, from Albert Preusser, Grand Rapids, Mich., and escaped. The man forged the name of a Mr. Butterfield to a letter written on the stationery of the firm of Butterfield & Keeny, requesting in the letter that he be given a gold watch, which the stranger explained to Mr. Preusser who waited on him in person, the writer intended to present to a friend. Shortly after the man left the office Mr. Preusser telephoned to Mr. Butterfield and learned that he had been defrauded.

The recent death of George F. Schmidt, who was formerly in the jewelry business at 49 Main Street, Battle Creek, Mich., is said to have been due in great part to disappointment and shock growing out of his failure. He had been suffering from a complication of ailments, and the grief and

discouragement which he felt after he was forced into bankruptcy by his sickness, undoubtedly made his condition much worse. He died while the creditors were selling the stock at auction. Mr. Schmidt was born fifty-two years ago and started in business as a jeweler originally in the North section of Chicago. In June, 1892, he opened a branch in the Central section, and in the following year met business reverses and moved to North Clark Street, where he remained until 1898. He then located at Mattoon, Ill., and continued there until last year, when he sold out and moved to Battle Creek. He would have done well there had not his bad health interfered with his work.

A. Beck, who was formerly connected with L. W. Johnston, Iron Mountain, Mich., has opened up a jewelry repair shop at the same place.

D. D. Shane, Grand Ledge, Mich., has accepted a position with I. H. Halsted, of the same place. D. D. Shane was an employee of L. W. Holmes for twelve years.

G. J. Calkins, who for twenty years had been employed as watchmaker with the J. Herkner Jewelry Co., of Grand Rapids, Mich., recently died of paralysis at his home. The deceased was forty-one years old. He was a past master of Grand Haven Lodge, F. and A. M., a member of the Chapter of De Molay Commandery and of the Shrine.

Iowa Retail Jewelers' Association

A circular was recently mailed to the Iowa trade by Secretary-Treasurer J. H. Lepper, of the Iowa Retail Jewelers' Association, urging the jewelers who have not already joined to become members and thus strengthen the organization. The circular stated:

We are going to hold a State convention in June, at Des Moines, for two days following the Iowa Optical Association's convention, that is, June 14th and 15th, and this will enable you to take in both conventions at one trip. Papers of interest to the trade will be read by able men, and after each paper the meeting will be thrown open to everybody for discussing the subject. The following will be a few of the many subjects that will be discussed: "Storekeeping," "Advertising," "Credits," "Mail-Order Competition and How to Meet It," "Workshop Notes," "The Little Things that Stop Watches and How to Correct Them," etc. You cannot help but get enough good from the trip to pay you well for coming, besides a few days' relaxation from business and meeting your fellow-craftsmen.

The executive committee of the Iowa society met recently at the office of the secretary, Mason City, and heard a most instructive address by S. R. Miles, a hardware dealer, who explained the methods by which the hardware men built up so strong an organization and combated the grievances of the trade. He said that everything depended on the membership of the organization, as only by a large membership could they force rectification of the things complained of. The committee received from Mr. Miles much valuable information, which will help them with their association work.

Secretary Lepper is much encouraged by the favor accorded by the manufacturers to the association idea of a restricted selling price, and he believes that the recent court decision recognizing the right of the manufacturer to control the selling price of his product will be a great assistance in bringing this about.

The Iowa society rejoices in an excellent staff of officers and a good membership, and we have no doubt the June convention will be a big success.

To assure advantageous purchases of

DIAMONDS

the Trade will do well to
look to this establishment

Your interests are protected
Unfair competition avoided
By our method of selling

NO GOODS AT RETAIL

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IMPORTERS OF DIAMONDS

MANUFACTURERS AND JOBBERS OF WATCHES, SILVERWARE
CUT GLASS, ETC. COMPLETE MATERIAL DEPARTMENT

The Emblem Jewelry Manufacturing Co.
Makers of Diamond Mountings

Fine repairing and stone setting. All jobbing stones furnished. Presentation jewels and medals. All first-class work. Refiners of old gold and silver; highest cash price paid.

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The best and most thoroughly equipped optical school in America. We train pupils to obtain a thorough knowledge of the optical profession. For this reason we want men and women who are anxious to learn, persons who are willing to devote all their time to study. We do not want any diploma-hunters—such persons do not need apply. We charge more for instruction, but you will find that it is the best investment you made in your life. Money may go astray, but knowledge is never lost. Full course, \$75.00. Address, KLEIN SCHOOL OF OPTICS
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Best of Workmanship **Right Prices**
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**Jewelers Having Tortoise
Shell Goods**

that have become dull, can have them repolished and made as bright as new, at a small expense, by sending them to the manufacturer.

WM. K. POTTER, PROVIDENCE, R. I.

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373 Washington St.

Jewelers' Bldg. Boston, Mass.

Manufacturers of high-grade diamond mountings, and repairers for the trade. Importers of precious, semi-precious and imitation stones.

*A Full Line Always in Stock at
Lowest Prices*

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Send us your repairs, and let us demonstrate our Superior Workmanship at Reasonable Price, or write us for information.

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Send for sheets of illustrations with prices of attractive cuts specially prepared for jewelry advertisements. The Keystone Publishing Co., 809-811-813 N. 19th St., Philadelphia, Pa.

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New England's Most Complete
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Jewelers, Silversmiths, Stone
and Metal Seal Engravers,
Encrusters and Setters

Lapidaries and Dealers of
all kinds of

Real and Imitation Stones

Repairers of Fans and Opera
Glasses, Gold Plating

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All work positively done in our own shop

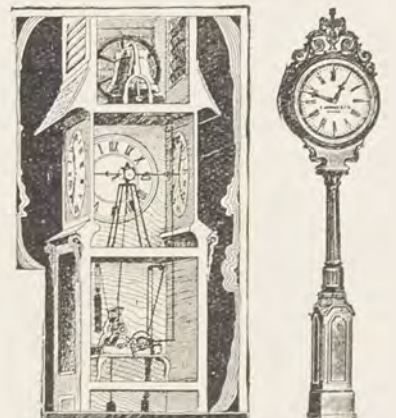
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DIAMOND SETTING
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The much-feared coal strike with which the country has been afflicted the past month did not have the detrimental effect on trade that was generally expected. Throughout New England a spirit of satisfaction seems to exist among the jewelers in regard to the April business, and all seem to have the firm conviction that trade conditions will remain stable and unaffected, except to a slight degree, as the strike progresses.

Increasing Demand for Diamonds The demand for diamonds seems to be continually on the increase in this section of the country, and judging from present conditions we are liable to see the greatest year in the history of the diamond business. The recent increase in the price of stones will undoubtedly be followed soon by a heavy increase in the price of two and three-grainers, bringing the cost of those sizes almost as high as the four-grainers of the same quality. The reason for this is the shortage of rough from which two and three-grainers are made, which will make it necessary in some cases to cut rough for larger stones so that it can be made to these sizes. Two-grainers have been growing scarce the last couple of years, which gives us good reason to believe that the rise is sure to come soon.

About June 1st the building on Bromfield Street, across from the Jewelers' Building, will be torn down and a magnificent office building erected on the site. As a result H. U. Lockwood, who has for some years past occupied one of the stores in this building, will be obliged to move. We are pleased to hear that Mr. Lockwood will undoubtedly receive a fair-sized sum of money for giving up his lease which runs for some time longer. He is at present considering another store on Bromfield Street, of which he soon expects to get the lease. In his new location it is his intention to have a neatly-furnished optical establishment in connection with his jewelry business.

The new office of I. Alberts, on the seventh floor of the Jewelers' Building, is more than twice as large as his previous quarters, and allows the necessary room for his rapidly-increasing business. New fixtures and show cases will be installed, and we are glad to note that no expense has been spared to equip it in good shape.

D. J. Ingraham, of Boston, has recently returned from a week's business trip to New York.

Gustavus Weiler, of Jason Weiler & Son, Boston, Mass., who recently returned from his honeymoon, which he spent in the South, has started up housekeeping in Roxbury.

H. J. Webb, of Beverly, Mass., is displaying in his window an extensive collection of interesting curios from California which are the property of Capt. John Haskell, of Beverly. The collection consists of horned toads, centipedes and various insects, as well as rare and beautiful shells and numberless other curiosities.

The store of F. Vorenberg, of Boston, was closed on April 9th, on account of the death of his mother, Mrs. Henrietta Vorenberg. She died at her home and was seventy-three years of age.

We regret to announce the death of George C. Rogers, of Salem, Mass., one of the oldest employees of Daniel Low & Co., of Salem, Mass. He was born and educated in Salem, and at fifteen years of age entered the employ of Mr. Low, with whom he had been continuously until the time of his death, at the age of fifty-one years, having seen thirty-six years' service with the concern. About two months ago he resigned because of heart trouble with which he was affected. He was a fine musician and played a clarinet in the Salem Cadet Band, of which he was one of the original members and was for many years its treasurer. He was a prominent Odd Fellow and was also a member of the Jewelers' League of New York. He leaves a widow, two sons, a daughter and mother.

The improvements in the Boston store of Smith & Patterson are being handled as rapidly as possible, considering that business is going on as usual. The lower floor has been lowered three and one-half feet to the street level. The base-

ment will be devoted to cut glass, whereas it was formerly on the street floor. The Arch Street side of the building will be entirely new. The fifth floor will be devoted to the watchmakers and jewelry repairers, while the second floor will serve as the wholesale department. Two new elevators are being installed, one freight and one passenger.

A. S. Bigelow, Jr., of Bigelow, Kennard & Co., will return soon from his yearly European business trip.

Channing Bowers, formerly with Tibbets, Morrill & Johnson, recently died at his home in Somerville. Mr. Bowers held an enviable reputation as a watchmaker for special work, being employed years ago by a watch factory in Ohio. After his return to Boston he entered the employ of the old firm of Morrill Bros., where he remained until they wound up their business affairs. He leaves a wife and two children.

A petition has been circulated among the tradesmen on Hanover Street, from Washington Street to Scollay Square, to have the Nickelodion removed from that locality, claiming that the persons who patronize the place as well as the people employed there, are a detriment to business in that section. The license was revoked by Mayor Fitzgerald previous to his Southern trip, but during his absence they were given a temporary license by the acting mayor. A number of Hanover Street jewelers are interested in the matter.

W. C. Dorrety, the emblem and class-pin manufacturer, who was formerly located at the corner of Bromfield and Washington Streets, has moved into the Washington Building, where he occupies room 806. Mr. Dorrety's establishment is neatly and tastefully furnished, giving him an office which is much superior to his previous one.

A stationery department which was in half the store occupied by M. C. Jewell, of Everett, Mass., has been purchased by him. Mr. Jewell has altered the entire store, putting in a larger and more complete line of stationery with a spacious and well-fitted optical establishment as well as new wall cases in his jewelry department. He will now have the largest and most complete jewelry and optical store in Everett.

The watchfulness of one of the officers of the Naugatuck, Conn., police, was instrumental in frustrating an attempt at robbery of Peirpont's jewelry store, in that city. Upon his approach two men who were standing in front of the store ran away, leaving behind a chisel and file with which it was evidently their intention to force an entrance.

The stock of L. W. Weston, of South Framingham, Mass., has been sold at public auction, giving him the opportunity of putting in an entirely new stock on his removal to the Bullard Building, in the same city.

A. E. Cunliffe, who purchased the stock and fixtures of Charles S. Saxton, of 186 Worthington Street, Springfield, is disposing of the stock at greatly-reduced prices. Some of the stock was damaged by smoke and water by the recent fire in the building, and it is the intention of Mr. Cunliffe to replace it with new.

The store of F. F. Bartlett, of Rumford Falls, Maine, was recently broken into. Fortunately the thieves stole but three revolvers and a violin. From the goods stolen and the manner in which the store was entered, it was concluded the break was made by mischievous boys.

L. B. Coe Co., of Springfield, Mass., has been holding a removal sale the past month.

The jewelry store and the stock of H. M. Stilson, of Pittsfield, Mass., has been disposed of to two young men of that city, who will continue the business.

Parker Ford has been congratulating himself on the fine automobile trip which he enjoyed, when J. Perry Carpenter ran his new White steamer from Boston to Providence. Mr. Carpenter is an enthusiastic autoist.

Among the first of the Boston jewelers to subscribe to the fund for the relief of the citizens of San Francisco, was D. C. Percival & Co., who contributed a check for \$100.

George W. Lord, of Lynn, Mass., has recently built a fine new residence in that city.

The store of D. W. Basker, of Lynn, has been entirely equipped throughout with new fixtures and show cases as well as a new window.

One of the managers of the E. Gately & Co.'s stores, J. B. Kelly, has started in the instalment business for himself with Barre, Vt., as his headquarters. His large acquaintance in that section will undoubtedly assure his success from the start.

Legislation Affecting Instalment Houses

At the present time the Massachusetts Legislature is putting a bill through the house which will have a tendency to drive many of the instalment dealers out of the State. The original intent of this bill was to aim at the money lenders who charge such usurious rates of interest, but instead of affecting them it ended by giving a most serious blow to the instalment dealers. Much pressure is being brought to bear by the instalment dealers to defeat this bill. Many jewelers would be satisfied to see the rights of the instalment dealer restricted to a considerable extent. But when we stop to think of how the percentage of profit grows less and less on the year's business, year after year, it is then the advantage gained by having the instalment dealer as a competitor comes in. He naturally charges a greater percentage of profit than the average jewelers who sell for cash, as he has to figure interest on his money, insurance against loss and collector's commission.

A former Boston jeweler, Wm. J. Dron, who is now established in a jewelry business of his own in Brantford, Ontario, Canada, recently visited Boston and reports a good and rapidly increasing patronage. Mr. Dron was formerly in the employ of Jos. A. Williams, one of our prominent Washington Street jewelers.

Herbert L. Gruber, who for some years past was located at the corner of Atlantic Avenue and State Street, has leased the office up one flight at 355 Washington Street. Display cases, which were used in the doorway by the former tenant, have been secured by Mr. Gruber, who will use them to display his goods.

Lawrence F. Percival, of the firm of D. C. Percival & Co., was married to Miss Evelyn H. Joyce, of Lakewood, N. J., in that city, on the 26th of April. They sailed for Europe on the *Deutschland*, from New York City, on the following Saturday, to spend their honeymoon abroad.

The business of the Portland store of Geo. E. Homer has been wound up by disposing of the balance of the stock and fixtures which were left after the retail auction, that has been going on for about a month. We are pleased to note that, as usual in Mr. Homer's dealings, the transaction showed no loss.

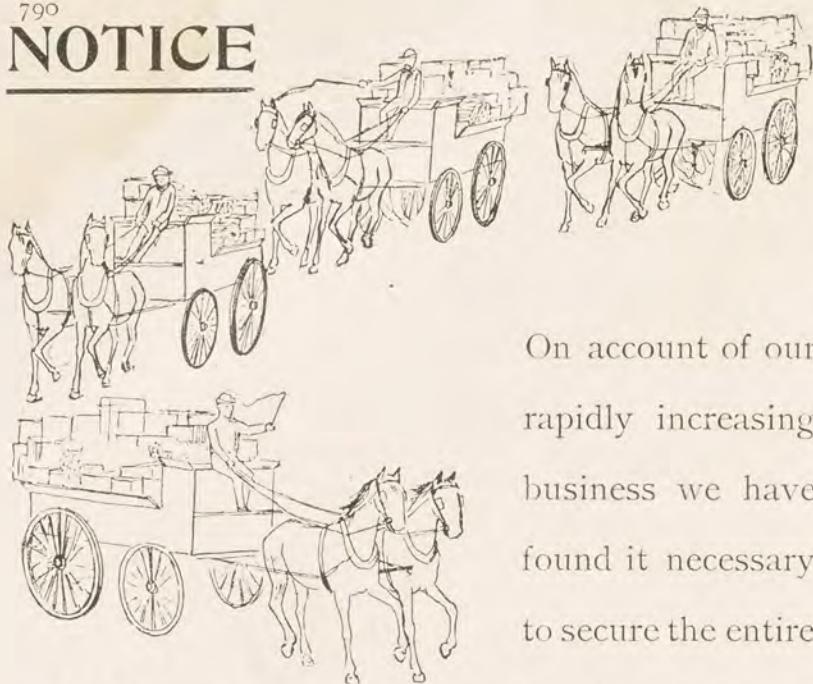
E. W. Martin, of Providence, R. I., and party sailed the 1st of May from Boston for Europe on the *Saxonia*, of the Cunard line. The party will be gone about three months on a tour of England, Scotland and Ireland, in Mr. Martin's new fifty-horse power Thomas flyer, which is equipped with all the extras, including a glass front and a canopy top. The party, consisting of six, includes Mr. Martin, his wife and two children, his wife's sister and a chauffeur. As luggage they carry six suit cases and one trunk.

Interesting Lectures on Watchmaking

The series of three lectures given by H. E. Duncan before the New England Watchmakers' Club have been completed and were a decided success, both as a social and educational feature. The president, F. W. Ruggles, has ably filled his chair throughout the lectures. The first lecture was devoted to a historical review of the evolution of the watch, bringing the subject up to the present day timepiece. After which, with the aid of the stereopticon, the system was described by which the sizes of watches were ascertained, followed by a very interesting talk and views of the train and train depth. The second lecture was devoted to setting up of the escapement and was greatly appreciated, as there were very few preliminaries necessary, as in the case of the first lecture. Mr. Duncan settled down to his subject immediately and gave much valuable information on the topic. And so with the third lecture, which was devoted to truing and poising the balance, and truing the hairspring. The club was an assured success from the start, and it is hoped that this will be but the beginning or opening of the large field which it has shown as being possible to the members by organizing for educational purposes. The officers and directors are to be congratulated on the success of this, their initial movement at organizing a club among themselves.

Among the recent trade visitors to the city were: M. T. Gillespie, Leominster, Mass.; H. P. N. Dahl, Maynard, Mass.; C. A. Trefethen, Manchester, N. H.; Chas. Sinclair, of N. C. Nelson & Co., Concord, N. H.; N. C. Squire, Lynn, Mass.; John B. Kelly, Barre, Vt.; M. C. Jewell, Everett, Mass.; J. P. Farrington, Kingston, Mass.

790
NOTICE



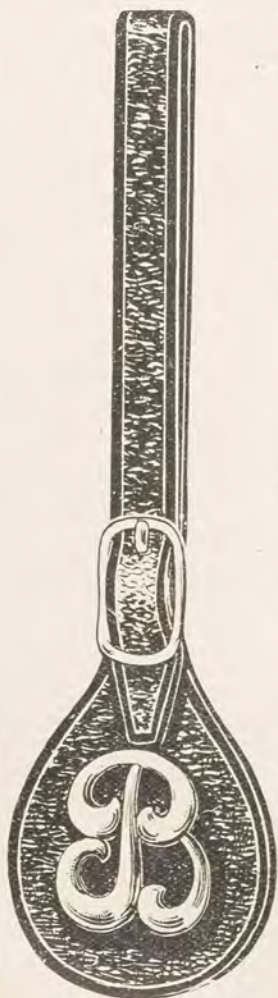
On account of our rapidly increasing business we have found it necessary to secure the entire

7th Floor Annex of the Jewelers' Building

We merit a continuance of your past patronage with our increased facilities.

I. ALBERTS

373 Washington Street, BOSTON, MASS.



FULL SIZE

JOHN A. SALMAN & Co.
21 Bromfield St., Boston, Mass.

We make and sell more Mono-gram and Initial Fobs than any other manufacturer in the country.

Now is the time to put in a stock of Initial Fobs. Here is a good seller which you can buy in one dozen lots or upwards at **\$2.00 dozen**. All one piece black leather lined strap, nickel buckle and rounded **sterling silver** faced letter.

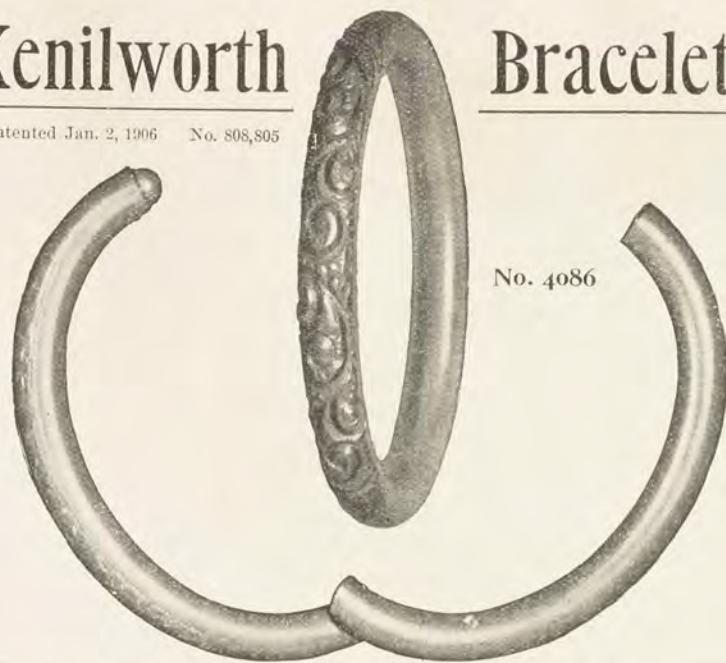
You can make your own selection of letters.

All goods guaranteed. Send for fob cuts.

TRY THEM AND YOU WILL NEED MORE

THE Kenilworth Bracelet

Patented Jan. 2, 1906 No. 808,805



No. 4086

The phenomenal success of the **KENILWORTH** is caused by its extreme beauty and convenience, and is making it the leading make in the growing demand for perfection in bracelet making.

Differing radically in working principles from all other makes, having no catch or snap, and practically unbreakable with ordinary use, makes it absolutely certain to successfully and with perfect satisfaction meet all demands of first-class trade.

Made in a full line of beautiful patterns, both in **GOLD FILLED** and **STERLING SILVER** and in **all finishes**.

All leading jobbers now have a full line. Do not fail to see them at your earliest opportunity. Manufactured by

DORAN, BAGNALL & COMPANY

New York—194 Broadway
Chicago—67 Wabash Ave.
San Francisco—126 Kearny St.

Successors to YOUNG, BAGNALL & CO. Established 1870

North Attleboro, Mass.



CANDO
Silver Polish
IS THE BEST

for Jewelers to handle—it is a quick seller and positively superior to any known polish on the market. The patent cap used on jar for **CANDO** is made to perfection.

We call special attention to the importance of a package for Silver Polish that can be **RESEALED** after it is once opened.

Samples sent when requested. Correspondence solicited

PAUL MFG. CO.
Boston, Mass.



Foreign Trade Opportunities

Manufacturing jewelers in the Attleboros have been advised by Charles F. Pidgin, chief of the bureau of statistics of labor, of Massachusetts, that one of the leading wholesale jewelers of Japan will visit the United States in the near future in quest of reliable brands of watch movements and cases, spectacle frames and all kinds of high-grade and cheap jewelry. The bureau will act as a medium through which dealers, who so desire, may establish business relation with the oriental visitor. From the same source jewelers have received notification regarding the opportunities for trade in Mexico and Bolivia.

The interest of Daniel F. Smith in the stone-setting and repairing firm of Fragner & Smith, Providence, has been purchased by his partner, Frederick Fragner, who is continuing the business under his own name.

The Martin Copeland Co., Providence, has been incorporated under the laws of Rhode Island by William A. Copeland, Edgar W. Martin, Lawrence C. Martin and William E. Copeland, for the purpose of manufacturing and selling all kinds of jewelry and optical goods, with a capital stock of \$400,000. This firm will continue the business formerly conducted under the name of Martin, Copeland & Co.

Reed & Barton, the well-known Taunton silver-smiths, have come into possession of an old mill, which is a most timely and convenient acquisition in view of prospective improvements and extensions of the firm's busy plant.

Martin L. Chapman, who has been a partner for some time past in the firm of Chapman & Barden, manufacturers of solid gold jewelry, Attleboro, has disposed of his interest in the concern to Harry E. Hull, of North Attleboro. The firm of Chapman & Barden was established in 1897, when Winthrop F. Barden and Martin L. Chapman purchased the equipment and business of the Barden-Blake concern, of Plainville. The business was continued in Plainville until 1902, when it was moved to the Bushee Building on County Street, Attleboro, where it has since remained. Mr. Hull, who has purchased Mr. Chapman's interest, was for some time engaged in the jobbing jewelry business in North Attleboro. Later he entered the employ of the T. I. Smith Co., of that place. From 1897 to 1903 he was foreman for W. H. Bell & Co., of Attleboro Falls, and for the past three years he has been foreman with J. F. Sturdy's Sons, also of that place. Although Mr. Chapman has disposed of his interest in the firm of Chapman & Barden, he will continue his work with it for a time. He has not yet definitely settled his plans for the future.

New Shop Association

The employees of Horton, Angell & Co., Attleboro, held a meeting last month and formed a shop association. A constitution was submitted to the meeting and the following officers were elected: Vernon O. White, president; William Brennan, of North Attleboro, vice-president; Joseph Hayward, secretary, and C. J. McClatchey, treasurer. The association has taken for its motto, "Unity and Friendship," and one of the principal features of its activities will be athletics, a movement having already been inaugurated to form a baseball team. The creation of a

fund for mutual benefit was heartily endorsed by Thomas Carpenter, president of the company, who subscribed \$150 towards this object. In the factory, rooms have been apportioned for gymnastic exercises, pool and other pastimes.

The jewelry trade was strongly represented in the election of officers by the Independent Order of Odd Fellows in Attleboro recently, among those returned to office being the following well-known members of the craft: Hon. Sidney O. Bigney, of S. O. Bigney & Co.; Emmons D. Guild, of the W. H. Wilmarth Co.; Fred. L. Torrey, David E. Makepeace, of the D. E. Makepeace Co.; Albert S. Ingraham, of A. S. Ingraham & Co.; George H. Herrick, of George H. Herrick & Co., and Maxy W. Potter and Edward A. Sweeney, of the D. F. Briggs Co.

Frederick Sulzberger and Milton Sulzberger announce that they have purchased the entire jewelry manufacturing business of J. J. White & Co., incorporated, including all its assets and book accounts, and that they have formed a partnership under the name of Sulzberger Bros., and will continue that business at its present location, 26 Fountain Street, Providence.

Notes from Alabama

Improvements Everywhere

With the opening of spring, now in its greatest glory in this part of the globe, there is renewed effort to get everything going well along business lines and to make 1906 the grandest in the history of the State. Montgomery has gone out after 100,000 people by 1910, and Birmingham is expecting to have the new owners of the Tennessee Coal, Iron and Railroad Company, and the Republic Iron and Steel Company set up industries and overhaul old ones at an expense of \$15,000,000. A recent visit of members of the rivers and harbors committee of Congress gives hope that Mobile, already one of the greatest ports of the South, will have the desired 37 feet across the bar, while the increased and ever increasing demand for yellow pine lumber leads to the belief that the Coosa River will be opened from Riverside to Wetumpka, where multiplied millions of feet of virgin pine are inaccessible, for the reason that the shalls are so heavy and the hills so extensive that it cannot be gotten out. Several efforts have been made to secure the passage of a bill giving a million dollars a year to this service, which would put it through in six years. Then we would have an open waterway from Rome, Ga., to the gulf at Mobile, over 400 miles of river without break.

Increasing Wealth of the State

The State is picking up along all lines. The increases in values are expected to go from \$344,224,000 last year to \$365,000,000 this year. Already the receipts to the State treasury are far in excess of the same time last year, and the outlook is that they will far exceed anything yet produced. The assessment of main lines of railroads, side tracks and rolling stock, with long distance telephones and telegraph lines, have been increased in value over \$4,000,000 last year, and there is to-day more than \$1,250,000 balance in the strong box of the State for which there is no use. The State is spending \$150,000 in enlarging and beautifying the old capitol, a contract for a new south wing to cost \$50,000 having been made last month. This will be followed later by another wing of like kind on the north side and the

general betterment of the whole. This is the capitol in which Jefferson Davis was elected president of the Confederacy, and here was held the first Congress of the unfortunate nation. Here sat the first cabinet, and the old furniture in use then is still in use. There could be no movement carried through to do anything else but preserve the old building, and the additions are to emphasize it. They were made thus on the advice of Mr. McKim, the most eminent architects of New York.

Agitation for Better Rates

Merchants are looking to great improvements from the agitation for better rates of freights as a result of the establishment here of the Montgomery freight bureau, which has already been instrumental in getting several valuable concessions. The river traffic is also picking up, which will have a tendency to help along the rate question very much. There is no intention to embarrass the rail lines or to do them harm, but rather a movement to get better results by showing that the charges are not in line with the rates that ought to prevail in a territory with so good a river as the Alabama, which is now to have three or four boats a week between here and Mobile. With the prospects of better rates, there has sprung more life in the trade world. The city has raised a fund of \$1000 with which to advertise the advantages about here, and will soon begin a campaign of education along publicity lines under the guidance of an expert advertising man.

A handsome opportunity for display has been given M. E. Pepperman, in the new Exchange Hotel, where his store is separated from the main lobby only by a series of glass partitions. He has put out in this way many lines of souvenir goods and has been able to make a fine display. He will a little later put in diamonds and the finer goods, so that they will be right at the hands of the guests.

C. L. Ruth & Son have had a fine Easter window and several special designs in window display lately. Hardwick Ruth is making quite an attractive feature of his windows. One that attracted much attention was a colonial or Washington window, on the birthday of the Father of His Country.

Several cases have been added to the equipment in the store of the LeBron Jewelry Co., it having become necessary to take care of the increasing business. Mr. LeBron says that he hopes ere long to refit the store with a full equipment of horseshoe cases.

William Weiss, Jr., of the firm of William Weiss & Son, pioneer jewelers, has been elected captain of the Montgomery True Blues, one of the oldest and best-known companies in the South. It was in the Mexican war and made havoc with the enemy. Some of the most distinguished men of the State have been on its official rosters.

John Rosenstihl, for many years a jeweler in Birmingham, has deserted the trade to become a real estate man. He is a son of William Rosenstihl, of Union Springs, and brother of Henry, of the latter place. They are a family of jewelers. The late William Rosenstihl, Jr., a brother, was secretary of the Alabama Retail Jewelers' Association.

To catch the trade and encourage thrift, the Maxwell-Raiford Jewelry Co., at Tuscaloosa, is giving a bank, with every \$100 diamond sold on credit, with which to keep the small change to make the payments.

The Davis Jewelry Store, at Tuscumbia, is making many improvements in the building it occupies. It is one of the prettiest in the town.

J. B. Whitlock, Eufaula, has returned from a trip to several of the lecture courses of the North and East.



The trade are invited to send us reliable items of news for this department

Arkansas

John L. Green, general manager of the Junction City Jewelry and Novelty Co., Junction City, has bought out the entire stock and fixtures of the firm of Constantine & Fuller, El Dorado, and now conducts that business under his own name. The Junction City Jewelry and Novelty Co. will continue under that name, with headquarters at El Dorado, under the management of Mr. Green.

California

H. Britzius, hitherto of Faulkton, S. Dak., has purchased the jewelry store of F. Pequegnat, Riverside, and having removed to that place, now continues that business. Mr. Britzius is a first-class workman in all branches of the trade, having learned watchwork from a pupil of one of the brothers Grossmann, the celebrated Swiss horologists. His success in his new field seems already assured.

C. H. Tully, the Middletown jeweler, is mourning the loss of a son, Leslie Tully, a young man of promise widely esteemed in the community.

Meyer & Talbott, wholesale jewelers, Los Angeles, have dissolved partnership by mutual consent. The dissolution was brought about owing to the impaired health of J. G. Talbott, which necessitated his retirement. His interest has been purchased by D. H. Keene, who with S. Meyer continues the business under the firm-name of Meyer & Keene Co.

Delaware

The Wilmington business of William G. Earle has been established in a new store at 715 Market Street, which is a model in equipment and arrangement.

District of Columbia

Carl Kattelmann, 715 Seventh Street, N. W., Washington, besides being an expert jeweler and watchmaker, possesses in a remarkable degree the gift, so indispensable to the inventor, of being a tool-maker of skill, originality and resource. He has many unique and ingenious devices to his credit, all practical and of enduring utility. His inventive ability has contributed largely to his business success.

John Keppler, the jeweler, of 1115 Seventh Street, Washington, was recently visited by a man who offered an old verge watch for sale as old silver. Upon inspecting the timepiece the jeweler discovered that it had been repaired by his own grandfather in 1852. It naturally assumed a new value in his eyes on that account and he was rejoiced at the opportunity afforded him of securing such a unique memento of the past. The seller was no less agreeably surprised at the coincidence, and went away much more liberally rewarded than he had anticipated.

Illinois

The business of E. L. King, of Dixon, has been incorporated and is now conducted under the name of the E. L. King Jewelry Co.

Indiana

A. L. Neuschwander, jeweler and optician, has removed from Deepwater, Mo., to Woodburn.

Iowa

Otto Eggers, of Eggers Bros., Atlantic, was married on April 15th, to Miss Maria Fress, niece of Mr. and Mrs. Simon Biene, of Avoca, at whose

home the ceremony took place. THE KEYSTONE extends congratulations to the newly-married pair.

Kansas

Roy Murray has resigned his position as watchmaker for H. W. Selts & Co., of Clay Center, and has removed to Altoona, where he has opened a jewelry repair shop. In due course he will add a stock of jewelry and conduct a modern and progressive store.

Kentucky

William Shire, son of the late Abram Shire, of Paris, and Chas. N. Fithian, who had been in the deceased jeweler's employment for twenty years, have formed a partnership, Mr. Fithian having purchased a half interest in the firm. This business is now conducted at the same location under the name of Shire & Fithian.

J. W. Campbell, the Bowling Green jeweler, recently caused the arrest of C. B. Irvine, who was in his employment, on a charge of grand larceny. Jeweler Campbell, it is stated, thinks Irvine has been systematically stealing diamonds, jewelry and other valuables from him; but at the time of writing, has no idea of the amount of his loss. The local newspaper states that when arrested, Irvine had on his person a duplicate key to Jeweler Campbell's cash box—which he was not authorized to have made—two fine solid plain gold rings, a handsome gold watch, and another watch which had been entrusted to him to despatch several weeks before.

Louisiana

Leonard Krower, the well-known New Orleans wholesale jeweler, was lately unanimously re-elected second vice-president of the Tuoro Infirmary and Hebrew Benevolent Association, of that city.

Maryland

Benj. F. Spink, the jeweler, of 323 West Lexington Street, Baltimore, has opened a branch store at 1209 Pennsylvania Avenue, Washington, D. C., which is under the management of Mr. McDougle, late of New York City. This is the fifth branch now operated by Jeweler Spink, two others being located in New York, one in Brooklyn and one in Newark. In addition to these he has a wholesale office at 9 Maiden Lane, New York.

Robert Rausch, the well-known Baltimore jeweler, has removed from 510 West Franklin Street, to 310 North Howard Street, where he has handsome and roomy quarters. Society emblems and high-class diamond setting are among the specialties which have contributed to the steady growth of this firm. The expansion should be well maintained in its new location.

Edward A. Eberly, the expert watchmaker, of Baltimore, who works for the trade, has changed his location in that city from 323 North Charles Street to 330 North Charles Street, where he enjoys the increased space and superior facilities necessitated by his growing business.

His numerous friends in the trade will be gratified to learn that, having recovered from an illness of three-weeks' duration, Henry Castleberg, of Eutaw and Lexington Streets, Baltimore, is again actively engaged in business.

Charles C. Crooks Co., 114 West Baltimore Street, Baltimore, have opened a branch store at 1405 North Charles Street, in that city, than which there could be no more tangible evidence of the progress of this firm.

Michigan

W. J. Roberts, a well-known local jeweler, was recently elected mayor of Ishpeming by a majority of twenty votes on the Labor Union ticket. Jeweler Roberts has been actively identified with the Labor Union movement for many years and his election was partly due to this fact.

C. C. Thoma, the Battle Creek jeweler and optician, is remodeling and enlarging his store and installing therein many new features. He will increase its present space by forty feet, put in a complete new frontage and two additional wall cases in plate-glass with interior mirrors. When these improvements have been effected he hopes to have one of the finest jewelry stores in Southern Michigan.

New York

F. C. Bennett, the Gloversville jeweler, recently concluded a very successful auction sale, afterwards resumed business and is now enjoying a considerably increased trade.

Ohio

J. Benj. Haverbeck sold his store at St. Mary's to Olmhausen & Smith, of Celina, which firm in turn sold it to A. C. Ca Jacob. The business is now conducted for Jeweler Ca Jacob by V. S. Phanning, hitherto his watchmaker, under the name of V. S. Phanning & Co.

Partridge & Co., of Wellston, have repurchased from Kessler Bros. & Co., of that place, the jewelry business which they sold that firm in May, 1902. A local newspaper hails with satisfaction the re-establishment of Partridge & Co. in Wellston, which firm is the pioneer jewelry enterprise in that place. It began business there twenty-three years ago when Wellston had a population of only nine hundred.

Oregon

Carl Adler, a well-known jeweler and pioneer business man, of Baker City, has incorporated his enterprise under the name of the Carl Adler Jewelry Co., with a capital stock of \$20,000, the incorporators being Carl Adler, D. C. Robbins and S. L. Baer. The officers of the new company are Carl Adler, president and treasurer; James Hamblin, vice-president; Dan C. Robbins, secretary. To a representative of a local newspaper, Mr. Adler expressed his determination to "establish in Baker City the finest jewelry and musical house in Eastern Oregon." Mr. Hamblin, who is now associated with him as a stockholder, is an expert workman.

Pennsylvania

Charles M. Hyatt, the oldest jeweler in Connelville, is mourning the death of his second wife, who was highly esteemed in the community for her religious and philanthropic activities. Besides her husband, two daughters, one step-daughter and one step-son survive her.

W. C. Comfort, formerly in the jewelry trade at Grover, has purchased the retail business of J. D. Lewis, Elmira, N. Y., and now continues it under his own name. Jeweler Lewis will go into the wholesale jewelry, tool and material business.

Texas

Geo. T. Wilson has opened a watchmaking business in portion of the City Drug Store, Hillsboro, and expects to do a profitable trade.

Washington

H. N. Skinner, the Everett jeweler, has changed his location in that place from 1709 Hewitt Avenue to 2008 Hewitt Avenue, where he has an improved and handsomely-appointed store.

Wisconsin

The jewelry firm of Hall & Sayles, Janesville, recently celebrated the fiftieth anniversary of the founding of their store. This business was established by Webb & Lee in a store nearly opposite the present location on April 1, 1856, and has since existed under different ownerships. In 1860 it became J. A. Webb & Co., and nine years later A. F. Hall, senior partner in the present firm took a half interest in the business, the name becoming Webb & Hall. After Mr. Webb's death in 1885, the firm became that of Hall & Farnsworth. This partnership lasted until 1887, when the name was changed to A. F. Hall & Co., which continued until 1896. In the latter year the name was changed to Hall, Sayles & Fifield, though the partners were the same. In 1904 Mr. Fifield retired and the company thereafter became known as Hall & Sayles. Mr. Hall has been in the jewelry business in Janesville thirty-seven years, and is one of the oldest jewelers in Wisconsin.

"Don't want to miss a single number of 'The Keystone. Worth its weight in gold.'"—C. H. Wallis, Jeweler, Tomahawk, Wisconsin.

New England Watches

A few of the choice designs selected
from our Spring line



8513



8515



4691



8675



8401

Our series "S S"—the 10 ligne size—is of entirely new construction. The difficulties that were found in the old-style escapement have been entirely overcome. The train has been so reconstructed that the watch will now run 37 hours. This has been thoroughly tested—probably more thoroughly than any other watch on the market to-day.

ELF Watches are the most up-to-date for a 10 ligne size

No. 4691 Rugby. The ten size men's and boy's hunting in 20-year cases. This is one of a large number of beautiful designs, all of which are very salable.

Accurate, reliable and carry our unquestioned guarantee. All sizes in open-face and hunting cases.

Send to-day for catalogue describing all our lines and prices.

NEW ENGLAND WATCH CO.

WATERBURY, CONN.

37-39 Maiden Lane
NEW YORK

131-137 Wabash Ave.
CHICAGO

Kamm Bldg.
SAN FRANCISCO



Every Roy Watch Case is made from Assayed Gold



and Quality is Guaranteed as Stamped

O Size Diamond Engraved Cases

ROY WATCH CASE COMPANY

206 Kearny Street, San Francisco, Cal.

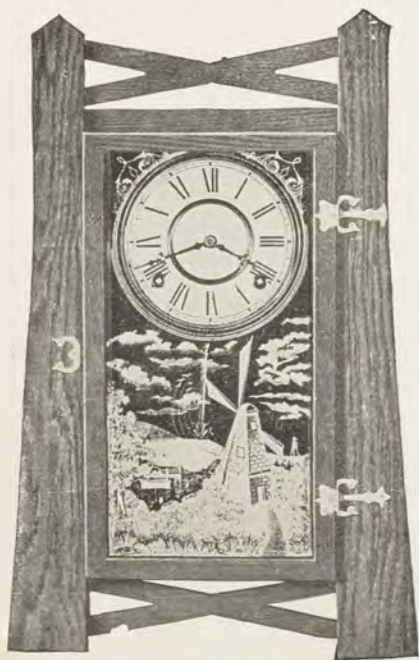
21-23 Maiden Lane, NEW YORK

SESSIONS CLOCKS

SUPERIOR FINISH

REASONABLE PRICES

“Monterey” Assortment



No. 43

Packed three in a case. Assorted patterns 20 inches high; 6-inch dial Dutch Scene Tablets

NOTE—“Villa” and “Para” are made *eight-day* time and eight-day time ALARM, and can be sold at a popular price.

The Sessions Clock Co.

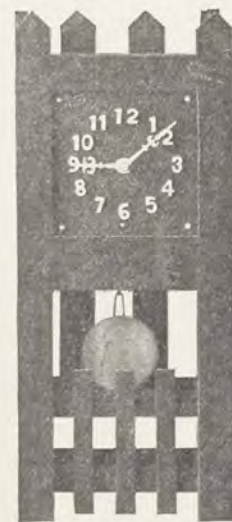
Main Office and Factories

FORESTVILLE, CONNECTICUT

U.S.A.

New York Salesroom, 37 Maiden Lane

“VILLA”



14½ inches high
3½-inch dial

“PARA”



14½ inches high
3½-inch dial

8-Day Time or 8-Day Time Alarm
Mission Oak Finish

Howard

Watches

*DIFFER from ORDINARY
Watches
in three important
particulars:*

- 1st—They are higher in price and always will be,
because—
- 2d—We pay the highest wages in our factories
paid in the country, and get the best workmen.
- 3d—They are adjusted closer than any watch you
have ever sold.

HOWARD WATCHES have a habit of bringing cus-
tomers back to you for more.

CUSTOMERS have a habit of recommending them
to their friends.

RESULT: More Watch business.

E. Howard Watch Company

WALTHAM, MASSACHUSETTS

Send for Booklet "The HOWARD" and List of Jobbers

No trade prices published. We establish the price to consumers and protect you
against price-cutting competition



BETSY ROSS WATCHES

Are better value for the money than any other complete O-size watch.

Sentimental and historical in name—Reliable as timekeepers.

Hunting or Open-Face, 7 jewels, Jas. Boss 20-year Case, Pendant-Set, Nickel Movement.

The Keystone Watch Case Co.

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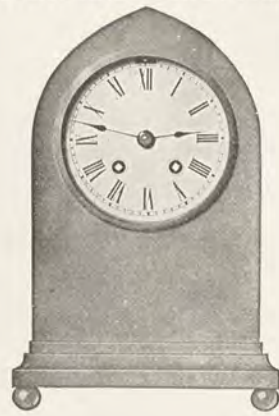
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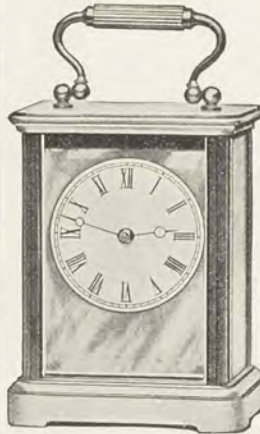
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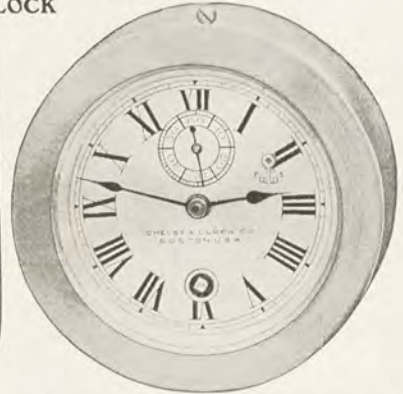
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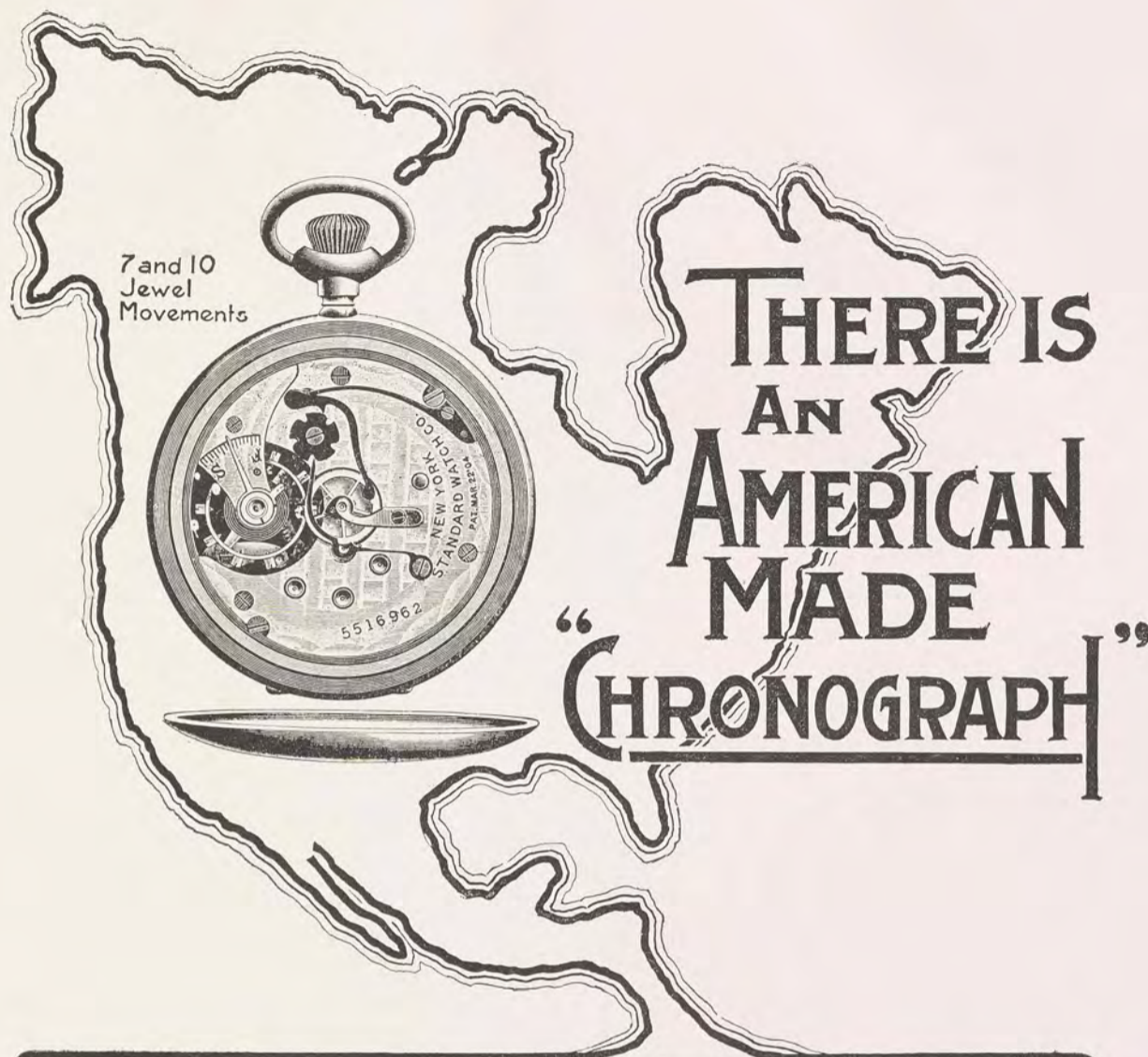
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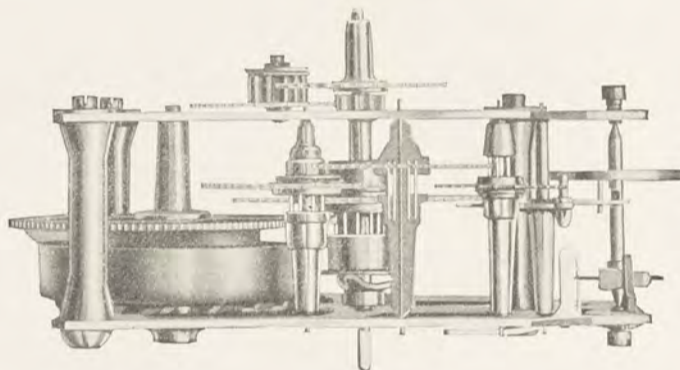
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Lessons in Horology

COURSE IN MECHANICS AS APPLIED TO CHRONOMETRY

By JULES GROSSMANN, Director of the Horological School, of Locle, Switzerland, and
HERMANN GROSSMANN, Director of the Horological and Electro-Mechanical
School, of Neuchatel, Switzerland.

Authorized translation by JAMES ALLAN, JR., Charleston, S. C. Former pupil of the
Locle Horological School.

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(Continued. Part XXIX.)

281. In the case of pinions with the excess semi-elliptical, the height of this excess becomes superior to those with which the preceding calculations have furnished us.

We have seen that the calculation of this value is complicated (259 and the succeeding); therefore, without entering into other details, we refer, for these values, to the table which we give on the following page.

Thus, taking up again our gearing of a 60-tooth wheel and 6-leaf pinion, we find in this table, that the total diameter of the pinion expressed in units of diametrical pitch is 7.4648; that is to say, 7.5 in round numbers.

282. Practically, to employ in a proper manner the proportional compass, one must, therefore, commence by examining the excess of the pinion leaves, estimating it with relation to the breadth of the leaf.

If one judges, for example, that it is equal to half the thickness of the leaf, one will add a unit to the number of leaves n' ; if the excess appears to be three-quarters of the thickness, one will add 1.5 and, finally, if the height is judged equal to twice the thickness of the leaf, one will add 2.

A compound microscope, the eyeglass provided with spider lines and mounted on its lower side on a carriage furnished with a micrometer screw, allowing the object observed to move in the field of the instrument, can measure with great precision the height of the ogives of the wheels or of the excess of pinions. In default of this instrument, the method which we have just indicated is exact enough to be used.

283. The table which we give hereafter indicates the number of the division on the compass for the gearings most used in horology. Thus, on placing an 80-tooth wheel at the division 83.38 of the compass, a 10-leaf pinion in which it should gear should correspond to the division 11.5 if the excess is of semi-elliptical shape, or at the division 11.05 if this form is semi-circular.

For a pinion with the uneven number of 7 leaves, one will find two indications in the table, one giving the real diameter, the other permitting the placing of the pinion with one leaf pressing against an arm of the compass, and the two leaves opposite against the other arm. This last measure comprises, therefore, in units of diametrical pitch, a total radius increased by the versed sine OB (Plate II).

After what we have said, it will be easy to obtain in a graphical manner the figures corresponding to gearings not appearing in this table.

284. Verification of a Proportional Compass. The two divided scales should be perfectly straight and consequently in exact juxtaposition when the instrument is closed; this, one verifies by holding the instrument to the height of the eyes and seeing if the two scales are perfectly fitted against each other.

The divisions should be regular and the zero point should be found in the center of the hinge.

It is also easy to verify this condition with exactitude by taking off, with a pair of sharp-pointed dividers, a certain number of divisions, 10, for example: on moving, then, these dividers over the whole of the part divided, it is easy to assure oneself of the exactness of this condition. Finally, on placing one of the points of the dividers on the division 10, one should be able to place the other on the center of the hinge.

This hinge should be made in such a manner that the arms can be spread without any jerk, that is to say, with even friction; in no case could any play or shake whatever, be allowed at this hinge.

A compass being thus verified, it could be used with the aid of the given table.

There exist other systems of proportional compasses, most of which dispense with the use of an accessory table. Let us remark,

however, that the one which we have just described has its principle founded on an exact and rational basis and that the table which it requires complicates its use very little, if at all.

285. Determination of the Distance Between the Centers of a Gearing by Means of the Proportional Compass and of a Depthing Tool.

Having fastened the proportional compass in such a manner that the primitive radius of the wheel corresponds to the figure for its number of teeth, one measures, in this same opening, the diameter of one of the arms of a depthing tool. Let d be the division corresponding to this last measure. One opens, then, the depthing tool until the two arms a and b , drawn in section (Fig. 76), correspond to the division

$$\frac{n + n'}{2} + d.$$

This opening then gives the distance between centers.

Example: Having regulated the opening in the proportional compass so that the total diameter of a 60-tooth wheel is fitted to the division 62.78 (see the table), one measures the arm of a depthing tool and finds that its diameter corresponds to the division 8; we will thus have

$$\frac{60 + 6}{2} + 8 = 41,$$

the pinion having 6 leaves. The opening of the depthing tool should then be regulated in such a manner that the two arms a and b correspond to the division 41.

286. The Proportional Compass and Stem-winding Gearings.

First—Gearing of the crown wheel in the ratchet wheel: The teeth of this gearing should be solid; this is the reason why only one-twentieth of play is given them (223). For the same purpose the bottoms of the teeth are made with a rounded shape and the ogives of the teeth are shortened. These gearings are epicycloidal; the profiles are formed by epicycloids described by a point of a generating circumference smaller than half of the primitive circumferences. As we have just said, one does not use the whole of the epicycloidal arc for the tooth; it is sufficient that the contact be established three-fifths of the pitch before the line of centers, in order to be continued until three-fifths of the pitch beyond that line.

The "flank" of the tooth is no longer a straight line, but a *hypocycloid* described by a point of the same generating circle rolling on the interior of the primitive circumference of the wheel.

Thus (Fig. 77) ta is the useful epicycloidal arc, while ab is any curve whatever shortening the tooth; in this manner, the height of the ogive is not determined; td is a hypocycloidal arc generally approaching, very nearly, a straight line.

To determine the height of the shortened ogive in

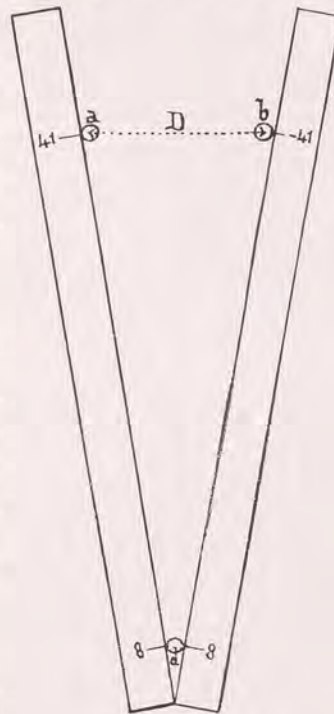


Fig. 76

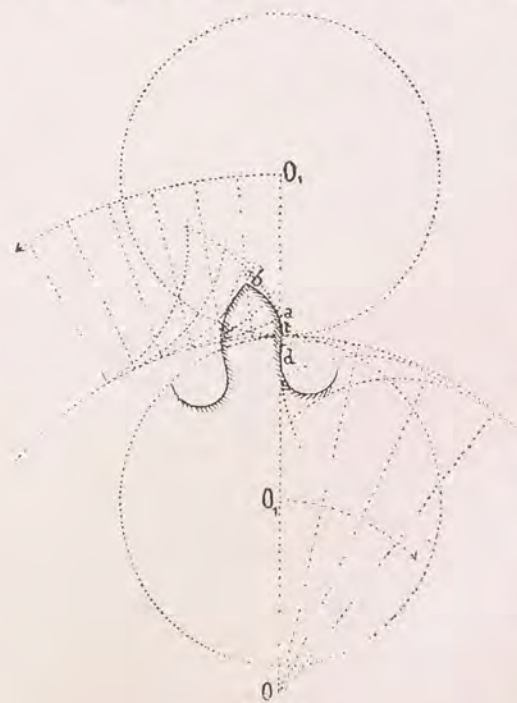
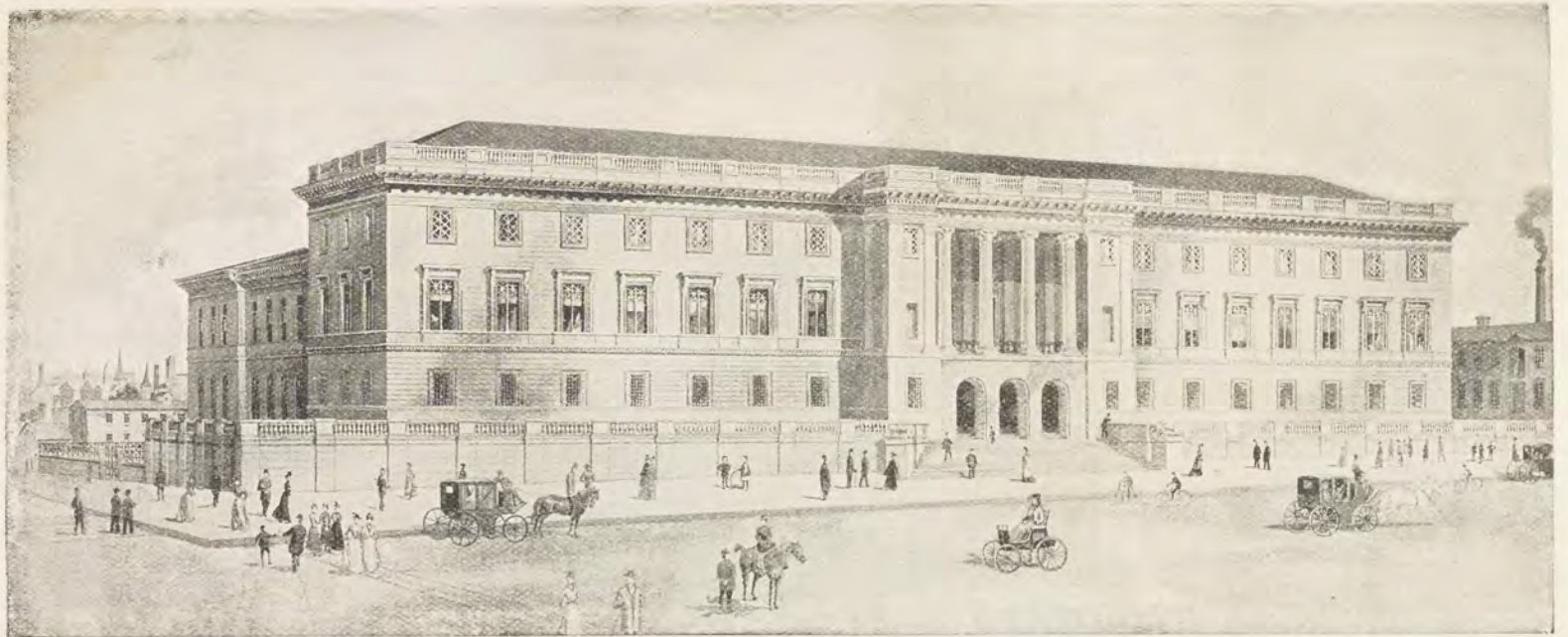


Fig. 77



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Lessons in Horology

(Continued from page 801)

units of diametrical pitch, it is necessary to proceed graphically or by simply estimating it by the eye.

Generally, for this gearing, the height of the two ogives placed opposite to each other can be taken as $2\frac{1}{4}$ diametrical pitch.

TABLE FOR USING THE PROPORTIONAL COMPASS

DESIGNATION	NUMBER OF TEETH	DIVISION OF THE COMPASS FOR SHAPE OF TEETH		THE RADIUS OR DIAMETER = 1 SHAPE OF TEETH	
		Elliptical	Circular	Elliptical	Circular
Wheel . . .	180	183.542	—	1.019676	—
Pinion . . .	12	13.66	13.25	1.14	1.104
Wheel . . .	144	147.446	—	1.024	—
Pinion . . .	10	11.5	11.05	1.15	1.105
Wheel . . .	96	99.747	—	1.03904	—
Pinion . . .	12	13.66	13.25	1.14	1.104
Wheel . . .	80	83.3853	—	1.0423	—
Pinion . . .	10	11.5	11.05	1.15	1.105
Wheel . . .	64	67.1	—	1.048475	—
Pinion . . .	8	9.45	9.05	1.18	1.13
Wheel . . .	90	93.614	—	1.04016	—
Pinion . . .	12	13.66	13.25	1.14	1.104
Wheel . . .	75	78.375	—	1.045	—
Pinion . . .	10	11.5	11.05	1.15	1.105
Wheel . . .	60	63.0976	—	1.0511	—
Pinion . . .	8	9.5	9.05	1.18	1.13
Wheel . . .	80	83.1247	—	1.039	—
Pinion . . .	8	9.5	9.05	1.18	1.13
Wheel . . .	60	62.7839	—	1.0464	—
Pinion . . .	6	7.4648	7.05	1.2441	1.175
Wheel . . .	70	72.9637	—	1.0423	—
Pinion . . .	7	8.397	8.05	1.1995	1.15 real diameter
"	7	7.972	7.7	1.139	1.1 on pressing 2 leaves on one side and 1 on the other
Wheel . . .	48	50.77	—	1.0577	—
Pinion . . .	6	7.4	7.05	1.23	1.175
Wheel . . .	36	38.74	—	1.0762	—
Pinion . . .	6	7.4	7.05	1.23	1.175
Wheel . . .	30	32.72	—	1.0908	—
Pinion . . .	6	7.4	7.05	1.23	1.175
Wheel . . .	36	38.55	—	—	—
Pinion . . .	12	14.02	—	—	—
Wheel . . .	40	40.7	—	—	—
Pinion . . .	10	11.52	—	—	—

If, then, n and n' are the numbers of teeth; the crown wheel should be fitted to the division

$$n' + 2\frac{1}{4}$$

and in the same manner the ratchet to the division

$$n + 2\frac{1}{4}$$

Let us note, however, that since the crown wheel always drives the ratchet, it is preferable to make the first proportionally greater than the second; for example,

$$\begin{aligned} \text{Crown wheel, division} & \dots n' + 2\frac{1}{3} \\ \text{Ratchet wheel, division} & \dots n + 2\frac{1}{4} \end{aligned}$$

287. Gearing of the Winding Pinion in the Crown Teeth of the Contrate Wheel. In these gearings the axes of the two mobiles form a right angle between them. Logically, such a gearing should be a *conical gearing* (311); in the practice of horology it is sufficient, however, to skillfully simulate it.

One finds two general arrangements of this system.

In the first (Fig. 78), ab is the exterior diameter of the crown teeth in the contrate wheel; this is, at the same time, its primitive diameter, for the ogive of the tooth is not to be added to the extremity of the radius, since the teeth are perpendicular to the plane of the wheel. The crown wheel must, therefore, be fitted to the division n' of its teeth and the total diameter cd of the pinion, perpendicular at b on ab to the division $n + 2\frac{1}{4}$, as in the preceding ease and also for the same reason. Therefore,

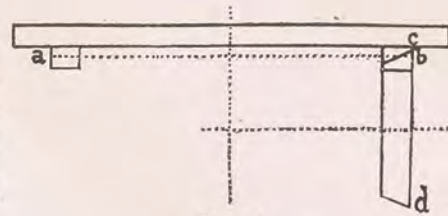


Fig. 78

$$\begin{aligned} \text{Winding pinion, division} & \dots n + 2\frac{1}{4} \\ \text{Crown teeth of the contrate wheel, division} & \dots n' \end{aligned}$$

The second arrangement is found in some winding mechanism.

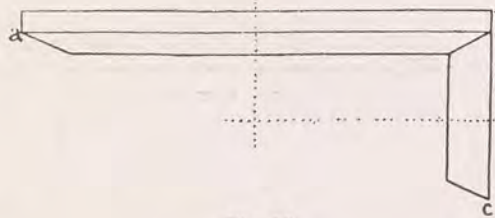


Fig. 79

It admits of a teeth range with the crown teeth outside of its primitive radius (Fig. 79); in this case there must be added to each of the two mobiles the height of the two ogives. One will then have

$$\begin{aligned} \text{Winding pinion, division} & \dots n + 2\frac{1}{4} \\ \text{Crown wheel, division} & \dots n' + 2 \end{aligned}$$

288. Gearing of the Sliding Pinion and of the Small Setting Wheel. Although one could not make use of the proportional compass for the study of the relative dimensions to be given to the mobiles of this gearing, and as this determination should be entirely a matter of calculation, we give here, however, the theory, which will not be found out of place.

Suppose (Fig. 80) r to be the primitive radius of the small setting wheel, R its total radius and n the number of its teeth;

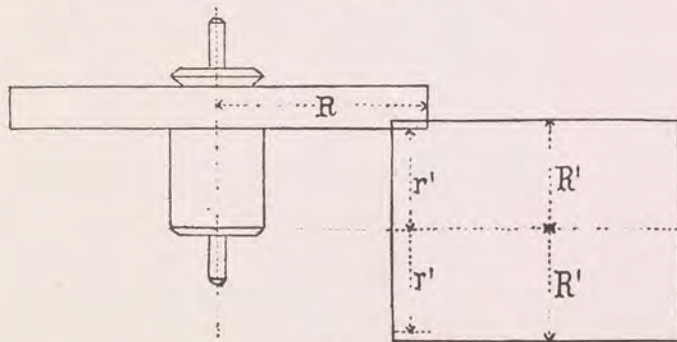


Fig. 80

r' the radius of the sliding pinion abutting on the under side of the small winding wheel, R' its total radius and n' the number of its teeth.

In the generality of cases, one can admit that

$$R' - r' = 0.2 \text{ mm.};$$

consequently,

$$r' = R' - 0.2.$$

If the penetration of the two mobiles is greater, the gearing does not work well. Generally, it is desired in practice to determine the number of teeth n' in the sliding pinion.

The proportion

$$\frac{r}{r'} = \frac{n}{n'}$$

gives us the value

$$(1) \quad n' = n \frac{r'}{r}$$

By an analogous reasoning to that of (286) one can place

$$\frac{r}{R} = \frac{n}{n + 2}$$

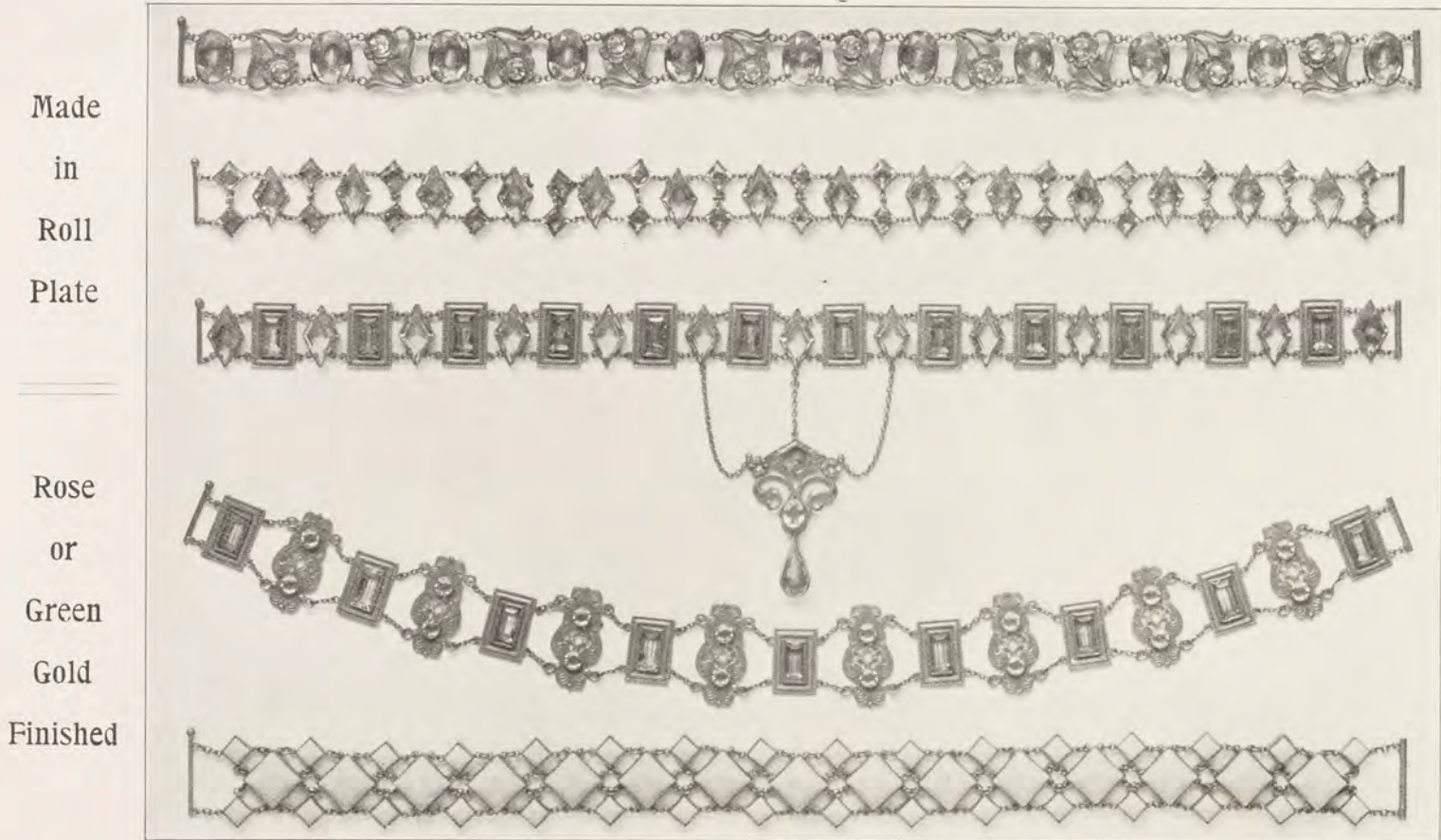
from whence one draws

$$r = \frac{R n}{n + 2}$$

(TO BE CONTINUED)

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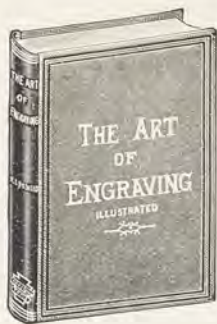
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(Continued. Part XXXIX. Begun in March, 1903)

After the center is obtained as described the watch cap is removed from the watch. This is not an easy matter to accomplish, as sometimes the rivet in the hinge is very tight. A pin punch, such as is used by jewelers, will avail, but it should be blunt or flat on the end, not pointed or sharp, as in the latter case it will spread the pin and have a tendency to rivet it over, while if it is flat and of the same size as the rivet it will drive the pin out without any trouble. Before the cap is removed it should be pricked with a stylus or any sharp instrument at the point directly over the pendant. Then when the case is removed a line is drawn from the center of the rivet to this point, which will be directly across the watch cap when placed in its position again.

The cap is now filled with cement in order to hold it firmly while engraving and to prevent the case from being dented if it is a thin one. Most watch cases in solid gold are so thin that it is advisable to cement them. A little oil should be placed around on the extreme edge of the inside of the cap to prevent the wax from sticking to it. One drop of oil when the cap is heated will be sufficient to oil the cap all the way around. After this is done the cap is laid down with the concave side up and the wax melted and run into the cap until the same is filled full of the heated wax. Now the brass or wood, to which it is to be cemented, should be held on to the pad or block as the engraver prefers. The cement on such block is heated and the wax in the cap, which by this time is probably somewhat cooled, is warmed again slightly and the cap thus heated placed on the cement block. After the cap has cooled (if it is desired to rush the work, it can be plunged into cold water, which will cool it very quickly), it is dried thoroughly and covered with the transfer wax, mention of which has been previously made. It must be remembered that the wax is not to be rubbed on to the watch cap or any other article, but must be put on by patting with the finger, which has been pressed down on to the wax. A sufficient amount of wax will stick to the finger so pressed down to cover a watch cap. The patting gives it a deadened appearance. Then a line is drawn over the hinge to the point indicated by the dotted line made opposite the pendant before removing the cap, which is exactly horizontal and passes through the center of the cap. There is here an opportunity to bring into practical use those geometrical or mechanical problems mentioned in the early chapters of this work. We now desire to erect a perpendicular line on to this horizontal line; in other words, to draw a vertical line through the watch cap. This can be done by erecting the perpendicular on a horizontal and dropping the same below the line. Instructions as to the exact method of doing this have already been given.

Laying Out the Inscription

Having thus made the horizontal and perpendicular lines we now know where the center of the watch cap is, and having previously found the center of the inscription by the method described, we now dot, by the use of the stylus, little marks on the vertical line above the center of the horizontal line, each dot indicating the space allotted to each line. We thus find the location of the principal word in the inscription. For instance, if the inscription is a presentation to a certain person, that person's name is thus found, and having found the location of it by this method we then draw a line for a base guide line of said words parallel with the horizontal line across the watch cap. It is to be understood that we are now considering only inscriptions such as are to be engraved in plain script, and the lines here mentioned are to be all perfectly straight.

Having found the location of the principal name of the inscription, the all-important point now is to decide on the size of the

letters. The size is decided in the mind of the operator at the moment when he places the rule to draw the second guide line for the lower-case letters. This is the time that all his skill and judgment should be brought into account, as, if the line is made too large or too small, the inscription is spoiled, and these first words, the name of the recipient, constitute the nucleus for all the other lines, as it is necessary to engrave such words in a size appropriate for the size of the watch cap and befitting the importance of the name. Then all the other lines are engraved according to the size of this one, but none can be engraved larger. Some may be the same size, but most should be smaller.

Spacing the Letters

Having decided upon the size of the letters and having drawn the letters, the spacing for the first, middle and last name is the next consideration. Some engravers space by letter, some by words. If the words are short it is safe to space by words. By spacing we mean making a little dot on the line from the extreme left of the case to the end of the first word. Then, allowing for a space between the first and second words, make another dot to the extreme right of the middle name. If, however, the beginner finds it necessary it is not objectionable to space by letter, allowing, of course, more space for the capital letter and then allowing space for the letters in the name, according to the size of each. For illustration, if we come to the letter I we allow less space than we would for an M, and so on. In other words, we allow a space according to the width of the letter to be placed therein. Having spaced the lines by either of the methods above described, we then hold the watch cap at a distance of fourteen or fifteen inches in front of the eyes and study the appearance of it before it is cut. By this the reader must not infer that it is necessary for a skilled engraver to deal with such preliminaries; we are now speaking especially for the benefit of the beginner.

Holding the watch cap as mentioned we study the size of the letters and their appearance as sketched, to note if they are too large or too small for the watch cap. If they are too small they must be obliterated by patting the index finger over the words and doing them over again, and if any change is necessary great care should be exercised to avoid crowding of the letters or allowing more than the proper space for letters or words. The distance allowed between the letters, that is, lower-case letters, at the beginning of the line, should be maintained throughout the line. In the work of students it is sometimes observable that words are begun by drawing the letters out, and as the student nears the end of the line the letters are crowded, which is found necessary in order to get all the letters on the line. Such spacing, of course, must be very carefully avoided. We must maintain the same spacing and same width of letter both in the width of the letter from the right bar to the left bar of the same, and the widths of the bars or the shade strokes. If the beginning of the line is cut heavy each and every letter of the line should be cut exactly the same. For instance, if the student will study the lines of a finely-cut monogram or letter by actual measurement, he will find there is not a variation of a thousandth part of an inch in the width of the shade strokes. Especially is this true of an inscription. There is probably more skill required in engraving an inscription on a watch cap when the inscription is composed of eight or ten lines than in almost any other class of engraving that is done in a jewelry store. The difficulty in this case arises from a cause similar to that in the case of a wedding announcement or invitation, as all the lines must be exactly the same, according to the importance of the words.

How to Begin Cutting

If the words appear to the engraver to be accurate when held in front of his eyes as above mentioned, he then commences at the left to engrave a line.

Among the students who have had years of experience as practical engravers there are few who would begin to cut a word at the right and work to the left instead of beginning at the left and working to the right. The reason given by them for this is that they do so in order to avoid rubbing out the line. Of course, this would not apply to a watch cap, as the fingers and thumb work around the edge of the case and seldom pass over the horizontal line, but if it was on a larger piece the argument in favor of cutting from the left to the right would not hold, as it matters not whether you cut from the left to the right or right to the left, the same amount of crossing of the horizontal line is necessary in doing the work.

(TO BE CONTINUED)

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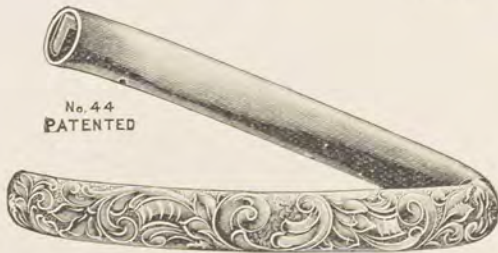
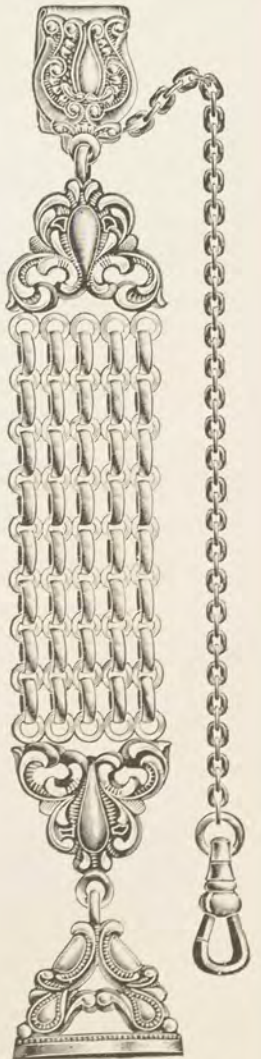
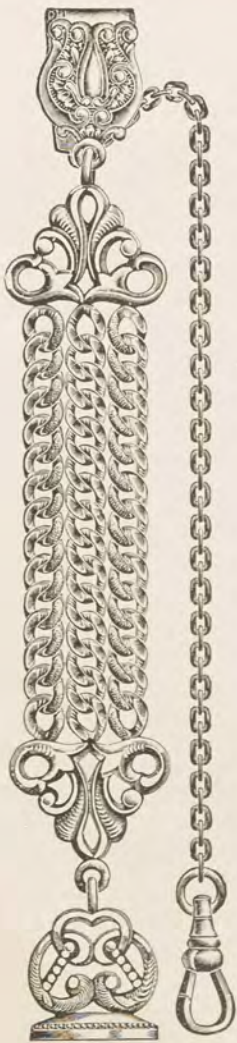
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Electricity for Jewelers

(Continued. Part VIII)

Measurement of Resistances

In every circuit the movement or transfer of electricity is more or less impeded, and we therefore infer that the particles of the substances composing the circuit offer a certain resistance to the passage of an electric current, and this is called *electrical resistance*. As we already know, different substances offer the different resistances, and the resistance of the same substance depends on the distance the current has to pass through it and its cross-section; or, in the case of a wire, we say that it depends on the length and the size of the wire, increasing with its length and diminishing as its cross-section becomes larger. The effect of this resistance is to cut down the strength of current (in amperes) which a certain electro-motive force can send through the circuit. If we doubt the resistance, we cut down the current one-half, and so for all other proportions.

The measurement of the resistances in a circuit is therefore even more necessary and useful than the measurement of the amperes and volts of the current. For, as we always know approximately the electromotive force of the battery we are using, without measuring it, whether it have one or more cells in series, we only need to know the resistance through which the current is flowing in order to calculate the amperes or volume of the current, by the rule $E \div R = C$. For instance, if we have 3 Daniels cells in series, we know that the electromotive force of the battery will be $3 \times 1 = 3$ volts. And, if the resistance of the circuit is 3 ohms, we know that the current C will be $E \div R$, or $3 \div 3 = 1$ ampere, without having to measure it, and so with any other numbers.

Resistance is measured in different ways. One is to insert the wire or object to be measured in circuit with a galvanometer which measures amperes, and observe the deflection of the needle when the current flows through the circuit. If we know the electromotive force, and the resistance of the entire circuit (including the battery, the galvanometer, and all other parts), except the object to be measured, also the current in amperes which flows through it, we can insert the object to be measured, and again observe the current that flows. It will be less than that which flowed before the resistance was inserted. Suppose it was 1 ampere, but now it is only $\frac{1}{2}$ ampere. The new resistance has cut the current down $\frac{1}{2}$ ampere. Suppose, also, that the electromotive force the current is 1 volt (from 1 Daniels cell), and the resistance of the battery and everything except the new resistance is $1\frac{1}{2}$ ohms.

We transpose the above formula to its equivalent form, the total resistance $R = E \div C$, and substitute the above values in place of these letters. This gives us $R = 1 \div .5 = 2$ ohms. Consequently, if the resistance of the battery and everything except this wire was $1\frac{1}{2}$ ohms, the resistance of the wire must be $2 - 1\frac{1}{2} = \frac{1}{2}$ ohm.

Substitution Method

This does not require calculation, but consists in first getting the galvanometer deflection with our unknown wire resistance in circuit, as above, then removing this wire and putting in its place a box of resistance coils, and finding what

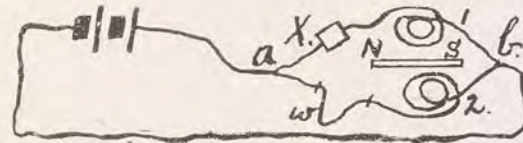


Fig. 17.

resistance will give the same deflection as the wire whose place it takes. A "resistance box" contains an assortment of wire coils, each one having its resistance marked on the box, which is so arranged that any particular coil or coils can easily be put into the circuit by simply putting in a metal plug and making a connection between the coil and the circuit. We try different coils, putting one and another in the circuit, till the galvanometer gives the same deflection that it did when the wire was in circuit. We then read off the resistance of the coil or coils we now have in the circuit, and we know that that is the same resistance as that of our wire, else the deflection would not be the same as when that was in the circuit.

Differential Galvanometer

Differential galvanometer is an instrument for making both of these measurements at once. It consists of a magnetized needle, *N S*, Fig. 17, simultaneously acted upon by two coils of wire, but in opposite directions. When the coil 1 tends

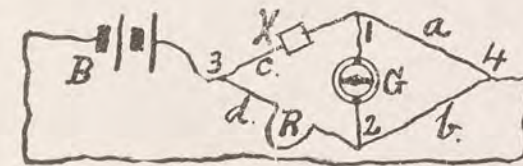


Fig. 18.

to deflect the needle to the left, coil 2 tends to deflect it to the right. If the currents are equal in each coil, the needle will evidently not be deflected at all, in either direction. The process of measurement therefore consists in getting the currents exactly equal, by equalizing the resistances in the two branches containing the coils, which is done as follows: The resistances of the two branches, from *a* to *b*, are equal. Each contains one coil of the galvanometer. We then

insert our resistance box *X* in one branch, and the wire *w*, whose resistance is to be measured, in the other branch, between 1 and 2. The current of battery *B* is sent through the circuit, and we shift the plugs of the resistance box until the needle *N, S*, stands exactly at zero, *i. e.*, not deflected at all. The coils used in the resistance box will then have the same resistance as the wire *w*.

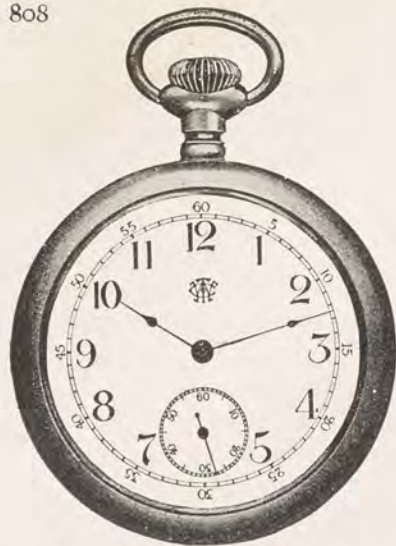
Wheatstone's Bridge

A still better method of measuring electrical resistances is by the use of what is called the Wheatstone's bridge or balance. This is illustrated in Fig. 18. The bridge consists of the two-branch circuits *ca* and *db*, connecting the points 3 and 4, in the circuit of the battery *B*. There is, of course, a certain difference of potential between the points 3 and 4, say 10 volts—the precise amount depending on the battery and the resistances of the different parts of the circuit. In passing from 3 to 4, along either branch, there will be all potentials between that of 3 and that of 4, and for the potential of any point in the upper branch, there will be a point in the lower branch having the same potential. Let us suppose that the potentials of points 1 and 2 are the same. Then if they are connected by a wire from 1 to 2, containing a galvanometer *G*, no current will flow through the galvanometer, because a current only flows from a point of higher to one of lower potential. In this case the potentials are the same, and there will be no current.

In wire *d* we insert the unknown resistance *R* which we want to measure. In wire *c* we insert the resistance box *X*, by which we can balance the resistances in the different wires of the bridge. In wires *a* and *b* we have three coils, the resistances of those in *a* being the same as those in *b*. Those resistances are only changed when we want to measure a very high or low resistance at *R*.

When the bridge is balanced, so that no current flows through the galvanometer, showing that the potentials are the same at 1 and 2, it is evident that, whatever may be the resistances in each branch circuit, the same proportion of it is to the left of 1 in the upper branch that there is to the left of 2 in the lower branch, and the same proportions to the right of 1 and 2. If three-fourths of the total resistance in the upper branch is to the left of 1, then three-fourths of the resistance in the lower branch is to the left of 2, otherwise the potential could not be the same at 1 and 2. If the resistances in *a* and *b* are equal to each other, then those in *c* and *d* must also be equal. To find the exact resistance of *R*, therefore, we simply adjust the resistance in *X* till the galvanometer needle points to zero, showing that no current flows

(Continued on page 809)



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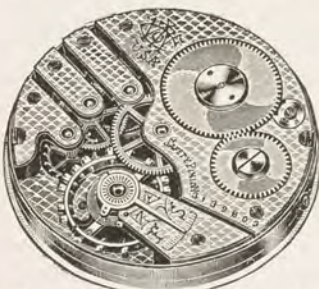
No. 100. Bridge Model, O Size, 7 Jewel, Hunting and Open-Face, Pendant Setting



No. 310. "FORTUNA." 6 Size, 7 Jewel, Hunting and Open-Face, Pendant Setting



No. 130. Bridge Model, 16 Size, 7 Jewel, Hunting and Open-Face, Pendant Setting



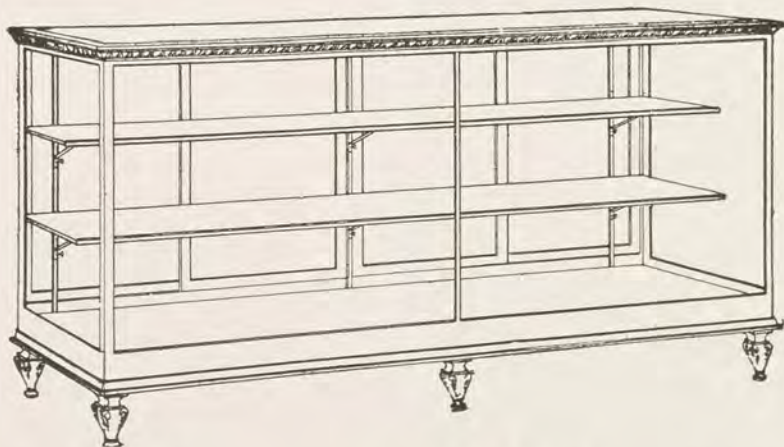
No. 135. Bridge Model, 16 Size, 11 Jewel, Hunting and Open-Face, Pendant Setting



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Electricity for Jewelers

(Continued from page 807)

through it, and whatever resistance is then in use in X will be equal to the resistance R . Nothing could be simpler, easier, quicker or surer.

Now suppose we want to measure a very large (or small) resistance—more than is contained in the resistance box, or so small that the box has no coil to balance it with. We evidently could not balance R by the coils in the box X . In this case we can use multiplier coils, and have the total resistance in the upper branch a certain number of times greater or less than that in the lower branch. Then the resistance in the box X would be that number of times greater or less than the resistance of R . This is done by changing the ratio between a and b , say by making the resistance in b 100 times as much as that in a . Then the resistance in d must also be 100 times that in c , in order to balance the different sides of the bridge, and have the same potentials at 1 and 2. In that case, every ohm in the resistance box would balance 100 ohms in R , and the same of all other amounts. To measure R , we therefore adjust the resistances in the box till the galvanometer needle stands at zero, or no deflection. We then add up the resistances of the different coils in use in the resistance box, say 215 ohms, and multiply that by 100, to get the resistance of R , which will be $215 \times 100 = 21,500$ ohms.

If we reverse the ratio between a and b , making a 100 times as great as b , then the resistances in c must also be 100 times as great as that in d , to get a balance. We therefore measure R as usual, using coils enough in the box to balance R , and divide their resistance by 100 to get the resistance of R . Thus, if we have $\frac{1}{100}$ ohm in use in the box, then the resistance of R is $.01 \div 100 = .0001$, or $\frac{1}{10000}$ ohm.

The sections or sides a and b each contain usually three coils, of 1 ohm, 10 ohms and 100 ohms. (Sometimes they are 1, 10 and 50, but generally they are as stated). When measuring a large resistance (with equal sides), we use the 50 ohm or 100 ohm coil, in both a and b ; and the 1 ohm coil for measuring small resistances. When the resistances in a and b are equal, those in X and R are equal, when a balance is obtained.

When we want to measure very high or low resistances, we use different resistances in a and b . For instance, 100 ohms in b and 10 ohms in a would be 10 to 1, or a multiplier of 10; 100 in b and 1 ohm in a would be a multiplier of 100; 10 ohms in b and 1 ohm in a would be a multiplier of 10. Whatever the ratio between a and b , that is the ratio

between X and R . When so used, the coils in a and b are called multiplier coils, because we therefore multiply the resistance on one side or the other (in c or d), which is required to secure a balance (equal potentials at 1 and 2), and bring the galvanometer needle to zero.

Remember, that when the resistances in a and b are equal, the resistance of R is read off directly from the box X ; but if a and b bear a certain ratio to each other, as 1 to 10, 1 to 100, etc., or 10 to 1, 100 to 1, etc., the resistance in X must be multiplied or divided by that ratio to get the true resistance of R .

These illustrations will make clear the principle of the Wheatstone's bridge, and render it easy to work with it. Most operators think it a very mysterious and difficult process to work with the Wheatstone's bridge, but it is really one of the easiest and most satisfactory that we have. By keeping the above explanations in mind, and tracing out the parts in the instrument which correspond with those shown in the diagram, so as to know their objects and uses, working with a Wheatstone's bridge will become a pleasure, as almost any resistance may be measured with it, from the smallest fraction of an ohm up to millions of ohms. A Wheatstone's bridge with a galvanometer can also be used for the measurement of current in amperes or electromotive force in volts, as well as ohms of resistance, but want of space prevents further explanations.

Ohmmeters are special instruments which show the resistance in ohms on the scale, by direct reading. These generally have two coils acting on a soft-iron needle at the same time, one of which is in series with the unknown resistance R , and the other is in a branch circuit around R , in the manner shown in Fig. 16. These coils therefore correspond to an ammeter and a voltmeter. The coils are arranged at right angles with each other and wound in a certain way, which causes the soft-iron needle with its pointer to deflect in proportion to the resistance in the branch circuit containing R . The number of ohms of resistance in R is, therefore, read directly from the scale of the instrument. But, except for commercial or industrial purposes, *i. e.*, practical work on a large scale, they are not very much used yet—the galvanometer being ordinarily preferred.

We have now explained the principles of electrical measurement in such a way that, we think, the operator will understand what he is doing and why he does it, and so work intelligently.

There is, of course, much more to be said on the subject of electricity, but those who wish for full information should procure

some good text book and study it thoroughly. It is thought that further details would not come within the proper scope of these articles. We hope and believe, however, that on some points, such as the arrangement of batteries, the resistance of branch circuits, and many others that could be mentioned, we have made the subjects more clear and intelligible to the ordinary workman than is done by any of the text books or other publications, and, with our articles as a preparation, he will more readily understand them. In that belief we now close the subject.

[THE END]

Historic Clock of Revolutionary Fame

The Indianapolis *Sunday Star* recently published an interesting article headed, "Washington's Valley Forge Clock to-day Ticks off the Hours in Chicago Hospital." The famous old Lehman clock, in its massive mahogany case, occupies a commanding position in the main hallway of the Mercy Hospital, Twenty-sixth Street and Calumet Avenue, Chicago, and keeps as good time as it did 130 years ago when General George Washington frequently met the members of his staff at the home of Colonel Lehman, during that long discouraging winter at Valley Forge. Tradition tells how Washington would stand and listen to the ticking of the great old clock, as he gazed with a sad and troubled look into its big brass face, and how he set his watch by it numerous times. How long the clock had been running before that is not known. It has been in the possession of the Sisters of Mercy since 1872, when Charles Lehman, a citizen of Fort Wayne, Indiana, who had been a patient at the hospital, gave it into the keeping of the nuns out of gratitude for their kindness and attention to him. Charles Lehman was a grand-nephew of old Col. Lehman, a brave officer and patriotic man of revolutionary fame.

When this historic timepiece passed into the custody of the Sisters of Mercy, Mr. Lehman exacted two promises from them. One was that on the centennial anniversary, July 4, 1876, they would strike the clock 200 times—100 for the old century and 100 for the century just dawning. The second promise exacted was that the clock should never pass into other hands, but should remain for all time in the custody of the nuns. The works of the clock were imported, but the great heavy case was made in America. The face is of hammered brass, Arabic numerals marking the hours. The hands are made of gold. A peculiarity is that no difference where the hands are placed, it always strikes the correct hour. It has but one weight, suspended on a long chain and drops several feet when running down. Where the pendulum door opens, near the bottom of the massive case, the weight just grazes the woodwork, and yet in its century and more of service over half an inch of solid wood has been worn away. From present indications and the care bestowed upon it, the faithful old timepiece promises to continue to mark off the fleeting hours for many years to come.

"I took *The Keystone* when it contained only a few pages, and it has grown larger and larger and better and better, and I would suggest that you just keep it coming; that's all."—D. H. Darling, Jeweler, Guilford, New York.



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Chronometry and Alloys of Steel

[Translated for THE KEYSTONE from the French of M. DEGRES-SAIN, in the Revue Chronométrique]

IRON and carbon, combining to form steel, give it a chemical constitution and some properties that are intermediary between those of iron and cast-iron. Steel is manufactured by carbonizing iron, or by decarbonizing cast-iron, up to a certain point. In the Bessemer process, all the carbon contained in the cast-iron is burned out to obtain pure iron, which is afterwards recarbonized by means of an additional casting rich in manganese, bringing into the mass in fusion the desired quantity of carbon; it is thus reconstituted in the state of steel.

The Alloys of Steel

The introduction into the mass of iron of certain metals, such as chromium, tungsten, nickel, vanadium, give the steel properties that are highly appreciated in industry; thus with chromium, a chromated steel, or ferrochromium is obtained, well adapted to the manufacture of metallic sheathing and ordnance.

Steel hardened by nickel in the proportion of three to five per cent. results in a metal whose qualities of resistance and elasticity are much superior to those of carbon steel, rendering it fit for railways, steam boilers and machinery.

The physical properties of the metal in question may be varied within any desirable limits, and an alloy may be obtained having the coefficient of expansion of any given body; it is thus that by certain manufacturing processes nickel-steel may be made having exactly the same coefficient of expansion as glass, which allows of substituting wires of this metal for the platinum wires of incandescent electric lamps.

As is well known, to fix the carbon filament in the glass bulb its extremities are attached to platinum wires that traverse the bulb, then united with the exterior conductors. The platinum, of which the coefficient of expansion is next to that of glass, is soldered to the glass, and the lamp remains perfectly tight after the vacuum has been made in the bulb. But as platinum costs about 2500 francs per kilogram the advantage of replacing it by a cheaper substance is at once apparent.

Properties of Invar Steel

When the alloy contains from 26 to 35 per cent. of nickel, a body almost insensible to thermic variations is obtained, whence the term *invar*, an abbreviation of invariable. But the rapid physical modification that nickel-steel undergoes, according to the proportion of alloy, makes its manufacture a delicate process; again, the high price of nickel (1.10 to 1.30 francs per kilogram)

puts a ton of alloy of 3 per cent. at a figure which exceeds by nearly 200 francs the same weight of carbonized steel. If to these considerations we add the fact that the world is supplied with nickel only by the mines of Canada and New Caledonia (about 10,000 tons a year), it is seen that the use of nickel-steel will, for a long time yet, be limited to the manufacture of special articles, for which the price is largely compensated by the advantageous qualities inherent in the new metal.

The special properties of nickel-steels, and in general the characteristics of their variations at different temperatures, were first made known by M. Guillaume, associate director of the bureau of weights and measures. This distinguished scientist has in various articles demonstrated and emphasized the advantages of invar when applied to the compensated mechanism of timepieces.

Nickel-Steel for Pendulums

The pendulum most in use in non-compensated timepieces, is composed of an iron or steel rod supporting a brass bob attached by its center or by its lower extremity. The expansion of the iron rod produces a variation in the speed of half a second per day and per degree. If we assume differences of 20° C., we will reach variations to the extent of a minute a week. Then if the construction of a clock admits of closer rates, it will be of real advantage to substitute an invar rod for an iron one. Invar of medium quality will reduce the deviations attributable to the error of compensation to ten seconds a week, if it is assumed that the bob is attached by its center.

This is a first and rough approximation, applicable to clocks of scarcely more than ordinary quality. When the quality is better, we have the first real improvement, consisting of adapting the dimensions of the bob, supported by the screw-nut at its lower part, to an invar of average quality, expanding, for instance, 1.5-millionth per degree, so as to have about half the expansion of an invar of good and one of inferior quality, the former expanding about one millionth, the latter, about two-millionths. Thus, the largest deviations of an average compensation will be half a millionth, that is, half a second per day and per degree, or from two to three seconds per week for a difference of 20° C. This compensation, applied to large series, would require no calculation, and, by allowing of the construction of all pendulums under identical conditions, would suit movements of very elaborate make. When the quality is yet higher, it will suffice to determine the conditions of compensation for each quality of invar; for instance, to a lot of pendulums of a hundred kilograms the corrections found by the examination of a single rod will be applied. Here the possible differences are in the ten-millionths, and error of compensation will certainly fall below one second a week.

Finally, for astronomical pendulums of great precision, it will be necessary to determine the constants of each, which, of course, only a limited number of manufactories can undertake.

Remarkable Results

M. Riefler, of Munich, who has substituted the pendulum with invar rod for the mercury and steel tube pendulum of his construction which had yielded him remarkable results, employs one of the last three processes, according to the quality of the clocks, and announces deviations of compensation that, in the higher qualities, do not exceed two-hundredths of a second per day and per degree.

At the steel foundries of Fourchambault, where invar was first produced, rods of nickel-steel were adopted with a guaranteed coefficient of expansion of eight-tenths of a micron (a micron representing one-thousandth of a millimeter) for one meter of length and one degree of variation in temperature.

Iridium and rhodium are very rare and expensive metals that give incomparable steels. Vanadium, which was more recently discovered than the others, costs in the pure state 120 francs per kilogram, and ferrovanadium, 24 francs.

Vanadium-steel is utilized in ordnance for the production of certain parts of projectiles; it is used also for surgical instruments.

According to recent researches, telegraph wires of vanadium steel have a greater electric conductivity than that of the wire now used, which would admit of diminishing the diameter. As the resistance of this wire is superior to that of galvanized iron (of four millimeters in diameter), the lines could be set up in a very economical way.

The rupture of steel cables used in mines and quarries is often due to the small diameter of the strands. For equal resistance, cables of vanadium-steel would have a smaller section and more suppleness, and would roll better on the pulleys, without fear of any change in the metal.

The Most Expensive Metals

There are other new bodies, the prices of which reach extravagant figures. One milligram of radium, for instance, is worth 10 francs; 1 gram, 10,000 francs, and 1 kilogram, 10,000,000 francs. But there does not exist a kilogram of radium in the world.

These are, therefore, not metals of current use, but there is hope of obtaining them, in the more or less distant future, by processes that will reduce the prices.

It was thus with aluminum, which in 1855 cost 1000 francs per kilogram, and has now fallen to 3 francs. Aluminum with its alloys has definitely entered modern metallurgy, and is no longer designated "the metal of deception." Soon, no doubt, rapid manufacturing processes will produce nickel-steels economically enough to bring the invar pendulum into general adoption.

There are three kinds of invar steel:

1. *Extra-superior*.—Coefficient of expansion equal to or below 0.8 millimeter (0.000,0008 m. per 1° C. per meter). It is made in white and round, of all diameters.

2. *Superior*.—Coefficient of expansion equal to or below 1.60 millimeters (0.000,0008 m. per 1° C. per meter); black and white.

3. *Ordinary*.—Coefficient of expansion equal to or below 2.5 m. (0.000,0025 per 1° C. per meter).*

* We have been informed that the nickel-steel alloy can now be had from W. Green & Co., 81 Nassau Street, New York, or Herman Boker & Co., 101 Duane Street, New York.



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Mr. F. W. Schuler,
Philadelphia, Pa.

Dear Sir:—Yours of the 30th received. In reply will say that I am very much pleased with Mr. Miner, so far, he is doing fine. HIS WORK SPEAKS WELL OF YOUR SCHOOL. I find him a gentleman in every respect, and will try and make things as pleasant as possible for him. I thank you for sending him to me.

Yours respectfully,
EGENE FERRIS.

Mt. Morris, N. Y., April 4, 1906
Mr. F. W. Schuler,
Philadelphia, Pa.

Dear Sir and Friend:—Having recently completed a nine-months' course in watchmaking, engraving and optics at the Philadelphia College of Horology, I feel amply paid for the time and money invested. I can cheerfully recommend your College to any one contemplating a course.

I had no knowledge whatever of the business on entering the College, but now consider myself competent to do any work in the jewelry line. My large engraving plate and escapement model are admired by all.

With sincere wishes for the prosperity of the institution, instructors and students, I beg to remain,
Yours respectfully,
C. W. MINER.

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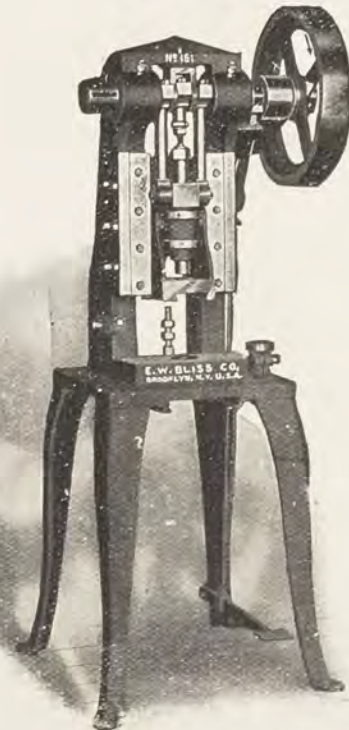
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WORKSHOP NOTES

Subscribers wishing inquiries answered in this department must send name and address—not for publication, but as an evidence of good faith. No attention will be paid to anonymous communications. Questions will be answered in the order in which they are received.

An INDEX to the questions answered in Workshop Notes department for each year accompanies each December number. Subscribers are requested to preserve these indexes, and, before mailing questions, to refer to them, as similar questions may have been answered in previous issues. These indexes are arranged alphabetically, according to subject covered in each answer, and tell the issue and page on which the information may be found.

"Brass-Steel."—Please tell me why all the high-grade movements have steel escape wheels? Why are they better than the brass ones? I have noticed a great many of the imitation movements having steel escape wheels, so do not think they are any more costly. As a rule, two hard substances working against each other will not produce as good results as a hard and soft metal working against each other.—It is claimed that a watch containing a brass escape wheel will not keep a rate as long as one that has a tempered steel escape wheel, owing to the teeth of the brass wheel cutting. If the impulse faces of the brass escape wheel were at such an angle as to slide practically parallel with the face of the pallet jewels, there would be little perceptible wear of the escape teeth, but if the angle is such that they scrape across the corner of the pallet jewels, there will be a gradual cutting of the wheel teeth. As the steel escape wheels of the better grades of watches are tempered, the factories can obtain a very smooth and accurate surface on the impulse and locking faces of the teeth, and they are sufficiently hard to withstand the tendency to cut.

"Tooler."—Will you please tell me how to determine if my watchmaking tools are magnetized?—This can be readily determined with the aid of a pocket compass; place the compass on a table with the needle pointing to zero and bring the tool up to it from east or west. If the tool is not magnetized, the compass needle will remain stationary. If it is magnetized, the needle will be deflected and the tool should be thoroughly demagnetized before it is returned to the bench, in order that it may not contaminate other tools or watch parts thereon.

"Collet."—(1) I would like to know the meaning of half-timing a watch or movement?—Speaking of a watch running on half-time, means a watch that is running without a hairspring. This is done by some workmen to test the watch and see if everything is free. It is not advisable to let it run long this way for fear of loosening or chipping the roller jewel, for every time the balance takes a vibration the roller jewel strikes the fork with such a force as to cause it to rebound.

(2) Also Swiss hairsprings—what number of size of Swiss springs can be used in Waltham or Elgin O size, 6 size and up to 18-size movement?—We cannot give you the name or size of the Swiss hairspring for the movements that you speak of, because they do not come marked that way, but a good assortment of a gross or two would have to be kept on hand. It is better and advisable to always buy the hairspring made by the factory for the particular watch that you want it for, they are a better spring than the average Swiss spring, and another advantage is they come colleted and all ready to put into the watch.

"Brush."—Please tell me how to remove the old lacquer on silverware and how to put new lacquer on same?—Ordinarily, the old lacquer may be removed by immersing the articles in boiling hot water; sometimes, however, it is necessary to employ a boiling hot saturated solution of borax in water. The application of new lacquer is generally best effected with the aid of a brush; there are specially prepared brushes on the market for the

purpose that may be procured at very reasonable prices. Sometimes, especially if the articles are small, they are lacquered by being dipped in the lacquer while held in a wire basket of wide mesh work, but articles so lacquered do not take on the same high-class finish as those that have had the lacquer applied by the brush. In applying by means of the brush, it is well to work by the rule that a very little lacquer should be taken on the brush; the smaller the quantity, the better the result.

"Ship."—(1) How can I get the brass escape wheel of a ship chronometer off its long pinion staff without injuring it? The brass work of the wheel is a long taper pushed down on the pinion staff which appears to be there forever. The pivot that entered the jewel close to the wheel was cut away by wear and a new one is necessary. How can I get it apart?—The brass hub is put on the pinion friction-tight, then turned true while the pinion is running between centers and at the same time the seat for the escape wheel is turned. We would not advise removing the brass bush and escape wheel; if we did, it would be very near impossible to replace it so that it would be true again. The pinion could be pivoted by a careful workman without the least injury to the wheel by cementing it in the lathe. The best plan to cement a long pinion of this kind is to use a cement chuck with a sleeve, see Fig. 1. A represents an ordinary

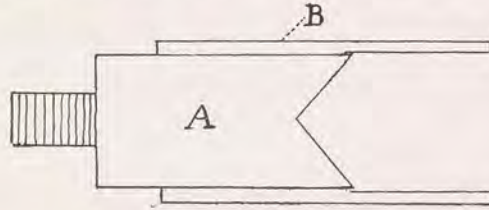


Fig. 1

$\frac{1}{8}$ -inch cement brass which screws into our chuck; this should be centered. B represents a piece of brass tubing, which fits loose on the center brass A, and the object of the tube B is that no matter how long or short the pinion that we are cementing up, it can be brought out as far as we want it so that when the tube is filled with shellac and the pinion cemented up, there is very little danger of the pinion breaking loose or the shellac cracking.

(2) Where can I buy a hairspring for a chronometer, same quality as the non-magnetic?—Chronometer hairsprings can be bought from any of the advertisers in THE KEYSTONE, who make a specialty of repairing chronometers.

(3) Also where can I buy a mainspring for a chronometer? I have the parts, but they are all rusty and broken.—Any wholesale material house can supply you with a mainspring if you will send them a piece of your old spring.

"Clocker."—May I ask you to let me know what will be the best to use to improve the looks of black marble clock cases that have become gray and look bad from age?—There are several methods for the restoration of such clock cases. Among the best of these may be said to be that of first grinding out any scratches that may reveal themselves, with pumice-stone powder and water, and then polishing with putty powder (oxide of tin) and water. To apply the pumice-stone powder and water use a piece of cotton flannel folded into eight or ten thicknesses. A similar piece may be used to apply the putty powder and water. Another method much employed is the following: After cleaning the work carefully, apply a paste made of beeswax and turpentine, using about two parts of turpentine to one part of beeswax. The white wax (which can be procured of any druggist) is the kind to use. All surplus of the paste is wiped off and then a polish is imparted by a vigorous rubbing with a linen rag. Sometimes it is possible to achieve good results with no other aid than a coat of hard spirit varnish, such as the photographers use. In case of a white marble clock case, a wash can readily be prepared of freshly-slaked lime and soda lye, by dissolving to

saturation washing soda crystals in soft water and mixing with the lime to the consistency of thin cream.

"Watcher."—(1) Does it strengthen a set mainspring any to stretch it out? Should not a new one be used?—No, it does not strengthen it; a new mainspring should be used.

(2) Will a watch that is in good order vary in different positions? If so, why?—That depends upon what we may consider good order. A watch that may be in good order, from general observation, may have a staff with one pivot a trifle larger than the other, or the walls of the balance hole jewels of unequal thickness. This would cause it to vary in positions. Such slight defects of this kind cause most of the position errors.

(3) In what case is a balance thrown slightly out of poise to perfect the time? Why not a balance that is in poise in all cases for good time?—We do not believe that our American factories ever resort to the method of throwing a balance out of poise to correct a position error, but in some cases in high-grade Swiss watches this has been done. For example, the balance may be in perfect poise, but it can be put out of poise to cause a gain or loss in a certain position of the watch. If the watch gains in one vertical position as compared with the opposite—supposing them to be XII up and VI up—a small amount of metal is removed from the bottom of the balance (i. e., the bottom when at rest with XII up), thus making the top heavier and causing a falling back or loss in the former position. On the other hand, if the gain occurs with VI up, the metal is removed from that part of the rim which is at the bottom when at rest with the VI up, and causes a slight loss of rate in that position. Care must be taken not to remove too much. In screw balances, turning the screws corresponds to removing the metal, as it makes that side virtually lighter. The same effect is produced by turning the screws out on the opposite side, as making one side heavier is equivalent to making the other side lighter. But the screws should be turned in on one side the same distance they are turned out on the other, else the rate will be affected.

(4) Is not a steel escape wheel better than a brass one for a fine watch?—See answer to "Brass-Steel," in another column.

(5) Have noticed several times that of our railroad loaners a 17-jewel* unadjusted will run closer than a higher grade adjusted one. Why is this?—This is a case where the adjusted movements were not in good order, or the adjustment ruined by some careless workman, and where the unadjusted movements were in exceptionally good condition.

(6) A hall clock with a dial that turns above the other dial with the change of moon, etc. What does the figures 5, 10, etc., stand for, and what figures should appear at 12 o'clock noon?—The figures you refer to represent days, and are used to set and tell how old the moon is, the wheel containing the moon is moved, as a rule, by a pin on the hour wheel which moves twice in twenty-four hours; to set the moon we would do it in this manner: On March 10th there was a full moon, we would move our wheel until a full moon was shown. Now, suppose the day we set our moon was March 14th, in that case, after we had set the full moon, we would bring it forward four days, using the above figures you refer to as to how many days to move it.

"Caster."—In connection with pouring gold, I have seen some casting done where there was something put in crucible just before casting, and was told it was to prevent holes and to blow out impurities.—If there is tin or other base metal in the gold that would cause it to work badly, it is customary to remove it by adding corrosive sublimate and charcoal while the gold is melted in a crucible. Pulverize the charcoal and corrosive sublimate and mix them, then fold the mixture in small packages wrapped in tissue paper and drop them into the melted gold and stir with a long pipe stem. If using pulverized charcoal and salomoniac as a flux, these ingredients should be well mixed and also folded in tissue paper and dropped in the crucible just as the gold is getting ready to melt. The object of folding in tissue paper is to prevent the hot air that arises from the furnace blowing the substances away.



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WORKSHOP NOTES

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"Gravo."—Kindly illustrate and describe a gravity escapement and a dead-beat escapement.—As you are probably aware, there are several kinds of gravity escapements; a description of two of them, however, by Britten, will, no doubt, meet your needs: *Double Three-Legged Gravity Escapement*.—Invented by E. B. Denison (Lord Grimthorpe), 1854. This escapement, shown in Fig. 1, consists of two gravity impulse pallets pivoted as nearly as possible in a line with the bending point of the pendulum spring. The locking wheel is made up of two thin plates having three long teeth or "legs" each. These two plates are squared on the arbor a little distance apart, one on each side of the pallets. Between them are three pins which lift the pallets. These pins are generally the bodies of three screws used to connect the locking plates, though a three-leaved pinion answers the purpose. In the drawing one of the front legs is resting on a block screwed to the front of the right-hand pallet. This forms the locking. There is a similar block screwed to the back of the left-hand pallet, for the legs of back plate, which is shaded in the drawing, to lock upon. Projecting from each of the pallets is an arm. The tip of the one on the right-hand pallet is just in contact with one of the pins which has lifted the pallet to the position shown. The pendulum is traveling in the direction indicated by the arrow, and the left-hand pallet has just given impulse. The pendulum rod in its swing will push the right-hand pallet far enough for the leg of the front locking plate, which is now resting on the block to escape. Directly it escapes the left-hand pallet is lifted free of the pendulum rod by the lowest of the three pins. After the locking wheel has passed through 60 degrees, a "leg" of the back locking plate is caught by the locking block on the left-hand pallet. There should be a couple of banking pins to stop the pallets from going lower than the left-hand one is shown. This allows the lifting pins to have a little free run before reach-

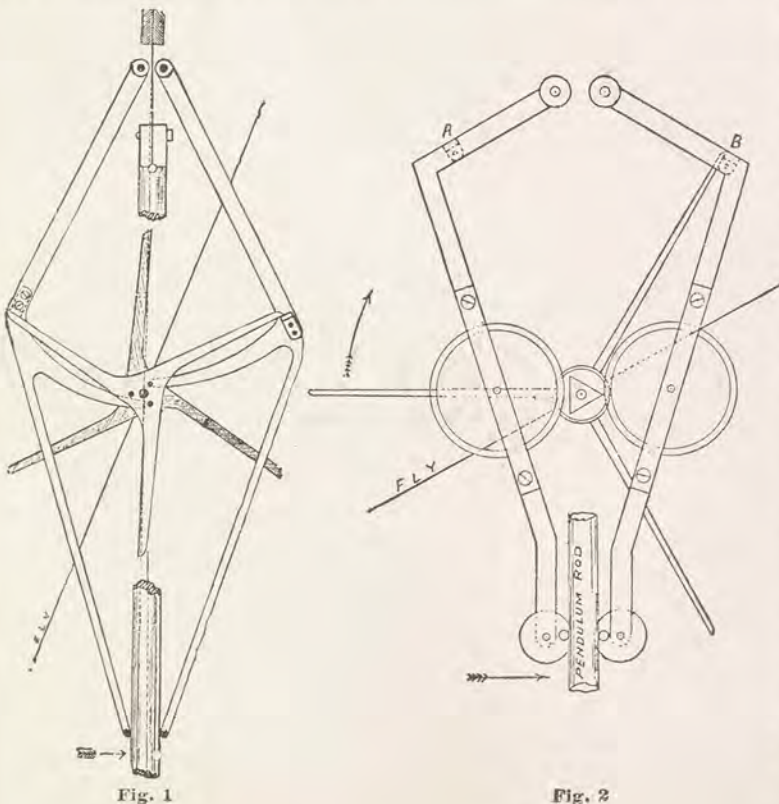


Fig. 1

ing the arm. As the three-leaved pinion always lifts the pallets the same distance, the pallets in returning give a constant impulse to the pendulum. The friction in unlocking would, of course, vary with the pressure transmitted through the train, but the effect of such variation is found to be practically of no moment. To avoid any jar when the locking leg falls on the block there is a fly, kept by a spring friction-tight on an enlarged portion of the arbor. This fly causes the legs to fall smoothly and dead on the blocks, and thus avoids all danger of tripping. All the parts are made very light, of steel, with the acting surfaces hardened. The pallets and locking wheels may be cut from an old saw plate, and a three-leaved pinion for lifting obtained by breaking out every alternate leaf from a six-leaved pinion. The distance of the lifting pins from the center should not be more than $\frac{1}{2}$ or less than $\frac{1}{3}$ of the radius of the locking legs. They should be placed as shown, the one last in action and the one about to lift being vertically under each other; the lifting is then performed across the line of centers. The distance of the center of the escape wheel from the pivots of the pallets equals the diameter of the escape wheel. The length of the tails of the pallets is immaterial. For symmetry they are generally made as shown. The most frequent mistake in constructing this escapement is that the parts, especially the locking plates, which can hardly be too light, are made too heavy. Lord Grimthorpe suggests that the fly should be made of aluminum for lightness. The beat pins may be of brass or ivory. They, and the pendulum rod where they touch, should be left perfectly dry. If oiled they become sticky, and the action of the escapement will be unsatisfactory.

Single Three-Legged Gravity Escapement.—It will be observed that the double three-legged really acts as an escapement with a three-toothed wheel, the extra wheel being added to spread the impulse pallets more, and so obtain a greater vertical lift for a given horizontal movement. Fig. 2 is a single three-legged arrangement by Dr. Waldo and Professor Lyman. The locking blocks *a* and *b* are well placed for ensuring sound locking and easy release. Instead of the usual three pins, there is, for lifting, a triangular steel block which acts against large, light friction rollers pivoted one on each pallet. The locking wheel is commendably

light. The beat pins are mounted eccentrically for easy adjustment, a good plan often followed. *The Dead-Beat or "Graham" Escapement*.—Invented by George Graham at the beginning of the eighteenth century, is an escapement in which the escape wheel does not recoil. Generally a dead-beat escapement is understood to mean the Graham escapement used in regulators and fine clocks. For regulators and other clocks with seconds pendulum this escapement, which is shown at Fig. 3, is the one most generally approved. The only defect inherent in its construction is that the thickening of the oil on the pallet will affect the rate of the clock after it has been going some time. Notwithstanding this, it has held its own against all other escapements, on account of its simplicity and certainty of action. The pallets of the Graham escapement were formerly made to embrace fifteen teeth of the wheel, and until recently ten, but now

many escapements are made as shown in the drawing, with the pallets embracing but eight. This reduces the length of the impulse plane and the length of run on the dead face for a given arc of

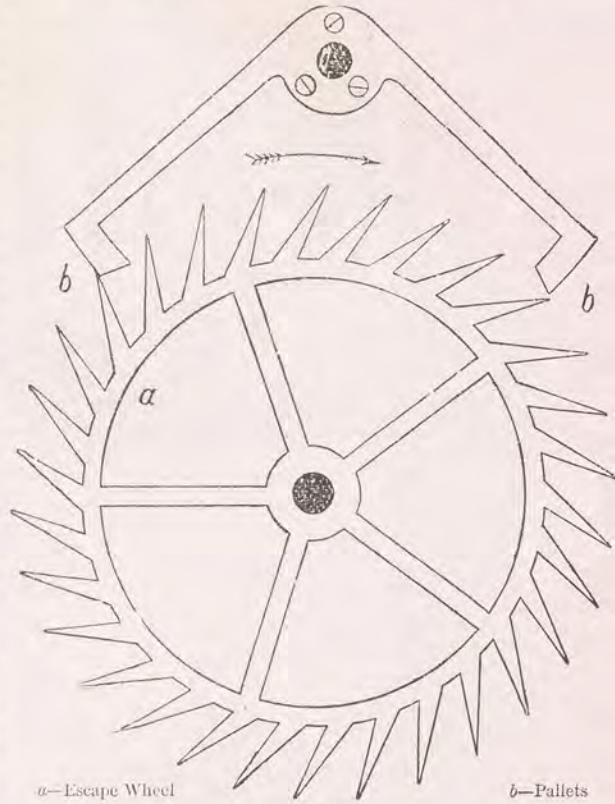


Fig. 3


vibration, and consequently the relative effect of the thickening of the oil. The angle of impulse is kept small for the same reason. There is not much gained by making the pallets embrace a less number of teeth than eight, for the shake in the pivot holes and inaccuracies of work cannot be reduced in the same ratio, and are therefore greater in proportion. This involves larger angles and more drop. It is purely a practical question and has been decided by the adoption of eight teeth as a good mean for regulators and fine clocks where the shakes are small. For large clocks of a rougher character, ten teeth are a good number for the pallets to embrace.

"Model."—(1) Kindly tell me how I can transfer my drawings to the metal for cutting it out accurately?—There is no successful way to transfer a drawing from paper to metal. The best plan is to make a drawing directly on the metal. For example, if we want to make a large escape wheel it is only necessary to design two teeth, from this we can make our cutters and set the cutting engine. The index will divide the wheel into fifteen spaces.

(2) What is the length of lever from center of staff to outer corner of slot in fork?—The length of our fork will depend upon the distance the pallet and balance pivot holes are, and also the amount of roller action we want to employ. The roller action varies in watches from 30 to 40 degrees. If we knew the exact distance of the pivot holes we could give the exact length of the fork and the size of the roller table.

"Weaker."—I have an eight-day cuckoo clock which runs too slow when first wound up. It has fusee like an English watch. Now, do you advise me to exchange mainspring for a weaker one? The clock has been brought to me to regulate. Could you let me know by return mail, as I have not the time to wait for an answer in *The Keystone*?—Changing the mainspring is the last thing we would advise you to do. You say the clock was brought to you to regulate. Did you repair the clock otherwise? If not, we would suggest to take it all apart, clean it thoroughly (especially the mainspring) and do whatever repairing necessary, such as bushing or closing the holes, etc., when we think you will be able to regulate the clock.

Fig. 2




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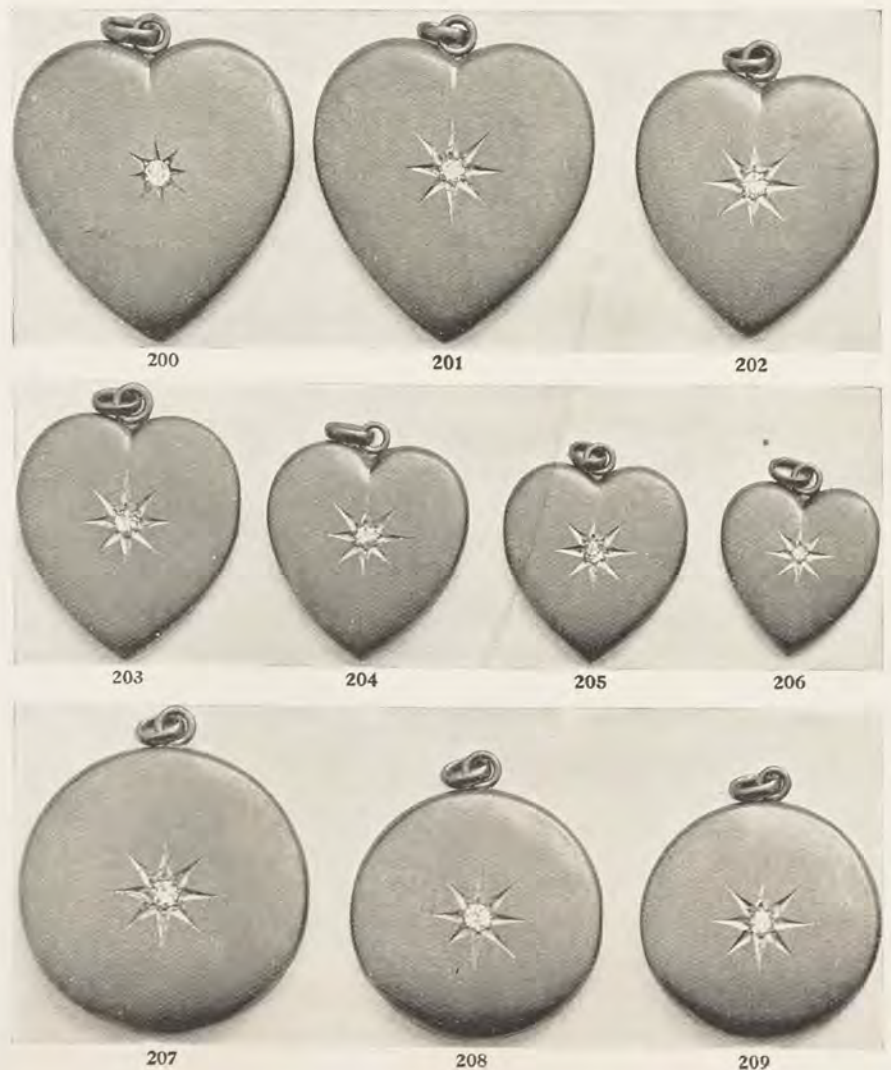
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MODERN MERCHANDISING



Sentiment in Jewelry Designs

THE enterprise of the manufacturers in weaving sentiment with their jewelry designs has been a forceful factor in the stimulation of trade. A striking manifestation of this enterprise is found in the endless variety of emblem and society jewelry—rings, pins, watch charms, etc.—which has proved so fruitful a source of profit to the jewelers. An analogous and later development of the sentimental idea had its origin in the traditional association of certain gems with the different months and the sentiments and superstitions attached to them. The practical application of this idea has been most successfully utilized and exploited in recent years, and as every emotion may be symbolized by gems or combinations of gems there are endless possibilities in this field. This is well evidenced in the comprehensive lines of birthday goods which now enrich the staple stocks of the jewelers. Rings, pins, brooches, lockets with birthstone settings command a ready sale, and as the custom of presenting birthday gifts is becoming more popular yearly, these goods merit proportionately more attention from the trade.

Birthstones and Their Meaning

That the jewelers are very much alive to the opportunity afforded by sentimental jewelry is shown in the many queries received by us in regard to it. As to the stones associated with certain months there seems to be some difference of opinion, but the generally accepted tradition is the following:

January	Garnet	Fidelity
February	Amethyst	Peace of Mind
March	Bloodstone	Courage
April	Diamond	Purity
May	Emerald	Happiness
June	Agate	Longevity
July	Ruby	Luck in Love
August	Sardonyx	Wedded Bliss
September	Sapphire	Serenity
October	Opal	Hope
November	Topaz	Friendship
December	Turquoise	Success

One of our subscribers argues that the pearl is the February birth gem, and indeed it is occasionally used as such. We believe, however, that usage has given this distinction to the amethyst. It seems, indeed, somewhat arbitrary to eliminate the pearl from the list of birth gems, but it must be remembered that the pearl, which is a pro-

duct of the mollusk and partly organic in its origin, is in a somewhat different category from the other gems, which are purely mineral in character, being extracted from the earth. The elimination of the pearl is not, therefore, as illogical as it would on first thought appear. Besides, as the virtue of "purity" which is associated with the pearl is more beautifully symbolized by the diamond, this most precious of sentiments is well taken care of. The question, however, has been settled beyond recall by the poet who placed in immortal quatrains the associated months, gems and sentiments.

The February-born will find
Sincerity and peace of mind;
Freedom from passion and from care,
If they an amethyst will wear.

Combination settings, too, may be made to express pretty sentiments. For instance, a setting composed of a hyacinth, opal, pearl and emerald signifies "hope," the initial letters of the names of the gems spelling the word. So numerous are the available gems that practically every sentiment or emotion may be expressed by these combinations.

Birth Flowers and Their Meaning

Since the manufacturers have given practical application to the sentimental association of months and flowers in the designing of jewelry the trade manifest an interest in the subject equal to that in the gem stones. In an advertisement in our Easter Number two birth-flower rings were illustrated, one for March and one for April, the decoration on the latter representing an Easter lily. One of our subscribers claims that the daisy is the traditional April flower, and not the lily. In this, as in the gem stone matter, custom is divided. We find two lists in use, one being the following:

January	Snowdrop	Hope
February	Primrose	Early Youth
March	Violet	Fidelity
April	Daisy	Innocence
May	Hawthorn	Hope
June	Honeysuckle	Love
July	Water Lily	Purity
August	Red Poppy	Consolation
September	Morning Glory	Affection
October	Hops	Injustice
November	Chrysanthemum	Inspiration
December	Holly	Foresight

As the language of flowers has, at least in part, been handed down from antiquity and has come to us from the old world, where the climate is different from our own

and where the same flowers bloom at different seasons or in different months, there will naturally be many apparent inconsistencies if we accept the list unchanged. And this probably accounts for the fact that there are two lists in common use.

The second list of associated flowers and months, which seems to be most in favor with the jewelry trade, is the following:

January	Wild Rose
February	Pink
March	Violet
April	Easter Lily
May	Lily of the Valley
June	Rose
July	Daisy
August	Pond Lily
September	Poppy
October	Cosmos
November	Chrysanthemum
December	Holly

"Use your reason and take your choice" is probably the best advice. It seems to us that for January and February reason would give the snowdrop and primrose the preference, but the artist and sentimentalist would undoubtedly select the Easter lily in preference to the daisy for April, though the claims of the daisy are undoubtedly sound. For June, known in our latitude as "the month of roses," the honeysuckle does not seem a reasonable selection. The rose, "queen of flowers," sacred to Cupid and Venus, and symbolic of love, joy and prudence, must not be dethroned, and to June let our own "American Beauty" be consecrated. The daisy, being a spring flower, is certainly inappropriate for July, and the water lily is a preferable selection. Sometimes we see the apple blossom used as the floral symbol of May and sometimes the hawthorn, either being a good selection, though American opinion would probably favor the apple blossom as being the more appropriate for this country. The lily of the valley is a third selection for this month. From this it will be seen that the choice is, at best, arbitrary, and considerable freedom of selection must be allowed. The differences of opinion only lend interest to the new fad, and the floral selections of the manufacturers, whatever they may be, are pretty and fascinating enough to overcome any doubt or prejudice as to their orthodoxy. It remains for the trade to turn the pretty custom to profitable account by appropriate advertising and display of the goods.

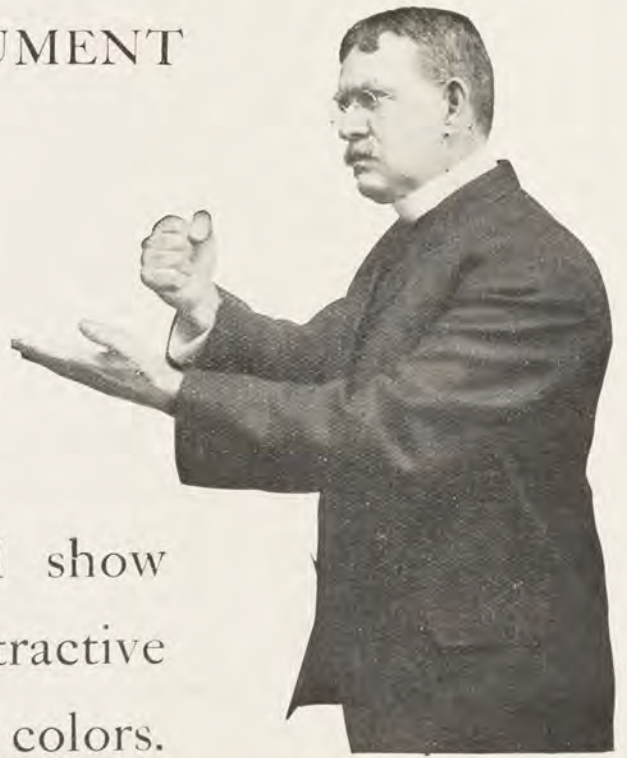


FORTIETH YEAR

40 YEARS

of success as Solid Gold **RING MAKERS**
 is a **CONVINCING ARGUMENT**
 as to the supreme merit
 of our **RINGS.**

All of our productions
 are from *original drawings*,
 and this season we will show
 an unusual number of attractive
 effects, both in design and colors.



Our fall line is now ready.

14 K. Diamond Rings
 Signet Rings
 Ladies' Stone Set Rings
 Children's and Misses' Rings
 Band Rings
 Scarf Pins

Arnold & Steere

New York
 3 Maiden Lane

Providence, R. I.

Chicago
 151 Wabash Ave



1866 - 1906

**The Smithville Jewelers' Trust:
A Twelve-Month Experiment**

Fifth Month

"Frank Fingerring has the floor," said Solomon Silverplate, glancing in the direction of the Adonis of the party. "At our last meeting he named himself a fool for cutting prices, in the youth of his business; but his story was cut short by adjournment. It was then agreed that the price question should furnish to-night's discussion; so go ahead, Frank."

The Question of Price

Frank Fingerring: "The price question is important."

It is the dotting of the i, the crossing of the t, in the whole trading proposition; when it is accurately determined the scheme is complete, but not before. Many a business has been carefully nursed through all the preliminary stages of purchase, advertising, financing, store service and all details up to naming the selling price to the actual customer; then breaks down. Some merchants do not ask enough profit to carry the business to success; a very few fail because they ask too much profit; but a very large number 'make ducks and drakes' of their prospects because they do not maintain a fixed price. This is the chief blunder made by those who fail to solve the price question correctly.

"Fortunately there are comparatively few reputable jewelers who still practice the 'sliding scale' price policy—asking at first more than they expect to get, and then coming down in price and closing as a 'bargain.' This outworn practice came down from the Oriental merchants but is too crude for our day. The special evil of it is that the merchant thus surrenders himself into the hands of his customer; once favored with a 'reduction' the customer will invariably look for it thereafter in all subsequent purchases; and the merchant is under constant danger of quoting different prices, at different times, to the same customer on the same article, and a great objection to it is that the merchant is unable to estimate his profits in advance, or forecast his financial future.

"The special argument against it is moral rather than material. The fact that the merchant eventually takes less than his first price shows that he can afford to sell for less; hence arises the question, in the mind of the customer, as to whether the first price was not exorbitant and the merchant guilty of intended fraud; and the next step is to doubt whether the merchant is a safe one to buy from. Under every circumstance the fixed price is the only safe practice."

"How about selling on time?" interrupted Henry Hourhand.

"In that case let the fixed price be the credit price, and then allow a cash discount of, say, five per cent. to those who pay cash; but then maintain the credit price to credit buyers, absolutely.

"The price-cutter will some day be relegated to the same obscurity as the Oriental-like 'sliding-scale' merchant. The dealer who makes price the only argument will eventually have no argument left. The habitual price-cutter is doomed to say, with Othello, 'my occupation's gone.'"

The Practice of Trading in

"What is your practice with customers who 'trade in?'"

To what extent does the 'trade' affect your price?" inquired Ratchet.

"Well, that is a puzzling problem, always," replied Fingerring. "The customer is invariably shocked at our allowances for his old watch which cost him possibly five times our allowance, if it was bought long ago. A friend of mine (a jeweler) argues that it is better to ask more than the regular price for the new watch, so as to be able to allow the customer that much more for his old one—the net profit being the same to the dealer. But this opens up a Pandora's box of ugly little devils; for if a friend of this customer should afterward get your regular price on the new watch, you can readily see why the trading customer would likely think that he had been swindled. The only safe thing to do is to offer for the old watch in the trade just what it is worth to you; and as evidence of good faith, offer to sell the old watch back to him, or to any person whom he sends to you, at just the 'trading' price, if no repairs have been made on the watch since the 'trade.'

"Stick to a fixed price; and mark that price in plain figures on the goods, so that all can see. It creates confidence in the mind of the modest buyer; makes him feel that he can buy of you in a small way as cheaply as the rich man buys of you in a large way; and the plain price tag gives him satisfaction because he need not trouble with questions but can see for himself."

Fixed Scale of Prices

Solomon Silverplate: "Supplementing Fingerring's very excellent suggestions, isn't it possible for us here to agree upon some scale of prices for standard goods and repairs? I do not mean that we shall advance our general prices to the public but in special lines, here and there, advance our figures to a fair price. For instance, Smithville has been notorious for years among the traveling men for being under price on plated flatware. Just how or when these prices were established in Smithville I can't recall; but it is a fact that we all get less profit on flatware than the jewelers in the near-by towns. Our prices on

this line should be ten per cent. higher, without any complaint from the public. So with some items of repairing; we are actually too low. A little co-operation in this direction will right a mistake. What do you say to our sitting down now and figuring together?"

"Good! good!" came in chorus. Silverplate went on to say: "And while we are about it, let us find out which of the public have been 'doing' us—getting credit and not paying up. There are a number of 'beats' in this town, and I've got some of them on my books, while likely each of you have others, or the same names. I suggest that we go over our books, schedule these names, then get together some evening and make out a 'black-list' of whom we'll all hereafter require the cash with the purchase. Wish we could get at it by next meeting, but that won't be possible—too much detail to work out in comparing names of delinquent debtors, etc. But we'll tackle this problem later, sure. Does the idea appeal to you?"

"Good again!" came from the others. "Now we are getting down to carpet tacks." Co-operation on these lines will have an immediate, practical effect on our profits. The Smithville Jewelers' Trust is already justifying its reason for being," said Ratchet. "I'm mighty glad for that Christmas day inspiration of Solomon Silverplate."

"Here, too!" said another and another, as they went out into the night.

Carelessness in Keeping Accounts

During a recent conversation with one of the traveling representatives of a large wholesale house he said it was surprising to what an extent the unbusinesslike methods of a past age still lingered in the jewelry trade. As an illustration, he stated that during a recent visit to a jewelry store he noticed the jeweler's wife take from the till some money for household expenses; a few minutes later the daughter, who was probably arranging for her Easter outfit, passed out, helping herself to the necessary cash in the same manner, and the jeweler himself, from the money in the till, paid several small bills just then presented. There was no record kept in either case of the amount of money taken or the purpose for which it was used. Our informant assured us that this was by no means an isolated case, and that many of the trade have but little realization of the importance of systematized account and record-keeping. The older members of the craft who are thus delinquent, are possibly beyond hope, but the younger brethren must be convinced that modern business is rigorous in the matter of book-keeping and that negligence in this particular means certain failure.

AIKIN, LAMBERT & CO.'S

Self-Filling Fountain Pen

Retails 3A, \$3.00 4A, \$3.50 5A, \$4.50



We offer to the trade a new self-filling device in Fountain Pens that we believe for convenience, durability and simplicity to be the best yet invented for this purpose, and shall be pleased to furnish samples to dealers with prices and discounts.

It has no ink joint to soil fingers or clothing. Holds three times as much ink as any other self-filler. Ink is held in a hard rubber reservoir instead of soft rubber sack. Pressing the bulb expels the air and ink flows into the barrel.

NEW and GOOD

Mercantile Fountain Pen

Made and fully guaranteed by

AIKIN, LAMBERT & CO.

19 Maiden Lane

NEW YORK



WEDDING INVITATIONS

A most profitable line for you to handle. Write for information regarding sample sets.

Wm. FREUND & SONS.

ENGRAVERS, PLATE PRINTERS AND EMBOSSEERS
174-176 STATE ST. CHICAGO.

COMMENCEMENT INVITATIONS



THE "CLEAN-TO-HANDLE" FOUNTAIN PEN

Moore's Non-Leakable Fountain Pen

Retails from \$2.50 up



These pens, being constructed upon entirely different principles from other fountain pens are, without doubt, the nearest perfection of any pens manufactured.

THE FOLLOWING CLAIMS WE GUARANTEE:

1. That the pen is filled without unscrewing the section, thus avoiding soiling the fingers with ink when filling.
2. That the pen is drawn back into the barrel or reservoir after using, and when the cap is turned on is absolutely AIR and INK tight.
3. That it can be carried in any position in any pocket and cannot leak.
4. That the pen is always ready to write the instant it touches the paper.

5. That the barrel being AIR-TIGHT, the ink never thickens or dries up, and if the pen is not used for a year, it writes just as readily.
6. That we have the ONLY desirable fountain pen IN THE MARKET for LADIES' USE.
7. That our "Tourist" or Military Pen is the best pen made for travelers' or military use.
8. That we use nothing but the highest grade gold pens.
9. That we use pure gum rubber, and the superior finish and luster of our holders is very noticeable when compared with others made from common stock.

Sectional View of Pen Closed for Carrying



American Fountain Pen Co.

Boston, Mass.

R. W. SPENCE, New York Agent, 152 Broadway
I. P. PATCH, Philadelphia Agent, 1029 Chestnut Street



JOHN HOLLAND FOUNTAIN PENS

Lately improved with a PATENTED FEEDING DEVICE

Also makers of Gold Pens, Fine Pen Holders, Pencils, Toothpicks, Thermometer Cases and Stylographic Pens.

THE JOHN HOLLAND GOLD PEN CO.
Established 1841 127-129 E. Fourth St., CINCINNATI Eastern Sales Dept., 66 John St., New York City

THE SUCCESS OF THE PEN AGE

The "MODEL" Fountain Pen



THE MODEL OF PERFECTION. Retail Price, \$1.00 to \$10.00. Made of finest grade rubber and fitted with a 14 K. Gold Pen. No extra charge for special imprint. Every pen guaranteed. Write for samples and prices. All makes repaired and returned same day received.

HERING & CO., 47 Ann Street, New York



No. 650
25 cents

Send for sheets showing advertising illustrations specially prepared for the use of Jewelers and Opticians. Prices nominal

THE KEYSTONE PUBLISHING CO., 809-811-813 North 19th St., PHILADELPHIA, PA.

No. 669
35 cents





Wedding Stationery

As we are now in the midst of the wedding season and as fashion is very exacting in the matter of style in matrimonial stationery, it behooves the jeweler-stationer to be posted on the latest fashionable styles and sizes as ratified by the usage of the best society. Styles in wedding stationery, says the *American Stationer*, change slowly; but because of the importance of the event in connection with which this class of goods is used, it is extremely necessary for the stationer to keep acquainted constantly with the tendency away from the forms that are accepted as most conventional. For this reason considerable interest attaches to the invitations used in connection with the recent wedding at the White House, when a style somewhat different from that which had been most popular in recent seasons was used. The sheet of this invitation measured $6\frac{3}{8} \times 5\frac{3}{4}$, and the envelope $6 \times 3\frac{1}{2}$.

From the dimensions it will be observed that the envelope was of a more oblong type than has of late years been regarded as most conventional by the leading engravers. This growing tendency toward the oblong envelope, though important, has not as yet, it should be remembered, gained such strength that it is likely this season, or perhaps even next, to supersede the styles that have been most popular during the past few seasons. These styles are being purchased in large quantities every day by the leading engravers throughout the country, and, of course, this is the best evidence that their use will satisfy all the conventions.

The stock most favored continues to be a kid-finish, though, as in past seasons, limited quantities of fabric-finished paper are being sold.

The style of engraving continues practically without change from last season. Script and Old English and Roman, both black and shaded, are the varieties of letter most used. Principally because of the cost, script, of course, is most used; though some customers whose purses are not limited, frequently order this style because they consider it in better taste. French script, which was first used a few seasons since, continues to be carried among the samples of prominent engravers, but its popularity increases but slowly. Some handsome samples of shaded French script have been shown, but no great demand for this work, in spite of its beauty,

is reported, which is due undoubtedly to its excessive cost.

The most conventional forms continue without punctuation in the text, the single exception, as heretofore, being that a comma is used after the day.

George B. Hurd & Co. report the current demand for wedding stationery as showing some tendency toward the new oblong envelope. Fair quantities of the following styles and sizes have been ordered by engravers in certain sections:

Series.	No.	Sheet.	Envelope.
71	7½	5 x 5¼	5½ x 2¾
71	8½	5¾ x 5¾	6 x 3
71	9½	5¾ x 6¾	6½ x 3

This house, however, still reports its demand as confined most largely to the following sizes, which have been its popular sellers during several seasons past:

Series.	No.	Sheet.	Envelope.
71	9	6¾ x 5½	5¾ x 3¾
71	8	6½ x 5¾	5¾ x 3½
71	6½	6¾ x 5¾	5¾ x 3½
71	6¾	6¾ x 6	6¼ x 3½
71	11½	7½ x 6½	6¾ x 3¾

Church, at home and reception cards, made especially to accompany these series, may be obtained by simply mentioning the number of the invitation.

The Whiting Paper Company reports some request for the oblong sizes; the first mentioned, it will be observed, being that used at the Longworth-Roosevelt wedding, and the last, Adrea, is a thoroughly new style:

Style.	No.	Sheet.	Envelope.
41	7½	6¾ x 5¾	6 x 3½
71	8½	7½ x 6¾	6½ x 3¾
Adrea	1	5½ x 6¾	6¾ x 3½

The demand, however, is said more especially to favor the "New York" style, the sizes of which follow:

Style.	No.	Sheet.	Envelope.
New York	2	5½ x 6¾	3½ x 5½
New York	3	5¾ x 6¾	3¾ x 5½
New York	4	6½ x 7¼	3¾ x 6¾

The Whiting Paper Company also reports a good demand for the "Empire" style, as follows:

Style.	No.	Sheet.	Envelope.
Empire	1	5½ x 5¾	3½ x 5¾
Empire	2	5¾ x 6½	3¼ x 5¾
Empire	3	5¾ x 6½	3¾ x 5½
Empire	4	6 x 6¾	3¾ x 6¼

The ceremony cards vary as to size, but at home and reception cards to match the sizes given are furnished.

The Marcus Ward Company reports its best demand for the various styles and sizes, the heaviest sale, however, being on the 71.7 size:

Style.	No.	Sheet.	Envelope.
71	7	5¾ x 6½	3¾ x 6
71	5	6½ x 7½	3½ x 6¾
61	6	5¾ x 6¾	3½ x 5½

The New Spring Papeteries

The authority above quoted says: The spring assortment of papeteries is unusually extensive, and the attractiveness of the boxes also compares more than favorably with that of the corresponding season in previous years. The factor of price is, of course, an important one in making up the spring lines; and when this is remembered it will perhaps be agreed that the lines which have just been placed on the market, exhibit even more commendable creative genius, than did the excellent lines of the past holidays. Spring goods cannot encroach on the field of fancy goods, as holiday papeteries are doing more and more each season, but the increasing success that is being attained each season with the handsome Christmas goods is teaching the manufacturer that the element of attractiveness in spring boxes, so far as it is feasible within the popular price range, is decidedly worth taking into consideration.

Big Demand Foreshadowed

The initial demand for spring was unusually large, and the reorders are confidently expected to show up correspondingly well. This success, however, is not surprising, but was looked forward to and provided for when the lines were planned. Quantity naturally reduces the cost of individual designs, and with prospects of a less liberal demand, so many nor such excellent designs could not have been undertaken.

Floral designs, most appropriately, since they best express the spirit of the season, have been numerously used; but the colors and the general outlines are greatly improved, except perhaps in the lines of certain manufacturers who for some seasons past have produced very commendable goods of this sort. On many boxes, some of which contain the very highest grade stock, simply the title of the paper appears, embellished only with a small border or fancy scroll.

The Art Papeteries

The art papeteries have been extended by the addition of only a comparatively small number of subjects; to the selection of which, however, much care and attention have been given. These make excellent display pieces, and dealers who in the past few seasons have handled them to the best advantage, have bought larger quantities than ever this season. Reorders also have been exceptionally good, which indicates conclusively that these goods will increase their already great popularity during the present season. In addition to the black and white subjects, in which form these papeteries were originally introduced, some very handsome subjects in colors and unique photo effects may also be had.

DIAMONDS

Diamonds are our great specialty. We import them in the rough, using only the better grades. We have our own cutting plant, with the finest cutting facilities and the most skilled workmen. We thus save duty and so economize in the cutting and distribution that we can furnish the best stones at the lowest prices.

DIAMOND REPAIRS

In diamond repairs—re-cutting and re-polishing—we can be especially serviceable. We have had years of experience in this work and guarantee satisfaction. We will gladly give estimates on all work of this character.

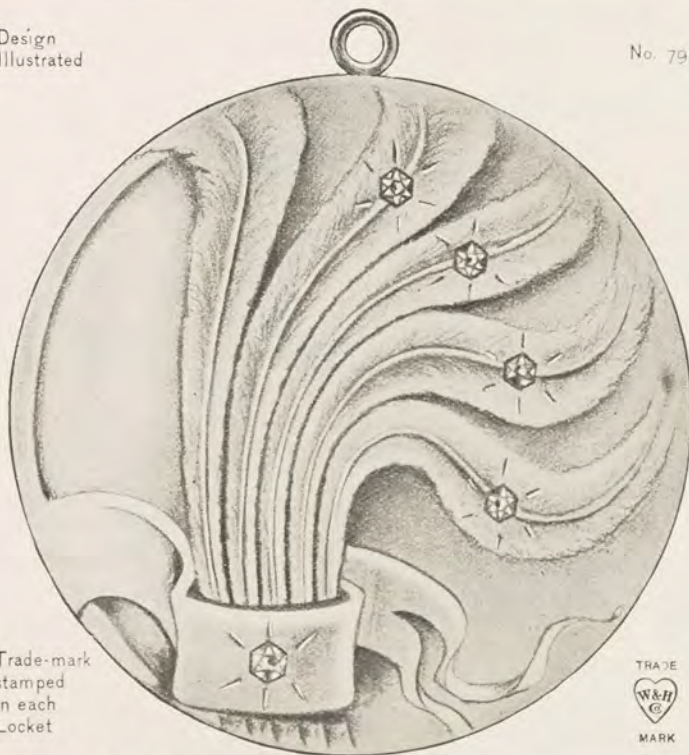
Stein & Ellbogen Company

DIAMOND CUTTERS and
WHOLESALE JEWELERS

Columbus Memorial Building
CHICAGO

Design
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Trade-mark
stamped
in each
Locket

TRADE
MARK

Our **LOCKET** creations continue to be the standard for workmanship and design. Originality and quality have combined to render the excellence of W. & H. Locketts unsurpassed.

3 Maiden Lane
New York

Wightman & Hough Co. Providence, R. I.



EARN A GOOD SALARY

Be master of your business

Increase your salary

GOOD Engravers are always in demand and are better paid than any other class of workmen. We want to mail you our booklet, giving particulars; it is yours for the asking. We also will send samples of students' work free of charge. Write us.

THE REES ENGRAVING SCHOOL

3 Departments
The Largest School
The Finest Equipped

Steele Memorial Library Building

ELMIRA, N. Y.

F. H. REES, the author of the "Art of Engraving," Proprietor and Instructor

Graduation Gifts

CROSSMAN COMPANY

Have them in their swell 14 K. line of dainty Baroque Pearl Jewelry. Art Rings, Necklaces, Pendants, Collars and Ear-Screws especially.

3 Maiden Lane, NEW YORK

Practical Suggestions for Retail Merchants

The Question of Guarantees

Every retailer who buys "guaranteed" goods from the wholesaler or manufacturer and sells them as such to his customers, ought to find out exactly what the guarantee means—to have it reduced to writing by the concern from which he buys, so that he may know exactly how far he can safely go in repeating it to his customers, says a writer in *Printers' Ink*. Far too often a guarantee means absolutely nothing. If put into words, it is frequently so ambiguously stated as to thwart even the proverbial Philadelphia lawyer in any effort to unravel it and find anything which actually places the responsibility for any shortcomings in the goods upon the man or concern who issued it to help sell the goods and not with any purpose to protect the purchaser. Many merchants are selling guaranteed goods largely on the strength of the guarantee, without any idea of what the guarantee covers or any knowledge of what the manufacturer will do if they (the retailers) replace such of these articles as are defective with new ones, without charge. Every merchant who is doing business in to-day's way must protect his customers, wholly on his own responsibility, by the liberal "money-back" guarantee that means money back in case of dissatisfaction for any reason or for none at all. At the same time, the manufacturer's guarantee, if it amounts to anything at all, should be a valuable aid in pushing the goods and help to give them a standing which will be mutually beneficial to maker and seller. And this is of particular value to the dealer who controls some particular line in his town and is anxious to make the most of it.

Guarantee to the Consumer

The manufacturer who really wants to add to the reputation of his product and to know the reasons for dissatisfaction with his goods in those cases where it occurs, will see that his own guarantee goes straight to the consumer with his goods, by inclosing it with them or attaching it to them, in printed form. And he will see that it covers, clearly, and beyond the impossibility of misinterpretation, if that is possible, every point in which there is even a remote chance for disappointment on the part of the buyer. The best guarantee—the easiest one to put into words and the one about which there can be no misunderstanding, is one which authorizes the dealer to refund full purchase price without question. There is no harm in instructing dealers to find out, after the money has been refunded, the real cause for complaint, if it can be done in a way that will not give offense. But the first concern should be to inspire confidence on the part of the customer—to make him feel that the maker himself is back of his goods, and to offset dissatisfaction in the purchase with thorough satisfaction in the adjustment of the matter complained of. This gives the manufacturer the full benefits of the "money-back" proposition, even when his goods pass through the hands of those merchants who have not yet seen the advantage of that policy; and such merchants, I am glad to say, are becoming more and more rare. "Money back" is so common nowadays that it is generally taken for granted. Many retailers have been using the idea so long that they regard any reference to it as entirely unnecessary. It is true, nevertheless, that the average retailer who gives money back does not yet know how to do it in the way that will be most useful to himself, and

either through ignorance of good business or a deliberate purpose to refund only when no other course is open, "gives up" in a way that defeats the purpose of the whole scheme by making the customer even more dissatisfied than if there had been no money-back offer. Remember that while some people are impressed by the appearance of liberality, more are won over by its practice. Don't pretend to be liberal—be liberal in fact, and the results will take care of themselves.

A friend of mine, a mechanic of more than ordinary skill and knowledge of business methods, bought a guaranteed, or warranted pocket-knife. He didn't know how far the guarantee went, in fact never gave the matter a thought until he snapped off one of the blades in attempting to open a bottle, or in some other use for which the knife was never intended. Then it occurred to him to find out what was back of the word "warranted" which he found on each blade. There was no apparent flaw in the broken blade, but, as he said afterward, he made one, "just for the sake of argument" by the skillful application of a little India ink to each of the broken parts. He presented his "evidence" to the dealer, with a show of outraged innocence which he calls to his assistance in emergencies, and, anticipating some objection on the part of the dealer, demanded to know in no uncertain way what was going to be done about it. Much to his surprise and somewhat to his discomfiture, the clerk, after examining the fracture and noting the make of the knife, said there were just two things to do about it—he could take his choice between his money and a new knife. Of course, my friend immediately took the clerk into his confidence and told him just how and why he had played his little trick—simply to find out what "warranted" meant on that particular make of knives. Then the clerk rather spoiled the good impression he had made by showing a disposition to get mad.

The point I want to make is simply that those who offer "money back" unconditionally are sure to be imposed upon occasionally by some less scrupulous person than my friend—that merchants who make that offer and live up to it, will sometimes have to refund money when in justice they should not and when they know that they are being "worked." But not for one minute should these occasional impositions be considered as against the direct and cumulative benefits of refunding promptly and willingly when called upon to do so.

The Telephone in Business

Business people who put in a telephone to facilitate business, and then, because it happens to interrupt them at inconvenient times, answer calls with a gruff and impatient "Well?" had better take their 'phones right out again, for they will not facilitate business very much when used in that way. Early in my business experience it devolved upon me to "make change" for a large store employing a rather rapid and very busy cash carrier system, and, at the same time, take complaints and orders over the 'phone. Naturally, these duties kept me from worrying about my other troubles during business hours, and not infrequently my patience was sorely tried. Many of our telephone customers were women of the town's well-to-do families, and it occurred to me one day that we would hardly greet any of them with the somewhat undignified "hello" of the telephone if they gave their orders in person at the store. It also struck me that a short "hello" was much more likely to have the impatient, hurry-up-

sound than "good morning," so I disregarded precedent and greeted our telephone customers with a pleasant yet businesslike and wholly respectful "good morning," whether there was an order or a complaint in the tone of the "hello" that came from the other end of the line. I am not going to say that this increased the business perceptibly—it may not have made a cent's worth of difference. But I do know that favorable comment occasionally reached my ears, and I am sure that it went far toward mollifying those who called us up to make complaints. A telephone conversation is supposed to be brief and very much to the point; there is no time in business 'phoning for unnecessary preamble, but I believe a cheery "good morning" or "good evening" is worth a mile of "hello's," and the extra time it takes is of no consequence.

That reminds me that some business men who wouldn't think of lying to a customer in the store, or of making rash promises, will lie and promise "regardless" over the 'phone. A customer calls up to know when her purchase will be delivered, or to ask why it has not been delivered and is told, without investigation, that it has been sent or is now on the wagon. A purchase of my own, here in New York, was "on the wagon" for a week, or the man at the other end of the 'phone was a great many kinds of a liar; which, of course, he was. A personal call and investigation at the store disclosed the fact that the goods had not been received from the western factory, but were expected every day. The truth might have lost them one sale; the lie has already cost them several, I think, and it is still working. It was a telephone lie, probably, because it is easier for some people to lie when they don't have to look the other man in the eye while doing so.

Opening Credit Accounts

You can't be too careful how you treat an applicant for credit, if you open accounts. You are bound to protect yourself by requiring references and asking certain questions of the applicant himself as to his ability to pay. But, if you decide not to grant the accommodation, don't make a foolish attempt to retain the good will of your would-be customer by resorting to deceptions as to your reasons; which, instead of sparing his feeling, make it plain to him that you think he is not only a knave but a fool as well. If you accept his application, then find out what he wants to buy, look up his references and finally decide not to take the risk, don't tell him that you are "not opening any new accounts." He will know that's a lie, if he knows anything at all, and he will very properly resent it. He will know that if you were opening no new accounts, you would have told him so in the first place. Simply tell the man the truth—tell him that from all you have been able to find out, you believe that he intends to pay, but that you think he has perhaps overestimated his ability to pay on the date stipulated, and you do not feel justified in letting him have the goods.

If he is a straight out-and-out "beat" (and these are relatively rare) tell him straight out-and-out that you do not care to open an account for him; and then if he insists upon your reasons, which he probably won't, tell him that he has the reputation of not paying his bills. Credit can be refused in a way that will bring you the cash trade of the applicant; but it requires tact, and there is a wide difference between tact and the polite fiction that is so often employed. Don't confuse the two; it isn't good business and it won't pay in the long run.



The Queen City Ring Mfg. Co.
Buffalo, N. Y.

Advertising the Repair Department

The summer season is an excellent time to push the repair branch of the jeweler's business. Many a home has from two to a half dozen clocks that stand silently on the mantles useless for time-keeping purposes and which might all be ticking gaily if the local jeweler or his representative called and explained how cheaply they could be put in order. Only a few days ago we visited a friend who prided himself on the possession of a hall clock, three mantle clocks

and a dainty little bed-room clock. We noticed the silence of the timepieces, and the owner laughingly told us that he had purchased two 75-cent nickel clocks to tell the time. We explained to him that all these expensive clocks were being ruined by neglect and disuse and that no doubt the price of a few nickel clocks would put the entire outfit in proper repair. We named a good workman who would undertake the job and telephoned for him. The result was our friend was much pleased with the work and the cost. No one likes the solemn suggestiveness of a silent clock, and the owner will readily pay the expense of repairs if attention is called to the matter.

Samples of Newspaper Advertisements

Diamonds



There cannot be different degrees of perfection any more than there can be different degrees of honesty. If a diamond is perfect it is perfect; because it is perfectly cut, perfectly polished and free from flaws. Let us show you diamonds that are perfect and explain to you why.

Lawrence L. Moore Co.
Direct Importers
Fashionable Jewelers
705 Second Ave. Hoge Bldg.

Jeweled Neck Ornaments

are the demand of the present fashion. Foreseeing this we prepared for it.

Superb Collars of strands of the finest rose Indian Pearls with plain and fancy bars of diamonds.

Collars of Black Velvet set with grouped diamonds in exquisite mountings following Louis XV motifs. Both broad and narrow—the latter have detachable clasps which permit their being worn over the collar as well as decollete.

J. E. Caldwell & Co.
Jewelers and Silversmiths
902 Chestnut St.



The Engagement Ring

reflects the man who buys it. When he buys at Mitchell's it means he's paid cash, but it also means he has invested in the best diamond value in Philadelphia. The same ring would have cost much more elsewhere. Cash Sales and Small Stores explain the whole thing.

A fine white perfect diamond that weighs about 7/8 carat and looks larger, for \$135.

MITCHELL'S STORES
56 N. Eighth 37 S. Eighth
Philadelphia, Pa.

Sell Your Diamond At a Profit

☐ When we tell you that diamonds are certain to advance in price, we not only give an opinion but are ready to back it up in this offer.
☐ We have a beautiful stone, pure white and absolutely flawless, cut heart-shape. A rare and brilliant stone weighing 2 3/8 less 1/64 carats, and which was originally cut out of a seven-carat stone. It could not be replaced for less than \$750.
☐ Now consider this offer. We will sell it for \$500 and buy it back for \$550 at the expiration of two years from the date of purchase, if the buyer wishes to return it.
☐ This is a generous proposition, but a safe one, because we are sure the stone will be worth that much more to us at that time. Or you may keep it one year and we will buy it back for just what you paid for it—\$500 cash.

CHAS. S. STIFFT, Little Rock, Ark.

WATCH NEED CLEANING?



No watch will tell correct time if it isn't cleaned and overhauled occasionally; if your watch hasn't been cleaned for a year it's pretty certain that it needs attention. With expert workmen, best materials and all facilities for fine watch work, we promise entire satisfaction in the matter of cleaning or repairing. We loan you a watch meanwhile.

A. D. NORTON CO., Gloversville, N. Y.

Jewelry Repairing

When a piece of jewelry gets out of order, it is highly important that the repairs be done by an expert in his line. We have the best equipped shop for this sort of work in this section of the State. No finer or better workmen can be found anywhere than are employed here, and solely on the ground that we do accomplish the best results with your work, we solicit your business.

JUD. S. NEWING, Binghamton, N. Y.



Have You the Right Time?

Unless your watch has been thoroughly cleaned and oiled within 18 months, it can't be absolutely depended upon. We are competent to clean and repair the most complicated movements; all our work is done thoroughly and on time—and the charge will be no more than you'd have to pay where less skill and less care are exercised.

P. H. STEVENS
HARTFORD, CONN.

High-
Grade
Modern
Jewelry
Store
Fixtures
and
Show
Cases



One of the Many Jewelry Stores Designed and Furnished by us

Manufacturing
To Order
Our Specialty

State your wants

Estimates
cheerfully
furnished

ALEXANDER H. REVELL & CO., Manufacturers
Rees, Dayton, Eastman and Hawthorne Streets, CHICAGO, ILL.

Replenish Your Stock with the Popular **NEW COLLARETTES**
AND
STERLING AND GERMAN SILVER BAGS AND PURSES

We have these in sizes from 2 inches to 6 inches. ROMAN, SILVER, GUN METAL and OLD ENGLISH FINISH. WHITE KID LININGS

These bags have many meritorious points in style, construction and finish. The principle upon which they are made obviates rivets, and the tops are not drilled. Just as good is but a tribute to their superiority, and should be so understood. Our Bag is the best.

STERLING AND PLATE
BROOCHES
BEAD NECKS
BACK COMBS
CUFF PINS
HAT PINS
SCARF PINS
NECK CHAINS
ETC.

Buckles

Bracelets

Bags

CIGARETTE CASES
MATCH BOXES
LOVING CUPS
COIN HOLDERS
CIGAR CUTTERS
KEY RINGS
KNIVES
SCISSORS
NOVELTIES
ETC.

Headquarters for Souvenir Spoons

CODDING & HEILBORN CO., North Attleboro, Mass.

New York—Chas. Van Ness, 11 Maiden Lane

Western Representative—C. H. Davison

San Francisco—H. C. Van Ness & Co., 115 Kearny St.

Qualifications of the Modern Traveling Man

Evolution has been at work in the field of salesmanship as in everything else, and there is little in common between the traveling man of to-day and his care-free prototype of a century ago. Wherein the difference consists is well told by a leading authority on modern salesmanship in the following excellent article:

The Keynote of Salesmanship The logic of facts and experience is the great teacher. When looking for a clue to future success we must try to note the causes of present weakness or of past failure. In the field of salesmanship, it may as well be admitted, the average salesman does not inspire confidence in those who have dealings with him. He is the victim of what may be called a traditional mistrust, and its origin can be told in very few words.

So far as the public knows, salespeople have never been held to high standards of capacity or character. There is the whole secret. Not much was expected from the salesman beyond a certain glibness of speech and alertness in the performance of routine daily tasks. Nobody ever thought of training or instructing him in a special manner for the discharge of his duties. Nobody gave him lessons in the courtesies of life to those around or in any responsibilities attaching to his position. In very many cases his choice of the occupation was but a mere accident. Employers only viewed him as a member of their sales "force," pretty much as they would look on one of the "hands" in the factory.

Hence, he had no special pride in his profession and not enough in himself to care very much for achievement or distinction. If ever he chanced to bloom into high proficiency it was because, like Topsy, he "just grewed."

Customers as Victims But that was not the worst of it. In lieu of better things, the chief requisite for the position was deemed to be "smartness." It is a vague sort of merit and was mostly supposed to include a faculty for "getting the best" of others, for wheedling them against their true interests, for persuading them to buy things they did not want, or to believe that expensive "gim-cracks" were prodigious bargains. In its essence the salesman's "smartness" was but his genius for cunning and pretense, and there were places where it was winked at even if tainted with falsehood.

But a new order of things has arisen out of the old. The growth and rivalries of trade have made confidence a necessity of the business life. To-day it stands for credit,

for patronage, for varied enterprise and wider commerce. It is the salt of business intercourse in every field, and is as needful to the man at the counter or to him who goes out with a sample case as it is to the merchant or producer whose staples have a world-wide fame.

Every cog in the machinery of trade must be stamped with this quality, and it is the very keynote of success in selling.

Now, confidence is a luster shed by the man, or the woman—the person or party in any transaction—and hence it is a maxim of the new business science that the personality of salesmen must always be such as to invite and hold confidence. This is the great problem for employers and managers.

The Secret of Business-Getting It is the secret of business-getting and business-building. It implies more sales and larger profits, as well as the growth and prosperity of trade. To the salesman himself it means the favor of employers, the friendship of customers, the regard of fellow-workers, better salary, promotion, responsibility and ultimate fortune.

Personality is the jewel that sheds the beams of confidence. It is the tree of which confidence is the charming fruit.

Meanwhile this personality is not in any sense a mere gloss or shell. It is not alone the external bearing or polish of the individual.

It goes deeper. It reaches down to the mine of sterling character.

It implies a sturdy development of all the native faculties of body, mind and spirit. This is a work of time and effort and can scarcely be well performed except under adequate guidance.

It is also the very work which we know as the chief element of business science, and none can doubt for a moment that the favor which this science enjoys in the world of trade is because it is the price of business-getting and business-building.

It is the only true path to enduring success. Scientific salesmanship has come to stay.

Watch and Man—A Repairer's Soliloquy

"No use tinkering with that," said the watchmaker. "It is worn out by the wear and tear of constant use. The case, although showing signs of age, might do, but you would have to buy an entirely new set of works, and for what they would cost you, you could get a new timepiece from case to mainspring.

"Watches are just like human beings," went on the watch repairer, ruminatively, "and we are the physicians. The watches come to us just as humanity goes to the

doctor. We repair a broken-down watch just as your surgeon repairs a broken-down man or woman. Watch and man run for a time as well as ever. Then they break down again, and again they come to us. Again we repair them, and again they run for a time. So it goes on until, as is the case with your watch here, sir, there's nothing left to repair.

"There are cheap, poorly constructed watches, just as there are cheap, poorly constructed men. Both never keep time. They require constant attention and repair. Their life is one constant struggle to keep up to time, and they soon are forced to give up the unequal struggle. How many men there are who have stopped running! Like a useless watch, they lie on a shelf, their works rusting, watching the rest of the world march on, until they are thrown into the junk heap. The good for nothing watch is melted up, and out of it something else is made. So with man. The law of nature says that out of his decay new life shall come.

"Watches come into the world just as babies do. Some are born to be carried attached to bejeweled fobs in the waistcoats of the wealthy, there to mark the time of hours spent amid luxury. Others count the minutes of struggle with poverty and vain endeavor. There are watches born to the penury of hovels; there are watches born the magnificence of palaces. The poor watches are symbolic of the lives of their owners. They often go to the pawnshop. They run behind time or ahead of time, because the owner has not the money to cure them. So men and women and children gradually sink beneath disease. There is not the wherewithal to cure it."

The Johnston Optical Co., of Detroit, Mich., regretfully announces the death of their well-known traveler, Geo. A. Douglas, who succumbed to erysipelas at his home in Toledo, Ohio, on March 27th. His unexpected death will be a surprise to his many friends in the optical trade. Only last month his portrait and a brief resume of his career while in the service of the Johnston Optical Co. were printed in this journal. Therein was recorded his humorously-expressed wish to travel for that company until he was ninety-nine years old and then take a rest. But the rest came sooner than anyone had expected, and so the optical trade loses a genial visitor and the Johnston Optical Co. a valued representative.

The Holtzer-Cabot Electric Company, of Boston, Mass., announce that they have discontinued their New York selling agency and will henceforth furnish their jewelers' buffing and grinding motors direct to the jewelry and optical trades. This company has been one of the recognized leaders in the manufacture of small motors for many years, and their product is well and favorably known to the trade.

John H. Dunham, manager of the Chicago office of the Western Clock Mfg. Co., returned last month from the French Lick Springs, Ind., where he spent a month on account of poor health.

The Allsopp Rings

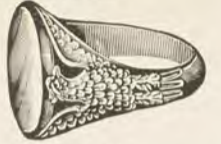


No. 6814
Tiger
Diamond, Ruby Eyes

THE UP-TO-DATE LINE OF

Signet and Set Rings

In twenty years we have built up a business second to none in Rings exclusively. ALLSOPP QUALITY, DESIGN and WORKMANSHIP appeal to the most fastidious. It will pay you to examine a selection package.



No. 6077
Eagle. Signet

A ★
TRADE-MARK

ALLSOPP BROS., Allsopp Building, NEWARK, N. J.

ROYAL DOULTON Fine English China and Earthenware



Illustration shows one of Doulton's Latest Novelties "MOTORING"

WM. S. PITCAIRN

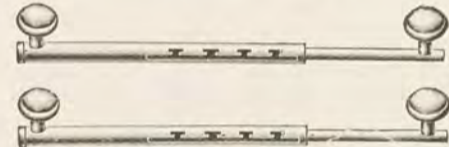
44 Murray St.

New York

WHEN YOU SELL THE Simplex Adjustable Collar Supporters



Actual Size
Shortest Length



Actual Size
Longest Length

(Patented Nov. 25, 1905)

You make both PROFIT and CUSTOMERS. Its adjustment is simply a half-turn and there it stays. The crotch on each end explains why it holds both the collar and itself in place. No spring or intricate mechanical construction to get out of order and puzzle milady.

Made in Sterling Silver, Fine Rolled Plate and Gold Filled. Mounted with Round and Half-Round French Pearl, real Baroque Pearl, and all colors of Oval and Round Stones.

Having the best at the right price and HAVING IT FIRST has made

MANY MERCHANTS MERRY

If your jobber can't supply you, write direct to the

Davis Mfg. Co., Providence, R. I.

THE BEST OPPORTUNITY FOR YOU TO LEARN A PROFITABLE TRADE

The W. L. Newmeyer School of Engraving

Cleveland, Ohio

A practical experience of nearly thirty years with the largest and best-known houses of the country—East, West and South—as well as in training engravers in specialties, has given us the necessary requirements to put you in the way of greatest achievement in the shortest time. Whether you are a beginner, or an engraver of experience who desires coaching in any particular specialty, we are qualified to bring you to the highest perfection of the art.

We guarantee by our original and practical method to give a complete course of instruction, thus fitting any intelligent and industrious person for business requirements. Write for artistic brochure and interesting prospectus.

Monograms designed in an artistic manner in pencil, India ink or color, 50c to \$5.00.

Coats-of-arms, Crests, Heraldic Devices, etc. properly emblazoned, \$5.00 to \$50.00 according to size, style and detail. Also designing of letter heads, book plates, trade-marks, book covers, etc. Correspondence invited.

The W. L. Newmeyer School of Engraving, W. L. Newmeyer, Master
Garfield Building, Cleveland, Ohio



Readers are requested to send for publication new ideas on any subject, technical or mercantile, of general interest to the trade. As this page is for the use of individual readers, we do not hold ourselves responsible for the views expressed.—Editor The Keystone

Soft Soldering Dials

ED. KEYSTONE:—I have read your articles on soft soldering dials, but there is another method which, in my experience, I find more satisfactory. It is as follows:

After placing soft solder around second dial; for example, place a small piece of mica covering the entire second dial and then a piece of harder material, say tin or copperplate, over same to give equal pressure when holding with tweezers. Heat slowly over alcohol lamp. As the solder melts it is forced around the entire second dial, leaving a nice job of factory appearance.

My experience heretofore has been that the solder would not flow around but ball up, and it seemed impossible to get the solder to flow entirely around, and by using any other method the solder would stick to the plate forcing the same down, but it will not stick to mica.

Yours truly,

Loveland, Colo.

B. L. BRANNAN.

Scheme for Preserving "The Keystone"

ED. KEYSTONE:—I have an inexpensive little scheme for keeping my KEYSTONE, which may interest others in the trade. Take a cloth-bound catalogue, as large as the journal, and cut the covers away from the leaves with a knife. Then with an awl punch two holes about an inch and a half a part, near the top of the covers, and two near the bottom. If the cloth strip connecting the covers is thin, it is better to make the holes in the cardboard part, and then with some round-edged tool press a line just in front of the holes and bend the covers back. Take the back cover off THE KEYSTONE, pry up the little pins and pull out. Look over each sheet and if there is only one page you wish to save, it is best to put in the whole sheet. Stack these up as they come from the magazine inside the open covers, punch holes to correspond, run ribbon through and tie. Number the pages, which have items of interest, consecutively, and index them on the front and back covers.

I hated to tear them up, but was short of room, and this kind of a book will hold from four to six KEYSTONES. It does not take long, and, besides, when we wish to look up anything, we soon make up the time.

Very truly yours,

Springfield, Mo.

HATTIE A. BURNS.

Engraving Coffin Plates

ED. KEYSTONE:—An article in a recent issue, relating to coffin-plate engraving, is of interest to me, in as much as I engrave hundreds of them yearly, and this year makes my fortieth at the bench. I have many ways of doing both engraving and watch repairing, and the trade is welcome to what I have learned. In regard to coffin-plate engraving, my way is this: I have a strip of corset steel one inch wide. On one side I have a thin

piece of rubber pasted to the surface. This is my lining rule. You can press it on any kind of a coffin plate and it will not scratch the surface. I then moisten my fingers with soap and pat the same over the plate. I next lay my protected rule on the surface of the plate and line and draft the inscription, etc. After completing the job I run water over the surface and dry with a clean towel, patting the surface gently. I never rub across the plate, as that would scratch. The plate will be as good as new at the finish, without scratch or blemish.

Now, in regard to black plates, after patting the surface with soap, I let it dry and then gently pat whitening or polishing powder over it. I then draft as before, and the lines and letters will show black through a white foreground distinct and plain. At completion of the job run water over the surface and finish as before.

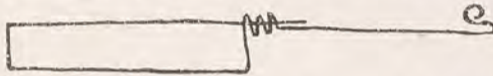
Yours truly,

Stamford, Conn.

GEORGE WEED.

Wire for Stringing Watches

ED. KEYSTONE:—As I am most interested in watch repairing, I thought it might interest my brother repairers to learn of a little device I use for stringing parts of watches during the process of cleaning. It is simply a wire bent like this:



and I think it excels in convenience and simplicity any thing I have seen.

Yours truly,

Honey Creek, Ind.

L. R. FADLEY.

Clock Corrections by Wireless Telegraph at the Bureau of Standards

ED. KEYSTONE:—When a Riefler clock was purchased by the bureau of standards at Washington, D. C., as a standard clock for use in the testing of watches, for which work preparations are being made, the question at once arose as to the best method of obtaining the clock's rate. The use of a transit instrument for star observations would involve the expenditure of much extra time, and unless a large number of careful observations were taken it would not give as satisfactory results as it was expected the clock would justify. Furthermore it would be a partial duplication of the work of the naval observatory, where observations with a meridian circle instrument are carried on almost continuously day and night in clear weather. Inasmuch as the noon signal from the naval observatory is based upon the combined rates of two or three clocks, with the advantage of all these careful observations, it was thought desirable to use the noon signal for the rating of the clock at the bureau of standards.

Upon inquiry it was found that the installation and maintenance of a direct wire for this purpose by the telephone company (the telegraph companies are not permitted to erect lines in the District of Columbia for any but inter-State telegraphic purposes) would be costly. The problem has been successfully solved by wireless telegraphy however.

The navy department was making arrangements to send out the noon signals from their various wireless stations in the navy yards throughout the country for the use of their vessels in rating their chronometers, and the bureau of equipment of the navy department offered the loan of a Lodge-Muirhead receiving apparatus to the bureau of

standards. This has been installed at the bureau in the time laboratory, and with a wire merely attached to the top part of one of the trees in the grounds for an aerial, the noon signal has been received very successfully for over a year.

In the Lodge-Muirhead receiver the message is taken off on a tape run by clockwork. A line is traced on the tape by ink flowing from a capillary glass tube attached to a galvanometer coil, which jerks this pen towards the back at each impulse of the coherer. In this way the second beats of the noon signal are marked off on the tape similar to the record on a chronograph. The speed of the backward movement of the pen and of the recovery after decoherence can be regulated, with the result that a record can be obtained which is almost as sharp in the break as the best work of a relay and chronograph, except that the second marks are a little longer. A movement of the tape of about 1.9 cm. per second has been found to be the best speed of those available with the apparatus.

The apparatus also permits connection with a clock by wires, so that the seconds' contacts of the Riefler clock can be recorded on the tape at the same time with the same marking device, and thus the error of the Riefler is determined very accurately. The noon signal from the naval observatory omits the last five seconds before the end of each minute except the last before noon, when it drops ten seconds. The Riefler clock drops only the fifty-ninth second of each minute and thus the two records are distinguishable and the hour, minute and whole second correction is determined. The two records also differ in the shape of the second breaks. For the direct wire connection with the Riefler produces a stronger jerk on the galvanometer coil with a resulting higher and sharper break on the record than is accomplished by the noon signal record from the coherer. Having read by the omissions of seconds the whole-second correction of the clock, the fractional part of a second is found by measurements with a scale, ten successive seconds usually being measured.

At the end of each month the naval observatory furnishes the bureau with a list of the errors of the sending of the noon signals (seldom as large as 0.10 sec.). When these are applied to the observed daily corrections, the daily rate of the Riefler is probably known within 0.02 or 0.03 of a second.

The signal is sent out by the wireless station in the Washington Navy Yard, being transmitted to the navy yard from the naval observatory by wire. The distance from the station in the navy yard to the bureau of standards is about six miles, so short a distance that with the strength with which the signal is sent no "tuning" of the receiving apparatus is necessary. It is possible that there are delays from the mechanical action of the transmitting apparatus at various points in the circuit from the observatory to the bureau of standards, such that the absolute correction to the Riefler is not determined as closely as the figures given above. But it is reasonable to suppose that these delays are practically the same each day, and very small besides, for the entire transmission is automatic, so that the relative corrections, and consequently the rate, are known within the limits given. And it is the rate of the Riefler that is desired rather than its absolute correction.

The signal has been received without any apparent difference in heavy rains and snow storms and when the aerial was covered with a heavy coat of ice. So altogether the method seems to be a very reliable and satisfactory one.

Truly yours,

Bureau of Standards,
Washington, D. C.

ROY Y. FERNER.

BIG PROFITS FOR THE JEWELER

in B. & D. China and Glass Specialties for

JUNE WEDDINGS

Special packages of different makes of richly decorated china, crystal and gold glass suitable for jewelers' trade now ready. Advance fall styles. Our crystal and gold glass is different from other makes. Will not tarnish. Send for \$25.00 assorted package or for some of the items below. Big money-makers. Prices quoted subject to 5% discount 30 days. Write for "B. & D. Bulletin." Free.



\$1.65 ea.
No. 2000 K., Tall Bonbon



\$3.00 ea.
No. 2001 K., 8-in. Berry Bowl



\$12.00 doz.
No. 2002 K., 6 shapes, 6 Engravings Asst.



\$8.25 doz.
No. 2003 K., 6 Eng. Asst.



\$1.50 ea.
No. 2004 K., Handled Jug

BAWO & DOTTER

26 to 34 Barclay St., New York

Watchword of the Craft—"Stand by Those Who Stand by You"



Finest and in fact
the ONLY line of

HOLLOWWARE

Made for and sold exclusively
by the

Retail Jewelry Trade

Guaranteed to wear to purchaser's satisfaction. Only sensible guarantee we know of—and we give it.

Rockford Silver Plate Co., ROCKFORD, ILL.

A TREATISE ON ESCAPEMENTS

A thorough knowledge of the several escapements is the first essential of all who aim at competency in watch work. To obtain this knowledge in the most practical way, and in the least time, procure a copy of the book

Watch and Clock Escapements

This book is the work of two of the most accomplished and experienced teachers of horology in the United States, and their skill in imparting their knowledge to students is shown on every page of the book, both in text and in illustration.

Sent postpaid to any part of the world on receipt of price, \$1.50 (6s. 3d.)

Published by THE KEYSTONE PUBLISHING CO., 809-811-813 North 19th Street, Philadelphia, Pa.



The Man Who Fails

NONE of us can appreciate the feelings of the man whose business craft smashes upon the rocks of failure until we have been there ourselves. I am speaking now of the honest man whose business runs into the mire of grief and not of the man who deliberately puts it there. After one has worked long hours each day through many years to make a success of the business, he must, indeed, feel discouraged when he finds that the doors must be closed, the assets divided among creditors, and he make a fresh start back at the very mark where he began.

Success After Failure

The man who succeeds after he has once failed deserves credit for it. No matter of what stuff a man may be made, he is severely handicapped when he begins his second race for success with the reputation of a failure at his back. Every report that goes to the credit man, makes a note of this failure. How discouraging it is to feel that credit men the country over, while acknowledging that he may be a man of energy, perseverance and integrity, are everlastingly revolving in their minds that one phrase which says, he failed once. It is a fact, however, that many men do succeed with this handicap, and in that many men who start on this second race for success find their encouragement and consolation. You who have never gone through this experience do not know what it means, any more than we can appreciate fully the meaning of the death of a dear friend until we have been brought face to face with ourselves with that saddening experience. After all, the failure of a business conducted by an honest man, is a good deal like a death in the family. The one is the death of our dearest hopes in the business world; the other is the death of a person dear to our hearts. After such an event we must endeavor to find encouragement to continue life on as near the old basis as possible. We simply have gathered new experience, and with that we ought to go on with our best endeavors. As long as there is life there is hope. As long as there is hope there ought to be energy, and that condition has turned defeat into victory and followed a business failure by a business success many times.

When Prospects Change

Most of you have probably met the man who has failed and have talked with him about his experience. But did you ever compare notes with him shortly after the business had passed from his hands into the control of the trustee and soon after the realization had come that his bright prospects have really turned to ashes? I have

had that experience several times in my life, but one in particular stands out in bold relief. This was one of the best fellows and one of the finest gentlemen I ever met, one of the kind of men you want to see succeed, and when he fails one of the kind who ought to receive all of the encouragement and assistance possible from his old friends. On one of my annual visits, he told me that things with him were promising quite well in a business way. On my next visit, about a year after, I found that the trustee had taken charge but a week before. That was a quick change, you may think, but such changes are frequent in mercantile affairs. None of us are exempt, especially when all of our working capital is tied up in book accounts and stock, and the obligations at the wholesale houses are large. No matter how good a country you may be doing business in, you are always in danger of running against adverse conditions which will bring you financially back if you happen to be spread out too thin. This was exactly what happened to this merchant. He was doing business in a grain country, and in his enthusiastic endeavors to increase his volume he reached a little too far.

Along with the trustee came a remarkable change in the attitude of many of this merchant's so-called friends. I think the differences I noted mostly cropped out among the list of friends this merchant was supposed to have among the traveling salesmen. The time when a man's friends are tested are in the hours of his adversity. Of the many traveling salesmen who had been favored with good orders by this merchant, very few called to see him after they learned that he was down and out. There were a few sturdy fellows built of the right stuff who came and offered their consolation and encouragement, and explained that when he got the business in shape again they would do all in their power to place him right with their houses, because they felt that his energy and integrity would bring him success in the long run.

That was a little thing, but to any of us down at the bottom of the slough of despond these words mean a great deal. To know that when you are temporarily under a cloud, there are people who still have faith in you is worth much. This merchant did get on his feet again, and I note that the traveling salesmen who had the good heart and the manliness to call on him every time they came to town, are getting good orders from him to-day. The other fellows who scoffed and sneered from a distance, or who simply passed this merchant up "like a white chip," are calling there again. Their jolly is just as plentiful, and spread on just as thick as ever before, but this merchant with his new accu-

mulation of experience has weighed these fellows in the balances of friendship and found them wanting.

The common herd kick a man when he is down, but there are men built on a higher order who cheer the loser on to better achievement. Of which are you?

There are more extremely conservative men among the retail merchants I meet than there are downright plungers. These two types are at each end of the line, with the great majority of merchants in between. I do not know which one of these deserves the most of our sympathy. The plunger is doomed to failure from the start. He is forever trying to do things on a much better scale than conditions in his community will warrant. It may be that were he placed right in a large center of population with more opportunities around him, he would be successful. But usually the man who plunges in one place, will learn to take a deeper plunge if he gets where the water is deeper. These men are the gamblers in the retail business. They buy big, and like to be known as big buyers. What they think will prove their best deals, turn out to be the big money losers and the day of reckoning finally comes.

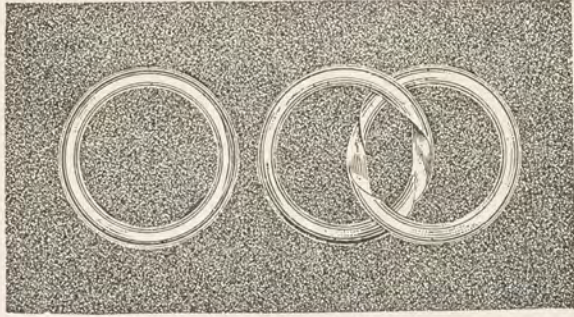
On the other hand, the extremely conservative man never grows to the full size of his opportunities. He seems to shrivel as the days and weeks go by. Fear becomes such a big element in the promptings within him that he never gets on to new ground. He rarely makes good profit on a new line, because of the fear that he may lose a few dollars. He is always known as good pay and he probably discounts much of his bills, but the wholesaler who sells him will probably tell you that his purchases have increased but very little through a long range of years.

To my mind, one of the real tragedies of life is the man who has ceased to grow, whether he be the old clerk who is content to stay on in his old job at the same old salary, the bookkeeper who comes and goes each day and is satisfied if they will just let him alone and let him have the job to the end of his days, the traveling salesman who bumps along in the same old rut, having long since degenerated into an order-taker and who plainly shows that his record is behind him, or the merchant who thinks that every time his competitor does something new and out of the ordinary the competitor is going broke.

Give me the merchant you call the happy medium between the plunger and the conservative. He is the fellow who is always ready to try an enterprising scheme if it is built on sensible lines. He takes his loss with a smile if he loses, but nine times out of ten he wins.

—*Minneapolis Commercial Bulletin.*

Numerous inquiries have been made, Who makes



THE ALLIANCE RING?

Let us solve this question for you
WE DO!!!

The graceful style of the Alliance Ring is rapidly supplanting the use of the old-style wedding ring.

Its mysterious construction is another reason for its increased demand.

We have thus far supplied the entire demand, and we take these means to inform you that should you need them, we can supply you.

These rings are most carefully adjusted: the joints are barely perceptible, except by a magnifying glass.

Whenever engraving is desired, it is done in the inside flat surface. They are easily opened as shown on illustration by inserting a sharp instrument, for instance a pin, in the inside pin hole.

They should not be pried open, as this would destroy their adjustment.

14 karat, 3 dwts., each, \$1.25 per dwt.; in dozen lots, \$1.10 per dwt., net
18 karat, 3 dwts., \$1.40 per dwt.; in dozen lots, \$1.25 per dwt., net

LEONARD KROWER, Manufacturing Jeweler

536-538 Canal Street

New Orleans, La.

DIAMONDS LOOSE AND MOUNTED

MAKERS OF FINE JEWELRY

JOS. NOTERMAN & CO.

512-514 RACE STREET

CINCINNATI, OHIO

DIAMONDS RECUT AND REPAIRED

SIGNET-
LOCKET
RINGS
for
PHOTOS

AN EXCLUSIVE LINE OF RINGS



No. 1755 Open



No. 1751 Open



No. 1751 Half Closed

Write for the Fifth Edition
CATALOGUE
containing Illustrations of new and
salable Rings and Locketts

Pacific Coast Representatives
A. EISENBERG & CO.
126 Kearny St., San Francisco, Cal.

CHARLES M. LEVY

Manufacturer of

FINE GOLD RINGS AND DIAMOND LOCKETS

90 William St., NEW YORK

Interchangeable
Encrusted Initial and
Emblem Rings

(Patented Nov. 27, 1900)



Popular Craze for Diamonds

Higher Prices and Bigger Sales—Women the Best Customers—Many of the Public Expert Gem Buyers

WHILE the continued advance in the price of diamonds is not welcomed by the jewelry buying public, the effect of it seems to be an increased desire for possession of the gems. This, in conjunction with the unusual prosperity now prevailing, explains the enormous importations of diamonds during the past year, all records having again been broken. And yet a New York jeweler who caters to the very wealthy, is quoted as saying:

"The very wealthy are now after something more rare than diamonds. They don't spend fabulous sums any more making a collection of diamonds. It is pearls, emeralds, rubies these women covet.

"There are collections of pearls owned by New York women easily worth from \$800,000 to \$900,000, and the rivalry among women of fashion with big bank accounts, on the jewel question, is no longer as to who shall wear the biggest and finest diamonds, but who can secure the rarest and costliest of the other stones I have mentioned.

"Years ago the top notch of extravagance and of fashion was reached when \$50,000, say, was paid for a diamond necklace; that is, for a row of large solitaires reaching once around the neck. To-day we haven't one necklace of that description in stock.

"No, it is not altogether a question of change in designs. It means rather that any one rich enough to afford \$50,000 for one piece of jewelry is generally rich enough to go higher and combine other jewels with the diamonds.

"Collars and chains of diamonds are in demand now, but these pieces do not represent the most costly of the jeweled ornaments which are owned by rich American women, and which generally create something like a sensation when worn in public either here or abroad.

"But the government reports are correct. The demand for fine diamonds was never brisker than now and it grows all the time; and by fine diamonds I mean the most perfect stones only, stones without a flaw.

"Who buys them? Principally persons of moderate means, or what is called moderate means now-a-days. Fifty years ago these people would have been called rich. And we have other good diamond customers who are only a little more than well off.

"The other day a very plainly dressed woman came in and asked to see a diamond

corsage ornament, something in the nature of a breastpin, although we don't call them breastpins now. Judging from her appearance—she wore no jewelry, not even a chatelaine watch, and carried only a plain black leather wrist bag—the clerk showed her several ornaments made of small diamonds of inferior quality, diamonds a bit off in color and containing trifling flaws, which none but a connoisseur would notice.

"But pretty soon the clerk got on to the fact that his customer was after something high-class, and that the best was not any too good for her. As a result she selected a pin containing five one carat diamonds, every one of which was flawless and blue white in color.

"I do not care for jewels unless they are the very best," she remarked to the clerk, and walked off with five diamonds which would attract attention from experts anywhere.

"It is woman like that who do a lot to boom the diamond sales in New York, and in the last few years there has been a great increase in their number.

"They wear no large, flashy pieces of jewelry, for the reason that such designs look ridiculous with a plain toilet. Their selections are rings and breastpins, and it is in these comparatively small pieces that first-class stones are seen to the best and poor ones to the worst advantage.

"For example, take a corsage ornament of the size of a small tea plate—and now nearly every fashionable woman has one or more of that sort—and a lot of the stones in it may be pretty poor without the average person detecting the fact. In such a dazzling array the poor stones pass muster far better than they do in a small ornament, which the eye can compass at a glance.

"That is why, I think, buyers of modest pieces of jewelry get to be more particular every year, and the reason why our best diamonds don't all go to the very rich.

"It is a sign of the times, too, that the best in stones is now eagerly craved by New Yorkers, just as they desire the best in paintings, the finest in bric-à-brac, rugs and tapestries. Even the least worldly people, the sort of people who once were satisfied with a cameo brooch and plain gold pins and rings, want a few good diamonds these days.

"They don't hanker after pearls, emeralds, turquoises and other fancy stones, but they do care for diamond solitaires. Yes, the public taste in diamonds becomes more highly cultivated every year.

"Possibly would-be buyers get books and read up about stones. I don't know about that, but I am certain that customers often show a remarkable knowledge of what

they are after when they come here to buy diamonds. To illustrate:

"A little lady, who is not at all conspicuous socially—whose name, in fact, is not known to us here—came in yesterday and calmly insisted that she must have a blue tinted diamond about two carats in size set in a finger ring. The commercial white diamond, as we call it, would not do at all. She pushed the best of them aside.

"But when we produced the sort of diamond asked for, our customer promptly went into ecstasies, and but for the price, which made her fall back, after all, on a pure white diamond, she would have walked off with it. What surprised me, though, was her knowledge of the subject.

"The most highly prized diamond is blue tinted and comes mainly from the Jagersfontein mines. Second in value is the blue white, a trifle less blue, less clear, and third, the pure white.

"The most popular size of diamonds? Well, it is the one-carat size, which is about one-eighth of an inch in diameter. It is only the few who buy larger stones than that. Diamonds of this size group well, and show off to an advantage in any setting.

"In the large stones the price is increased more than proportionately. Any one wanting a two-carat pure white diamond this fall, instead of paying just double the price of a one-carat stone of the quality mentioned, will probably pay \$500 or \$600. The cutting and setting of a stone often adds materially to its value.

"The round stone in all sizes is the one most in demand, and where fashionable New York women are concerned the pendant style of ornament is having the greatest vogue. We are receiving a great many orders to attach diamond pendants to corsage ornaments and to chains of very fine diamonds worn about the neck.

"Some of the latter are elaborated into festooned necklaces with several pendants or clusters of pendants in front. Large scroll designs incorporated into corsage ornaments of almost heroic size, wherein are used many hundreds of tiny diamonds, are now finished with pendants of solitaires, and drop earrings have taken the place to a great extent of screw solitaires.

"We are also making up bands of jewels to be worn straight across the front of a low-cut corsage, and bordering them with a fringe of jewels. The beauty of a fine solitaire is never seen to better advantage than when in pendant setting."

"Cannot see much room for improvement in The Keystone, as it is now the finest trade magazine of any published."—J. Lavey & Son, Jewelers, North Manchester, Indiana.

Diamond a Universal Favorite



THE GROWTH OF OUR DIAMOND DEPARTMENT

is the best proof of the fitness of our stock and the excellence of our service. We make a specialty of selected assortments to suit individual jewelers, due consideration being given to the character of their trade and their local business conditions. This safeguards their interests and assures satisfaction in sales and profits.

C. H. KNIGHTS & Co.
COLUMBUS MEMORIAL BUILDING ✻ CHICAGO



April weather was quite an improvement over March, and the assurance that spring was surely here together with the natural Easter trade resulted in an improvement in business that was very acceptable. Both retailers' and jobbers' reports show a decided increase over last year with the outlook very encouraging. The weather has been just right, and spring seeding is well under way in the farming sections. The only complaint that is heard in jobbing trade is the continual call for good watchmakers by the retailers. One jobber reported having over twenty calls for help, and not one good man on the list of applicants. Good wages are offered for the right kind of men, but no takers. Why this scarcity?

C. F. Sischo, of Sischo & Beard, St. Paul, has returned from a six-weeks' visit to the Western Coast, greatly benefited in health.

M. L. Finkelstein, St. Paul, has improved his store by putting in a new tile floor.

M. B. Hubbard has retired from the firm of J. G. Ferry & Co., Eau Claire, Wis. Mr. Ferry will continue at the old stand.

Aug. Perry, Eveleth, Minn., will remodel his store, which, when completed, will be very attractive.

T. J. Collins is a new jeweler at Proctor, Minn. Leon E. Miner, Foley, Minn., has sold out.

Fred. H. Straub, Fergus Falls, Minn., spent a few days in the Twin Cities recently.

John Caesar, Stillwater, Minn., has purchased the Willman Street clock, for over twenty years a landmark there, and has it in front of his store, where it is a most effective advertisement.

A. E. Palmer, Grand Forks, N. Dak., spent a few days at Mankato, Minn., looking after his business interests there.

H. A. Jensen is a new jeweler at Waubay, S. Dak.

E. B. Woodward, Spring Valley, Minn., who purchased the C. E. Day stock at Preston, Minn., has sold it to J. N. Drake.

Henry C. Bott, for the past five years head watchmaker for Geo. R. Holmes, St. Paul, has quit there and will go into business for himself.

E. H. Treiber, Scotland, S. Dak., spent several days in the Twin Cities last month buying stock.

E. E. Cole & Co. succeed Cole & McElwain at Atlantic, Iowa.

E. E. DeGroff, LeRoy, Minn., has just closed a successful auction sale.

F. H. Straub, Fergus Falls, Minn., was elected alderman at the recent election.

Edw. Moore, of Sischo & Beard, St. Paul, starts on his first Southern trip May 1st. We commend Eddie to the mercies of the trade in that section.

L. W. Mowry, for the past three years watchmaker for the Scott Jewelry Co., Stillwater, Minn., is now with Otto Supe, Sault Ste Marie, Mich.

W. D. Funk, lately with F. Willman, is now with the Scott Jewelry Co., Stillwater, Minn.

M. N. Berg, Duluth; F. A. Klass, of Hibbing, and R. E. Bailey, of Eveleth, Minn., have been appointed watch inspectors for the Duluth, Mesoba & Northern Railway.

J. Segerstrom, Rhineland, Wis., spent a few days in Chicago last month.

E. Henning has started in business at Warroad, Minn.

I. M. Varnson, Valley City, N. Dak., has moved into his new store, giving him a much better location.

Bennett & Co., Cloquet, Minn., have been holding an auction sale to close out their stock. They are seeking a new location.

Ralph Siegrist, of Albert L. Haman, St. Paul, has returned from a three-weeks' trip in North-eastern Minnesota and reports business good.

H. S. Wright succeeds J. P. Foss, Wausau, Wis.

J. C. Dills, Middle River, Minn., has quit business.

Thos. Culshaw has started in business at Minneota, Minn.

Albert Mellin, Jr., has started in business at Stillwater, Minn.

Sweet & Rock succeed F. B. Sweet, Marshall, Minn.

Judson A. Beard, of Sischo & Beard, St. Paul, has returned from his Northeastern trip with a big smile. He says the trip was the most successful in his experience.

R. M. Horr, Prentice, Wis., has just installed some new fixtures.

C. M. Toft, Stanley, Wis., spent the Easter holidays with relatives at Menomonie, Wis.

Miss F. Koehler, Livingston, Mont., was married last month to T. P. Phinney. Miss Koehler's friends in the jewelry trade all extend hearty congratulations.

Louis Holt, Eau Claire, Wis., who has been to the Western Coast for the winter, has returned and reopened his optical parlor there.

Frank Waterbury, of Sischo & Beard, St. Paul, enjoyed a short vacation at Hunter's Hot Springs, Montana. Frank says it kept him busy counting sheep for a pastime.

J. L. Egleston and bride, Wadena, Minn., spent a few days visiting friends in the Twin Cities last month.

C. A. Swanson & Co., Superior, Wis., have improved their store by putting in a new steel ceiling and new lighting fixtures.

W. M. Thurston is again in the employ of W. D. Triplett, Ironwood, Mich.

W. J. Roberts, Ishpeming, Mich., was elected mayor at the recent election—neat compliment.

Huber & Bunker, Superior, Wis., will move into their new store May 1st.

S. Perlman, Washburn, Wis., had the double misfortune to fall and break two ribs, and barely recovering from this, was taken with an attack of typhoid fever. We are pleased to announce that he is now well on the road to recovery.

S. E. Pixley, Church's Ferry, N. Dak., has put in a new steel ceiling in his store.

C. B. Adams, Bottineau, N. Dak., has been succeeded by H. H. Hovda.

C. Foogbery, lately with Hyman, Berg & Co., Chicago, is now with W. H. Reighart, Minot, N. Dak.

Chas. E. Proctor is now with C. H. Pratt, Helena, Mont.

C. B. Jacquemin, Helena, Mont., spent a few weeks in Omaha, Nebr., looking after his business interests there.

Chas. E. Cashmore, of Hight & Fairfield, Butte, Mont., was married last month to Miss Milliecent Urlich, and is now enjoying a wedding trip to Southern California.

A. D. Morrison and wife, Grand Forks, B. C., spent a few days in the Twin Cities en route home from an Eastern visit.

Tom Darrell is now at the bench with J. H. Miskemen, Glendive, Mont.

Picard & Moss, Jamestown, N. Dak., have improved their store by putting in a new plate-glass front.

D. M. Grinnell, Valley City, N. D., has been succeeded by Grinnel & Co. The new firm have moved to a new store room and added new fixtures to accommodate increased stock.

D. B. Bryan, of Albert L. Haman, St. Paul, has returned from his Coast trip with glowing reports.

Peder Gaalaas, for the past five years with Henry Bockstruck, St. Paul, has started in business at Stillwater, Minn., where he succeeds F. Willman, who has retired.

An attempt was made to rob the store of T. G. Mahler, LeSueur, Minn., last month, but the thieves were frightened away by his brother, who slept in the store. They then visited the store of Max Distell and got away with \$12 worth of goods. They did not touch the safe. The work was apparently done by amateurs.

Visitors to Twin City jobbers the past month were: Fritz Guy, St. Cloud, Minn.; M. D. Lonergan, Grantsburg, Wis.; Leonard A. Peterson, Shafer, Minn.; W. S. Lindsay, Casselton, N. Dak.; I. M. Radabaugh, Hastings, Minn.; Mr. and Mrs. J. L. Egleston, Wadena, Minn.; John Caesar, Stillwater, Minn.; F. W. Seaman, St. Croix Falls, Wis.; C. C. Staacke, Duluth, Minn.; Mr. and Mrs. A. D. Morrison, Grand Forks, B. C.; Flo. B. Sweet, Marshall, Minn.; Albert Mellin, Jr., Stillwater, Minn.; Walter Vind, Rugby, N. Dak.; A. E. Palmer, Grand Forks, N. Dak.; W. E. Palmer, Mankato, Minn.; Ed. H. Gross, Kenmare, N. Dak.; F. Willman, Stillwater, Minn.; E. H. Treiber, Scotland, S. Dak.; Geo. K. Munro, Grand Forks, N. Dak.; August Gfrerer, Stillwater, Minn.; Carl Hammergren, Rock Creek, Minn.; E. F. Huhner, Stillwater, Minn.; W. R. Crandall, Mankato, Minn.; C. J. Webb, Byron, Minn.

Letters that Pull

Here is some good advice given by Sherwin Cody, the authority on letter writing:

Letter writing is a distinct art, built principally on applied psychology. A good letter makes a sharp impression at the right place and at the right time. A bad letter lessens the impression which may have been created by a first and stronger one. Two weak letters following one strong one will make no impression whatever.

This is what Mr. Cody says:

"Write a long letter to

"A farmer,

"A woman,

"A customer who has asked you a question,

"A customer who is angry and needs quieting down and will be made only more angry if you seem to slight him,

"A man who is interested but must be convinced before he will buy your goods.

"Write a short letter to

"A business man,

"An indifferent man on whom you want to make a sharp impression,

"A person who has written you about a trivial matter for which he cares little,

"A man who wants only a record of a piece of information.

"A person who needs only the slightest reminder of something he has forgotten or of something he may have overlooked."

ALLER-NEWMAN-WILMES JEWELRY COMPANY

Globe-Democrat Building

SAINT LOUIS, MISSOURI

These three
That's all

THE BEST GOODS
THE BEST SERVICE
THE BEST TREATMENT

Wholesalers to the Retail Jewelry Trade Only



HOLD YOUR TRADE

by handling Bassett Chains—quick sellers,
big profit makers and satisfaction
guaranteed. Select styles for
fastidious purchasers—
popular styles for all

**TIE TO
BASSETT CHAINS**
and Avoid Dead Stock
and dissatisfaction

THE BASSETT JEWELRY CO.

Factory

Manufacturers' Building, PROVIDENCE, R. I.

NEW YORK OFFICE
37 Maiden Lane

CHICAGO OFFICE
Masonic Temple Vaults

MINNEAPOLIS OFFICE
617 Lumber Exchange

SAN FRANCISCO OFFICE
120 Sutter Street

WEEKS, ADV.
PHILA.



Jeweler-Elks' Gala Day

An unusually large number of visiting jewelers were noticed in the city last month, whose presence was due to the dedication by Philadelphia Lodge, No. 2, of the Benevolent Protective Order of Elks, of their new \$300,000 home at Juniper and Arch Streets, this city, on Wednesday, April 25th. A parade of local and visiting brethren took place from the old Elk home at 1609 Arch Street through the principal streets of the city. The procession presented a very imposing appearance and was much admired by a large throng of spectators. This was followed by the formal dedication of the new quarters with impressive ceremonies, presided over by Robert J. Byron, exalted ruler of Philadelphia lodge. Later a banquet was given at the Bellevue-Stratford. The jeweler members of the order in Philadelphia took a conspicuous part in the proceedings and entertained their out-of-town brethren with a hospitality characteristic of the trade in the Quaker city.

The Philadelphia Jewelers' Club held a very enjoyable musical and vaudeville entertainment last month, to commemorate the birth of Benjamin Franklin. This function proved a very interesting wind-up to a week's observance of the great philosopher's bi-centennial anniversary by the people of the Quaker City and visiting notables. J. Warner Hutchins, the well-known jeweler and member of the Jewelers' Club, acted as grand marshal of the very imposing parade which formed a feature of the commemorative proceedings. Mr. Hutchins was delegated for this role by the Masonic Grand Lodge, under the auspices of which the celebrations of the day were carried out.

Fred B. Hurlburt, of H. O. Hurlburt & Sons, and Mrs. Hurlburt, returned recently from a month's sojourn at Nassau, Bahama Islands. His stay at the beautiful insular resort was largely devoted to the healthful and restful pastime of fishing, sailing, etc.

Louis Sickles is again in business harness, having fully recovered from his recent serious illness. He was much benefited by his recuperative trip to the South, where he visited Miami and Palm Beach, Fla., Havana and other Cuban cities.

B. Frank Williams, of B. F. Williams Co., is mourning the loss of his wife, who died of pneumonia on Sunday, April 22d. The funeral took place on Thursday, April 26th, when the remains were followed to their last resting place by sorrowing relatives and friends. Mr. Williams has the sympathy of his many friends in the trade in his bereavement.

Herman Donath, 2446 Kensington Avenue, has been receiving the condolences of his numerous friends upon the great loss which he sustained last month, in the sudden death of his wife, who succumbed to an operation for appendicitis in the Jewish Hospital, this city. Mr. Donath, who is overwhelmed by the sudden bereavement, is widely known in the trade.

The Franklin Jewelry Co., of this city, was incorporated last month with a capital stock of \$10,000.

The Keystone Watch Case Co. received at this writing only a single brief message from their agent in San Francisco, Geo. E. Smith. He stated that his office and stock were destroyed, but gave no further particulars.

William Henry Spering, formerly with John C. Kelly, and later with C. H. Hambly, died on April 20th.

Jack Zimmern, Southern representative of M. Sickles & Sons, has just returned from a prolonged business trip through his territory, and reports present prosperity and bright prospects in that section.

H. C. Barry, of M. Sickles & Sons, is rejoicing over the convalescence of his boy, who has been very ill with diphtheria.

The western trip of the Philadelphia contingent of Shriners to the annual encampment in Los Angeles, in which several members of the local trade were to take part, has been called off. The order decided to donate the \$100,000 collected to cover the expense of the encampment at Los Angeles to the San Francisco sufferers, and instead of the encampment a business meeting will be held by the order in Chicago.

The glass globe, which was placed in front of the Wanamaker store by the management of that business after the Johnstown flood, and in which was collected during the six days, from Monday, June 3d, to Saturday, June 8th, 1889, the sum of \$3708.75 for the relief of the sufferers by that catastrophe, was on Tuesday, April 24th, placed just inside the Market Street entrance of the same establishment, and started on its second mission of mercy, this time for the San Francisco homeless. The globe, on the last occasion, after it had served its useful purpose, was purchased by W. R. Wetherill for \$51 (which amount was added to the Johnstown fund). Mr. Wetherill then presented it to the Historical Society of Pennsylvania, where it remained until requisitioned by California's great calamity.



The present month has been a good one from many points of view. There has been very favorable weather as well as a plentiful crop of weddings. The statements of financial institutions have been so favorable, that investors feel like spending some of their earnings, and it has made a satisfactory condition all around.

The past month has seen the consummation of a scheme to greatly enhance the beauty of the down-town district. The city authorities have purchased a large tract of blocks and business locations, and it is intended to create and build a number of public buildings—such as a city hall, court house, public library, etc.; with a large open court in center, running from Superior Street to the lake front. The new union depot will be the apex of the court. The land purchased by the city is about one-half mile square and cost several million dollars.

Geo. Scribner has returned from an extended trip to Florida and North Carolina, and reports an enjoyable time all around.

Webb C. Ball and family were in Chicago last month, attending the marriage of his son, Sidney, to a daughter of S. P. Shane, a prominent railroad official of the Erie Railroad Co. The bride and groom will make this city their future home.

Bert Farrow, chief designer for Carter, Howe & Co., Newark, N. J., was in town last month on his bridal tour and spent a few days with his parents.

Chas. Graham, formerly of Cumberland, Md., has joined the force of Chas. Kretchman, the manufacturing jeweler, 117 Euclid Avenue.

Burt Ramsay has recently put in an iron safety fence in his diamond window in the Euclid Avenue store.

The Alexander Optical Co. have increased their capital stock from \$10,000 to \$50,000. The local branch is located on Erie Street, near Huron.

The Deutsch Jewelry Co., who for the past year have occupied the end store-room of the Lennox Building, have been having an auction sale, preparatory to moving to a new location in the old Arcade.

Oliver Meyers, clockmaker for the Cowell & Hubbard Co., is a recent benedict. The men associated with him presented him with a clock set as a wedding gift.

Wm. Murphy, bookkeeper for Sigler Bros. Co., is the father of a son, born last month.

David Eappy, for many years watchmaker for Burt Ramsay, Colonial Arcade store, has resigned and will open a new jewelry store directly opposite the Ramsay store.

J. P. Johnston, optician, Colonial Arcade, now has his son, Frank Johnston, associated with him a partner.

C. R. Aldrich, for the past four months with Burt Ramsay, has returned to West Virginia and again gone into soft-coal mining in the Kenawha district.

Your correspondent should have reported last month Fred. Grossenbacher as retiring, after twenty-five years with the Cowell & Hubbard Co., as watchmaker. The error was manifest. Apology is extended to the veteran.

Chas. Liebenauer has removed from the corner of Fairmount Street and Euclid Avenue to a new location on Euclid Avenue, near Doan Street.

H. A. Friedlander, 190 Erie Street, is a recent addition to the jewelers of this city. Mr. Friedlander was formerly from New York.

Camillo Taussig, salesman for Bowler & Burdick Co., has just joined the spring crop of benedicts. The bride is a young lady of considerable fortune, so Camillo is doubly lucky.

The W. A. Jones Optical Co. was incorporated the middle of the month. The incorporators are E. C. Caldwell, F. M. Hall, E. W. Waite, C. Esterbrook and O. J. Horn. The capital stock is \$20,000, and the company is located 143 Euclid Avenue.

C. C. Sigler has returned from an extended trip through the Southwest and Coast cities, and reports a fine time and enjoyable tour.

E. J. Sauthany, Bedford, Ohio, has removed to Carrollton, Ohio, and reports that he is well pleased with his change, as he is doing an increased business.

Frank Dyer, Cairo, Mich., was a visitor last month.

C. W. Smith, Collinwood, Ohio, has returned from his winter in Florida.

F. A. Earl, of Barnum & Earl, Traverse City, Mich., was in town last month. Mr. Earl has a daughter at Oberlin College and visited there a few days.

W. H. Broer, Toledo, Ohio, is preparing plans to enlarge his store and remodel, so as to make it an up-to-date mercantile establishment.

The following jewelers were in town last month: H. B. Nielson, Lorain, Ohio; John Rich, Painsville, Ohio; Ed. Nolf, Wadsworth, Ohio; D. A. Beswick, Berea, Ohio; L. J. Goddard, Ravenna, Ohio; J. C. Joss, New Philadelphia; Wallace & Wilson and Mrs. Wilson, Meadville, Pa.; D. R. Young, Youngstown, Ohio; E. E. Critz, Elyria, Ohio.



PRIZE CUP 236

L. A. Littlefield Silver Co.

Makers of

High-Grade Silver-Plated Hollowware

Trophy Cups

in English Pewter
Solid Copper with Pewter trimmings
and Silver Plate

Office and Factory, NEW BEDFORD, MASS.



CUP 220



Best Quality Glass

Office and Factory, *Honesdale, Pa.*

Artistic Designs and Brilliant Finish

New York Salesroom—
25 W. Broadway
FRANK MILLER, Representative

No Pressed Blanks Used

New Patterns for 1906

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ITEMS of INTEREST

Morris M. Kritzer is removing his business from Chicopee Falls, Mass., to 169 Main Street, Springfield, Mass.

The B. H. Stief Jewelry Co., Nashville, Tenn., have been appointed official time-inspectors for the N. C. & St. L. Railway in the Nashville district.

Adolph Hapke, the Newman, Ill., jeweler, is rejoicing upon the arrival of a son and heir. THE KEYSTONE joins with his friends in extending congratulations.

We are indebted to the Philadelphia Press for the excellent view of the business district of San Francisco before the recent catastrophe, shown on page 739 of this issue.

Bert Seifert, of Cummings, Ind., nephew of J. M. Seifert, of Mulberry, Ind., was married to Miss Perlin Smith, at the bride's home in Mulberry, Wednesday evening, April 25th. THE KEYSTONE extends congratulations.

The W. L. Newmeyer School of Engraving, Cleveland, Ohio, has issued a prospectus in the form of a beautiful booklet explaining the facilities of the school for teaching engraving, and giving some masterly samples of monogram and letter work. The booklet reflects the enterprise of Mr. Newmeyer, whose genius and skill as an engraver are well known.

Herman A. Stone, principal of the Stone Practical School of Watchmaking, St. Paul, Minn., reports an unmistakable sign of prosperity in the jewelry trade, in the greatly increased numbers of young men who are taking a thorough course in watchmaking. The demand for good workmen and the big wages offered for efficiency are excellent inducements to study.

The Hamilton Watch Co., of Lancaster, Pa., have purchased over two hundred thousand square feet of ground adjoining their factory, the purpose in view being a further extension of their plant, which will then cover nearly an entire block. Only recently this company completed an addition to their factory, which gives employment to one hundred and fifty additional hands.

L. E. Grant has purchased the entire stock and modern fixtures—invoiced at over \$15,000—of the establishment hitherto conducted in Portage, Wis., by Charles A. Port, and has consolidated them with the stock and equipment of T. H. Gadson & Co., of that place, successors to Gadson & Grant, and with whom he has formed a partnership. The former firm-name of Gadson & Grant has been resumed and the newly-organized concern begins business with a large and high-class stock.

The Gorham Mfg. Co., Providence, R. I., made the silver tea and coffee sets presented recently to Dr. J. H. White, of the United States Public Health and Marine Hospital Service, New Orleans, La., by the citizens of that city. The services were supplied through A. B. Griswold, the New Orleans jeweler, and are very beautiful. The decoration of the tea service is of the Renaissance style, the chasing being especially notable. The waiter is very artistically finished with the flower symbols of the four seasons. The coffee set is likewise a very fine example of the silversmiths' art.

J. B. Spangle, of Spangle & Wardell, Chetopa, Kans., died last month after a two-weeks' illness. He was born in Seneca County, N. Y., seventy-eight years ago, and lived in Ohio and Indiana before going to Kansas. After removing to the latter State, he settled in Parsons, but twenty-four years ago he left that town and became established in Chetopa. He was well-known and highly esteemed by a large circle of friends. A widow and one son, Geo. H. Spangle, survive him.

John C. Pierik, of Springfield, Ill., has issued a handsome catalogue and price-list, containing one hundred and ninety-two pages, printed on enameled paper and bound in a strong paper cover. Almost every page is illustrated by rich half-tones and the articles shown, which comprise practically everything carried by a retail jeweler, are numbered for easy reference and prices quoted at the foot of each page. The book contains some very pretty illustrations in colors, and there is a carefully classified index on the inside back cover.

Half a century in one line of business, under one firm-name, in one city, is a record of which any dealer may well feel proud. Such is the distinction of John F. Kohler, the well-known jeweler, of 209 East Broad Street, Richmond, Va., the golden anniversary of whose business was fittingly



John F. Kohler

observed on April 1st. The founder and sole proprietor, John F. Kohler, was born in the Province of Hanover, Germany, on February 23, 1835. When seventeen years old he came to the United States and settled in Baltimore, Md., where he remained until April 1, 1856, when he went to Richmond and purchased the jewelry establishment at 715 East Broad Street. This he successfully conducted until November 25, 1900, when he built his present handsome store at 209 East Broad Street. Jeweler Kohler has earned the confidence of a large clientele by integrity, courtesy and rigid fidelity to every commission entrusted to him. The golden anniversary was marked by the issuance of a tiny souvenir booklet containing a portrait of the proprietor, a picture of his store and a brief résumé of his career.

The International Silver Co. has published volume 1 of "The Silver Standard," which is familiar to our readers as a most interesting historical compilation. As an advertisement of the famous 1847 Rogers Bros. ware, it is most effective, combining instructive and entertaining reading matter with the business information. The quaint binding, typography and illustration assure for it careful perusal and preservation. For those interested in the history of the country—and who isn't—it is a little treasure of facts, briefly stated and judiciously selected.

W. & S. Blackinton Co., North Attleboro, Mass., are this year celebrating their fortieth anniversary, and have signalized the occasion by a unique prize offer to the trade. To the four retail jewelers who use the greatest number of Blackinton chains between May 1, 1906 and January 1, 1907, the firm will award four prizes: an automobile touring car, an automobile runabout, a motorcycle and an American watch lathe. Another scheme is to attach aluminum tags to the chains, these tags to be redeemed by the firm; so many chains for so many tags.

Apropos of the universal vogue of souvenir and symbolic spoon, R. Wallace & Sons Manufacturing Company, Wallingford, Conn., have issued a richly embellished catalogue of these goods. This catalogue measures 15 x 8 inches, approximately, dimensions admirably suited for adequate pictorial display. High-class enameled paper is used and black and maroon inks are pleasingly contrasted, every page being bordered in the last-named hue. A preface occupying two pages, tells concisely of the manufacture and ornamentation of these spoons, and the remaining ten pages contain exquisite half-tones of spoons in various styles of symbolic decoration, floral, Masonic and topographical.

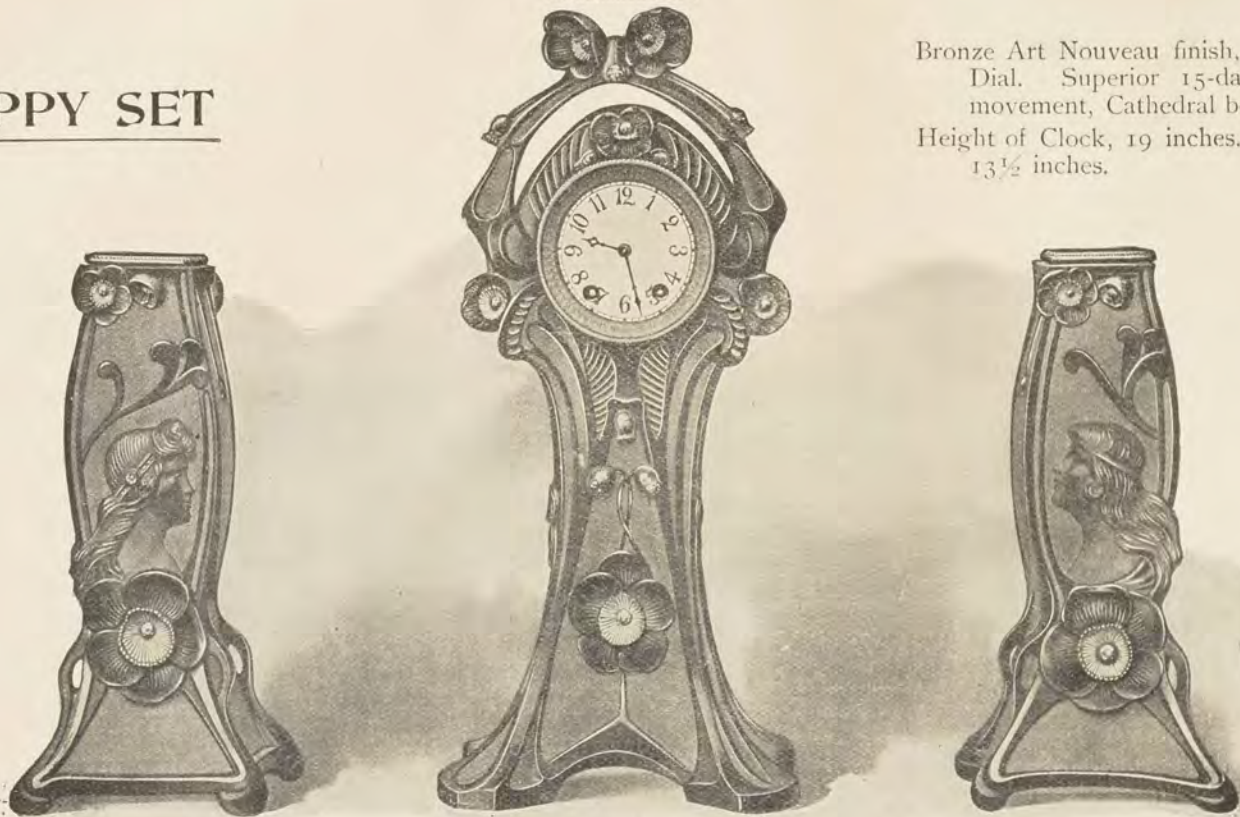
A veritable encyclopedia of information on store and home decoration is the new illustrated volume of two hundred and thirty-two pages entitled "Dennison's Dictionary." The book is issued by the Dennison Manufacturing Co., and is divided into two parts, one having to do with home embellishments and requirements, and the other dealing with articles and inventions that facilitate business doing and office work. It covers thoroughly the various utilities of the company's products—tags, boxes, favors, party prizes, etc., but is particularly instructive in the matter of crepe paper and its uses. The book is elaborately illustrated in colors, and a novel plan of indexing facilitates reference. The book will be sent free to members of the trade and none who value good practical store information should be without a copy.

The business of the M. S. Benedict Mfg. Co., manufacturers of silver-plated ware, East Syracuse, N. Y., was recently reorganized and incorporated at Albany, under the title, the Benedict Mfg. Co. The business was originally established in 1883 by the late M. S. Benedict, and incorporated in 1902, including the M. S. Benedict Mfg. Co., Hamilton Mfg. Co., Benedict-Clark Silver Co., and Benedict-Dunn Co. From a small concern it grew to such an extent that during the year 1904 its gross sales amounted to a very large amount. To accomplish this result it was necessary to increase its facilities from year to year, until at the present time the factory is a capacious, well-equipped one employing about five hundred hands. The main office and show-rooms are located at East Syracuse; but for the benefit of export trade a lease has just been signed for an office and display room to be located at 409 Broadway, New York; also for the benefit of the Western trade, a Chicago office has been opened, located in the Silversmiths' Building, on Wabash Avenue. At a recent meeting of the directors, the following officers were elected to act during the coming year: President, H. L. Benedict; first vice-president, George N. Crouse; second vice-president, E. H. Banker; secretary, Elbert B. Van Wagner; assistant secretary, John Bailey; treasurer, R. B. Roantree; assistant treasurer, C. C. Graham. The directors elected were George N. Crouse, Elbert B. Van Wagner, and H. L. Benedict.

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A Doubt of Dollar-Delight

BY JOHN TWEEZER

The average jeweler, by the exercise of diligence, perseverance, concentration, sobriety and the other business virtues which are fundamental in a successful career, can look forward with practical certainty to securing a competency during his own life and leaving something substantial to his heirs; but the average jeweler, as the average merchant in other lines, does not dream of accumulating millions, and so is shut out from the joys and sorrows which the millions bring.

Do the millions bring more of joy, or more of sorrow? Is the pursuit of millions worth while? In the last analysis is the millionaire happier than the average citizen who has only a competency? Is there any real ground for envy of the very rich? Is the popular notion that, because the multi-millionaire can command luxuries entirely beyond the grasp of the average citizen, he must be vastly happier than "common folks"—is this notion supported by the demonstrated fact? It is worth a few minutes' consideration, for the relief of our peace of mind and the prosperity of our moral estate.

In looking for testimony to prove the futility of wealth in securing happiness, let us turn aside from the philosophers and stoics who seem to be of one mind on the subject. We reject their assistance in forming our conclusion for the reason that their testimony is necessarily *ex parte*; they have had no experience as to wealth; their reasoning is theoretical entirely. Instead, we will hear from the lips of one who is generally assumed to be the second in point of wealth in America, and who is therefore in position to "speak as one with authority." I have pleasure in introducing to this audience Mr. Andrew Carnegie, whose word on this subject no one shall gainsay.

Mr. Carnegie says, "*Millionaires seldom laugh.*"

Now, brethren, when you get down to the root of that amazing revelation, what does it signify?

It means numberless things for the comfort of the minds of those who have envied the multi-millionaire. The statement will be accepted with incredulity by the unthinking majority, but will be received as the truth by others who are possessed of a broader knowledge of the hearts and passions of men. It means that the burden of care and responsibility imposed upon the very rich is one which few sane men would, knowingly, care to assume.

I venture the assertion that there is no unhappier lot of men to-day in America than certain groups of millionaires in New York City who are waiting the next uncertain move of keen-scented investigators. Their innumerable worries are inconceivable to the man of moderate means; and this applies not only to those unfortunate rich who are now in the lime-light of publicity but to the whole millionaire class as well. Their vast capital must be employed; investments must be sought in the constant menace of conscienceless speculators in the stock market; they are constantly harassed by importunities (one notably rich woman has stated that she receives an average of over three hundred begging letters each week); they are threatened by the daring and the desperate; they are daily misrepresented, lied about and traduced. They have no privacy in their daily lives unless they live as recluses; their comings and goings are blazoned to the world; the conditions thrust upon them are nearly intolerable to such as possess sensitiveness and delicacy of feeling. Those of them who are not voluntarily self-ostracised from the public in order to escape the lime-light of curious gossip are separated by leagues on leagues from that public sympathy and consideration which makes life worth living.

And even in death there is no relief; for as death approaches they are harried by the fear that their vast accumulations will be scattered or go into hands not competent or loving. They cannot take their wealth with them, for shrouds have no pockets; nor could all their wealth purchase for them the assurance of happiness in eternity. In their death hour they realize the futility of it all, and come to see that the only wealth they *then* possess is that which they gave away in loving kindness to humanity.

"Millionaires seldom laugh," says Mr. Carnegie; and we now begin to understand why. When one can command every luxury, the luxury brings no joy; it is the *pursuit* which gives the sport, not the dead hare in the hand. After all, the most that money can do for our selfish satisfaction is to assure a competency for old age; but the average citizen secures that competency, and the millionaire cannot eat more than three good meals a day. The rich man can buy pictures and build palaces and yet live meanly; for too often the gathering of his millions has been at the blunting of his moral senses, the impoverishment of his culture and the confusion of his distinctions between right and wrong.

The next time you find yourself laughing in careless happiness, remember that "millionaires seldom laugh"—and be content with your modest means.

Tweezerisms

Money never disgraced a man, but men have disgraced money.

We strive to accumulate money not so much for the purpose of satisfying wants as for creating them.

Think twice before you speak once—and *then* be sure that what you say is worth listening to. The folks who have nothing to tell do most of the talking.

Prosperity keeps many men honest.

Pity is often only a quiet satisfaction that I am better off than you and intend to keep so.

Happiness is wanting what you have.

Some people are like an egg—too full of themselves to hold anything else.

Forgiveness is the supreme revenge.

Patience, if it is born in the man, is no more of a virtue than cold feet are. It is the *cultivated* virtues which deserve admiration.

The prevalence of divorce proceedings suggests a new reading of an old line: "'Tis better to have loved and lost than never to have lost at all."

The man who can invent a good working substitute for honesty has first to be invented himself.

The frog cannot remember when he was a tadpole—but other folks can.

Pay as you go; and induce your customers as well to pay as *they* go, especially if they intend *going for good*.

The principle of double-entry book-keeping is *not* that it is better to charge an item twice than to forget to charge it at all.

In the game of life, as in the game of whist, we must play what is dealt to us; and the glory consists, not in winning, but in playing a poor hand well.

Don't question a success. The bulldog, standing at his own gateway, explains himself sufficiently to the prudent passer-by.

There is a great deal of resolution in rum, but very little judgment.

A certain man has not spoken to his wife for sixteen years; yet he is a devoted husband. He simply will not butt in and interrupt her.

J. T.

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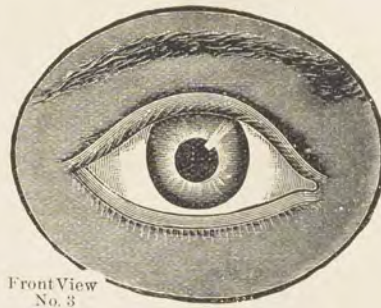
Price, \$20.00 net

We are also making an outdoor Winking Eye Sign that shows on both sides same as cut No. 3. Weather-proof and suspended by iron rods. Price, \$30.00 net

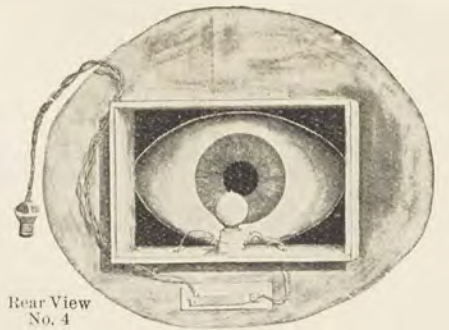
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The head is mounted on a black velvet display sign, 16 x 16 inches. The face is made of wax, will not fade from exposure and can be readily cleaned. Hair is natural. Brass hooks are placed around the stand to display your goods. The winking effect is produced by the "Firefly Flasher" and winks as natural as life.

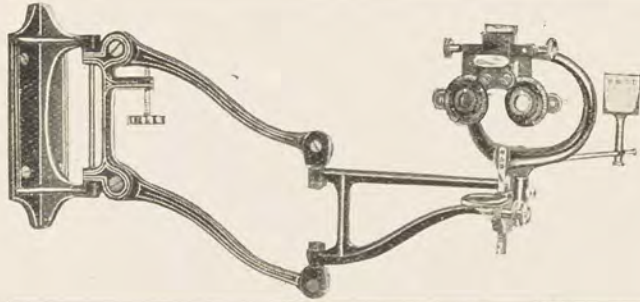
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Front View
No. 3



Rear View
No. 4

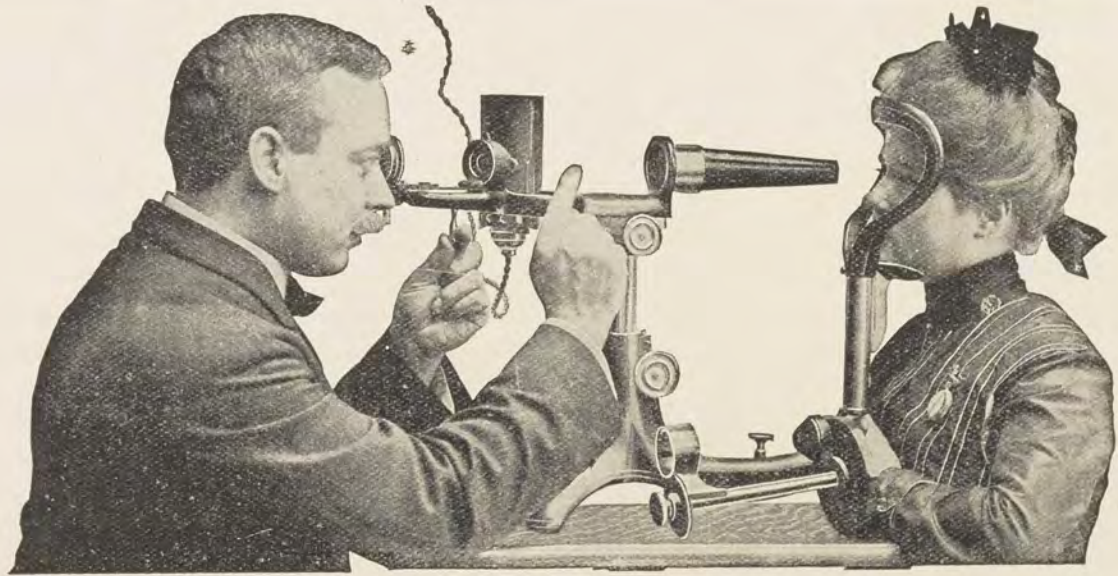


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Review of Current Ophthalmological Literature of the World

A New Pocket Optometer

At the Seventy-seventh Congress of German Scientists and Physicians, held in Meran last year, Dr. Becker, of Dusseldorf, Germany, demonstrated his new pocket optometer. This instrument consists of two tubes—one of which carries an 8 D. convex lens, while the other one, which glides in the first tube, has a cover with small holes which serve as test objects. These small holes give very accurate results for eyes that are not too eager to accommodate; for the irradiation that arises if the holes are viewed out of focus is a very good guide for the eye and allows of accurate focusing. Of course, if the holes are five inches from the 8 D. lens they appear distinct to an emmetropic eye. A myopic eye requires the holes to be brought nearer, while for hypermetropia the test object must be removed from the lens. A scale on the inner tube allows of an accurate reading of the refractive error. The doctor does not claim for his instrument that it is free from the imperfections of most optometers, but he recommends it for many occasions where a cheap instrument of this kind must be a great help to the worker. He claims that as good work can be done with his cheap appliance as with the greatest expensive piece of apparatus of many authors.

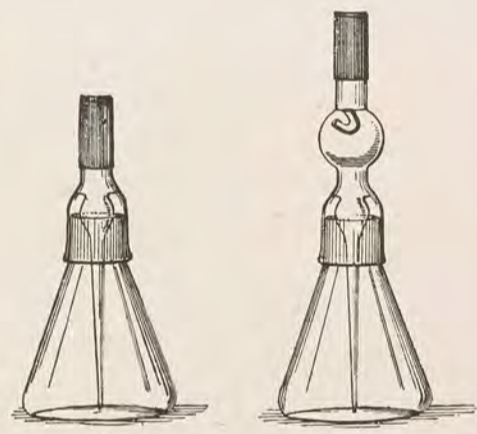
New Studies About the Crystalline Lens

It has been known for a long time that the crystalline lens gives rise to two catoptric images—that is, that it gives two reflected images of a candle in front of the eye; one upright one, being formed by the anterior, and one inverted one by the posterior surface. In fact, it was by means of these two images that the curvature of the two lens surfaces and the thickness of the crystalline was determined. It was further known that the refractive index of the lens increased from the outer layers to the center, and it was Matthiessen who some years developed a complex curve about the increase of this refractive index. Now, this curve is shown to be incorrect by the researches of Hess. He shows that every normal crystalline lens beyond the twenty-fifth year of life shows also two further images, reflected by the nucleus of the lens. These two images are somewhat smaller and less well-defined than the two images, above referred to. They lie very near the old images and move in the same direction. It is not necessary that there should be a sharp differentiation of a nucleus; for it is perfectly sufficient if the refractive index increases very rapidly. These obser-

vations of Hess prove that there is no gradual increase of the refractive index, and they further show that this sudden increase occurs already very near to the lens surface. From the latter fact it would seem that we have to give up the older explanation of acquired hypermetropia, according to which the decreased refractive power of the eye depended upon an increased refractive index of a relatively large cortical part; for such a thick cortex does not seem to exist.

A New Kind of Glasses for Eye Drops

According to Dr. G. P. Duuring, of Holland, there is one radical defect in all glasses for eye drops. This refers to the way the stopper is put in the lower vessel. In the usual styles the stopper is so arranged that there is a great deal of a chance to infect the solution whenever the stopper is put back. He therefore designed two new receptacles in which this possibility is practically done away with because the dropper is so constructed that it protects the opening of



the lower receptacle. This is shown by the two figures herewith. The figure to the left illustrates the usual form, recommended for ordinary use, while the other figure shows a form in which the fluid, sucked up in the dropper, cannot enter the rubber at the top. The doctor has used these glasses with great success. They are made by J. C. Th. Marius, in Utrecht, Holland.

Does the Act of Accommodation Increase the Intraocular Pressure?

It is stated in all the text-books of ophthalmology, that whenever the eye accommodated, the pressure in its interior was increased. That this theory cannot be upheld any more, is shown by the following experiment of Heine. He took a fresh eye from a child that had died a little while before and cut a small door in the sclera, through which protruded a small pearl of vitreous matter.

He then produced a contraction of the ciliary muscle by means of an electric current. The bead of vitreous matter did not show the slightest change, although the ophthalmoscopic examination of the eye demonstrated that the eye was really in the act of accommodation. This experiment shows conclusively that accommodation does not increase the intraocular pressure, but the reviewer must remind the reader that this refers only to each eye by itself. That is, the experiment shows that the contraction of the ciliary muscle does not increase the intraocular pressure. But the contraction of the ciliary muscle is not the only muscular act occurring during accommodation; for there is always more or less convergence. It may be that the intraocular pressure still increases from the pressure of the outer eye muscles. Further experiments therefore have to be made by the physiologists before it can be asserted that accommodation produces no increased intraocular pressure.

Ocular Movements Similar to those Found Normally in Hoofed Animals

In the following we reprint an article from *American Medicine*, from the pen of Dr. William L. Phillips, Buffalo, N. Y. The article is full of interest, but the reviewer is convinced that the explanation of the author, who believes that these peculiar movements are due to an absence of the macula, is quite untenable. The reviewer himself has the same power of moving his eyes to this unusual degree, and he is sure of having a well-developed macula in each eye. He acquired this faculty by practice twenty years ago while studying the "Physiologic Optics" of Helmholtz, who himself was very clever in this respect, and in one place remarks that "this faculty of being able to produce at will and without the corresponding object any position of convergence and parallelism of the visual lines is of the greatest importance for anyone who is occupied with physiologic-optic researches and ought to be cultivated." Undoubtedly, many of our readers can learn the same ocular movements, although it would take one man a little more time than another to acquire the trick:

Abnormal Eye Movements

is intensely interesting; but even more so is the study of those rare human eyes which are capable of performing many functions found normally only in the animal.

The study of the different steps of ocular development, beginning with the blind fish of the deep sea and ending with man,

There is a different structural formation of the eye in each natural order, making it possible to classify them as to order, family, genera and species, without knowing to which animal the eye belongs, although at times it is nearly impossible to separate even the species of two distinct orders, because of their similarity. The one apparently seems to be the continuation of the other, as if

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Ophthalmological Reviews

Ocular Movements Similar to those Found Normally in Hoofed Animals

(Continued from page 835)

there had been an evolution of the eye. As an illustration of this, let us compare the eye of the macaques rhesus* with that of the golden-eyed duck.

The eyes of these two animals are posteriorly soft and yielding. The anterior half is composed of a bony plate, which completely surrounds the eyeball and is covered in front by a circular cornea, over which at times is drawn a nictating membrane for protection while the monkey crashes through the trees and the duck while swimming under water. There is a round, central pupil in front of the lens which is nearly spherical in shape, except the anterior one-third curves more rapidly than the posterior two-thirds, as if the lens had been divided and from the anterior part a segment removed and rejoined. Their eyes do not accommodate by altering the shape of the lens, as in man, but by advancement, caused by the expansion of a highly vascular body called the pecten, which springs from the optic disk. Accommodation by means of the pecten produces tension within the eyeball, which would cause bulging of the soft parts not protected by the orbit if it were not that the anterior part is surrounded by a bony plate. The only noticeable difference in these two eyes is in their shape. In the duck it is plum-shaped, but in the monkey it is round.

Evolution of the Eye

In the fish family amphioxus and myxine stand for the lowest form of eye-development. The lens is imbedded in the retina,

which, as a whole, is equally sensitive in all parts. These eyes, of course, are very simple in their construction and have no power of seeing moving objects.

In crustaceans we find the daphnia has a number of simple eyes covered by a common cornea. These eyes are usually hexagonal in form, although at times, as in the lobster, they are square.

Passing from the amphibious animals to those living exclusively in air, as the coleoptera, we find the eyes becoming more complicated, having now a lens, iris and pupil, as seen in the beetle, which is able to see moving objects, because each of its 25,000 eyes is turned in a different direction.

As development of the eye progresses, we find in the rodents and ungulates that the central part of the retina is more sensitive than the periphery; this becomes more pronounced than the carnivora, the maculas are well defined in the simiæ, and have the highest development in man.

Man's greatest lateral field of vision, for the two eyes, is 180 degrees, but this is small in comparison with those animals having extreme pupillary width, round lenses, large corneas and retinas which have equal visual perception, for their fields overlap behind as well as in front. This is illustrated if one tries to touch the tail of the alligator or raise a whip behind a horse without blinders, for each will immediately see what is to happen.

So essential is lateral vision for the survival of the fittest, that there has been supplied to the animal having flatter lenses a movement of the eyes so as to bring objects in focus through the optical axis, and overcome the distortion that would come from the oblique rays.

The normal movement of the eyes in the human family is from extreme convergence to parallelism, and to this is added

in the lower animals many other movements, such as turning the eyes upward or downward. The periophthalmus and boleoophthalmus are able to advance their eyes from their orbits. The mole has this power, but to a lesser degree, although it remains for the elephant, bison and several other mammals to rotate their eyes from parallelism through an arc of 165 degrees, enabling them to see in front, behind and laterally, without head rotation; that is, they are capable of changing from binocular to monocular vision without confusion, a protection afforded them by nature which we do not possess.

*It is stated by many authorities that the simiæ have no pecten; although it is very rare, I nevertheless found it in this monkey.

This voluntary control of the ocular muscles seen in the mammals below the simiæ was, no doubt, normal in primitive man before he developed a macula by concentrating his eyes at the near point; for a field of vision greater than 180 degrees was as essential to him as to the animal. Synchronous with the development of the maculas was the increased power of convergence and a diminished pupillary width. Following this was the lost power of divergence. Even to-day we find many of these rudimentary conditions of the eye existing. In the lowest human type we find the greatest interpupillary width and retinas having poorly-developed maculas, but rarely do we see human eyes which belong to that period of development represented by the ungulates. So far as I know, the following is the only case on record:

An Interesting Case Mr. X., who is thirty-two years of age, has had the control to be described of his ocular muscles since birth. May 21, 1905, he came to me for relief of symptoms caused by astigmatism. At this time he was able to see $\frac{3}{8}$ with each eye separately and without glasses; but by using both eyes his vision decreased to only $\frac{2}{20}$. At first I was inclined to think there was binocular fixation without binocular vision, and that one visual field overlapped the other, causing a decreased amount of vision; but I found that by using different colored lenses over each eye, he perceived a complementary color. It was also proved by other methods that he not only had binocular fixation, but also binocular vision, and that the decreased vision when using the eyes this way was due to a non-use of the binocular position. So perfect a control has Mr. X. over his ocular muscles that it is possible for him to fix with both eyes, to turn either one out slowly and back again to double fixation without disturbance while reading. He is also able to converge both eyes and move his eyes simultaneously to extreme divergence. Besides this, he can move them both to the extreme right, or to the extreme left, or, by holding one in any position, from extreme divergence to extreme convergence look at the side of his nose with the other. At no time since birth did Mr. X. have double vision, and it is not produced even by the use of strong prisms. He finds that monocular vision is more restful than binocular vision, because of less head rotation. In his normal positions he has both eyes in focus, seeing with the one in front and the other at the side. When he told me it was possible for him to do this, I did not believe him and told him so; then while he was reading the test-card with his left eye, I distorted my face in such a position that he was able to see me only with his right eye. I was surprised to hear him say "you can't come that on me."

Another Abnormal Case

Subsequent to sending this case to *American Medicine* for publication, I was consulted by Mr. Z., aged sixty, for headaches and blurring at the near-point. Upon examining the eyes, I was greatly surprised to find that his muscular control equaled that of Mr. X.'s. At this time Mr. Z.'s monocular vision enabled him to read the three-quarter line without glasses, and his binocular vision was a trifle better than a fifth of normal. The correction of compound myopic astigmatism in both of these cases gave normal vision in each eye separately, and increased Mr. X.'s binocular vision to a fifth of normal, the same as Mr. Z.

Although Mr. Z. dates his present condition from birth, he has never had double vision. When a young man, so as to improve his appearance, he kept his eyes in a parallel position when at public gatherings, but when working his eyes were allowed to diverge so he could read proof and set type at the same time without head rotation, a fact which I verified.

The lateral field of vision for both patients when the eyes are diverged is 220°. Their retinas show a similarity to the ungulates in not having a highly developed area which would suggest a macula; although light perception is more acute centrally, it is nevertheless seen in all other parts of the retina.

In conclusion, I would say if it were possible to have a pathologic examination of these eyes, we would find their movements due to the absence of the macula, which would in turn prove that the macula is necessary, but only for binocular vision at the near point.

Patient Relieved by the Wrong Glasses

At the last meeting of the ophthalmological section of the British Medical Association, Dr. A. Bronner, of Bradford, reported an interesting case in which all distressing symptoms of the eye and the general system had been relieved by the use of the improper correction. In his paper the doctor referred to the many cases that every one is familiar with, in which the correction of small errors of refraction had relieved local and general symptoms, and to the still more marvelous cases that were frequently seen reported in the lay press. In America heterophoria is the cause of many of these wonderful symptoms, and in England slight errors of refraction are said to produce them. The case here recorded is one which shows how careful we should be in believing the statements of patients and how the use of glasses which are absolutely wrong can produce the same results. The patient was a man aged twenty-four, who came to Dr. Bronner, stating that the glasses he was wearing were simply wonderful, and he required no alteration in them, but he wished to know whether, if he left them off, it would cause injury to his health, as they interfered with his promotion in business. Before he wore glasses, six years ago, he had been in indifferent health and was unfit for work. He also suffered much from headaches. He had always seen fairly well at a distance, but had to bend his head much in reading. As soon as he began to wear glasses, all his distressing symptoms disappeared and he gained several stones in weight. On examination he read $\frac{6}{18}$ and J i with difficulty with his glasses, $\frac{6}{12}$ and J i easily without them, and with $-.5 \frac{6}{12}$. The disks were congested and both eyes practically emmetropic. He was wearing spherical — 1 D. and cylindrical — 1 D.

Dr. Bronner believes that in this case the cure was due to suggestion and probably assisted by the fact that with the glasses the patient was obliged to hold his head up when reading. But the reviewer must remind the reader that there is a serious gap in the report of the doctor, for nothing is said regarding the muscular equilibrium of the patient. It may be that the patient was suffering from marked heterophoria like exophoria, which was relieved by the stimulation of the internal recti due to overcorrection of the optical defect.

The Eye and Sources of Light

In a recent number of the *Archiv f. Augenheilk.*, Dr. A. Staerkle calls attention to the fact that the acetylene light, the Welsbach light and the electric light, even with the usual glass covers, still emit many hurtful ultra-violet rays, while the ordinary petroleum light is entirely free from them. He advises to cut down these hurtful rays either by thicker lamp covers (about $\frac{1}{8}$ inch thick), or by globes made from a grayish-yellow glass, the so-called Fienzal glass. The latter he also recommends for protecting spectacles where it is intended to diminish the ultra-violet rays and not the strength of the light. In the latter case, where it is the intention to reduce the whole amount of light entering the eye, one should use smoke glasses.

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Eyestrain as a Cure of Diseases of the Digestive Organs

In a recent issue of the *Journal of the American Medical Association* appeared a most interesting article by Dr. George M. Gould, of Philadelphia, the eminent oculist, under the caption which heads this column. The article in its entirety was a severe arraignment of the medical profession at large for its dilatoriness in recognizing the great importance of eyestrain in general pathology. The following extracts have a special interest for the opticians, to whom should be awarded much of the credit for the change told of by Dr. Gould:

Belated Recognition

Before the section on practice of medicine of the American Medical Association, in 1905, the then president of the association, the professor of medicine in the medical department of an old university, read these words:

"NON-GASTRIC ORGANIC DISEASES PRESENTING GASTRIC SYMPTOMS."

The eyes—the subject is familiar to all. Who has not seen correction of errors of refraction relieve so-called 'bilious attacks,' periodical vomiting, anorexia, indigestion and other gastric symptoms? The cure of grave organic ocular defects relieves similar gastric conditions."

A good-sized book, with no superfluous word, might be written concerning this astonishing admission, for: 1. Every statement made is true. 2. Every statement made is untrue. 3. Its significance is wholly unrecognized and far-reaching. 4. The history and due credit-giving are unjustly ignored.

1. Supposing that the thing intended to be said is really said, we have here an authoritative assent and reaffirmation of the truth that eyestrain frequently produces "bilious attacks," periodical vomiting, anorexia, indigestion, and other gastric and intestinal diseases. It is now sixteen or seventeen years since I began to affirm and to reaffirm this truth, and this is the second convert made among the diagnosticians, leading practitioners or gastrologists. Hereafter I can merely refer critics, sneerers, ignorers and deniers to Dr. Musser, ask them to settle their scores with him, and sing my "*Nunc dimittis*" with a smile of cheery satisfaction. No longer is it a question of the opinion of a "specialist," an "enthusiast," an "exaggerator," a "hobby-rider," a "grinder of his own axes," etc., but the president of the largest American medical society, the professor of medicine in a great college, and the leading diagnostician and practitioner in a large city, has spontaneously and publicly stamped the theory with the approving seal of his authority. There is abundant clinical evidence of the correctness of the intended statements of Dr. Musser in the paragraph quoted, and any practitioner can verify it in his practice by numerous patients whenever he will refer them to competent oculists and follow the histories up for a few days, a few weeks or a few months. In this instance it is not for the affirmer to prove his statement. Any man who makes such an assertion as this, and especially one occupying the position of authority and power held by Musser, is perfectly aware of the reach and significance of his published opinion. He has, beyond question, demonstrated it long and often, or he would not dare to come out so plainly and without equivocation. It, therefore, behooves the deniers, ignorers and cynics—the so-called "conservatives"—to prove their negation, because, by every moral and medical law, all patients continued in their sufferings by this "conservatism" may justly, and should legally, hold the deniers, ignorers and cynics criminally responsible.

The Fatal Prejudice

How many deaths are chargeable to the prejudices of Hodge and Meigs and their blind adherents who opposed the clear logic of Oliver Wendell Holmes? And when the error-loving and truth-hating opponents and rivals

of Semmelweiss ruined him professionally and allowed thousands of their patients die they were likewise responsible. Since now a great man has authoritatively announced the frequent dependence of diseases of the digestive organs on eyestrain, those who continue their policy of not giving their patients the possibility of cure by the method suggested must settle with avenging science and the medicine of the future. They cannot longer continue the pitiful and silly cry of "danger, danger in such extremism," with which they and their commercial medical journals have met the demands of progress in clinical medicine.

2. It is a pity that the method of making the announcement of the paragraph was not itself beyond criticism. There is a perfectly well understood and admitted meaning of the term "organic disease." In the paragraph-title, "Non-gastric Organic Diseases," etc., this definition is contravened and mystified. Ametropia is not an organic disease. The eye with the low and common errors of refraction is in no way morbid or diseased, least of all is it organically diseased. Only by secondary endeavors to overcome the malfunction of the ametropic eye does organic disease somewhat rarely arise, either in the eye itself or elsewhere. In the vast majority of cases the attempt to overcome the error—called eyestrain—is purely functional. In the same way, in the last sentence of the paragraph, the repetitive misuse of the term is followed by the words "similar gastric conditions." But the gastric, intestinal and pelvic consequences of eyestrain are at first, and for long, purely functional. As long-continued functional disorder is bound to end in organic disease or anatomic pathology, so here, also, these functional disorders of digestion may finally end in inflammatory and surgical disease. But a wiser discrimination should have guided in the making of the pronouncement.

Willful Ignorance and Indifference

The motive may have been excellent which prompted the writer to say, "The subject is familiar to all. Who has not seen?" etc. But method is often almost as important as motive, and in this instance it is doubly and trebly so. If it is correct to say that the subject is "familiar to all," etc., then those who show willful ignorance of it, those who deny and scoff at it, those who do not bring the possibility of the therapeutic tests to their patients—what shall be said of them? Is there any word too denunciatory, any expletive too strong, as applied to one who has seen, often and "familiarly" seen, the relief of eyestrain and bilious attacks, vomiting, anorexia, indigestion and other similar symptoms, and yet who wholly ignores the fact in his published books and articles, who does not act on the suggestion in the treatment of his patients, who scoffs at all reflexes, and who publicly laughs at all such non-sensical theories and theorists. Without the "if," I do not myself call them miscreants and scoundrels—I only ask, if it is so, is it not scoundrelism? The authority implies plainly that all physicians have seen such cures, are familiar with them, know them to be genuine and true—and yet, well, let us glance at the literature! We must remember that there cannot be less than one-third of the persons of the civilized world who are suffering from some of these enumerated symptoms and their sequels. There are several hundred millions of such civilized persons, and hence, admittedly, and at the lowest calculation, there must be a score or two of millions suffering from digestive disorders due to eyestrain. Everybody, plainly implies Professor Musser, is familiar with and admits the fact that the correction of eyestrain gives relief in many cases of gastric and intestinal disorder. Well, if so, why do they not say so and report cases publicly? What kind of familiarity and science is that which is carefully excluded from all publication and open admission? It is, of course, sham familiarity, unscience, nonsense.

A Revolution in Medical Practice

If the truth of Dr. Musser is true, the refractions of our oculists were the means of demonstrating the truth. So far as I know, only one such oculist has publicly confessed. Concerning sick headache or "migrane," many have done so, and in other essays I have given the details, quoted the writers and established the question of priority. Sick headache, however, is not the subject now under discussion. Although that disease consists in the most profound and revolutionizing morbidity of the digestive process,

it presents, in the main, a different clinical picture from that of "bilious" attacks, periodical vomiting, anorexia, indigestion and other gastric symptoms described in the quotation taken as a text.

3. The significance of Dr. Musser's statement is not recognized, and its far-reaching consequences not discriminatingly appreciated. If it is true, then the professional and the social bearings are tremendous. It may be seen at once that the practices of nearly all physicians must be thoroughly changed in the majority, or in a large minority, of the patients consulting. Not even the specialists can be excepted, because, seek where one will, do not the majority of diseases spring directly from the disorders and diseases of digestion and nutrition, or are intimately based on or associated with them? How large a portion of the drugs advertised are directly or indirectly aimed at those conditions? What is the whole nostrum, patent and proprietary medicine business but the organized attack of quackery on the demons of "dyspepsia" and denutrition? Seventeen or eighteen years of clinical observation and study have convinced me that a far larger proportion of all gastric and intestinal diseases are due to eyestrain than ever Dr. Musser and Dr. Stockton would admit.

The Pioneer in This Field

4. If I am in error, I shall be happy to be corrected, but I think I have not mistaken when I say that the recognition of the truth of the ocular origin of these diseases of digestion was begun, and for ten or a dozen years was advocated, solely by me. Since then I have continued nearly every year to beg consideration of the fact. Not an oculist published a line of assent or seconding. At last I convinced a few of my friends in general practice, especially one great physician of national fame, by the best of demonstrations—the restored health of patients. The misfortune of the theory consists in the self-evident fact that the cures depend on an accuracy and refinement of practical refraction which has been almost impossible and unknown and which is now only becoming more general.

The manner in which the recognition of the truth is coming about illustrates so admirably the ancient psychologic way that it should be noted. Years of utter silence and ignoring follow a discovery and the repetition or re-emphasis of it by the foolhardy. Then follow ridicule, calumny, coarse dogmatism and stupid opposition of the leaders who do not lead, the authorities who are without authority, the editors who sell themselves to the *Zeitgeist* or to their commercial salary-givers, the indifferent multitude who follow blindly the blind guides. Finally, one after another acknowledge the truth, long evident to many, impossible longer to be slandered or ignored. But the distinguishing characteristic of the confession is that it is "familiar to all" and admitted by all; but still persists the death-like silence as to how the discovery was made, by whom recognition was made necessary. There is not a hint of gratitude to those who have sacrificed themselves in the cause of truth and discovery. Instead it is said: "It is familiar to all;" "That is an old story;" "We have always said so"—and then is renewed the custom of ignoring and maligning the new and different truth that, in its turn, is struggling for a chance to release others from their sufferings.

What Will the Doctors Do?

How is it in practice? Will Dr. Musser's colleagues, the great professors and text-book makers, see to it that the eyes of patients with gastric troubles have been accurately "glassed?" Will the leading diagnosticians and practitioners of New York, London, Paris, Berlin, Boston, Chicago, San Francisco, Philadelphia, Baltimore, New Orleans, and the rest, when a patient comes to them next week, seek to learn if there exists eyestrain? If they do this will they do more than to ask in an incurious and hunderum way: "Have you been wearing glasses?" If they get a reply, "Yes, from a good eye specialist," will they rest unsatisfied? Do they care to go into the matter earnestly, scientifically? Do they seek to know that, as a rule, the greater the reputation of the "ophthalmic surgeon" the more certainly will his prescription of lenses be wholly inaccurate and wrong? Will they seek to learn that there are some one hundred good and sufficient reasons why the glasses worn by patients generally are unscientific and incapable of relieving eyestrain? "Familiar to all" may be an astute (or blunderful (?)) way of rendering a truth unfamiliar to any.



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Grinding Telescope Lenses

THE first lens was a raindrop; and the first optical demonstration was the rainbow. How long ago men began to imitate nature in the making of lenses, we cannot even guess. In their crudest form they were made by filling hollow glass globes with water, and were used as magnifiers and burning glasses. A ground lens of rock crystal was found by Layard among the ruins of Nimrud; but if lens grinding was practiced by the ancients, it was numbered among the lost arts and remained forgotten for many centuries.

The First Ground Lenses

Among modern peoples the ground lens was first used in the making of spectacles, becoming common for this purpose early in the fourteenth century. This form of the lens is still the one with which we are most familiar. In the photographic camera we see it in a higher form of development; and in the great object glass of a telescope it reaches its highest perfection.

Little high-grade glass suitable for lenses is made in the United States. That used in this country is nearly all imported from France or Germany. It is shipped in pieces a little larger than the sizes of the lenses to be made, the two surfaces being polished just enough to enable experts to determine by looking through that there are no defects in the glass, the edges being left rough excepting at four opposite points. Much time and care are spent in the examination of the rough blocks, for if they contain the slightest vein or trace of unequal density they are entirely worthless, and any time spent in grinding or polishing would be wasted. It is also imperative that the disks shall be perfectly annealed, which is readily determined by means of polarized light. Small bubbles can be overlooked in large optical disks, as they do no more than slightly retard the passage of light; but defects of any other nature are fatal. Two kinds of glass—crown and flint—are used in the construction of a lens.

First of all, the focal length of the lens must be decided upon; and then it is necessary to establish by mathematical calculations the exact curves by which the greatest possible effect, with regard to the refraction and diffusion of light, can be secured.

Producing the Proper Curve

The whole effort of the lens grinder is now directed to the production of the exact curve that has been decided upon. The piece of glass is ground on an iron disk of the proper curve, revolving in a circular trough. From time to time powdered emery and water are thrown on the disk. Most of the time the lens is held in the bare

hands of the workman, it being but rarely during the whole process of manufacture that machinery can be used in its manipulation.

When it has been ground down to something near the required shape, it is taken to another slowly revolving tool, where a finer grade of emery is used; and from this to still another; and so on, until it has been reduced to the proper size and has gained approximately the required curves. The last grinding, called the "fining" process, is the most important, and requires the most careful manipulation. The selection of the emery to be used is of prime importance, as a coarse abrasive particle might result in spoiling the labor of months. Several pounds of emery powder are thrown into a vessel of water. All the particles that float are carefully taken from the surface, and what is left is washed for twelve minutes. The water with the emery remaining in suspension is then used for fining. A washing for a shorter period produces a coarser grade, which is used at an earlier stage, and so on.

Polishing the Lens

The lens is next taken to the polishing department, where the most delicate work of all is done. For the larger lenses, the polishing and correcting are done on massive machinery, in an apartment where the temperature is kept absolutely constant. The windows are never opened here when a lens is in process of manufacture, as a stray particle of dirt from the outside world might work irremediable havoc; and the workman and the precious piece of glass in his hands are protected by a huge umbrella or other non-porous covering from dust particles that might fall from the ceiling. This extreme caution is none too great, as the optician must now deal with errors not greater than the five-hundred-thousandth part of an inch.

A mixture of coal-tar pitch and oxide of iron is put on the plate of a revolving wheel, and on this the lens is placed. The workman still holds it in his hands, and from time to time adds more of the mixture. To the novice this thing of standing all day long over a piece of glass, and watching a wheel slowly revolve under it, with every faculty of the mind concentrated on the action of watching, seems tedious and monotonous beyond description. It would seem that human nature would rebel against the continual grind, grind, day after day, week after week, and month after month; and that carelessness and inattention, with consequent disaster, would result. However, the skilled lens grinder has cultivated the faculty of attention to such a degree, that he is oblivious to all but the piece of glass in his hands. The time passes unnoticed, and not until the day's work is done does physical exhaustion from the continual strain on both nerves and muscles assert itself.

Testing for Accuracy

After the lens has been polished to about the right degree, a careful test is made to determine that each curve is rigorously accurate to the calculated radius; and it is then centered on a machine that makes the edges of exactly equal thickness all around. At this stage of the work on a fine lens, the ordinary observer would consider it finished; but the educated optician considers it just begun. Now what is called the "figuring" of the surfaces must be commenced. This is a process calling for the utmost refinement and delicacy of manipulation of the surfaces of an object glass, so that every ray of light coming from the distant stars shall be brought to one exact focal point.

To make such a study of an object glass, a perfectly plane surface must be prepared, which in itself requires the very highest skill. Some of the plane surfaces used are so nearly perfect, that on the assumption that they are either slightly convex or slightly concave, the radius of the curve is greater than 1000 miles.

Once a plane mirror has been secured, it is used in the delicate study of the optical character of the objectives by simply placing them in front of the plane mirror and allowing the light from a tiny artificial star placed at the focus of the lens to pass through the lens and be reflected back from the mirror through the lens to the eye of the observer. He is now able to trace every high or low zone.

Producing Symmetrical Curves

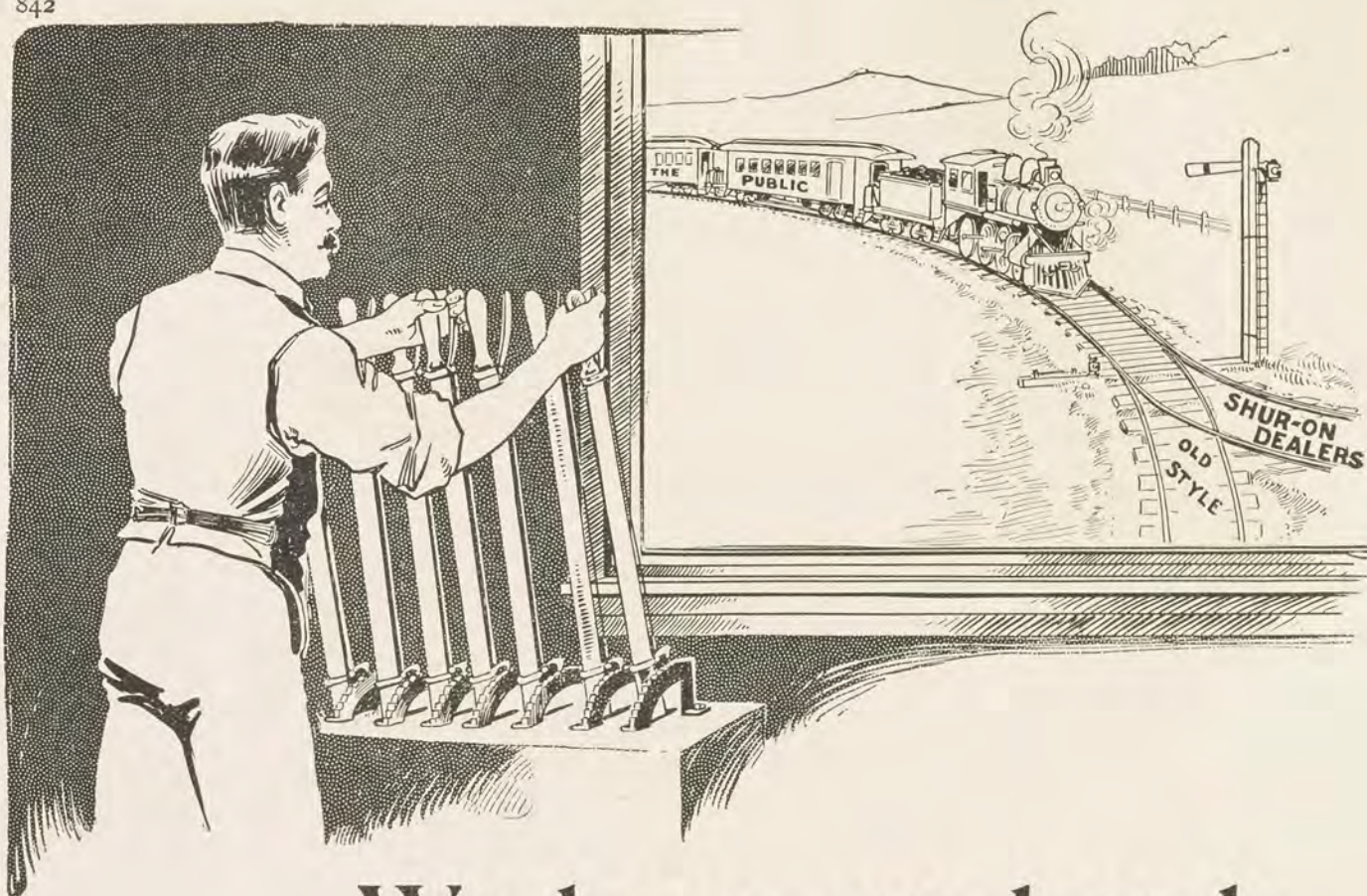
Then comes the fine art work of cutting down the high zones—some of them less than the two-hundred-thousandth of an inch high—and producing a symmetrical curve, which must be a composite of all the curves. But a few men ever succeed in reaching this stage in the making of optical instruments. Professor Newcomb has said that their number in each generation the world over can be counted on the fingers of one hand.

In the final work on a great object glass, patience and time, as well as skill, are essential. After working for a few minutes it is necessary to wait for many hours until the subsidence of the surfaces, elevated by such working, can take place—and then only when the temperature is kept constant.

As already mentioned, two kinds of glass—crown and flint—are used in conjunction for astronomical lenses, the combination of the two neutralizing the prismatic light waves which otherwise would prove annoying to the user of the instrument. With the smaller lenses a transparent cement is often used to fasten the two sections of the complete lens together; and so carefully is this done, that the keenest eye can discover no trace of the junction.

It may give some idea of the care and labor required in the making of a large lens, to say that least one year's time is required for the grinding, finishing and polishing of a thirty-inch object glass. A forty-inch object glass, completed some time ago, was four years in process of manufacture. A little lens two inches in diameter requires the unremitting care and attention of a skilled workman for nearly two days. The lens is one of the most perfect productions of human skill.

—John L. Cowan, in *Technical World*.



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The people who want *Shur-Ons* will get them sooner or later. It's only a question of whether they buy them from you or somebody else—but *you* ought to be the man.

Can you afford to do without *Shur-On* business; is it good policy to antagonize your customers and make them go to your competitors for something they should get at your store? Think of the good will and profits that might just as well be turned to your own account!

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Clinics in Optometry

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[Each of these clinics is complete in itself, and one of them is published each month in this department. They cover all manner of eye defects, from the simplest to the most complicated, and give the most authoritative procedure in the diagnosis and correction of the various visual defects. In order to make these clinics of maximum benefit, we invite our readers to join in them by sending us any criticisms or suggestions they may have to make in regard to the treatment here given. The first clinic of the series appeared in the May, 1904, issue.—Ed.]

Keratoconus or Conical Cornea

J. E. B., forty-six years of age, complains of headache and indistinctness of vision. He says he has been wearing glasses for the last eleven years, and that previously his vision had been good. A glance at his glasses shows them to be strong cylinders.

On seating him at the usual distance from the test-card and removing his glasses, we find he is unable to name even the large letter at the top of the card. In a case of impaired vision like this, it is desirable to determine whether the refraction of the eye is at fault or whether the defective vision is dependent upon disease. In the pin-hole disk, we fortunately possess a method by which this point can be easily and quickly determined.

We will therefore make use of this test in this case. You will notice that I do not place the pin-hole disk in the trial frame, because in so many cases I have found that the patient has difficulty in finding the opening and his answer is that he can see nothing.

Instead, I prefer to give the disk to the patient to hold in his hand, while he covers with his other hand the other eye. In this way he has the disk entirely under his control, and he can easily move it around until he gets it directly in the visual line. In this way there is admitted into the eye a small pencil of light, which, passing through the axis of the refractive system of the eye, forms a clearly-defined image on the retina, in spite of any errors of refraction that may be present.

Therefore, if the pin-hole improves vision, we know that the refractive system of the eye is at fault, and that a similar or greater improvement in vision can be expected from glasses.

If, on the contrary, there is no improvement in vision by looking through the pin-hole disk, there must be some diseased condition which is not remediable by glasses, so that no matter how perfect the image that is formed in the eye, it cannot be perceived or transmitted to the brain, and thus the case is classed as one beyond the province of the optician.

I would advise you in cases of defective vision to use the pin-hole disk at once, and discover early in the examination whether or not the case is one of refractive error, and you will thus save much valuable time which might be spent in trying to fit a case that could not be helped by glasses.

Any one of you gentlemen can demonstrate for himself the effect of the pin-hole disk. Take from your trial case a strong convex lens, hold it close to your eye and look through it at some distant object as the test-card. The letters will all be indistinct, in fact will be entirely blotted out; now place the pin-hole disk in front of the lens, when

you will find its power is destroyed and vision is restored to normal. In like manner, the effect of a strong concave lens will be neutralized, as will also the effect of cylinders, whether convex or concave.

If the damaging effect on vision caused by imposition of strong lenses, can be thus destroyed by the use of the pin-hole disk, you can easily understand how the impaired vision of refractive errors can be improved by the same means.

We now hand the pin-hole disk to this patient, and ask him to use it in the way we have just described. The result, as he tells us, is O. D. $\frac{2.0}{10.0}$, O. S. $\frac{2.0}{8.0}$. This is not very encouraging, but at the same time it demonstrates the possibility of some improvement in vision by means of carefully adjusted lenses.

We will now make use of the ophthalmometer. I find great distortion in the shape of the mires, and I am unable to focus them sharply. This shows great irregularity in the curvatures of the cornea, and from my previous experience in similar cases, I recognize here a case of keratoconus or conical cornea.

I am unable to get the primary position of the mires, or the meridians of least and greatest refraction or the amount of overlapping in the latter; the most that I can do with the ophthalmometer is to locate one of the principal meridians in each eye, that for the right eye being at 75° and for the left eye at 105° .

Before the days of the ophthalmometer, cases like this with irregular curvature of the cornea, presented the greatest difficulties in the fitting of glasses, but the perfected instrument of the present day does much towards overcoming these difficulties.

The first glance through the ophthalmometer reveals the irregularity of surface, and at the same time we gain information about any regular astigmatism that may be present. In this case the ophthalmometer shows the presence of regular astigmatism in addition to the irregular. The distortion of the images of the mires is such a delicate test, that the slightest irregularity of the surfaces of the cornea is detected. The ophthalmometer is also of the greatest value in finding the most regular part of the cornea.

In many of the cases of conical cornea, the astigmatism is of such a high degree that the ophthalmometer, as now constructed, is only capable of giving the relative difference of the dioptric power of the two chief meridians of the cornea, and not absolute and exact measurements. Nevertheless, in all ordinary cases and for all practical purposes, the instrument is accurate enough. In the exceptional cases, the difference in the curvature of the two chief meridians can be approximated, as can also the position of the two meridians.

We will now use the ophthalmoscope in this case, and we find the shadow crescent of conical cornea beautifully shown in each eye. In the right eye the shadow is so pronounced as to suggest an opacity of the lens, but as we examine by oblique illumination the lens and cornea show perfectly clear.

The details of the fundus are but indistinctly seen, with either the direct or indirect method. The optic disk is whitish, and is long and narrow vertically, but I can see

only parts of it at a time, the blood vessels and background changing with each movement of the eye or the ophthalmoscope. There are no opacities in the vitreous humor.

The ophthalmoscope is of no value in the estimation of the refraction, while the retinoscope is utterly useless, as we cannot get any definite reflections or movements. The subjective test with the clock dial is altogether unsatisfactory. The value of the ophthalmometer is greatly limited, but it has pointed out to us the location of one of the principal meridians. This narrows the measurement of the error of refraction down to the subjective tests with the test case and trial lenses.

We will commence the test with the right eye. The ophthalmometer has indicated the location of one of the principal meridians at 75° , but has given us no evidence as to whether it is the meridian of least or greatest refraction, and hence we will have to start with the test lenses somewhat empirically.

We place a $+1$ D. cylinder in the trial frame with axis at 75° . The result is negative, or if anything a still greater dimness of vision. We then rotate the cylinder, and the patient chooses 165° as the best position for the axis. This indicates a case of astigmatism against the rule, the vertical meridian (or 15° from it) being flatter or hypermetropic. We add a .50 D. cylinder with axis in same position, and still another .50 D. cyl., both of which are accepted, and with this $+2$ D. cylinder we have reached the limit of convex acceptance, but so far have produced but little improvement in vision.

Presuming the astigmatism to be of much higher degree, we place a -1 D. cylinder over the convex cylinder, with axes at right angles. This makes the letters considerably brighter, and the acceptance of this concave cylinder with axis at 90° (or within 15°) shows the horizontal meridian to be convex or myopic, and indicates astigmatism against the rule; or, taken in connection with the convex cylinder, a case of mixed astigmatism against the rule.

We increase the concave cylinder 1 D. at a time, each change producing a greater improvement in vision until we reach -6 D. cylinder, which is the strongest cylinder in our trial case, but without affording very satisfactory vision. It is very unusual to meet with astigmatism of a higher degree, and therefore stronger cylinders are but seldom called for.

Fortunately we have a three-cell trial frame, which holds the two cylinders so far selected, and permits of an additional concave cylinder, which of course is placed with its axis in the same position. We add a -1 D. cylinder, which affords considerable improvement; we replace this with a -2 D. cylinder, but patient is in doubt whether this is any better. We therefore give preference to the weaker cylinder. Our combination now is:

$R + 2$ D. cyl. ax. 165° $\ominus - 7$ D. cyl. ax. 75°

with which vision equals $\frac{2.0}{6.0}$.

With the concave cylinder divided into two, it is almost impossible to rotate together in order to determine whether or not they

(Continued on page 845)

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Don't blame your jobber if he has been slow in filling your order for solid gold and extra quality filled guards. I have had more orders for these during March than during the whole six months previous, and have been obliged to make jobbers wait for stock; all the opticians in the country seemed to want gold at once, as there is more money in it than in the other metals, and they have discovered that fact. I have increased my stock of gold and extra quality filled and can now fill orders promptly. I am glad to see the demand for extra-quality filled increasing.

Read the EAR GUARD NEWS each month in THE KEYSTONE

A. A. Laforest, Manufacturer
St. Louis, Mo.

Clinics in Optometry

(Continued from page 843)

are placed at the proper meridian. In fact we are unable to rotate the convex and the concave cylinder together, and under such circumstances it is customary to transpose to the equivalent sphero-cylinder, where there is only one cylinder to rotate. But in this case the transposition yields a -9 D. cylinder, and unfortunately we do not have a cylinder of this strength in our trial case.

The only thing we can do is to take our strongest cylinder (-6 D.) and find the best position for its axis, which the patient very confidently locates at 75°, and as this meridian is corroborated by the ophthalmometer, we have no hesitation in accepting it as correct.

The pin-hole disk showed the vision of the left eye to be capable of the greater improvement, and hence we commence the test of this eye with more hope. We try of course convex cylinders first, and the strongest accepted is +1.50 D., with axis at 15°. We then use the concave cylinders with axes at right angles, increasing 1 D. at a time and securing greater improvement in vision, until we reach -6 D. cylinder, axis 105°, with which combination vision equals $\frac{3}{80}$. We cannot transpose to a sphero-cylinder, and then verify the position of the axis, but we will have to use the -6 D. cylinder alone, with which the axis is quickly located at 105°, which is verified by our ophthalmometric examination.

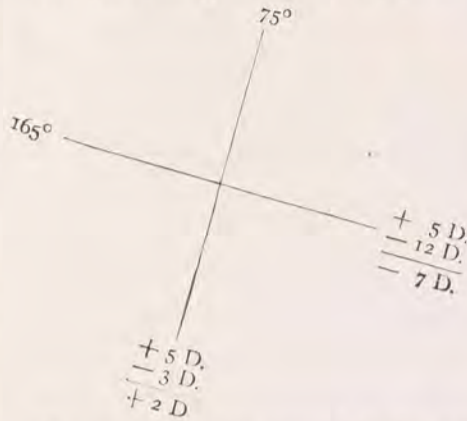
This man is forty-six years of age, and some correction must be given for the presbyopia that is usually present at this age. He asks us if he cannot have his glasses in the bifocal form. We tell him these would not be satisfactory in view of the high degree of defect and the lowered acuteness of vision. Instead we will prescribe +1.50 D. spheres in an extra front for reading.

This seems to be a favorable case for ordering the lenses ground in toric form, which would be as follows: the front surface of the lens ground with a +5 D. sphere; the posterior surface of the lens ground toric, -12 D. at 165° and -3 D. in the 75th meridian.

We are considering the right eye, and in order that you may follow me and understand this transposition, I will make two diagrams on the blackboard:

transposition must show the same power in the same meridians.

Now let us analyze the toric combination



The +5 D. sphere ground on the anterior surface of the lens affords +5 D. power in both meridians. The -3 D. ground in the seventy-fifth meridian reduces this meridian to +2 D., and -12 D. ground in the one hundred and sixty-fifth meridian changes this meridian to -7 D., thus showing the same powers in each meridian as the original cross-cylinder. This toric lens will be of much better shape than the cross-cylinder or its equivalent sphero-cylinder.

As conical cornea is not very common, I am glad to be able to present this case for your study and observation. Except very rarely it is not a congenital disease, but makes its appearance about the tenth year. It is most frequently observed between the ages of fifteen and thirty. This gentleman tells us his vision was good and he did not commence to wear glasses until about fifteen years ago, which would make his age thirty-one when it was first noticed. The statement is made that women are more often affected than men.

The cause giving rise to this condition is not known, neither is the method by which it is produced, but it has been noted that a great many of the patients who have been affected were in feeble health. The integrity of the cornea is impaired so that it gives way at the point of greatest weakness, which is usually a little below its center, where it is forced forward and becomes sharply curved while around it the cornea assumes a conical form.

If the protrusion is moderate, the cornea maintains its transparency, or shows but slight opacity on oblique illumination. If the protrusion is extreme (and it is said to amount to as much as a half inch sometimes) the opacity is much more noticeable. Both eyes are usually affected; the protrusion may slowly increase for a time, then become stationary and perhaps change again later in life.

Its most important effect is its influence on the acuteness of vision and the refraction of the eye, the cornea, on account of its increased curvature and displacement forward, renders the eye highly myopic and astigmatic. This impairs the vision so greatly that but seldom can lenses be found to raise vision to anything like the normal standard. The lenses giving best vision are usually strong concave spheres combined with cylinders. In this case, as you see, the strong lens is a concave cylinder combined with a weak convex, which is somewhat exceptional.

While on this subject of conical cornea, it may be interesting for you to know that many years ago Sir John Herschel proposed to correct the refraction by placing over the cornea a transparent shell or cup, which was called a "contact glass." The lens was ground in the shape of a meniscus, so that the posterior surface fits the front of the eyeball, somewhat after the nature of an artificial eye, while the front surface is ground to correct the refractive error. Unfortunately the contact glass acts as a foreign body, and on account of the irritation which it produces, cannot be long tolerated.

As optometrists, you are not so much concerned in the surgical aspect of conical cornea, but it will be interesting for you to have some knowledge of the operative treatment.

Sometimes an iridectomy is performed for the purpose of admitting light through a peripheral portion of the cornea, thus limiting the diffusion of the retinal image.

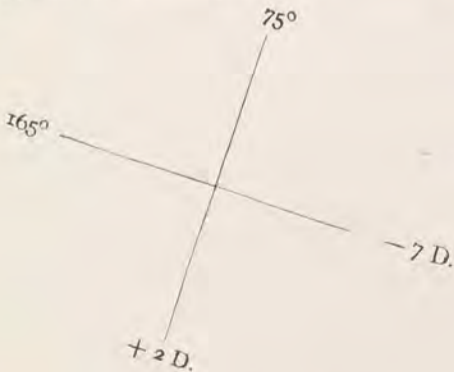
Attempts have also been made to flatten the cornea by excision of a small piece from the apex of the cone, or by touching and perforating the apex with the galvanocautery, resulting in the production of a flattened cicatrix.

The extended use of myotics seems to act favorably in cases of conical cornea, the progress of which they moderate or check by reducing the tension of the anterior chamber. And, besides, they tend to improve the vision by contraction of the pupil.

Backgrounds for Photographic Work

One often sees portraits with brick walls or creased cloths for backgrounds which show that the photographer has not taken any trouble, or, at least, has not taken it successfully, to avoid unsuitable details from figuring in his portraits, says a writer in the *London Optician*. Yet it is very easy to make a background. Material is cheap enough, for the cheapest cotton fabric will make a very fair background if stretched on a light wooden frame and distempered. Those who have never tried to make one, may find the following the easiest way of coating the material: Two pounds of size should be liquefied by heat, and have added to it half a pint of boiling water. With this, the whole of the face of the background should be well brushed over. If both sides are to be painted, both should be sized.

The fabric, which is supposed to be stretched on a frame, is allowed to get quite dry. It is then coated with whitening one-half pound and size two pounds. The whitening should be soaked in water, but should not have any water which it has not absorbed. It must be thoroughly mixed up with the size, which has been liquefied by heat, and should be kept hot while the mixture is being brushed over the fabric. Lampblack is to be added to bring the mixture to the desired shade, remembering always that it will dry very much lighter than it looks when wet. These backgrounds are all that can be wanted in the way of plain grounds. Very cheap to make, and when soiled it is an easy and cheap matter to repaint them.



The cross-cylinder showed +2 D. power in the seventy-fifth meridian and -7 D. power in the one hundred and sixty-fifth meridian, and the toric lens or any other

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Optical Questions and Answers

Subscribers wishing inquiries answered in this department must send name and address—not for publication, but as an evidence of good faith. Questions will be answered in the order in which they are received. No attention will be paid to anonymous communications.

To enable us to answer questions satisfactorily and give proper advice in the management of cases submitted to us, it is essential that we be furnished with a complete history of each case and accurate information on the following points:

1. Age. (If not possible to give exact age, always approximate).
2. Have glasses been previously worn? How long and what number?
3. Visual acuteness of each eye, and what improvement glasses afford.
4. Range of accommodation (without glasses and with them).
5. Evidence of astigmatism (as shown by radiating lines).
6. Test for muscular insufficiency.

"C. H. R."—*I read in the Easter number of The Keystone, page 517, about the pin-hole test. It said in the first column: "If the light moves with the disk, it requires a plus lens to neutralize the defect." Should it not be a minus instead of a plus lens? Further on it said: "When the light seems to move in the opposite direction or against the movement of the disk, it requires a minus lens to neutralize the defect." Should that not be a plus instead of a minus lens? What do you think of the pin-hole test system? Do the glasses fit properly if they are fitted according to that system? If glasses are to be fitted for reading, how far should the light be away from the patient, and how far it to be fitted for distance?*

The pin-hole disk furnishes an important method of examination, but we have never attached quite as much importance to it as the writer referred to, nor have we ever attempted to determine by its use the correcting lenses in myopia and hypermetropia, or the position of the axis of the cylinder in astigmatism.

In our experience, when the light moves in the same direction, we find the refraction is myopic, and a concave lens is required to correct; and, contrariwise, when the light moves in the opposite direction, the refraction is hypermetropic, and a convex lens is required to correct. When all motion is neutralized, the correcting lens is found.

"P. L."—*Single lady, thirty-three years of age, highly nervous temperament and displaying symptoms of asthenopia, called on me in reference to her eyes. Stated that an attempt at reading or sewing produced a sensation as though her eyes were being pulled out. P. P., each eye, 19½ cm. Refraction, R. E., 2/30, same + .50 cyl. ax. 5°; L. E., 1/30, same, only clearer, + .75 S.; O. U., nil. Upon investigating the condition of muscular balance, using both rod and prism, I was unable to establish diplopia at either distance (20 feet) or reading point. I then examined for strabismus and found that when eyes were directed to distance there was just a suggestion of divergence of right eye. I again tried to establish diplopia, using, in addition to rod, a prism, base in, before right eye; but the best that I could do was to produce a faint and transitory flicker of light. I prescribed the lenses indicated above, with the result that the former inconvenience attendant upon reading and sewing has disappeared. I instructed her as to what she must do to insure the use of both eyes, but would now like to know from you what further service, if any, I can render such a case. I subsequently learned that my client had been born "cross-eyed," and that a doctor had ordered a card or blind to be worn with holes to straighten the child's eyes. In all probability fusion has never been established.*

If the vision in this case is monocular, it seems hardly possible that each eye should possess the same acuteness of vision and that it should be even better than normal, unless the eyes were used alternately. When monocular vision exists, and one eye is used exclusively, the vision of the other eye becomes impaired, the so-called *amblyopia ex anopsia*. Sometimes it is the defective vision

that causes the eye to squint. But, at any rate, strabismus is always associated with impaired vision of the deviating eye. Conversely, we must reason that if both eyes possess a vision that is better than normal, there cannot be any strabismus present, and under such conditions we ought to be able to produce artificial diplopia.

We are inclined to doubt the statement that this lady was born "cross-eyed"; as a matter of fact, strabismus does not appear until the child is several years old and begins to use its eyes for close vision. But if strabismus did exist in infancy, it must have long since disappeared and the affected eye for many years has been participating in the act of vision, as proven by the acuteness of vision.

If our correspondent made his tests intelligently, then the failure to obtain artificial diplopia may be due to the patient's lack of understanding of what is desired of her. After the Maddox rod is placed over one eye, cover each eye alternately and call patient's attention to the red streak seen by one eye and the natural light seen by the other, and then uncovering both eyes she will probably see both the streak and the light.

In order that a correct and definite understanding may be had of each case submitted, it is necessary that correspondents should give ALL the particulars asked for at the head of this page.

"G. W."—*1. In clinic, in February, 1906, Keystone, in the examination of the O. D., the addition of + .25 cyl. ax. 180° was rejected. Why not revolve it to ax. 90° before trying the minus cylinders?*

2. In your clinic in February, 1906, Keystone, the O. D. shows + 1 D. astigmatism. You do not use it in making your transposition. You use + .50 cyl. ax. 180°. Why?

3. In your clinic in November, 1905, Keystone, is the following statement: "An eye instinctively makes an effort to overcome concave lenses when placed in front of it; the ciliary muscle is thus called into action and may result in spasm of accommodation, which is essentially a condition of false myopia." In your clinic in December, 1905, Keystone, I find the following statement: "You will understand that when a strong convex lens is placed before the eye its refractive power is greatly increased, the rays of light are brought to a focus in front of the retina and a condition of false myopia is produced." To my mind these two statements conflict. I do not understand how a concave and a convex lens can both produce false myopia. Please explain my error.

1. The + .50 D. cylinder was accepted with axis at 180°. We then hold a + .25 D. cyl. in front of it in order to determine if a stronger will be accepted, and, of course, the added cylinder must be placed with its axis in same position as the original.

2. The right eye in this case shows 1 D. of astigmatism, but not + 1 D., as our correspondent states. The 1 D. of astigmatism is made up of .50 D. of hypermetropic astigmatism and .50 D. of myopic astigmatism. We use a + .50 D. cyl. axis 180° to correct the hypermetropic meridian, but we must use in combination with it a - .50 D. cyl. axis 90°. This cross cylinder may be transposed as follows: - .50 S. \ominus + 1 D. cyl. axis 180°.

3. A concave lens is a minus or minifying lens, a lens that diminishes or destroys refractive power, and when such a lens is placed before the eye the accommodation instinctively is called into action to overcome or neutralize its negative power. We are presuming that such concave lenses are placed before eyes that are emmetropic or nearly so, and then a contraction of the ciliary muscle occurs, which continues as long as the eye looks through the concave lenses, and perhaps longer. Under the latter conditions we call it spasm of the accommodation, on account of which the eye appears to be myopic, because the increased refractive power of the crystalline lens caused by

the spasm focuses the rays of light in front of the retina, which is essentially the condition found in myopia. This explains how a concave lens, on account of its stimulation of the accommodation, causes a false myopia.

When a convex lens is placed before the eye, the refractive power of the eye is increased and the rays of light are again focused in front of the retina, as in myopia. This shortening of focus is due, not to the extra effort of the crystalline lens, but to the added power of the convex lens in front of the eye.

If the accommodation was passive, the use of a concave lens would diminish the refractive power of the eye and make it, for the time being, hypermetropic. This would be the result if a concave lens is placed in front of an eye whose accommodation has been paralyzed by a cycloplegic. Otherwise the accommodation is active and at the same time involuntary; or, if the concave lens is not very strong, it acts automatically in overcoming it. But if the concave lens is strong, then, in spite of every effort of accommodation, its diminishing power cannot be neutralized, and the eye is made artificially hypermetropic.

When a convex lens is used, whether the accommodation is active or passive, the eye is made artificially myopic.

"W. J. B."—*Girl, twelve years old, came to me for glasses. Vision, either eye, about 2/30. After carefully testing eyes, prescribed the following: R. E., - 1 \ominus + 2.50 ax. 75°; L. E., - 1.50 \ominus + 1.50 ax. 90°, which made vision fully 2/30 and seemed to be perfectly satisfactory. However, after examining the little girl's eyes and giving my opinion, the parents sent the child to a traveling optician, who tested her eyes and told her parents that in his opinion her eyes had not been defective more than two years, and that if he fitted her she would not have to wear glasses more than a year before her eyes would be all right. What I would like to know is whether or not the optician is correct.*

As a rule, a man need not concern himself much as to what a competitor may say about him or his work, provided he is doing what is right and his competitor's statements are untrue. While some traveling opticians may be competent and trustworthy, as a rule they are unprincipled fakirs. The public find them out as such sooner or later, and little credit will be given any statement they make as against an established optometrist who is known and respected by his fellow-citizens. Apparently our correspondent's correction in this case is all right, and the statements made by the traveling optician are extravagant, unreasonable and dishonest. No man can assert how long a refractive error has existed nor, in the case of as great astigmatism as this, can he promise just how long the glasses must be worn.

"H. O. S."—*Teacher, age eighteen; never wore glasses before. Visual acuteness, 2/30; + 1 sph., each eye, 2/30; P. P., without glasses, 4½ inches; P. P., with glasses, 4 inches; 2° esophoria. No other muscles unbalanced, as far as I can find. Adduction, 6°; abduction, 6°. Unable to do near work any length of time; also troubled with headache. Would you advise exercising the internal recti muscles in cases of this kind? No astigmatism.*

This is evidently a case of hypermetropia, as shown by the acceptance of + 1 D. lenses for distance. Corroborative proof of the correctness of this diagnosis is furnished by the near point of 4½ inches, which, at this age, should be slightly within 4 inches. The presence of esophoria also indicates hypermetropia.

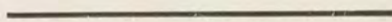
The measurement of adduction shows it to be much below normal; but this may be due to the fact that the patient did not know how to exert his full power of convergence, because the presence of 2° esophoria shows an excess of power of the internal recti, or at least an excessive innervation of these muscles.

A correction of the hypermetropia fulfills all the indications in the case and will probably suffice to afford relief.



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(Continued. Part XVII)

Since thus Om represents the depression of the cornea and On its torsion, we see at once that depression is the prime action of the muscle. The torsion occurs in the same sense as in a screw passing from O to n , so that it is extorsion.

The lengths of the lines On and Om are easily found; for the proportion which they each bear to OI is simply that of the cosine of the angle included between each and OI , or, what comes to the same thing, of the sine, and the cosine of IOD .

Suppose, for instance, we take the obliquity of the axis of the superior and inferior recti to be 27° from the transverse axis, the component Om will be .89, *i. e.*, less than nine-tenths; and the component On will be .45, *i. e.*, about nine-twentieths of the whole rotation OI .

The torsion, therefore, is only about a half of the elevation.

Co-ordination.—Let us now see how much rotation the superior oblique must effect in order to be a perfect associate of the inferior rectus (Fig. 29). Clearly, if subduction is to be unaccompanied by torsion, the extorsion On must be counterbalanced by an equal intorsion On' . After marking off On' , therefore, equal to On but in the opposite direction from O , erect a perpendicular at n' to cut off along OS' (the axis of the obliques) a distance Op , which shows the exact proportion of intervention required from the superior oblique muscle, its rotation being resolved into a torsional component (On') which balances the torsional compound of the rectus (On), and a subducting component equal to $n'p$, which supplements the subducting effect of the rectus. Indeed, the lengths Om and $n'p$ exactly represent the relative proportion of pure subduction due respectively to the inferior rectus and superior oblique. The latter is scarcely more than two-fifths of the former.*

Effect of Horizontal Displacement.—When the eye to start with is ab- or adducted, the proportions are different. We imagine the muscular axes (SI and $S'I'$) to remain fixed in space (though they do not do so absolutely), and the visual AP and DE to move with the eye. In abduction, the transverse axis of the eyeball approaches the axis of the superior and inferior recti.

With 27° of abduction, therefore, the torsional component of the superior and inferior recti ceases, while it would reach its maximum were it possible for the eye to rotate in 63° . Conversely, their vertical effect is theoretically greatest with abduction of 27° , becoming nil with hypothetical adduction of 63° .

The torsional effect of the obliques is greatest theoretically† with abduction of about 39° and nil with adduction of about 51° , since in the former case the axis of rotation ($S'I'$) coincides with the optic axis (AP) and in the latter is perpendicular to it. Exactly the opposite is true of their elevating power, which is nil with abduction of 39° and greatest with adduction of 51° .

Though these calculations are at best only approximately true, we can by their aid determine with more or less approach to truth the provinces of the motor field over which different muscles hold chief sway, or sway of a special kind. A chart of the motor field on this principle was attempted by Duane.

The only reliable way of constructing an exact chart of these provinces is by very careful examination and measurement of the motor field in cases of isolated paralysis, since there is some reason to believe that synthetical calculations are only true in a certain measure owing to the influence of Tenon's capsule, that measure being greatest near the primary position and less with increasing departure from it.

The right-hand side of Fig. 29 (where we come to deal with the superior rectus and inferior oblique) shows that to resolve any given superduction of the eye, such as OE , we need only complete the parallelogram, of which that line is a diagonal, by drawing Er and Rs parallel respectively to the axis of the recti and the axis of the obliques. Then the dimensions Or and Os show the component rotations effected by the rectus and its associated oblique. They are proportional to the sines of 51° and 27° and, therefore, about 17 to 10.

* $n'p = Om \tan 27^\circ, \tan 39^\circ$.

† The reason I use the word so freely in this section is because I suspect the muscular axes do not remain quite so stationary as is supposed.

It is true that isolated paralysis of the superior oblique is common. The double images therefrom indicate sometimes abduction of the cornea, but far more frequently adduction. Moreover, the occasional abduction is most likely explainable, on Mauthner's hypothesis, by the liberation of a previously-existing latent squint, or tendency of the eyes to diverge (exophoria) when not engaged in single vision, from slack action of the converging innervation.* If this explanation of Mauthner's be true and adduction be the characteristic effect of this paralysis during the primary position of the sound eye, then the axis for the muscle must be tipped up above the horizontal plane at its outer end and dip below it at its inner end, as shown in Fig. 31.

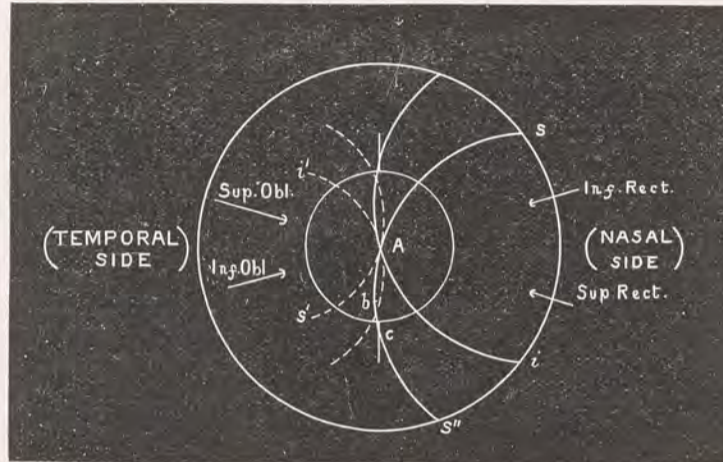


Fig. 31

An india-rubber ball, marked so as to show the Paths of the Cornea during Contraction and Paralysis of the Muscles, if their Axes are tilted (the tilt being purposely exaggerated).

Even then, adduction would only occur during a moderate paralytic displacement of the eye, and would give place to abduction if it exceeded a certain amount, which it would be quite easy to assign were the exact tilt of the axis known.

In fact, as soon as the depression of the eye were to become twice as great as the tilt of the axis, adduction would begin to give place to abduction, provided the center of motion of the eye be fixed.

Paralytic Exophthalmos.—It should not be forgotten that since the four recti tend to draw the eyeball back into the orbit (and balance thus the tensions in the expansion from Tenon's capsule to the orbit with its check ligaments, and the oblique muscles, all of which tend to draw the eye forwards, assisted by the elastic resistance of the retro-orbital fat) it is more than likely that pronounced paralysis of a rectus, when physiological tone is lost, allows the center of motion to advance, and thus the eyeball to be translated forward as well as rotated. This, however, would only introduce a source of error into any quantitative calculation, for it would not alter the principles: the paralytic rotation of the globe would be the same in kind as if no translation occurred, but less in amount.

It would, indeed, occur about an axis, exactly the same in direction as if there were no translation, but which instead of passing through the center of motion would lie to the opposite side of it from the paralyzed muscle, so as no longer to be a diameter of the globe. The rotation about this new eccentric axis, however, would be resolvable into an advance of the center of motion and a rotation about it, the latter being the same in kind, but less in degree than if there were no translation. The greater the translation the less the rotation. The translation in itself is of no clinical account, since it does not affect the diplopia directly, but only indirectly by lessening the amount of rotation.

Model with Tilted Axes.—On an india-rubber ball, like Professor Landolt's, I have represented, as in Fig. 31, the paths pursued by the center of the cornea during contraction or paralysis of isolated muscles whose axes of rotation are tilted to the horizon. Since there are four muscles concerned, none of which have coincident axes, there must be four corresponding paths (or orbits) for the center of the cornea. Since the axes are not horizontal, the muscular planes, to which they are invariably perpendiculars, cannot be vertical planes, neither can the planes of the corneal orbits, for they are parallel to the muscular planes.

Construction.—We may, therefore, after deciding how much to tilt the axes in a model (*e. g.*, an india-rubber ball), still follow Professor Landolt's plan of placing one leg of a pair of compasses on the extremity of each axis in turn, and the other leg on the center of the cornea to describe a circle with the latter. These circles are the four corneal orbits for the respective muscles.

Differences.—In a horizontal-axis model there are only two corneal orbits, each common to a pair of muscles, and it will be seen from Fig. 23 that neither orbit transgresses the vertical meridian: though both touch it at the corneal center, they keep strictly to their own sides, so that, in the primary position, adduction is the only result demonstrable by the model of either contraction or paralysis of the recti: and abduction for the obliques. In Fig. 31, however, each orbit crosses the vertical meridian.

* Perfect orthophoria (by which I mean orthophoria maintained if one eye be excluded for a week) is not found in one of a thousand: it is this which makes the horizontal element in paralysis so uncertain.

[TO BE CONTINUED]

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Optical Notes

John Wagner has again opened an optical business in Buffalo, N. Y., his quarters being at 91 East Genesee Street. They include a waiting room, testing room and consulting and working rooms. Mr. Wagner states that he has been particularly successful in muscular treatment.

The Caswell Optical Co., which has for the past five years been located at 27 Bridge Street, Lowell, Mass., has been obliged to move to another office on the same street. The building which they occupied is being razed to the ground and is to be replaced by a new office building and theater. On the completion of the structure the Caswell Optical Co. will occupy one of the finest offices. At the present time they occupy three rooms in the Runel Building.

The Toric Optical Co. have just moved into fine quarters in the new building at 110 East Twenty-third Street, New York City, where they will occupy the entire second floor, giving them more than double the floor space they had in their old location. A considerable portion of the new space has been assigned to the workshop and considerable new machinery has been added and three new one-horse-power motors installed. The front part of the floor is devoted to the offices and sales-room, which have been fitted up in a very attractive and convenient manner.

The De Zeng Optical Co. and the Standard Optical Instrument Co., both of Philadelphia, have consolidated and incorporated under the State laws of New Jersey; capital, \$100,000, with \$40,000 paid in. The name of the new concern will be the De Zeng, Standard Company, and the officers will be Henry L. De Zeng, president; Philip S. Reid, secretary, and J. Ernest Reid, treasurer. The new company will begin business on May 1st, at 313-315 Vine Street, Philadelphia, with the very best equipment for extending the long-established business of each of the two companies represented by the De Zeng, Standard Company.

We hasten to direct the attention of our readers to the fact that in a news mention in this column in our last issue an error was made in giving the address of Charles Fried, manufacturer and importer of artificial human eyes. Mr. Fried's correct address is 110 East Twenty-third Street, New York City. Mr. Fried was formerly with the R. Hoehn Company. As previously announced he purchased from that company the artificial eye department of their business and is conducting same at the address mentioned. As he is a thorough master of this growing branch of the optical business the trade can be assured of prompt and satisfactory service.

Superintendent McVey, of F. A. Hardy & Co., has returned to headquarters at Chicago. When Hardy & Co. purchased the wholesale business of the Meyrowitz Mfg. Co., of New York City, Mr. McVey, who is classed as one of the best men in the country in this line, was brought on from Chicago to install the prescription department and supervise its operation for a time. He soon had the mechanical end of the business running in first-class shape, and now that everything is running smoothly in that department, he feels free to return to headquarters and resume his old duties. T. Schulte, who has been connected with the dispensing department of the firm at Chicago for a number of years, has been installed as foreman of the New York branch.

Articles of incorporation of the College of Optometry have been filed in the office of the register of deeds, St. Paul, Minn. The incorporators are Joseph W. Grainger, of Rochester, Minn., president; Elmer S. Bugbee, of Minneapolis, vice-president; Edward C. Roberts, of Red Wing, secretary and treasurer. The purpose of the corporation is to promote and advance the practical and scientific knowledge and investigation in optometry and kindred subjects for higher educational purposes.

Oregon State Association of Optometrists

This society was recently organized in Portland and the following were the officers elected: President, G. A. Cutting; vice-president, W. E. Garretson; recording secretary, B. E. Fiske, Macleary Building, Portland; financial secretary, E. M. Dallas; treasurer, R. Thompson; directors, L. M. Hoyt, Hillsboro; S. W. Potter, Newburg; D. W. Kolle, Portland, and H. T. Ingersoll, Oregon City. The next meeting of the association will be in Portland, May 19th next.

North Carolina Optical Society

At a recent meeting of the above society, held at Greensboro, A. P. Staley, of High Point, was elected president, and R. C. Bernau, of Greensboro, secretary. The next meeting will be on July 4th next, in Greensboro, and endeavors will be made to have most of the opticians of the State in attendance.

New England Opticians' Banquet

The twelfth annual banquet of the New England Association of Opticians was held at the Hotel Bellevue, on the evening of April 17th. The affair was known as "Ladies' Night," as the occasion is arranged with a special view of affording the lady friends and relatives of the members an opportunity of meeting and partaking of the hospitality of the association. About seventy-five attended. During the dinner the Mexican Serenaders rendered a number of musical selections, and later performed a varied and most entertaining programme. Miss Welch, a talented reader, gave a number of recitations, that were warmly received and called for numerous encores.

Before the dinner a brief business meeting was held, at which three applicants for membership were elected and two other applications were received and referred to the membership committee. On motion, the chair appointed Messrs. Doane, Barber, Hart, Parks and Ward a committee to make nominations for officers, to be voted on at the May meeting for the ensuing year.

The only speaking at the dinner was a short address of welcome by President Carter, who expressed the belief that the interest of the ladies in the affairs of the association would tend to make the members better opticians and his pleasure that this interest was manifest by the presence of many of their lady friends. He called upon Briggs S. Palmer, vice-president of the American Association, who told about the plans made for running a special car or train, if needs be, for the use of New Englanders who would attend the Rochester convention. Attention was also called by Mr. Carter to the coming convention of the New England Association, to be held in Boston, May 15th and 16th. The indications, he said, pointed to the largest gathering of opticians ever held in New England and probably the largest optical conven-

tion held anywhere. Plans are made to accommodate between three and four hundred opticians and jeweler-opticians. All the spaces in the exhibit hall have been engaged by manufacturers and wholesalers, who will show a varied line of the newest things on the market. Some very handsome souvenirs will be distributed and the visitors entertained at a banquet by the two prominent wholesale firms of Boston, while a well-known manufacturer will give a theater party for the entire list of members and visiting dealers. The traveling men of the various wholesale houses of Boston report considerable enthusiasm over the prospects of an instructive and enjoyable gathering, and a desire to attend and enjoy the good things planned for their benefit.

Bifocal Lenses—A Correction

ED. KEYSTONE:—Our attention has recently been called to an article published in the April number of your valuable paper, entitled "Bifocal Lenses." We notice particularly the paragraph near the top of the center column on page 673, where it says: "The last lens placed on the market is the Aplanatic, made by the Spencer Optical Co. It consists of a base lens and round wafer about 12 mm. in diameter, of ordinary thickness."

We seriously object to this description of this lens because it is misleading, and we cannot think that the gentleman who read the paper in question would willfully misrepresent the article intentionally. At the same time it would have been much better if he had ignored it wholly rather than to have given it such a false description, causing a serious injury to us.

We notice on page 671 of the April issue that he describes "a popular bifocal." If he had used this description for the Aplanatic invisible bifocal lens of "ordinary thickness" he would have been very much nearer the truth. The facts are that the wafers used on our lenses are made from 12 to 16 mm. in diameter, according to the size of the lens to which they are attached, but they are so thin that the average weight is one grain each, which causes them to appear practically invisible when used by the wearer, while the ordinary wafer weighs from eight to twelve times greater.

Yours very respectfully,

THE SPENCER OPTICAL COMPANY,

JOHN S. SPENCER, President.

American Association Notes

President Clark has appointed W. W. Bissell, 91 Main Street, East Rochester, C. I. Sumeriski and Milton Goodman, all of Rochester, as an exhibit committee. All exhibitors desiring space should address Mr. Bissell.

The date of the convention of the American Association of Opticians has been changed from August 6-9, as previously announced, to July 30-31 and August 1-2. The change was necessitated by a clash of conventions which would have interfered to some extent with the big optical reunion, if held on the date previously fixed upon. The new date will obviate this unexpected situation and insure the unqualified success of the convention.

Secretary Huston, of the American Association of Opticians, has the promise of the Iowa and Nebraska societies to meet with Kansas and Missouri in Kansas City in 1907, providing the national body selects this city for the next annual meeting place. If the sentiment is in favor of this great meeting, a delegation of representative men from each of the four States will attend the annual meeting in Rochester to urge upon the national body the advantages of the metropolis of the Southwest as a place for holding its next annual meeting.



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Optical Organizations

NATIONAL

- American Association of Opticians** (1898)
B. B. CLARK, President, Rochester, N. Y.
WM. E. HUSTON, Secretary, 1315 Harrison Street, Kansas City, Mo.
Meets annually. Next meeting to be held in Rochester, N. Y., July 30 and 31 and August 1 and 2, 1906.
- Worshipful Company of Spectacle Makers (England)** (1629)
RT. HON. LORD BURNHAM, M.P., K.C.V.O., Master.
COL. T. DAVIES SEWELL, F. R. A. S., Clerk, 9 Temple House, Temple Avenue, London, E. C., England.
- British Optical Association** (1895)
M. W. DUNSCOMBE, F. B. O. A., President.
J. H. SUTCLIFFE, F.R.S.L., F.B.O.A., Secretary, 17 Shaftesbury Avenue, London, W., England.
- Canadian Association of Opticians** (1896)
F. E. LUKE, President.
H. J. GEIGER, Secretary and Treasurer, Toronto.
- Scottish Optical Association** (1903)
JAMES CHALMERS, President, Springburn, Glasgow.
D. L. MURRAY, Secretary, 621 Duke Street, Glasgow.
- The Australasian Optical Association** (1904)
H. A. BARRACLOUGH, B. O. A., President.
A. A. C. COCKS, B. O. A., Secretary, Sydney, N. S. W.
- The Optical Specialists' Association of America** (1904)
J. C. CLARK, President, Sioux City, Iowa.
G. E. BOYCE, Secretary, Waterloo, Iowa.
- American Association of Wholesale Opticians** (1893)
J. T. BRAYTON, President, Chicago, Ill.
A. REED MCINTIRE, Secy., 723 Sanson St., Philadelphia, Pa.
Next meeting in New York, in 1906.

INTERSTATE

- New England Association of Opticians** (1894)
ALBERT A. CARTER, President, Boston, Mass.
G. A. BARRON, Secretary, 3 Winter St., Boston, Mass.
Meets third Tuesday of each month, except July and August.
Annual meeting and exhibit, Boston, Mass., May 15 and 16, 1906.
- Northwestern Optical Association** (1901)
EDWARD W. GREYISH, President, Minneapolis, Minn.
F. J. PRATT, Secretary, 415 Robert Street, St. Paul, Minn.

STATE

- Pennsylvania Optical Society** (1895)
H. E. HERMAN, President, Williamsport, Pa.
C. A. LONGSTRETH, Secretary, 228 Market St., Phila., Pa.
- New York State Optical Society** (1896)
W. W. BISSELL, President, Rochester, N. Y.
ROGER F. WILLIAMS, Secretary, 455 Main St., Buffalo, N. Y.
- Indiana Optical Society** (1896)
J. H. ELLIS, President, South Bend, Ind.
MISS MARGARET J. ERISMAN, Secretary, Lafayette, Ind.
- Michigan Society of Optometrists** (1896)
P. SCHOLLER, President, Hancock, Mich.
E. EIMER, Secretary and Treasurer, 105 Western Avenue, Muskegon, Mich.
Annual meeting, Detroit, August 3 and 4, 1906.
- Iowa Optical Society** (1897)
E. F. RENAUD, President, Keokuk, Iowa.
B. M. BELLS, Secretary, Vinton, Iowa.
- Illinois Optical Society** (1898)
GEORGE A. ROGERS, President, Chicago, Ill.
O. J. HALBE, Secretary, Room 1616, 42 Madison St., Chicago.
- California State Association of Optometrists** (1899)
W. A. MEYER, President, Sacramento, Cal.
H. W. CLARK, Secretary, care A. Huguenin, Sutter Street and Grant Avenue, San Francisco, Cal.
- Washington Association of Opticians** (1899)
H. CLAY EVERSOLE, President, Seattle, Wash.
LEANDER BUTT, Secretary, 715 First Ave., Seattle, Wash.
- Granite State Optical Association** (1900)
L. E. WHITE, President, Concord, N. H.
W. E. BURPEE, Secretary, Manchester, N. H.
Meets third Wednesday of January, March, May, September and November.
- Wisconsin Association of Optometrists** (1900)
A. J. STOESSEL, President, Milwaukee, Wis.
E. E. THOMAS, Secretary, Milwaukee, Wis.
Next Meeting, Racine, July, 1906.
- North Carolina Optical Society** (1900)
A. P. STALEY, President, High Point, N. C.
R. C. BERNAU, Secretary, Greensboro, N. C.
- Minnesota Optical Association** (1900)
J. W. BROWN, President, Ortonville, Minn.
C. A. SNELL, Secy., 608 Nicolet Ave., Minneapolis, Minn.

Maine Association of Opticians (1901)

A. M. WENTWORTH, President, Portland, Maine.
ROBERT B. SWIFT, Secretary, Portland, Maine.

Tennessee Optical Society (1901)

H. J. COOK, President, Knoxville, Tenn.
GEO. R. CALHOUN, Secretary, Union and Summer Sts., Nashville, Tenn.

Colorado Optical Association (1901)

R. B. FINCH, President, Denver, Colo.
R. H. BIEGEL, Secretary, 736 Sixteenth St., Denver, Colo.
MISS E. H. CHAPMAN, Cor. Secy., 1655 Welton St., Denver, Colo.

Kansas Association of Opticians (1901)

F. W. HUNT, President, Burlingame, Kans.
H. T. CORSON, Secy. and Treas., Kansas City, Kans.

Missouri Association of Opticians (1901)

C. M. WHEELER, President, Columbia, Mo.
ELMAR H. SCHMIDT, Secy. and Treas., Washington, Mo.
Next meeting, May 8, 1906, in Kansas City.

Virginia State Optical Association (1902)

W. WAYT ROYALL, President, Martinsville, Va.
E. S. GREEN, Secretary, Roanoke, Va.

Ohio Optical Society (1902)

F. W. WALLIS, President, Columbus, Ohio.
EDWIN L. JONES, Secretary, Sandusky, Ohio.
Next meeting, Columbus, May 28 and 29, 1906.

Kentucky Optical Society (1902)

L. J. BACKUS, President, Louisville, Ky.
A. S. REEVES, Secretary, Winchester, Ky.

North Dakota Optical Association (1903)

A. O. WOLD, President, Langdon, N. Dak.
W. R. BLAKELY, Secretary, Grafton, N. Dak.

New Jersey Optical Society (1903)

FREDERICK H. HEWLETT, President, Paterson, N. J.
J. J. HARTMAN, Secretary, 16 Howard St., Newark, N. J.

South Dakota Optical Association (1903)

WILLIAM H. FRITZ, President, Sioux Falls, S. Dak.
D. G. GALLETT, Secretary, Aberdeen, S. Dak.

Texas Optical Association (1903)

WEST CATHCART, President, Galveston, Texas.
B. R. STOCKING, Secretary, Belton, Texas.

Rhode Island Society of Optometry (1903)

W. J. DAVIS, President, Woonsocket, R. I.
G. FREDERIC BEANE, Secretary, 413 Main Street, Worcester, Mass.
Meets second Monday of each month.

South Carolina Optical Society (1903)

W. E. AVERY, President, Columbia, S. C.
M. R. ABBE, Secretary, Columbia, S. C.

Quebec Optical Association (1904)

R. DE MESLE, President.
P. G. MOUNT, Secretary, cor. St. Denis and Dorchester Sts., Montreal, Quebec.

Georgia State Optical Association (1904)

C. E. FOLSOM, President, 28 Whitehall St., Atlanta, Ga.
C. H. KITTRELL, Secretary, Dublin, Ga.

Opticians' League of the State of New York (1904)
(Dispensing Opticians)

E. B. MEYROWITZ, President, New York City.
A. SHAW, Secretary, 1145 Broadway, New York City.

Louisiana Optical Society (1905)

LOUIS CLAUDEL, President, New Orleans, La.
S. P. SCHUESSLER, Secretary, Baton Rouge, La.

Nova Scotia Optical Society (1905)

A. C. WHITTAKER, President, Halifax, N. S.
G. A. BURBRIDGE, Secretary, Halifax, N. S.

New Mexico Association of Optometrists (1905)

OTTO G. BEBBER, President, Albuquerque, N. Mex.
GEO. F. EVERETT, Secretary, Albuquerque, N. Mex.

Nebraska Optical Society (1906)

C. C. MCLEES, President, Davenport, Nebr.
J. H. HUKILL, Secretary, Lincoln, Nebr.

Oregon State Association of Optometrists (1906)

G. A. CUTTING, President.
B. E. FISKE, Secretary, Macleary Bldg., Portland, Oregon.

LOCAL

New York City Optical Society (1897)

OTTO OFFENHAUSER, SR., President.
ALBERT COHEN, Rec. Sec., 81 Fulton Street, New York.
Meets second Wednesday of each month.

Rochester Optical Society (1897)

HARRY M. BESTOR, President, Rochester, N. Y.
C. I. SUMERISKI, Secretary, Rochester, N. Y.

Utica Optical Club (1901)

RICHARD PERLEN, President.
C. T. EVANS, Secretary, Utica, N. Y.

Chicago Optical Society (1902)

J. ROSE, President, Chicago, Ill.
P. H. KREITZ, Secretary, care C. D. Peacock, State and Adams Streets, Chicago, Ill.

Niagara District Optical Society (1902)

JONAS HOUSE, President, Welland, Ont.
F. G. DUNLOP, Secretary and Treasurer, St. Catharines, Ont.

Optical Society of Western New York (1903)

J. P. SIMCOX, President.
ERNEST V. SYRCHER, Secretary, 11 Genesee St., Buffalo, N. Y.

Seattle Optical Society (1903)

CHARLES G. HOLCOMB, President.
LEANDER BUTT, Secretary and Treasurer, 715 First Ave., Seattle, Wash.

Los Angeles Association of Opticians (1903)

FRED. DETMERS, President.
F. LEE FULLER, Secretary, Los Angeles, Cal.

The Pueblo Optical Association (1903)

OREN H. HENRY, President, Pueblo, Colo.
JAMES A. HOWARD, Secretary, Pueblo, Colo.

Lowell Optical Society (1903)

F. C. CUFF, President.
J. A. McAVOY, Secretary, Lowell, Mass.
Meets second Thursday of March, September, November.

Southern Tier Optical Society of New York (1905)

I. PUTNAM, President, Elmira, N. Y.
C. H. VER NOOY, Secretary, Watkins, N. Y.

Optical Trades Association (1905)
(New York City)

E. D. SCHMIDT, President, New York City.
JOS. FRIEDLANDER, Secretary, 8 Maiden Lane, New York City.

Detroit Optometry Club (1905)

A. W. KLUDT, President.
FRED. R. PRESTON, Secretary, 42 Mott Ave., Detroit.

Southern California Optical Society (1905)

A. L. APPEL, President.
G. A. PICOX, Secretary, 342 S. Spring St., Los Angeles, Cal.

Compulsory Examination of the Eyes of School Children

A MOVEMENT of great importance in regard to the compulsory examination of school children's eyes was recently inaugurated in the East, and prosecuted with such vigor that laws on the subject have been already passed in the States of Connecticut and Vermont, with the probability that similar laws will be passed in Massachusetts and Ohio during the present session of the legislatures of these States. In virtue of this legislation, the Board of Education is empowered to make provision for the examination of the eyes of the school children, State funds within a certain limit being appropriated for the purpose. Test cards, blanks, record books and all the necessary appliances will be furnished free of expense to the teachers, who will be instructed in their use, and the eyes of the pupils will be examined at stated periods. Should the examination bring to light such defect of vision as would interfere with the child's physical comfort or progress in studies, the parents will be promptly notified with the recommendation that the case be given the proper professional attention.

This movement is so manifestly for the public good and so in harmony with modern progress, that it will be a matter of but a short period until such a law will be found on the statute books of all the States. The new legislation is backed solidly by the medical profession, and it behooves the opticians to have a care that no provision detrimental to their interests is placed in the law.



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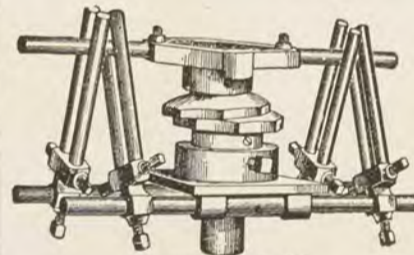
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Monument to the Late Professor Abbe

The Crystallization of His Life Work at Jena—An Ideal Industrial Institution

A movement has been inaugurated for the erection in Jena, Germany, of a monument to the late Professor Ernst Abbe, to whom the whole world is indebted for his achievements as industrialist, chemical scientist and astronomer. As befits his fame and genius, this tribute to the deceased scholar will be world-wide in scope, and it is not too much to hope that it will be relatively generous in expression. To the optical, scientific instrument and glass trades of the United States, whose activities have been enriched or diversified by the labors and research of the late German professor, the movement to perpetuate his memory should appeal with special force. The Bausch & Lomb Optical Co., of Rochester, N. Y., will receive donations for this worthy purpose and will contribute largely to its success.

A committee, which has been formed to solicit the necessary funds, includes a number of American scientists and business men. It is understood that the memorial will take the form of a statue to be erected in Jena, of historic memories, between two of the institutions called forth by the genius of Abbe, the Volkhaus and the now famous and familiar Zeiss works.

History of the Jena Industry

In connection with the movement to honor Professor Abbe, no better example of how science helps industry could be cited than the case of Jena and its glassmaking. Twenty years ago Germany imported lenses and glass for scientific purposes, chiefly from England and France. Jena was known to the world as the scene of a famous battle, and as the seat of a university. Since then there has been a new battle of Jena, the result of which is that the historic town has conquered the world—for glassmaking. The world, and more particularly the world of science, has benefited from the new victory, as optical microscopic work, and scientific investigations requiring the finest lenses could not be so well carried on without Jena. The recent eclipse of the sun was witnessed by the astronomers chiefly through lenses made at Jena.

How the new battle of Jena was won is one of the most fascinating chapters in modern science. The campaign began with a peaceful and industrious professor. He was a typical German scientist. He had no thought of founding a new industry when he began, and had never any desire for gain. As professor of mathematics, astronomy and natural science at Jena University, Professor Abbe was interested for his purposes in the improvement of lenses. Lensmaking had not reached a scientific footing; it was more of a craft, depending on the experience and skill of individual craftsmen. The professor wanted better and surer lenses—which would be more exact in refraction and deflection—and he set about finding out how they could be made. He began in 1881, taking as his partner Dr. Schott, of Witten, who, besides being a brother scientist, had a practical knowledge of glass-making.

The experiments and research work were carried on at the small glass works of Carl Zeiss, of Jena. It involved extensive chemical analysis and laboratory experiments, trials with a hundred kinds of new raw materials, new methods of treatment, testing, etc. The vast amount of this work only gave negative results, but the scientists kept on bravely. They were not discouraged until after

two years all their funds were exhausted, just when they were beginning to see results.

Then something happened which reflects the wisdom of the Germans in matters industrial. The Prussian government, recognizing the scientific and industrial value of the work which the scientists had in hand, subsidized them for two years. Help was not necessary after that time, as the first fruits of four-years' industry were being reaped, and the Jena lenses were on the market. Lenses for all sorts of scientific purposes were being turned out on the new methods. The Carl Zeiss works were divided into two departments, one for making the glass and lenses used for optical purposes, for prisms, thermometers, microscopes, telescopes, etc., the other for making the finest quality of glassware. In both factories the work of investigation was carried on. Now the lens factory employs more than twenty scientists, constantly undertaking new researches in the hope of discovering improvements. The glass works have also a staff of trained experts.



Professor Ernst Abbe

Professor Abbe had no thought of founding a new national industry or of reaping the profits of his discoveries. He became the chief owner of the Carl Zeiss works, and the business was very profitable; but he transferred his interest to the Carl Zeiss Stiftung, or institution—his own creation—which is now practically under public control. It owns a controlling interest in the lens works and a half-share in the glass factory. The Stiftung looks after the welfare of the workers, makes provision for profit-sharing, for pensions, sick allowances, etc. It devotes large sums to educational purposes and to scientific research. Professor Abbe and the other directors drew their salaries only, and it is a condition that a director's salary must be not more than ten times the pay of an ordinary workman. The State—Grand Duchy of Saxe-Weimar—inspects the Stiftung as if it were one of its own institutions for "workmen's welfare."

The employees work eight hours a day, and they have two weeks' holidays a year. They send delegates to the meetings of the Stiftung, and have a voice in the management of the works. The Jena glass works are practically a co-operative undertaking. Its position as an industrial enterprise has been rendered impregnable.

Professor Abbe, it will be seen, combined science and philanthropy. He worked for progress alone. His discoveries have not been patented, and the scientific and mathematical results which

he has obtained have been given to the world. His improvements in lenses have benefited mankind by adding to our knowledge in bacteriology and other departments of practical science.

New England Convention

From applications received for space and preparations being made, the exhibit in connection with the twelfth annual convention of the New England Association of Opticians, to be held at the new American House, Boston, May 15th and 16th, promises to be one of the finest optical exhibits ever held. The exhibit committee have engaged the service of an expert decorating company, who will arrange the booths and counters in a uniform manner and with harmony of color. The exhibit could not all be accommodated in the large hall, and it will be necessary to use the rear hall also, as was done when the American association exhibit was held at the same place. Most of the exhibitors are preparing fine souvenirs to distribute and are arranging some handsome exhibits. Among those who have engaged space are the following: Globe Optical Co., of Boston; Boston Optical Co., of Boston; Stevens & Company, of Providence, R. I.; Bay State Optical Co., of Attleboro, Mass.; Standard Optical Co., of Geneva, N. Y.; F. A. Hardy & Co., of Chicago, Ill.; Fox Optical Co., of Philadelphia, Pa.; German Eye Remedy Co., of Boston; American Fountain Pen Co., of Boston; Hub Optical Case Co., of Dedham, Mass.; Randall & Fachney Co., of Boston; R. F. Simmons Co., of Attleboro, Mass.; Paul Mfg. Co., Boston; Eye Need Remedy Co., of New York City; W. Green & Co., of New York City; National Cash Register Co., of Dayton, Ohio.

W. Green & Co. will exhibit their new Westminster chimes, and these will be in operation during the convention. The hall will also be purified by the Egyptian deodorizer, a new preparation which is now used by the Pullman Palace Car Co. for purifying their cars, and samples of this will be distributed free by the makers, the Paul Mfg. Co.

The visitors will be handsomely entertained at a banquet to which all the members and visitors and their lady friends are invited as the guests of the Globe and Boston optical companies, of Boston. This will be held on the evening of the fifteenth instant, and on the evening of the sixteenth instant the visitors will attend a theater party as the guests of Stevens & Company, manufacturers, of Providence, R. I. Arrangements will probably be made for seats to witness "A Yankee Circus on Mars," Messrs. Thompson & Dundy's immense spectacle from the New York hippodrome, which will be showing at Boston at that time. The company is made up of five hundred actors, actresses, ballet girls and circus men, while in addition over three hundred stage hands are required to stage this immense production. Among the features of the show is an exhibition by Claire Heliot, "the woman without fear," who exhibits her twelve magnificent lions in the steel cage set on the stage. The immense cage is made up of thirty-five sections, and seventy trained stage hands set it in two or three minutes.

The American House, at which the convention is to be held, is conducted on the European plan, and rooms can be engaged for \$1 and upwards. A varied and entertaining programme has been made up, and from reports received throughout New England, indications point to the largest convention ever held in the East.

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 Bifocals

YOUR CUSTOMERS will note that the reading segment in the Kryptok lens is *beneath the surface*; that it *cannot be rubbed loose*; *cannot catch dust*; *cannot chip at the edge*; that the entire lens surface is as clean, clear and even in curvature as a plain, single-vision lens. When they look through Kryptok glasses they will see that the outline of the reading lens is effectually hidden—*lost to sight*; that with all the other advantages enumerated they have the real "INVISIBLE" BIFOCAL. Fair demonstration *sells Kryptoks*. There is no satisfactory substitute.

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From the original prescription of the late Dr. Agnew

This wonderful remedy has been on the market for twenty-five years, and is sold by thousands of Jewelers and Opticians throughout the United States and Canada with **great satisfaction**. This is the **ONLY** Eye Remedy from the formula of any **eminent oculist** ever put upon the market. Its immediate effect in cases of chronic or acute conjunctivitis, blepharitis or scaly eyelids, burning, smarting or itching of the eyes, or inflammation from **any cause**, is phenomenal. It contains nothing poisonous, therefore is perfectly harmless to use freely in any case.

This Eye Water **WILL NOT** prevent a person's eyes from growing old, restore the sight of a person that is blind, or remove cataracts, but it **WILL CURE** or prevent more diseases of the eyes than any other preparation **ever compounded**.

Beware of imitations that are inferior or perhaps injurious. **Remember, Dr. Agnew's portrait is on every box.**

Price, \$19.50 per gross; \$1.63 per dozen

Customers' business card on each bottle if six dozen or more are ordered. Order from your jobber or direct from the proprietor.

W. F. CUSHMAN, 711 Boylston Street BOSTON, MASS.

THIS IS AN EYE WATER

ALL EYE WATERS OF ANY VALUE ARE EYE REMEDIES

WHAT IS A REMEDY? Any substance or preparation used with the view of curing or allaying morbid action. As it would require many of the valuable pages of THE KEYSTONE to publish the testimonials received from dealers and users of THE GREAT GERMAN EYE WATER, I refer dealers in optical goods to a few of the leading opticians in different parts of the country, selling this remedy, some of them for more than 20 years. This remedy is NOT for sale in drug stores, but by the optical trade **EXCLUSIVELY**. **NO COCAINE** in this formula.

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 John Scheidig & Co., 43 Maiden Lane, New York

Convention of Missouri and Kansas Opticians

Much interest attaches to the joint meeting of the optical associations of Kansas and Missouri, in Kansas City, May 8th and 9th. Everything points to a fine meeting, for every detail is being looked after that might make the occasion a pleasant and profitable one, and the committee in charge of the arrangements is doing everything in its power to add to the comfort and pleasure of its guests. A large attendance is expected, and special arrangements have been made with the railroads whereby special rates of one and one-third fares for the round trip will be given to the opticians attending the convention.

The sessions of the convention will be held in the hall at 1114 Grand Avenue. The convention will be opened by an address of welcome by Hon. Henry M. Beardsley, mayor of Kansas City. The entire programme has not been arranged, but the committee in charge has announced the following topics for discussion:

"Demonstration of the Retinoscope," W. J. Lewis, Topeka, Kans.

"Demonstration of the Ophthalmoscope," F. W. Hunt, Burlingame, Kans.

"How I Fit Myopia," Charles A. Wilson, Wichita, Kans.

"Advertising," William E. Huston, secretary of the American Association of Opticians.

The evening of May 9th a banquet will be tendered the visitors at the Midland Hotel, where preparations will have been made for 300 guests. On the morning of the same day, an official "out-door" photograph will be taken of both associations.

Just after the convention, a party of opticians from Missouri and Kansas, and especially from Kansas City, will go on a brief tour of organization in the interest of the convention of the American Association of Opticians in Rochester next August. The party will go first to Oklahoma City, May 16th, and will organize a State optical association there. They will visit Little Rock, Ark., for a similar purpose, May 19th, and will go to Birmingham, Ala., May 22d, and to Jackson, Miss., May 24th. In all, four State organizations will be put in working order. The personnel of the party has not been completely decided upon, but it is known that Dr. S. W. Lane, of Kansas City; Dr. Campbell, of Topeka, and Dr. Reed, of Wichita, will be among its members.

New York City Optical Society

The regular monthly meeting of the Optical Society of the City of New York, was held April 11th, in the optical parlors of A. Martin, at 17 West Twenty-eighth Street. President Offenhauser called the meeting to order, and the secretary read the minutes of the preceding meeting, which were accepted.

The application for membership received from H. J. Pippitt, 72 Pike Street, Port Jervis, N. Y., was laid on the table to be acted upon at the next meeting.

The following gentlemen, whose applications were handed in at the last meeting, were voted for as members: Samuel Ross, Brooklyn, N. Y.; David S. Michel, New York City; Stephen H. Brooks, Newark, N. J.; Chas. Geist, New York City.

Mr. Ryer, as chairman of the auditing committee, reported that that committee, after a careful

and thorough examination of the books of the financial secretary and treasurer, found them correct. Motion was made and carried to accept the auditing committee's report.

The secretary called the roll and noted that there were thirty-two members present, making the meeting one of the largest held for some time.

Prof. Lockwood addressed the members on the plan of the educational work, speaking of the question as to what use it would be to the optometrist to learn something about the eye, stating that every man who does optometrical work ought to be able to recognize ordinary diseases of the eye, and thus be able to send the patient to the oculist for proper treatment. If he knows what the trouble is, it is not always wise to tell the patient, but he can save himself much time trying to fit glasses in cases where treatment first is required, and leave it to the oculist to treat and enlighten the patient as to his ailment. This knowledge is also a protection to himself and his other patients in a case where a patient has some malignant disease, which is noted before the trial frame is put on his face.

Ohio Optical Association

The annual meeting of the Ohio Optical Association will be held in Columbus, Ohio, on Monday and Tuesday, May 28th and 29th. A feature of the proceedings will be the examination of candidates for the association's advanced certificates. The following compose the examination committee appointed last year: F. W. Wallis, Columbus, president of the association; Mr. Haines, of the White-Haines Optical Co., Columbus, and J. C. Eberhardt, of Dayton.

Southern Tier Optical Society

The annual meeting of the Southern Tier Optical Society was held Thursday evening, April 5th, in the parlors of the Elmira Optical Co., Elmira, N. Y. An important feature of the gathering was the address by the retiring president, F. E. Robbins, which was full of interest and listened to very attentively.

The new officers chosen are: President, I. Putnam, of Elmira, N. Y.; vice-president, L. L. Stone, of Canton, Pa.; secretary, C. H. VerNooy, of Watkins, N. Y.; treasurer, W. L. Hopkins, of Montour Falls. The executive committee is composed of F. E. Robbins, Elmira; J. A. Perkins, of Horseheads, and A. J. Peck, of Watkins; while the following constitute the entertainment committee: M. A. Ruger, Elmira; D. L. Perkins, Horseheads, and J. T. Stalford, Athens, Pa.

After the election of officers and transaction of other business an able address was given by Mr. Robbins on "Amblyopia," which was timely and exceedingly instructive.

The next monthly meeting will be held May 3d.

Examination Paper of the Illinois Optical Society

Prompted by the failure of its efforts to have an optometry law passed in the State legislature, the Illinois Optical Society established an examination system for its members, granting certificates of competency to such as stood the test. Our readers will be interested in the following list of questions submitted at the recent examination:

1. Give the leading features of the outermost coat or tunic of the eye, as to (a) transparency, (b) extent, (c) curvature, (d) perforation.

2. Give two reasons why we see better those objects that are imaged on the macula than on other parts of the retina.

3. What part is played by the force of elasticity of tissues in the act of accommodation and accommodative relaxation?

4. What would be the effect upon vision of atrophy of the left optic tract back of the optic commissure?

5. If light from a point twenty inches forward of a +7 D. spherical lens passes through the lens, where will it come to a focus?

6. If a receiving screen is ten inches posterior to a +9 D. spherical lens, where will an object require to be placed to focus at the screen?

7. If sunlight passes through the compound lens, +6 sph. \ominus 3 cyl. ax. 180°, where will the light be brought to a focus?

8. What sph.-cyl. prescriptions will give a lens that is +1 horizontally and -1 vertically?

9. Transpose +.75 sph. \ominus 1.25 cyl. ax. 180°. Which form is best adapted for receiving inside wafer, cement bifocals?

10. What form of scale would be required for adding +1 sph. to an ordinary +2 sph. periscopic lens?

11. What is the full technical name of the defect of an eye that requires for a distance correction +.50 sph. \ominus 1.25 cyl.?

12. If an eye is properly corrected for reading at the ordinary distance with a +4.50 sph., what would you consider the defect?

13. If a reading glass of +2.50 blurs distant vision, but -1 before it gives $\frac{2}{3}$, what optical condition of the eye is shown?

14. The distance correction of an eye is - .75 sph. \ominus 1.25 cyl. ax. 15°, and +2 is added for reading. Give reading correction.

15. If an eye is 2.50 hypermetropic, what accommodation is required for reading at a distance of thirteen inches?

16. If a patient is 1.50 hyperopic and has an amplitude of accommodation of 5.50, what is the punctum proximum?

17. At about what age will 2 D. of hyperopia make a reading glass necessary for a stenographer? What glass?

18. If the patient with 2 D. hyperopia is, say, thirty-five years of age and comes to you for reading glasses, what will you give him?

19. A patient fifty years of age has 1 D. of hyperopia. About what reading glass would be necessary for ordinary near work?

20. A myope of 4.50 has 1.50 presbyopia, what correction should be worn for reading?

21. Give reasons for correcting myopia in full, and reasons for under or over correcting?

22. If the distance correction of a pair of eyes is O. U. - .75 sph. \ominus 1.25 cyl. ax. 180°, and the patient has 2 D. of presbyopia, give simplest form of reading glass?

23. What shadow test at forty inches would prove a finding of 1 D. of myopia with the trial case?

24. If a +2.75 sph. neutralizes motion at 40" by the shadow test, what trial case finding would prove the result?

25. With the Maddox rod before the right eye, horizontal streak, the light appears above. What phoria is indicated?

26. With vertical streak in the right eye, the light appears to the right of the streak. What phoria is indicated?

27. Give position of base of prism over left eye to measure right hyperphoria?

28. What classes of cases, if any, do you refuse to give glasses to?

29. Give your opinion of prescribing prisms to be worn constantly.

30. What is your rule in the correction of anisometropia?

31. How much should a 5 D. lens be decentered to give a prism effect of 2°?

32. If a 4 D. lens is decentered 3 mm., what prism value will it impart to the lens so decentered?

33. In what direction should a + lens be decentered to correct exophoria?

34. In what direction should a - lens be decentered to correct esophoria?

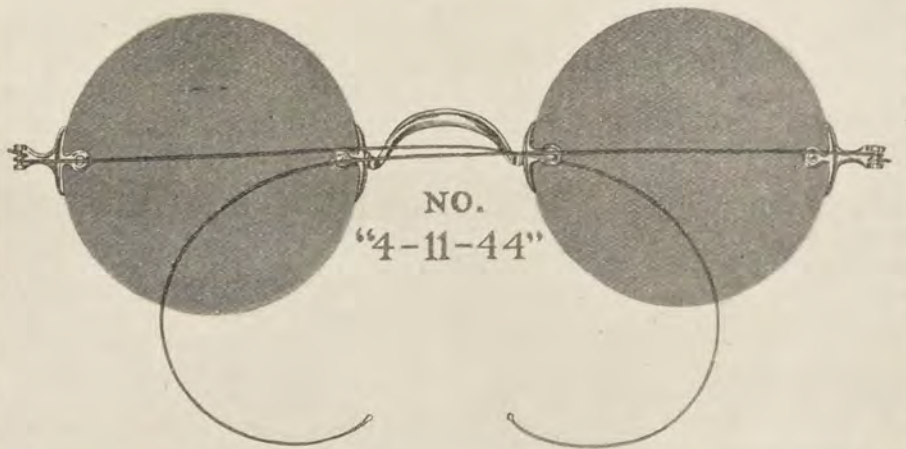
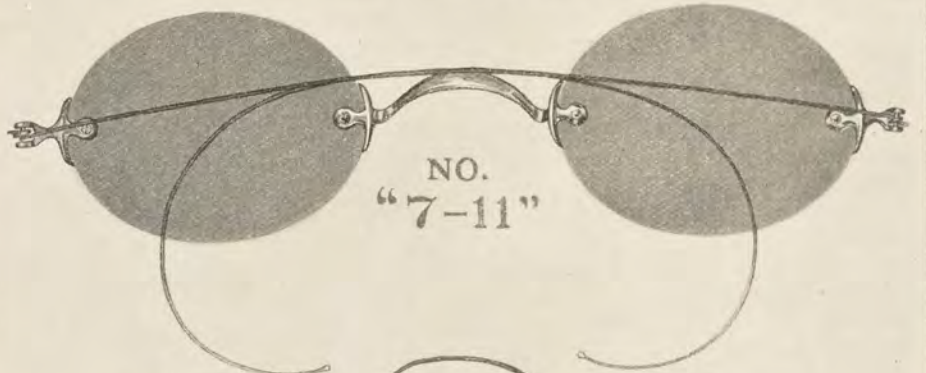
35. In what direction should a + lens be decentered for left hyperphoria?



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 from out the sky
 Bring the wrinkles
 round the Eye

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 will stop the Glow
 Merry Prices
 make them Go

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KANSAS CITY MEMPHIS PARIS-FRANCE

MICHAELIS ENG. CO. K.C.

Handsome Quarters of the Globe Optical Company

The optical industry is progressing at so rapid a rate that each improvement in the modern optical establishment merits widespread publicity by reason of its value to the trade at large. A specially-instructive object lesson in this regard will be found in the newly-arranged and handsomely-equipped quarters of the Globe Optical Co., Boston, Mass., a view of which is shown in the accompanying illustration. The feature of the new establishment that most elicits the admiration of the visiting trade is the fact that the new prescription department is on the same floor with the offices, salesrooms, stock rooms and mailing department. The prescription department is so conducted as to create little noise, confusion or dust, while its position at the same time makes for concentration, every part of the work and service being regularly systematized.

Work begins at the farther end of the room on surface machines and passes successively from bench to bench until it is finished, inspected and billed at the front of the apartment. The benches are the company's own manufacture, have legs of iron, are judiciously placed and screwed to the floor. The tops are of two-inch squared, white maple strips, glued together and highly polished. On the left of the prescription department is the shipping and mailing department.

In the lens stock department there are twelve cabinets of drawers, or 2100 drawers in all, each holding twelve dozen pairs of uncut lenses, and 300 drawers, each holding forty dozen pairs of interchangeable lenses—an immense stock truly, and in close touch with the prescription department.

This handsome establishment approaches the ideal in every respect and is much admired by the visiting trade. It furnishes an excellent object lesson for all contemplating like improvements either in equipment or system.

Rochester Optical Society

The regular meeting of the Rochester Optical Society was held in the office of Clark & Bowen, Rochester, N. Y., on April 10th. Owing to illness, Dr. R. R. Williams was unable to deliver his intended lecture, and it was accordingly agreed to hold a special meeting, at which he would have an opportunity to do so. The matter of furnishing glasses to poor school children was discussed, and Messrs. Bausch, Bissell and Clark were appointed a committee to interview the school board with a view to arranging for the testing of children's eyes.

On April 17th a special meeting was convened that Dr. Williams might deliver his lecture. This time the members were not disappointed, as the doctor gave a very interesting talk, at the conclusion of which the members presented him with a fine microscope of the latest pattern, made by the Bausch & Lomb Optical Co. The gift was gracefully acknowledged by the recipient.

The next meeting of this society will be held on May 8th, when the annual election of officers will take place. A nominating committee, appointed by the president, consists of Messrs. Bausch, Bissell and Clark.

Oregon State Board of Examiners

The Oregon State Board of Examiners in Optometry met at Salem, Oregon, Wednesday, April 11th, and examined a number of applicants. The names of the successful candidates will be published later. The next examination will be held in Portland, June 13th and 14th. The board offers a reward of \$25 for the arrest and conviction of anyone violating the optometry law, and all registered optometrists in the State should call attention of officers of the law to this reward. The board is



View of the Prescription Department and Workshop of the Globe Optical Company's new plant

fully determined to strictly enforce the law in every particular so far as lies in its power.

Iowa State Optical Society

The ninth annual convention of the Iowa State Optical Society will be held in Des Moines on June 12th and 13th, and all the opticians of the State are urged to be present. The programme of the meeting will be published in our next issue.

New Optical Organizations

Dr. S. W. Lane, of the Southwestern Optical College, Kansas City; J. H. Hukill, secretary of the Nebraska State Optical Society; F. W. Reed, of Wichita, Kans., and Dr. A. C. Campbell, of Topeka, Kans., will accompany Secretary William E. Huston, of the American Association of Opticians, on an organization tour of the South in May, when affiliated optical societies will be organized in Oklahoma, Indian Territory, Arkansas, Alabama and Mississippi. The territorial meeting will be held at Oklahoma City, May 16th; the Arkansas meeting at Little Rock, May 19th; the Alabama meeting at Birmingham, May 22d, and the Missis-

issippi meeting at Jackson on the 24th. An interesting programme will be prepared for each place, when practical talks and clinical work will be conducted by the visitors, assisted by local opticians in each place. The remarkable results obtained in affiliated organization in Nebraska, the first attempt of the national body to effect affiliated organization of State societies, has aroused great interest in States having no associations, especially throughout the West. With the States mentioned and Missouri and Kansas in line—and every indication points to their probable affiliation at the May meeting—the Middle West will present an almost solid affiliated body.

A Question in Frame Fitting

The second number of the little optical monthly the "S. Q. Advertiser," published by Stevens & Company, Providence, R. I., shows material progress as compared with its predecessor. "The Making of Gold Filled Optical Goods" is an interesting serial, while the general matter is varied in scope and both instructive and entertaining in character.

In the "Inquiries Answered" department the following question is asked: "Should a spectacle bridge first be fitted to the patient's nose and then the rest of the frame be adjusted to its proper relative position?" and the answer is as follows: "Yes, in most cases, but it is not vitally important that you begin by first fitting the bridge. There are cases when it is best to begin otherwise. Example: Suppose a N2 bridge is approximately right in base measurement and depth of arch for a certain patient. That bridge in connection with a one eye should give a pupillary distance $2\frac{3}{8}$, and if it be found advisable to use 00 eye and still retain the pupillary distance $2\frac{3}{8}$, the correction must be made by curling the shank of bridge, or, as commonly expressed, make a 47 bend to bring the center of the 00 eye where the center of the one eye would naturally be. If before this operation the bridge should have been carefully adjusted to the nose, it is more than likely that curling the shank would disturb the length and alignment to such an extent that labor in that direction would be lost and again have to be performed. It is therefore best in all cases when pupillary distance has to be got by bending, to do that work first and then fit and align the bridge.

Buffalo Optical Society

The Buffalo Optical Society met in the Genesee Hotel, Buffalo, N. Y., on the evening of April 6th, when Julius Hansen gave a discourse on "How to Refract," with demonstrations through the medium of clinical patients present. M. W. Berry, of 379 Main Street, Buffalo, was admitted to membership.

"I am most interested in the optical department of *The Keystone*."—D. H. Darling, Optician, Guilford, New York.

JOHN L. MOORE & SONS

42 N. Broad St.

Manufacturing—Wholesale—Importing

Atlanta, Ga.

OPTICIANS

Intentions and Results

This is truly an age of results rather than intentions; yet the former cannot be great without the inspiration of the latter.

This **Prescription Department** was planned upon the highest principles.

The intention has proven the inspiration of a **Prescription Department** head and shoulders above any other in the South.

It has placed our customers in closest touch with everything new in the optical world.

It has helped each to serve his customers well and provided an optical stock, as well, practically limitless.

Nothing has been unimportant. Nothing is left undone that will make you feel safe in trusting your customers' prescriptions to us.

We are the Pioneer Surface Grinders of the South.

Sole Manufacturers of

Kryptok Lenses in GEORGIA

B^eS^tO

Stiffest, Most Flexible
Strongest, Neatest
The Standard of Perfection

Our 20th Century 12 K. Frames
are Trade Winners

BAY STATE OPTICAL CO.

Attleboro, Mass.

Rochester School of Optometry

A Thorough and Practical Optical School

40 Hours a Week Devoted to Lectures, Quizzes and Practical Work

YOU LEARN HERE the Theory and How to Conduct the Practice

YOU GET EXPERIENCE in the examination room and workshop

WHEN YOU HAVE COMPLETED COURSE you are capable of making a success in the practice

If interested, write for terms and outline of
Course

A. H. BOWEN, M. D.
President

B. B. CLARK
Secty.

Triangle Building, ROCHESTER, N. Y.

R

We make a specialty of

PROMPT
ACCURATE
ATTENTION TO
PRESCRIPTIONS

WE GUARANTEE
PERFECT
WORKMANSHIP
AND REASONABLE
PRICES
TRY US



Todd's Stud Screw Lock Nut

Will fit any Eyeglass Stud
Positively prevents the screw
from working loose

Have you or your customers
had trouble from stud screws
working loose? YES.
The lock nut will prevent all
annoyance.

Try a Dozen Pair
Gold Filled, 50c; Nickel, 25c.

Manufactured by

The Kennedy Optical Co.

Manufacturing Opticians
21 Rowland St., cor. State, DETROIT, MICH.
No Goods Sold at Retail



Advertising a Photographic Department

THE ubiquity of the camera devotee and the consequent pleasure and profit of handling photographic supplies of all kinds, have revealed to many jewelers a tempting opportunity for the extension of their trade. As practically all jewelers now have an optical department, and as photographic goods come under the category optical, this modern branch of business comes naturally within the field of the jeweler and optician. As the camera season is now here, the time is ripe for the exploitation of the photographic department, and in this connection we reprint from the *Druggists' Circular* the following admirable suggestions by Joseph F. Hostelly, a recognized authority on the subject:

Business Value of a Dark-Room A properly arranged dark-room, well stocked with the best "tools," is an advertisement worth many dollars to a photographic department. It is something that amateur photographers will talk about among themselves. The dark-room and the work therein is just as interesting to a camerist as "subject" hunting. An amateur will go a long way to see a model dark-room. He will go out of curiosity and to get ideas that he may carry out for himself at home. And this is one feature of the dark-room—giving ideas to camerists—that will make it a paying investment. Amateurs will want for their own photographic workshops many of the new devices and latest conveniences seen in the up-to-date dark-room. If space can be claimed for the purpose, it will probably pay the merchant in a locality where amateur photography is practiced, to fit up a good-sized dark room that will offer every convenience to the camerist and give said dealer an opportunity to most advantageously advertise certain photographic accessories, by bringing them to the attention of the consumer in a forcible way. To show a camerist what he may use, how he may use it, in the surroundings he may use it, is very effective advertising. Not only may the sale of mechanical devices to aid and facilitate the art of photography be furthered in this way, but a demand for developing solutions and powders, toning and fixing solutions, etc., may be created.

It should be the aim of the dark-room advertiser to keep a little nearer up-to-date than any of his customers. He should hear of new things photographic first; he should be the first to have new things. In his dark-room he should be able to show the camerists a few things unknown to them. If the arrangement of the dark-room is changed somewhat from time to time, it will afford an

opportunity to remodel the photographic department advertising and to interest amateurs anew.

Advertising the Dark-Room

Before the dark-room is a reality, begin to talk about what it is going to be, and when the ruby lamp of celebration has been lighted tell, every chance you get, what it really is. Invite all amateur photographers to inspect it and to use it. Keep inviting them. Show the dark-room to young people, and to parents, as yet uninterested. Those who know nothing of photography to-day may want a camera tomorrow. And it might occur to some father or mother that a camera would be an ideal diversion for a son or daughter, the opportunity for the boy or girl to profit by the facilities and experience of the photographic dealer not being overlooked.

Extend a welcome to the dark-room to the members, individually and collectively, of any local photographic club, or to any such club in a near-by town. An amateur photographer will go many miles for "subjects." Scenes at a distance have more charm than familiar views at home. A camerist in the next town is just as likely to make use of the dark-room and patronize the photographic department as a farmer or his wife from the same place is apt to favor the store. There is an old saying, that "cows farthest from home have longest horns." A dark-room at a distance may seem superior from all standpoints to any at home and conducive to much better pictures. Seek customers for the photographic department among camerists of neighboring towns. Put them on the mailing list.

Amateurs in Small Towns

Amateurs in smaller, near-by towns might be interested in a photo department by an offer of inducements for them to take pictures of points of interest in the more important town. Prizes of photo material might be offered for the best pictures; the prize and honorary photographs to be displayed in the show window. As a rule, camerists, particularly beginners, need very little inducement to interest them in the taking of pictures that are in demand, and this interest may be intensified not a little if both honor and remuneration be promised for supplying this demand. Circulars might be sent to all amateurs in neighboring towns announcing a contest in photography, only for camerists beyond the limits of the dealer's town; a second requirement being that all pictures be taken in the dealer's town. Several prizes of photo accessories should be mentioned, one or two of which should include supplies prepared by the dealer himself. A contest of this kind would not only most likely assure the attention and interest

of out-of-town amateurs, their relatives and friends, but of local camerists as well, who would be anxious to see what their neighbors of the craft can do. Friends in adjacent towns who photograph will be brought into the contest, and many will be only too willing to grasp an opportunity to show their ability.

Keep the New Things in Stock

Old scenes, old ideas and old photographic goods interest the real enthusiastic amateur photographer not at all. He will go many miles and suffer great inconvenience for a marine or landscape view that will afford him a picture a little different from any displayed by his friends of the hobby; his constant aim is, by being first in things photographic, to excite the admiration of his less fortunate acquaintances who take pictures; the latest improved apparatus, new material, the most modern processes keep him in the lead; he will be first, and his enthusiasm leads others of the art to keep close in his wake. Now it follows, naturally, that to make possible this photographic progress of the enthusiasts, the demand for the latest and best photographic material must be supplied. And the dealer in the latest and best, who lets it be known that he is right up to the hour, supplies the demand. There is no stock of goods that needs freshening up quite so often and so thoroughly as this. Not that it is necessary to renew the entire stock, but only certain portions of it, as sales make room; and the new goods must be of the very latest type.

Keep changing the stock from one position in the store to another, to make it appear in a new and perhaps more attractive light. Let cameras be displayed in a case for a time, to be replaced in a couple of weeks by developers, toning solutions, etc., the cameras again exchanging positions in a short time with photo supplies in another case. When the display cases are rearranged, let the color scheme be decidedly changed. Show customers of this department that your stock receives your constant attention; that new goods are continually coming in; that you are doing the business of the town in this line.

Some dealers with photo departments make the mistake of too often repeating material in certain styles, because these particular styles have sold well. After a time the demand fails, because the old customers have been interested in newer styles at some other place. Keep new goods and new patterns in the foreground, older styles to fill up space. Talk new styles; push them; let older, more familiar goods sell if they will, but keep your advertising and your counter talk crisp, snappy and interesting with new ideas and new styles for subjects.

The dealer who offers beginners no suggestions—gives them no help, but lets them select material unintelligently, allows them to go on and on in a rut—is certain sooner or later to lose much of his custom; the loss begins from the time the discovery is made that some more sagacious dealer in supplies, looking to his own interest, is looking to the interests of his patrons.

PROTECTION

For the Optician is guaranteed by the

Ametropometer

Send for information and descriptive literature, free upon request.

A postal card, an investment of one cent, will bring you information that will mean **DOLLARS** to you.



The AMETROPOMETER is a constant source of pleasure and profit for the up-to-date Optician

Price, \$20.00 Net

YOU cannot make a mistake when you use the Ametropometer. cannot possibly prescribe the wrong kind of lens. can save time and money. Ask for catalogue.

SAMPLE LETTERS FROM A FEW OF OUR HUNDREDS OF SATISFIED PURCHASERS

S. V. MALLERY, Flandreau, S. Dak.
"I have used your Ametropometer six months and will say I am more than pleased with it. It is worth five times its cost for determining a case, if it could be used for no other purpose."

GEO. H. KING, Nevada, Iowa.
"I bought one of your Ametropometers a few months ago and find the same a great help in correcting errors of refraction, and it is the most satisfactory instrument I ever used."

HOMBYCOMB & SON, Shullsburg, Wis.
Yours of Sept. 6th received, and in reply would say we never gave a testimonial to anyone, as they are so easily bought from some. But will say that anyone who buys your Ametropometer will never regret the purchase."

ROBT. HELMER, Hector, Minn.
The Ametropometer I purchased of you does just what you claimed it would. It does measure the errors of refraction, and any optician need not make a mistake if he follows the directions that come with it. It is the best help an optician can have in his work.

JOHNSTON OPTICAL CO.

DETROIT, MICHIGAN

NO GOODS SOLD AT RETAIL

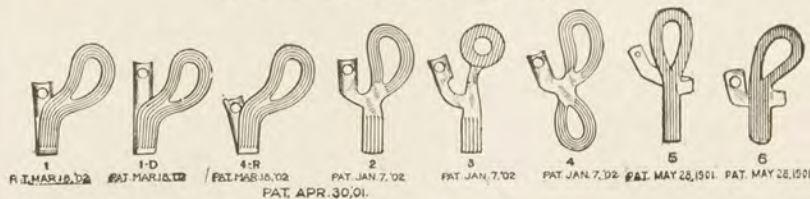
WE ABSOLUTELY DO NOT RETAIL

Fox Lasso Eye-Glass Mountings

BRING TRADE

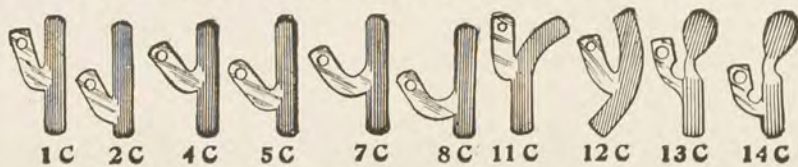
That's the reason progressive opticians are using more **Lasso Mountings** than ever. Why don't you get in line? They'll suit your customers and that makes selling easy. They are easy to adjust, comfortable to wear, neat in appearance, secure at all times; in fact, the ideal eye-glass mounting.

FOX LASSO GUARDS



No. 1 is the guard most generally used—will fit most cases.
No. 1-D is the guard to raise the lenses for distant use.
No. 1-R is the guard to lower lenses for reading and near use.

FOX EUREKA CORRUGATED GUARDS



FOX TUBULAR SPRING



The Tubular Spring is concave on the inner surface which gives greater strength and resiliency and is neat and dainty in appearance. Both Lasso Guards and Tubular Spring have convex ends, so designed that when screwed to the studs they spread outward against the sides of the studs and press upward against the screw head, making a secure lock which prevents the screws coming loose.

FOX LOCK TEMPLE SPECTACLE MOUNTING



The Self-locking Spectacle Temples are so constructed that when in use the ends of the temples are locked into the joints in such manner as to be invisible, and at the same time wobbling of the temples is impossible. They are almost as inconspicuous on the face as eye-glasses, and will especially appeal to your lady customers.

Fox Optical Manufacturing Co.

1419-21 Chestnut Street

Philadelphia, Pa.

Send for Price-List and Descriptive Circular of Fox Specialties

MURINE

Have
Stood the
Test of
Time and
Criticism

Optical Aids

Gone to success on the wave of good opinions of Physicians, Opticians and the People

Murine rapidly reduces an Inflamed Eye to its normal condition preparatory to its proper measurement for Glasses.

Murine Clears the Transparent Media and obviates the use of a dangerous Mydriatic.

Banene Stimulates the Blood Supply which nourishes the Eye, removes Floating Spots, strengthens vision, and with Murine greatly aids those wearing Glasses, hence their value to the Optical Profession.

THE maximum per cent of those ordering Glasses seek your aid only after continued urgings from over-worked and defective Eyes—urgings that have left inflamed tissue and local irritation. Correct Eye Defects with Properly-fitted Glasses. Correct Effects of Defects with *Murine*.

Properly-fitted Glasses and Murine Promote Eye Comfort

Banene

This preparation should be in the hands of every Refractionist



STIMULATES the circulation of the blood supply that nourishes the Eye, clears the retina of congestion, removes the causes of floating spots, dimness of vision, cobwebs, and an inability to wear glasses with comfort.

Banene absorbs opacities of the Crystalline Lens—Cataract and in many cases renders an operation unnecessary

Murine Eye Salve

(Unguentum Hydro-Murine)

A REMEDY FOR THE EYELIDS

Restores lost Eyelashes and promotes a healthful growth. Cures Cysts, Styes and Ulcers



THE Eyelashes often fall out in consequence of neglected disease, both at their roots, and of the Lubricating Glands which open near them, resulting in a thickened and crusted condition. This condition is intensified by an *Error of Refraction*, and properly-fitted Glasses should be worn in addition to applications of *Murine* and *Murine Eye Salve*.

NOTE—The law does not confine the sale of these preparations to any class. Jewelers and Opticians have a right to sell them, but not the right to compound or administer.

The Murine Eye Preparations are sold by all jobbers. The Murine Eye Remedy Co., Chicago, will gladly supply attractive Office Pictures, Booklets and Circulars when desired

“THERE IS ALWAYS ONE BY WHICH THE REST ARE MEASURED”

MURINE RELIABLE EYE REMEDIES



Trade Price List

These Prices are regular and are subject to Cash Discount only

	PER BOTTLE	WHOLESALE	WHOLESALE
	RETAIL	PER DOZ.	PER BOTTLE
No. A—MURINE—Regular size.....	\$ 1.50	\$ 4.00	\$
No. B—MURINE—Special or Opticians' size.....	1.25	7.20	.60
No. C—MURINE—1-pound bottle for Physicians' dispensing.....	8.00	72.00	6.00
No. D—MURINE—½-pound bottle for Physicians' dispensing.....	5.00	48.00	4.00
No. E—MURINE EYE SALVE—(Unguentum Hydro-Murine).....	1.00	7.20	.60
No. O—OXIDO-FLARINE—(Salve).....	1.00	7.20	.60
No. F—GRANULINE.....	1.50	10.80	.90
No. G—HYDRONE.....	1.10	8.40	.70
No. H—SULPHO-FERRINE—A systemic tonic in eye cases.....	1.00	7.20	.60
No. K—BANENE.....	1.25	9.00	.75
No. L—OLIN'S RED CLOVER COMPOUND.....	1.50	10.80	.90
No. M—HYDRARGYRINE—(Powder)...	1.15	8.40	.70
No. Z—MURINE—Trial size. Per gross.....			\$28.80

This size has no price printed on label or package.

Send for 48-page book which gives full description and directions for the entire "MURINE OPTICAL AID FAMILY."

We supply, when desired, Show-Case holding two dozen Murine, Celluloid Cases, beautiful Lithographs, Circulars, also attractive Window Displays, and Books on home treatment for Eyes, with your card on cover.

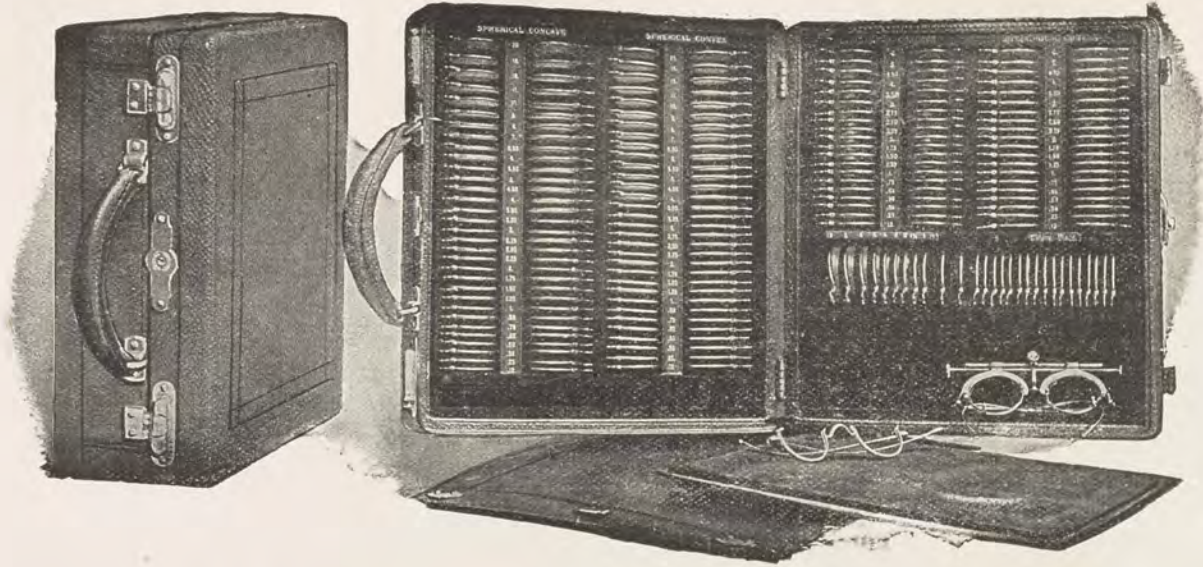
Granuline

FOR old and chronic cases which have resisted the ordinary methods of treatment and where most positive action is desired; Granulated Lids, Spots, Scums, and Opacities on the eyes. *Granuline* is Absorbent, Tonic, Antiseptic, Astringent and Antiphlogistic. It is a valuable collateral to *Murine* in Eye cases.



Crowned—not with Jewels but with *Plaudits of the People—Laurels* justly earned as the "Best Eye Treatment." Safe and pleasant. Used in the eyes of *Infant or Adult*. A never failing source of *Relief*. **Murine Eye Remedies** have cured thousands and will cure you.

Geneva Test Lens Cases are the Standard of Excellence



Our Catalogue, giving illustrations and full description of the various styles of Geneva Cases, sent on request.

Geneva Optical Co., Geneva, N. Y.

N. B.—“Geneva \mathcal{R} Work is accurate”

ARTIFICIAL HUMAN EYES

We are the only manufacturers in this country who can produce perfectly

THE FULL BACK REFORM EYES

Sometimes Called the Dr. Snellen Eye

- 1st—The Full Back catches the muscles and gives a surprising increase of motion, producing lifelike expression.
2d—Give comfort because there are no irritating edges.
3d—Aseptic, because there is no hollow back to accumulate secretions.
4th—Overcomes sunken appearance, as it completely fills the orbit.

Life-size illustration of one shape of FULL BACK REFORM EYE
—No irritating edges



Life-size illustration of old Shell Eye.
Irritating edges.



Enlarged Illustration of Full Back Reform Eye, showing clearly the full back, which forms an easy cushion and obviates irritating edges. This FULL BACK is made in various curvatures. Opticians are invited to visit our works and see how we make eyes, matching and filling special orders with the utmost facility and accuracy. We also have constantly on hand the largest stock of regular shell eyes. We can make to order (on the premises) the most difficult eye within a few days. Write for our special circular “Facts About Artificial Eyes and How to Order Them.”

CHARLES FRIED

Successor to the Artificial Eye Department of the R. HOEHN CO.

Write for our Booklet “K”

110 East 23d Street, NEW YORK CITY

“BISIGHT”

TRADE-MARK

The only Invisible Bifocal ground in one piece

U. S. A. Pat. August 29, 1905. Patented in all civilized countries

Do you sell **Bisight**, the new, double vision lens, ground invisible in one piece (these are lenses where each base, uppers and lowers, has a perfect center)? It is not more expensive than a cemented lens, and can be made in any curve or combination, Cylinder, Sphero-Cylinder or Torics, also any style wafer. Write to the manufacturers who control your State.

PENNSYLVANIA :

D. V. Brown, 740 Sansom Street, Philadelphia, Pa.

GEORGIA, ALABAMA and FLORIDA :

John L. Moore & Sons, 42 N. Broad Street, Atlanta, Ga.

LOUISIANA and MISSISSIPPI :

H. I. Robert, 209 Carondelet St., New Orleans, La.

OHIO and WEST VIRGINIA :

West Virginia Optical Co., Wheeling, West Virginia

MISSOURI :

Lyons Optical Co., 612 Franklin Ave., St. Louis, Mo.

TEXAS and NEW MEXICO :

Houston Optical Co., Houston, Texas

KANSAS, NEBRASKA, IOWA, OKLAHOMA, INDIAN TERRITORY :

The Merry Optical Co., 1009 Walnut St., Kansas City, Mo.

TENNESSEE and KENTUCKY :

The Merry Optical Co., Memphis, Tenn.

Or, if there are no manufacturers in your State, write to the inventor and manufacturer,

B. MAYER

6 E. Baltimore St., Baltimore, Md.

NEW GOODS and INVENTIONS

[The illustration and description of new goods and inventions as hereunder is a permanent feature of THE KEYSTONE; our twofold object being to keep the jeweler and optician thoroughly posted on the very latest and most salable goods, and the workman at the bench equally well posted on the newest inventions and improvements in tools and appliances.]

A New Automobile Goggle

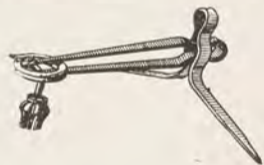


The world-wide popularity of the automobile has created a corresponding demand for all manner of accessories needed by the devotees of the new vehicle. Among the most interesting of these are the necessary goggles for the protection of the eyes in swift running. For a number of years

American inventive genius has been striving towards greater perfection in this field and its latest achievement is shown in our illustration. These goggles, which have been suggestively named the Dreadnaught, are made by F. A. Hardy & Co., Chicago, and their most noticeable and distinctive feature is their four-glass construction, enabling the motorist to see in all directions. They should prove a great boon to the thousands who delight in the pleasures of the horseless flyers. The new goggles are compact and can be folded and put with ease complete in the vest pocket. They are wonderfully light and comfortable to wear, all parts that touch the face being made of soft leather. The goggles can be worn over spectacles or eyeglasses and give absolute protection against wind and dust.

New Soldering Clamp

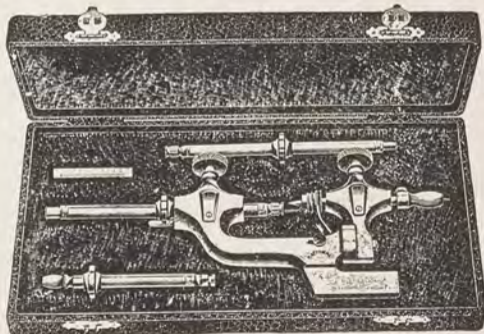
Benchworkers will be interested in the new soldering clamp shown in this illustration. This is a simple, effective and convenient tool, which should prove especially valuable in repair work. It is furnished to the trade by the Tweezer Clamp Co., Atlanta, Ga., and is calculated to save much time and obviate much labor. It has neither



screws nor nuts to work loose nor unnecessary parts to get lost. Another valuable feature of this clamp is its manifold utility, being practicable in the repair of jewelry articles of every shape and construction. Never, apparently, has inventive genius been so active in the improvement of all manner of tools as at the present time.

Aluminum Pivot Lathe

The accompanying illustration shows a recent addition to the equipment of the workshop in the shape of a new aluminum pivot lathe. This lathe is furnished to the trade by Hammel, Riglander & Co., New York, and it possesses many commendable features which will doubtless be appreciated by the practical jeweler and watchmaker. This lathe is new in construction and larger than the regulation pivot lathe. It is very light and easy to handle. All the steel parts and screws run in hard bronze bearings. The pulley has three speeds and is supplied with an adjustable carrier. The carrying collet is movable by means of a slide provided in the bed of the lathe, thereby supplanting the former guiding screw operated from the back.



New Gothic Ceiling Plate

The popularity of the steel ceiling for stores has encouraged many improvements in style, and one of these is shown in our illustration. It is called the Gothic ceiling plate and is one of the many handsome and artistic modelings being brought out by The Edwards Manufacturing Co., of Cincinnati, Ohio. The new plate is patterned strictly in accordance with the canons of gothic architecture and its decorative effect is rich and striking. The company advises us that they have now in press a new catalogue of metal ceiling and side-wall designs, embodying many new ideas, which they will be pleased to forward to parties interested.



New Material Cabinet

The accompanying illustration shows in reduced size a very convenient cabinet of highly-polished solid oak, which may be obtained from Swartchild & Co., Chicago. This is a commodious receptacle, having two trays containing ninety-six cork-top bottles, all properly labeled and numbered to

Swartchild & Company		SENSIBLE COMBINATION OF STEM-WINDING SPRINGS.												Swartchild & Company	
FOR ALL AMERICAN WATCHES.															
1. Elg. 10s	9. Elg. 16s	17. Elg. 12s	25. Elg. 16s	33. Wal. 6s	41. Wal. 6s	49. Hpd. 18s	57. Hpd. 16s	65. Ill. 16s	73. Hml. 18s	81. Col. 18s	89. Tr'n. 0s				
Click Spring	Set. Lev. Spring	Setting Spr.	Vib. Arm Spr.	Click Spr.	Shipper Spr.	Click Spr.	Yoke Spring	Click Spr.	Yoke Spring	Cam Spring	Click Spring				
2. Elg. 13s	10. Elg. 16s	18. Elg. 12s	26. Elg. 16s	34. Wal. 0s	42. Wal. 0s	50. Hpd. 18s	58. Hpd. 6s	66. Ill. 18s	74. Hml. 18s	82. Col. 18s	90. Tr'n. 000s				
Click Spring	Set. Lev. Spring	Setting Spr.	Vib. Arm Spr.	Click Spr.	Shipper Spr.	Click Spr.	Yoke Spring	Lifting Spr.	Shipper Spr.	Yoke Spring	Click Spring				
3. Elg. 16s	11. Elg. 16s	19. Elg. 6s	27. Elg. 0s	35. Wal. 26s	43. Wal. 6s	51. Hpd. 6s	59. Hpd. 000s	67. Ill. 10s	75. Rfd. 18s	83. S.T. 13s	91. Tr'n. 6s				
Click Spring	Setting Spring	Setting Spr.	Vib. Arm Spr.	Clutch Spr.	Set. Slide Spr.	Click Spr.	Yoke Spring	Setting Spr.	Click Spring	Click Spr.	Ship. Lev. Spr.				
4. Elg. 16s	12. Elg. 16s	20. Elg. 0s	28. Elg. 6s	36. Wal. 16s	44. Wal. 6s	52. Hpd. 000s	60. Hpd. 6s	68. Ill. 15s	76. Rfd. 16s	84. S.T. 6s	92. Tr'n. 0s				
Click Spring	Setting Spring	Setting Spr.	Vib. Arm Spr.	Clutch Spr.	Set. Slide Spr.	Click Spr.	Cam Spring	Setting Spr.	Click Spr.	Click Spr.	Ship. Lev. Spr.				
5. Elg. 6s	13. Elg. 18s	21. Elg. 0s	29. Elg. 0s	37. Wal. 1s	45. Wal. 10s	53. Hpd. 18s	61. Ill. 18s	69. Ill. 16s	77. Rfd. 18s	85. S.T. 18s	93. Tr'n. 000s				
Click Spring	Setting Spring	Setting Spr.	Vib. Arm Spr.	Clutch Spr.	Set. Wheel Spr.	Shipper Spr.	Click Spr.	Int. Wind Spr.	Setting Spr.	Yoke Spring	Ship. Lev. Spr.				
6. Elg. 0s	14. Elg. 16 s.	22. Elg. 18s	30. Elg. 18s	38. Wal. 10s	46. Wal. 10s	54. Hpd. 16s	62. Ill. 13s	70. Ill. 18s	78. Rfd. 16s	86. S.T. 6s	94. Long. 16s				
Click Spring	Setting Spring	Vib. Arm Spr.	Cam Spring	Shipper Spr.	Yoke Spring	Shipper Spr.	Click Spr.	Yoke Spring	Clutch Spr.	Yoke Spring	Detent Spr.				
7. Elg. 0s	15. Elg. 16s	23. Elg. 15s	31. Wal. 16s	39. Wal. 16s	47. Wal. 12s	55. Hpd. 000s	63. Ill. 13s	71. Hml. 18s	79. Col. 10s	87. Tr'n. 16s	95. Long. 12s				
Click Spring	Setting Spring	Vib. Arm Spr.	Click Spr.	Shipper Spr.	Yoke Spring	Shipper Spr.	Click Spr.	Click Spr.	Click Spr.	Click Spr.	Detent Spr.				
8. Elg. 16s	16. Elg. 16s	24. Elg. 16s	32. Wal. 16s	40. Wal. 12s	48. Wal. 6s	56. Hpd. 18s	64. Ill. 10s	72. Hml. 16s	80. Col. 6s	88. Tr'n. 6s	96. Long. 0s				
Click Spring	Setting Spring	Vib. Arm Spr.	Click Spr.	Shipper Spr.	Set. Lev. Spr.	Yoke Spr.	Click Spr.	Click Spr.	Click Spr.	Click Spr.	Detent Spr.				

correspond with the description of the contents given on the inside of the lid which, as will be seen by reference to the illustration, are very complete and explicit in detail. Thus when a certain style of spring is required the dealer can simply order by the number of the illustration, saving time and insuring against error. There is no branch of the jewelry business in which system is so essential as in the material department. The new cabinet will, therefore, be welcomed as a veritable crystallization of system in stockkeeping and ordering.

A New Form of Jewel Box

We show in this illustration one of the latest creations in jewel boxes, the Ideal dumb-bell. This is a simple and very compact receptacle, neat in appearance and in every way conducive to full display. It is made by the Empire Jewelry Case Co., 105 Seneca Street, Buffalo, N. Y. The box, neck, cushion and block are all made of very thin steel and covered in silk, velvet and other material. It can be opened in any position, just as little or as much as may be desired. They are made in various degrees of fineness and to suit all forms of taste. Their appearance seems decidedly calculated to emphasize and dignify the articles displayed in them—a most important feature of all such goods. There is no line of jewelers' supplies which have been so enriched by improvement in design and construction in recent years as jewel boxes, trays, etc., and it behooves the trade to keep posted on all such improvements.



(Continued on page 867)

An Ophthalmometer is a Necessity for the Careful Refractionist

It Saves Time and Insures Accurate Work



REMEMBER

The Ophthalmometer gives valuable information in regard to astigmatism that cannot be found in any other way. It shows the presence of corneal astigmatism and the meridians of greatest and least curvature.

Can be supplied with attachment for city electric current or with battery.

The **C. I. Ophthalmometer**, shown above, is in use in over a thousand offices and has met with the greatest success. It is scientifically built, well finished, and besides its acknowledged utility as an instrument of precision that no refractionist can afford to be without, gives a professional tone to the office that is invaluable.

For Sale by All Jobbers

May 1, 1906.

Please mail me pamphlet descriptive of the **C. I. Ophthalmometer**, together with price, etc.

Name, _____

Address, _____

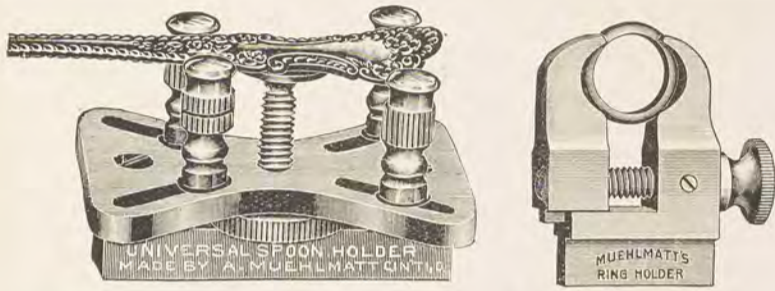
CUT HERE AND MAIL TO YOUR JOBBER. IT WILL PAY YOU

New Goods and Inventions

(Continued from page 865)

New Spoon Holder and Ring Holder

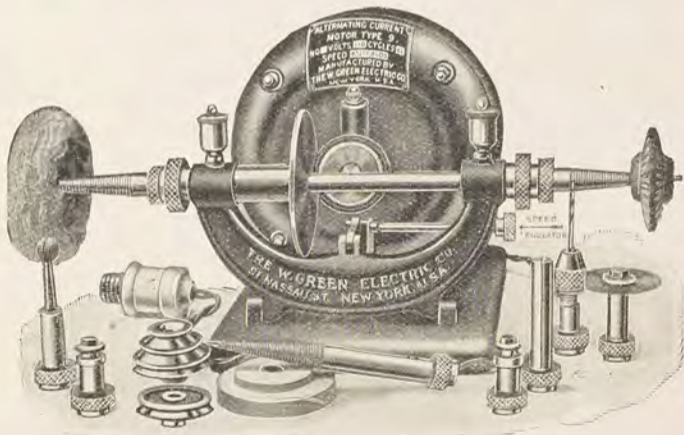
The facilities of the jeweler's workbench have been augmented by the two valuable devices shown herewith, the larger being Muehlmann's universal spoon holder and the smaller Muehlmann's improved ring holder, both of which are furnished to the trade by Sussfeld, Lorsch & Co., New York. The spoon holder will hold spoons of all sizes, either by the bowl or the handle. It will fit any engraving block and may be used for holding forks, knives, medals, coins, lockets, etc. Neither key nor wrench is required to operate this device. The workmanship and material are excellent. The work support has half-inch vertical adjustment and is provided with a ball joint adjusting itself readily to articles of any shape. The four posts are



provided with steel flanges, the under side of which are faced with fiber washers, offering a splendid surface for adjusting the work without injury. The flange posts are quickly adjusted to position, and one post only needs to be moved to insert articles of the same size. When inserting articles to be engraved the post should be brought to the work before raising the work support. The removing work should be lowered from the holder. The construction and operative principle of the ring holder are admirably shown by the illustration and will appeal strongly to engravers. This engraving-block attachment is a simple and compact device, easy to operate and satisfactory in results. It is adjustable to all sizes of rings and will fit all makes of engraving blocks. An especially valuable feature, long desired by many engravers, is its capacity to effectively hold rings while they are being engraved on the inside.

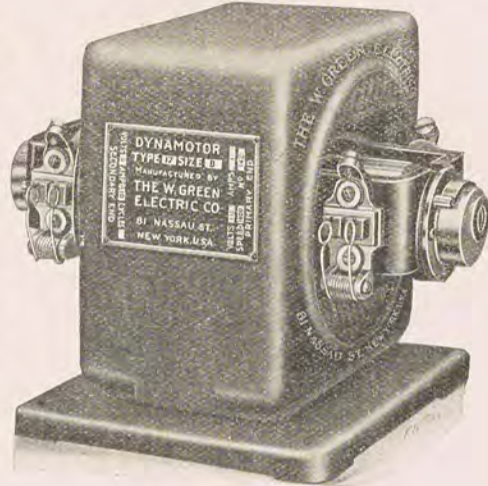
New Models of Motor Lathes

We show in the accompanying illustration one of two new 1906 models of motor lathes made by the W. Green Electric Co., 81 Nassau Street, New York, which entirely supersede the 1905 models formerly made by the same firm. The new 1906 models are made in all sizes from one-tenth to two-horse power. One of the models is a No. 4 direct-current lathe, the other a No. 9, shown in our illustration, which is of the alternating-current



variety. The No. 4 has four variable speeds, from 600 to 3500 revolutions per minute, is air and water-tight, of the ball-bearing type and needs no lubricating. The No. 9 alternating-current lathe possesses ten or more variable speeds from 700 to 3500 revolutions per minute. It also is air and water-tight and is a convenient and simple device, having neither pulleys nor belts. The makers claim that neither of these lathes will become overheated and burn out, and that if overloaded on the high speed they won't stop suddenly and run in the reverse direction. The lubricant does not

leak and both models will run for months without calling for attention to the bearings or brushes. Among other distinctive features of these models is the enclosing cover, which can be readily removed for inspection or cleaning without disturbing the bearings, brushes or armature while the motor is running. Another instrument of practical interest to the trade and manufactured by the same company, is the new plating dynamotor shown herewith. This consists of a plating dynamo and power motor combined, capable of being self-operated by any direct-current, light or power circuit, no motor belts or pulleys being required. These dynamotors are warranted for gold, silver, nickel and copper plating, etc. They are wound to run on 110, 220 or 500-volt circuits, and will deliver to the tank a 5-volt current for plating exactly like the regular plating dynamos. The cost of running one of them is from one to eight cents per day. They are compound wound, have phosphor-bronze bearing sleeves, self-oiling bearings and extra-large commutators. To operate, it is necessary merely to connect the wires from the regular switch cut-out to the primary end of the machine, close the switch and the device runs like a motor, delivering the regular plating current of five volts, or less, to the secondary terminals. The strength of the current may be completely controlled with the regular tank rheostat, while the voltage may be reduced to any extent by means of a speed-controller connected with the primary or motor end of the machine. These dynamotors are made to run only from a light and power current of the direct kind and cannot be used with the alternating-current system.



Making an Umbrella

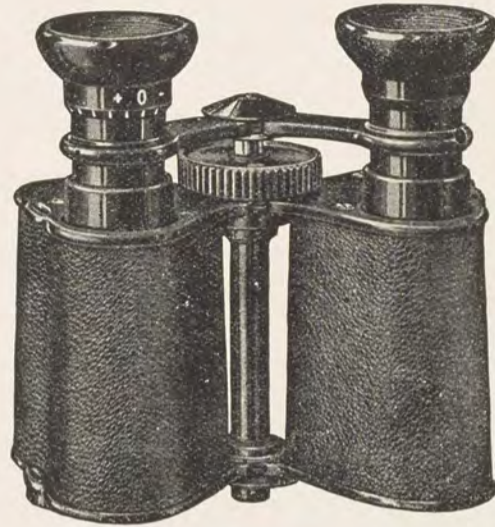
Some ten thousand people in the United States are to-day engaged in making umbrellas, parasols and canes. The call for canes, of course, comes chiefly from cities. The umbrella industry began in this country about 104 years ago, but for some time the parts were brought from Europe, and America was chiefly an assembling ground. It is said that the first umbrella seen on this side of the pond was carried through the streets of Baltimore, and that at the sight of it horses scared and the population marveled. Be that as it may, Philadelphia is the pioneer home of the umbrella. The Quaker City is still the greatest in point of umbrella production, though other cities have come to the front both in the East and the Middle West.

In the making of modern umbrellas the styles of cloth do not change so much, but improvements and innovations in construction have been quite marked in recent years. When a man pays seventy-five or more dollars for an umbrella a large per cent. of the cost is represented in the handle. It may be of gold, silver or ebony, any one of which would be expensive. An umbrella with a detachable handle enables the owner to preserve the most valuable part of his umbrella for many years and renew the cloth and frame whenever necessity requires. This is one of the many economies and conveniences represented in modern construction. Another style permits of an umbrella being folded so that it may be conveniently carried in a trunk or even a valise.

The cloth for umbrellas and parasols comes to the umbrella factory in rolls. This cloth is unrolled upon what is known as a "splitting-table," and here fifty or more thicknesses at a time may be cut into the prescribed lengths by means of a long sharp-bladed knife. A slot in the table assists in guiding the knife. The cloth is now ready for the hemming machines. The speed of these machines is 3000 revolutions a minute, making it possible for each girl to hem 1200 yards of cloth in one day.

Everyone who has ever given the construction of an umbrella even passing notice can appreciate the fact that the pieces of cloth which constitute the cover are triangular in shape. After the hemming the strips of cloth go to another cutter who places a triangular pattern upon the goods and with a sharp knife cuts one triangle after another, being careful to waste as little of the cloth as possible.

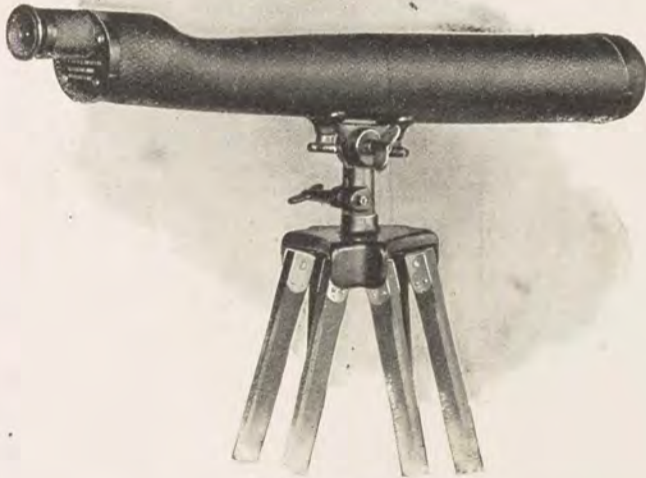
The
Warner
&
Swasey



Prism
Binocular

Three powers: 6, 8 and 10
One price: \$40.00

Instruments for Vacation Use



Price \$80.00

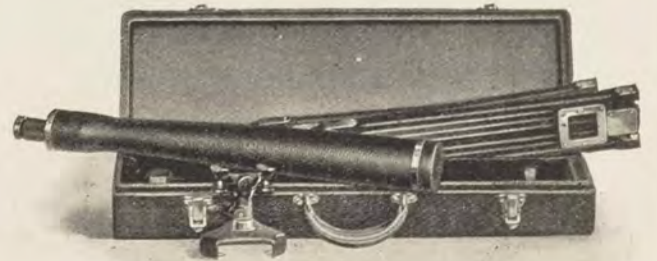
The Warner & Swasey
2-inch Prism Terrestrial
Telescope

Including two powers—24 and 40—alt.-azimuth
mounting, tripod and carrying case. Total weight,
12 lbs.

Just *now* is the best time of the year to
push the sale of instruments of this kind.

Write us at once for circular matter and
discounts.

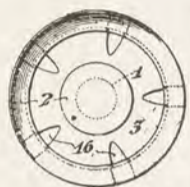
The Warner & Swasey Co., Cleveland, Ohio



United States Patents

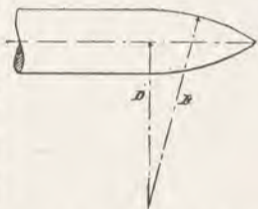
Patents of interest to the trade, issued April 3, 10 and 17, 1906. Specially prepared for this journal by Wm. N. Moore, patent attorney, Loan and Trust Building, Washington, D. C.:

No. 816,555.—Tool for grinding lenses. John L. Borsch, Jr., Philadelphia, Pa. Filed June 20, 1905. Serial No. 266,103.



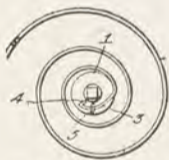
A tool for grinding bifocal lenses, composed of a head portion which is provided with a grinding surface and formed with a circular annular channel which interrupts the grinding surface; and the tool is also provided with ports or openings extending from the bottom of said channel to the outer edge of the tool.

No. 816,700.—Tracer and tool for engraving machines. Mark Barr, London, England, assignor, by mesne assignments, to Linotype & Machinery Limited, London, England. Original application filed October 13, 1900. Serial No. 32,999. Divided and this application filed February 6, 1903. Serial No. 142,686.



A tracer and tool for use in a pantograph engraving machine formed of a rod having a curved working end lying in a surface of revolution about the axis of the rod, the contour of said end being defined by two finite geometrical distances, viz.: the radius of curvature of said curved end and the perpendicular distance of the center of this curvature from the axis of the rod; the said distances being so short as to produce a perceptible curvature; the said distances for the tracer being proportional to those for the tool.

No. 816,723.—Watch barrel arbor. John W. Gibson, Mystic, Iowa, assignor of one-half to William H. Lowe, Mystic, Iowa. Filed June 8, 1905. Serial No. 264,326.



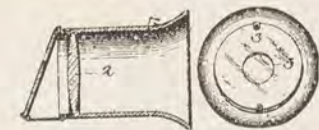
A barrel arbor formed with an eccentrically-disposed slot having its inner end terminating in an angularly-disposed portion, a spring seated in said slot having an angularly-bent portion to engage the angularly-extending portion of the slot, and a locking pin passed through aligning openings in the barrel and spring.

No. 816,777.—Jeweler's implement. William F. Brown, San Francisco, Cal. Filed August 16, 1905. Serial No. 274,433.



A jeweler's implement having a head provided with aligned orifices, a vise embodying an abutment and a pair of jaws, and a striking tool to engage the orifices and the abutment.

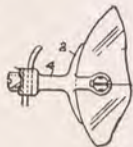
No. 817,902.—Reflector for magnifying glasses. Carey E. Bunker, Oregon, Mo. Filed April 20, 1904. Serial No. 204,116.



A reflector held frictionally combined with the eyepiece of a monocular magnifying glass, and comprising a tubular angular holder, and a reflecting surface disposed oblique to the holder.

No. 818,006.—Eyeglass mounting. Albert S. Weaver, Providence, R. I., assignor of one-half to Christopher A. Murray, Pawtucket, R. I. Filed December 1, 1905. Serial No. 289,895.

An eyeglass mounting consisting of a stud box having notches in two opposite sides, a fastening screw having a head provided with radial notches, and a locking clip having a perforation for the insertion therethrough of said fastening screw.

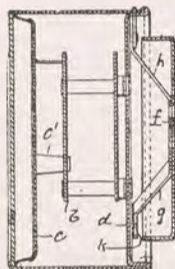


No. 816,997.—Gem setting. Albert Pollard, Providence, R. I. Filed November 25, 1904. Serial No. 234,298.



A gem setting comprising a metal sheet having a perforated concave seat with edges projecting beyond the face of the sheet on one side and integral prongs projecting beyond the opposite face of the sheet.

No. 17,147.—Clock. Arthur W. Owen, Winsted, Conn., assignor to The Wm. L. Gilbert Clock Company, Winsted, Conn., a corporation of Connecticut. Filed March 11, 1905. Serial No. 249,557.



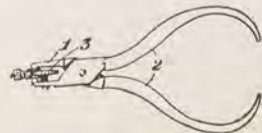
A clock comprising a case, a strut having two or more legs, tenons formed at the ends of the legs adapted to enter openings in the side walls of the case, and a bell mounted on the strut.

No. 818,347.—Jewel-setting pliers. Britton E. Byrd, Durham, N. C., assignor of three-fourths to V. G. Davis, Bracey, Va., and John I. Rose and F. L. Walker, Durham, N. C. Filed June 2, 1905. Serial No. 263,485.



Jewel-setting pliers comprising crossed and pivoted levers having jaws rigid therewith and having work-engaging faces meeting on a line substantially perpendicular to the general line of the levers, and a gage adjustably secured at the pivot.

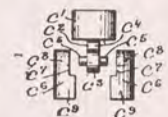
No. 816,845.—Optical tool. Lewis E. Capps, Seattle, Wash. Filed May 16, 1905. Serial No. 260,719.



An optical tool comprising opposite compressors, means to move the same toward and from each other, and a form yieldingly supported between said compressors.

No. 818,146.—Bracelet. James M. Clark, 2d, North Attleboro, Mass., assignor to The Daggett & Clap Co., Attleboro, Mass., a corporation of Maine. Filed May 18, 1905. Serial No. 261,011.

A concealed hinge for bracelets consisting of a member having a body portion *c'*, the center tongue having the depression *c4* and the circular end *c3*; and the oppositely-disposed stamped-up tests *c5 c5* forming the pintle of the hinge, and a two-part member, each part *c6* having a cut-away portion *c7* for the tongue *c2*, and in the face of the cut-away portion the recess *c8* for a test *c5* on the tongue *c2*.

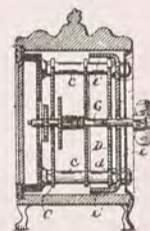


No. 817,944.—Locket, photograph pendant, frame, charm and the like. Thomas Wilcox, Birmingham, England. Filed August 26, 1904. Serial No. 222,205.



A locket comprising a frame, a bezel pivoted and adapted to turn therein, side members hinged to said frame and opened by the turning of said bezel, and a ring or head for turning the bezel.

No. 817,803.—Clock. Wilson E. Porter, New Haven, Conn., assignor to the New Haven Clock Company, New Haven, Conn., a corporation of Connecticut. Filed April 22, 1902. Serial No. 104,124.



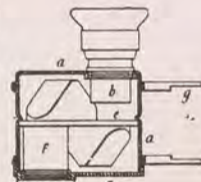
A clock comprising a case having separable end plate secured thereto, a movement frame in said case, and a cup-shaped bell mounted within the case and end plate on pillars taking into said end plate.



No. 818,297.—Eyeglass holder. Marie J. Russell, Chicago, Ill. Filed November 20, 1903. Renewed September 22, 1905. Serial No. 279,711.

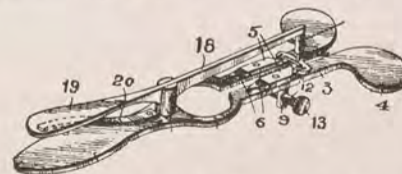
An eyeglass holder comprising a hairpin and a pendant open hook loosely connected therewith and free to swing in all directions.

No. 818,014.—Prism-telescope casing. Max Berger, Jena, Germany, assignor to the firm of Carl Zeiss, Jena, Germany. Filed May 20, 1905. Serial No. 261,288.



A binocular prism field glass consisting of two casings, a bottom plate closing the open end of the shell, and two hinge arms fastened to the shell.

No. 817,955.—Patent setting and adjusting tool. William B. Brosius, St. Louis, Mo., assignor to William L. Girard, St. Louis, Mo. Filed October 25, 1905. Serial No. 284,299.



A pallet setting and adjusting tool consisting of a handle, a pair of arms integral therewith, and means whereby a pallet is held on said arms.

"The Keystone gets better and more useful to the retail jeweler and optician every year."—A. L. Fawcett, New Albany, Pennsylvania.

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All sales conducted along MODERN and HIGH-CLASS LINES

I have made six sales since the 2d of January this year, and the space will not allow me to publish the six testimonials. I will publish the last two sales that I have made, and anyone who is interested that would like to hear from the other four, I will send same upon application.

TO WHOM IT MAY CONCERN:

Oneonta, N. Y., April 1, 1906
 Mr. H. J. Hooper has just closed a very successful sale for me, and to say that I am satisfied is expressing it mildly. He sold nothing but my own high-grade goods and sold it at a profit, and I know he left me in as good a standing in the community as I was before the sale started. I can highly recommend him to any one needing an auctioneer. He is a hard, conscientious worker and a gentleman.

C. O. BIEDERMAN.

Niagara Falls, N. Y.,
 April 21, 1906

Mr. H. J. Hooper, has been conducting an auction sale for us for several weeks past, he is having unbounded success, and which seems likely to continue for some weeks to come. He is very witty and pleasing to his audience and keeps them in the best of humor. The prices he obtains are eminently satisfactory, affording us a nice profit. We attribute his success quite as much to his ability as an auctioneer as to the large stock from which he has to sell. To anyone desiring the service of an auctioneer, we say get Hooper if you can.

FREEMAN
 JEWELRY CO.

The names that I publish below are merchants that I have sold for direct, there are no wholesalers among them. Anyone wanting the wholesalers I have sold for indirectly, I will furnish by mail.

- | | |
|--|--|
| L. Robins, Oswego, N. Y. | Fung Hai & Co., San Francisco, Cal. |
| Blumberg Brothers, Syracuse, N. Y. | J. L. Fuller, New York |
| Sun Fat Company, San Francisco, Cal. | Everett Jewelry Co., 3 sales, Everett, Wash. |
| Peter Engel, Marysville, Cal. | W. D. Meail, Marysville, Cal. |
| S. Hollander, Salinas, Cal. | J. Joseph, Los Angeles, Cal. |
| A. P. Hall, Visalia, Cal. | A. Leitson, Duryea, Pa. |
| M. Edwards, Syracuse, N. Y. | Davidow Brothers, 3 sales, Wilkesbarre, Pa. |
| C. Wilcoxson, Carnegie, Pa. | Maiden Lane Jewelry Co., Elizabeth, N. J. |
| Keystone Jewelry Co., Pittsburg, Pa. | Dualibil Brothers, Schenectady, N. Y. |
| E. A. Walker, Pasadena, Cal. | Fred. Ward, Visalia, Cal. |
| S. E. Rich, San Jose, Cal. | I. E. Gilbert & Sons, Modesto, Cal. |
| Andrews & Wood, Modesto, Cal. | M. L. Stanton, Riverside, Cal. |
| A. Thurman, Healdsburg, Cal. | A. E. Backs, Woodland, Cal. |
| J. Frost & Co., Chicago, Ill. | M. S. Osgood, San Jose, Cal. |
| A. Clark, Spencer, Ind. | Chas. Wilcoxson, Napa, Cal. |
| C. Hill, Southbridge, Mass. | George Jordan, Redlawn, Cal. |
| U. S. Renshaw, Lansford, Pa. | George Thomas, Auburn, Cal. |
| L. M. Lasell, Martinez, Cal. | W. H. Wilson, Marced, Cal. |
| E. F. Brown, Pasadena, Cal. | South Bend Jewelry Co., South Bend, Wash. |
| J. Hyman, Sacramento, Cal. | B. Banetti, Ferndale, Cal. |
| Kohn Brothers, Missoula, Montana | D. E. Gilbert, Modesto, Cal. |
| F. R. Stearns 2 sales, Petaluma, Cal. | M. Barboska, Santa Cruz, Cal. |
| Ike Fields, Grass Valley, Cal. | L. Robins, Utica, N. Y. |
| George Johnson, San Bernardino, Cal. | Yoshimi & Co., Atlantic City, N. J. |
| R. F. Stearns, Stockton, Cal. | S. Kritzer, Binghamton, N. Y. |
| Thomas Howard, Marshfield, Oregon | Cummings & Son, San Francisco, Cal. |
| Franz Mahneke, Tacoma, Wash. | J. M. Ives, Meriden, Conn. |
| J. H. Shade, Brooklyn, N. Y. | E. H. Kutner, Albany, N. Y. |
| John E. Knapp & Co., Salt Lake City, Utah | S. Susman, Stamford, Conn. |
| James J. Tracey, Seattle, Wash. | Rival Jewelry Company, Los Angeles, Cal. |
| Charles Hoff, Denver, Col. | A. H. Broon, Boise City, Idaho |
| Jacob Cohn, New York | Levison Brothers, Oakland, Cal. |
| L. J. Bennett, Brooklyn, N. Y. | O. A. Dockhan, N. Tonawanda, N. Y. |
| E. A. Walker, Pasadena, Cal. | A. Benjamin, Denver, Colo. |
| R. Cohen, Pittsburg, Pa. | M. BasBarker, Fresno, Cal. |
| F. R. Williams, Buffalo, N. Y. | J. M. Dickson, Stockton, Cal. |
| R. W. Wilson, Portland, Oregon | J. M. Jacobsen, Ferndale, Cal. |
| Fred Woodman, Louisville, Ky. | O. M. Lathrop, Troy, N. Y. |
| M. Rundback & Co., Chicago, Ill. | J. Rupert, Terentum, Pa. |
| Glendemann & Schweitzer, San Francisco, Cal. | C. O. Biederman, Oneonta, N. Y. |
| Luke MacDonald, Visalia, Cal. | Cal. Freeman Jewelry Co., Niagara Falls, N. Y. |
| Bemas Brothers, Vallejo, Cal. | |



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you have a stock of jewelry to dispose of either wholesale or retail, "he is just the man," because he sells your goods without misrepresentation and protects you and your interests in everything. Many references gained by fair and square dealing, prove that he has no real competitors. All correspondence strictly confidential. Terms and methods different from all others in the business.

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Refer to the following

- | | |
|---|----------------------------------|
| J. P. Bader, Clarksdale, Miss. | Geo. W. Kates, Newton, Kans. |
| Joe Freedlander, Memphis, Tenn. (2 sales) | Wuerth & Son, Leavenworth, Kans. |
| M. Maloney, Birmingham, Ala. (2 sales) | Warren & Warren, Paducah, Ky. |
| Douglas Jewelry Co., Guthrie, Okla. (2 sales) | Raines Bros., Tarkio, Mo. |
| E. K. Crothers, Bloomington, Ill. | S. Waldman, Bloomington, Ill. |
| James A. Young, Watertown, Tenn. | W. Akenhead, Lake Village, Ark. |
| Hattiesburg Jewelry Company, Hattiesburg, Miss. | |

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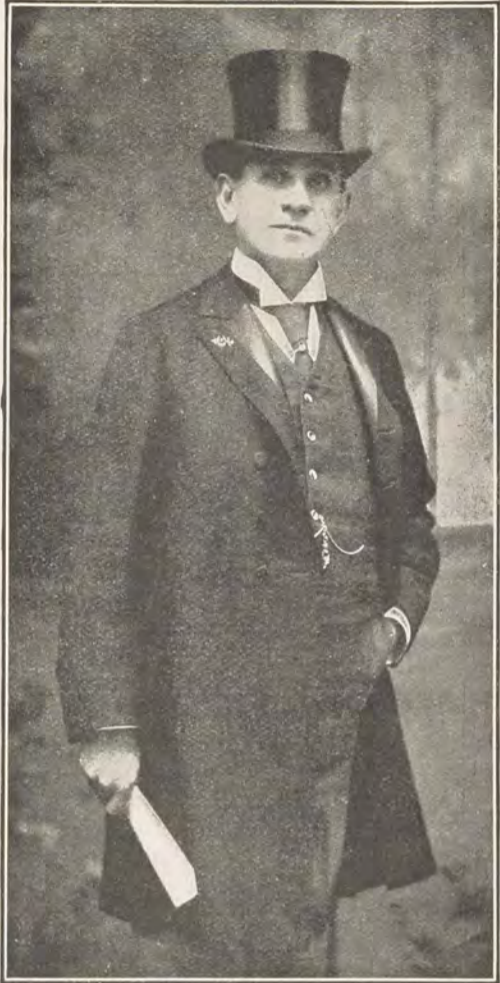


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JEWELERS' AUCTIONEER

170 Broadway, Corner of Maiden Lane
NEW YORK, N. Y.

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I have conducted most all the large sales from New York City to San Francisco, Cal., and have to my credit the greatest number of sales, with largest percentage of profits. The secret of my success, I possess that which I profess, ABILITY.

I have just closed a four weeks' sale for Mr. J. E. Steere, Charlotte, N. C., selling \$10,000 without adding any goods, and the sale showed a profit of 25 per cent.

If you wish this kind of a sale write at once, for demands are pressing and the times favorable.

Sales conducted in any part of the United States or Canada.

My lifetime study has been the Auction business. By an investigation you will find I lead them all

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I always guarantee large profits.

No percentage charged by me to conduct your sale.

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A. L. GOTTLIEB

Auctioneer

816 Ashland Block, Chicago, Ill.

Established 1880

Telephone, Central 390



WARNING

Jewelers, protect yourself. Don't pay a percentage to any auctioneer and then have your goods sold for less than the actual cost price. You cannot be too careful in selecting a man if you value your interests. A line to me might be greatly for your interest.

Have you heard the story of the Raven?

IT'S A BIRD!!



But the story of an auction has them all beat for it shows you the way to make money. I want you to know the story of my wonderful success as an Auctioneer and price-getter, and I would like to help you plan, advertise and conduct one of my rousing big auctions for the money there is in it.

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J. V. MOROSS

Jewelers' Auctioneer

Bric-a-brac and Art China

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No goods misrepresented. Over twenty years' experience. I thoroughly understand the price of goods without asking, which saves time and money.

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Write me now and secure a dating for either now or later. Best of reference and terms furnished.

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In these dull summer days would you like to have a sale that would bring from \$2000 to \$5000 a week to your cash drawer and clear the store for new fall stock?

Perhaps you are overstocked. Maybe you have an accumulation of undesirable stock, the leavings of years. Possibly you would like to move to a new location and open there with new goods. The bank or your jobber may be pressing you for money.

Now, we have been retail jewelers for fifteen years, and for many years we have been making auction sales for jewelers. This long experience enables us to appreciate the conditions and solve the problems of retailers. We can size up a situation instantly and give the needed service. Best of all, we can conduct a profitable clearing sale any month in the year in such a way that it will be a big advertisement for the store and bring hundreds of new customers who become permanent customers. No better proof of this is needed than the fact that our customers send for us again and again.

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Give us an opportunity and we will convince you from the testimony of those we have served that a Mitchell & Tillotson auction sale is the silver lining to the dark financial clouds that encompass the average retail jeweler.

Write us. Your letter will be treated confidentially. Tell us the size of your stock and store and whether there have been any auction sales in your town recently.

Mitchell & Tillotson

Jewelers' Auctioneers

37 Maiden Lane

New York



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**LEATHER
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With Gold-Plated
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You will save about 33% profit on every jewelry box if you buy our "Empire-Auto-matic," our "Dandy," our "Ideal," and at the same time get the best on the market. The only box of its kind in the world. The patented



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LET US ENGRAVE
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Artistic Monogram and Letter
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Old English
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Special Cases made to order in Gold and Silver
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 Demagnetizing Watches a Specialty
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 Write for our Free Book, "How to be a Watchmaker." A postal will do. **STONE'S School of Watchmaking**, Globe Building, St. Paul, Minn.

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 Sent on selection to reliable manufacturing jewelers
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 Every jeweler that sells rings cannot afford to be without an assortment of Wells' Perfect Ring Adjusters for immediate use when wanted. 1 doz. solid 10 K. gold, astd. sizes, \$3.75; 1 doz. gold filled, astd. sizes, \$2.00; 1 doz. metal, astd., 85c. Sent prepaid at once (only on receipt of price). If you will mention Order No. K., I will forward at same time, prepaid, one game of "Grip" for each dozen Adjusters ordered.
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\$5.00 WITH RACK
 Cards Easel Rack—Holds 600 Cards Sell for
 50 New York Views (black) . . . \$0 50
 25 " (colored) . . . 63
 100 Comics (colored) . . . 2 50
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 Makers of **VICTORY PAT'D. AUTOMATIC SAFETY CATCH**
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 Samples and New Price-List on application **LION BLDG., CINCINNATI**

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 This machine is designed especially to meet the demands of the jeweler. It will carry emery and buffing wheels up to 6 inches in diameter, and with perfect ease speeds to 2500 revolutions a minute.
Economy of space reduced to the minimum
 We also make a line of Foot-Power Lathes for heavy jewelry work.
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 For hard-soldering. Can be applied to any button. Made in Solid Gold, Gold Filled and Silver
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 Can be made from any photograph or print
 Send 5 two-cent stamps for a beautiful sample dial and price-list
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 Sell Entire Stock at Cost New System
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For Scarf Pins, Studs and Lace Pins. The most practical and only adjustable one invented. Price, \$1.50 per doz. For sale by all wholesale jewelers and material houses. Sample by mail, 25c; in 10 K. gold, \$1.00; 14 K. \$1.25. **M. CROHN, Mfr. & Invt. 48 & 50 Maiden Lane, N.Y.**

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Very good CHRONOMETERS on hand; second-hand Chronometers in first-class condition. Repairing, springing and adjusting Chronometers. Also fine watch repairing for the trade.

John Schroeder & Co., Inc.
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Successors to H. H. Heinrich

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Everything in the line of Watch Case Repairing, Gold and Silver Plating, Satin Finish, Engraving and Engine-Turning

Changing Old English and Swiss Cases to take American S. W. Movements by Specialty OLD CASES MADE NEW

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J. M. WESTMACOTT CO.
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Special Furnaces made to order. *Send for Catalog A*
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HAIR JEWELRY
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Jewelry Sample Trunks and Cases
Extra Deep Trunks and Cases Always in Stock
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made easy, effective and 50 to 75% cheaper than kerosene, gas or electric lights by using our

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WELL KNOWN AND PRACTICAL

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Individual instruction in Watch Repairing, Engraving and Optics.

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The E. P. H. Patent

Non-pull-out Neck Chain Snap is a patented snap that insures the wearer against loss of

CHAIN or CHARM

for it positively will not pull out.

Made in 10 and 14 Karat Gold and in Gold Filled

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" Leonard Krower
NEW ORLEANS

" Bauman-Massa Jewelry Co.
ST. LOUIS

" E. A. Cowan & Co.
BOSTON

PRICES

14 Karat	Small, \$7.00 per doz., net
	Large, 7.50 " " "
10 Karat	Small, 6.00 " " "
	Large, 6.50 " " "
Gold Filled	Small, 2.00 " " "
	Large, 2.25 " " "

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Under heading "Situations Wanted," ONE CENT per word for first twenty-five words. Additional words and advertisements, THREE CENTS per word.

Under all headings except "Situations Wanted," THREE CENTS per word.

Name, address, initials and abbreviations count as words, and are charged for as part of the advertisement. No display other than two-line initial letter.

To insure insertion money must accompany all orders for advertisements, and copy must reach us not later than the 25th of each month for insertion in the following month's issue.

If answers are to be forwarded, TEN CENTS in postage stamps must be enclosed.

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809-811-813 N. 19th Street, Philadelphia, Pa.

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Under this heading, ONE CENT per word, for first twenty-five words. Additional words and advertisements, THREE CENTS per word. No advertisement inserted for less than 25 cents.

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BY optician and jewelry repairer. Address, D "M 734," care Keystone.

BY young man as salesman in good store, would also be glad to work on watches and finish trade. Best of ref. H. A. Lewis, Brockport, N. Y.

POSITION wanted by watchmaker and graduate optician, 15 years' exp.; own tools, best refs. "L 732," care Keystone.

ENGRAVER and watchmaker desires position with reliable firm. Young man, good habits, best of refs. Salary \$15 to \$20. Middle or Eastern States. "W 746," care Keystone.

BY watchmaker, jeweler and engraver who is thoroughly competent in all branches of the trade. 25 years' exp.; all tools and ref. "N 742," care Keystone.

APPRENTICE to first-class jeweler, by young man of 20, strong, energetic, natural mechanical ability, ambitious; no bad habits. Texas preferred. Hugh Crane, Giles, Texas.

WATCHMAKER, jeweler, engraver and graduate optician wants position in Illinois or bordering States. "R 737," care Keystone.

LETTER and monogram engraver, salesman, can assist on jewelry and clock repairing and some watch work. Good habits and references. "F 736," care Keystone.

YOUNG man, 8 years' exp., manufacturing jeweler and stone-setter. Can furnish A1 ref. "C" care Geo. Duesner, 77 S. River St., Aurora, Ill.

MANAGER or partner. Thoroughly experienced optician, 37, of good appearance, well educated, speaking German and accustomed to the better class of trade, would like position as manager, or financially interest himself in established optical business or department; or take space in representative jewelry or department store. Will not consider fake, graft or road propositions and no small towns. Address, "J 735," care Keystone.

POSITION by young lady as general letter and monogram engraver and saleslady, also generally useful about the store. Experienced. Address, "D 754," care Keystone.

IN Ohio, as manager or assistant manager by live man of 27; married. Watchmaker, jeweler, salesman, fine optician. Now managing \$10,000 stock; having increased sales over 50% in 18 months. 11 years' exp.; gilt-edge refs. from present and all past employers. Nothing less than \$25 and optical commission considered. Present position pleasant and permanent, but desire to return to native State. Address, L. H., 38 W. Spring St., Columbus, Ohio.

YOUNG man, 4 years' exp. at watch, clock and jewelry repairing, good salesman, can furnish A1 ref. "O 762," care Keystone.

YOUNG man, owning lathe, full set of tools, desires position as watchmaker. For full particulars address, Frank C. Conklin, Manchester, Mich.

FIRST-CLASS watchmaker, salesman and plain engraver. Best ref., 7 years' exp. in city store. No bad habits, own complete set of tools; would like steady position with good firm. S. A. Wise, Wilton Junction, Iowa.

WANTED immediately by a first-class watchmaker, jewelry repairer and engraver, must be permanent job, not afraid of work. "H 765," care Keystone.

HIGH-GRADE watch repairing and adjusting my specialty; also fine letter and monogram engraver, optician, jeweler and stone-setter. Very thorough, conscientious, steady and industrious. Capable taking charge repairs of store. Married, no bad habits; long exp.; permanent position, good firms only. Refs. exchanged and full particulars first letter. "F 779," care Keystone.

SITUATIONS WANTED

A first-class engraver and salesman. "M 766," care Keystone.

B young man to finish trade under good watchmaker, can do plain and monogram engraving. Graduate optician, have lathe, trial case and other tools. Permanent position wanted, willing to work; West preferred. Lock Box 3, Clarkston, Wash.

COMPETENT watchmaker desires position immediately; age 23. First-class on railroad work, 6 years' exp. Good salesman, best refs.; single. "F 764," care Keystone.

JULY 1st, Western Coast, California preferred; by steady, reliable, married man; no bad habits; assistant watchmaker, engraver; reasonable wages. A. E. Howell, 3825 East Ninth St., Kansas City, Mo.

EDGE-GRINDER and benchman wants position in retail optical establishment with chance to learn refraction. Has a good education, refs. and exp.; 20 years old. Address, "W 786," care Keystone.

WANTED position, expert watchmaker, graduate optician, A1 salesman, 15 years' exp.; own tools. S. S. Rose, 112 West King Street, Lancaster, Pa.

YOUNG man desires position as watchmaker and plain engraver. Ambitious; has lathe and tools. Pennsylvania preferred. "Z 777," care Keystone.

YOUNG man, 19, wants position to finish trade, 2½ years' exp. on jewelry, clock and plain watch work. Exp. lens grinder, best refs.; some tools. A. E. Gordon, Hillsboro Bridge, N. H.

ENGRAVER, young man desires position to finish trade, good letterer on flatware, samples on request. "H 772," care Keystone.

BY watchmaker and engraver; competent, single, age 27; have A1 refs. and complete tools; am graduate optician; salary \$25. "A 776," care Keystone.

FIRST-CLASS optician, watchmaker and salesman, desires to change position; prefer Western Pennsylvania or Ohio. Young man with 15 years' exp. "M 774," care Keystone.

AS manager, strictly temperate man, 20 years' exp. in all branches of jewelry business. Best of refs. given, thoroughly capable. "S 775," care Keystone.

BY thoroughly competent watchmaker, familiar with railroad watches; 10 years' experience, age 30, unmarried, plain engraver, all bench tools, graduate and experienced optician, trial case, good sale man. North preferred, good refs. "B 763," care Keystone.

PRACTICAL watchmaker, plain engraver, graduate optician, 10 years' exp., all tools, trial case, unquestionable refs., will wait on trade, good habits, salary reasonable. Address, Lock Box 147, Sapulpa, I. T.

THOROUGHLY practical watchmaker, with tools, desires position at once. Competent to handle railroad work. New England States preferred. Address, "E. H. B.," 45 Charles St., Springfield, Mass.

WATCHMAKER and engraver, married, age 30, wants position in West or Southwest. Can handle railroad work. Sample engraving and refs. first letter. "E 694," care Keystone.

P-T-O-D-A-T-E watchmaker, jeweler and engraver, with lathe and all tools. "S 700," care Keystone.

WATCHMAKER, jeweler, plain engraver, stone-setter, graduate optician (attendant course), wants position about June 1st, under expert railroad watch inspector. Assistant optician and salesman; good set of tools; best of habits. "G 784," care Keystone.

FIRST-CLASS watchmaker jeweler, engraver, 11 years' experience; single; competent on railroad work; have all tools; speak English and German; refs. "E. K.," 1201 Heyworth Building, Chicago, Ill.

BY a young married man; I am a graduate of the Minneapolis School, first-class engraver and watchmaker, can do soldering, wait on trade, in fact I can do anything about a store, I have had 18 months' experience in store work; wages \$13 week; can give best reference; do not drink. Howard Davis, Parsons, W. Va.

WATCHMAKER, jeweler, salesman, plain engraver, 15 years' experience, have tools, married, age 35, good appearance, best of refs., wages expected \$20. "P 783," care Keystone.

BY engraver; married man, age 23; or man and wife; experienced. Ad., "P. O. M.," Box 342, Warren, Ind.

WATCHMAKER and plain engraver, 30 years old, speaks German, desires benchroom in drug store or general store, or will work for reasonable wages. Address, "M 790," care Keystone.

BY watchmaker, jeweler, graduate optician, fair engraver. Good habits and refs.; age 26, married; own tools. Central States pref. "M 793," care Keystone.

YOUNG man, 22 years old, as watchmaker, jeweler and plain engraver; good refs. Have all light tools; speak German. Wisconsin pref. "B 788," care Keystone.

WATCHMAKER, jeweler and engraver desires a position. Can give good refs.; has some tools; no bad habits. W. E. Trauger, Morrison, Illinois.

ALL-AROUND watchmaker and jeweler; 5 years' exp. Single, age 23; good habits, refs., not afraid of work. \$12 to start; go anywhere; Michigan pref. C. A. Crane, Port Huron, Mich.

SITUATIONS WANTED

WATCHMAKER, refractionist, salesman wants position with prospect of purchasing \$1000 interest in business; steady man, age 39. Ad., "W 794," care Keystone.

A1 WATCHMAKER, jeweler, optician, salesman; drug exp. Own tools, 10 years' bench exp.; speak German and English. German locality preferred. Ohio, Indiana, Michigan. Box 345, Stryker, Ohio.

YOUNG man as watchmaker, jeweler and plain engraver. Good refs. and address: \$12. Have all light tools; age 22; speak German. "B 739," care Keystone.

HELP WANTED

UNDER THIS HEADING THREE CENTS PER WORD

A GOOD watchmaker and optician or engraver. Must be sober and reliable. Permanent position to right man. G. N. Moore, Marion, Ill.

WATCHMAKER able to engrave; also a jeweler; thorough and competent men. Must have good refs. Address, W. H. Mendham, Dawson, Yukon Territory.

FIRST-CLASS watchmaker; one who can do general job work. J. H. Sawyer, Bar Harbor, Me.

WANTED, an experienced cut glass salesman. Address, Feeny & McKanna, Inc., Honesdale, Pa.

WANTED, graduate optician who can do watch and jewelry repairing. R. C. Hardwick, Hopkinsville Ky.

YOUNG man of good address to finish trade under competent workman, must have at least 2 years' exp.; full set of tools not necessary. Give age, exp. and salary wanted. C. M. Pfeiffer, La Grange, Ill.

AT once a first-class watchmaker, jeweler and engraver, good wages and permanent position to an all-around man. Send refs. and sample of engraving in first letter. Hill & Co., Rockdale, Texas.

WATCHMAKER, engraver and salesman at once, want good refs., state wages. J. D. Daniels, Albion, N. Y.

WANTED, watchmaker and engraver of exp. No drinking man and perfect gentleman; good job and easy work with one of best firms in South. Address, "T.," Box 278, Union, S. C.

JUNE 1st, first-class watchmaker, engraver and salesman, must be capable of handling railroad work as well as ordinary. Town 6000, Central Iowa. State wages and full particulars in first letter; permanent situation for right party. Address, "P 733," care Keystone.

YOUNG man, a first-class jobbing jeweler. Permanent position to the right man. Address, J. B. Schaefer, Charleroi, Pa.

TRAVELING salesman to sell a new article as side line. Sells at sight. F. A. Danforth, Warrenburg, N. Y.

SALES MANAGER—recently organized wholesale and manufacturing optical company wants first-class man to take charge of sales department. Must be a good correspondent and familiar with the optical business; no traveling required. Give age and business exp. Address, "K 740," care Keystone.

SALES MAN of ability in large retail store. Young man of exp., a hustler. Address, A. J. Rankin & Co., Roanoke, Va.

YOUNG, single man for watch, clock and jewelry repairing. Fine tools, all kinds work. Good position for advancement in salary and ability for proper person. A. J. Clark, Clarksville, Tenn.

FIRST-CLASS watchmaker who can do engraving and help wait on customers. State wages wanted in first letter. "S 407," care Keystone.

MANAGER for wholesale and retail exclusively optical house, in the house. Applicant must thoroughly understand the wholesale and retail business including shop work. High-class ref. must be furnished as to competency and responsibility. "H 756," care Keystone.

FIRST-CLASS watchmaker; apply with refs. to James H. Kelly, care The Bailey, Banks & Biddle Co., 1218 Chestnut St., Philadelphia.

IHAVE a place for a bright young mechanic desiring to become an expert watchmaker, must be of good family with best ref. L. E. Winslow, 407 Masonic Temple, Chicago.

A MAN who can do watch and jewelry repairing also engraving and do regular bench work. Must be temperate in habits; a good position for the right man. State exp. and wages expected in first letter. P. O. Box 214, Rockford, Ill.

FIRST-CLASS watchmaker and engraver, position permanent, good salary. T. G. Burkhardt, Jefferson City, Mo.

AT once, good watchmaker and jeweler. Hale & Co., Lima, Ohio.

WANTED a few good surface grinders for Baltimore and out of town. Apply with salary desired to B. Mayer, 6 E. Baltimore St., Baltimore, Md.

AT once, competent watchmaker, optician, fair engraver; position permanent, salary from \$20 to \$25 per week. Particulars and ref. in first letter. Jos. Astracan, Amarillo, Texas.

THREE A1 experienced traveling men familiar with West, Northwest and Southwest, to sell Swiss watches. A. Max Holzheimer, 4049 Grand Boulevard, Chicago.

HELP WANTED

A1 SALESMAN wanted to cover East and Middle West, to carry a line of medium and high-grade diamond jewelry. Only those with established trade and best of ref. need apply. Address, "K 750," care Keystone.

YOUNG man competent to do good plain watch work and hard soldering; one who can engrave preferred. Must be sober and steady. Salary moderate but permanent position for right man, with old-established firm in a good town. State age, exp., salary. Jno. W. Ruth & Sons, Shelbyville, Tenn.

A STRICTLY high-grade watchmaker and engraver; position permanent. Must be sober and reliable man and of good address. To a competent man will pay \$27.50 per week. Must be first-class watchmaker and engraver; refs. required. Sanders Bros., Paris, Texas.

WATCHMAKER, jeweler, optician, must have good tools and trial case; take full charge branch store. Must have ability, good habits and furnish refs. that will stand investigation. American preferred. Send full particulars and photo. First letter, will return photo.; wages \$25 week. Herbert K. Smith, Jamaica, N. Y.

WANTED—young man who has had some exp. at the bench on clock and jewelry repairing, who is desirous of finishing trade and who isn't afraid of work. Good opportunity and permanent position for live young man. Wages, \$10 to start; write fully, first letter; American boy preferred. Send photo. and full particulars first letter; will return photo. Herbert K. Smith, Jamaica, N. Y.

OPTICIAN, engraver and jeweler; capable of taking entire charge of optical department. Send refs., photo. and sample of engraving. F. Truby, Coffeyville, Kans.

A STRICTLY first-class all-around workman, watchmaker, jeweler, and engraver. Good salary and permanent position to a good man. State salary expected, and send sample of engraving first letter; only a man of ability wanted. Thos. Van Auken & Co., 316 Pearl St., Beaumont, Texas.

FIRST-CLASS jeweler and engraver, who can also wait on trade. Good salary and steady position to right man, must have best of refs. Give refs. and full particulars in first letter. Nat. Kaiser & Co., Atlanta, Ga.

TWO watchmakers who understand the care of time locks, to travel. State age, exp., salary expected and refs. Address, The Blake Bank Lock Inspection Co., Worcester, Mass.

GOOD engraver, jeweler and stone-setter; permanent position. State age, exp. and salary expected. Address, "H. M.," 507 Traction Bldg., Cincinnati, Ohio.

AT once, a first-class edge-grinder and rimless man; good wages to a competent person. A. A. Kilton, Empire Bldg., Pittsburg, Pa.

CLOCKMAKER, must be a thorough mechanic, competent to repair hall chimes and mantel repeaters. Possessing lathe and bench tools. An excellent position is offered. Address, Tilden, Thurber Co., Providence, R. I.

WATCHMAKER, engraver and optician, good salary, permanent position, open at once. F. D. Hobb, Dyersburg, Tenn.

YOUNG man with about \$900 to learn watchmaking, as partner. Address, "Watchmaker," 617 Westmont, Philadelphia.

FIVE good refractionists wanted at once. The J. J. Boyd Optical Co., 204 N. George, York, Pa.

STRICTLY first-class, A1 watchmaker and engraver, competent to take charge and can handle fine railroad work. One who can set diamonds and has a knowledge of optics pref. Permanent position with good salary to right man. Give details, salary, sample of engraving and refs. in reply. P. A. Goodnough, 710 State St., Erie, Pa.

AT once a competent watchmaker on Swiss and American watches, plain engraver and jeweler; position permanent. Salary, \$20 per week, chance of advancement. Good refs. and sample of engraving in first letter, apply at once to A. Rabinowitz, Stamford, Conn.

WATCHMAKER of pleasing address and competent with customers. Must be a good mechanic and possessing American lathe and bench tools. A permanent and excellent opportunity is offered. Address, Tilden, Thurber Co., Providence, R. I.

GOOD bench man. One who can also cut and edge lenses pref. Ad., "H 761," care Keystone.

AN optical workman able to do all kinds of prescription work. Chas. S. Rees, 327 W. Commerce, San Antonio, Texas.

FIRST-CLASS all-around watchmaker, jeweler and optician, fair engraver, etc. Permanent place for right man. Only 60 miles from St. Louis. State exp. and salary to start. Must have A1 refs. As to my business standing refer to any jobber. T. L. Foley, Elsberry, Mo.

RESIDENT salesmen in different large cities, also competent traveling salesmen. Empire Jewelry Case Co., 105 Seneca St., Buffalo, N. Y.

EXPERIENCED clock and jewelry repairer and assistant watchmaker. Permanent position for a good workman. Give exp., refs. and wages expected. Bogle Bros., White River Junction, Vt.

FIRST-CLASS watchmaker and engraver; wages \$20; hours 8 to 6. Send ref. and sample engraving in first letter. E. J. Faust, 723 Hamilton Street, Allentown, Pa.

HELP WANTED

WATCHMAKER, optician and engraver. Steady job and close store at 6 o'clock except Monday and Saturday nights. O. C. Bath, Ewart, Meh.

DIAMOND-MOUNTER and setter, also a jobber who can do stone-setting. Best wages and permanent position to the right man. E. Maritz Jewelry Manufacturing Company, 217 North Sixth Street, St. Louis, Mo.

GOOD, all-around optical workman capable of everything but surface-grinding. Address, "H 760," care Keystone.

YOUNG man to finish trade under fine watchmaker, jeweler, engraver and optician. Store exp.; good clerk; age above 21. Gilt-edge ref. required. One who can engrave. State wages first letter. Address, "Jeweler," 404 E. State Street, Jacksonville, Ill.

WANTED

UNDER THIS HEADING THREE CENTS PER WORD

TO buy a good second-hand fire and burglar-proof jewelers' safe. B. Gottlieb, Pine Bluff, Ark.

A YOUNG man who is a good jeweler, watchmaker and engraver, and has a little money can get an interest in an old-established paying jewelry business in Colorado. Good opportunity for the right man. "H 755," care Keystone.

TO buy test case and optical tools. Hurd, Optician, Sixth Ave., Troy, N. Y.

WANTED first-class trial case, give description, lowest cash price. Ned Conner, Plymouth, Ind.

ANTIQUE jewelry wanted. We are always ready to make cash offers on any antique jewelry containing mosaics, cameos, seed pearls, etc.; also filigree, enameled or etruscan jewelry; either all gold or set with diamonds or other stones. Chas. S. Crossman & Co., The "Old Mine" Diamond House, 3 Maiden Lane, New York. Established 1880.

OPTICIAN pocket trial case and pedometer. W. F. Boast, Colby, Kans.

ENGRAVING block and attachments. Address, Huyek, Swanton, Ohio.

SECOND-HAND plate-glass show case, 8 foot by 28 in. wide by 17 to 19 in high. H. H. Burnham, Fryeburg, Me.

PARNY wishes to purchase jewelry business in good live town. Michigan preferred. Ad., "B 781," care Keystone.

A SECOND-HAND wheel cutter to fit Webster-Whitcomb slide rest. Must be cheap. L. M. Watson, Waltham, Mass.

GOOD regulator, with or without pendulum. A. L. Neunenschwander, Woodburn, Ind.

AMERICAN key-wind movements, 18 size. I give from 50c. to \$1.00 each. Send me the movements and I send you the cash. Broadbent, 4 S. 42nd St., Philadelphia.

FOR SALE

STORES, STOCKS AND BUSINESSES

\$2000 BUYS a splendid jewelry business in the prettiest town in Nebraska. Good schools, churches and a fine bench trade. Established 1880. Can reduce to \$1000. Address, S. Rhodes, Ulysses, Nebr.

QLD-ESTABLISHED jewelry and optical store, county seat and wheat belt of Kansas. No competition. Address, "M 714," care Keystone.

GOOD paying jewelry and optical business; will sell at once; fine location. "P 731," care Keystone.

JEWELRY and optical store, clean stock, guaranteed business. Town 1000. Best business town for its size in the State; no competition. C. W. Lindsay, Anthon, Iowa.

TRADE engraving business established for 17 years. City of 300,000; clears \$1500 per year. For particulars address, "M 759," care Keystone.

STOCK and fixtures, North Dakota; not another jewelry store within 30 miles; good surrounding country. Stock invoices \$1000, but can reduce. J. N. Barthelemy, McHenry, N. Dak.

ONLY jewelry store in town, 1000 pop. Stock and fixtures invoice \$2000, can reduce stock. Good reasons for selling, have been in business here for 16 years; sell for cash only. L. C. Pedersen, Walnut, Iowa.

WELL equipped manufacturing jewelry shop, in a 40,000 pop., rapidly-growing Western city. Good machinery and an old-established place. Address, "S 594," care Keystone.

DO you want a fine location in the prettiest town in Kansas? If so, here is a chance to step into an established, well-paying jewelry and optical business. Stock and fixtures all new. Bought about a year ago. Low rent; city owns electric light and waterworks; free mail delivery; cheap fuel—coal mines now being opened up near city. Garden spot of Kansas. Thickly populated, 50,000 people in county. County seat, fine schools and churches. Mild winters. 125 miles south of Kansas City, the nearest large city. If you have about \$2500, write. Investigation invited. H. C. Williams, Girard, Kans.

STOCK, good-will and fixtures of first-class jewelry store in Pennsylvania. Good repairing trade. "M 782," care Keystone.

(Continued on page 878)

FOR SALE

STORES, STOCKS AND BUSINESSES

(Continued from page 877)

HOW does this Colorado proposition suit you for \$9000? Business over \$14,000 a year; work about \$150 a month. December alone each year averages \$2244. Don't be afraid to investigate. "D 559," care Keystone.

A BEAUTIFUL modern jewelry store in a growing city of 15,000 in the garden spot of Texas. Clean, up-to-date stock and fixtures. Invoice about \$18,000; stock turned each year. Repairs, \$4000 yearly. Cash or terms. Investigation invited. All inquiries answered. Best reasons for selling. Fine opportunity to acquire a profitable business. Do not delay; this ad. will appear but once. "D 778," care Keystone.

ON account of failing health, offer jewelry and optical business for sale. Established 11 years; pop. 5000; Central Indiana, good farming community; 3 railroads; 2 inter-urbans; good location, nice business. Invoice about \$4500; can reduce. Terms cash. For particulars address, "G 757," care Keystone.

ONLY jewelry, optical, repair, musical and school book and supply business in town of 1800 in Arkansas. Nearest competitor, 30 miles. All the repair work one man can do, and it pays expenses. Up-to-date stock; invoices \$3750. Reason for selling, dissolution of partnership and other business. "H 745," care Keystone.

JEWELRY stock in a lively railroad town of 1500. Good business and best location in town; easy terms. Box 44, Sanborn, Iowa.

JEWELRY and musical business established 35 years; net weekly income, \$50. Expenses small; will teach anyone. Good-will, stock and fixtures, \$2500. Apply, J. O. L. Tepper, Columbia Building, Washington, D. C.

PROSPEROUS jewelry business in one of the best towns in Iowa; established 20 years. Falling health. "S 744," care Keystone.

JEWELRY and optical business in State of Washington; county seat—no other town in county. No opposition within 30 miles. Stock and fixtures about \$10,000; can reduce stock to about \$6000. Railroad inspector. Address, "C 743," care Keystone.

JEWELRY and china store in town of 1000—Illinois—only stock in town; 2 railroads. Invoice about \$800. Good opportunity. Box 107, Tolono, Ill.

700 BUYS the only store, stock and fixtures in town of 800 in Central Nebraska. Building 10 x 16; best location. Plenty of repair work. Positively no dead stock. Expenses not over \$5 per month. "S 758," care Keystone.

3000 STOCK, tools and fixtures for \$2500; must sell. Good growing railroad town—\$40,000 pay-roll. Inhabitants 2500; Central Minnesota. Good repairing, jewelry and optical sales. Fine opportunity. "Z 753," care Keystone.

600 BUYS jeweler's safe and nice fixtures, original cost \$900, in city of 3000 pop. A splendid opportunity to step into a well-established stand. No opposition. Reason for selling, going West. Box 15, Jackson, Mo.

ONLY jewelry and repair business in one of the best county seats in Northwestern Iowa. Stock and fixtures can be reduced to \$4000 or \$5000. Everything in healthy condition. Investigate. "P 748," care Keystone.

A GOOD-PAYING jewelry store in Central Ohio; \$10,000 stock and fixtures. Railroad town of 10,000. Ad., "D 747," care Keystone.

JEWELRY store in good Indiana town of 15,000; best store in town and carry best stock. Invoice about \$3500. Good watch and optical trade. Also railroad watch inspection. Selling to settle estate. "M 741," care Keystone.

JEWELRY store, 2000 pop., in Iowa town; stock and fixtures will invoice \$1500; county seat, railroad town. Lock box 656, Clarion, Iowa.

JEWELRY stock; store and dwelling combined. Will sell stock without store, or store and dwelling without stock at Chetek, Wis. Just coming into prominence as a pleasure resort. Write for particulars. J. Friedinger.

JEWELRY store, established 11 years, on one of the best and finest corners in New York City on account of owner going to Europe. Apply for full particulars to Carl Wiesbader, attorney, 99 Nassau Street, New York.

JEWELRY store in small town, lumbering district Western foothills Cascade Mountains; good ranching land, fine climate, fine trout streams. Investigate this. \$700 to \$1200 takes it. Address, L. Kamalia, Startup, Wash.

2500 BUYS a good jewelry, optical and repair business in a good Illinois town, 2000 inhabitants, in midst of thickly settled corn country. Opposition light. Stock and fixtures clean and up-to-date. Reason for selling, other business. "T 767," care Keystone.

JEWELRY store, healthiest town on Ohio River; pop. 15,000. Only 2 others. About \$3000 required. Phil. Levy, Henderson, Ky.

THRIVING Southern California town of 5000. Fine, growing jewelry business for \$2500. Books to show for business. For reasons, etc. Address, Box 545, Whittier, Cal.

7-YEAR established jewelry business in mining district. Last year's profits and repairs \$4066.87, can be bought for less money; population 10,000; have other interests. Cash. Joseph Tieknor, Trinidad, Colo.

FOR SALE

STORES, STOCKS AND BUSINESSES

50 REWARD, if not as represented. Must sell jewelry and optical business. Is located in beautiful little city in Iowa of about 2000 pop. Competition better than none. Cash profits last December over \$1000; profit last month over \$390. Reserve bench tools and watch material. Can reduce stock and fixtures to about \$1500 by July 1st, if desired. Do not write unless you mean business. Herman Miller, Syndicate Block, West Waterloo, Iowa.

OPTICAL business, leading thoroughfare, New York City; small stock, low rent. "L 768," care Keystone.

IOWA town of 2500, jewelry store, stock and fixtures in first-class shape; first-class prices for repairs. Exceptional chance for good man; will sell for about \$2000; write quick. "H 771," care Keystone.

JEWELRY stock and fixtures in first-class condition; no old junk; Iowa town of 2500; good paying business; invoice about \$2000. If you have the cash and mean business, write for further particulars. "H 770," care Keystone.

THE Bedford jewelry store, known far and wide as one of the most substantial and profitable business propositions in the Middle West, is offered for sale. This is a splendid opening and a very rare opportunity. A pushing, vigorous business with an established trade which has for years run over \$22,000 annually. A. G. Bedford, Ionia, Mich.

JEWELRY store in Minnesota town of 1100 pop., must be sold on account of death of owner; no competition; inventory of stock and fixtures about \$900; good run of bench work; two railroads; large high school; fine opera house. "H 749," care Keystone.

JEWELRY store near center of New York state, doing fine business, will reduce to \$500. Address, "W 786," care Keystone.

JEWELRY and optical business in Illinois town, 2500, right in the oil boom, splendid opening for good jeweler. Other business reason for selling. Don't write unless you mean business. "S 785," care Keystone.

JEWELRY and picture frame business; fine location on south side residence district in Chicago. Good trade already established. Price, \$1000. The best of reasons for wanting to sell. Address, Geo. Perkins, 1201 Heyworth Building, Chicago.

ENTIRE jewelry, musical and optical business, general supplies, fine lathe, tools, materials, fixtures, etc.; over \$1400 invested; will take less than half. It pays to see me; first-class stock to start in business anywhere; health and eyesight failing. Tools and material kept if necessary. A. F. Roller, Winesburg, Ohio.

A SNAP—Jewelry, optical and kodak business for sale. Only business of kind in town of 1000 population; best farming section in Illinois; 3 hours' ride from Chicago; watch inspector for C. B. & Q. R. R.; ill health reason of change. "M 788," care Keystone.

THE best chance yet for man with \$1000 cash to get established business paying \$2000 yearly; fixtures on time; nice Minnesota town, 2000 people. Ward Wood, care Marshall, Nicollet and Grant Streets, Minneapolis, Minn.

GOOD paying jewelry and optical business, town of ten thousand, healthy climate; present owner started business six years ago with no capital, now carries six thousand dollar stock; must give up bench work; sales over five thousand last year; will reduce stock, or give time on part of the amount if secured. "D 787," care Keystone.

MUST sell at once, on account of ill health, jewelry, stock and fixtures; business in 1905 over \$6300, job work average over \$100 a month. Invoice about \$4000. Otto Wiederanders, Gotterburg, Nebr.

IN Oregon, Jewelry and optical business in town of 1200; fine climate. Owner has other interests which require all his time. Good proposition for an energetic young man; about \$1200 required. Address, "F 789," care Keystone.

JEWELRY store, good town; 2 steam railroads, 1 interurban line. Two other stores. "K 795," care Keystone.

SOMEBODY to buy established jewelry business. Good agricultural town; but small capital required. No competition; retiring from business. C. S. Middleton, Sugar Grove, Pa.

ESTABLISHED jewelry business; good town in Illinois of 15,000. Stock will invoice about \$2500. Will give 10% and 5% for cash. Reason for selling, have other interests West. H. E. Roberts, Mattoon, Ill.

600 CASH for jewelry store cleared in 1905 \$1800. Fine chance for beginner or single man. Have other business. "Jeweler," 606 Dempster Street, Evanston, Ill.

JEWELRY and drug store in a rapidly growing Western Indiana mining town of 1800. Will sell jewelry stock alone \$1200 with lease; or both \$2000. Can reduce jewelry stock. Only jewelry store in town. Fine farming country. "H 791," care Keystone.

JEWELRY store, established for 18 years in one of the best residences and business districts of Chicago. Good reasons for selling. Stock and fixtures will invoice \$6000. Can reduce to suit buyer. Repair work pays running expenses. Address, "Henry Adams," room 1201 Heyworth Building, Chicago.

FOR SALE

STORES, STOCKS AND BUSINESSES

ONLY jewelry and optical business in a fine town of 1500—Western New York. Old-established business and fine trade. Easy terms. "B 751," care Keystone.

JEWELRY stock in good town, no competition; failing eyesight. Town of 800. S. W. Cooper, Marquette, Kans.

FOR SALE

UNDER THIS HEADING THREE CENTS PER WORD

MISCELLANEOUS MERCHANDISE AND EQUIPMENT

OLD clock (over one hundred years), good timer and hour strike. Photo if interested. Harry Tippet, Constableville, N. Y.

PERFECTION watch demagnetizer, cost \$15.00 new last fall; first check for \$6.00 gets it. J. F. Carr, Portsmouth, Ohio.

ONE New Century engraving machine, new. One trial case, nearly new. Both perfect. At your own price. Address, Box 501, Westfield, Mass.

POSTAL typewriter, good as new. Send for description and price. Box 584, Victor, N.Y.

ONE 9-foot horseshoe walnut, plate, counter, case and table, \$50.00. One National cash register, cost \$400, built for jeweler, bronze finish, perfect condition, prints rebate checks, price, \$250. Loehman Bros., Springfield, Ill.

TWO 10-foot oak wall cases, plate glass, one 9 foot and one 8 foot ditto, second hand. Will pack for you. Cheap. Address, E. Bengston, Freeport, Ill.

GENEVA retinoscope, new, cost \$67.50. \$35.00 cash takes it. J. F. Butler, Potsdam, N. Y.

SOLEY lathe No. 2, Webster-Whitcomb pattern, engraving block, Lancaster pattern, complete; both in good condition, \$25.00. D. H. Blaine, Flint, Mich.

40 SILK plush-lined jewelers' oak trays, 50c each. Newlin, Colorado Springs, Colo.

LOT of watchmaker's tools, including one Moseley's best lathes, No. 2 hard; cash or easy terms to right party. J. Knowles, Van Buren, Arkansas.

CASH for watch-movement boxes, watch cases, watch glasses, Watchmaker, 99 Central St., Springfield, Mass.

ELEMENT lathe attachment, used 3 months. F. G. Calender, Warren, Ohio.

A BARGAIN—An entire fixture equipment for a jewelry store, consisting of two 10-foot plate-glass counter cases; one 8-foot plate-glass counter case; three 10-foot and one 8-foot counter case in single glass; three 10-foot wall cases; one 12-foot-wall case; two French plate glass mirrors; one 50 capacity umbrella case, enclosed; one watch rack, capacity 120 watches; one background fixture 20 feet long, for clocks, and uniform with wall cases. These fixtures are of solid walnut, are in excellent condition, and will be sold cheap. Good reason for selling. Possession can be had about August 1, 1906. Call or address W. J. Gamm, 3 West Main St., Madison, Wis.

COLUMBIA cylinder phonograph, 24 Edison and Columbia records, largest size floral horn and stand, outfit cost \$40, used 4 months, records good as new; best offer takes outfit. J. C. Koempel, Galena, Ill.

A FEW second-hand travelers' trunks and trays. Benj. Allen & Co., Siversmiths' Building, 131-137 Wabash Ave., Chicago.

STEEL-LINED safe, \$450; regulator, \$35; two wall cases, \$65 each; show cases, \$10 each; show case tables, \$5 each; roll-top bench \$12. "Jeweler," 629 Davis St., Evanston, Ill.

FULL set of second-hand watchmakers' tools. Address, A. M. Comerus, Elroy, Wis.

TELESCOPE, with tripod, for astronomical work; extra strong power and in good shape. Address, F. Klein, Colorado Springs, Colo.

GENEVA combined retinoscope and ophthalmoscope, used 2 years, electric and gas lighting attachment. Also Geneva adjustable table, new. Louis Bessmer, Hastings, Mich.

FOR SALE OR EXCHANGE

UNDER THIS HEADING THREE CENTS PER WORD

ENGRAVING machine, like new, for an American lathe; or what have you? Chas. Schultze, 768 Tremont Ave., New York City.

TIGHT silver-mounted show cases, jewelers' lathe, lot tools, polishing lathe, scroll saw, lot gold emblem pins, lockets, rings, cuff links, etc., for sale cheap or will exchange for anything of equal value. S. R. Stibgen, Marietta, Pa.

STOCK of jewelry in town of 1000, in best part of Kansas; will trade for land. "S 773," care Keystone.

ONE Oliver typewriter for diamond. Address, E. A. Copeland, Elgin, Ill.

RARE old English dictionary, printed in London in 1770; will exchange same for trial case or cash. W. A. Blair, Warren, Va.

LEADING jewelry and optical business in fine Wisconsin town; pop. 2500. Best location, large store, steam heat, low rent. Fixtures \$600, stock \$3900; can reduce stock to \$1500. What have you to exchange? "F 769," care Keystone.

FOR SALE OR EXCHANGE

CALIFORNIA property. Cash or exchange for New York real estate or stock, 10 acres orange orchard, 40 acres fruit land, Maywood Colony; 3 houses, also optical business at Corning. Reason for selling, have regained health shall return to my Utica, N. Y., business. Further details of M. E. Kenney, Corning, Cal.

PRESSURE gasoline and Rochester kerosene lamps, safe, polishing lathes, lunettes, tools, movement boxes, trays. Want lens measure, typewriter, card cabinet, electric polishing lathe. Clark Bros., St. Cloud, Minn.

SMALL stock, drugs, patent medicines, etc., for anything in the jewelry line can use. S. W. Cooper, Marquette, Kans.

WATCH sign, roll-top bench, 15 trays; used 2 months, will sell cheap or trade. L. Votroubek, Columbus Junction, Iowa.

A COMPLETE optical course. What have you? "E 752," care Keystone.

CALIGRAPH typewriter; want optical books, retinoscope or ophthalmoscope. New Remington for trial case, ophthalmometer or Geneva combined instrument. I. S. Hansen, 668 Henry Street, Brooklyn, N. Y.

FOR jewelry and optical goods stock, \$5000 worth of musical coin machines all placed in good-paying locations. Profits on proceeds will average 50% clear per year. Snap for some one. M. C. Weyer, Fairbault, Minn.

FOR exchange—half cash, balance in good fruit farm—the only first-class jewelry store in fast growing city in Indian Territory; pop. 4000. Stock and fixtures, \$4000; real estate, \$1500. Bench work, \$150 month; December sales, 1905, \$3900. "P 574," care Keystone.

SPECIAL NOTICES

UNDER THIS HEADING THREE CENTS PER WORD

GET the best balance staffs and jewels. Order direct from the makers; every one warranted. No student's work. Tarbox & Gordon, Omaha, Neb.

BEWARE of second-hand Clement combined lathe attachments offered for sale. They are old models; they sell them to get our latest. See our ad. in this number. W. D. Clement, Waltham, Mass.

MONEY loaned to jewelers. Write for information. The Collateral Loan and Banking Co., 143 Euclid Avenue, Cleveland, Ohio.

THE Clement combined lathe attachment, costs \$40. See page 707. Fine, new, complete catalogue free.

WANTED—Paul Vassiliff (or Wilson); liberal reward for confidential address of the above person, who has probably applied for position as manufacturing jeweler and engraver, about 45 years of age, 5 feet 4 inches in height, strong built, bald in front with warts on bald place, naval tattoo marks on arms. Wm. Weitzel, 222 Main Street, Dallas, Texas.

STOLEN, reward of \$25.00; 12 size hunting, 14 karat raised gold ornaments, with a diamond in the back of the case; No. case 266695, with 15 jewel Waltham movement. Notify J. F. Clark, Abilene, Texas.

BUSINESS NOTICES

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PHILADELPHIA'S finest and most complete workshop. Jewelry, watch case and watch movement repairing, engraving, diamond setting, mounting and special order work. Repair work returned same day received. Finest workmanship at lowest cost. Your old gold, broken jewelry is worth more than bullion value for repair purposes. Get our offer before selling it. Benjamin Gebhard, 735 Sanson Street, Philadelphia.

THE Clement combined lathe attachment, costs \$40. See page 707. Fine, new, complete catalogue free.

YOU are looking for a good reliable firm to do your watch work. Here is the place. W. K. Sandberg, watchmaker to the trade, 802 Columbus Memorial Building, Chicago.

WE make a specialty of changing old antique watch cases to stem-wind. Something that has been refused by others. Have had 40 years' exp. and can guarantee satisfaction. N. J. Felix, 18 John Street, New York.

ADMINISTRATORS, receivers and merchants desiring to dispose of any jewelry stocks, any size, or surpluses, for spot cash, write at once to Boesma League, Syracuse, N. Y.

NOTICE—I have moved from 727 Sanson Street to 807 Sanson Street, Philadelphia, where I will continue to buy all kinds of old gold and silver; also refine all kinds of jewelers' waste containing gold or silver. Send by mail or express and receive prompt attention. J. L. Clark. Established 1870.

WANTED, every one desirous of improving themselves in watch work, jewelry work and engraving, to address Bradley Polytechnic Institute, Peoria, Ill., for one of their latest catalogues. A postal card will get it. See ad. on page 725.

BUSINESS NOTICES

BALANCE staffs fitted, 50c.; cleaning, 35c. up —guaranteed. A. Trabert & Co., 307 Bleecker St., New York.

ELGIN Horological School, the oldest and most practical school for watchmakers. Send for catalogue to Elgin Horological School, Elgin, Ill.

ANTI-TANGLE eyeglass hooks; 68c., \$1 and \$1.50 dozen. Something new. Try them. See page 879.

ENGLISH trade. Experienced business man, established in London with good offices, competent staff and sound connection for American goods among jobbers and general merchants (fancy goods, watches, clocks and kindred lines), is ready to take up direct representation of one or two reliable manufacturers. First-class American and London refs. Address, "Energy," care Chas. H. Fuller's Advertising Agency, 203 Temple Chambers, Temple Ave., London, E. C., England.

EXPERIENCED advertisement writer for jewelers and opticians. Will guarantee every advertisement a trade winner; try me and watch your trade increase. Lock Box 41, Moravia, N. Y.

THE Omaha Watch Repairing, Engraving and Optical Institute devoted to preparing young men to fill first-class positions and to become expert repairers. If you contemplate taking up this work and wish to acquire a thorough and practical knowledge of every detail of the business, our institute is designed with a special view to your needs. A fact that speaks volumes for the thorough training and practical work our students receive is, that of the large number we have sent to situations, not one to our knowledge has been discharged for lack of ability as a workman. We aim to excel and feel certain of our ability to impart to you a thorough and practical knowledge of the work. Write us. Dr. Tarbox and Gordon.

Too Late for Classification

FOR SALE—\$2000, stock and fixtures; Washington state. For particulars, write, "H 796," care Keystone.

FOR SALE—stock of jewelry, or will sell tools and materials separate. About \$1500. Harry Harmon, Alton, Iowa.

FOR SALE—A jewelry business, a success, and established for years; has the utmost confidence of the people. Town of 3000 in North Mississippi, and on two main lines of railroad. Health unsurpassed. Educational town; electric lights, waterworks, sewerage. Stock and fixtures about \$7000; can be reduced. Clean, up-to-date stock. Business expenses low. Last annual sales footing \$10,958.75; work \$1220. Do not think this opportunity can be surpassed with capital invested. Only correspondence with persons of reliability and who mean business will be answered. Ad., "D 797," care Keystone.

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If a customer should bring you any Diamonds or Antique Jewelry to sell, and you do not care to buy them yourself, send them to

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Established 1880

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Impossible for garment to become entangled or caught in coil at base of pintoag as in all other styles. Having once used this hook, your customer will use no other. If your jobber does not handle them I will give you the address of those who do or will send direct. Three grades, 68 cts., \$1.00 and \$1.50 per dozen. Patentee and Sole Manufacturer, L. E. RUSSELL, Deposit, N. Y.

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On or about May 1
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Will Remove to 35 Maiden Lane
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Our Specialty is Scientific Rubies
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H. R. PLAYTNER DIRECTOR

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	Amount of Sale	Profit		Amount of Sale	Profit
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Geo. Winder, Troy, N. Y. (in 7 days)	7,250	90 "	G. J. Williams, Urbana, Ohio	3,200	700 "
W. F. Foye, Hot Springs, Ark.	37,000	70 per cent.	Schmidt Bros., New Castle, Pa.	3,600	475 "
S. H. Whits, Sidney, Cape Bre.	16,000	35 "	R. J. Henson, Natchez, Miss.	16,000	2,300 "
Davis & McCullough, Hamilton, Can. da	19,000	40 "	H. Wondor, Holyoke, Mass.	6,700	1,750 "

THINK IT OVER. If you would like a sale like the above, write or phone me; tell me all about your stock, I will tell you what can be done and send my references. I do business on a commission basis and guarantee a success.

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somebody else

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Chicago

CORRESPONDENCE CONFIDENTIAL

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- DAVIS BROS., Galion, Ohio, two sales
- A. M. LESHNER, Bucyrus, Ohio
- E. O. COLLINS, Franklin, Indiana