see Kunz article
p 154 + 5

EDWARD H. HUFNAGEL
President
1920—1923

A. W. Anderson
Secretary
1913—1923

YEARBOOK

1923

AMERICAN
NATIONAL RETAIL JEWELERS'
ASSOCIATION

COMPILED AT THE OFFICE OF
THE PRESIDENT
MOUNT VERNON, NEW YORK

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FOREWORD

The success with which the Yearbook of the American National Retail Jewelers' Association for 1922 was met clearly justified the hopes of its compilers that it abundantly served the purposes for which it was intended. Those technical articles which are so valuable to the retail jeweler, and which were incorporated in last year's publication, have been perpetuated for all time. Our Yearbook is now to be found in many of the Public Libraries throughout the country, where it has been preserved as an authentic and important reference text which is always available to those who desire information concerning the historical features surrounding the jewelry industry, as well as data pertaining to the growth and expanse of a large trade organization.

Each year it is expected that a new volume will be added to the retail jeweler's library. In the present volume will be found articles which have been gathered from many sources, and which contain a concise résumé of the work of the A. N. R. J. A. during the year 1923.

PATRONS OF 1923 YEARBOOK

The American Silver Company, Manufacturers of Electro Plated Flat Ware, Bristol, Conn.

Associated Silver Co., Yourex Silver Plated Ware, 4450–56 Ravenswood Ave., Chicago.

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David Belais, Inc., White Gold, 137 West 14th St., New York.

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Dominick & Haff, Silversmiths, 144 Orange St., Newark, N. J.

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PATRONS OF 1923 YEARBOOK

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International Silver Co., Meriden, Conn.
Joseph H. Meyer Bros., Laboratories, 220 Twenty-fifth St., Brooklyn, N. Y.
Oneida Community, Ltd., Silver Plated Ware, Oneida, N. Y.
George L. Paine Co., Manufacturers of Jewelry, North Attleboro, Mass.
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Swartchild & Co., Watchmakers' and Jewelers' Supplies, 29 East Madison St., Chicago.
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Scharling & Company, Manufacturers of Hollow Ware, 755-757 Summer Ave., Newark, N. J.
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YEAR 1923—1924

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GEORGE A. BROCK . . . . . Los Angeles, California, 1917-'19
ARTHUR A. EVERTS . . . . . Dallas, Texas, 1919-'21

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RÉSUMÉ OF WORK DONE DURING 1923

THE 1923 NATIONAL CONVENTION

The year 1923 will always be remembered by retail jewelers throughout the country as the "Tax Campaign Year," and as such it was well characterized. Early in the year, the American National Retail Jewelers' Association took over from the Jewelers' War Revenue Tax Committee the details incident to the retail jewelers' claim for relief from taxation. A unique and effective educational campaign was carried on by members of the Association located in nearly every state in the Union among members of both Houses of Congress, preparatory to introducing a bill for remedial legislation in the Sixty-eighth Congress. Full details of this campaign are given elsewhere in this publication.

It was found that it was necessary to raise a sum of money with which to defray the expenses of those connected with the campaign, and to this effect the entire membership of the Association was asked to contribute to a fund which was allocated upon the following basis:

	Subscription
Minimum all under $25,000 volume of business 1922	$ 5.00
Minimum all over $25,000 and under $50,000 business 1922 . . .	10.00
Minimum all over $50,000 and under $75,000 business 1922 . . .	25.00
Minimum all over $75,000 and under $100,000 business 1922 . . .	50.00
Minimum all over $100,000 and under $250,000 business 1922 . . .	100.00
Minimum all over $250,000.	250.00

In the majority of cases this money was contributed without delay, a satisfactory showing having been made by the executive officers of the various state associations, who worked diligently toward raising the required sum.

The selection of Providence as a typical city in which to hold a jewelry convention proved to have been both wise and fortunate. Situated in a representative jewelry-manufacturing center, all the educational features afforded by large and flourishing plants and factories were at the disposal of the hundreds of retail jewelers who attended the convention from every section of the country. The deli-

cate intricacies incident to the manufacturing of finished products were viewed by many who had hitherto known little or nothing in connection with the manufacturing processes of the goods which they sold.

A wonderfully stimulating effect was produced by the jewelers in all branches of the industry who were located in New England. A hearty welcome was extended on behalf of the New England Manufacturing Jewelers and Silversmiths Association, and members of the A.N.R.J.A. took away with them at the end of a busy week memories which they will never forget.

A diversified and enjoyable social program had been arranged for both the delegates and the ladies who accompanied them. Automobiles transported the retail jewelers and their families for great distances beyond Providence, and water transportation on the great bays and on the Atlantic Ocean was afforded on several occasions. The program and addresses delivered are reproduced elsewhere in this report. Those who attended the convention returned to their homes feeling that they had been well repaid for having been present, and a unanimous vote of thanks was offered to their generous hosts.

The Economic Conference

What was probably one of the most important gatherings ever held in the jewelry industry was called to order by President Hufnagel at the Providence Biltmore Hotel at 2.00 P.M. on Monday, August 27. The manufacturers, wholesalers, importers, retailers and editors of many of the trade journals who were present had been invited by Mr. Hufnagel to meet in open conference, to discuss ways and means by which the entire industry could co-operate, each branch with the other, to eliminate many of the present economic problems, and also to stimulate the distribution of jewelry wares for the benefit of all concerned. Mr. Hufnagel opened the session with the following address:

This meeting of men representing all branches of the jewelry industry has been called for the purpose of discussing many of the problems which today affect our entire industry. The manufacturer, wholesaler and retail jeweler labor under grievous burdens which seriously hamper business and retard the enjoyment of a just remuneration to all concerned. Each, in his own sphere and after his own fashion, has

attempted to attack his problems with commendable vigor and active effort, but with perhaps a lack of understanding of the others' problems.

The time has arrived when an individual or a single industry can no longer hope to compete with other individuals or industries without first having a thorough knowledge of the industry in which he is engaged, and, second, a knowledge of other industries in operation throughout the country. The day of close application to merchandising methods came to hand several years ago, but post-war conditions have so changed the business of the entire world that each merchant is practically forced to step out of the sphere of his trade and give his serious consideration to the causes which affect the rise or decline of his business.

It is generally conceded that one of the important causes of present-day unrest is the lack of popular understanding of the economic laws which control every phase of modern commercial and industrial life. The ignorance of fundamental economics is not limited to any special class. What every citizen needs to know, quite irrespective of his own financial condition, is that our modern institutions are so closely interwoven that injury to one may do grave damage to all of them and to the people at large.

However short of perfection these institutions may be, they are infinitely better than a condition of chaos and anarchy. While they can be improved, improvement is possible only as individuals engage in teamwork with their fellows to construct, and not to destroy. It is with the desire of improvement solely in mind that I have been actuated to call this meeting, in the well-founded hope that it will eventuate into one of the momentous discussions that will place the financial and ethical relationship between all branches of our trade upon a higher and more profitable basis.

In former years the jewelry industry was functioning in a somewhat haphazard manner, because the market for jewelry products was very limited. With the general progress of national business in all other lines, it was discovered that the field of activities of the jeweler was gradually widening, until today we find that our scope is almost unlimited. Our industry has advanced in the customs of the times hand in hand with other forms of business, but owing to many of the conditions which have sprung up within the trade, it has not acquired the propor-

tionate share of financial remuneration enjoyed by other industries. A close study of the economic conditions of the jewelry business shows that somewhere there is a decided obstacle in the path of success. This not only relates to the retail jeweler but to the manufacturer and wholesaler as well. Each branch of the trade, in seeking for improvement, has apparently neglected to consider and consult with the associate branches, and today there exists an almost internecine strife, which must be eradicated if each branch is to survive. We are gathered here, as in every convention, to try to find a solution for our difficulties.

The Problem of Distribution

One of the greatest problems confronting us at the present time is that of distribution. Upon investigation it has been found that the number of wholesalers has increased materially during the past ten years. Wholesalers, or jobbers, as they are sometimes called, perform a very real service in the process of distribution. Were this not the case there would be fewer wholesalers than formerly. The cost of distribution is a large factor in this respect. Manufacturers who formerly distributed directly found the cost of distribution so heavy for the limited line which they made that they could save from 12 to 15 per cent. by selling through the wholesaler. The wholesaler, on the other hand, who has undertaken the marketing of merchandise, has not been able to deliver to the retailer at a lower cost because the saving to the manufacturer has not been saved to the retailer but has been added to the wholesaler's cost before it reached the retailer.

One of the chief difficulties lies in the fact that there are too many men on the road carrying the same lines in the same territory. Retailers complain that they have from fifteen to twenty calls from traveling salesmen in a day. This creates an economic loss, as it takes too much important time from the retailer's other business. At the present time it costs a great deal of money to put men on the road and maintain them. If for any reason traveling salesmen do not produce business, prices of articles increase and the consumer is forced to pay a higher price for his purchases. It has been maintained by some people that syndicates formed for buying and distributing can sell goods much cheaper to the consumer because of a quantity business. If this were wholly the case, it would only be a short time before there would be no retailers' establishments. Chain stores would obtain all the business.

Strange as it may seem, statistics show that 80 per cent. of the retail jewelry business of the country is accomplished through the individual retail jewelers' stores, and only 20 per cent. through the larger independent stores. In this respect jewelers are very fortunate that their wares are of the more expensive type and that the public relies largely upon the reputation of the firm rather than on merchandising methods for the attraction of trade. Here is where I see that the jewelers have a great advantage, as they can make their personalities felt in this direction to a greater degree than can the retailer in almost any other line of business.

The two most essential elements necessary to the successful operation of any industry are material and energy. If we can look upon the matter from the jewelers' standpoint, we can place the material for the business in the hands of the wholesaler and the energy for the distribution necessary for the disposal of production in the hands of the retailer. Some of you may think that the retailer is not sufficiently active to be entrusted with this phase of the case. If this is so, why not jump in and help him to be a better merchant, a better advertiser, a better student of economics? By the concentration of united efforts upon his retailing to the consumer, we could do much to reach the desired goal of selling more goods at a better profit.

The Cure for Slow Turnover

To all of you who have studied the reports of the Harvard Bureau of Business Research, it has been evident that the jewelers as a class have for years never made a satisfactory profit, due to slow turnover. Nor will they ever be able to make a satisfactory profit unless the rate of turnover is increased. The way in which to meet this obstacle is through the exercise of intelligent co-operation and good publicity. From all present indications the jewelers who are going to make headway during the next year are those who can effect economies in their overhead expenses and in their cost of doing business, who have a thorough knowledge of their business and a good standing in their own communities. We all recognize that the leaders in any form of business are those men who are able to stand alone. Were the distribution of jewelry to be left solely to these men there would be very little jewelry distributed.

Statistics show that over 70 per cent. of the jewelry sold in this country is distributed through the small retail establishment. The class of merchants who handle these stores have in the past had neither the time nor the training to enable them to grasp the details of administration, accounting and advertising, and merchandising, but they are fast coming to the point where they have a very real desire to meet the economic situations, and conduct their businesses upon a better plane. These men must be helped by their association. Many manufacturers and wholesalers have attempted to inaugurate national advertising campaigns, sales plans and methods of their own for distribution, but have failed in their efforts, as they have considered that the retail jewelers were not good enough business men to carry out their ideas. It seems to me that the fault lies in the method, not the men.

A retailer is usually not very receptive to plans which are offered to him because he knows that they cannot be successfully operated in his community. He is the man who stands behind the counter and who knows, from actual experience, what is required. Too often manufacturers and wholesalers employ efficiency experts, psychologists, sales experts, and others, to study a business they know nothing of. Many of these individuals make investigations, and base their conclusions upon erroneous reports, or else cover a myriad of half-baked facts with a blanket of impractical theories.

The duplication of investigations and surveys by manufacturers and wholesalers is tremendous, and while some benefit may be derived, there is little benefit to the retailer, who does not share in the formulation of policies for the betterment of the trade as a whole. Apparently the retailer is considered as a mechanical outlet for the distribution of finished products, whereas in reality he is a potent factor in the creation of a larger volume of production, through his ability to stimulate the demands of his community and to supply these demands. It would appear to me to be a much better plan if the manufacturers and wholesalers would work through our trade organization, which has regularly appointed committees the business of which is to study the conditions surrounding the retail trade and to disseminate information and lend assistance to the retail jeweler.

Too little consideration has been given to the viewpoint of the retailer, and, in fact, too little has been known about his method of dis-

tribution. We recommend that national advertisers of jewelry lines, instead of going to advertising experts, submit their plans to a committee appointed by the executive officers of our association, which is qualified to pass upon subjects with which they are thoroughly conversant. Instead of rubbing the fur the wrong way, why not consult those who are in the position to know? There is no doubt but that a great economy would be effected in this way.

The Collection of Statistics

There is a great deal that can be done through the collection of data and statistics pertaining to the entire trade, through questionnaires and by making investigations where necessary, and for that purpose our association has employed the services of the Harvard Bureau of Business Research, and has the invaluable assistance of the Babson Institute.

In addition, many facts are sought for the purpose of removing local and national trade problems. All this data is open to the manufacturers and wholesalers if they will take advantage of it, and there are many prevailing conditions which, when analyzed, throw additional light upon the problem of distribution as it affects all branches of the industry. We believe that more accurate and helpful information can be obtained by working through our Association than by placing a corps of expensive investigators who know little of actual conditions, throughout the country.

When you consider that the number of florists has doubled, the furriers tripled, and electric shops tripled in the past ten years, is it not reasonable to think that the number of retail jewelers should increase in proportion to the population rather than decrease, as they have done? There are statistics available which show how much money is in the possession of every family in the United States. It is estimated that the total annual expenditures of the country is thirty-five billion dollars. Of this amount, the grocers and food dealers secure twenty billions, dealers in women's apparel five billions, in men's apparel four billions, furriers eight hundred millions, and jewelers five hundred millions.

We are almost at the bottom of the heap when it comes to the volume of sales. There are various kinds of communities, such as residential sections, which have high financial potentialities for purchasing jewelry

items; industrial cities, where watches and diamonds are sold in great quantities. If everyone in all branches of the trade will study these aspects, and, through the retailers be guided in their efforts upon local communities, then greater sales can be obtained. Various localities call for various kinds of service. If this were not so, the cash-and-carry system would be universally adopted. Many people demand a charge-and-delivery system, and are willing to pay the additional cost.

Trade relationships, as they affect the consumer, the retailer, the wholesaler, and the manufacturer, must be studied by our entire trade. Demands for greater service have increased faster than mark-up. The result of this has been a net loss to the retailer. A certain amount of publicity should be set forth to teach the public what we hope to accomplish in our dealings with them. As I see it, we need to make a more scientific study of the various aspects of our problems, and so inform the consuming public that they will understand that differences in price depend upon differences in quality and service.

Dr. Steinmetz, when questioned about the relation between economics and business, recently said he thought that economic forces occupied the first place, and that religious forces followed, a close second. In our recent gatherings, we have stressed these two factors, particularly that of spiritualizing business. This was done when we adopted our Code of Ethics. We believe it is good citizenship, good Americanism, and good business, to have such a high standard as our Code of Ethics represents, because, while economics regulate business conditions, the thoughts and actions of men directly influence economics, and control them.

There is much to be done along this line, particularly through the standardization of the right methods of doing business. Until we introduce more of the spiritual element in our business, and until the application of the Golden Rule is more universally adopted, we will be unable to achieve fair play. At the same time, economics can be studied, and the necessary consideration should be given them. Adverse economics can eventually be eliminated if the right kind of thinking is involved.

Mankind is linked together more closely in this age than in any other. The radio, telephone, telegram and cable are helping to bring about a much closer relationship between men in all walks of life, because they are able to speak, or communicate over long distances with one another

quickly. These forces create comprehension and remove misunderstanding.

In conclusion, let me state that the retail jewelry store is the most logical outlet for the distribution of jewelry wares. If the retailers, wholesalers, and manufacturers will lend every assistance to one another, and will work for definite, clear, and practical methods of selecting the outlets for their wares, I am sure that the greatest good will result. Work done by the industry for the industry will form a sounder foundation for the enjoyment of a closer relationship and much more satisfactory profits than it has ever known.

Following Mr. Hufnagel's address, the meeting was thrown open to discussion, and the remarks made by many prominent men in the various branches of the industry clearly showed a willingness to join their forces with those of others who were striving for the betterment of business conditions and the execution of ethical principles. The full effects of this meeting will unquestionably be realized to the fullest extent during the months and years which are to come.

August 28th

President Hufnagel dropped the gavel promptly at 10.30 A.M. on Tuesday, August 28. Rev. Dr. J. Lee Mitchell, pastor of the First Congregational Church, Attleboro, Massachusetts, pronounced the invocation.

Addresses of welcome were made by Mayor Joseph H. Gainer of Providence, Mr. Ellis Gifford, President of the Rhode Island–Massachusetts, Jewelers' Association, and Mr. Woodward Booth, Manager of the New England Manufacturing Jewelers and Silversmiths Association. In these addresses the several speakers extended to the retail jewelers and their guests a cordial invitation to utilize all of the facilities which had been placed at their disposal and to feel that while they were in Providence the entire city and its environs were theirs.

Owing to the illness of Mr. Arthur A. Everts, the response to these addresses was made by Mr. Joseph Mazer, Second Vice-President of the A.N.R.J.A. Mr. Mazer captivated his audience by his brilliant oratory in a masterly speech, in which he stated that this convention would be looked upon years afterward as the most important gathering that the Association had ever held, and that it would serve to form a

bond of better understanding among the retailers, wholesalers and manufacturers which could never be broken.

Mr. Arthur Mansur, First Vice-President of the A.N.R.J.A. read the abstracted Code of Ethics which was adopted by the Association in 1922, and commended it to the entire membership. The business program followed, the addresses delivered being reproduced elsewhere in these pages.

PRESIDENT HUFNAGEL'S ANNUAL ADDRESS

WORK OF THE PRESIDENT'S OFFICE REVIEWED—NEED OF ORGANIZED EFFORT—RECOMMENDATION FOR ADDING TWO MORE VICE-PRESIDENTS

As most of you know, your president has made two extensive trips during his incumbency in office, one to the Pacific coast and through the Northwest, the other through sixteen Southern states. In addition to these, many visits were made to the nearby states of New England, New Jersey, Delaware, and the District of Columbia. In all, over fifty thousand miles of distance were covered and, in addition to this, many other officers and national committeemen augmented the president's visits, so that a greater amount of personal visitation was done during this term than ever before. These delightful trips were rich in experiences for those whose pleasure it was to meet the jewelers and their families in their home environments. Confidences were exchanged and experiences related, and one could obtain much first-hand and reliable information concerning economics and local conditions affecting each locality. It was evident everywhere that jewelers were looking to all others in the trade with inquiring minds.

There is much to be said upon a subject which resolves itself into one of the major themes of our convention, namely, that of distribution. There are conditions existing today which are not only unfortunate but deplorable as well, and until the entire trade can unite to substitute better ways and better relationships there will be no prosperity for the retail jeweler. The loss in money and prestige sustained not only by the legitimate jewelers, but by the public, is enormous. When platinum jewelry becomes so debauched that there is only a little more than a trace of platinum in an article sold for platinum, or when manufacturers allow seconds, or rejections, of their nationally advertised merchandise to be sold under a branded name as regular goods, they thus deceive the public and encourage the unscrupulous vendors of merchandise to take the bread out of our mouths.

Need of Organized Effort

One thing is certain and that is the realization on the part of almost all of the jewelers that our industry is being sapped of its life blood by unfair taxation and by unscrupulous practices. There is a remedy for this situation in organized effort. All petty differences must be dropped and a rigid adherence to the policies which are adopted either in convention, or by the executive committee, must be maintained. Furthermore, we must not think that all the fault lies beyond our own doors. There is much that we can do to place ourselves in a position of respect before those from whom we purchase. Many manufacturers and wholesalers are high-principled men who have done their part in a noble way, and have received in return very little encouragement, because the retailer who asks for protection does not patronize his best friend, but buys in the cheapest market, and usually helps the dealer who is undermining his business.

In method the average jeweler needs some modernizing, such as has taken place in other industries. We have been too slow in adopting successful merchandising plans, too preoccupied with details to make visits and to study approved methods in other lines of activity. Some of us have stuck to the fallacy that money is to be made by being the exclusive jeweler of the town. Many so-called establishments are today dying of dry-rot, while others are more progressive, and are making strides that would astonish our old, conservative members. Would it not be refreshing if you could see your business grow to ten times its present volume? This is actually being accomplished by numerous establishments which adopted modern merchandising methods. Too few of us are taking advantage of the help that is being offered us by the Harvard Bureau of Business Research, the National Jewelers' Publicity Association, the Mutual Fire Insurance Company, the Horological Institute of America, and other agencies. The aims and objects of these bodies will be explained by one of the directors of each organization.

Considerable work has been done throughout the year by the national chairman of the special excise tax elimination committee, Ralph Roessler. Our general secretary, A. W. Anderson, has worked incessantly in our behalf. Our field secretary, Mr. Mellor, has added many new names to our membership rolls. The work of the president's office has grown a hundred-fold. Important interviews are almost daily occur-

rences, requests for speakers and representatives at meetings are constant. Contributions in the way of news items, and technical articles for the trade press and *Bulletin*, research work into the fields of accounting, merchandising, and studies in economics require very careful and painstaking effort on the part of your executive officers, all of whom are giving their services to the cause without compensation. These officers have ideals in mind that they wish to see crystallized into permanent realities. If the members of our organization will signify their approval, and will earnestly co-operate, the time will come shortly when the public will recognize a member of this great body as a thoroughly responsible and trustworthy merchant, in whom they may have absolute confidence.

Restrictions on Membership

We should so restrict the membership of this association that none but "honest-to-goodness," sincere and ethical jewelers could hold a membership in the organization. We should so advertise the principles upon which membership is built that the public would immediately recognize a member of this great body as one whose every word is to be depended upon and whose service would also be the last word in superiority. We should have the public know that the phrase: "Member A. N. R. J. A." associated with the name of a jeweler would stand for the highest ideals and the best value that it is possible to give. We should make our association of such value to its members that it would not only be a privilege to belong to it, but that a jeweler might find his business sufficiently profitable and enjoyable to engage his entire time and attention.

In the August edition of *Success*, under the heading "Fabulous Profits from Co-operation," you will find an article showing what has been accomplished by the orange growers of southern California. I wish every one of you would read it, so that you may learn what wonderful accomplishments have come to them. If we have the same vision and wisely plan to build up our business, which has the possibilities of being developed under the proper leadership, there is no telling how far-reaching the effects may be.

Select Regional Directors

May I suggest that we add to our staff of officers two more vice-presidents, making four in all, each one to be selected from a section of

the country, and become a regional director. The boundaries suggested are:

Northeastern Division—All states lying east of Illinois and north of Tennessee and Virginia.

Southeastern Division—All states lying south of Missouri, Kentucky, West Virginia and Maryland, and east of Oklahoma and Texas.

Central Division—Tier of states running from north to south, bounded on the east by Lake Michigan, Indiana, Kentucky, Arkansas and Louisiana, and on the west by Montana, Wyoming, Colorado and New Mexico.

Western Division—All states bounded on the east by North and South Dakota, Nebraska, Kansas, Oklahoma and Texas.

If the right man is selected and elected from each one of these divisions, and he is willing to make the necessary personal sacrifice by giving his time and energy for the period of his incumbency, and if he will co-operate with the president to the best of his ability, there is every reason to believe that our organization could function more successfully than at present.

It is the duty of this convention to elect such men as they can trust with the responsibility of formulating policies for the organization to the membership of the executive committee and these in turn should directly have full charge of carrying out the plans which a majority of their members act favorably upon.

I would recommend that serious consideration be given to the matter of education in regard to business management, purchasing and merchandising methods, general publicity, and co-operate effort. I should like to see the accomplishment of our work in the elimination of excise taxes on jewelry and kindred lines, a national stamping law enacted, a standard of weights and qualities adopted, and the fake auction menace eliminated. If unity and good will toward one another are coupled with a high degree of integrity, we may look forward to years of prosperity and better trade conditions than have obtained in the past.

CONVENTION REPORTS

REPORT OF A. W. ANDERSON, SECRETARY

From my knowledge of the attendance at past conventions of this association, and of the average per capita cost of coming to these gatherings, I figure that our members will spend $30,000 in coming to Providence for this great gathering of jewelers, and as our convention session will total about 30 hours during the week it means that this convention is costing our members here present $1,000 per hour, or $16.66 per minute—altogether too valuable time to be wasted, and I shall make this report as brief as possible.

We are now in the second year of operation under the new schedule of dues. It was recognized that to increase the per capita from $2 to $5 in one step would entail a considerable loss in membership, and this was shown last year, but the states are coming back. When the report of the Credentials Committee is read you will find that the paid membership to the National Association for 1923 is 12 per cent. greater than the membership reported at the Cincinnati convention.

Naturally, this gain is not evenly distributed. Some states have reported fewer members to the national this year than last. California and Illinois both have one class of members who pay a small amount of dues and who are not reported to the national, and this accounts for the falling off of members in these states. Actually their state memberships are considerably higher than our figures make them appear, but, unfortunately, we can report as members only such as are paid for to this organization. This distinction in classes of memberships was put in operation in these states since the per capita to the national was increased.

Then again, the total of members in good standing in all states as shown by their state records is considerably larger than the totals as shown on the national records. This is accounted for by the fact that all states allow members a full year in which to pay dues. For instance, a member who paid his dues in 1922 is called in good standing in the states until the end of 1923, although he may not yet have paid for

1923. But the national association wipes its slate clean every January 1st and, starting all over again, gives credit only for such members as are reported in and paid for, plus the new members for whom the states pay no per capita the first year.

The membership in the national association as reported by the credential committee will be very close to 3,600, but the total of state memberships as shown by their books is in excess of 4,000.

How the Gains Were Made

A great deal of the credit for gains in the various states must be given to our energetic Field Secretary, who put in a strenuous five months in one trip this year, from January 15th to June 15th, and also worked all through the hot weather and right up to the convention dates.

Virginia, North Carolina, Georgia, Florida, Alabama, Mississippi, Louisiana, Arkansas, Tennessee, Kentucky, Pennsylvania, Massachusetts, Rhode Island, Maine, New Hampshire and Vermont have had the benefit of his services this year, while in the fall of 1922, after the Cincinnati convention, he worked in New York, Connecticut, Massachusetts and Rhode Island.

The details of his work I will leave to him to explain, and will only say that every state in which he worked in the past twelve months reported an increase in members to the National over their figures for 1922.

Some states that did not have the services of the Field Secretary in the past twelve months also showed they could increase their membership. Missouri increased from 57 to 131, Michigan increased from 100 to 151, while several other states had small gains.

Trip of the National President

On February 1st of this year President Hufnagel started on his speaking tour of the South, and duplicated his success of 1922, when he visited the central and far western states.

Beginning at Philadelphia, he visited and spoke to jewelers in the following cities: Philadelphia, Washington, Richmond, Va.; Norfolk, Va.; Raleigh and Durham, N. C.; Columbia and Charleston, S. C.; Savannah, Ga.; Jacksonville and other Florida cities, Atlanta, Ga.; Birmingham and Mobile, Ala.; Biloxi, Miss.; New Orleans; Galveston

and Dallas, Tex.; Little Rock, Ark.; Memphis and Nashville, Tenn.; Louisville, Ky.; Charleston, W. Va.; Pittsburgh and Altoona, Pa., ending his campaign in the latter city March 15.

Not only did he bring the message of co-operation to the jewelers in these states, but he enthused them individually, as is proven by his securing as members some of the largest firms in the cities named, and he organized them for effective work on the war tax elimination question and other vital issues before us at the present time.

Presidents Have Been Real Leaders

The American National Retail Jewelers' Association has always been fortunate in its selection of men to occupy the high office of president. It's a brilliant list—Jennings, Hurlbut, Archibald, Roberts, Combs, Evans, Brock, Everts, Hufnagel—each and every one putting his heart and soul into this work, men of many different types and personalities, but all heavy contributors in the way of unselfish service and sacrifice to the success of the jewelers' cause.

This ends my tenth year as secretary of this organization. I have had the honor to know all of these men, some of them intimately; have worked with or under all but the first three of these presidents of your association, and realize perhaps better than does anyone else what they have done for the retail jewelry business. My hope is that the future holds for this organization a promise of service in the executive chair such as it has had in the past.

Your vice-presidents, your treasurers and the other members of your executive committee in these ten years in which it has been my honor to serve in this office have borne their share of the burdens, have upheld the hands of their executives in many trying days, but the list is too long to cite them here. Not all of them, good workers and earnest that they were, rose to be presidents; that could not be humanly possible, but they did their work as I can well testify. And they are doing it today.

State Officers Deserve Thanks

More than 250 different men have occupied the high office of state president in some one of the 41 organized states during the past ten years. The same is true of vice-presidents, secretaries, treasurers and all the long list of each association. That the national organization is a

strong and well-grounded institution today is very largely due to these men and women, some of them for a brief time, and some for many years, who have carried on their arduous work with no thought but that of bettering the condition of their fellow jewelers.

The Yearbook for 1922

The most ambitious effort our association has ever attempted was the Yearbook for 1922, which was off the press and distributed in March of this year. It was sent to all members who paid their dues for 1922, so I take it that every member here received a copy.

President Hufnagel was fortunate indeed in his compilation of this work, which is deserving of being the nucleus of a jeweler's library. No such work was ever issued before by this or a similar organization of jewelers, and it is my hope that periodically a like Yearbook may be issued, but it is doubtful that this can be done oftener than once in two years, as I believe that it would be difficult for even President Hufnagel to gather such a wealth of material oftener than that, and, again, the cost of the book is so heavy that the matter of expense must be carefully considered. We are indebted to our good friends, the patrons of this Yearbook, whose names appear in the forepart of this volume, for their subscriptions, which greatly lightened our expense of publication.

National Visitors at State Convention

More than in any other year have been the number of visits by national officers and representatives to the various affiliated states in the past twelve months. All but four or five have been visited at least once, usually at the State Convention, but, because of President Hufnagel's tour and the field work of Walter H. Mellor, visits at other times have also been frequent in many states.

It is to be regretted that a very few states did not get the benefit of a national officer or representative at either the State Convention or any other time, but circumstances made this impossible in these states, and efforts were made by your officers to assist such states in other ways.

A notable trip was that of Vice-President Mazer, who represented the National at conventions and meetings last spring in the states of

South Dakota, Montana, Idaho and Oregon, resulting in a new affiliation with the National; Montana organizing and coming into this organization with a nucleus of 21 members.

Excise Tax Elimination

The first and foremost topic at state conventions and other gatherings of jewelers this year has been the fight for the removal of the 5 per cent. war tax on jewelry and kindred lines. The visits by National officers and representatives to the various states have resulted in mustering the moral and financial support of members everywhere and they are showing themselves willing and anxious to give all the aid possible to our able and energetic chairman, Ralph Roessler of Indiana.

From some high source came to your National Secretary the appointment as Revenue Collector for the Special Excise Tax Committee. This work is now proceeding satisfactorily, and I express thanks to officers and National representatives and other speakers at various state conventions who have done so much to assist in the raising of this absolutely necessary fund, which will be given further notice in my financial reports.

Silver Situation Getting Better

The efforts of your officers to better the conditions relative to the sale of sterling silver wares, which efforts extend back over a period of many years and have been vigorously pushed by President Hufnagel during his tenure of office, are bearing fruit. The Towle Mfg. Co., The Gorham Company, R. Wallace & Sons Mfg. Co. and Reed & Barton all have, within recent months, announced as their future policy the billing of silverware to dealers at a figure allowing a discount of 40 per cent. I am authorized to state that other manufacturers of silver have signified their intention of doing likewise.

This announcement takes but a few words, but years of constant effort and work were necessary to bring about this happy result.

Relations with Manufacturers and Wholesalers

It is a privilege to assure you that manufacturers, wholesalers and retailers in the jewelry business are getting closer together. The vari-

ous conferences called by your President in the past two years have done much to bring about a better understanding and a closer sympathy.

I am particularly impressed with the cordiality of the officers of the manufacturers' and wholesalers' organizations toward the retailers, as expressed in private conversation and at conventions by their representatives in recent months. Let us fervently hope that the conferences at the present convention may lead to still better understandings between these three branches of the jewelry trade, each one of which is dependent on the others for business and profit.

Our New England Hosts

The enthusiasm with which all organizations in New England, whether manufacturing, wholesale or retail, entered into the great task of arranging for this convention, is remarkable. This convention was bound to be a success as soon as the officers and committees of these organizations set to work. Every detail has been carefully planned and taken care of, every desire of our National Association officers has been met, and much has been done and planned that your officers would never think of asking for as a requirement for bringing this National gathering to any city or locality.

The dealings of your officers have been principally with the officers of the New England Manufacturing Jewelers and Silversmiths Association and the Massachusetts-Rhode Island Retail Jewelers Association, and it is with all the emphasis that I can muster that I will say we appreciate and thank them for their splendid work, which has culminated in this great and magnificent convention of jewelers.

The Jewelry Trade Journals

We have always been proud of our trade press for very good reasons. We are prouder than ever of them now, because of the splendid publicity they have given to us in the past few months in relation to this convention. Who could possibly resist the appeal to come to Providence after reading these gripping descriptions of New England's past and present, both historical and industrial? The feature articles printed in the trade press today are of the very highest order and of great benefit to those jewelers who will not only read but study them,

and your Secretary has, in the past few months, been calling the attention of our members, through the columns of the *Bulletin*, to these invaluable articles, both technical and otherwise, which every jeweler should absorb for both mental and monetary profit.

The A. N. R. J. A. Bulletin

This little sheet, which now comes to our members once a month, has been criticized in some quarters because it does not expand. Let me emphasize what has been often said before, the National officers are not trying to start a trade paper. The *Bulletin* is issued to our members because it is the most convenient and least expensive method by which we can bring to our members the latest activities of their organization. I believe it is filling its mission. In the past year many important announcements and articles by President Hufnagel have been presented through its pages. Other officers and committeemen have presented interesting messages and, in addition to this, we have carried the advertising of our members in our Wants, For Sale and Exchange Columns, to the benefit of many of them, as testified by numerous letters.

Plans are being made to make the *Bulletin* still more interesting and useful to our members.

The National Jewelers' Mutual Fire Insurance Company

The National Jewelers' Mutual Fire Insurance Company is no longer unknown to all but a few of our members. Organized ten years ago, it now has more than 2,000 policies in force among members of the American National Retail Jewelers' Association in forty-three states, giving them protection totaling over $7,000,000 against fire; has assets of nearly $100,000, of which $60,000 is surplus, and is returning them dividends of 40 per cent. of the amount of the premiums paid. $30,000 is the amount that is being returned to our members in dividends this year. Next year it will be about $40,000. Inside of five years the savings to our members will be close to $100,000 per year.

It is one of the activities of our organization of which jewelers may well be proud. Don't forget the fact that it is a strong direct supporter of the A. N. R. J. A., because it pays in cash to your national organization each year 5 per cent. of the first premiums received on new busi-

ness, and this contribution, since the 1922 national convention, has amounted to over $1,000.

Its office staff works for the national association every day in some way or another, and your financial burdens have been lighter in the past few years because of the fact that the National Secretary had this privilege of using the staff and the office facilities of the Jewelers' Mutual in the work of the A. N. R. J. A.

The National Jewelers' Mutual Fire Insurance Company pays about $400 per year to send your Secretary to visit various state conventions, and, as he also represents the national organization as well as the fire company at these conventions, the national association is relieved of just that much more of a burden. Every time a member takes a policy in this, the jewelers' own company, he not only saves money for himself, but he strengthens his jewelers' associations as well.

Take Pride in the Code of Ethics

Our members may well feel a proper pride in this work done at the last convention, the adoption of the Code of Ethics. We have had several inquiries from other organizations within the past year. These organizations had heard of the new code and wanted it for perusal with a view to introducing a similar one into their trades.

We have had letters from members saying that they thought this was one of the best forward steps ever taken by our organization, as undoubtedly it was.

Auction Laws Needed

Just one trouble of the jewelers I want to call your attention to that certainly seems almost unbearable, and that is the auction nuisance. Perhaps it runs a good second to the war-tax nuisance. It seems improbable that we will get relief from fake auctions until we can have framed a state law that can be passed in all states, wherever possible. Today there is no such thing as uniformity in laws governing auctions, and the present ones receive various interpretations, but none of them seem to protect the jeweler as they should. An air-tight law that will withstand all assaults made on it and will work when the legitimate trade endeavors to enforce it, will be a great boon. I am glad to be able

to state that President Hufnagel is interested in the framing of such an act.

Group Meetings of Jewelers

Wisconsin this fall will hold a series of group meetings, small conventions, in various parts of the state, where the tax fight and other things of vital interest will be discussed. I understand New York State will do the same thing. It would be a good thing if all states would warm up this way in the coming fall. Get the boys out, get them interested in the tax fight, both morally and financially; give Ralph Roessler's Tax Elimination Committee all the support it deserves in every way. Over fifty thousand pieces of mail will go out from the National Secretary's office relative to the tax fight in the six last months of this year. Every jeweler will be given a chance to line up with us for the removal of this burden. Let every member resolve to do his best in this very serious matter and we may be able to celebrate a victory when we meet in 1924. This is my earnest hope.

Sincerely yours,

A. W. Anderson, *Secretary*.

REPORT OF C. J. BROTHERLY, TREASURER

Annual Report of Upholding Fund

September 1, 1922, balance		$ 5,790.38
Receipts		
Subscriptions	$1,085.50	
Membership Dues through Field Secretary	7,074.75	
Commissions on Subscriptions to The Jewelers' Circular	2.00	
Interest on Investments and Bank Deposits	276.32	
		$ 8,438.57
		$14,228.95
Disbursements		
Paid State Associations Their Portion of Dues of Members Taken by Field Secretary	$3,424.25	
Expense of Maintaining Field Secretary	6,502.77	
Bad Checks Charged Out	20.00	
Investments	4,000.00	
		$13,947.02
Cash Balance		$ 281.93
Investments		4,000.00
Total Balance, Upholding Fund		$ 4,281.93

Annual Report of Tax-elimination Fund

Receipts		
Subscriptions Collected	$8,101.32	
Interest on Bank Deposits	4.11	
		$ 8,105.43
Disbursements		
Ralph Roessler, Expenses	$ 950.01	
Neenah Printing Co.	28.85	
Traveling Expenses	253.05	
Overpayment Refunded	69.00	
Postage	200.00	
To General Fund on Account of Advances for Tax-elimination Work	3,369.09	
		$ 4,870.00
Balance in Bank		$ 3,235.43

Annual Report of General Fund

September 1, 1922, Balance in Bank		$ 6,552.74
Receipts		
Delinquent Dues	$ 442.50	
Dues for 1922	4,554.00	
Dues for 1923	11,657.00	
Convention Exhibits	5,735.69	
Yearbook	2,575.00	
From States toward Expense of National Visitors	43.00	
Tax Fund Advances Returned	3,369.09	
Interest on Investments and Bank Deposit	417.22	
Miscellaneous Receipts	217.78	
From National Jewelers' Mutual Fire Insurance Co.:		
Commissions for 1922	475.96	
Commissions for 1923	600.00	
Investments Cashed	4,000.00	
		$34,087.24
		$40,639.98

Disbursements

Salaries of Officers	$2,100.00	
Office Help and Expense	5,768.36	
Yearbook and Exhibit Expense	4,099.23	
Postage, Telephone, Telegraph and Freight	1,725.42	
Stationery and Printing, Including Bulletin	2,504.43	
Traveling Expenses	2,612.44	
1922 Convention Expense	1,242.74	
Miscellaneous	1,977.88	
Investments	4,000.00	
Overpaid Dues Returned	455.00	
Advanced to Tax-elimination Fund	3,446.59	
		$29,932.09
Bank Balance	$10,707.89	
Investments	5,000.00	
Total Balance, General Fund	$15,707.89	

REPORT OF LEGISLATIVE COMMITTEE

MR. WILSON A. STREETER, *Chairman*

Your Legislative Committee, at the convention last year held in Cincinnati, presented a brief, tentative outline of the various standards we felt should be considered in the framing of an adequate stamping law. This report was adopted and approved in the resolutions which were presented later in the convention, and it is our belief that practically all of these suggestions have proven to be the best that have been presented up to this time. This year we desire to make certain statements in order to clarify the same, and, if possible, to simplify and hasten this most important work.

During the past year there have been numerous meetings of various committees and interested groups of the trade, but so far as we have been able to learn, no substantial progress has been made in the actual drafting of a stamping law. This, we feel, is due in no small measure to the attitude of many in our trade who have considered the question from a standpoint of how it would affect them personally rather than in the broader sense of what is right and how high a standard can be adopted and maintained, which, after all, is what we retailers want; namely, an honest stamping law that will protect the manufacturer, the wholesaler, the retailer, and, most important of all, the consumer.

We have been told by certain groups that this is not a retailer's problem. This, of course, is not true, as even the most superficial examination has proved; for, after all, it is the retailer who must first defend himself against fraud in the goods he purchases, and second against fraud in the goods sold by all kinds of merchants who handle similar wares in competition with him.

Perhaps the most outstanding example of the present unsatisfactory business conditions caused by the lack of a proper stamping law is best illustrated by the platinum question. The manufacturers are divided into groups, publishing and circulating quantities of material to substantiate their various claims regarding this precious metal. Without going into the merits of any of these claims, we believe this question can readily be settled once and for all by framing a statute

establishing a definite standard for, first, iridio-platinum and, second, a standard for the metals of the platinum group.

As the matter now stands, certain manufacturers sell only wares made from so-called hard platinum, supposedly platinum hardened by iridium. May we ask, however, how many manufacturers require the refiner from whom they buy their hard platinum to give them a statement of the exact iridium content in their metal? Every refiner knows full well that platinum hardened with, let us say, 10 per cent. of platinum metals frequently contains less than 3 per cent. iridium, the balance being made up of ruthenium and rhodium. True, this produces a metal that is readily worked and is very satisfactory, but the honest manufacturer who actually buys and pays for platinum hardened with iridium only should be amply protected, because of necessity his wares must be more expensive.

It is equally true that platinum, combined with, say, 5 per cent. iridium and 15 or 20 per cent. palladium, has also proven a most satisfactory metal, though it is much lower in specific gravity and at the present time less expensive.* Therefore, we suggest these two definite standards as mentioned above. This will enable the retailer to know exactly what he is buying.

Before presenting any concrete suggestions of the various standards, as it is our purpose to do, we desire to call attention to certain other phases of the whole subject.

We believe, in the framing of this law, the economic question should be considered and provided for in the law. By this we mean definite provisions regarding the disposal of present stocks, for, while the manufacturer could readily change quickly in accordance with the requirements, it would require time for him to dispose of the wares he had on hand; likewise the wholesaler and the retailer. It might be necessary that the latter would require as long a period as five years. We do not feel it would be wise in the interests of the entire industry to pass a law without making adequate provisions to prevent the forcing of large quantities of goods already manufactured into the open market.

Another question that has been discussed very frequently is that of allowances between the stamped standards and the actual fine-metal

*Platinum jewelry, however, not to be permitted containing less than 750/1000 pure platinum.

content of gold and silver. As retailers, we are opposed to the allowance of any tolerance whatever in the fine-gold or silver content of these metals used in the making of articles which do not of necessity require the use of solder in their manufacture. On the other hand, however, we believe there should be established in this law a maximum leeway merely sufficient to cover the necessary solder contained in such articles as require soldering.

We believe it is just as important that articles made of platinum, gold, silver, any colorable imitation or plating thereof, if stamped as required in the new stamping law, should contain the registered trademark of the maker, wholesaler, jobber, importer or dealer who is the guarantor of the quality mark so stamped.

We believe it is also important that all stamps should be simple in character and that any qualifying stamps should be of an equally large and distinct type as that representing the precious metal in the article; *i.e.*, where the term "gold filled" is used, both words should be equal in size. These points should be covered in the law.

After careful consideration, your Committee presents the following tentative suggestions of standards we felt should be attained by any new law that is adopted:

Platinum

Iridio-platinum.—To be composed of at least 950/1000 parts of pure platinum and iridium. The article to be stamped indicating the exact platinum content. Thus, an article composed as above, 10 per cent. of which is iridium, would be stamped "Iridio-Platinum" or "Irid.-Plat. 850."

Platinum.—To be composed, as above, of at least 950/1000 parts of the metals of the platinum group (iridium, platinum, palladium, ruthenium, rhodium and osmium), to be stamped indicating the platinum contents. Thus, an article composed as indicated of the required 950/1000, 20 per cent. of which is made up of other metals in the platinum group, would be stamped "Platinum" or "Plat. .750."

Where platinum is used as a plating (rolled or electro) on white gold, or any colorable imitation of platinum, it shall not bear the stamp "Platinum" or of any word resembling same.

Gold.—Articles stamped with the regular karat stamp must be made from the full, fine-gold content so indicated without tolerance. Thus,

articles stamped 10, 14, 18 or 22 karat, would assay the full standard except in cases where solder has been used in the manufacture. In these cases a small maximum leeway to be fixed in the law.

The use of karat stamp to be prohibited on articles made of a lower standard than 10 karat, except as they may be provided for in the regulations regarding gold-filled and rolled gold.

Gold-filled.—Articles made of rolled gold on all sides may be stamped "Gold-filled" and should indicate the thickness of the gold contained in the finished piece. Note: If the karat stamp is used (and we do not favor its use), the fraction should precede the karat stamp and be of the same size letters as said karat stamp, *viz.:* "1/20 10 Karat Gold-filled."

Rolled Gold Plate

Articles made of rolled gold on the upper side only, the remainder being electro-plated, may be stamped "Rolled Gold," and should be stamped in exactly the same manner indicating the thickness of the gold contained in the finished piece, *viz.:* "1/10 Rolled Gold Plate."

Gold-Plated

Articles that are plated with gold by electro-deposit, fire gilt, or other process, shall be stamped "Electro-plated Gold, Fire Gilt," or by a stamp indicating the process used.

White Gold

Articles made of white gold, white gold-filled or electro-plated with white gold, if such process is in existence, or shall come into existence, shall be stamped under exactly the same regulations governing the regular gold, gold-filled, rolled gold plate or ordinary gold plate, provided above with the addition of the words "White Gold."

Watchcases

Provisions shall be made that watchcases shall be stamped under exactly the same conditions and regulations as all other precious metals provided for in the stamping law.

The custom of using time guarantees to be prohibited by law, as has already been provided by the Federal Trade Commission.

Silver

Articles to be stamped sterling shall be made of 925/1000 parts of pure silver without tolerance, except in the case where solder is necessary for the making of such articles, in which case there shall be fixed in the law a small maximum leeway to provide for this solder.

If any other metal or material is used in combination with silver, it may not be stamped "Sterling," except where such metal is merely a mounting or container, such as the handle of a knife, or the base of a vase, in which case, if it is 925/1000 parts of pure silver, it may be stamped "Sterling Mounted."

Silver articles of the required sterling standard that are weighted or filled shall be clearly stamped with the weight in Troy ounces of the sterling silver used and, in addition, with the words equal in size and legibility to the sterling stamp, "Cement Filled" or "Lead Weighted," etc.

The stamp solid silver to be prohibited on under-standard articles, *i.e.*, articles containing less than the required 925/1000 parts of pure silver, may be stamped with their actual pure silver content in decimal, provided the pure silver content shall be at least 750/1000 parts. Hence, articles made of the present coin silver standard would be marked ".900 Silver."

Silver Plate

Articles made of a base metal electro-plated with silver shall be stamped "Electro-plated Silver," with a definite standard indicating the amount of silver so deposited. We suggest for the consideration of the manufacturers the adoption of a uniform standard to be based upon the amount of fine silver deposited per square inch, or, better still, per square centimeter.

The use of all time guarantees, coined words similar to sterling, or silver, misleading names of base metals, such as "silverrode," "German silver" and "Nickel silver," as well as such terms as "Triple," "A-1," "Quadruple," etc., to be prohibited by law.

The term "Sheffield Plate" to be used only on articles made in Sheffield, England, as provided by the regulations of the Federal Trade Commission.

The regulations and standards adopted in the stamping law to be equally applicable to all goods made of platinum, gold, silver, colorable

imitations or platings thereof that are, or shall be, imported into the United States.

Imitation Gems

Your Committee presented the suggestion at the last convention that on all advertising, sales tickets, etc., provision should be made to require that imitation gems should be clearly marked with the word "imitation." It is gratifying to know that during the past year a portion of this question has come up for definite consideration before the Federal Trade Commission, and that they, after having consulted with the Trade Mark Pearl Association and various groups of the jewelry craft, have the matter under consideration at this time. Your Association went on record by submitting to the Federal Trade Commission the resolutions adopted last year, and we sincerely trust that this convention will approve the measure requiring that all imitations of precious and semi-precious gems shall be clearly marked in the jeweler's stock and advertised exactly what they are—"imitation."

Louis Otto
C. M. Fuller
J. H. Stouthamer
Wm. G. McDougall
Arthur De Montigny
Mr. Mellinger
Wilson A. Streeter

REPORT OF SPECIAL EXCISE TAX ELIMINATION COMMITTEE

MR. RALPH ROESSLER, *Chairman*

It is with great appreciation of the honor bestowed upon me that I appear before this national convention to present an exposition of one of the greatest injustices that has ever been perpetrated upon a living industry and allowed to continue in a land of equality and a land of freedom, and to tell as briefly as possible the steps that have been taken by our Association to bring about the relief that is so earnestly desired by every member of this most important craft.

In the life of the National Association there have been many services rendered the jeweler, some direct and tangible and easily recognizable, others of a more indirect nature, but in the work being done by this Special Committee of the National Association a service is being rendered that attracts the interest of every member of our profession, whether an association member or not, and, if successful, will demonstrate, as never before, the value of organization and co-operative efforts for the benefit of the industry as a whole.

In taking up the 5 per cent. war excise tax, let us briefly review this system of taxation, its primary reason for existence and the given reasons for its continuance. A few short years back, in times of war and chaos, there was an immediate demand for a tremendous sum of money—a sum so large as to be almost beyond comprehension, and it was apparently more important how much could be raised in a given time than the manner in which it was to be raised. It was believed that the jewelry business was a luxury business and as such was non-essential to the existence of the Government in times of emergency. On this basis a tax was applied, first at the suggested rate of 10 per cent., but, through strenuous efforts of the War Revenue Tax Committee and its active chairman, M. D. Rothschild, this was reduced to 5 per cent., and the jeweler accepted this as his patriotic sacrifice in a time of need and his contribution to the winning of the war. Naturally, he believed that with the passing of the emergency the removal

of the tax would come about and he would again be placed on a plane with all other legitimate business with equal rights with all others.

The foundation of this tax is the term "luxury," and wholly upon this basis is it applied. The common thought in the minds of our legislators was, "The person who can afford to buy diamonds and pearls can afford to pay a luxury tax," and, with the thought that the tax was actually paid by the rich (always thinking in terms of $50,000-diamond tiaras and $100,000-pearl necklaces), they were satisfied that the tax was justly and equitably applied. Now let us analyze the stock of the average jeweler in the small and medium-sized town or city who actually forms the backbone of the jewelry profession; for, mark you, the tremendously wealthy establishments can almost be counted upon the fingers, while thousands do less than $50,000 for the entire year's business. As to $50,000-pearl necklaces, how many will you find in the stocks of Mr. Average Jeweler? I dare say the great majority have never made a sale of this size in their entire business careers!

But what do we find? Actually from 60 to 70 per cent. necessities! Shall we term the watch a luxury when the variation of a few seconds may cause the death of many? When our transportation systems would be completely paralyzed without correct time? When our business and daily life is measured in minutes and at times in seconds? Shall we term the clock a luxury as we go about our daily duties? Is not the clock a necessary part of the office or factory equipment, and in the home as much a part of the furniture as the chair we sit upon? Will the working man admit that the alarm clock is a luxury and a nonessential when his very means of living depends upon arriving at his work, day or night, always punctual and on time? Who dares say the watch was a luxury and a nonessential in times of war, when the very lives of our soldiers depended upon the correct marking of time to the second? Can you imagine our "boys" going over the top, advancing a given number of feet in a given number of seconds, properly following the barrage, without timepieces properly synchronized from one end of the line to the other? Who made the delicate time fuses for the big shells, timed to explode in a given length of time after being fired? Who contributed many delicate instruments to our air service, so necessary in an emergency such as we have gone through? Directing your attention to a specific instance: the engineer must have a watch of a certain grade capable of keeping time within certain prescribed limits, and

must undergo time inspection at regular intervals, but is penalized for purchasing a luxury which is absolutely made necessary by the Government itself before the man can go to work. How can our legislators honestly and sincerely choose the industry furnishing these most essential things for special taxation wholly on the basis that the articles sold are luxuries and nonessential to the continued welfare of this country?

And the silverware with which we eat, taxable under the classification of luxuries, and as a consequence nonessential. Shall we go back to the days of our grizzly ancestors, when the fingers were the only implements available? If one of our lawmakers were seated at the table and found the knife, fork and spoon missing, would he be content without? And yet these pieces are luxuries and taxable as such! But, look, in the center of the table we find a beautiful bouquet of cut flowers, certainly delightful to look at, wholly unnecessary, but because of improper classification, automatically essentials in so far as taxation is concerned. Is it just to tax silverware and exempt the cut flowers?

In our Christian civilized life, how many wives and mothers would give up the wedding band, that precious little circlet with its sacred, sentimental attachments? Would they be content to discard these as luxuries? I doubt it! The engagement ring, with which the happy promise is given, is it a luxury or is it absolutely sacred to the owner?

The many utility items, so common to us all, the links of our shirt, the button for our collar, the pin for our tie, the pins for baby's dress, the buckle for our belt, the bar pin for the lady's waist, and many such items, certainly not wholly essential, but nevertheless accepted as a part of our daily life and dress. At least these are no more of a luxury nature than many items sold in other lines of business that are wholly untaxed.

Now, let us view this from an entirely different angle. Let us assume that the jeweler sells partially or wholly luxuries, and as such subject to a special form of taxation. Let us assume that the Government has a right to enter his store and analyze his merchandising on that basis. Why, may I ask, should the jeweler alone suffer the merciless scrutiny of the officers? Why should one business be analyzed without analyzing all business when the merchandise sold is relatively in the same class? How about the furniture store with its items of nonessentials, its elaborate draperies, its fancy curly-legged furniture made to look at and not to use? How about the drug store with its items, perhaps use-

ful to some of our ladies, but surely not absolutely essential to their natural beauty? How about the department store with its silks and satins, its laces and fancy what-nots for our ladies? All essentials? No! Then why not taxed equally with the jeweler's merchandise? And so on and on throughout every business, we find all selling some item more or less of a luxury nature and just as applicable for special taxation as the diamond or pearl. Even in the corner grocery store you will find many items of food strictly of a luxury nature but not taxed as such. I can never be made to believe that it is fair to tax one business on its sales and not tax another of a like nature equally. It is unfair, it is unjust, it is discriminatory, it is class legislation and wholly un-American.

We find this argument in support of this tax, conscientiously believed in, but absolutely erroneous in the great majority of cases—"The tax is passed on to the consumer and does not affect the jeweler." Let us analyze this. At the beginning of the present system, it was deemed wise that the tax should be included in the selling price of the merchandise, rather than added as a separate item. This, at the height of prosperity, with the advancing costs of merchandise and abnormal sales, was to a certain extent passed on to the consumer, but in the period of deflation, with the waning costs of merchandise and the consequent losses, it naturally was absorbed and became a part of the jeweler's overhead. Again bear in mind I refer to the average jeweler who must meet competition from all sources, and must ever meet the price of the competitor who, to undersell, openly pays the tax himself. More especially is this applicable to the small merchant in the small city, who, again, makes up the thousands in the trade. I am unable to figure just how the tax can be passed on to the consumer until the business shows a net profit sufficient for the investment with the tax additional for the Government. If the profits disappear in the tax, it then becomes confiscatory in nature, and actually raises the question of legality in its application.

Many of the small and medium-sized jewelers with their inadequate means of bookkeeping, accounting systems and methods of figuring costs, really feel that the tax is being passed on to the consumer, but cannot figure out why they have worked hard all year for practically nothing. Economically the system is unsound, dangerous to the many merchants who have this tax to pay in times of lax business and deflated values of merchandise, and eventually must be changed.

Not only does this apply to the small merchant, for I have communications received from some of the largest and best stores in the country in support of these statements. In illustration of this fact, I have a communication from one of the finest stores in one of the most prosperous communities in the country, a store with the highest type of merchandise and the most efficient management with this statement: "Had it not been for the 5 per cent. excise tax, our corporation could have paid a 6 per cent. dividend, which we have not been able to do in two years." I may also refer to one of the largest stores in Chicago whose manager informed me that if the same amount of money as was invested in this business was invested in the lowest interest-bearing securities obtainable, the returns would be greater than the profits from this institution at the present time.

In analyzing the conditions of the business throughout 1920 and 1921, the Harvard Bureau of Research shows an average loss of 6.6 per cent. exclusive of the excise tax, or a total loss of 11.6 per cent. This is appalling, and some relief must be afforded the jeweler for his very existence. In support of these statistics we have the following figures from a reliable source:

Year	*Failures*	*Liabilities*
1919	94	$688,093.00
1920	139	3,931,451.00
1921	488	13,834,137.00
1922	570	11,935,327.00

For practically the first half of the present year there have been 382 failures, showing a condition absolutely disastrous to the welfare of the industry as a whole. Surely it is economically unwise to legislate out of business hundreds and even thousands of what would be normally tax-paying businesses.

The only justification for this tax I have been able to find is the fact that our Government needs the money. True, the only justification the hold-up man has when he meets you in the alley with a piece of lead pipe is the fact that he needs the money, but that fact does not justify the method by which he obtains it. If the repeal of this tax causes a hardship upon our Government, it is up to the Congress to see that revenue is raised to offset this loss but *equitably applied!*

Going back to last November, I had the pleasure of attending a dinner in New York, at which a number of representatives and senators were present. Among them was the Honorable Ogden Mills, a very prominent member of the Ways and Means Committee. Mr. Mills said in part: "No one is going to defend the original schedule of objects selected for the excise taxes, or the rate at which they were taxed." There was no logic in it. It was perfectly fantastic, and any man can ridicule it. I do not see any greater logic in the objects selected to be removed. There was no logic in it. There is no strict logic in saying that a high-priced fur should be relieved from an excise tax, and that a clock should not. There is no logic in it, but the fact that certain articles could be relieved because certain money could be dispensed with because of economy. Fifty per cent. of the taxes could be done away with and they remain on silverware, and from other well-known luxuries without apparent reason for so doing.

This brings us to the proposition where we find that the tax was removed from musical instruments and allowed to remain on watches, from sporting goods, fishing tackle and the like and allowed to remain on silverware, from chewing gum and soft drinks and allowed to remain on clocks, from fine furs and allowed to remain on our utility items, and from other well-known luxuries without apparent reason for so doing.

To thoroughly drive home the absolute injustice of this tax, we find a serious condition existing, a condition which, when brought to the attention of our legislators, immediately causes them to admit the necessity for prompt action toward relief for the jeweler. To illustrate, I will ask you to mentally travel through the various stores in your communities. You will find that every hardware store sells silverware and clocks; every furniture store, clocks and silverware; every department store, jewelry of some kind; drug stores, alarm clocks, pens and pencils; gents' furnishing stores, links, scarf pins, belt buckles and men's jewelry; gift shops, novelty jewelry; shoe stores, ornamented buckles, and so on and on through every store, you will find some articles sold in competition with the jeweler. Now, may I ask, how many of the various businesses are paying tax? The amount of evasion, whether wilful or otherwise, is astounding! Is it fair and just to penalize the jeweler for making an honest return to the Government, allowing the other merchant to sell the same merchandise at a less cost to the competitor? There is no question but that this form of taxation is a breeder of dishonesty and eva-

sion, a form of taxation practically impossible to enforce and wholly obnoxious to the honest merchant who desires to live up fully to his obligations.

Enough for this, I can go on for hours with arguments against this form of taxation. Now, what are we doing to relieve our industry of this unjust burden?

Previous to last fall, no organized effort had been made by our National Association toward obtaining the repeal, although much work had been done by the War Revenue Tax Committee through M. D. Rothschild and Harry Larter and numerous individuals in the past two or three years. Important work was done some time ago by the North Carolina Association, Mr. Shipley of the Kansas Association and by members of the California Association.

Although no organized national effort had been made, following the convention of the Indiana Association held at West Baden, June, 1922, it was decided to inaugurate a special campaign in the state of Indiana as a test campaign in an endeavor to obtain the opinion of every candidate for Congress relative to the repeal of this tax. In the belief that the logical time to approach a representative to obtain favorable attention was just preceding a national campaign, at a time when the candidates were most responsive to their constituency, questionnaires were sent to each and answers eventually were received from all. There were four questions in the questionnaire.

Number 3 asking point-blank: "If you are elected to Congress will you vote for the repeal of this tax?" Out of 27 candidates, but two were actually opposed to the repeal and of the two, one was defeated at election. This plan was outlined, all correspondence reproduced in a 68-page book, and was presented to the National Association at the convention in Cincinnati last August. This was accepted as the national plan to follow, and became known as the "Indiana Plan." At a meeting of the National Executive Committee this special committee was formed, with instructions to carry out the work nationally as was done in Indiana.

Immediately after the convention, work was started on this "big job." It first became necessary to locate some one in each state who would enthusiastically carry out the plan and to whom I could look for the conduct of the campaign in the state. Within two weeks practically every state in the National Association was organized with an active

working head. Bundles of literature, copies of the Indiana Plan, sample letters, reports and the like were sent out, and your chairman was in constant contact with every one working at all times. In most cases response was wholehearted and most enthusiastic, and some wonderful results were obtained. In some few cases the response was not so good and results proportionate. Thousands of letters and circulars were sent out and the mass of mail received was tremendous.

As election drew near, uniform information sheets were sent to all state chairmen requesting that full reports be sent to the office of the chairmen the eve of the election. This was carried out, in most cases, but it is true that some are not in yet. Passing over some of the wonderful work done by certain wide-awake, live chairmen, where organization was carried out to the last degree, we had some remarkable returns and the figures were most impressive.

In considering the results up to election we found:

Answers received from all candidates	571
Favorable	483
Evasive	44
Opposed	44

Of the opposed many were defeated at the election.

From the reports that came into the office of the chairman, and the voluminous amount of correspondence, an information book was compiled, copies to Mr. Rothschild and Mr. Hufnagel, containing a complete report on each state, totals, political complexion, excerpts from the original letters from the members of the 67th and 68th Congresses, showing in a few words the attitude of every one upon whom we have a report.

Following the election, it was some time before all reports were in; in fact some final reports did not come in until the first of the year, and nothing could be done in a definite way to focus the efforts of the campaign. Also, due to the coming Christmas session, it was an imposition to ask the various state chairmen to neglect their business to do anything further with this work. However, the work continued steadily from the office of your chairman, and an inside campaign was conducted in Indiana and in other states, in the hope of enlisting some inside support. In several instances this was accomplished and we have some very active representatives anxious to do all in their power to assist in the repeal when it comes to their attention.

Now, this brings us up to the present time, with plans for future work to consider. In working out a campaign such as was gone through with last fall much valuable information was obtained as to how to get best results from certain efforts put forth. We found that to bring this fight to a successful conclusion it would be necessary to confine this work wholly to the ranks of the retailers themselves. This because our representatives are more receptive to the wishes and opinions of their friends and constituents back home who are in the jewelry business and affected by the tax.

It is absolutely essential that a bill be brought to the attention of Congress in the next session, and before this is done we must know where every representative stands in reference to such a bill. We must know just how much support we will receive and how much opposition we will encounter. We must have a majority in both Houses favorably pledged so impressive that it cannot be brushed aside when brought to their attention.

As previously stated, the most effective way to bring the injustice of this tax to the attention of a representative is through a friend or constituent back home. In every state in the Union, the representatives and senators who had not previously responded were assigned to prominent jewelers from their home cities, and this we dubbed our "Personal Assignment Campaign." Hundreds of letters went out to these jewelers carrying these thoughts:

"You, as a jeweler, have a personal and individual responsibility to yourself and to your industry as a whole, you owe to your great profession sufficient interest in its welfare to take this matter up with your representative. Take him into your store, talk to him in an earnest and friendly manner, show him that you are not dealing in the expensive luxury items as he believed, but that you deliver a service constantly that is absolutely a necessity in your community. Show him that the bulk of your stock is utility items and ask him why the mere matter of operating under the name of jeweler should entitle you to a special taxation. Show him how other merchants are competing with you and evading the tax. Prove to him that with your high overhead you are not making any more profit than any other legitimate business, if as much, and are entitled to equal consideration. Show him that the jewelry business is an ancient and honorable business, and has contributed many things for the making of better homes and better living, and is as

old as civilization itself. Tell him of the many things that have come from the inventive fingers of the watchmaker, and how he has contributed largely to the growth of civilization. If he is a particular friend of labor, show him that the watchmaker jeweler works just as hard as any other laboring man and in most cases puts in many more hours of actual labor, and is entitled to the same consideration as any other member of any other trade or profession. Lastly, as a member of your community, a taxpayer supporting your city, your state, your Federal Government, your schools, your highways, through every form of taxation that can be heaped upon you, you are entitled, as a member of his district, to equal representation in the halls of legislation with every other constituent regardless of the line of business which he represents. The basis of your plea should be fundamental Americanism, based wholly upon your constitutional rights and if your representative has the welfare of his district as well as his country as a whole at heart he cannot help but admit that your plea is just and that he will endeavor to see that fair play is obtained when this matter comes to his attention in the form of a bill."

And so we coach our jewelers, but mark you, friends, here is where we have our hardest work, for time after time we write to jewelers throughout the country with these earnest pleas that they awaken to their personal responsibilities, without the slightest response. When will the jeweler awaken to the fact that he is not only a watchmaker but in reality a merchant, a purveyor of merchandise as well as service, and must face his responsibilities as such? Until he realizes this he must assume such burdens as have been heaped upon him in the past, but if he will assert himself as others have done, what a timely effect this will have upon future legislation. We have cases where five or six letters with possibly several telegrams as well have been sent to many jewelers without the slightest courtesy of a reply, all a waste of time and energy on the part of those willing to work and a detriment to the fight as a whole.

A complete record of every assignment is kept in the Continued Assignment book, and as each letter is written an entry is made, and when the information desired finally comes from one source or another, the final entry is made and the sheet is then transferred to the Completed Assignment book. These books represent an amount of work almost beyond belief, a task monumental in proportions.

Coupled with this personal-assignment work is work that is continu-

ally going on from this office direct to representatives of both Houses, with more or less favorable results. Every line of communication is followed, every method of approach taken advantage of, every legitimate means possible used to carry on this educational part of our program which after all will be the basis of our case when presented in our bill.

At the present time, August 15, 1923, we have the following results to report from the campaign of last fall, the work during December, the personal-assignment campaign and the personal work from this office:

Of 435 members of the 68th Congress:

Lower House

Favorable	327
Evasive	23
No reply	73
Unfavorable	5
Democrats favorable	157
Republicans favorable	168
Socialists favorable	1
Farm Labor favorable	1

Senate

Favorable	42
Evasive	6
No reply	44
Unfavorable	1

Now this brings us up to the present time, and we find we have been working along parallel lines, all leading to nothing unless we focus these efforts to a point, the objective being the actual presentation of a bill. From information obtainable at the present time there is slight possibility of a special session and in all probability the bill will go into the December session. When the time comes, this committee, representing, as it does, the retail interests, will surround itself with the most representative jewelers in the country, who will be amply able to properly represent this great industry before Congress.

We have retained adequate legal counsel to be available at any time we wish him, to assist in the framing of a bill and with technical or legal advice where needed. In retaining this man, we have no desire to lobby a bill, as the only lobbying we expect to do is the educational part of our program which has been going on and will continue until our repeal

comes. We do, however, want to fully protect ourselves from a legal standpoint so that our work will be properly and correctly handled, that attention will be given it by those whom we desire to reach.

There is a tendency throughout the country, forced by popular opinion, to change the existing tax laws of today. On March 19, of this year, press dispatches carried the news that Under Secretary of the Treasury Gilbert has called a special committee together to investigate certain inequalities in the 1921 Revenue Act. Surely the excise tax is one of these inequalities. This committee now has a brief covering the points we stress, and it is hoped that personal representation will be requested in the near future.

We find a changing of opinion in general relative to taxation, and a shifting of the opinion that by applying the taxes in a certain way the bulk of revenue will be obtained from the coffers of the rich. This is evidenced by the publicity given Mr. Mellon's recommendation to the new Congress that the income and surtaxes be revised, lowering the schedule to increase the revenue. The same fallacy has applied to our industry, for instead of compelling the rich to pay the excise tax, it has seriously handicapped small business, turning that which might have been a moderately successful business into a dismal failure in many cases.

Another hopeful phase is the present financial condition of our Government. Referring again to the meeting with Honorable Ogden Mills, the only reason for the continuation of this tax was the fact that the Government was facing a deficit, at that time estimated at some eight hundred million, and the money had to come from some source regardless of the principle involved. At a meeting of the business heads of the Government a short time ago we found that instead of ending the past fiscal year with a tremendous deficit, it actually ended with a cash surplus of three hundred millions, a difference of over a billion over the original estimate. Furthermore, Representative Madden, of Illinois, of the Appropriations Committee, estimates that the coming Congress will operate at a saving of an additional half billion, and out of these thousands of millions, the excise tax is but a ripple on the surface.

Mr. Mellon himself admits that if the same favorable conditions continue throughout the year, he will recommend a revision of taxation dealing with the income tax or with special forms of taxation now in force.

Throughout the United States work is going on to bring to the attention of prominent and active men, leaders of groups or blocs, chairmen of committees, the fact that this will come to a focus in the next session, and in most cases the response is most encouraging. As an example, a short time ago I had the pleasure of an interview with Senator James E. Watson of Indiana, a most prominent member of the Senate Finance Committee, and received from him an open and public pledge that he would use his personal influence for the repeal of this tax in the December session.

This covers some of the high spots of the work this committee has been engaged in, but before closing the address I wish to call the attention of the jewelers here assembled to the fact that there is not a jeweler in the United States that has any conception of the amount of work that has been done and is being done by your Association for the elimination of this tax. The deepest appreciation is due every one who has taken part in this work and is now taking part. This includes the War Revenue Tax Committee, the officers of the National Association, the state chairmen who have worked so diligently, and every individual who has done his share. As chairman of this special committee I want to here and now express my heartfelt appreciation for the wonderful support that has been accorded me throughout the United States and for the many, many friends I have made. It has meant a tremendous sacrifice on my part, in the giving up of home, family, pleasure and business, but in the belief in the righteousness of our cause, and in the success of our endeavor is this gladly being done. Let me urge upon every jeweler in this great country to show appreciation for this service being rendered by the National Association by joining your state and national associations, thereby adding your moral influence, to the end that the National Association will become one of the representative and powerful associations in this country, with equal power and prestige before our makers of the laws under which we live and operate our businesses.

As chairman of the Special Excise Tax Elimination Committee and President of the Indiana Association I bring this message of good cheer and this word of appreciation. It is the sincerity of this work that renews hope in the hearts of the jewelers, and the very sincerity and earnestness of it that impresses our legislators with the fact that sooner or later heed must be given and these wrongs righted.

REPORT OF TRADES INTERESTS COMMITTEE

MR. ELLIS GIFFORD, *Chairman*

This committee has held no meetings during the year owing to the expense and great distances in traveling involved. But your chairman has endeavored by correspondence to secure the ideas of the other members on items affecting the trade.

Your chairman has been active again in following up complaints of manufacturers and jobbers sending wholesale prices in open mail advertising net wholesale prices in the trade press. We emphasize to them the improvement in conditions where the A. N. R. Jewelers' Association prices are quoted which are, like the trade-press prices, lists subject to 50 per cent. discount. This evil is gradually getting less as our educational campaign takes effect.

One of our most prominent activities this year has been in following up complaints of misleading advertising. We have secured opinions from the Federal Trade Commission on two matters and are working in close co-operation with them.

In connection with the misleading advertising campaign which was undertaken with the co-operation of the Sterling Silverware Manufacturers' Association, and President Hufnagel, we asked the Seymore Manufacturing Company to eliminate the word "Silvore" from their advertising as misleading. They co-operated with us in every way, and after a masterful publicity campaign changed the name of their metal to "Seymorite."

Another phase of the misleading advertising campaign has been the effort to standardize terms in the silverware field, particularly relating to silver-plated ware.

The Associated Silver Co. was using the terms, "Best Silverware in the World" and "Solid Silver Where It Wears." When called to their attention the fact that both these terms were misleading, they immediately substituted others, showing a great spirit of co-operation.

The Holmes & Edwards Co. are now using the term "Solid Silver Where It Wears." We have had some correspondence with them on

this subject. They feel that the term is not misleading. We have asked the Federal Trade Commission for a ruling. Your chairman thinks that for the good of the trade all such terms should be standardized so that people could not possibly be misled by using the term "Solid Silver" in connection with plated ware, especially as this term refers to silver which is not solid way through, but just inlaid. We believe "Solid" implies the whole of, or clear through, from front to back or side to side. The commission replies that the term "Solid Silver" has not been standardized so that they can give us no ruling. We would like to hear the opinions of those present in discussion of this subject. We believe that a piece of solid metal loses its right to be called solid when applied in any way to outside of other metal. If it does not lose its right to the use of the name solid, we believe use of the word solid should be avoided.

Many other terms in our trade should be standardized, and we look forward to the day when doubt will be eliminated from a customer's mind by the clean-cut terminology employed by jewelers.

Besides standardization of terms we expect some day to see a standardization of trade practices, such as the adoption of standard weights for sterling flatware as suggested by President Hufnagel.

No part of our trade needs more thorough standardization than the platinum situation, which we have watched and tried to give opportunity for clearance at the several state conventions.

All of you who attended the Buffalo convention, two years ago, remember the inspiring and instructive address by Mr. Hausmann, of New Orleans, of this committee, on the subject of collections and credits. We would again call this matter to your attention. Too many jewelers are prone to neglect collections to their own detriment. Remember customers pay first the bills of the houses with clearly defined credit terms which are enforced with clean-cut precision. Do not forget that a customer is all too likely not to trade with you if she owes you a bill.

Our trade undoubtedly could profit more from the reports of the Harvard Bureau, which are now of untold value, were these reports available earlier. Now we have to go blindly ahead eight months before we know how well we conducted our stores last year. We cannot lay the blame for this delay on the Harvard Bureau, as they cannot get the report out until we send in our individual reports to them. Our reports should be in their hands early in January so that we could get their

analysis figures much earlier than at present, so as to base our present figuring on last year's experience and not that of almost two years ago.

A few paragraphs above I noted a suggestion of President Hufnagel to this committee and right here I wish to impress you with the deep appreciation we have for the untiring efforts President Hufnagel is exerting to help this, our jewelry business. Just to show some small part of the thought he is putting into his work, I must read you two letters received from him within two weeks. The second of these letters gives you a field for thought in the future conditions of your business. Will it be cash, credit, installment or a combination of all three? The first letter relates an everyday incident in the work of your president to help your business. He wrote:

"A few days ago it came to my attention that the United Cigar Stores Co. has placed in stock a number of inferior watches for sale at the price of $6.99. Undoubtedly these watches have been placed in all of their branch stores. In advertising these articles a 10-year time guarantee was placed upon the cases, which purport to be made of gold, green gold and white gold.

"I took the matter up with the Federal Trade Commission, inasmuch as I understood that the Commission has ruled against the use of time guarantees upon watches and watchcases. In reply to my letter I received information which is quoted in part as follows:

"'A trade-practice submittal of the principal manufacturers engaged in making gold-filled watchcases was held at Washington on January 18, 1923, and they resolved to discontinue the stamping or engraving of time guarantees on gold-filled watchcases. These manufacturers have arranged to put this new rule into effect on January 1, 1924, it being necessary for them to have some time to dispose of the stock on hand, change their methods of manufacture, etc. It is thought, from consideration of these facts, that it would be better to hold the matter to which you call attention in abeyance until after the date mentioned. It is understood that the manufacturers who took part in the trade-practice submittal will themselves call the commission's attention to instances of violation of their resolutions.'

"In making up your report of the Trades Interest Committee, I think it would be a very good idea to incorporate this statement from the

Federal Trade Commission as one of the activities undertaken by the Association in the interests of the retail jewelers."

In the second letter President Hufnagel said:

"For some little time there has been considerable agitation of the time-payment plan for selling jewelry by members of the retail branch of the trade. Much discussion pro and con of the subject has been indulged in, and from the information I have been able to gather it would appear as though there are many elements in favor of the adoption of such a plan. I have hesitated to recommend this plan to the retailers as a whole because I was not sure just which form of the plan would be the best to suggest.

"I have correspondence from various firms, some of them large and well-known companies, who have adopted the selling of jewelry on the installment plan, and it appears to have worked out most satisfactorily. I would like to have you, as chairman of the Trades Interest Committee, give some thought to this question, and, if you think well of it, make a report at the convention as to your opinions and recommendations."

It is a question in my mind as to whether or not the straight installment plan of deliveries of the goods at once, upon the payment of the first installment, is better than a deferred-delivery plan of setting aside the article, at the time of the first installment, and keeping it in stock, but not on view, until the final installment has been paid. I believe both systems have their advantages. A choice would depend upon the knowledge of his customers on the part of the jeweler.

The matters of the selection of the kinds of merchandise to be sold on the installment plan has been discussed by jewelers who have already taken up this form of sales plan. At first glance it would seem that a jeweler doing business on the time-payment plan would need to make a greater profit than his competitors, who sell for cash, but this is not so. The increased volume of his sales, due to his extended credit, more than makes up for the slight added expense of carrying accounts. Therefore, the argument that the time-payment plans necessarily mean that a jeweler must feature inferior lines because of the profit they afford is unsound. Furthermore, an inferior line, though the first cost is less, proves itself a greater expense as in the long run it costs more, and is unsatisfactory to all concerned.

This question of handling inferior lines also affects the situation from the standpoint that inferior lines are always slow-moving and difficult to get off the shelves unless some unusual locality demands cheap prices for cheap articles. These cases are rare. It requires more salesmanship and means much unsatisfactory "come back" if a consumer is sold inferior goods, whether on the time-payment plan or not.

The world has become educated to the nationally advertised goods, to such a point that the majority of people instinctively demand the goods which have been advertised, and which they have tested and found to be satisfactory. In many instances the public will pay no attention to the rise or decline of prices of nationally advertised goods, and will demand them irrespective of the cost. There is a great deal of thought in this situation for the retail jeweler who has shunned nationally advertised goods, particularly if he can supply his customers with them in a manner which will enable them to pay for them in proportion to the sizes of their purses, and the regularity with which their purses are filled.

We have only to witness the wonderful and truly remarkable revolution of the automobile industry, the talking-machine business, and many other concerns which have long ago seen that in order to create volume there must be constant and active turnover. Until the jeweler realizes the same thing he will never make satisfactory profits. Therefore, it occurs to me that one of the ways in which turnover can be effected is through the time-payment plans.

A little illustration of the customers who can be obtained in this manner may not be amiss. Let us assume that Mrs. Smith is a woman whose income is small, but sufficient to allow her to obtain a few of the niceties of life. Her income may be derived from insurance, dividends from small holdings or other resources which are regular in payment, but which do not permit her to make any large outlay of cash at any one particular time. She finds that she wants to buy a watch, or a string of pearls (imitation), a ring, or some other present for the graduation of her daughter or son. She hardly knows one make of watch or brand of imitation pearls from another, but for many years she has understood, dimly, that some certain brands of both have been "standard" for a long time. Undoubtedly she wants to make this gift as an unusual one, and after shopping around in the cash stores she finds that the $10 or $15 makes a poor showing. She undoubtedly reads the ad-

vertisements of the time-payment store, and has heard from her friends about the charge-account plan at one of the local jeweler's stores. She enters this store and compares the prices, first of all, and is convinced that they are no higher than the prices in the store which sells only on a cash basis. She also finds that her $10 or $15 will be acceptable as a first payment on a $50 or $60 purchase, and this enables her to consider a much more beautiful watch or string of imitation pearls, one which she really would like to give as a graduation gift.

And the same applies to wedding gifts, birthday gifts and other purchases of jewelry wares. If a customer cannot afford to pay all cash for a suitable watch or gift of jewelry, he or she will certainly buy a gift of some other type with the money on hand. In other words, it all reverts to the old selling talk, which teaches us that when a customer enters a store, his or her mind is already made up to purchase, and it is up to the seller to provide the article and fulfill the desire.

The Community Silver Co. has a plan which has, according to their sales manager, been successful. A small payment is accepted by the retailer, the goods are put away in the safe until the last payment is made, and are delivered when the transaction has been completed. This appears to be a good plan to adopt about three months prior to the Christmas or June holiday seasons.

The National Wholesale Jewelers' Association has recently formed a committee for the purpose of trying to find a way of financing the retailer who wishes to adopt the time-payment plan. I have written to them, but as yet have had no reply. Undoubtedly we will have some information from them before the convention.

I have set forth the above ideas for your consideration and hope that you feel that you are in the position to present them to the Trades Interest Committee. In giving this information to you, I do so with the sole purpose in mind of trying to stimulate turnover in the jewelry business. Until we obtain turnover, we will never realize satisfactory results.

In conclusion, I would only add that if we were to all work as hard and as earnestly and efficiently for our trade as our President and executive officers are doing, we would be in a business even further ahead of all others than it is today.

REPORT OF SILVERWARE COMMITTEE

MR. G. A. BROCK, *Chairman*

Emil Scheer, Rochester, N. Y., submitted the report of the Silverware Committee in the absence of George A. Brock, chairman. The report follows:

To the Members of the National Retail Jewelers' Association:

Your Silverware Committee extends to you greetings, and wishes to congratulate the members on the improved conditions in the handling of sterling silver which have come to pass within recent months.

It was the privilege of your Silverware Committee, in connection with your worthy President, Mr. Hufnagel, to take up the silverware subject and the conditions we found the sale of silver to be in. We pointed out the fact that the sale of silver had not been on a satisfactory basis, and that it would require co-operation on the part of the manufacturers if they were to find the selling of sterling silver as successful as they desired. We impressed them with the fact that there could be no prosperity in the manufacture of silverware, nor in any other jeweler's line, unless that prosperity came up through the distributor. Without satisfactory conditions in the distribution there could not be the volume of sales desired, nor the favorable conditions surrounding the business that would work for its welfare.

There were several meetings held—the last of which was at the Waldorf, and at that time the manufacturers received us cordially and showed a desire to co-operate to the best interests of all. Suggestions were invited from our Committee as to what steps might be taken to improve conditions in the merchandising of silverware.

The principal suggestion made at that time was to have the silver billed to the retailer at the retail price, and the proper discount deducted from the bottom of the bill. This was considered in a favorable manner by the manufacturers, with the result that it has been worked out so that it is becoming almost universal, and in a short time will no doubt be followed by every silver manufacturer in the United States. In our discussion we pointed out that lines billed to the retail jeweler at retail prices, such as fountain pens, Rookwood pottery, and other similar lines, were seldom disturbed by the price-cutter, and under

these conditions the retail price would be accepted and observed by all classes of jewelers, and not deviated from by the few who are prone to cut prices when opportunity presents.

So far as we know, this new method has been accepted favorably by all the retail jewelers, and we believe it will work out most satisfactorily to both the manufacturer and the retailer.

There has also been a more or less concerted action in different parts of the country to eliminate free engraving. Everybody can see that the practice of free engraving is one which is in most cases unnecessary and in all cases highly unprofitable. Most large communities find there is someone in their community who refuses to conform to the rule of No Free Engraving, and, consequently, the best results have been found in the smaller communities. We believe, however, that this practice will gradually extend, and that the increased overhead which every merchant is facing will eventually force everyone into line; and when that time arrives the rule of No Free Engraving will become practically unanimous.

It is only a few years since the sale of sterling silver was on the basis of $33\frac{1}{3}$ per cent. mark up, and when the time came that silver was advanced to 50 per cent. there was much misgiving, and many jewelers believed it would be detrimental to the business. This, however, like many other of the backward tendencies of the trade, was found to be erroneous. We are today selling silver as freely perhaps as at any time in our history, and with a profit that is more nearly sufficient to cover the actual cost of doing business.

It is quite unnecessary to point out to an up-to-date jeweler that when his store does not show better than 6 per cent. net profit for the whole store, the silver department, with its excessive expense for engraving, refinishing, furnishing bags, rolls and boxes, in addition to the great expense of delivery, must be operating at a loss.

Silver, however, is like sugar in a grocery store, being one of the necessities of our line and one that a progressive jewelry store cannot well be without in the average community. We believe, however, that better merchandising will improve the profits even on sterling silver; and this will hold good, of course, throughout the entire store.

We would recommend that the number of patterns of flatware should be limited by the normal turnover, and that purchases should be made frequently and in small orders, sufficient to cover the requirements of the individual store. There should also be a registration on the

silver which would show the turnover, and in patterns of flatware—and other lines of sterling silverware—the turnover could be noted definitely on each piece. When these articles were found to be slow-moving they should be left out from the reorders, and purchases confined to the more rapidly-moving goods; or else the additional capital should be placed in new merchandise that would freshen up the stock.

I believe that National Sterling Silver Week should receive the hearty co-operation of all retail jewelers, and that each community should get together in ample time before the National Week is announced and arrange for advertising, either co-operatively or individually. I am inclined to think that for the special Silver Week the co-operative or joint advertising might be effective. This method would enable the silver merchant to carry a large amount of space with rather less expense than could be done by individuals under separate announcements.

I would recommend that every jeweler get behind this movement and try to create a greater demand on the part of the public for good silver. The manufacturers are willing and anxious to help us, and the least we can do is to meet them halfway.

The sale of all good merchandise, but more especially the sale of sterling silver, is a matter of education. The more we can keep silver before the public, the more intelligently we display it in our stores, and the better posted we become on its use as salesmen, the more effective will be our campaign and the more silver will be sold.

These are all matters well within our own hands, and I would urgently ask that we all take an active interest in the subject of sterling silver and try to create a demand for such silver by the buying public as will increase our sales and improve our turnover.

In this report I am principally stressing the necessity of more effort on sterling silver. Our plated-silver business has been given a great impetus by the many pages of advertising put out by the manufacturers, and the public has in some cases become so thoroughly sold on plated silver that they appear to neglect the worth and value of our sterling-silver lines. In order to bring a better balance between the two lines, I have given sterling silver preference in this report.

Regretting very much that I do not have the pleasure of being with you, and the privilege of talking to you personally, I am,

Very sincerely yours,

G. A. Brock, *Chairman*

REPORT OF BUSINESS PRACTICES COMMITTEE

MR. E. O. LITTLE, *Chairman*

Mr. President and Members of the Convention:

Your Committee on Business Practices is of the opinion that there is very little to report on this subject.

In our judgment, the evil practices of our trade are well taken care of in the report of the Committee on Business Practices of last year, which report carried with it our Code of Ethics. The good practices need no mention, for if we eliminate the evil ones, the good will take care of themselves.

Bearing in mind the fact that the jewelry industry was the first, and, as far as we know, the only trade organization to adopt a Code of Ethics, we should take considerable pride in keeping it foremost in every transaction of our business lives, and to that end we would again respectfully call the attention of this convention to our Code and urge its complete adoption, without reservation, and the sincere application of its principles by each individual jeweler who is worthy of the name.

It is President Hufnagel's idea that this Committee should act as a vigilance committee to promulgate the Code of Ethics. To see that its provisions are lived up to and that it is not used as a blind for questionable transactions. To adjust differences arising from violations of the provisions of the Code and to act as a general clearing house for information of the Code and its declarations, and we hereby pledge our time and ability to such end.

We further suggest that with the adoption of this report, the Secretary of this Association shall read to this convention the Code as adopted at Cincinnati and the abstracted copy that its declarations may be once more brought forcibly to the attention of each jeweler present, and we further suggest that a copy of the Code and of the abstracted form be furnished each jeweler attending this convention who is willing to subscribe his name to the abstracted copy.

That this Association may again go on record as endorsing the Code of Ethics and the principles it embodies, we recommend that the fol-

lowing resolution be made a part of the report of the Committee on Resolutions.

"*Resolved*, That we again affirm our faith in and adherence to the principles embodied in the Code of Ethics of this Association, as the rule and guide of all true jewelers in the conduct of their business. That we each pledge ourselves to its true promulgation, both in letter and spirit. That the Secretary of this Association bring the Code to the attention of the President and Secretary of each state association affiliated with the National Association and that he supply such officers with copies of the Code and request them to see that it is properly brought before their membership, both individually and at their conventions, and we recommend to each state association that they have printed on their application blanks, as a condition of membership, these words, 'I have read the Code of Ethics, and cheerfully subscribe to the same.' "

Respectfully submitted,

Business Practices Committee,

E. O. Little, Auburn, Ind., *Chairman.*
L. W. Suter, Seattle, Wash.
Louis S. Nordlinger, Los Angeles, Calif.
Carl Walk, Indianapolis, Ind.
C. L. Crawford, Peoria, Ill.
F. F. Stearns, Nashua, N. H.
B. F. Roark, Charlotte, N. C.

REPORT OF PUBLICITY COMMITTEE

MR. J. CLARE CRAWFORD, *Chairman*

Last year the Publicity Committee urged the great necessity of advertising and what gigantic results could be obtained by linking up with the National Publicity Association, and it is indeed most pleasing and gratifying to note the way in which the jewelers throughout the country placed themselves on record in a real worth-while advertising way, supporting the different national campaign drives, dovetailing singly, collectively and co-operatively in this respect. The scope of this wonderful work conducted by the National Jewelers' Publicity Association, whose endeavors have reached over 400 cities, with over 2,000 jewelers assisting in putting over this great work, and $100,000 has been invested in eight co-operative campaigns, totaling almost 900,000 lines of advertising matter. Great credit is due the members of the American National Retail Jewelers' Association, and they are to be congratulated upon their hearty co-operation towards achieving this splendid success.

Now that advertising has begun in a real, nation-wide, spontaneous way, your Publicity Committee urges "you-all" to "Keep Everlastingly at It." You must advertise and keep on advertising *without a let-up* to bring results which are bound to produce expansion, whether your business be small or large.

Our craft is without doubt the most fascinating in the world today—and comes nearest to producing that "Real Heaven on Earth" than any other industry. A gift from the jeweler marks all the important events in the life of the individual—carrying with it the full possession of perpetual joy, extreme happiness and lasting sentiment. Our craft embraces men of the highest ideals—men who possess those sterling requisites and 24-karat qualities that go to build up in your community a reputation and a confidence of trust held by no other commercial business.

Just consider how many millions of dollars' worth of jewels pass over the jewelers' counters throughout the world in a single day without the least semblance of a receipt given in return. Take these same patrons

dealing at a bank making a deposit: The bankbook is scrutinized most critically to see that the smallest fraction of a cent is recorded. Quite a contrast. This certainly rates the jeweler in a class of trust higher than any other business man.

We emphasized last year the importance placed upon every retail jeweler not letting a month go by without mailing from his establishment a letter, a folder, a circular or a booklet. This year we are going to be a little more specific relative to the importance of each.

We hereby inform you

What the Letter Says to Mr. Retail Jeweler

I am the fastest traveling, most personal messenger you can employ. Dress me properly, address me correctly and I carry your message wherever you direct—into the homes of the lowly, or into the residences of the wealthy: wherever your product is bought, I can take your wares—I always get attention.

What the Folder says to Mr. Retail Jeweler

I am the most inexpensive reminder you can hire. I slip into the envelope with your other mail and I am carried all over the world without extra postage cost—yet I carry your message and tell it effectively. I can be made so attractive that I cannot help but get the attention of your prospect—especially effective am I in the introduction of a new product.

I can create good-will. I can quote prices and bring inquiries. I can *even sell*, but it is hard work for a little fellow like me, a missionary, to get the name on the dotted line. I need the help of a Booklet or a Salesman, but still you must admit I am useful.

What the Circular Says to Mr. Retail Jeweler

I am a professional caller. I can make more calls per day over a wider area than any number of men you could possibly hire, and at a much lower cost.

Design me tastefully, write me thoughtfully, print me attractively in colors, if possible, address and stamp me and I will reach your prospect. Let me carry a return address post-card and I bring you results.

I am one of the best possible mediums for obtaining good homes for your new booklet, as I eliminate wasteful distribution and pave the way for a cordial reception for your book.

Says the Booklet to Mr. Retail Jeweler

No matter how many products you sell, I can tell your story. Through type and illustrations I can sell your goods—I reach prospects far remote from your sales area, add new customers to your store that it would be impossible to get in any other way. I secure conferences where no salesman could ever get. I Sell Goods.

Nine-tenths of our retail jewelers' advertising is confined to letters, folders, circulars and booklets which come under this head.

Last year we advocated the advisability of compiling a systematized booklet on advertising adaptable for the retail jeweler. Today just such a book has been timely written and strongly endorsed by the leading advertising experts throughout the country and has been dedicated to the United Typothetæ of America, and has already had widespread distribution. It is a classic and a book that should be moved as one of the first to be used as a ready reference by the jeweler or his advertising expert. Negotiations are now pending whereby we may be in a position to serve the members of the A. N. R. J. A. with a reference work of this kind.

We already see the advantageous results obtained through the medium of a united co-operation in publicity and connective window displays which has been very instrumental in producing an increased volume of turnover in our business. We jewelers can make this work vastly more effective, bringing it before the public at stipulated times with co-operative newspaper publicity of the jewelers in your community with a follow-up of window displays.

Time-Week Campaign

We respectfully urge you to give your individual support to certain seasonable campaigns, such as a "Time-Week Campaign," probably in the month of November, whereby watches—timepieces of all kinds—shall be displayed in your windows. This campaign can be linked up by the manufacturers of timepieces with attractive booklets on the subject, suitable to be mailed out by the retail jeweler to his trade.

Baby-Week Campaign

We jewelers have a splendid field to develop increased business, as the general public has really no conception of the many varied, attractive and suitable gifts that can be found in the jewelers' shops to be purchased for the baby. This gives wonderful opportunities for booklets and advertising possibilities.

The New Wedding-Anniversary List

The new wedding-anniversary list will soon be announced, after due, careful and deliberate analyzation has been given the many lists that have been submitted, which will be best suited for our business. We respectfully urge you to give this wedding-anniversary list widespread publicity, having it included in all your advertising matter mailed out to your customers.

Small suitable counter-display forms of the wedding-anniversary and birth-stone list should be used and, where possible, in your window displays. They can be displayed rather conspicuously in some corner of your window in your night-trims.

Suggested Sales Helps

Your Committee believes more attention should be paid by the retailer and his buyers when looking over new creations and conceptions prepared by manufacturers, bearing in mind that there is a vast amount of *time*, *thought* and *costly labor* involved in bringing out these new products. These conceptions are brought out mainly to satisfy the desires of the retailer for new goods, so we should not be too hasty in making negative decisions without first giving our buying public a chance at times to pass final judgment on these wares.

Let us be fair to the generous manufacturer who is desirous of producing finer and better goods where quality predominates.

New creations should receive the just and proper consideration due them by our buyers, giving the new product a fifty-fifty chance with the old, taking into consideration that the old was once new. Let us cooperate in every way we can, for in so doing we are benefiting.

In many cases too much is taken for granted by our manufacturers relative to the production of our wares—a knowledge of which imparted to our merchants and sales force would prove more effective in increased turnover.

We urge the retailer and his buyer to give sales talks in the purchase of new conceptions to their sales force and, where possible, take them to the hotel display rooms, where the traveling representative can give valuable sales information. In so doing, we are bound to have a better co-operative sales force, and, with this thought in mind, the speaker a short time ago mentioned to the vice-president and sales manager of one of our largest silver manufacturers the advisability of giving the retail trade some idea of the time consumed from the bringing out to the finish of a new product. As an illustration: a new silver service. In response to this suggestion, we have the pleasure of submitting a classic prepared by William Codman, chief designer of the Gorham Company, namely, "The Silversmith's Art."

REPORT OF WATCH INSPECTION COMMITTEE

MR. W. L. JONES, *Chairman*

We, the undersigned members of the Committee on Watch Inspection appointed by our President, beg leave to submit the following report:

To do unto others as thou wouldst that they should do to thee will make thee honest, kind and good, as all should strive to be. There never was a better opportunity to practice the Golden Rule in business than in conducting the watch-inspection work.

This work is triangular, and the three parties vitally interested are:

First—the railroad companies who maintain the service, for therein lies the safety of the lives and property that the system is designed to protect. Away back of every order issued is the underlying thought of better service and greater safety.

Second—the railroad employee. He should be educated to understand that, instead of a species of graft, he, in complying with the rules of the time service in procuring a watch of standard quality and keeping it in good condition, is contributing his mite to the safety of his fellow men and himself, as well as the property intrusted to his care.

Third—the inspector. He should treat those he serves with candor, dignity, honesty and truthfulness. Seeing their work is well done, impose no unnecessary hardships and give them to understand that they are free agents and can buy and have their watches repaired wherever they prefer. Do this and the financial results cannot help but be satisfactory.

The variance of opinions as regards the benefits derived by watch inspectors as compared with those who are not watch inspectors, we find that the profit to the individual inspector is not what it is generally believed to be, and the benefits to those not inspectors are very

much greater than they seem willing to accredit to the system of inspection. The inspectors have a great and grave responsibility, and it is the opinion of the Committee on Watch Inspection that those who are not inspectors must assume part of this responsibility, and, in the judgment of your Committee, this can be accomplished to its fullest extent only by the hearty co-operation of every member of the craft.

These are the days of progress, and we should realize that watch inspection must grow with the other measures of safety for the conduct of affairs of railroads. When we consider the millions of human lives and the millions of dollars in property value entrusted to the safekeeping of the transportation companies, handling the immense commercial and industrial life of our country so vital to prosperity, we feel that no obstacle of any kind should be placed in the way of growth and development.

The system of watch inspection has created and will continue to create demands for high-grade watches, and it is manifestly evident that all jewelers share therein. There is a very erroneous impression prevalent that the inspectors get the most benefits. As a matter of fact, they are compelled to carry a heavy investment in loaned watches of a standard grade, and upkeep the same. Time of high-salaried watchmakers spent in comparing and timing watches. Time of high-salaried watchmakers examining watches semi-yearly. Time of clerk recording performance of watches and making reports—thereby adding to their overhead, while those not inspectors secure the benefits of the business created without additional expense.

Careful observation of the present systems of watch inspection has proven beyond any doubt that the same protection to lives and property could not be maintained without organized methods such as those now in use on the various railroads, and which are recognized as standard. Moreover, these systems of inspection are not compulsory by law, but are among those safety measures voluntarily adopted by railroads to safeguard the lives and property entrusted to their care.

Your Committee recommends that in view of the fact that the public has been educated to the point of reliance on the present high standards of time service, and in view of the fact that railroad officials and employees have worked so harmoniously in developing this branch of the service through strict enforcement of adopted rules, we respect-

fully recommend that no action be taken by this Association which would tend to lessen interest or bring about any changes of same.

Respectfully submitted,

W. L. Jones, *Chairman.*
Harry N. Clark.
Wm. G. Frasier.
Gustaf Sylvan.
E. R. Herron.
Chas. E. Sunderlin.
Harry J. Pippitt.
Aaron Bergeday.
J. Frederic Kahl.
W. C. Donnelly.

REPORT OF AUCTION LAWS AND ORDINANCES COMMITTEE

MR. WILLIAM M. IRION, *Chairman*

The Committee, through close application and careful study covering the research of the auction ordinances of the country, have failed to find that no one auction ordinance now can be uniformly acceptable to all the state statute books; that it is necessary to draw up such uniform law, called an Enabling Act, and have it passed by every state legislature in the Union.

Certain cities—Louisville, Ky.; Boston, Mass.; Moline, Ill.; Toledo, Ohio; Akron, Ohio, and others—have passed certain auction ordinances which appear to be bullet-proof, some of which have been tested and found effective, others of which have not been tried. A mass of data has been compiled by the merchants' associations, state jewelers' associations, better-business bureaus and other organizations, and many of these bodies have signified their willingness to aid the A. N. R. J. A. in getting rid of the fake auctioneers.

Recommendation: That the officers of the A. N. R. J. A. be authorized to vigorously and actively work toward placing on the statute books of each state in the Union, a uniform, satisfactory and bullet-proof Enabling Act. That the officers of the A. N. R. J. A. shall be requested to appoint a national auction laws and ordinances committee; that each state president be asked to appoint a state committee on auction ordinances, which shall have at least three members who shall all reside in the capital city of each state. These subcommittees shall ascertain the value of the present state enabling acts, and, where necessary, shall draw up suggested enabling acts and forward same to the national committee for supervision and possible revision. That the national committee shall in turn forward the proposed Enabling Act to the executive officers of the National Association for supervision and possible revision. These final enabling acts will be returned to the subcommittees for passage through their various state associations.

This plan suggested should, if adopted, be carried out in the same manner as that which is known as the "Indiana Plan."

The Committee believes that in this way the most effective work can be done at the least cost to all involved.

REPORT OF CREDENTIALS COMMITTEE

MR. H. C. STERN, *Chairman*

States	*Number of Members*	*Number of Votes*
Alabama	76	4
Arkansas	14	1
Arizona	...	...
California	83	5
Colorado	21	2
Connecticut	101	6
District of Columbia	1	1
Florida	70	4
Georgia	43	3
Idaho	6	1
Illinois	101	6
Indiana	203	11
Iowa	102	6
Kansas	21	2
Kentucky	60	3
Louisiana	12	1
Maine	37	2
Maryland-Delaware	43	3
Massachusetts-Rhode Island	262	14
Michigan	151	8
Minnesota	154	8
Mississippi	35	2
Missouri	131	7
Montana	20	1
Nebraska	126	7
Nevada	1	1
New Hampshire	73	4
New Jersey	46	3
New Mexico	1	1
New York	437	22

	Number of Members	*Number of Votes*
North Carolina	92	5
North Dakota	27	2
Ohio	157	8
Oklahoma	32	2
Oregon	91	5
Pennsylvania	187	10
South Carolina	21	2
South Dakota	30	2
Tennessee	60	3
Texas	48	3
Utah	1	1
Vermont	45	3
Virginia	94	5
Washington	42	3
West Virginia	56	3
Wisconsin	239	12
Wyoming	1	1
Total votes of states	3,654	209
Votes Cast by Officers:		
Pres. Edw. H. Hufnagel		1
1st Vice-Pres. A. G. Mansur		1
2nd Vice-Pres. Joseph Mazer		1
Treas. C. J. Brotherly		1
Sec. A. W. Anderson		1
Member Ex. Com. George J. Hess		1
Member Ex. Com. William H. Rindt		1
Total number of votes		216

We find that according to the Secretaries' records the various states have memberships as above, and are entitled to the number of votes in this convention set opposite their state names.

Respectfully submitted,

H. C. Stern, Chicago, Ill.
Henry F. Stecher, Milwaukee, Wis.
Ray Reed, Chariton, Iowa.

ANNUAL REPORT OF WALTER H. MELLOR, FIELD SECRETARY

Too much cannot be said of the wonderful co-operation this office is receiving from the jewelers in every state visited.

In New York, President Harry N. Clark devoted a week and his car to the work. In New Hampshire, President Arthur De Montigny and Secretary A. U. Burque toured the state with me in the president's car, and the list of jewelers who have devoted one or more days to the work would be too long for me to include in this report, but to each one this Association extends its thanks, for it is to such men that the success of this office has been made possible.

The success of the various state organizations lies in the Secretary's ability to function. If he be lax in the discharge of his duties, his organization will not grow; in fact, cannot hope even to hold its membership. I find many state secretaries not giving the proper effort to the work. Once the honor has been accepted by a retailer, he should not disregard the confidence placed in him by his fellow jewelers, but fill the office to the best of his ability. Above all, he should not accept a check for services that have not been rendered his state association. If some states can maintain their membership and grow, all of them can. It is up to the secretary.

I find all jewelers interested in the tax fight, and it is the cause of many co-operating with us. Some of the larger stores are especially interested in the work of Harvard Research Bureau, some in jeweler's publicity, or the Horological Institute, or in the Jewelers' Mutual Fire Insurance Co. Many others consider the Association because it enables them to attend their state convention, and, I regret to say, there are some who refuse to join the Association unless someone else whom they know will also co-operate. (I am glad to state that thus far I have never lost one of that kind.)

May I suggest to the publicity department that a cut of the Association membership card, with "Gifts That Last" above and "Dependable Gift Counselors" below, be included in their national advertising. This would not only make a membership in the Association more de-

sirable, but would influence many jewelers to contribute to the cause. In addition, it would prove a protection to the customer.

Since our convention in Cincinnati this office has been very busy on the work, as the following report will show. In the past year I have solicited members in Connecticut twice, Rhode Island twice, Massachusetts twice, and once in New York, Virginia, North Carolina, Georgia, Florida, Alabama, Mississippi, Louisiana, Arkansas, Tennessee, Kentucky, Indiana, Pennsylvania, Vermont and New Hampshire. In addition, I attended conventions in South Carolina, Kentucky and Indiana.

Number of days spent in Memphis, Tenn.; New Orleans, La.; Jacksonville, Fla.; Atlanta, Ga.; Providence, R. I.; Boston, Mass.; New York and Buffalo, N. Y., and Philadelphia, Pa.	24
The new members secured in cities were	181
Number of cities and towns visited (not including the above)	349
Total number of cities and towns visited	358
Total number of jewelry stores visited (members and non-members)	2,138
Best results for one day's work were secured November 11, 1922, assisted by Frank M. Todd, Bridgeport, Conn. New members	25
Total new members secured since Cincinnati convention	882
Total number of new members since office was established	1,426

I have held many meetings and organized jewelers' clubs, assisted the Tax-elimination Committee and in many states collected dues from jewelers who did not understand what the Association was doing for them—in fact, this office has endeavored to render service for every department of the work.

To those who have assisted me, may I again extend my personal thanks.

WALTER H. MELLOR.

THE RESOLUTIONS

Whereas: God, in His Infinite wisdom, has called from his earthly labors, our President and fellow business man, Warren Gamaliel Harding, we desire to record in these resolutions our feeling of esteem and respect for his memory, and our sense of personal loss in his untimely removal from his activities as our leader during a critical time of readjustment in our country and the whole world, and to express to his widow our sincere sympathy for her in her deep sorrow. Be it therefore

Resolved: That this Association, through its President and Secretary, transmit to Mrs. Harding a letter, expressing to her the respect and esteem in which we held her late husband, and to assure her that we most sincerely sympathize with her in her bereavement. Be it further

Resolved: That we pledge our loyal and enthusiastic support to President Calvin S. Coolidge, who so suddenly had placed upon him the burdens and responsibilities of Chief Executive of this, the greatest nation on earth.

Whereas: God, in His infinite wisdom, considered it desirable to brighten His home by the soul of Edward H. Hufnagel, Junior, the son of our lovable President, Edward H. Hufnagel, therefore be it

Resolved: That this convention records itself as extending to its President that affection and that fraternal and heartfelt understanding which will, in part at least, make his loss more bearable. Be it further

Resolved: That as a mark of esteem, this convention rise to its feet and remain standing for two minutes silently, calling upon the Almighty for his blessings upon our President, his wife, and his family.

Resolved: That we again affirm our faith in, and adherence to, the principles embodied in the Code of Ethics of this Association, as the rule and guide of all true jewelers in the conduct of their business; that we each pledge ourselves to its true promulgation, both in letter and spirit; that the Secretary of this Association bring the Code of Ethics to the attention of the President and Secretary of each state association, and that he supply such officers with copies of the Code, and re-

quest them to see that it is properly brought before their membership, both individually and at their conventions, and we recommend to each state association that they have printed on their application blanks as a condition of membership, these words: "I have read the Jewelers' Code of Ethics, and hereby subscribe to same."

Whereas: We submit that the time for special taxation has passed, and believe that fair and equitable justice for all citizens of this Republic suggests the abolishment of all the special excise taxes, originally established to deter purchasing in times of war as much as to provide revenue through the sales made, and *whereas* the retail jeweler willingly and cheerfully paid these special taxes until Congress rewrote the Excise Tax Bill, and eliminated from further special taxation many industries and dealers whose products are surely luxuries to an extent equal to, or greater than, those of the jeweler, and *whereas* we submit that it is an injustice to tax the jeweler to the exclusion of dealers in other lines, and cannot understand how the continuance of such special taxes which are unfair, unjust, and discriminatory can be justified, therefore be it

Resolved: That we approve the efforts to have the tax removed, which are being put forth by President Hufnagel, and the Special Excise Tax Elimination Committee, of which Ralph Roessler is Chairman, and pledge to them our financial support in the way of special contributions to the funds for carrying on this campaign, and also pledge our personal support by interviews with, and letters to, our representatives in Congress, our Senators, and any other parties who may be involved in the elimination of this unjust tax.

Whereas: It is particularly desirable that the best standards for jewelry products shall be established for the protection of the consumer as well as for the jewelry industry, be it

Resolved: That the standards set forth in the report of the legislative committee shall be accepted as the best obtainable standards, and shall be adopted by this convention as such.

Whereas: We have never had a definition of platinum which is satisfactory to the trade, or sufficiently descriptive to be understood by the public;

Whereas: Believing that our industry should insist upon a Stamping Act which will protect the purchaser of platinum goods, be it

Resolved: That we urge upon our officers to lend every effort toward the adoption of definite platinum standards which are workable.

Resolved: That we endorse the work of the National Jewelers' Publicity Association in its efforts to popularize the sale of jewelry through national advertising, and urge upon our membership to co-operate with this movement by contributions to the general fund, by local advertising, and by the use and display of the slogans: "Gifts That Last," and "Make the Jeweler Your Gift Counselor," and be it further resolved that the members of this association heartily pledge their support of these slogans, and incorporate them in all their stationery, letterheads, and advertising matter, and be it further

Resolved: That this association pledge its thanks and express its sincere appreciation of the splendid productive efforts of Mr. P. J. Coffey, Chairman of the National Jewelers' Publicity Association, and to his fellow directors.

Resolved: That we commend the work of the Horological Institute of America, and urge upon our membership to co-operate with this work to the fullest extent possible, believing, as we do, that the future of the jewelry industry rests largely upon our ability to develop better workmen in the horological as well as the jewelry departments of our business.

Resolved: That we express our appreciation to the various manufacturers of sterling silverware who have co-operated with us by billing sterling silverware to the retail jewelers at list prices, less a trade discount, thus enabling us in our efforts to create and stabilize a more active and productive business for all branches of the jewelry industry.

Whereas: The fake auctioneer is still a menace to the life of the jewelry industry, and whereas it is deemed necessary for the protection of the public that the fake auctioneer shall be eliminated through the proper methods of the law, be it

Resolved: That the executive officers of this, the American National Retail Jewelers' Association be requested to appoint a national committee on auction laws and ordinances, to be composed of as many members as necessary, and be it further

Resolved: That the presidents of each state association be requested to appoint a state committee on auction laws and ordinances, to consist of at least three members who shall reside in or near the capital city of each state, and that these members, with the assistance of the members of the national committee on auction laws and ordinances, shall vigorously labor toward the end that state auction laws, or enabling

acts, shall be placed upon the statute books of every state in the Union, in which this association is represented, and be it further

Resolved: That each state Senator, Representative, or other official whose services warrant it, shall be requested to lend his efforts to accomplishing this vitally important legislation.

Resolved: That all misleading, ambiguous, or indefinite names of jewelry products should be abolished in the jewelry industry, and that we urge upon manufacturers and wholesalers to so mark their goods that there can be no possible opportunity for misunderstanding upon the part of the consumer.

Resolved: That the manufacturers of watchcases shall be urged to cease the use of time guarantees on all watchcases, and be it further

Resolved: That this resolution be forwarded, in copy, to the Federal Trades Commission.

Resolved: That we urge our membership to discontinue the practice of free engraving, believing that this is a service for which a charge should be made.

Resolved: That we endorse the work of the Harvard Bureau of Business Research which is being conducted for the benefit of the members of this Association, and be it further

Resolved: That we urge upon our members to furnish the Harvard Bureau of Business Research with the figures which are vitally necessary for the preparation of the reports by maintaining systems of accounting which make such figures available, and be it further

Resolved: That we express our thanks to the members of the Harvard Bureau for the excellent results which they have accomplished.

Resolved: That we commend to our membership the advantages of placing a share of their fire insurance with the Jewelers' Mutual Fire Insurance Co. and point to the fact that it is one of the tangible evidences of the benefits of membership in our National and State Retail Jewelers' Associations.

Resolved: That we urge the discontinuance by wholesalers and manufacturers of the practice of printing net prices in circulars and catalogues and suggest that in all cases such prices as quoted conform to the requests so often made on this subject, *i.e.*, that they be subject to the usual trade discount.

Resolved: The resale price (particularly when applied to an advertised article) has long ago received the commendation of the retail

jeweler. We submit, however, that in the establishment of such retail prices the manufacturer should take into consideration the average established overhead charges of the retail jeweler and provide a sufficient advance over the retail or wholesale price to satisfactorily answer the jeweler's claim for consideration.

Resolved: Since experience has proven that 50 per cent. of the first year's dues of membership secured through the efforts of our Field Secretary is not sufficient to cover the expenses of this important work and to make possible its continuance, be it

Resolved: That this revision of dues be hereby readjusted on a basis of 100 per cent. of the dues received for the first year for each new member secured by the Field Secretary which shall be paid to the National Association and the only dues to be paid the National Association for new members so secured shall be the regular per capita tax on the renewal of membership.

Resolved: That this convention extend its thanks to Mr. Edgar M. Docherty, president of the New England Manufacturing Jewelers' Association, and Mr. Woodward Booth, secretary of the same association and their associates for having made this convention the most successful and enjoyable ever held, and be it further

Resolved: That we extend our expressions of appreciation to Mr. William H. Mason and his associates of Providence for having aided our convention by providing us with daily reports of the convention through the daily press.

Resolved: That we express our sincere appreciation to all those who have in any way assisted in making this the greatest jewelry convention ever held; for the thoughtfully prepared addresses; to the members of the New England Jewelers' and Silversmiths' Association who have acted as our hosts in the various entertainment features; to the local and state associations who have given unreservedly of their time and thought; to the local papers and to all others who have in any way assisted, we offer our thanks.

Appreciating the value of the various addresses which have been delivered at this convention and recognizing the fact that many of these addresses were delivered in an informal manner and with the idea of placing before the jewelry trade of this country the many wonderful suggestions contained therein:

Resolved: That the executive committee have distributed a complete

report of the speeches of this convention to all the trade papers and by printed copy to all members.

We would be lacking in appreciation if we failed to record once again our thanks to the trade press which has given so willingly of its space to promulgate the cause of the American National Retail Jewelers' Association. We recognize that we are particularly fortunate in the papers published in the jewelry trade, and extend to the various editors and publishers our sincere good wishes for their continued prosperity.

To President Edward H. Hufnagel, Secretary A. W. Anderson, Treasurer Conrad J. Brotherly and their associate officers and committeemen of the American National Retail Jewelers' Association we extend our sincere thanks for the wholehearted and unrestrained use of their time and talents in the advancement of the cause of the association. We feel that the association has taken a long step forward under President Hufnagel and that we as an association count ourselves fortunate in having the benefit of his services as our president.

Charles T. Evans, Buffalo, N. Y.
Frank R. Ford, Norfolk, Va.
Jean R. Tack, Newark, N. J.
Gustaf Sylvan, Columbia, S. C.
John P. Hess, Fond du Lac, Wis.
Fred N. Day, Winston-Salem, N. C.
E. O. Little, Auburn, Ind.
Alvin Magnon, Tampa, Fla.

MODERN MERCHANDISING

Miles E. Robertson, *Assistant Director of Sales*

Oneida Community Company

Group Action versus Individual Action

Your National and State Associations are constantly perfecting and solidifying their efforts on such group questions as distribution methods, the war tax, uplifting the moral tone of the industry, arranging quality standards and other definite trade necessities. Every aid should be given such collective objects, and your association should be considered a partnership; each partner to profit in accordance with the amount of effort and time he applies, but keep in mind that even though all these group objects are successfully accomplished, your individual problem is still unsolved.

For example: remove the war tax, perfect the quality of standards, prevent unfair quality competition—and you still have left a competition that can do as well or better under such changed conditions. In other words, you, as an individual, must answer the question, Who is the best merchant?

Necessity for Immediate Individual Action

I am not a firm believer in figures, yet when statistics prove beyond peradventure that danger is near an industry, then indeed we should examine the facts, and lay plans accordingly. Figures show that two very serious things are happening in the jewelry trade.

1. Fifty-two per cent. of the jewelry business is done outside of the jewelry trade. Forty-eight per cent. is done inside. It is my understanding that this ratio is constantly increasing to the detriment of the jewelry trade.

2. The Harvard Research Bureau's figures on the jeweler's cost of doing business shows that this cost is constantly mounting out of all proportion to other retailer's costs. The 1922 report is available and shows a necessity for immediate action.

Who Is Your Competitor?

Who is your competitor? In an effort to broaden the field of endeavor, to increase the size of your possibilities, really to play in the mammoth business pool which lies before the industry, let me say now that it is not your neighbor who sells jewelry, whether such neighbor be hardware, haberdasher, gift shop, department store or jeweler. To illustrate, and again use figures, let us say that 50 per cent. of the family purse goes directly into necessities, the butcher, the baker, coal dealer, etc. The other fifty cents of the dollar goes to whoever can get it. Here enters the merchandising side of all businesses. That fifty cents will inevitably go to the best merchant on the street—perhaps the automobile man, furniture store, the dealers in ready-to-wear garments, victrolas, pianos, rugs, hats, and who knows what not? Someone creates a demand in the woman's mind for a particular article and the fifty cents immediately changes ownership.

You must consider every retailer in town a competitor for your receipts, not necessarily for your jewelry business. There is an example so pertinent for the occasion that I want to give it here. When silverware manufacturers put blue gift boxes on the market, it was with the distinct purpose of going into the gift field which is infinitely larger than the standard knife, fork and spoon business. The gift business runs into hundreds of millions of dollars, whereas the silverware business, as such, represents only about fifty million dollars. These manufacturers have been repaid for their broader vision, and you, Mr. Jeweler, must lie awake nights, if necessary, thinking up plans which will prevent the other non-jewelry-dealing stores from getting the surplus fifty cents that is in the woman's purse.

It is difficult in a discussion of this character to outline plans which apply to every dealer. Only one general principle has been followed. Most of the sales plans outlined are for the benefit of the smaller jewelers. By this I do not mean that the larger stores may not find these suggestions of value, but we all know that the larger volume of business a store does, the more skillful and experienced merchandising it can pay for. Also, such stores can spend more money in direct newspaper advertising, which, after all, is possibly the largest single force in modern merchandising. Such theories as are advanced herein will be tied to definite sales plans. Further, I will not attempt to discuss newspaper

or magazine advertising, except by reference, since time will not permit. Also advertising, as such, deserves a complete chapter in itself.

Wise Buying

Modern merchandising starts with buying. There are several definite planks which must be in your buying platform.

1. *Buy for resale*—Your Association has stressed this point, and advisedly so. It eliminates the gamble from purchasing. It necessitates a knowledge of sales on major lines, and such knowledge once obtained shows where your efforts will be most profitable.

2. *Buy popular-priced items*—Don't buy the three or four most expensive items in a salesman's line and let your nearest competitor (perhaps the department store) buy the popular-priced items. Your customers want popular prices. You must cater to that want. This year has witnessed the introduction of many new, interesting, and popular-priced items. Most of them have been widely merchandised by the department store. Many dealers have ideals confused with merchandising and are daily passing up opportunities of buying popular-priced items.

3. *Be careful of unknown items*—Don't buy on first sight unknown lines or little known lines, irrespective of the profit vision the salesman may hold out. There are doubtless some stores that can make any item salable, but the great rank and file of retail businesses are run on known goods.

4. *Be suspicious of long-profit items*—Long profits usually spell slow turnover. Also, they emphasize in consumers' minds the fact that you have high prices. Resale is vastly more important than long profits. You should know what your cost of doing business is. Add a fair profit to that figure and when you get above the resultant figure, be careful.

5. *Give heed to packaging when buying*—Yours is a gift business, and goods *must* be attractively packaged. Many manufacturers pay special attention to this phase of their service, and you should question those others who do not properly package their goods for suitable presentation to customers.

Packaging represents a definite cost; either you or the manufacturer must stand this cost, and wherever possible, put it up to the manufacturer. Certain of the larger stores repackage all goods, but such repack-

aging is expensive, and retailers now pursuing this policy should examine narrowly as to the value received.

6. *What service does the manufacturer sell you with his goods?*—Modern salesmanship requires that a salesman be prepared to tell you how to resell his goods. His factory spends time and money in preparing window displays, advertising copy, sales plans, etc. I suggest that you take advantage of this service by the following plan: *Make a Merchandising Card Index*. When you buy a line, make out a card with all the salesman's suggestions and list the aids which his factory will furnish. File this card in your Merchandising Index, then when the goods arrive you will have many suggestions on its resale. Jobbers' salesmen will aid materially by telling you of sales plans which other dealers have used.

You daily compete against stores that can afford specialized buying talent. The Card Index System gives high-priced merchandising experience without cost. Observe the other rules listed and many troubles will have ended before they start.

Starting Sales

You must *start* the sales of new items. Many dealers put new goods on the shelf and wait for consumer calls. Such a policy is fatal. Look about you. What do other live merchants do to start sales on new goods? The clothier, department store, ready-to-wear store, hardware and gift shops all spend time and money in letting people know that a new item has been added to their stock. Some suggestions: Perhaps, in the case of a fine article, you might arrange for a private showing at your store. Send out printed or engraved invitations to your better customers inviting them to this private showing. Suggest in your letter that you would like to have them see the article before it is placed on general sale. We put on such a plan this spring and it proved very successful. Details can be furnished those interested.

Other methods: Telephone your customers, advertise in local newspapers, make window displays, both day and night, distribute circulars at the store or pack them in delivered articles. The real plea I make is: *Do something*. Make a real effort for that other fifty cents. Give the new article a chance.

Repeat Sales

The jewelry business needs repeat-sale lines. By repeat-sale lines I mean those that necessitate fill-ins by purchasers; also, articles that

permit of second, third and fourth sales on the same item. You have many such in your store now, and keep your buying eyes open for others to add to the list. Department-store buyers are constantly on the watch for such lines. Such goods represent the bread-and-butter business of a retail dealer. Certain items which permit of such resale are: glassware, silverware, hair ornaments, cuff links, toilet articles, victrolas, thermos bottles, kodaks, electrical appliances, etc.

And, at the risk of getting the attention of larger stores only, I want to suggest a second Card Index System, namely: "Customers Index File." When we realize that there are such occasions as Easter, June Weddings, Thanksgiving, Christmas, Anniversaries, Birthdays, Year-round Gifts, etc., the value of keeping a record on customers as having purchased some item in a repeat-sale line is apparent. Follow-up letters at the appropriate time will be very effective. We need the return of our old customers, as well as means of attracting the eyes of new ones.

Day Window Displays

The making of window displays ought to be as automatic and regular as paying the rent. You should change your windows at least twenty-four times yearly, and it would be much better to make the change forty-eight times. Window displays cost you practically nothing. You have the time, the windows, and the goods. It is simply a question of combining the three. Keep in mind that window displays have three distinct advantages over all other forms of advertising. First, the physical article is shown. Second, goods can be shown at the psychological moment. Third, purchasing is made easy since your open store door is located directly beside the window. Windows may be built around such central ideas as the woman, the man, youth, children, seasonable items, new goods, standard displays to conform with national advertising by manufacturers, and last, but not least, spectacular windows. Every window should have a selling plan tied to it. Don't be afraid of pricing your goods. Price to piece is the modern way to merchandise.

On Dollar Day, let's have one of the windows with dollar items and the other window with "one-dollar-less" items. Perhaps a window with every item at $2.50, or one with all items at $5. Here some of you may say that your items won't fit this price mark. In such a case I must emphasize that this is one place where "wise buying" will help. Fur-

thermore, what about using some of the items which you have carried in inventory for two or three years? How about a window filled with items, and a price tag on each with a misspelled word on one of the price tickets and a prize to the first successful finder of the misspelled word? This would get attention, and every tag would be thoroughly read.

Night Window Displays

Your night windows are most important. Keep in mind that the movies are constantly attracting more people, and especially if you are located in the theater district, your night window is apt to get more attention from real buyers than your day windows. Department stores realize that the housewife brings the husband along at night to concur in the purchase of an article seen earlier. What colors do you use in your night windows? Other dealers are using colored globes to bring out the beauty of certain items, or to force attention. This can be arranged at very little cost. For globe color, perhaps a pale blue, yellow, green, orange or white. Try this out on some of your items, especially a window on toilet articles under a soft orange light. Have you ever tried putting a search light in your window which would throw a straight bar of light on the side walk? You can be certain that everyone who passes will look at your display. Also, what can your electric-light dealer tell you about automatic arrangements by which the lights go on and off? Certain dealers having wide glass doors have often made displays at night back of these doors. They use large articles and by a little change in the lighting system make a most effective display.

I have attempted to give several suggestions in regard to windows—not all of them perhaps appropriate for every dealer, but some of them may be interesting or new. The one point I want to leave with you is—Your store window is your business face and there are few of us who go without shaving for a week.

Are You the Authority?

The Jeweler can be the authority as to what is correct. Your stock essentially comprises only gift and personal items. Consumers need intelligent assistance in buying such articles. For example: watches and chains for business and dress, gifts for wedding and engagements, ornaments for prevailing style, rings and precious stones for anniversaries

or months in the year, and silverware for the correct service of the table. We believe that the jeweler's service in this regard has not been sufficiently emphasized to customers, and during the fall we plan to put in your hands for distribution a quantity of books on Correct Service of the Table. A merchandising plan is included in those books. A proper distribution of these books will emphasize in your customers' minds the fact that the jeweler is the authority.

Why not find out what manufacturers can furnish to further this propaganda? It will pay more dividends to be known as the authority on Correct Appointments than to be known as the watch repairer. May I offer a new title—"Counselors in Good Taste."

Gifts

The modern jeweler carries but a small percentage of items that can justly be called "necessities." Therefore, his is a constant effort for the remaining fifty cents of the dollar. Gifts and gift suggestions are his major line of attack. The National Association is wisely suggesting the slogans: "Gift Counselors" and "Gifts That Last." Build on these suggestions. Dress your windows, write your advertising copy, arrange your counter and aisle tables with the gift idea as a background.

There are dozens of items in your stock that could be segregated into sections, and labeled "$1 to $5," "$5 to $10," and "$10 to $20." Let your customers have a choice in the price range of their choosing. Incidentally, in arranging these sections you will be surprised as to the items which finally make up the assortment. This plan will bring out goods which have been lost sight of for months and it will emphasize even more the necessity of wise buying.

Why Nationally Advertised Lines are Necessary to the Jeweler

You may recall my statement that fifty cents of the dollar goes directly into necessities and the remaining fifty cents to whoever can get it. Let me phrase it a bit differently. The consumer spends the first fifty cents on absolute needs. There is practically no choice. The remaining fifty cents will be spent on satisfying desires with a free choice. National advertising creates desires. By handling these advertised articles you cash in on the desire brought to fruition.

There is a "high-price" prejudice now existing against the jeweler. In other words, many people of your city feel that while you sell good goods and are responsible for their wear and value, yet you are the highest-priced man in town. That impression must be removed. The most effective possible method of changing this impression is to carry and merchandise nationally advertised lines at known prices. A liberal use of the manufacturer's price tickets in your window displays will aid materially.

Manufacturers of nationally advertised lines usually sell a service with their goods. I will guarantee that the most completely filled-out cards in your Merchandising Card Index will be those covering stocks of nationally advertised products.

I will not attempt to cover the obvious arguments on turnover, profit, etc., that apply to such lines, but will leave that to the many salesmen who are constantly telling you of these sales advantages. The points I raise are all jewelers' points—not manufacturers'. One further point should be emphasized. Don't let the department stores steal this quick-sale business from you. They are anxious for it and will do everything possible to make their purchase attractive to the manufacturer.

Youth—Your Best Customer

Youth—your best customer! What heed do you give it? What heed do the other merchants in town give it? Every other store has a message. What is yours? Are your goods purchased, your windows dressed, your advertisements keyed, and your literature written with youth as the objective? What are you doing to keep in touch with the local grammar school and high school? Are you a friend of all the boys and girls? Do you attend the athletic games, and make yourself a familiar figure at all these young people's activities?

Here are several suggestions: I know of certain dealers who have hired a popular boy or girl to work in their store during the hours after school. Sometimes the particular boy or girl will wear various items of jewelry, such as wrist watches, hair ornaments, bracelets, etc., and in many cases set the style for the school with resultant business for the jeweler. A timely gift to the popular boy in school, especially if it is the result of some competition, will stimulate business. I remember particularly one clothier of my acquaintance who gave away a mackinaw to the Captain of the High School Football Team. Within the month

every boy in his class had purchased a mackinaw from this same clothier. Automobile dealers have given perhaps the greatest heed to this insistent call from youth, and their sales are reflecting the benefits which naturally accrue. I recently had occasion to buy an automobile in New York, and called at about thirty show rooms. Everywhere I saw youth accompanying age and wielding the important voice as to what should be purchased. Parents came in to buy a Ford and drove away in a Buick—they entered to buy a Buick and purchased a Cadillac. Bright colors, speed, action, life—these are what youth demands and the older people accept youth's judgment.

Don't forget youth. Age is buying for youth. You have only to look about you on the street and see the ages from forty to sixty dressing down, and buying down to the younger ages. Cater to the one and you reach both. The period from eighteen to thirty years is what psychologists call the "plastic" age. During that time buying habits are formed which last throughout life. Watch out that some other merchant does not cash in on this business which might very easily be converted your way. Doubtless, you already have in your town competition of this character. Perhaps a clothier is outfitting the Baseball Team, or the local Winchester store running a hunting or fishing club. What are you doing to attract youth?

It has been my privilege to see a great deal of the literature which chain organizations are constantly sending to their units. In every case they put special emphasis on youth, and since such firms form some of your strongest competition, you, as jewelers, must do everything possible to overcome what might be called "absentee ownership" of youth's business.

Who Are You in John Doeville?

Many of you may wonder why this subject enters into a discussion of merchandising. My answer is: it is too important to be left out. We are all salesmen—the stronger our personalities and the more they are felt, the more successful we are going to be. Membership in lodges, societies, Rotary clubs and other groups is important, and you should be as popular a figure in them as possible. I have emphasized in a former paragraph that you must be popular with youth. Now, there are dozens of other ways to make your store the interesting place. You might have the radio receiving station in your store, post the

baseball scores in your window, sell the tickets for a local home-talent production, paste on your window items of news that are vitally interesting to all the community. You can doubtless think of dozens of other alternative schemes.

You have one big advantage over department and chain stores. Your selling and service can be personal; theirs necessarily is somewhat impersonal. By your actions don't lose this advantage. Be popular—it's profitable.

Time-payment Business

The deferred-payment plan of selling is becoming of greater importance each year. Its popularity has been fostered by manufacturers of phonographs, washing machines, Steinway pianos and dozens of other items with which you are familiar. There is almost no product at the present time that cannot be purchased on this plan. The introduction of the phonograph particularly has made converts of many families who had previously considered deferred payments quite out of the question. The homes of this country are full of pleasant things that would not be there except for this plan. In many cases the homes themselves would not be built without it. For example, several years ago, in Philadelphia alone, there were two thousand building-and-loan associations. The kitchen cabinet, the kitchen range, vacuum cleaner, electric iron—all make work lighter and contribute comfort and cheer to the home, and would in most cases be missing had it not been for this deferred-payment plan. The American citizen has been thoroughly trained to contribute considerable sums of money in this way. It merely means that he can buy more and better goods. It is my personal feeling that this deferred-payment plan is but in its infancy, and that very soon articles, the initial cost of which is twenty-five dollars or more, will be largely distributed by a sales plan of this character. And surely neither you nor the manufacturer will lose anything of prestige in company with such products as automobiles, Steinway pianos, victrolas, radios and dozens of other standard products of value.

The first question that comes to your mind is that of expense. Who is going to finance this business? My answer is, that unless you are already doing it, probably very few of you can start in with every article in your store and do a deferred-payment business. There is a plan, however. Today one of the greatest evils in the jewelry business is

"Receivables"; that is, money outstanding, money owed to you by customers. You are selling goods perhaps to the wealthiest people in town and it takes from six to nine months for payment. This means that you are now giving a longer time than a deferred-payment business demands and have quite as much money outstanding without receiving one iota of the advertising or merchandising value. Even further, you may be losing business by your present method. You probably have customers that owe you money and are daily making purchases for cash at other stores, since they are ashamed of their failure to pay you. A definite time of payment, with amounts so graduated that this customer could have paid it without strenuous effort, would have relieved this situation.

Where your finances will not permit of the complete policy, you should approach this problem by offering a single line on the deferred-payment plan, and, as your "receivables" on the old basis are gradually being collected, you may add other items. Use articles the initial sale price of which is large, and those which the woman would be very pleased to be able to buy all at once, rather than a little at a time. Silverware, watches, diamonds and various other articles in your store could be so merchandised. In many cases you receive from six to nine months' credit from various jobbers, and in most cases that credit would cover the whole time of payment.

May I give you one pointer in regard to this plan? Do not attempt to make your initial payment too large. If the customer's credit is good, it is *good*; if it is bad, it is *bad*. A large payment down will not materially change the situation, but it will hold up sales. The largest firms in this class of business state that the smaller the initial payment, the more results they get. On a twenty-five-dollar article, two dollars down and one dollar a week is more valuable than five dollars down and one dollar a week. Your local knowledge of customers' finances renders loss practically negligible.

We have worked out a sales plan of this character in detail and would be very pleased to give you the proposition complete. It is indeed surprising how little effort and money is required.

The Style Is the Woman

Actual data prove that seventy-five per cent. of the household purchases are made by women. This includes articles for the family. In our

particular industry the woman plays a ninety per cent. part. Every store in the city is catering to the women. What are you doing to cater to their demand? Women are more influenced by style and fashion than any other single thing. You can learn what they want in a variety of ways, and it must be a part of your business to keep in touch with what is modern and acceptable to them. You should be friendly with the buyer in some department store or ready-to-wear house, and exchange ideas with such buyers as often as possible. They can tell you the prevailing style of dresses, hats, shoes and all manner of other articles which are in the market. Jewelry will absolutely follow such styles, and if you do not have such modern jewelry, the local department store will get that trade. If you haven't access to what is correct in style and fashion, by all means make such connections now. Buyers in lines that are selling directly to the women, trade journals, big city newspaper advertising, etc., will all aid in keeping you in touch with this problem.

Inventory

After March 1 many jewelers are going to face the third, fourth or fifth inventorying of certain items in their stock that are long since out of date and for which there is absolutely no demand. Usually this stock is passed by with the remark, "Junk—rest in peace." May I suggest a plan that might convert this so-called "junk" into cash?

Let us have a rummage sale. The word "rummage" has been especially chosen, with due regard to the jewelers' known aversion to cut-price sales. In this connection, however, it has no real drawbacks. It is identified and perhaps dignified by its association with church functions. It typifies just what you want it to typify—that is, a temporary sale that is over and done with and everybody gets a bargain. It is our suggestion that all the items which are in the left-over class be put in this special rummage sale.

If you are fearful of running this sale under your own auspices, let me suggest that perhaps the Ladies' Aid Society of your church, or some other society, may be very glad to take it over for a percentage of the proceeds. After they have accepted the proposition, which you may have to work up in detail, the goods can be taken bodily from your store and put down in the rooms under the church, the sale conducted, and you are sure of success, especially as most members of this

society will want to make it a success and will buy something themselves.

Certain gift shops have made very effective use of letters to customers detailing the rummage-sale plan. Let me suggest an opening sentence in your letter to the woman which will minimize any possible danger for you:

> "DEAR MADAM: We have taken a leaf from the Housewife's Book and plan to have a Spring Rummage Sale March 15th. Many of the items which have been put in our special-sales group represent real bargains. It would be a pleasure to show you these goods," etc., etc.

To some jewelers the plan outlined above may sound like department-store methods, but you must be in line with the times, and if you are going to keep in touch with youth, fashion and style, you must have a method of keeping your house clean. Two things are definitely accomplished. It not only cleans your business house, but it gets more and new customers into the store—the first requisite of turnover.

POSITION OF SILVER-PLATED WARE

I was amazed to learn at a recent jewelers' convention in Cincinnati that there is approximately $500,000,000 annual jewelry business. I cannot vouch for these figures, but have since been assured that they are correct. If this statement is true, then indeed silver-plated flatware assumes a most important place, since, to my personal knowledge, it has an annual volume of $50,000,000. In other words, the line represents 10 per cent. of the total jewelry business and, as such, should receive a proportionate amount of effort. It is an admitted fact that, as an industry, this line has spent more time and money in creating consumers' demand and in merchandising its goods than any other class of semi-luxury goods. By reason of the manufacturers' efforts, a good quality of silver-plated flatware has become a necessity in every home. This business is profitable and shows a faster turnover than 75 per cent. of the items found in the ordinary jewelry stores. Don't let this business get away from you. Every other merchant in town is daily selling and pushing nationally advertised goods which show even less profits.

Repair Department

Many people feel that the repair department is responsible for most of the non-merchandising in the jewelry business, especially since it takes time that could profitably be devoted to selling. On the other hand, many jewelers would say that throughout the dull seasons they absolutely live on the repair work. Also, that the clientele and profits of the repair department provided their entrance fee into the jewelers' club. Watch-repairing ends as a major interest the day you rent a store on the main street and purchase a stock of goods. From that minute on, your major interest is to sell goods to the consumer, and the repair department is only a side line. But even a side line which brings people into your store can be merchandised. Several suggestions follow:

I mentioned a few moments ago your being the authority in your town. On engraving you are the absolute authority. What suggestions do you offer your customers as to how various articles should be engraved? What suggestions can manufacturers give you? In September of this year we plan to distribute to every retail jeweler in the United States definite information as to how various pieces of silver-plated flatware can be engraved. There will be a card for each pattern and a facsimile of every letter in the alphabet will be shown on this card. We believe that silverware patterns have individuality and, to protect this individuality, proper engraving is necessary. Our suggestion with respect to these cards is that you use single-letter engraving, since most engraving is done free of charge.

Today every home receives letters from retail merchants suggesting the purchase of various articles, but I have yet to receive a letter written by our local jeweler in which he states that he can fix up the watch or pieces of jewelry that have been laid aside because of defects. If he should send me this word, there is no question but that the three or four items now reposing in my dresser drawer would be sent for his attention. Furthermore, it is a justifiable excuse for him to write me and let me know that he is in business. When I go to his store, if his repair department is located somewhere in the back and where there is proper lighting, it will force me to pass his window and showcases that have been properly dressed and priced to attract my attention.

How often do you send out letters or postal cards on completed repair jobs? Some months ago, in talking with a local jeweler, he com-

plained seriously regarding lack of finances. We were at his repair bench and I noticed two large chests of drawers filled with completed repair jobs. I was astonished to learn that he had done nothing to relieve this situation for some months. Upon suggestion, he sent out some two hundred postal cards asking the customers to call for their completed work as he was leaving on a vacation. He got in more than half of the outstanding amount within two weeks.

We have prepared literature on all three of the suggestions outlined above and will very gladly give it out upon request.

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To explain this question mark, I must use another illustration. Some years ago the druggists were in a worse situation than is the present-day jeweler; that is, they were pharmacists, and people only went to the drug store to get prescriptions filled. Then someone had the bright idea of putting in the soda fountain. The soda fountain brought people into the store. In turn, the drug merchant stocked popular-priced goods and nationally advertised lines. As a result, his sales and profits have been constantly increasing. Now, the soda fountain has no more place in the drug store than it has in the shoe store, the hardware store, or the jewelry store; no more place than the restaurant in the dry-goods store, but it does get people into the store. During this discussion I have given many suggestions starting with Buying and ending with Inventory, and if some of these suggestions are followed, perhaps a part of this question mark could be obliterated, but the jewelry trade needs to find something just as effective as the soda fountain proved in the drug trade. *Modern-day retail business is a labyrinth of bypaths with failure on every hand. Merchandising is the only thread to success.*

BULLETIN NO. 38

HARVARD BUREAU OF BUSINESS RESEARCH
OPERATING EXPENSES IN
RETAIL JEWELRY STORES IN 1922

(Reprinted by Courtesy of Harvard Bureau of Business Research)

Introduction

The average figures for operating expenses in 302 retail jewelry stores in 1922, presented in this bulletin, constitute the Bureau's fourth annual summary of the cost of doing business in the retail jewelry trade, previous reports having been published for 1919, 1920 and 1921. The figures for 1922 bring to light several characteristic problems of the retail jewelry business, and are especially significant as indicating the difficulties encountered in readjusting ratios of expense to sales following a period of particularly severe depression.

For the merchandise business of 171 jewelry stores, as distinguished from the repairing business, the average ratio of total expense to net sales for 1922 was 40%. The average gross margin of 38.6% was insufficient to cover this expense; consequently, these 171 firms sustained an average net loss of 1.4% of their net merchandise sales. As a group, jewelry firms with net merchandise sales below $20,000 in 1922 had the largest number of losses, while those with net sales above $50,000 in the majority of cases showed a small net profit. The geographical distribution of profits and losses was such as to indicate that retail jewelry firms in the northeastern section of the country operated to greater advantage in 1922 than those in other sections of the United States. Stocks of merchandise in these 171 retail jewelry stores were turned during 1922 at the slow rate of 0.8 times annually, or approximately once in 15 months.

For this group of 171 stores, repairing receipts constituted 16.8% of the total net merchandise sales plus repairing receipts. On the basis of repairing receipts as 100%, the average total expense of the repairing business was 86.6%, and the typical net profit 13.4%. The average

combined net profit of the merchandise business and the repairing department amounted to slightly more than 1% of the total net merchandise sales plus repairing receipts.

Profit-and-loss statements were submitted to the Bureau for 1922 by 363 retail jewelry firms situated in 45 states and Canada. The aggregate volume of net merchandise sales plus repairing receipts for these firms in 1922 was $26,600,000. Of these 363 statements, some were not fully comparable because they had not been filled out in detail, and a few were received too late for inclusion in the tabulations. The data in this bulletin, therefore, are based on reports for 302 retail jewelry stores with an aggregate volume of net merchandise sales and repairing receipts of $25,700,000 in 1922.

The Bureau believes that the reports from these 302 retail jewelry firms constitute a fair sample of conditions in the retail jewelry trade in 1922. In all, 8,345 retail jewelry stores were given an opportunity to submit their figures for use in this survey of the cost of doing business. Since one or more additional letters were sent to firms failing to respond to the first request, the Bureau mailed 17,378 letters in circularizing this trade. The cost of this survey, including the expense of circularizing, of analyzing reports, and of preparing and publishing this bulletin, was met out of funds provided by the American National Retail Jewelers' Association. The executive officers of this Association, as well as the officers and members of various state and local jewelers' organizations, were of material assistance in enabling the Bureau to secure reports for 1922 from a larger number of retail jewelry firms than ever before had participated in this cost research.

All statements from individual firms used in the tabulations for this bulletin were adjusted to the standard classification of accounts explained in Bulletin No. 15, *Operating Accounts for Retail Jewelry Stores*. Only in this way could the Bureau, as well as the firms co-operating, be assured that all figures were on a uniform basis for comparison, and that differences in the figures represented real differences in conditions and not merely differences in the bookkeeping methods of firms reporting. In assisting the Bureau's staff to adjust the figures to a comparable basis, the answers to the supplementary questions on the profit-and-loss form were of especial value. In a majority of cases, however, it was necessary to write letters to secure the additional information essential for a complete adjustment. No statement was included

in a tabulation unless the figures were in all respects comparable with those received from other retail jewelry firms in the same group.

In computing percentages of expense incurred in selling merchandise, as well as the percentages of profit or loss resulting, the figure for net sales of merchandise was used as 100% throughout the tabulations for this bulletin. Similarly, expenses and profits of the repairing department were expressed as percentages of the net repairing receipts.

Net Sales in 1922

In determining net sales, the 5% federal tax was deducted wherever it had been included in gross receipts. Likewise the value of merchandise returned by customers and allowances made to customers on defective merchandise were deducted from gross merchandise sales, including both cash and charge sales. The amount of such returns and allowances was not large in a majority of cases. A tabulation made of returns and allowances for 88 firms that reported this item separately indicated that the average figure was slightly less than 1% of gross sales. In other words, a typical retail jewelry firm with net merchandise sales of $30,000 had returns and allowances in 1922 amounting, on the average, to not more than $300. It is not indicated, therefore, that returns and allowances constitute a particularly serious problem for the average retail jewelry firm.

Since the figures received by the Bureau for retail jewelry firms for 1920 and 1921 indicated that net sales of merchandise in 1921 were approximately 15% less than the net sales of the same stores in 1920, a similar comparison was made of the net sales of a group of identical firms reporting for both 1921 and 1922. For the 132 retail jewelry stores that submitted statements for both 1921 and 1922, the aggregate volume of net merchandise sales rose from $9,700,000 in 1921 to $10,300,000 in 1922, an increase of approximately 6%. For this same group of 132 stores, repairing receipts decreased from $1,385,000 in 1921 to $1,370,000 in 1922, a decline of slightly over 1%. These figures indicate some recovery in volume of merchandise sales from the low point of 1921, and are in contrast with figures showing a decrease in net sales for 1922 as compared with 1921 in two other fields of retail trade, namely, retail shoe stores, and department stores with sales under $1,000,000. By itself, the decrease in repairing receipts for these 132 jewelry stores probably is without significance, but in conjunction

with the increase in merchandise sales of the same firms it presumably indicates greater attention given to merchandise problems during 1922. This increase in the net sales of merchandise in 1922 as compared with 1921 is distinctly encouraging. Although the repairing department serves as a valuable backlog in periods of depression, and at all times gives the jeweler an opportunity to emphasize the service feature of his business, the average jeweler will find that in the long run sales of merchandise afford the principal opportunity for net profits.

One of the characteristic problems of the retail jewelry business is presented by the high seasonal sales peak. Because of the inevitable relation of the retail jewelry business to the practice of giving gifts, it is only natural that the sales volume of merchandise should be large during December as compared with other months in the year. The disparity, however, between December sales and those of other months is so great as to aggravate the management problems of the average retail jewelry store. Reports received by the Bureau for 1920, for instance, indicated that, on the average, more than one-quarter of the annual sales were made during December. In order to test the reliability of this figure, figures for sales of merchandise by months again were obtained for 1922. One hundred fifty-five firms reported monthly figures for sales of merchandise that could be used in the following tabulation. For these firms, the common figure for each month's percentage of the total merchandise sales during 1922 is shown in Table 1.

TABLE 1

MONTHLY SALES OF MERCHANDISE IN RETAIL JEWELRY STORES IN 1922—155 FIRMS

(Repairing Receipts Not Included)

Month	*Percentage of Net Merchandise Sales for Year*	*Month*	*Percentage of Net Merchandise Sales for Year*
January	5.1	July	5.9
February	4.5	August	6.3
March	5.2	September	7.1
April	5.6	October	6.9
May	6.9	November	7.4
June	7.9	December	31.2

As Table 1 indicates, almost one-third of the total sales of merchandise in 1922 in a typical retail jewelry store was made in December. This high figure for sales in December of 1922 may be accounted for in part by the fact that general business activity was considerably more pronounced in the latter part of the year than during the opening months. The improvement in business conditions coming at this time may have exaggerated the usual seasonal sales peak. It is quite possible, therefore, that the normal proportion of December sales to those of the other months of the year is not so high as the 1922 figures seem to indicate.

MONTHLY SALES OF MERCHANDISE IN RETAIL JEWELRY STORES IN 1922—155 FIRMS

(Repairing Receipts Not Included)

This distinctly seasonal character of the retail jewelry business, nevertheless, presumably is one of the causes of the relatively high common figure for total expense in this trade. In many respects, retail jewelry stores are operated throughout the eleven lean months of the year on a scale commensurate with the holiday trade. Owing to the specialty character of the jewelry business, it appears difficult for a jewelry store to expand and contract its sales facilities in accordance with this pronounced seasonal variation.

In the sale of numerous articles of merchandise, retail jewelry stores are in competition with department stores where the possibilities of shopping attract many potential purchasers; and in the sale of certain other articles, on the other hand, retail jewelers are forced to meet the competition of stores handling mainly convenience goods, such as drugs and hardware. Both these groups of competitors have the advantages of more rapid stock-turn and lower ratios of total expense to net sales. Some jewelers are meeting this competition directly by enlarging the variety of merchandise offered and by striving for a higher rate of turnover and lower expense ratios. Other retail jewelry merchants have endeavored to cope with these conditions by withdrawing from direct competition with department stores and convenience goods stores and concentrating their efforts on merchandise that gives them an opportunity to emphasize the specialty aspects of the jewelry business. This situation makes it of interest to know the approximate

sales of retail jewelry stores according to merchandise classifications. Table 2 shows approximate sales in 1922 according to different groups of merchandise for 87 firms that were able to furnish these data. For a typical store in this group, for instance, sales of jewelry in 1922 amounted to approximately 25% of total sales of merchandise, and sales of precious stones amounted to approximately 21%.

The accumulation over a period of years of such figures as those presented in Table 2 will indicate to what extent the character of the retail jewelry business is changing under the stress of competition. All the 87 firms in this group, with one or two exceptions, reported sales of precious stones, jewelry, jeweled watches and silverware. Seventy-six reported sales of clocks; 77, sales of cut glass and china; 74, sales of toilet goods and novelties; 36, sales of stationery, and 66, sales of other articles.

TABLE 2

APPROXIMATE SALES IN RETAIL JEWELRY STORES IN 1922
BY MERCHANDISE CLASSIFICATIONS—87 FIRMS
(*Repairing Receipts Not Included*)

Merchandise Classifications	*Percentage of Net Merchandise Sales for Year*
Jewelry	25
Precious Stones	21
Clocks	3
Jeweled Watches	15
Silverware	14
Cut Glass and China	3
Toilet Goods and Novelties	6
Stationery	4
Other Articles	9

The classification of sales according to different groups of merchandise is an essential feature of any plan for proper merchandise control. In addition to the classified record of sales, if similarly classified figures also are kept for purchases and stocks, they can be used to facilitate intelligent buying and to show the rate of stock-turn secured and the gross margin realized for each different group of merchandise.

The Merchandise Statement

The larger part of the net sales of merchandise in the retail jewelry business, of course, is required to meet the cost of merchandise sold; the remainder constitutes the jeweler's gross margin. According to the standard classification of accounts, the cost of merchandise sold is arrived at by subtracting the net inventory at the end of the year from the sum of net inventory at the beginning of the year, purchases of merchandise at billed cost, and inward freight, express and cartage, less cash discounts taken. The cost of merchandise sold deducted from net sales leaves gross margin, the amount from which the expense of operating the business must be paid and the net profit, if any, obtained. The cost of merchandise sold is the figure that is divided by the average inventory at cost to determine the rate of stock-turn.

These relationships are illustrated by the following sample merchandise statement:

Gross Sales		$50,000		
Returns and Allowances		450		
Net Sales			$49,550	100%
Net Inventory of Merchandise at Beginning of Year	$24,400			
Purchases of Merchandise at Billed Cost	33,000			
Inward Freight, Express and Cartage	300			
Gross Cost of Merchandise Handled		$57,700		
Cash Discounts Taken		1,218		
Net Cost of Merchandise Handled		$56,482		
Net Inventory of Merchandise at End of Year		26,432		
Cost of Merchandise Sold			30,050	
Gross Margin			$19,500	
Rate of Stock-turn	1.2 times a year			

In this statement, net sales were $49,550, the difference between the gross sales of $50,000 and returns and allowances of $450. The sum of net inventory of merchandise at the beginning of the year, purchases of merchandise at billed cost, and inward freight, express and cartage was $57,700, the gross cost of merchandise handled. From this were deducted the cash discounts taken, amounting to $1,218. Thus $56,482 was left as the net cost of merchandise handled, from which was subtracted the net inventory at the end of the year, $26,432. The remainder was the cost of merchandise sold, $30,050. Deducting the cost of merchandise sold from the net sales of $49,550 left a gross margin of $19,500. The average of the inventories at the beginning and at the end of the year was $25,416, and this figure divided into the cost of merchandise sold, $30,050, gave the rate of stock-turn, 1.2 times for the year.

The necessity cannot be too strongly emphasized of taking actual physical inventories at cost or market, whichever is lower, at regular intervals for the purpose of ascertaining accurately the gross margin that has been realized. Several jewelers follow the practice of making a notation of the cost of the merchandise sold each time a sale is made. In this way they accumulate figures for the cost of merchandise sold during a period. This plan is advantageous in that, by deducting the cost of merchandise sold from the sum of the previous inventory and subsequent purchases, the retailer can secure at any time a book figure for the cost value of goods that should be on hand. This book figure should be checked at frequent intervals, however, by an actual physical inventory. In the first place, stock shortages may have been caused by theft, or otherwise. Merchandise, furthermore, may have depreciated in value. The amount of such shortage and depreciation can be discovered only by an actual physical inventory. In other words, the real cost of merchandise sold includes losses from depreciation and stock shortage. If a merchant relies wholly upon the book figure for the cost of merchandise sold, he is in danger of overestimating his real profits.

The Expense Statement

As explained in Bulletin No. 15, *Operating Accounts for Retail Jewelry Stores*, total expense, which is the entire cost of doing business for retail jewelry stores, included not only the expenditures for such items as

wages of salesforce, advertising, office supplies, insurance and taxes, but also rent for the store, whether owned or leased, a fair salary for proprietor or partners equivalent to what they could earn if employed elsewhere in similar positions, and interest both on capital borrowed for use in the business, and also on the firm's net investment in the business. In computing their own total expenses, many jewelers have been prone to overlook these last three items.

From the Bureau's standpoint it is, of course, clear that proprietor's salary, rent of owned buildings and interest on the firm's own capital invested in the business must be considered as operating expenses if fully comparable figures are to be had for jewelry stores operating under different conditions. The individual merchant, furthermore, must include these items in his expense calculations if he is to know exactly how his business stands, and whether the results justify the employment of his own time and money in the business as an individual enterprise. There can be no doubt that the proprietor of a retail jewelry store is entitled to draw a salary equivalent to the amount he could earn if employed by another firm in a similar capacity. In the case of owned real estate used in the business, expenses are incurred for taxes, maintenance and depreciation, and the business, therefore, should stand a rental charge equivalent to the amount for which the premises could be leased to another firm. The proprietor's capital, if carefully invested in other business enterprises, furthermore, would yield him a return without effort on his part. Why, therefore, should he engage in business on his own account, and incur the numerous risks attendant on such an undertaking, unless he can secure a larger return than he would obtain from the interest on his capital invested elsewhere, from his store building rented to someone else, and from his own salary received as an employee of another firm? Unless a retail jeweler takes care to charge all proper expenses against his business, he cannot be certain that he is earning a real net profit. For instance, one statement submitted to the Bureau by the proprietor of a small jewelry store showed a net profit of approximately $320 for 1922, but no charge had been made for interest on owned capital. From the financial statement, it was ascertained that the worth of this business was approximately $17,500. Interest on this amount at 6% for one year amounted to approximately $1,050, and when this sum was included in expenses, the real result of the business was shown to be a net loss of approx-

imately $730. The $1,050 interest on owned capital, of course, did not represent money actually paid out and was credited back to the business under interest and rentals earned; thus the total net gain remained at $320. The figure of $1,050 for interest on owned capital, however, represented income which the proprietor might have secured on his capital if it had been conservatively invested in other enterprises. Hence, his total net gain for the year was less than the income he might have had if he had not been engaged in business on his own account. Knowledge of the facts, even though in no way altering them, at least aids a merchant in planning intelligently for the future.

Net Profit

Net profit is determined by deducting total expense from gross margin. Where the total expense exceeds the gross margin, a net loss results. In the example previously given, where the gross margin was $19,500, if the total expense had amounted to $18,000, the net profit would have been $1,500. If, however, total expense had been $20,000, there would have been a net loss of $500. Inasmuch as proprietor's salary, rent of owned building, and interest on the net investment are included in total expense, net profit, as defined for the purposes of this study, is in part a return to the proprietor for the exercise of special effort and foresight in the management of his business, and in part compensation for the risks incurred. Occasionally, of course, net profits as well as net losses are attributable to fortuitous circumstances. As here defined, net profit is not to be confused with total net gain or with total taxable income. Net profit, in the sense of the purely residual amount that is left after meeting all proper expenses, including interest on the investment, is a real measure of the effectiveness of the management of an individual enterprise. The hope of net profit is the incentive for men to engage in business undertakings on their own account rather than to seek employment with others.

Separation of Repairing Receipts and Expenses

When the Bureau first undertook the collection of figures on operating expenses in retail jewelry stores, it became apparent that some of the most important problems of the trade centered around the relations of the repairing department to the merchandise business. Sim-

ilarly, the proper separation of repairing receipts and expenditures from the merchandising figures has constituted the greatest difficulty encountered by the Bureau in obtaining fully comparable figures on the cost of doing business. It was recognized readily that the operations and results of these two departments were not fairly comparable. In the merchandise department, the store-management problems are those of buying and selling goods, and the larger part of the consumer's dollar is required to cover the cost of merchandise, considerably less than one fifth of it, on the average, being required to pay salaries and wages. The problems of the repairing department, on the other hand, are more nearly those of manufacturing than of merchandising. In the repair department, the jeweler sells the proficiency and service of his shop instead of an article of merchandise from his shelves that he has bought previously from a wholesaler or manufacturer. In the repairing department, therefore, approximately 50 to 75 cents of the consumer's dollar is paid out in salaries and wages. With these differences in view, it is readily understandable why a retail jeweler should keep separate accounts, so far as practicable, for his merchandise business and his repairing business, in order to be in a position to know whether each is conducted in a profitable manner or whether one is carried as a burden by the other.

From the Bureau's point of view, in securing comparable figures it is necessary to have as great a degree of separation as possible. In some retail jewelry stores, particularly those with a comparatively small volume of total net receipts, it is by no means uncommon for the repairing receipts to constitute from 25% to 50% of the entire volume. For numerous jewelry stores, on the other hand, repairing receipts amount to not more than 5% or 10% of the total. Because of the entirely different division of the consumer's dollar in these two departments, it would be wholly inaccurate and misleading for the Bureau to compare the sales and expenses of a store in which a third of the business was repairing with the sales and expenses of a store in which only 5% of the business was repairing.

At the same time, when the Bureau undertook this work, the practical aspect of the situation was recognized; namely, that the bookkeeping methods of the average retail jeweler had not yet developed to a point where it was feasible to divide accurately all expenses, particularly fixed charges and upkeep, between the merchandise and repair-

ing departments. Because of this, when the Bureau prepared Bulletin No. 15, *Operating Accounts for Retail Jewelers*, it was considered advisable that, for the time being, a division should be made only so far as concerned repairing receipts and direct expenses for labor and materials.

Proceeding on this basis, the Bureau tabulated common figures only for the reports on which receipts and direct expenses of the repairing business were separated from figures for the merchandise business. Frequently, where such separation had not been made in detail by the individual jeweler, it was possible for him to make fairly accurate estimates that were acceptable to the Bureau. These adjustments were handled by correspondence in individual cases.

Under this plan of partial separation, the repairing receipts were not included in the net sales figures used as 100% in computing percentages of profit and loss. Similarly, purchases of material for the repairing department were excluded from the figure for purchases of merchandise, and the wages paid to repair men, including part of the salary of the proprietor, proportionate to time spent in repairing, were excluded from the figures for wages of salesforce and buying, management and office salaries. This method did not provide for charging the repairing department with a fair share of rent, heat, light, insurance, taxes and other fixed expenses. Although in many cases it was to be assumed that only small portions of these expenses were chargeable to repairing, the Bureau recognized the fact that, for a jewelry store in which repairing represented from 25% to 40% of the total volume of business, the percentage figures for fixed charges, such as rent and interest, could not be figured fairly on the basis of a net sales figure from which repairing receipts had been excluded. Although realizing fully the difficulties attendant on a complete separation of all expenses chargeable to the repairing department, the Bureau undertook to secure by means of correspondence with individual firms data that would enable it to make a preliminary separation for 1922 of all expenses properly incurred by the repairing business.

The separation previously made of receipts, purchases and direct expenses, of course, was continued. In addition, inquiry was made as to what proportion of the time given by the proprietor to buying and management was spent in managing the repairing department and in buying supplies for it. On the basis of the replies to this question, part

of the salary of the proprietor or partners was charged to the repairing department. Retail jewelry firms also were asked what proportion of the total space in their stores was used for the repairing department, and on this basis part of the rent expense was allocated to repairing. The separation of heat, light and power expense was made on the same basis. In the case of taxes and insurance, the repairing department was charged with a part of the total outlay for taxes and insurance based on the proportion that the sum of the net inventory of repairing materials, supplies and equipment bore to the sum of the net inventory of merchandise, the net inventory of supplies and the net inventory of equipment for the entire store. Likewise, the repairing department was charged with a part of depreciation expense based on the proportion that the net inventory of equipment for the repairing department bore to the net inventory of equipment for the store as a whole. In the case of interest, the repairing department was charged with a part of the total interest, including both interest on borrowed capital and interest on owned capital, based on the proportion that the sum of the repairing department's accounts receivable, net inventory of materials, net inventory of supplies, and net inventory of equipment bore to the sum of the accounts receivable, net inventory of merchandise, net inventory of supplies, and net inventory of equipment for the entire business. In addition, retail jewelers were asked to state what part of their expenses for losses from bad debts and for repairs of store equipment were chargeable to the repairing department, and the transfers were made accordingly. In all instances, of course, the amounts that were charged as expenses of the repairing department were deducted from the corresponding expense figures for the merchandise business.

Although this separation of expenses between the merchandise business and the repairing department in accordance with estimates furnished by individual retail jewelers was necessarily liable to a certain amount of error, the Bureau is confident that the figures secured by this method represent a distinct improvement and are the most reliable for purposes of comparison that have been obtained thus far for the retail jewelry trade.

Of the 302 retail jewelry stores whose reports were used in the preparation of this bulletin, 171 were able to furnish information on the basis of which it was possible to make a complete separation of all expenses of the repairing department, and the principal tabulations

for this bulletin were based on these 171 reports. Seventy-seven firms were able to separate repairing receipts, purchases of materials and wages of employees in the repairing department, but were unable to furnish information on the basis of which management expenses and fixed charges could be separated. For purposes of comparison, the figures submitted by these firms were tabulated separately. There was a group of 54 retail jewelry firms that was unable to make any separation of the receipts, purchases and expenses of their repairing departments. A third separate tabulation was made of the figures for these firms.

The Use of Common Figures

In the tables in this bulletin, the common figures for each item of expense in retail jewelry stores in 1922, for gross margin, for net profit or loss, and for the rate of stock-turn are given for firms grouped in various classes. The common figure in each case is a typical figure, determined by approved statistical methods, with which each individual retailer can compare the figures for his own business. This common figure is the one around which the figures from all the individual reports in a group tended to center; it was not influenced by extremes. As previously indicated, the most representative figures for purposes of comparison are the common figures for the 171 stores for which a complete separation was made of repairing receipts, purchases and expenses.

A retail jeweler can place the percentages shown on the report for his own firm beside the table of common figures for this group of 171 firms and thus be able to judge how closely his results compare with the averages for representative jewelry stores for 1922. In addition, he can make comparisons between his own figures and averages for jewelry stores of similar size, as well as averages for those located in the same section of the country. For example, if the net sales of merchandise in a retail jewelry store amounted to $40,000 in 1922 and the wages of salesforce were $4,800, or 12% of the net sales, the proprietor can find by comparisons with Table 4 that this figure for wages of salesforce was 0.7% higher than the common figure for 171 retail stores in 1922. This firm also will find by comparison with Table 5 that its figure for wages of salesforce was 1.3% higher than the common figure for wages of salesforce for 61 firms with sales between $20,000 and

$49,000 in 1922. If this firm is situated in the northeastern section of the United States, furthermore, it will find by comparison with Table 9 that its wages of salesforce figure of 12% of net sales was 1.1% higher than the common figure for 52 retail jewelry stores in the same part of the country. Comparison also may be made with the common figures for firms having approximately the same rate of stock-turn. If this firm, for example, had a rate of stock-turn of 1.1 times in 1922, it can find by comparison with Table 10 that its salesforce expense was 2.2% higher than the common figure for 64 firms with a rate of stock-turn of once a year or more.

Such comparisons as these are of practical value to a retail jewelry firm in indicating the directions in which it should seek to effect economies in operating expenses. By comparing each expense item with the corresponding common figure given in this bulletin, a proprietor of a retail jewelry store can see at once wherein his expenses are higher or lower than the averages for other firms. Unless he has this information, he is handicapped in his efforts to reduce expenses. It is difficult to check leaks in a business when their location is unknown. If, by comparison with the common figures given in this bulletin, a retail jeweler finds that his figure for wages of salesforce is higher than the common figure for other firms, or if he finds that boxes and wrappings, or office supplies, or insurance, or any other item in his store exceeds the averages for those items in other stores, the next step is to make a careful examination of the factors affecting that particular part of the business, with a view to reducing the expense.

In Part I of this bulletin are given common figures for 1922 for 171 retail jewelry firms for which a complete separation was made of the repairing figures. Part II presents common figures for the firms making only a partial separation of expenses for the repairing department, and Part III presents common figures for firms that found it impossible to make any separation of the repairing figures.

PART I

OPERATING EXPENSES, PROFIT OR LOSS, AND STOCK-TURN FOR 171 RETAIL JEWELRY FIRMS IN 1922—REPAIRING RECEIPTS AND EXPENSES SEPARATED

The 171 jewelry firms that furnished data permitting a complete separation of repairing figures on their reports for 1922 were located in 37 states and Canada. Their aggregate net sales of merchandise were $14,223,000, and their total repairing receipts $1,779,000. The net merchandise sales of individual firms for 1922 exhibited an especially wide range, from $2,000 to $1,328,000. Of these firms, 112 were situated in cities with population less than 50,000, 16 in cities with population between 50,000 and 99,000, 33 in cities with population between 100,000 and 499,000, and 10 in cities with population of 500,000 or over. In Table 3, these 171 retail jewelry stores are grouped according to their volume of merchandise sales in 1922. This table shows, for instance, that there were 68 firms each of which had net merchandise sales of less than $20,000 in 1922.

TABLE 3

VOLUME OF BUSINESS FOR 171 RETAIL JEWELRY FIRMS IN 1922

(Repairing Receipts Not Included)

Group	*Net Merchandise Sales*	*Firms Reporting 1922*
A	Less than $20,000	68
B	$20,000 to $49,000	61
C	$50,000 and over	42
	Total number of firms	171

As in other years, by far the majority of retail jewelry firms reporting to the Bureau had net sales of merchandise less than $50,000.

Table 4 gives common figures for these 171 firms for each item of operating expense, for gross margin, for net loss and the common figure

for the rate of stock-turn. The common figures for various items of expense, for gross margin and for net loss are based on net sales of merchandise as 100%. At the bottom of the table are given common figures, based on repairing receipts as 100%, for the expense and profit of the repairing department. For these firms, repairing receipts constituted, on the average, 16.8% of the total net merchandise sales plus repairing receipts.

Wages of Salesforce

For wages of salesforce, the common figure was 11.3% of the net sales of merchandise for these 171 retail jewelry firms in 1922, or $3,955 for a typical jewelry store with net merchandise sales of $35,000. For stores where the proprietor or manager spent part of his time in selling merchandise, a part of his salary was charged to wages of salesforce proportionate to the time spent in selling. Wages of salesforce, of course, was the largest single expense item for retail jewelry stores in 1922. Although 11 retail jewelry firms reported wages of salesforce amounting to 20% or more of net sales, there was a strong grouping of figures in the lower part of the range around 9% of net sales. Presumably, the high seasonal peak in the jewelry business is partly responsible for the relatively large salesforce expense. A force of competent salespeople cannot be expanded and contracted readily in accordance with this seasonal fluctuation of sales. Nevertheless, because of the importance of this item of expense, retail jewelers will find it advantageous to make an effort to discover methods of increasing their volume of sales per employee. It is unlikely that reductions in salesforce expense can be secured by cutting down the number of employees or decreasing their remuneration. In some stores, improvement in lay-out, in display facilities, in advertising methods and in the selection of merchandise might be indirectly instrumental in reducing the ratio of wages of salesforce to net sales of merchandise.

TABLE 4

OPERATING EXPENSES, GROSS MARGIN, NET LOSS AND STOCK-TURN FOR 171 RETAIL JEWELRY FIRMS IN 1922

(Repairing Receipts and Expenses Separated)

Net Sales — 100%

Merchandise Departments	*Common Figures Per cent.*
Wages of Salesforce	11.3
Advertising	3.1
Boxes, Wrappings and Other Selling	1.2
Total Selling	15.6
Delivery	0.3
Buying, Management and Office Salaries	6.0
Office Supplies, Postage and Other Management	0.8
Total Buying and Management	6.8
Rent	4.8
Heat, Light and Power	0.9
Taxes (except on buildings and income)	1.3
Insurance (except on buildings)	0.8
Repairs of Store Equipment	0.4
Depreciation of Store Equipment	0.8
Total Interest	5.9
Total Fixed Charges and Upkeep	14.9
Miscellaneous	1.9
Losses from Bad Debts	0.5
Total Expense	40.0
Gross Margin	38.6
Net Loss	*1.4*
Stock-turn (times a year)	0.8

Repairing Receipts — 100%

Repairing Department	*Per cent.*
Salaries	59.4
Supplies and Other Expense	27.2
Total Expense	86.6
Net Profit	13.4

Average Proportion of Repairing Receipts to Total Net Merchandise Sales, plus Repairing Receipts	16.8%

Advertising

For advertising expense in 1922 for these 171 retail jewelry firms, the typical figure was 3.1% of net sales of merchandise, or $775, on the average, for a representative retail jewelry firm with net merchandise sales of $25,000. All these firms reported some advertising expense. In 10 cases, the outlay for advertising was more than 6% of net sales, but for 20 firms it was less than 1%. The average figure of 3.1% of net merchandise sales for advertising expense is by no means excessive; on the other hand, it is to be expected that well-directed sales promotion efforts in many stores will aid in increasing the sales volume sufficiently to lower this ratio.

Boxes, Wrappings and Other Selling

Thirty-two retail jewelry firms reported no expense for boxes, wrappings and other selling. This omission does not imply, of course, that such expenses were not incurred, but rather that they were lumped in a miscellaneous or general-expense account instead of segregated under this heading. For the firms segregating this expense, the common figure was 1.2% of net sales of merchandise, or an average of $480 for a typical jewelry store with net merchandise sales of $40,000. The range was from below 0.2% of net sales to above 3%, with a fairly well-marked concentration around the common figure.

Total Selling

For total selling expense, the sum of wages of salesforce, advertising and boxes, wrappings and other selling, the common figure was 15.6%

of net sales of merchandise, with a range from less than 10% to above 25%. There were also minor groups both below and above the common figure, at 12% and 17%.

Delivery

One hundred and five firms in this group reported no delivery expense. The common figure for the others was 0.3% of net merchandise sales. This evidently is a comparatively unimportant item of expense for most jewelry stores.

Buying, Management and Office Salaries

The common figure for buying, management and office salaries was 6% of net sales of merchandise, with a range from below 2.5% to above 10%. For a typical retail jewelry store with net merchandise sales of $50,000, this expense amounted on the average to $3,000. The grouping of the figures, however, was such as to indicate a tendency toward a somewhat lower figure for this item. There was a fairly strong concentration around 4%, or an average of $2,000 for jewelry stores with net merchandise sales of $50,000. In addition to office salaries, this item included a part of the salary of the proprietor or partners proportionate to the time spent in buying and managing. If the proprietor or partners also engaged in selling, or in repair work, the salary was divided according to the time spent, rather than included as a total in buying, management and office salaries.

Office Supplies, Postage and Other Management

The common figure for office supplies, postage and other management expense was 0.8% of net sales of merchandise, or $160, on the average, for a typical firm with net merchandise sales of $20,000. The range on this item was especially wide, from less than 0.3% to 3% and over. There was a fairly well-marked concentration around 0.6%, indicating a tendency toward a somewhat lower figure for this expense.

Total Buying and Management

For total buying and management expense, including buying, management and office salaries, and office supplies, postage and other management, the common figure was 6.8% of the net sales of merchandise. The range was from less than 3% to above 14%, with no strongly marked point of concentration.

Rent

Figures reported for rent exhibited a wide range, from less than 2% of net sales to above 12% in several instances. The grouping was fairly well defined, however, around the common figure of 4.8% of net sales of merchandise, or $1,920 for a representative firm with sales of $40,000. This figure included rental charges for store buildings that were owned as well as for those that were leased. For 37 firms in this group, rent expense amounted to more than 7% of net sales. As previously explained, part of the rent expense was charged to repairing, in accordance with the space occupied by the repairing department; the common figure of 4.8%, therefore, represents only rent expense properly applicable to the merchandise business.

Heat, Light and Power

The figures reported for heat, light and power for these 171 retail jewelry firms ranged from below 0.4% of net sales to above 2%. There were no outstanding points of concentration, but the most representative figure appeared to be 0.9% of net sales of merchandise, or an average of $180 for a typical firm with net sales of $20,000. Here, as in the case of rent and other fixed charges, the figures represent the expense properly chargeable to the merchandise business after deductions of amounts chargeable to repairing.

Taxes

The common figure for taxes was 1.3% of net sales of merchandise, or $390 for a typical retail jewelry firm with net sales of $30,000. The range was from below 0.2% to above 3%, but the concentration was well defined around the common figure, with enough figures grouped around 0.8% to indicate a tendency toward a lower figure. This tax figure did not include the 5% federal tax, deducted from gross receipts; neither did it include federal and state income taxes, deducted from the net gain after the earnings of the business for the year had been determined. Taxes on buildings also were not included in this item, inasmuch as they were covered by rent. The relatively high common figure for taxes, as well as for several other fixed charges, is directly attributable to the slow rate of stock-turn, which results in the accumulation of large inventories of merchandise in proportion to the sales made.

Insurance

The common figure for insurance was 0.8% of net sales of merchandise, with a range from below 0.3% to above 2%. For a representative retail jewelry store with net sales of $25,000, this expense amounted, on the average, to $200. Insurance on buildings was not included in this item, since that was covered by rent.

Repairs of Store Equipment

Ninety-three firms reported no expense for repairs of store equipment. The common figure for those that did make an outlay on this account was 0.4% of net sales of merchandise, or an average of $120 for a typical firm with net sales of $30,000. As in the case of insurance, this figure did not include expenditures for repairs of store buildings.

Depreciation of Store Equipment

For depreciation of store equipment, the common figure was 0.8% of net sales of merchandise. Forty-nine firms in this group submitted no figures for depreciation of store equipment; nevertheless, depreciation of store equipment is an expense that every business incurs. If a store fixture cost $500, for example, and is expected to last ten years, the approved accounting practice is to charge $50 yearly as depreciation.

Total Interest

For these 171 retail jewelry stores, the common figure for total interest expense was 5.9% of net sales of merchandise, or an average of $2,065 for a typical firm with sales of $35,000. The range of figures reported by individual firms was from below 2.5% to more than 12% in several instances. The total interest figures represented the sum of interest paid on borrowed money and the charge for interest on the net worth of the business exclusive of real estate, since every business should yield the owner interest at a fair rate on the capital that he has invested. The average net worth of a business for the year was considered to be the sum of the assets (not including real estate or goodwill unless purchased outright) less the sum of the liabilities to outsiders. The rate of interest used in calculating the amount to be charged as interest on net worth was the ordinary rate on long-time, reasonably secure investments in the locality in which the individual business was

situated. The charge for interest on owned capital, consequently, represents the amount that the capital fairly could be expected to earn if used for purposes other than operating a retail jewelry store. Interest on owned capital, charged as expense for the purpose of determining the real net profit, in all cases was credited back to the business under interest and rentals earned. The net gain for the year, therefore, was in no way affected by including interest on owned capital as an expense.

As pointed out in more detail later in this bulletin, the rate of stock-turn bears a direct relation to the total interest expense. When the rate of stock-turn is low, merchandise is carried in stock some time before being sold, and capital, consequently, is tied up in the goods for a longer period than in stores where the rate of stock-turn is more rapid. Additional interest expense thus is incurred. A relatively high total interest expense often serves as a warning signal that attention ought to be given to buying methods and efforts made to stimulate the sale, even at a sacrifice, of accumulated stocks of slowly-moving merchandise.

Total Fixed Charges and Upkeep

The common figure for total charges and upkeep expense was 14.9% of net merchandise sales, almost as high as the common figure for total selling expense.

Miscellaneous

Miscellaneous expense for individual jewelry firms ranged from less than 0.5% to more than 5%. The common figure was 1.9% of net merchandise sales, or an average of $950 for a typical firm with sales of $50,000 annually. Thirty-eight firms reported no miscellaneous expense.

Losses from Bad Debts

Fifty-nine retail jewelry firms reported no losses from bad debts. The common figure for this expense for the other stores in this group was 0.5% of net merchandise sales, or $225 for a representative firm with sales of $45,000. Nine firms reported losses from bad debts amounting to more than 2% of net sales.

Total Expense

The common figure for total expense, or the average cost of doing business, was 40% of the net sales of merchandise for these 171 retail

jewelry firms in 1922. This figure included only the expense applicable to sales of merchandise, the expenses chargeable to the repairing department having been deducted. Twenty-eight firms reported total expense amounting to more than 50% of net sales. At the other end of the range, however, were six firms with total expense less than 25% of net sales. For a typical firm with sales of $40,000, total expenses thus amounted on the average to $16,000. A sufficient number of firms reported total expense centering around 34% to indicate that it is possible to operate a representative retail jewelry store with a lower total cost of doing business than the average figure of 40%. Among the low figures for total expense was one of 20.8%, reported by a retail jewelry firm with net merchandise sales of approximately $42,000 in 1922. This firm's rate of stock-turn was 1.6 times, its gross margin 22.7% of net merchandise sales, and its net profit 1.9%.

Gross Margin

The figures reported for gross margin, the difference between net sales of merchandise and the cost of merchandise sold, showed a marked concentration around a common figure of 38.6% of net merchandise sales, although the range was from below 20% to above 55% in several cases. For a representative retail jewelry store with net sales of $40,000, the average gross margin for 1922 thus was $15,440.

Net Loss

For this group of 171 retail jewelry firms, the average result of the merchandising operations for 1922 was a net loss of 1.4% of net sales of merchandise, or an average of $560 for a representative firm with net merchandise sales of $40,000. Figures reported by individual firms varied from net losses of more than 25% of net sales to net profits of more than 15%. Less than one-half the firms in this group showed a profit on sales of merchandise in 1922. Hence the typical figure was a net loss.

Stock-turn

The common figure for the rate of stock-turn was 0.8 times for 1922. This figure represented the frequency with which stocks of merchandise were sold and replaced, and was determined by dividing the cost of merchandise sold by the average inventory at cost. In arriving at the average inventory, the Bureau found it necessary to use the average of

the inventories of merchandise at the beginning and end of the year, although an average of monthly inventory figures presumably would have been more completely representative. Nevertheless, the rate of stock-turn as determined by dividing the cost of merchandise sold by the average of the inventories at the beginning and end of the year is serviceable for purposes of comparison, since the figures were on a uniform basis for all firms.

For the purpose of determining the rate of stock-turn, it is incorrect to divide net sales by the average inventory at cost, because the sales figure is at retail prices, which include both cost and mark-up, whereas the average inventory is at cost before any mark-up has been added. The difference in the results obtained by the two methods of computing stock-turn is illustrated by the following instance. One jeweler, in submitting his 1922 statement to the Bureau computed his rate of stock-turn at 2.1 times. His statement showed net sales of $16,793, cost of merchandise sold $9,794, and average inventory at cost $8,007. To arrive at the rate of stock-turn, he had divided net sales by the average inventory at cost, and that method of figuring indicated that he had turned his stock 2.1 times during 1922; whereas his real rate of stock-turn was 1.2 times, determined by dividing the cost of merchandise sold, $9,794, by the average inventory at cost, $8,007.

Although there was a strong concentration of stock-turn figures for individual firms around 0.8 times, the range was from below 0.5 times to above 2 times. Only four firms, however, turned their stock more than twice in 1922. As pointed out in previous bulletins, stock-turn appears to be lower in the retail jewelry trade than in any other retail trade for which the Bureau has received reports. This low rate of stock-turn was one of the chief reasons for the high cost of doing business and also accounted in part for the average net loss sustained on merchandising operations by typical firms in 1922. Among the highest figures reported for rate of stock-turn for 1922 was one of 2.6 times for a retail jewelry store with net merchandise sales of approximately $35,000. The total expense for this firm was 29.9% of net sales of merchandise, and the net profit was 5.9%.

Inventories

For 170 of this group of 171 retail jewelry firms, the total of the inventories at the beginning of the year 1922 was $8,906,466, or an arith-

metical average of $52,391 for each firm. At the end of the fiscal year, the aggregate inventory for these 170 firms was $9,014,955, or an arithmetical average of $53,029 for each firm. This increase of approximately 1.2% apparently has no special significance.

Repairing

For the 171 firms in this group, repairing receipts amounted on the average to 16.8% of the total net volume of business. Repairing receipts in dollars and cents ranged from $1,000 to $162,000. The common figure for salaries and wages chargeable to the repairing department was 59.4% of the repairing receipts. Supplies and other expenses amounted on the average to 27.2% of the repairing receipts. As previously explained, this figure included portions of management expense and fixed charges, such as rent and interest, that properly were chargeable to the repairing business. The common figure for net profit of the repairing department was 13.4% of the repairing receipts. It appears that the repairing business for many retail jewelry firms serves as a valuable stop-gap during periods when it is difficult to maintain an adequate volume of merchandise sales.

Combined Net Profit—Merchandise and Repairing

For the 171 retail jewelry firms in this group, the average net result of both the merchandise and repairing operations during 1922 was a profit slightly over 1% of the net sales of merchandise plus the repairing receipts. Thus the profit on repairing more than offset the loss on sales of merchandise.

OPERATING EXPENSES, PROFIT OR LOSS, AND STOCK-TURN FOR 171 RETAIL JEWELRY FIRMS IN 1922 ACCORDING TO VOLUME OF MERCHANDISE SALES—REPAIRING RECEIPTS AND EXPENSES SEPARATED

For purpose of comparison, reports received from retail jewelry firms for 1922 were divided into three groups according to volume of merchandise sales, as shown in Table 5. Group A included 68 firms with net sales of merchandise less than $20,000 in 1922; Group B, 61

firms with net sales of merchandise between $20,000 and $49,000; and Group C, 42 firms with net sales of merchandise of $50,000 and over. It has been the Bureau's experience heretofore in this and other retail trades that such a grouping affords particularly significant figures for purpose of comparison. By means of this classification, retail jewelers are given an opportunity to compare figures for their own businesses with averages for other retail jewelry firms of somewhere near the same volume of sales.

In Table 5 are given common figures for the various items of expense, for gross margin, for net profit or loss, and for the rate of stock-turn for retail jewelry firms in the three volume groups, A, B, and C. For all these firms repairing receipts and expenses were entirely separated from the figures relating to sales of merchandise, and at the bottom of Table 5 appear common figures, based on repairing receipts as 100%, for repairing expenses and profits for each of these three groups of firms.

Variation in common figures for wages of salesforce among the three volume groups, A, B, and C, was not great. As shown by Table 5, the common figure for wages of salesforce for Group A, retail jewelry stores with net merchandise sales less than $20,000, was slightly higher than for the other two groups. For Group C, the common figure for advertising expense was 4.3% of the net sales of merchandise, as compared with 2.6% for the stores in Group A, with sales less than $20,000. As might be expected, delivery expense was higher for the stores with sales of $50,000 and over than for the stores in Groups A and B.

Corroborating the Bureau's experience in other retail trades, buying, management, and office salaries bore a higher average ratio to net sales for stores with sales of $50,000 and over than for those with sales under that figure. The common figure for rent was highest for the stores in Group A, 5.2%, and lowest for those in Group B, 4.3%. Heat, light, and power, and taxes were highest, on the average, for the firms in Group A, and lowest for those in Group C. The common figure for total interest for the firms in Group C was 4.7% of net merchandise sales, as compared with a common figure of over 6% for the other two groups. There was a noticeable difference in total fixed charges and upkeep in favor of the stores with relatively larger sales.

Losses from bad debts also were lowest for the firms in Group C, with sales of $50,000 and over. Other variations in individual items of expense were not of great importance.

The common figure for total expense applicable to merchandies sales was lowest for the firms in Group B, 38.5%, as compared with 41.4% for the firms in Group A.

Gross margin was lowest on the average for the firms in Group A, 37.1% of the net merchandise sales, and highest for those in Group C, 40.7%.

TABLE 5

Operating Expenses, Gross Margin, Net Profit or Loss, and Stock-turn for 171 Retail Jewelry Firms in 1922 according to Volume of Merchandise Sales

(Repairing Receipts and Expenses Separated)

Net Sales—100%

	Group A Net Sales less than $20,000	*Group B $20,000-$49,000*	*Group C $50,000 and over*
Number of Firms	68	61	42
Merchandise Departments			
Wages of Salesforce	11.9%	10.7%	11.1%
Advertising	2.6	2.9	4.3
Boxes, Wrappings, and Other Selling	1.0	1.3	1.3
Total Selling	15.5	14.9	16.7
Delivery	0.1	0.3	0.5
Buying, Management, and Office Salaries	5.6	5.8	7.0
Office Supplies, Postage, and Other Management	0.9	0.8	0.7
Total Buying and Management	6.5	6.6	7.7
Rent	5.2	4.3	4.8
Heat, Light, and Power	1.4	0.7	0.5
Taxes (except on buildings and income)	1.6	1.2	1.1

TABLE 5—*Continued*

Insurance (except on buildings) .	0.9	0.7	0.8
Repairs of Store Equipment . . .	0.5	0.3	0.3
Depreciation of Store Equipment	0.9	0.9	0.6
Total Interest	6.3	6.2	4.7
Total Fixed Charges and Upkeep	16.8	14.3	12.8
Miscellaneous	1.9	1.9	2.0
Losses from Bad Debts	0.6	0.5	0.3
Total Expense	41.4	38.5	40.0
Gross Margin	37.1	38.9	40.7
Net Profit or Loss	*Loss 4.3*	Profit 0.4	Profit 0.7
Stock-turn (times a year) . . .	0.8	0.8	0.9

Repairing Receipts—100%

	Group A	*Group B*	*Group C*
Repairing Department			
Salaries and Wages	61.7%	59.8%	55.3%
Supplies and Other Expense . .	25.9	26.9	29.6
Total Expense	87.6	86.7	84.9
Net Profit	12.4	13.3	15.1
Average Proportion of Repairing Receipts to Total Net Merchandise Sales plus Repairing Receipts	20.7%	16.2%	11.3%

The combination of high total expense and low gross margin for the stores in Group A resulted in an average net loss of 4.3% of net sales of merchandise in 1922. The average firm in Group B showed a small net profit; and the average firm in Group C made a net profit of 0.7% of its merchandise sales in 1922.

There was practically no variation in the rate of stock-turn among these volume groups.

For Group A, repairing receipts, on the average, constituted 20.7% of the total net merchandise sales plus repairing receipts; for Group B,

16.2%; and for Group C, 11.3%. Based on repairing receipts as 100%, average salaries and wages for the repairing department were lowest for the firms in Group C, and highest for those in Group A. Supplies and other expenses, however, on the average showed exactly the opposite tendency, being lowest for the firms in Group A and highest for those in Group C. Consequently, variations in total repairing expense in these three volume groups were small.

The net profit of the repairing business, on the average, was highest for the firms in Group C and lowest for those in Group A.

The combined net result of the merchandise and repairing operations for the firms in Group A was an average net loss of less than 1% of total income from net sales of merchandise plus repairing receipts; but for Group B as well as for Group C the combined net result was an average net profit of over 2% of the total net receipts.

For purposes of illustration, a typical profit-and-loss statement for each of the three volume groups, A, B, and C, are given on the following pages. None of these is the exact statement of any individual firm, but each is a composite statement representative of all the firms in that particular volume group.

TABLE 6—Group A

Composite Profit and Loss Statement for 68 Retail Jewelry Firms with Net Sales Less than $20,000 for Year Ending December 31, 1922

(Repairing Receipts and Expenses Separated)

Gross Sales		$11,434.19		
Returns and Allowances		103.06		
Net Sales			$11,331.13	100%
Net Inventory of Merchandise at Beginning of Year	$8,656.98			
Purchases of Merchandise at Billed Cost	7,036.63			
Inward Freight, Express, and Cartage	90.65			
Gross Cost of Merchandise Handled		$15,784.26		
Cash Discounts Taken		203.96		
Net Cost of Merchandise Handled		$15,580.30		

TABLE 6—*Continued*

Net Inventory of Merchandise at End of Year			8,453.02		
Cost of Merchandise Sold				7,127.28	62.9
Gross Margin				$4,203.85	37.1
Wages of Salesforce		$1,348.41			11.9
Advertising		293.48			2.6
Boxes, Wrappings, and Other Selling		114.44			1.0
Total Selling			$1,756.33		15.5
Delivery			11.33		0.1
Buying, Management, and Office Salaries		$633.41			5.6
Office Supplies, Postage, and Other Management		103.11			0.9
Total Buying and Management			736.52		6.5
Rent		$589.22			5.2
Heat, Light, and Power		158.63			1.4
Taxes (except on buildings and income)		181.30			1.6
Insurance (except on buildings)		101.98			0.9
Repairs of Store Equipment		57.79			0.5
Depreciation of Store Equipment		100.85			0.9
Interest on Capital—Borrowed	$113.31				
Interest on Capital—Owned	600.55				
Total Interest		713.86			6.3
Total Fixed Charges and Upkeep			1,903.63		16.8
Miscellaneous			215.29		1.9
Losses from Bad Debts			67.99		0.6
Total Expense				4,691.09	41.4
Net Loss				$487.24	4.3
Stock-turn 0.8 times a year					
Repairing and Engraving:					
(*a*) Receipts		$3,265.34			100%
(*b*) Salaries and Wages	$2,014.72				61.7
(*c*) Supplies and Other Expense	845.72				25.9
(*d*) Total Repairing and Engraving		2,860.44			87.6
Net Profit on Repairing and Engraving			$404.90		12.4

TABLE 7—Group B

Composite Profit and Loss Statement for 61 Retail Jewelry Firms with Net Sales between $20,000 and $49,000 for Year Ending December 31, 1922

(Repairing Receipts and Expenses Separated)

Gross Sales			$31,843.89		
Returns and Allowances			193.04		
Net Sales				$31,650.85	100%
Net Inventory of Merchandise at Beginning of Year		$24,909.22			
Purchases of Merchandise at Billed Cost		19,655.18			
Inward Freight, Express, and Cartage		189.90			
Gross Cost of Merchandise Handled			$44,754.30		
Cash Discounts Taken			474.76		
Net Cost of Merchandise Handled			$44,279.54		
Net Inventory of Merchandise at End of Year			24,940.87		
Cost of Merchandise Sold				19,338.67	61.1
Gross Margin				$12,312.18	38.9
Wages of Salesforce		$3,386.64			10.7
Advertising		917.87			2.9
Boxes, Wrappings, and Other Selling		411.46			1.3
Total Selling			$4,715.97		14.9
Delivery			94.95		0.3
Buying, Management, and Office Salaries		$1,835.75			5.8
Office Supplies, Postage, and Other Management		253.21			0.8
Total Buying and Management			2,088.96		6.6
Rent		$1,360.99			4.3
Heat, Light and Power		221.55			0.7
Taxes (except on buildings and income)		379.81			1.2
Insurance (except on buildings)		218.39			0.7
Repairs of Store Equipment		98.12			0.3
Depreciation of Store Equipment		284.86			0.9
Interest on Capital—Borrowed	$281.69				
Interest on Capital—Owned	1,680.66				
Total Interest		1,962.35			6.2
Total Fixed Charges and Upkeep			4,526.07		14.3

TABLE 7—*Continued*

Miscellaneous			601.37		1.9
Losses from Bad Debts			158.26		0.5
Total Expense				12,185.58	38.5
Net Loss				$126.60	0.4
	Stock-turn 0.8 times a year				
Repairing and Engraving:					
(*a*) Receipts		$6,495.75			100%
(*b*) Salaries and Wages	$3,884.46				59.8
(*c*) Supplies and Other Expense	1,747.36				26.9
(*d*) Total Repairing and Engraving		5,631.82			86.7
Net Profit on Repairing and Engraving			$863.93		13.3

TABLE 8—Group C

COMPOSITE PROFIT AND LOSS STATEMENT FOR 42 RETAIL JEWELRY FIRMS WITH NET SALES OF $50,000 AND OVER FOR YEAR ENDING DECEMBER 31, 1922

(Repairing Receipts and Expenses Separated)

Gross Sales		$278,580.45		
Returns and Allowances		4,258.94		
Net Sales			$274,321.51	100%
Net Inventory of Merchandise at Beginning of Year	$171,401.11			
Purchases of Merchandise at Billed Cost	164,894.66			
Inward Freight, Express, and Cartage	1,097.29			
Gross Cost of Merchandise Handled		$337,393.06		
Cash Discounts Taken		3,291.86		
Net Cost of Merchandise Handled		$334,101.20		
Net Inventory of Merchandise at End of Year		171,428.54		
Cost of Merchandise Sold			162,672.66	59.3
Gross Margin			$111,648.85	40.7
Wages of Salesforce	$30,449 69			11.1
Advertising	11,795.82			4.3
Boxes, Wrappings, and Other Selling	3,566.18			1.3

TABLE 8—*Continued*

Total Selling			$45,811.69		16.7
Delivery			1,371.61		0.5
Buying, Management, and Office Salaries		$19,229.94			7.0
Office Supplies, Postage, and Other Management		1,892.82			0.7
Total Buying and Management			21,122.76		7.7
Rent		$13,167.43			4.8
Heat, Light, and Power		1,399.04			0.5
Taxes (except on buildings and income)		3,017.53			1.1
Insurance (except on buildings)		2,167.14			0.8
Repairs of Store Equipment		850.40			0.3
Depreciation of Store Equipment		1,618.50			0.6
Interest on Capital—Borrowed	$2,194.57				
Interest on Capital—Owned	10,698.54				
Total Interest		12,893.11			4.7
Total Fixed Charges and Upkeep			35,113.15		12.8
Miscellaneous			5,486.43		2.0
Losses from Bad Debts			822.96		0.3
Total Expense				109,728.60	40.0
Net Profit				$1,920.25	0.7
Stock-turn 0.9 times a year					
Repair and Engraving:					
(*a*) Receipts		$28,313.88			100%
(*b*) Salaries and Wages	$15,657.58				55.3
(*c*) Supplies and Other Expense	8,380.91				29.6
(*d*) Total Repairing and Engraving		24,038.49			84.9
Net Profit on Repairing and Engraving			$4,275.39		15.1

OPERATING EXPENSES FOR LARGE RETAIL JEWELRY FIRMS IN 1922

The number of firms from which reports were received that had net merchandise sales over $400,000 in 1922 was not large enough to justify a separate summary for them. Consequently, their reports were included in the tabulations for Group C in Table 5. For purposes of com-

parison, however, note was taken of the figures submitted by a small group of retail jewelry stores with merchandise sales over $400,000.

It was indicated in general that wages of salesforce for these stores were lower than the common figure for all stores reporting, although there was a wide range even among this small group. One of these firms, for instance, reported wages of salesforce amounting to 4.2% of net merchandise sales, and another a figure of 16% for the same item. Advertising expense for these large stores apparently tended to be higher than the common figure for all stores reporting, and the same was true of boxes, wrappings and other selling expense. The total selling expense, therefore, was about the same for the firms with sales over $400,000 as for the entire group.

As might be expected, both delivery expense and buying, management and office salaries for these large stores were above the average. Office supplies, postage and other management expenses exhibited a wide range for the firms with sales over $400,000—from 0.4% of merchandise sales to 4.2%. Total buying and management expense apparently tended to be higher for this small group of large stores. On the other hand, their average rent expense was distinctly lower than the common figure for all stores reporting, and this was true in even more marked degree of their expenditure for heat, light and power. Figures reported from these large stores for taxes grouped fairly closely around the common figure for all firms reporting. Insurance, repairs of store equipment and depreciation of store equipment for these firms all were lower than the average figures.

All but one of these firms reported total interest expense amounting to less than the common figure for all firms reporting; and no one of these large stores had total fixed charges and upkeep as high as the common figure for all firms reporting. For miscellaneous expense, little variation appeared from the average figure for the entire group. Two of these large firms reported exceptionally high losses from bad debts, but a majority of them had losses from bad debts lower than the common figure for all firms reporting.

For the firms with sales over $400,000, total expense ranged from 32% to 46%, with a small majority below 40%. Similarly, gross margin ranged from 30% to 46% for these large stores, with a small majority above the common figure for all retail jewelry firms reporting. Slightly more than one-half of these large firms showed a net profit for

1922; the others sustained a net loss. All but one of the firms with sales over $400,000, however, had a higher rate of stock-turn for 1922 than the common figure of 0.8 times for the entire group of 171 stores.

The number of firms reporting with sales over $400,000 was too small to permit really significant comparisons. Nevertheless, if operating conditions were especially different for large jewelry stores as a group, that fact probably would have been indicated even by this small number of reports; the evidence that is available does not indicate any outstanding difference in the percentage cost of doing business for the large stores.

OPERATING EXPENSES, PROFIT OR LOSS AND STOCK-TURN FOR 158 RETAIL JEWELRY FIRMS IN 1922 ACCORDING TO GEOGRAPHICAL LOCATION—REPAIRING RECEIPTS AND EXPENSES SEPARATED

Although normally it has been the experience of the Bureau that the grouping of firms according to volume of sales permits more significant comparisons than grouping according to geographical location, nevertheless, during periods of unsettled business conditions, when commercial activity is not at the same pace throughout the United States, the grouping of firms according to geographical location may reveal genuine, even though temporary, differences in operating conditions. In Table 9, retail jewelry firms reporting for 1922 are grouped according to geographical location for convenience in making comparisons between the common figures for groups of firms in different sections of the United States. In this table, Group I is made up of the Boston, New York and Philadelphia Federal Reserve districts; Group II, of the Cleveland, Chicago and St. Louis Federal Reserve districts, and Group III, of the Minneapolis, Kansas City and San Francisco districts. An insufficient number of reports was received from the Richmond, Atlanta and Dallas districts to justify a separate tabulation. Table 9 gives common figures for each of these groups for the merchandising expenses, for gross margin, for net profit or loss and for the rate of stock-turn, and also for the repairing expenses and profits.

The number of firms reporting from each Federal Reserve district is indicated at the top of the column for each group.

As Table 9 shows, wages of salesforce and advertising, on the average, were lowest in the northeastern districts. Buying, management and office salaries, on the other hand, showed a higher average for Group III, comprising the Minneapolis, Kansas City and San Francisco Federal Reserve districts. The average rent expense also was highest for Group III. Total interest expense, on the average, was lowest for Group I, embracing the Boston, New York and Philadelphia Federal Reserve districts, and highest for Group III. Miscellaneous expense also was highest for Group III.

The average total expense for the northeastern districts was 36.8% of net merchandise sales, as compared with an average total expense of 44.2% for the Minneapolis, Kansas City and San Francisco districts. Conversely, the average gross margin was highest for Group I and lowest for Group III. The firms in Group I showed an average net profit of 2.3% of their net sales of merchandise; whereas firms in both the other geographical groups sustained an average net loss, amounting to the high average figure of 6.3% of net merchandise sales for retail jewelry stores situated in the western districts. The average rate of stock-turn was 0.9 times for Group I, 0.8 times for Group II and 0.7 times for Group III.

The high common figure for total fixed charges and upkeep expense for the firms in Group III may be taken to indicate that the poor average showing of these firms for 1922 was caused primarily by an insufficient volume of merchandise sales. It seems to be clearly indicated that the retail jewelry business recovered from the period of depression more rapidly in the Northeast than in other sections of the United States. It is to be concluded, however, that the differences shown by Table 9 are distinctly temporary rather than permanent in character.

The common figures for the repairing business according to these three geographical groups also suggest more favorable conditions for the stores in the Northeast than for those in the West, the average net repairing profit being 17% of repairing receipts for Group I, as compared with 8.5% for Group III. The proportion of repairing receipts to total net merchandise sales plus repairing receipts was practically the same for all three geographical groups.

TABLE 9

OPERATING EXPENSES, GROSS MARGIN, NET PROFIT OR LOSS AND STOCK-TURN FOR 152 RETAIL JEWELRY FIRMS IN 1922 ACCORDING TO GEOGRAPHICAL LOCATION

(*Repairing Receipts and Expenses Separated*)

Net Sales — 100%

	Group I			*Group II*			*Group III*		
*Federal Reserve Districts**	*1*	*2*	*3*	*4*	*7*	*8*	*9*	*10*	*12*
Number of Firms	*27*	*21*	*4*	*19*	*34*	*10*	*10*	*12*	*15*
Merchandise Departments									
Wages of Salesforce	10.9%			11.4%			11.7%		
Advertising	2.8			3.5			3.0		
Boxes, Wrappings and Other Selling	1.4			1.2			0.9		
Total Selling	15.1			16.1			15.6		
Delivery	0.4			0.3			0.1		
Buying, Management and Office Salaries	5.6			5.7			7.0		
Office Supplies, Postage and Other Management	0.9			0.7			0.7		
Total Buying and Management	6.5			6.4			7.7		
Rent	4.3			4.8			5.5		
Heat, Light and Power	0.7			1.0			1.1		
Taxes (except on buildings and income)	1.0			1.3			1.6		
Insurance (except on buildings)	0.9			0.7			0.8		
Repairs of Store Equipment	0.2			0.4			0.6		
Depreciation of Store Equipment	0.8			0.8			0.9		
Total Interest	4.7			6.1			7.4		
Total Fixed Charges and Upkeep	12.6			15.1			17.9		
Miscellaneous	1.8			1.8			2.4		
Losses and bad debts	0.4			0.5			0.5		
Total Expense	36.8			40.2			44.2		

TABLE 9—*Continued*

Gross Margin	39.1	38.5	37.9
Net Profit or Loss	Profit 2.3	*Loss* 1.7	*Loss* 6.3
Stock-turn (times a year)	0.9	0.8	0.7

*No. 1. Boston district
No. 2. New York district
No. 3. Philadelphia district
No. 4. Cleveland district
No. 5. Richmond district
No. 6. Atlanta district
No. 7. Chicago district
No. 8. St. Louis district
No. 9. Minneapolis district
No. 10. Kansas City district
No. 11. Dallas district
No. 12. San Francisco district

Repairing Receipts — 100%

Repairing Department	*Group I*	*Group II*	*Group III*
Salaries and Wages	58.2%	59.3%	61.2%
Supplies and Other Expense	24.8	27.3	30.3
Total Expense	83.0	86.6	91.5
Net Profit	17.0	13.4	8.5
Average Proportion of Repairing Receipts to Total Net Merchandise Sales plus Repairing Receipts	16.7%	17.1%	16.6%

RELATION OF RATE OF STOCK-TURN TO EXPENSES AND PROFITS FOR 170 RETAIL JEWELRY FIRMS IN 1922—REPAIRING RECEIPTS AND EXPENSES SEPARATED

The common figure for the rate of stock-turn for 170 retail jewelry firms for which repairing figures could be completely separated was 0.8 times in 1922. The average stock-turn figures did not vary appreciably for firms grouped either according to volume of merchandise sales or according to geographical location. As previously explained, the rate of stock-turn was determined by dividing the average inventory at cost into the cost of merchandise sold. Where the cost value of merchandise on hand equaled the cost value of merchandise sold during the year, the stock had been turned once. If the cost value of merchandise sold during the year, however, had twice the average cost value of merchandise carried, the stock had been turned twice.

In order to bring out the relation of the rate of stock-turn to expenses and profits, reports for retail jewelry stores for 1922 were classified according to the rate of stock-turn. There were 45 retail jewelry firms whose rate of stock-turn in 1922 was less than 0.7 times; 61 firms that turned their stock between 0.7 and 0.9 times, and 64 firms that succeeded in turning their stock more than once in 1922. There was one firm for which a stock-turn figure could not be determined. Table 10, on this page, shows common figures in percentages of net sales of merchandise for the major items of expense, for gross margin and for net profit or loss, for each of these three groups. In the tabulations for this table, no reports were used unless repairing receipts and purchases had been entirely separated from the merchandise sales and purchases.

TABLE 10

OPERATING EXPENSES, GROSS MARGIN AND NET PROFIT OR LOSS FOR 170 RETAIL JEWELRY FIRMS IN 1922 ACCORDING TO RATE OF STOCK-TURN

(Repairing Receipts and Expenses Separated)

Net Sales — 100%

	Stock-turn Less than 0.7 Times	*0.7-0.9 Times*	*1.0 Times and Over*
Number of Firms	*45*	*61*	*64*
Merchandise Departments			
Wages of Salesforce	11.6%	12.6%	9.8%
Advertising	2.9	3.5	2.8
Buying, Management and Office Salaries	6.4	5.2	6.4
Rent	5.5	4.7	4.3
Taxes	1.5	1.3	1.1
Total Interest	8.4	6.2	3.9
Total Fixed Charges and Upkeep	18.8	15.3	11 9
Total Expense	44.5	40.7	36.2
Gross Margin	39.9	38.8	37.6
Net Profit or Loss	*Loss 4.6*	*Loss 1.9*	Profit 1.4

According to Table 10, the firms that turned their stock less than 0.7 times in 1922 had an average cost of doing business of 44.5% of net merchandise sales, as compared with an average total expense of 36.2% for the firms that turned their stock one or more times in 1922. The principal difference appeared in the item of total interest expense, which was 8.4% of net merchandise sales for the firms that turned their stock less than 0.7 times, as compared with 3.9% for the firms that turned their stock one or more times in 1922. Wages of salesforce, rent and taxes also were less in percentage of net merchandise sales for the 64 firms that turned their stock one or more times.

Operating Expenses for Retail Jewelry Firms in 1922 according to Rate of Stock-turn

(Repairing Receipts and Expenses Separated)

It readily can be understood that smaller average inventories account for the average lower interest and tax expense exhibited by firms with a relatively high rate of stock-turn. The same reasoning applies, though less directly, to rent expense. In the case of wages of salesforce, it is possible that, for the stores that turned their stock more than once in 1922, better buying methods not only increased the rate of stock-turn but also increased the ease of selling merchandise. It is probable, however, that in a majority of cases where comparatively low salesforce expense accompanied a relatively high rate of stock-turn, the management had been successful not only in developing methods of moving stock more rapidly, but also in reducing expenses not affected directly by the rate of stock-turn.

Net Profit or Loss for Retail Jewelry Firms in 1922 According to Rate of Stock-turn

(Repairing Receipts and Expenses Separated)

Average gross margin showed the same tendency as total expense, being highest for the firms that turned their stock less than 0.7 times in 1922, and lowest for those that turned their stock one or more times. Nevertheless, in spite of their higher gross margin, the firms in the lowest stock-turn group, on the average, sustained a relatively large net loss as a result of their high average total expense. On the other

hand, the 64 retail jewelry firms that turned their stock one or more times in 1922 secured an average net profit of 1.4% of merchandise sales out of a gross margin of only 37.6%. They were enabled to do this because of their low total expense.

The figures in Table 10 indicate clearly that retail jewelers, as a group, will find it advantageous to give careful attention to buying methods and merchandise control problems in the effort to move stocks of merchandise more rapidly. Part of the difficulty in securing a profitable rate of stock-turn is inadequate information in numerous jewelry stores as to exactly which portions of the stock are retarding the turnover of the whole. One means of attacking this problem is for a firm to classify in detail the sales, purchases, and stocks of the merchandise handled. Records can be kept which show at all times the approximate value of the stocks on hand for each group of merchandise, such as precious stones, jewelry, watches, clocks, silver, glass, and china, and other classifications. Sales of each group can be compared periodically with stocks on hand, and purchases decreased or increased accordingly. In numerous instances, no doubt, such records will show that it is advisable to dispose of goods, even at a sacrifice, which have been in stock for a considerable period of time in order that the capital may be employed more profitably. Indications are that during the last four years numerous retail jewelers have been operating their businesses on only a small portion of their capital, the remainder being tied up in stocks of merchandise that move slowly or not at all. It is recognized, of course, that the retail jewelry trade is in many respects a specialty type of business and therefore cannot resort freely to the methods of sales promotion employed in stores where mere price-appeal constitutes an effective attraction for customers. On the other side of the balance, however, is the plain fact that the average retail jeweler in the long run cannot afford to permit large portions of his capital to stagnate on his shelves.

PART II

OPERATING EXPENSES, PROFIT OR LOSS, AND STOCK-TURN FOR 77 RETAIL JEWELRY FIRMS IN 1922 —REPAIRING RECEIPTS AND DIRECT EXPENSES ONLY SEPARATED

For 1922, reports were received from 77 retail jewelry firms that separated repairing receipts and direct expenses of the repairing department, such as wages and supplies, but were unable to furnish information on the basis of which a separation could be made of the fixed charges and management expenses applicable to the repairing business. These 77 stores were located in 32 states, and their net sales of merchandise in 1922 ranged from $3,000 to $553,000. The aggregate volume of net merchandise sales was $4,305,000, and the total repairing receipts amounted to $747,000. Fifty-three of these firms were situated in cities with population less than 50,000; 11 in cities with population between 50,000 and 99,000; 9 in cities with population between 100,000 and 499,000; and 4 in cities with population of 500,000 and over. Table 11 shows the grouping of these 77 firms according to their volume of merchandise sales in 1922; more than one-third had sales of merchandise amounting to less than $20,000 in 1922.

TABLE 11

VOLUME OF BUSINESS FOR 77 RETAIL JEWELRY FIRMS IN 1922

(*Repairing Receipts not Included*)

Net Merchandise Sales	*Firms Reporting*
Less than $20,000	33
$20,000-$49,000	23
$50,000 and over	21
Total number of firms	77

Common figures for the various items of expense, for gross margin, for net loss, and for the rate of stock-turn, and also for the direct repairing expenses and profits are given in Table 12 for this group of 77

TABLE 12

Operating Expenses, Gross Margin, Net Profit or Loss, and Stock-turn for 77 Retail Jewelry Firms in 1922

(Repairing Receipts and Direct Expenses only Separated)

Net Sales — 100%

Merchandise Departments	*Common Figures*
Wages of Salesforce	12.1%
Advertising	3.1
Boxes, Wrappings, and Other Selling	1.1
Total Selling	16.3
Delivery	0.3
Buying, Management, and Office Salaries	6.7
Office Supplies, Postage, and Other Management	0.9
Total Buying and Management	7.6
Rent	5.2
Heat, Light, and Power	1.1
Taxes (except on buildings and income)	1.2
Insurance (except on buildings)	0.6
Repairs of Store Equipment	0.5
Depreciation of Store Equipment	0.8
Total Interest	6.8
Total Fixed Charges and Upkeep	16.2
Miscellaneous	2.0
Losses from Bad Debts	0.5
Total Expense	42.9
Gross Margin	36.0
Net Loss	*6.9*
Stock-turn (times a year)	0.8

TABLE 12—*Continued*

Repairing Receipts — 100%

Repairing Department	
Salaries and Wages	60.1%
Supplies and Other Expense	14.2
Total Expense	74.3
Net Profit	25.7

Average Proportion of Repairing Receipts to Total Net Merchandise Sales plus Repairing Receipts	18.4%

firms. These figures, of course, are not as suitable for purposes of comparison as those for the 171 firms shown in Table 4, for which a complete separation of repairing figures could be made. The figures in Table 12, however, permit firms that were unable to make a complete separation of repairing expenses to compare their figures with those of a fair-size group of firms in which the same situation occurred as regards separation of repairing figures. The figures in this table, although not based upon reports from the same identical firms, are roughly comparable with the common figures published by the Bureau for operating expenses in retail jewelry stores in 1919, 1920, and 1921, before a separation was attempted of all items of expense chargeable to repairing.

A comparison between the common figures shown in Table 12 and those appearing in Table 4, for firms with repairing figures entirely separated, indicates that merely partial separation of repairing expenses exaggerates the ratio to merchandise sales of several items of fixed expense, such as rent and interest, and consequently of the total expense also. It follows that the net loss of the merchandise business is overstated, and too high a net profit shown for the repairing operations. At the same time, of course, the real expense of the repairing department is understated. In other respects, only such minor variations appear between the figures in Table 12 and those in Table 4 as might be expected to result from differences in the identity of the individual firms. For these 77 firms, repairing receipts constituted, on the average, 18.4% of the total net merchandise sales plus repairing receipts; and the average final result of the year's operations was a net loss of less than 1% of the total net receipts.

PART III

OPERATING EXPENSES, PROFITS, AND STOCK-TURN FOR 54 RETAIL JEWELRY FIRMS IN 1922—REPAIRING RECEIPTS AND EXPENSES NOT SEPARATED

Reports were received for 1922 from 54 retail jewelry firms that were unable to give separate figures for either receipts of the repairing business or any of the expenses chargeable to it. These stores were located in 32 states and their net volume of business in 1922, including repairing receipts, ranged from $3,000 to $721,000; the aggregate figure was $4,635,000. Thirty-six of these stores were located in cities with population less than 50,000; none in cities with population between 50,000 and 99,000; 9 in cities with population between 100,000 and 499,000; and 9 in cities with population of 500,000 and over. Table 13 shows the grouping of these 54 firms according to total volume of merchandise and repairing business in 1922. More than one-third, it may be noted, had total net receipts of $50,000 and over.

TABLE 13

VOLUME OF BUSINESS IN 1922 FOR 54 RETAIL JEWELRY FIRMS

(*Repairing Receipts Included*)

Net Merchandise Sales plus Repairing Receipts	*Firms Reporting*
Less than $20,000	16
$20,000-$49,000	15
$50,000 and over	23
Total number of firms	54

TABLE 14

OPERATING EXPENSES, GROSS MARGIN, NET PROFIT, AND STOCK-TURN FOR 54 RETAIL JEWELRY FIRMS IN 1922

(Repairing Receipts and Expenses not Separated)

Net Merchandise Sales Plus Repairing Receipts — 100%

	Common Figures
Wages of Salesforce	15.7%
Advertising	2.0
Boxes, Wrappings, and Other Selling	1.2
Total Selling	18.9
Delivery	0.5
Buying, Management, and Office Salaries	4.4
Office Supplies, Postage, and Other Management	0.8
Total Buying and Management	5.2
Rent	3.9
Heat, Light, and Power	0.7
Taxes (except on buildings and income)	1.1
Insurance (except on buildings)	0.8
Repairs of Store Equipment	0.2
Depreciation of Store Equipment	0.5
Total Interest	5.7
Total Fixed Charges and Upkeep	12.9
Miscellaneous	1.5
Losses from Bad Debts	0.4
Total Expense	39.4
Gross Margin	39.6
Net Profit	0.2
Stock-turn (times a year)	0.9

As explained in the introduction, reports for retail jewelry firms that do not separate the figures of their repairing business from their merchandise figures are not properly comparable with each other,

since there is no means of knowing how large a proportion of the total net volume of business the repairing receipts constitute and since the expenses of the two departments are quite dissimilar in character. Nevertheless, in order to afford some basis of comparison, even though not a thoroughly uniform one, to those firms that were unable to separate their repairing figures, Table 14 gives common figures in percentages of total net receipts for the various items of expense, for gross margin, for net profit, and for the rate of stock-turn for the 54 firms for which the receipts and expenses of the repairing department were reported with the figures relating to the merchandise business. The figures in Table 14, of course, are not properly comparable with those given for other groups of retail jewelry stores for 1922 in Parts I and II of this bulletin. The ratio of wages of salesforce to total net receipts, for instance, is relatively high because of the inclusion in that item of repairing wages, which absorb the major portion of repairing receipts.

CONCLUSION

There can be no doubt that the year 1922 marked an advance for the retail jewelry trade over 1921. Representative firms increased their sales of merchandise and realized a small net profit as a result of their combined merchandising and repairing operations. At the same time, the number and quality of the reports received by the Bureau are significant of the steadily increasing attention given to basic problems of store management.

Yet it is doubtful whether, in retrospect, 1922, any more than 1919, 1920, or 1921, will be considered a completely normal year; the ratio of total expense to net sales of merchandise was high, the rate of stock-turn low, and the meager net profits a result of repair work rather than merchandise operations. Each of these three conditions is a potential source of difficulty. The low rate of stock-turn, in addition to being a prime cause of high operating expenses, may result in inventory accumulation that will seriously embarrass many retail jewelers during the next business slump. Finally, fair profits must be shown on merchandise operations if existing capital is to be maintained intact and strengthened, and if new funds are to be attracted into the retail jewelry business on even terms with other mercantile trades.

HOROLOGICAL SECTION

REPORT OF EDUCATIONAL COMMITTEE HOROLOGICAL INSTITUTE OF AMERICA

Rendered at the Annual Meeting, Washington, D. C., May 9-19, 1923

Your Educational Committee, in considering the subject matter for this report, decided that the first part should undertake to inform the institute as to what the present situation is in the United States with respect to facilities for teaching watch and clock making and repairing —the work for which it is becoming more and more customary to use the term "horology." Following the preliminary survey, some suggestions will be made as to how the cause of horological education may be assisted by those whose interests are involved; then the report will close with an enumeration of the activities of the Educational Committee during the past year.

History of the Horological School Movement

The history of the school movement in the horological field runs mainly parallel to that in other industries. The oft-related story of how steam-driven machinery brought about the factory system, and how the factory system abolished apprenticeship, applies to watch and clock making as it does to most other industries.

In watchmaking, the gradual decay of the apprenticeship system seems to have caused no alarm until about forty-five years ago. The trade press of that period reflects that the more far-seeing men began to worry about where the next generation of watchmakers was to come from, and an agitation was begun which began to bear fruit about five years later in the establishment of horological schools.

The earliest schools quite naturally were welcomed only by the most progressive men in the trade. At other hands the schools encountered not only indifference, but hostility. Natural conservatism forbade most of the jewelers seeing anything good in the innovation.

Some Early Obstacles

The older watchmakers shortsightedly feared the schools as a menace to their economic interest. Another factor soon came in to add to the troubles of the pioneer schools. In addition to schools of higher aims, there sprang up a crop of schools started by men who imagined that a watchmaking school could be made a very profitable business. Disappointment in this led them to seek to attract students in large numbers by advertising to teach watchmaking in an impossibly short length of time. The graduates of these schools went out and failed to make good "on the job." Their disappointed employers then thoughtlessly condemned all horological schools. The pioneer of high aims needed vision, courage and persistency in highest degree. Many schools failed; a few survived through the earlier period of discouragements, and their lead has been followed by other good schools which have been established in response to the continually increasing demand for good workmen. The jeweler has gradually learned that the schools are the only source he has to depend upon to supply him with competent watchmakers.

There are ten horological schools now in operation in the United States. These are, geographically speaking, fairly well distributed. Their combined output is estimated at about three hundred and fifty *graduates* per year. This number is easily seen to be much under the requirements of the trade for replacements in the current force of watchmakers engaged in repair work. In all of this discussion, the term "watchmaker" means the man who repairs watches—not the man who works in a watch factory. The factory man need not know anything but his one limited subdivided portion of the work. The watch repairer, on the other hand, must know how to make almost any part of any watch when necessary. This fact justifies the apparently paradoxical statement that the man who repairs watches—and not the man who works in the watch factory—is a watchmaker. To say watchmaker for watch repairer is correct and in accord with trade usage.

Support for Schools Needed

The figures above given as to the output of horological schools show that conditions *demand* not only the fullest support of the existing horological schools, but, in addition, the eventual establishment of additional schools. But a fact which has a bearing upon the adequacy

of the present supply of watchmakers coming from schools, must now be considered—namely, the great number of ex-service men undergoing rehabilitation training, under the United States Veterans' Bureau, to become watchmakers.

What the United States Veterans' Bureau Is Accomplishing

In all of the foregoing part of this report, the schools discussed have been regular permanent institutions established to draw students from the civilian population. While it is true that the Veterans' Bureau has sent to these regular schools as many trainees as could be accommodated these rehabilitation students are only a portion of the total attendance. Their presence is incidental and the schools depend upon getting their pupils from the trade and otherwise, and expect to continue in operation permanently; their continuance does not depend upon the influx of students from the Veterans' Bureau. The Veterans' Bureau, however, found itself faced by the problem of several thousand men desiring training as watchmakers, in excess of the facilities offered by existing schools.

To provide training for these men was a difficulty which was solved by establishing special *temporary* watchmaking schools, and by placing men in jewelry stores for instruction by watchmakers "on the job," or, to use the Bureau's term, "in placement training."

Of the Veterans' Bureau watchmaking schools there are two types: schools managed and taught by men employed by the Bureau, and schools which are operated on the basis of a contract held with the Bureau by individuals, or by organizations of various kinds—for instance, a Y. M. C. A., or a general trade-school, or college—in each case the idea being that when there are no more trainees from the Veterans' Bureau, the watchmaking classes at the school shall close.

The number of men in training to be watchmakers under the Veterans' Bureau is approximately 4,000. While it is true that not every one of these men will become a competent watchmaker, still the final result of the Bureau's operations will be to add a large number to the ranks of the watchmakers. The effect of this on the matter of supply and demand, while it cannot be told in exact figures, may be reasonably assumed to be a temporary easing of the great shortage of watchmakers which has existed for many years. It is not thought that the shortage can be canceled, because it is considered to exceed in numbers the new

supply, and the shortage is not stationary, but increasing continually. The thing to emphasize is that the effect of Veterans' Bureau trainees coming into the field as watchmakers is temporary. The trade must not entertain any delusive hopes that the problem of training watchmakers has been met for it by these temporary measures of the rehabilitation program.

Jewelers' Co-operation Desirable

The only way in which the trade, the retail jewelers, can safeguard their supply of skilled workmen, is by co-operating with and assisting not only the Veterans' Bureau, but particularly the permanent horological schools upon which the trade must depend in the long run.

Your committee suggests, especially to retail jewelers, that they inform themselves as to what the schools teach, how long is required for courses, and all other conditions. In this way mistakes can be avoided, and the schools' efforts to turn out competent, successful workmen can be aided, instead of unintentionally interfered with by the jeweler himself, who should be interested above all in seeing as many *good* workmen as possible turned out by the schools.

Thorough Training an Essential of Success

The schools try to retain students long enough to complete the courses for which they enter. The tendency, however, is for the student to be tempted away from school when only partly through his course, by offers of positions. A jeweler needs help; he knows a good boy from his town who is halfway through with his course in a watchmaking school; he offers the student a job at pay low enough so that his work will be profitable as far as it goes. The boy perhaps is told that the experience he will get at the jeweler's shop is all he will need to make a finished workman of him.

Now the result of this is simply to add one more half-competent workman to their already too-great number.

The jeweler no doubt meant well enough, but he acted without knowledge of what was best for the young man. He held out a delusive hope when he said, "Experience in my shop will finish your ability." The fact is that "experience" can do as much harm to a half-taught man as it will do good to one who has completed his school course. The *graduate* of a school needs shop experience to develop speed and output. The

student only halfway through school, if put on shopwork without the systematic instruction he was getting in school, will be plunged into difficulties, blind guesswork, and the formation of bad habits in doing his work; then another "botch" workman has been started on his melancholy career. In the interest of the students and of the trade (including the jeweler himself in the long run) the student should be encouraged to remain in school to the end of his course instead of being coaxed away from it.

Quality the Keynote

The crying need is first of all for *better* watchmakers; next, for more of them. The character of watch-repair work is changing; it is becoming more difficult. Men's watches are expected to achieve better timekeeping than formerly, and the exceedingly small size of women's watches creates difficulties which were unknown to the watchmakers of only a generation ago. The schools must conform their standard to the present requirements, and turn out graduates who will be easily able to do the work required. Wonderful opportunities for service are open to the horological schools of America. The schools' great service to the watchmaker is to make him capable of success; able to hold a good position and earn a good income. The schools' great service to the public is to provide sufficient good watchmakers so that the owner of a timepiece can have it repaired without risking the ruination of its good timekeeping qualities. The schools' great service to the trade is in the fact that they are the only source from which the trade can draw the competent watchmakers needed.

Where Jewelers Can Help

In every community the jeweler is looked upon as the authority on horological matters. Not infrequently jewelers are asked advice by parents as to watchmaking as a vocation for their sons. In such cases the jeweler can render assistance to any school he favors by securing and passing on to the prospective student accurate information as to courses, and by following the matter up, and making a real effort to gain a good recruit for the trade. If jewelers would do more of such work, they would help the schools to solve one of their most important problems—securing maximum attendance of the right sort of students.

Horological Engineers?

The question is sometimes brought up whether in some way there should be provided a distinct type of instruction in American horological schools, to produce horological engineers. This matter has been considered carefully and thoroughly discussed by your committee, and their conclusion is that the demand at this time for the graduate of such a course would be too limited to make its success possible.

The term "horological engineer" is to be understood as meaning one who designs the mechanism of timepieces. He may or may not be also an engineer of machinery for use in manufacturing timepieces, but he must be primarily a *watchmaker*.

Most of the American watchmakers who could be considered as horological engineers, who have designed improvements in watches or clocks, have been fitted for their vocation by uniting early training as watchmakers at the repair bench with great mechanical talent and native power of intellect. While each of our American horological schools, to a greater or less extent, teaches its pupils the mechanical principles upon which timepieces are built, the object of such instruction is, of course, in the direction of efficiency in repairing, rather than to train pupils for designing improvement in timepieces. Only in the sense that America's horological engineers spring from the ranks of her watchmakers, can there be said to be any connection between our schools and the matter of the education of students to be horological engineers.

As time goes on, if changing conditions should indicate the need for more horological engineers than can be produced, as now, by natural development, the establishment of appropriate courses will then become a live issue, and can then be taken care of, without the waste of effort which is the result of premature action.

The Year's Work

We have come now to the matter of the work of the Educational Committee during the past year. In spite of the fact that the members of the committee are scattered from Massachusetts to Texas, some have had the opportunity of meeting during the year, and the others have kept in touch as well as could be by correspondence. In addition to this, the chairman called a meeting of the committee yesterday, in

order to have an opportunity to review educational matters thoroughly before presenting this report.

Throughout the year there has been considerable correspondence received upon educational matters, correspondence either referred to the chairman by the secretary of the institute, or addressed directly to him.

Demand for Additional Horological Schools

Some of this correspondence asks the help of the institute in starting new horological schools. These inquiries have of course been very carefully and sympathetically handled. Lists of the necessary equipment, outlines of courses, suggestions as to securing instructors, financial estimates and general information otherwise, have been furnished where desired. In every case the invitation has been pressed for the recipient to write to the institute at any time for further advice, as occasion may arise in case the school in question should be started. The desire of the institute to be of help, out of the funds of knowledge gained through the experience of its members, has been expressed to each of this class of inquirers. It must be understood that such assistance is as far as the institute can go. The expectation in several cases was that the institute would finance new schools, or provide personnel to organize and instruct the school. The institute has no funds for such purposes. Should any funds be left in its care for aiding horological schools in any specified way, the institute would be able and willing to administer them.

Many Watchmakers Are Ambitious to Improve Skill

Another class of letters which have been numerously received are from men working in the trade who desire to improve their knowledge of horology, but have not the means to permit them to cease earning for a while in order to go to a school. The best that can be suggested in these cases is that the ambitious workmen study suitable books. Your committee has considered the subject of books available for watchmakers, and finds that there is much to be done before a good range of works suitable for American watchmakers can be said to be at their disposal. We are glad to be able to report that arrangements are under way which will result in an adequate library being placed upon the market, for American watchmakers, in the near future. Your com-

mittee is continuing its efforts to replace haphazard publication by a systematically planned course of reading from which each watchmaker may select the units he needs.

Question of Attempting to Standardize Training

There has been considerable discussion, in previous meetings of the institute, of the subject of Standardization of Courses in horological schools. This matter seems to be an appropriate one for the attention of the Educational Committee. After thorough consideration, the committee has arrived at the opinion that it would be inadvisable to attempt to secure standardization of courses by means of direct agreement between the schools. It would seem entirely reasonable to expect to see standardization brought about as an effect of the Certification of Watchmakers which the Horological Institute is now carrying on. In other fields, standardization of the curricula of educational institutions has been effected sufficiently by the operation of what corresponds with our Certification of Watchmakers—for example, the examinations which the graduates of law schools must undergo for admission to the bar, and the State Medical Board examinations for permission to practice medicine.

To await the certain effect of the Certification movement will be, in your committee's opinion, the only practicable way in which standardization of courses in our horological schools may be brought about—an end which is unquestionably desirable.

Conclusion

In concluding their report your committee feels that it would be neglecting a duty both important and agreeable if it failed to express its gratification at the way in which the institute has brought together the horological schools of the United States. Not only has it brought the schools together but it has afforded them an extremely helpful contact with leaders in the general field of education, as well as with representative men of various branches of the trade which the schools are serving. The associations thus made possible by the Horological Insti-

tute of America are, and will continue to be, in ever-increasing measure, of untold benefit to the cause of better horological education in America.

JOHN J. BOWMAN, *Chairman.*
WM. T. BAWDEN
EDWIN F. LILLEY
W. H. SAMELIUS
CARL KLINEFELTER

Note.—Dr. Bawden is assistant United States Commissioner of Education—in charge of Industrial Education.

ASTRONOMY AND HOROLOGY

By Dr. Frank Schlesinger
Professor of Astronomy, Yale University

I come from an observatory which nearly fifty years ago started a horological institute, not quite the same as that which you have so bravely started, but an institute the object of which was to certify watches. I think it was the first time in the history of watchmaking that that was done. This work was done for a very nominal price, just enough to pay the cost of doing the thing. This movement, I think, made for greater precision in watchmaking and I look back with pride for my predecessors who had the foresight to form such a bureau. Its place has since been taken by the United States Bureau of Standards.

I think you who are interested in the industry would be greatly pleased to know how much trouble scientists have taken and are still taking to make accurate time possible. One instance I want to mention. In a number of observatories so situated that they are within easy telephone communication of large cities, it is becoming the practice to advertise that accurate time is at the disposal of anyone who wishes to have it. Now, accurate time means one thing to one person and quite a different thing to another. For example, people have called us to ask for the exact time and have been satisfied if told it was a "quarter past eleven." But there are some people who want the time to the nearest fraction of a second. Now one way to do this is to arrange a disk connected with an accurate clock, and every observatory has a clock which is accurate. Place the disk in connection with the telephone and the man at the other end can tell the time just as accurately and conveniently as if he were looking at the face of the clock.

You have heard of what accurate time means to the general public. Accurate time to the astronomer is entirely relative. Accurate time to a watchmaker means a little more now than it used to mean, to be sure. I suppose you are acquainted with the progress that has been made in clockmaking, particularly by the Riefler people in Munich. They have made clocks which they have buried in a pit free from moisture, down

where the temperature does not vary, then enclosed the clocks in an air-tight case and partly or completely exhausted the air so that the change of atmospheric pressure would not affect them. It was not necessary for anyone to disturb them as they were wound electrically. They have studied them for a few years and then let them run for another year. At the end of that time they would not be out more than two seconds. There are about thirty-one million seconds in a year so you can see that two seconds is not a great deal. I doubt if there is anything that can be measured with the small measure that these Riefler clocks can be.

Two seconds is small but it is a large measure indeed from some aspects in astronomy. Time must go back to the stars. The astronomer furnishes time. His clock is the earth. He has always assumed that the earth was a perfect clock; that it revolves on its axis exactly as it did the century before. Well now, is that assumption quite true? Just within the past few months an answer to that has been given. The earth is not a perfect timepiece. In order to check a timepiece one must have some other way to tell time. It cannot be with a mechanical device, it must be something else in the sky and the next best timepiece is the moon, which revolves around the earth once a month. The problem is to determine exactly how many seconds there are in a month and see if that tallies always with the number of times that the earth revolves around its axis. It is known that they do not agree. Until the last few months we have been laying the fault at the door of the moon, but it appears now that the fault belongs right in the earth itself. The reason for it is that the tides which the moon and sun cause go around the earth in a direction contrary to its rotation and slow it up, and that slowing up has been actually measured and it has been found that it will account for the slowing up that has been observed in the earth which before had been attributed to the moon. It is a curious fact that most of this friction occurs in the Irish sea. Of course, there is friction in other parts of the earth's surface and it is found that this accounts for the fact that the earth does not revolve exactly as it should. The moon is therefore a better timepiece than the earth.

The astronomer has looked to find another timepiece in the sky. There does not appear to be anything of the kind. We do not know where to look for it, but if in the coming century such a timepiece turns up further discoveries such as this may be brought forward.

We suspect now that the earth is at fault in another way. It is not

merely slowing up in the way we have just discovered but sometimes it runs a little faster and sometimes a little slower. Now I must not leave you with the wrong impression; I must give you some idea how much faster. For example, the day is now somewhat longer than it was last year; the difference is about a millionth of a second. We have no means of determining or observing so small a quantity as a millionth of a second. We can only observe the accumulation which runs back at least three hundred, and according to some ways of looking at it, perhaps two thousand years.

ADEQUATE HOROLOGICAL EDUCATION

By Robert F. Nattan

The question of getting the boy to study horology in this country is a very difficult matter. The psychology of the American boy is very different from that of the European boy. I believe that our public schools have neglected to impress on the plastic mind of the child, the importance of timekeeping. If they did that, I am sure there would be subconsciously implanted in the child's mind a desire to know more about time and perhaps to examine a watch, to study watchmaking later on.

It was my privilege to visit a horological school at Geneva in October, and I was wonderfully impressed with that institution. The director, a very lovable character, took me through the school. They take a boy when he is fourteen years of age and his course is five years. The boy is taken from an elementary school and is put in there and given a very thorough training in horology, the theory and practice. He is taught to do and why he does it. I believe that we should have not more watchmakers, but better watchmakers for this reason—for the watchmaker's own sake. To protect the watchmaker means to protect the public and to protect the honest, worthy manufacturer because a watch manufacturer's prestige is very often destroyed by an incompetent watchmaker. During the first four months to the first year the boy is taught to make tools and after this, the plates and bridges. During the second year he is taught to make the winding parts and train. During the third year he finishes the train and takes up the escapement. During the fourth year he is taught to put on the finishing touches of the watch. During the fifth year he makes a complete watch. In order to secure the title of Engineer he must make a repeater and stop watch. This course is so difficult that the director told me only one man received the degree in 1921. In 1920 nobody received the degree. Students are allowed to go out after the fourth year, but to secure the title of Engineer they must remain five years. The school is supported by the municipality, the student paying only a nominal fee. They had

ninety-two pupils, twenty-four of which were girls. There is a special two years course for girls who are preparing for manufacturers. There are a fewer number of students in Geneva at the present time owing to the unusual economic conditions in the country.

I know there are a great many people who do not understand even now the aims of the Horological Institute of America. That very wonderful character, Mr. George W. Spier, came to my office in 1920 and talked to me about some way of stimulating interest in horological education because I have been very enthusiastic over the subject, realizing that it was the basis of success of the retail-jewelry business. My job is to find out what the retail jeweler is doing in a storekeeping way, so for many years I realized that he needed something to differentiate him from a common vender. I saw this terrible deterioration going on but everyone thought it was an old fossilized subject of mine. When Spier came to me he was full of determination and told me about his hope of instituting a National Research Council. I felt sure that he was going to do something, that he was going to achieve. The National Research Council held a conference in May, 1920, and this Horological Institute of America was put upon the map. It is very gratifying to see so many men here tonight. Everyone evidently realizes the importance of this institute. This movement, some people seem to think, is a school. It is not that at all. It is a scientific body organized to endeavor to certify watchmakers and to standardize the curricula of the schools, not by an arbitrary process, not by a coercive process. It is felt that this standardization will gradually come about automatically by the examinations which are given by the Horological Institute of America. We could not certify watchmakers by any form of legal enactment. That is not practical or possible. How are we going to induce watchmakers to be certified? That was the great problem. We believe that eventually economic pressure will be brought to bear, and that watchmakers will be induced to become certified through their sense of pride. The public will some day positively demand a credential and a certificate of the Horological Institute of America will be your credential.

There has been a great deal of discussion as to whether theory should be taught to any extent. Anyone who has any experience in education knows that the most practical man is the man who knows why he does something, and the man who knows why he does something is the man who knows something about theory.

We need real men, twenty-four karat, full-weight watchmakers, who can repair watches such as are brought into the jewelry stores of America and who can keep in good shape the watches that are produced by the conscientious watchmakers of America. I would say in closing that we should consider what we are, what we ought to be, and how to get from what we are to what we ought to be.

TIME AND JEWELS

By Dr. George F. Kunz

There is nothing greater than time. Time once lost is lost forever, and less than a minute of time has changed the destiny of a nation. In order not to lose time keep a good watch, keep it in good repair, and don't think that because you are the one who is wearing it that it doesn't have to be cleaned in seven, eight or perhaps nine years.

Speaking now on the matter of jewels, it came to me this week that Greece was probably the most artistic of all ancient nations. Grecian art is among the finest in the world. In Babylon, engraving was done on hard stones that has never been equaled. The Grecians worked in gold, in quartz, in amethyst, but they were entirely unfamiliar with some of the jewels we know today. I doubt if there are three authentic diamonds dating back to the Grecian period. The diamond did not appear until about the fourteenth or fifteenth century. Today every bit of jewelry has either a diamond, a sapphire, an emerald or a ruby set in platinum. Well matched pearls were unknown until the time of Marie Antoinette. The diamonds of the quality and size of today never existed, the jewelry never existed, we know the watches never existed.

The Greeks were artistic in their lines, in their figure work, in their engraving, but they knew nothing about the mechanical processes as we do. The jewelry of today has never been equaled in any time. Consider the platinum work which is being done, the many shapes and sizes of watches that are being made. There are at least two hundred types of watches in the city which will require the work of an expert watchmaker, and there is not a man in the profession who need worry that he will be without work. We always look back to the good old time but there is a good time today.

Something which has always interested me and which would have been started if it had not been for the war, is a museum of peaceful arts. We had outlined plans and had the co-operation of a great many leading men. It was planned to have a great institution in which we could have a building for almost every great subject.

I think very deeply about the matter of technical schools. Through France, Germany, and Austria you will find schools of twenty or thirty pupils where a boy is taught to draw, to mold and refine gold, to draw the form of a cameo, to cut it, and fundamentals. We should have more of these schools throughout the country. Since I was a boy of ten I have always earned my own living. I have always felt happy in my work. I think there is too much being done for the boy of the present day. Consider some of the things that are being done on the other side. A peasant will have eight or nine children in the fields weeding all day. They are just as happy as they can be. That is something we scarcely hear of here. We should teach our children at a very young age to do something. I don't believe in working children too hard; I think sweat shops are a blot on our country, but I do think that children at the age of seven or eight should be made to do something. If a person isn't taught to work young he will never work well.

Take the boy on the farm. What can a farmer do in New York state in winter? You can't get farmers to do anything. They become inactive. Here is a splendid opportunity for house industries for the American farmer. Find out the boys who have skill and have them do some watchmaking for you. I believe we would find able workers in our poor houses and in our deaf and dumb asylums. Make these people useful members of society also. See what the Horological Institute can do along this line.

Then, too, I think specializing in watchmaking is wise. One man could repair certain parts, one could put them in order and another could put them together, and in this way save a great deal of time.

WHEEL AND PINION CUTTING

By Lester B. Pratt

(Reprinted by courtesy of the *Jeweler's Circular*)

Quite frequently watchmakers are required to supply new wheels or pinions for certain watches of imported make, discontinued movements, or antiques; for which it is impossible to obtain regular stock material of any kind. Usually the watchmaker is obliged to send the job to some trade-shop which makes a specialty of cutting wheels and pinions to order, and quite often considerable time passes before the job is returned. Did it ever occur to you, brother watchmaker, that you spend almost enough time writing out your instructions concerning the job, packing and unpacking, to do the job yourself if you were properly equipped for same? It is hoped the following lines will prove instructive to the watchmaker who wishes to perfect himself in his trade.

Assuming that a new train wheel is required: if we have the old wheel we can usually obtain the necessary dimensions, and the number of teeth required. As most brass wheels are cut with a fly cutter, our first operation will be to select or make a suitable fly cutter. Usually fly cutters are mounted in a special arbor. The writer uses a very practical attachment which can be made by the watchmaker. Referring to Fig. 1, A is a frame which may be made of brass or steel. The projection at F may be made to fit into the tool-post of your slide-rest. B1 and B2 are male centers made of steel about ¼ inch in diameter and having 60° points to fit into the ends of the fly cutter arbor shown at D. The fly cutter arbor is made of steel, ¼ inch in diameter and 1¼ inches in length, having a threaded collar at the lower end.

A small hole should be drilled transversely through the arbor at the intersection of the collar. The hole should be of the proper size to take the fly cutters, which may be made of steel rod about .100 of an inch in diameter. With this arrangement the cutter may be held firmly in place by means of the threaded collar. An excellent method for making fly cutters is to make a 10° taper mill of the same size stock as our cutter arbor and mount the taper mill in our cutter arbor attachment,

using a 60° female center at B2 and using our pulley E to drive the taper mill. Having a piece of steel of the required size for our fly cutter

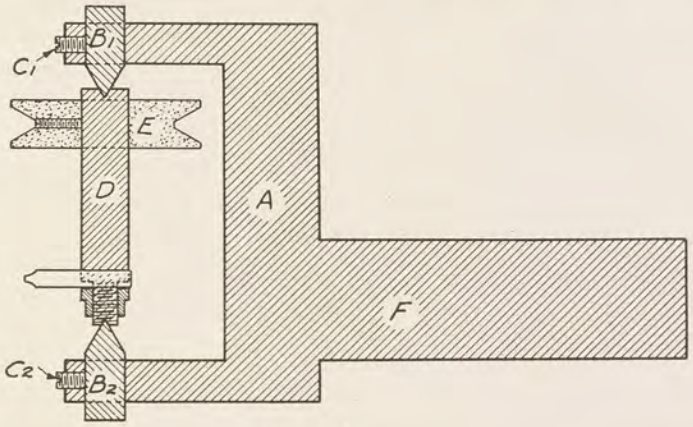

FIG. 1

secured in our lathe-chuck, we can mill the end of stock as shown at B in Fig. 2.

If we do not at first obtain the proper curve to fit the teeth in the wheel we wish to duplicate, then we may raise or lower the taper mill as required, until the proper curve is produced to cut a new wheel having the same tooth curve as the old wheel has. The end of the stock should *also* be milled with the taper mill. By using the above-described method, we can produce a fly cutter having ample chip clearance on the sides and the end, and after hardening and tempering the fly cutter, we may grind the cutting face and lap the slides and the end. Our next operation will be to turn a blank disc of hard rolled brass of the proper diameter and thickness.

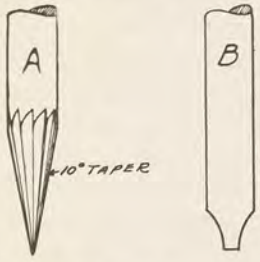

FIG. 2

The blank disc should be stoned perfectly flat and within .002 of an inch of the required thickness of the finished wheel. Before removing from the lathe we should drill a small hole in the center; about .008 of an inch will be large

enough. We can then lay off the spaces between the arms of the wheel by means of a pair of dividers and a small steel rule. The spaces may then be sawed out with a very fine saw. Remount the brass disc on a cement chuck, using the small hole previously drilled, with which to center the disc. The cement chuck should be of the same diameter as the wheel blank to properly reinforce the wheel blank while cutting the teeth. The fly cutter should be set exactly on "the line of centers," and is usually run at a high speed. With the index plate and latch in position, we may now cut the teeth in the blank wheel. Do not try to cut the full tooth in one cutting; compare with the old wheel until the proper depth is obtained. Two or three cuttings may be necessary. When we are sure the teeth are cut to duplicate the teeth in the old wheel, then remove the wheel from the cement chuck and boil out in alcohol to remove the cement.

The wheel may then be stoned to proper thickness and finished in any manner desired. The easiest method of finishing the wheel is to satin-finish with a fine steel-wire lathe brush, using a solution of sal-soda and water on the work. Then gild the wheel in a Roman coloring solution, rinse and dry in sawdust and we have a very acceptable finish.

In regard to pinions and all steel wheels used in watches, we can not use a fly cutter advantageously. Such work requires a multiple-edged cutting tool of the proper form for the wheel or pinion we wish to cut. Assuming that we have a broken pinion to duplicate, we will select a suitable pinion cutter for same. If we do not have a suitable pinion cutter we shall make one. In this connection we would advise the watchmaker to have blank cutters made up for this purpose. Stubb's steel 5/8 of an inch in diameter and 1/16 of an inch in thickness will answer for most requirements. The arbor hole should be slightly smaller than needed, so we can fit same closely on our cutter arbor. The holes in all pinion and milling cutters should fit closely at their center, but *not* at the outside of the holes. This is done so that the cutter may fit flat and true against the collar. The rough blank should be stoned flat and of even thickness all over, and the hole in the center fitted accurately to our cutter arbor. We should also have an arbor chuck for the lathe that will take the same size hole as our regular arbor chuck. With the blank in our arbor chuck we will shape the edge to fit the pinion we wish to duplicate. As there are many different ways

of doing this, we will describe the most simple method. All we will require will be a round face graver and we can turn the blank away on each side until we produce a form that will fit the pinion we wish to duplicate

By careful examination with a strong magnifying glass we should have no great difficulty in producing the proper curve. Then we can use our wheel cutting attachment and mill out the spaces between the teeth. For the watchmaker's lathe we would recommend from twelve to twenty teeth for pinion cutters. A fine-toothed cutter will always cut smoother and with less vibration than a coarse-toothed cutter. Fig. 3 shows side and front view of our pinion cutter. *A* shows the proper form of hole to fit our arbor chuck. *B* shows the space to be milled out to form the cutting faces. *C* shows the approximate form of cutter to use for this purpose, and which can be varied to suit any special requirements.

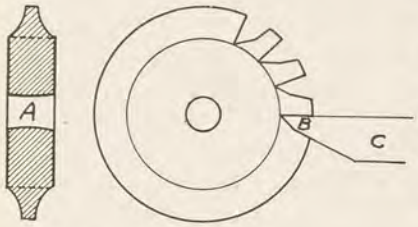

FIG. 3

When all the spaces have been milled out, the cutter may be hardened and drawn to a light straw color. In hardening milling cutters of this class, heat to a cherry red and plunge edgewise in water. In tempering: brighten one side and lay on a flat piece of sheet copper and hold over a flame so that the heat does not strike the cutter directly. Plunge in water as soon as the desired color is obtained. Then stone the cutter flat on each side and it is ready for use. Properly made milling cutters should be backed off to produce the proper clearance angles. In the watch factories, or any place where large quantities of pinions are made, this is invariably done. However, to back off a cutter properly requires a rather expensive attachment for the lathe and, furthermore, we do not believe such an attachment is available for the watchmaker's lathe. The method we have described will answer very nicely for the occasional job of pinion cutting required by the watchmaker.

We will next turn a piece of steel rod the exact diameter of the pinion we wish to produce, and it should not protrude from the lathe-chuck any farther than necessary. With index plate and latch in position, we will set our milling cutter exactly on "the line of centers" and

take a cut through the blank. As in the brass wheels, do not attempt to form the entire leaf of the pinion at one cut. Make two or three cuttings and compare with the old pinion until we are sure that the correct depth is obtained. All shoulders and the length should be approximately produced before removing from the chuck. Then cover well with soap and harden. Heat carefully to a cherry red and plunge endwise into water. If the soap has been applied properly, the pinion will be a dull gray color after hardening and will be easily polished. Place the pinion in a small box of white sand and draw to a purple or blue color. We can finish suitably for ordinary requirements by using a small bristle brush and rotten-stone on the polishing lathe. If a very fine finish is desired we would form a box-wood lap to fit between the leaves of the pinion and polish with Vienna Lime and alcohol. After finishing the leaves we can chuck the pinion and finish the shoulders to fit, and also obtain the proper end-shake. The wheel shoulder should be cupped just the same as a balance staff shoulder so that it can be staked on to the wheel easily. If the ends of the pinion leaves require a fine polish it will be best to use the pivot polisher. All pinions should have the leaves cut and should be finished all over as much as possible before removing from the chuck. Properly done, we are more sure of producing a true pinion in this manner. In cutting crown wheels or main winding wheels which have two series of teeth, we would cut the teeth on the face first, and then cut the teeth on the edge. The teeth on the face are usually cut radial with the center, but at a predetermined angle to mesh properly with the bevel pinion. If we have the old wheel to compare with our new work we can readily make the proper wheel. If the old wheel is lost we would have to cut and try to a certain extent. In making bevel pinions having a male winding square, the square should be produced first, then the proper leaves cut and all shoulders finished as close as possible before cutting off from the stock. In making a bevel pinion having a female winding square, we would produce the square by any suitable method, then turn up a piece of steel rod and form a square on the end, so we can drive the bevel pinion blank on tight. Then the leaves may be cut and the shoulders finished and we will be quite sure of having a true pinion.

Saw-toothed ratchet wheels, such as are used in key-wind watches are very easily made. Our first step will be to make a blank of the required diameter and thickness. The diameter should be about .004

of an inch larger than the finished wheel and the thickness should be about .002 of an inch thicker to allow for finishing to correct size. We can often use an old winding wheel for the purpose, but we must first anneal the steel soft so that we can work same without injuring our cutting tools.

What is known as "water-annealing" is most suitable in this case. Simply heat the steel to a dull cherry red; then take a pinch of sawdust and "salt" the piece of steel. Immediately upon removal from the flame, the sawdust will glow red as soon as it touches the steel, but at the proper quenching temperature the sawdust will simply char. The steel should be immediately plunged into water at this stage of the process. Steel properly annealed in the above manner will be absolutely soft and very easily worked with any cutting tools. Assuming that we have our blank properly annealed and sized, our next step will be to make a square hole in the blank to fit the barrel arbor. This may be done with a small square file, but a more workmanlike method will be to make a suitable square punch with a slight taper. Then we can file out the hole to the approximate size and use our taper punch to finish with. Our next step will be to make a cement chuck with a small "boss" of proper size to fit into the square hole in our blank. The "boss" may be made round and should fit closely in the square hole in our blank. The blank is next cemented on to our cement chuck and we are ready for the cutting operation. For this purpose we will use a cutter having an angle of 60 (included angle) and having teeth formed on the edge, but *not* on either side. Fig. 4 shows respectively edge-view and top-face view of our ratchet-tooth cutter. The cutter should be set with the top face exactly on "the line of centers." With the number of teeth previously determined, and with the index plate and latch in position, we can cut the teeth to *almost* the correct depth. We should make two cuttings if we wish a wheel of nice appearance, although it is quite possible to make one cutting answer, provided we attain the proper depth of tooth. When the cutting operation is finished, remove the wheel from the cement chuck and harden and temper as previously described in this article. The wheel may then be

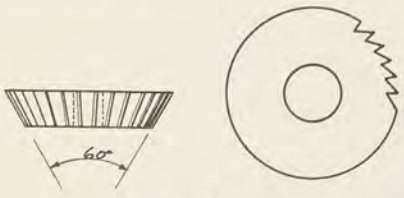

FIG. 4

stoned flat and is ready for use. Compound wheels are cut as two separate wheels and then staked together. A minute wheel is a good sample of such work and requires no further explanation.

It sometimes happens that a wheel or pinion is lost. In such cases it becomes necessary to figure the required teeth or leaves. We will first consider the dial wheels. Assuming that the hour wheel is lost, we will multiply the number of leaves in the cannon-pinion by the number of leaves in the minute pinion; multiply this product by 12 and divide by the number of teeth in the minute wheel. The result will be the required number of teeth for the hour wheel. The minute wheel and pinion may be figured together. We will assume that the minute pinion is either 8, 10, 12 or any number that seems most suitable. We will multiply the number selected by the number of leaves in the cannon-pinion, multiply this product by 12 and divide by the number of teeth in the hour wheel. The product, if it be a whole number, will be the number of teeth for the minute wheel and our first multiplier will be the number of leaves for the minute wheel pinion. Rules for figuring dial and train wheels may be set down in the form of a table for convenient use, as follows:

Dial Calculations

Hour wheel = cannon-pinion × minute pinion × 12 ÷ minute wheel

Minute wheel and minute pinion = { assumed: 8-10-12 ; minute pinion × cannon-pinion × 12 ÷ hour wheel }

Cannon-pinion = (hour-wheel × minute wheel) ÷ (minute pinion × 12).

Train Calculations

Center-wheel = third pinion × fourth pinion × 60 ÷ third wheel.

Third wheel and Third pinion = fourth pinion × 60 × { 7, 8, 9, 10 } ÷ center wheel.

Fourth pinion = (center-wheel × third wheel) ÷ (third pinion × 60).

Fourth wheel = escape pinion × { 10 for 18000 train ; 9 for 16200 train ; 8 for 14400 train }

In figuring the third wheel and third pinion the assumed multiplier: 7-8-9-10 would represent the third pinion and our product would represent the third wheel. We would probably obtain two or more products having whole numbers, and of these we would select the most suitable for the watch requiring same. This would require a knowledge of depthing center and distances.

MAKING BETTER WATCHMAKERS FOR AMERICA

By Paul Chamberlain

Chamberlain Memorial Museum, Art Institute of Chicago

I make the keynote of my advice on the making of better watchmakers, to produce in some way a desire for better watchmakers, not only on the part of the person who carries a watch to have it repaired so that it will run advantageously, or the difficulty which the owner of a store may have in getting someone to do the work properly, but a real demand and desire on the part of the mechanically-inclined young man to follow out that which would give him the greatest pleasure. Now what are the promises which can be put up before them? Will it pay them as large an income as that of dentistry, or medicine, or engineering, or many other things which might be desirable? At the present time, no. That is easily answered. But how about artists? How about painters? How about musicians? Are the emoluments so tremendous in music that thousands of people go into it, spend hours on it every day for weeks, months and years? Why do they follow music? Is it because of the final recognition that is ahead of them? Usually it isn't. Occasionally, perhaps, but not ordinarily. Consider the large number of people who take up drawing and painting. Is it because of the enormous wages which they expect to receive or is it that they expect to become renowned painters? Hardly that. What is it? It is the appreciation of a large number of people. People who have studied music find they have the sympathetic interest of a great many people, and if they, perchance, get in a musical atmosphere they will go to almost any extent to acquire the technique and the qualities which make the musician.

Well, now, it seems to me that the art of watchmaking is directly comparable, and there would be a great desire and an enormous number of people following it if there was an appreciation, an appreciation of the wonderful skill. What is there in your knowledge that compares with the skill of the great watchmaker? The amount of

manual skill that watchmaking requires is great. I think it is safe to say there is nothing in the handling of oils on canvas which requires a greater technique, a more diversified ability, and the appreciation of the watchmaker is almost nil. I am sorry to say it, but it is almost true, except among watchmakers. The watchmaker appreciates the skill of another. In such countries, for instance, where for a hundred years they have been turning out graduates of horological schools there is an appreciation which is universal. During the past year I was in Switzerland quite a number of months, and it was my pleasure and interest to pick up as many specimens of interesting horological work as possible, but I found it very difficult. I found it difficult not because they are wanting for specimens, but because the appreciation of them is so universal that everything was already in a museum. The museum had some twelve thousand examples, and eight or ten well-known schools throughout Switzerland, which have enormous collections, go a long way toward producing the appreciation.

The enormous number of mistakes which have been made in the United States might have been prevented if we had only known more of what has been done, what has been tried. There is in my mind a belief that America can produce the best watchmakers. A new country produces initiative. We have to do so many things which we have no rule for. Combine initiative with knowledge of what has been done, what to improve on, what to avoid, and you have world leaders in any line, and that is true of watchmaking.

If we look for a moment at the financial side: if it were possible for the watchmakers to either charge less for the work they now do, or if they were able to do the work in less time than it now takes, it would work to their advantage—and just here a note to the manufacturers. There is a great lack of uniformity of standards. There was a time not long ago when standards in nuts, bolts, screws, taps and threads were almost unknown. You could buy a half-inch bolt which would not fit a half-inch nut that was bought somewhere else. But gradually the makers of machinery discovered that it was not to their advantage to have their own standard, and so we now have the National Research Council, which is doing a wonderful work to help bring about standards. If it is not necessary for the watchmaker to carry enormous quantities of screws of all makes, there is an item of saving. The Horological Institute might consider these suggestions. We should do

everything that will reduce the work of the watchmaker that at the same time makes it more interesting and more attractive financially.

I wish that watchmakers all over the country and all over the world would enter into a campaign to educate the public to an appreciation of the wonderful qualities of a watch, the wonderful skill which goes not only into the making of it but into the repair and the care of it. I believe that if this were done the time would not be far distant when it would be possible to find people discussing their watches instead of the latest sort of gearing in their automobile. An appreciation of the work that has been done by such great artists as Breguet, Harrison, Arnold and Thompson, names which to the average watchmaker are almost unknown, would be an inspiration and a constant help in making better watchmakers for America.

THE HOROLOGICAL INSTITUTE OF AMERICA

By Paul Moore, *Secretary*

Convention

"You never can tell what a minister's son will do."

Roy Rutherford Bailey says, in writing about "Little Tommy Mudge" in "Through the Ages with Father Time," that some of Tommy's playmates had this jingle:

> "Little Tommy Mudge,
> Solemn as a judge,
> Looks as if he's thinking;
> His brain will never budge!"

That was chirped off in derision of a minister's son.

But Mudge, Senior, told Tommy to "carry on" and study, and the day would come when he would make more money in a month than his teasers would in a year. The result, Tommy became the successor of the famous George Graham and invented the lever escapement about 1765. "You never can tell what a minister's son will do."

Now I happen to be a minister's son and I have just come from a few days of companionship with my father, who celebrated on Monday, August 27, his ninety-first anniversary. In all his wildest dreams of me, that wonderful father of mine never had an idea that his son would stand some day before an annual gathering of the jewelers of America. He educated me for other work. Until two years ago I had no interest in watches or jewelry other than the average man has. But "you never can tell what a minister's son will do." You see, I am sticking to a text. Now I am secretary of the Horological Institute of America, and I have come to have a very great interest in the business of you gentlemen.

And it came about in this wise:

A number of men had the idea of creating in this country some organization like the British Horological Institute, which was formed on the other side of the water in 1858, but nothing definitely, I believe, was shaped here until after a conference called by the National Research

Council in May, 1921. The originator of this conference was George W. Spier, a practical watchmaker, who had for fifty years been a resident of Washington and for a number of years has been custodian of watches at the Smithsonian Institution. Mr. Spier was aware of some of the conditions in the trade, and shortly after the close of the great war he brought these to the attention of the National Research Council. The Council was very much interested.

The National Research Council

Now, what is the National Research Council? There is much confusion in the minds of many about it. The Council was organized for war work; it was the scientific branch of the Council of National Defense, which was established in August, 1916, by Congress "for the co-ordination of industries and resources for the national security and welfare."

But a little more explanation is needed here. We must go back to the time of our Civil War. It was war that brought into being the National Academy of Sciences in 1863. The academy became the adviser of the United States government on questions of science. But following the close of the Civil War the academy went peacefully on its way, largely in academic studies.

In 1906, however, following the attack on the *Sussex*, the academy, by unanimous vote, offered its services to the President. He at once called upon it to bring into co-operation governmental, educational, industrial, and other research agencies. It was then proposed that a new body, that should have a wider contact than the academy had, should be organized. Thus, the National Research Council, comprising the chiefs of the technical bureaus of the army and navy, the heads of government bureaus engaged in scientific research, a group of investigators representing educational institutions, and another group including industrial and engineering research, was constituted by the academy with the active co-operation of the leading scientific and engineering societies. It was formally organized on September 16, 1916, and early in 1917 it was requested to act as a "department of science and research of the council of national defense." It contributed much to the winning of the war. President Wilson found the work of the Council so valuable that he passed an executive order that it should be continued for peacetime work. It was in line with its purpose that it should become interested in some of the problems of the watch trade.

Objects of the H. I. A.

After due process of time, the Horological Institute of America was organized and incorporated, following conferences of representative men in the jewelry and watchmaking trade, called by the Council to improve the conditions in the watchmaking profession:

1. To emphasize the importance of time—accurate time—and instruments of time;

2. To aid the men who, through the perfection of their skill in all that pertains to watchmaking, will be able to have a just pride in their profession, so that it may be deemed the more honorable as they seek to serve more worthily the public. The jewelers must see to it that only the best skilled watchmakers handle the high-grade watches;

3. To bring to competent workmen a fair financial return for their specialized work. The public must be made to understand that a skilled watchmaker's time is worth more than that of a hod-carrier.

These are objects everyone understands. They are the practical side of the work of the H. I. A. They are the appealing reasons for its existence. The Institute has other objects, such as to serve as a center for the reception and diffusion of scientific information relating to horological matters and the collecting of various things that are representative of the history of horological science.

The Institute gave first attention to a plan of certification based upon tests of efficiency of workmanship and theoretical knowledge. Some of the best practical men worked out the plan. Those of you who read your technical papers—and all of you ought to do this—know what the plan is. Briefly, the candidate is given a practical test which is passed upon first by the bureau of standards in an arrangement with the Institute. The results of this test, together with the written examination, are passed upon by a board of examiners appointed by the Institute. Candidates who pass a first examination may then aspire to a second; but this examination is far more difficult than the first. A man who can pass the second examination may be considered a first-class all-around workman. But there is still another examination. Don't get the impression that this can be passed easily. My impression is that only very superior men can win this distinction, and if you should ever pass it you will be known everywhere as a very high-grade and real scientific horologist. In the list of "American Men of Science" there are

many thousands of names, but there are only about one thousand of these that are marked with an asterisk, indicating that they are men of outstanding significance. So, the "certified horologist" of the Horological Institute of America will be a man of the first rank in his profession.

Building for the Future

Now, I am familiar with the difficulties of organization and the objections that may be raised against the whole scheme. Of course, there are those who are satisfied with things as they are. If they do first-class work, the Institute is not trying to force them to join its ranks, nor, indeed, to force anyone to do this. We are building for the future. And, doubtless, there are selfish fellows who, being competent themselves, do not care whether anyone else is fitted to do the right kind of work. But can such men have any real pride in their profession?

And is the young man with little experience afraid? He is the very man whom we need and who needs us. Let him "carry on and study," like little Tommy Mudge. Let him associate himself with men of high ideals and who knows but that he may turn out to be another Mudge or a Graham or a Harrison or a Breguet or an Ohlsen or a Haschka.

The Horological Institute of America was conceived in the spirit of patriotism, but the practical results of its success will be that when the public comes to know its purpose and the true worth of its certified men, the public will be willing to pay the difference between what is due a competent high-grade professional and a botch at the trade.

This is a time, not for knocking, but for boosting. Criticize if you must; but to improve, not to destroy. Remember, the H. I. A. was established to help the whole trade. Become a member yourself. Many families spend one night at the movies or the soda fountain the amount of a year's active membership dues. Help the endowment committee raise the $100,000. George Spier will provide the last $10,000 of this $100,000. There are men before me who could give anywhere from $1,000 to $10,000 to this fund and really not miss it. Make it payable over a period of years, if you must. Why, nearly half the money would be raised if every man in the trade gave just one dollar.

Which of the Horological Institute's certified men will win the plaudits of future generations for great, or even revolutionary, accomplishments in advancing the profession? There are those who believe with the ever-advance in science that we shall in three centuries be able to

quit, if need be, this planet. Is the science of horology to make progress that we now do not even dream of? In three centuries our dreams of today will seem petty and childish beside the realities. Within the space of my father's life, there have been more inventions and discoveries than in a thousand years before.

The greater our knowledge, the greater our power.

The Horological Institute of America stands for knowledge that is power.

PRECIOUS GEMS

THE NOMENCLATURE OF GEMS

(Reprinted from the *Keystone*)

The student of precious stones has a great many difficulties to overcome before he can successfully identify every kind of gem, both in the rough and cut states. By no means the least of these difficulties lies in the great confusion which exists with regard to their names. Gems seem to have acquired their names quite irrespectively of any system of nomenclature, and with an utter disregard to their relationship one with another, as a difference which makes a distinction between one set of gems makes no distinction at all between another set.

The Confusion of Names

For instance, a diamond, which is crystallized carbon, is always called a diamond, no matter what color it has, and there are red, yellow, green, blue and black diamonds, besides the white stones so familiar to everyone. Yet the gems composed of crystallized aluminum receive a different name for every color. The red variety is called ruby; the blue, sapphire; the yellow, Oriental topaz; the green, Oriental emerald; the purple, Oriental amethyst, and there are a whole host of delicate shades of every color, which are known as fancy sapphires.

The asteria, or star-stone, is also another variety of this crystallized corundum. It occurs in many different shades of color and displays a shimmering, glittering, six-pointed star, which diverges from the center to the edge of the gem, presenting an appearance quite unlike any other precious stone. The spinel is a beautiful gem which occurs in almost every color in a great many different shades and is known as blue, green, purple or red spinel, as the case may be. The red and blue varieties of spinel are not infrequently called spinel rubies and spinel sapphires from their resemblance to rubies and sapphires.

Same Name for Different Stones

This is sometimes the cause of confusion, and it is a great pity that the name of one stone has in this way become used in conjunction with that of another, but the reason is only too obvious. One gem is of greater value than the other, and, therefore, to supplement the less expensive gem with the name of the more costly one necessarily carries weight with those people who are unfamiliar with precious stones. In fact, this kind of thing is the explanation of a good deal of the difficulty of the faulty nomenclature of precious stones. In several cases two or more absolutely distinct and separate gems have been allowed to masquerade under one title—those of less value, of course, reaping the benefit of the prestige of the more costly. An example of this is readily to be found in the cat's-eye. The true cat's-eye, a variety of chrysoberyl, is a most valuable gem, in color varying from rich gooseberry green down to soft honey yellow, and displaying a glittering streak or ray resembling the iris of a cat. There are also two varieties of quartz known as cat's-eyes, which present a somewhat similar appearance, but lack the great luster and brilliancy of the chrysoberyl cat's-eye. These quartz cat's-eyes are almost valueless, yet they are cut, mounted and sold at a low price to purchasers who are often unaware that such a thing as a chrysoberyl cat's-eye exists.

The Genuine and the Spurious

Topaz is another gem which labors under the disadvantage of having an ugly sister known as Scotch topaz, which is only yellow crystal and does not possess the beauty and luster of the true topaz; neither must it be confused with the beautiful Oriental topaz or yellow sapphire already referred to. There is a family of precious gems known as the beryl group, the chief of which is that costly and popular stone, the emerald, differing only in color from the aquamarine—pale green or blue—and from the sage green variety termed beryl.

The beryl must not be confused with the chrysoberyl, which is an effective but by no means rare stone, unless in the form of cat's-eye, occurring in shades of rich green and yellow. There is only one other kind of chrysoberyl which is of great value, and that is the alexandrite. Fine alexandrites possess the property of changing color. By daylight they are bright green, and by artificial light they are bright red. Good

specimens of these stones are extremely rare, and inferior ones do not change color in such a marked way.

Jargoons or zircons are inexpensive gems and scientifically rank next in brilliancy to diamonds. They are found in nearly every color, but are always called by the same name except when they are honey-colored, when they go under the name of jacinth.

The Jacinth and the Garnet

The name jacinth is also sometimes given to a honey-colored garnet; in fact, most of the jacinths sold are this variety of garnet. This has become so universal that it may be considered that the name jacinth includes the jargoon and garnet of honey color. The correct name of this kind of garnet, however, is essonite, or cinnamon stone, and as such it is known to mineralogists. This is not the most valuable kind of garnet, for there is a green variety, sometimes misnamed olivine. This gem is extensively used in high-class jewelry. Its color is a vivid verdigris green, and it has a high luster. The ordinary red garnet, although a beautiful and effective stone, is found in such large quantities that it has little or no value commercially.

The peridot is a leaf-green gem. We are unable to trace the source from which the peridots worn by our grandmothers were derived, and the supply to meet the modern demand was, until recently, entirely derived from the old jewels, which were taken to pieces, recut and remounted. Latterly, however, peridots have been discovered in Egypt and placed upon the market in great numbers. They are brilliant and of a pleasing color, but do not compare at all favorably with the old stones. The same stone sometimes occurs as a delicate primrose yellow, when it receives the name of chrysolite. The chrysolite is not of such value as the peridot, though really fine specimens of it are no less rare.

Varieties of Turquoise

The turquoise is a sky-blue opaque stone, the finest specimens of which are found principally in Persia and Egypt, although America and Australia produce a variety of inferior hardness and texture. There is also a substance known as fossil turquoise, which somewhat resembles the real stone. This consists of the fossil remains of ivory and bone which have become colored naturally in course of ages by phosphate of copper. The fossil turquoises always show upon careful exam-

ination the bony structure of the substance of which they are composed.

The opal is a gem quite unlike any other precious stone. It is semi-translucent by transmitted light, but by reflected light it displays prismatic colors distributed in patches of various size, causing an effect of color which changes as the position of the stone is altered.

Tourmalines are gems of great beauty and, although unappreciated in Europe, find ready purchasers in America and among the potentates of the East. There are red, blue, yellow, green and brown tourmalines.

Some Interesting Derivations

The Hebrew name for diamond is "jahalom," which is derived from "halam" (to smite) in allusion to its extreme hardness and its abrasive power upon all other stones. The name of the ruby is merely expressive of its red color, by which it was distinguished from the other varieties of the hyacinthus. The word "sapphire" was used by the ancients in connection with "lapis lazuli," and was merely an epithet expressive of its azure color. It, however, in course of time became associated with the blue variety of corundum, which forms the stone known as sapphire today. The word "jacinth" comes to us from the Italian "giacinto," which can be traced to the Latin "hyacinthus." The cat's-eye was named from the resemblance of the gem to the iris of a cat. The modern emerald was undoubtedly the variety of gem known to the ancients as "smaragdus," which is the Greek equivalent of the Persian "samarrud." The word "turquoise" indicates that this gem was procured from the Turks. The name "asteria" was applied by Pliny to the asteriated crystals of corundum. This gem is also known as the "star-stone." Topaz is derived from the Greek "topazios," an island in the Red Sea, whence a yellow stone was obtained by the ancients. This yellow stone, however, was probably the gem which is known as chrysolite today. The word "tourmaline" is derived from the Singhalese "turmali." Garnet from the Latin "granatus" (grain-like). Peridot from the Arabic "feridet" (precious stone). Chrysolite comes from the Greek "chrusos" (gold) and "lithos" (a gem). Beryl comes from the Latin "beryllus." Opal from the Latin "opalus" or "opalum." The alexandrite was named after Alexander I, Emperor of Russia, upon whose birthday it was first discovered. Corundum comes from the Indian "Korund."

PRECIOUS GEMS AND THEIR DISTINGUISHING QUALITIES

By William Kley

(Reprinted by courtesy of the *Keystone*)

If we speak of precious and semi-precious stones, we have before our eyes a certain number of minerals invested in the crust of the earth, which are above all others distinguished by their special beauty. They were, therefore, used for ornaments of the human body as long ago as history was written, and even before that. Their beautiful appearance consists in their transparency and clearness, their color or color play, which is the result of the reflecting light that runs through the stone. These features become manifest only after the stones are cut and polished.

But it is not only the nice appearance of a mineral which makes it suitable for a gem. Besides the possession of undeniable beauty, which for a gem stone is naturally necessary, it must also have a certain degree of hardness, which gives it power of resistance when coming in contact with other minerals. A soft stone, as we certainly all know, loses its beauty very easily. A stone should possess at least the hardness of quartz, which is identical with the hardness of steel.

Not all minerals which are used as precious stones have the features of transparency, hardness, color and so on, in the same measure. The higher the beauty and hardness is, and the scarcer its occurrence, the more valuable is the stone, and those which reach the highest point in these features are called precious stones. The more distant from the above features a stone is, the less precious it is, and it is therefore called semi-precious.

But here opinions differ greatly. The salesmen and the practical workers, also the scientists, in their opinions are far apart. Books written on this subject are often misleading. Scientists like Kunz, Bauer, Braun, Grath and others, would draw the line at a certain hardness (beauty, of course, always considered), while others who have nothing to do with the technical part of it would consider only the

value, the price they have to pay, and the receipts they can obtain for them. One, I remember, went as far as to claim as precious stones only diamonds, emeralds and pearls. You will notice here at once that the man was neither a scientist nor a practical cutter of gems, but a dealer at the time of writing. Those stones mentioned were the highest in price, I suppose, and therefore the line was drawn there. But why set the emerald above the ruby and sapphire, which are much harder and certainly just as beautiful in red and blue, as the emerald is in green? And how about the rare alexandrite, the beautiful spinel, which are both fine gems and harder than the emerald? But it is hard to bring order in this chaos. The only way out of it would be to take up the proposal of Professor Schmidt, of Bonn, Germany, to drop the names of precious and semi-precious, and simply call them ornamental stones or gems.

Since gems are minerals, their study is a branch of mineralogy. It includes the examination of their natural characters, such as chemical composition, hardness, crystalline forms, specific gravity, their refractive power, etc.

In olden times people were of the opinion that gems consisted of special precious substances (therefore worn as talismans, birthstones, etc.). But that is not so. They differ very little in their chemical composition from other minerals, but consist of ordinary material like carbon, aluminum, silicon, etc. But the different gems differ very much in their composition. Some are very simple, others are complicated. The diamond is the most simple of all, consisting only of carbon, but in an excellent crystallized form. Most others have a combination of many elements.

The forms of crystallization I will only touch, as it is hard to handle the subject in a short lecture like this in an easy understanding way. Only the different systems will I mention, by which, if you are familiar with them, you will be able to distinguish the different gems in their rough state.

1. The regular or cubic system-octahedron.
2. The hexagonal system.
3. The square or tetragonal system.
4. The rhombic system.
5. The monocline system.
6. The tricline system.

Much better can I explain the specific gravity. To measure the density of a substance is to compare its weight with that of an equal volume of distilled water. In other words, you have to find out how many times heavier that body is than water. The process is simple. You weigh a stone the regular way, out of the water. Then you fasten the stone onto a copper wire hook and weigh it in a glass of distilled water. It will weigh less in the water than it does out of it. The difference in weight you divide into the regular weight (out of the water) and the result is the specific gravity.

Hardness

A very important feature of gems is their hardness. We understand by that the resistance a mineral is able to give without being marred by coming in contact with any other mineral. The scale of hardness is scientifically fixed as follows:

1. *Talc*—is easily scraped with the finger nail.
2. *Gypsum*—can be scratched with finger nail yet.
3. *Calcite*—cannot be scratched with finger nail but can be scraped with knife.
4. *Fluorspar*—hard to scrape with knife but easily filed.
5. *Opatite*—can be scratched with knife; file makes strong impression.
6. *Felspar*—scratches glass, but file will make impression yet.
7. *Quartz*—hardness of steel.
8. *Topaz*—spoils any file.
9. *Corundum*—scratches all minerals except diamond.
10. *Diamond*—the hardest mineral.

The optical features of gems—their action towards the light—are of great importance. The transparency and luster, the color and the play of colors of a gem depend largely on its optical characters. And by these qualities it is often easily determined to which family of stones a gem belongs. But, of course, a person must be able to handle certain instruments, like the refractometer, polariscope, dichrascope, etc.

The light may be refracted single or double, but for the beauty of a stone it does not make any difference. All gems of the cubic crystalline system are single-refracting (diamond, spinel and garnet). All other

stones are double-refractive. Another feature is that all the cubic, hexagonal and tetragonal systems have only a single axis, while the rhombic, monocline and tricline systems have double axes. All these features can be observed under the polariscope.

In the following I shall mention shortly the best-known gems, their characters and the places where they are found:

Diamond

The diamond is, as almost everybody knows, the hardest mineral, with its scale 10. It cannot be scratched, except with another diamond It is pure crystallized carbon and in colored ones a trifle of oxide of iron is mixed in. Its specific gravity is 3.50 to 3.56. It belongs to the cubic crystalline system and is single-refractive.

They are found in India, Australia, Brazil, Russia, the United States and South Africa. In the United States some single stones were found in Georgia, North Carolina, Kentucky, Virginia and Wisconsin, and in recent years regular deposits were found in Arkansas, but the mines here did not prove to be profitable so far, and, as I understand, ceased working. Of the other few stones which were found in the different states of the Union, geologists are of the opinion that in the time of the glaciers they were brought there from their original deposits. So some day we may have diamond mines in the United States or Canada.

The deposits in India are about exhausted and the stones from Russia and Australia are insignificant for commerce and are mostly used as Bortz.

But South Africa and Brazil are furnishing the world with diamonds. We all know that at present the main supply comes from South Africa, but Brazil has wonderful possibilities. In this latter country conditions for travel and transport are very primitive through the primeval forests and wilderness, and therefore it is not explored to its utmost capacity.

Corundum (Ruby or Sapphire)

This is the second hardest stone, with its scale 9. Its chemical composition is 98 per cent. of oxide of alumina and 2 per cent. iron oxide, titanic oxide or chromic oxide, depending on what color it appears. It belongs to the hexagonal crystalline system and is double-refractive.

Its specific gravity is 4—much heavier than the diamond. Of all gems it has the greatest variety in colors. We find it from the faintest pink to the pigeon-blood ruby, from light sky-blue to dark indigo, from straw to golden yellow, from a light violet to the darkest amethyst, from olive to emerald green, not to speak of the varieties laying between those mentioned; also some in which we find two and three colors in one stone; not to forget the star sapphire. This latter one is a milky non-transparent crystal, carbuncle cut, which brings out the hexagonal lines, running like white streaks through the stone.

Rubies are found mostly in India, Burma, Siam and Ceylon. A few are found in North Carolina and Montana. Sapphires are also found at the same places—in India, Ceylon, Australia and Montana. The peculiarity of the blue variety is, that in most cases one who handles many can tell where they come from, as Burmas have the fine indigo color, the Ceylons light blue, the Australians have a greenish, and the Montana a violet tint.

Chrysoberyl (Alexandrite, Cymophane)

As manifold as we have seen the colors of the sapphire to be, we find hardly any variations here. It is mostly greenish yellow. Its hardness is 8½ and its specific gravity 3.70. Its composition is 80 per cent. aluminum oxide, 20 per cent. berylium, and small quantities of iron and chromocide. It belongs to the rhombic crystalline form and is double-refractive. As it appears in very few colors, two of them are remarkably significant. The first is the opaque kind. If rightly cut into a carbuncle shape, it has a white or gray streak through the center, while both sides are green. These are called the Oriental cat's eye (Cymophane). The other kind is the so-called alexandrite. It has a green color in daylight, but changes some under artificial light to a nice red. Both kinds are very rare and command high prices in commerce, especially the alexandrite, found in Russia on the eighteenth birthday of the Czar Alexander II and named after him. A few of them were found in Brazil, but its principal home is Russia.

Spinel

This gem has exactly the same crystalline form as a diamond and is therefore single-refractive. Its hardness is 8, and its specific gravity 3.60. It comes blue and colorless, but most of them are red and re-

semble the ruby very much. Its chemical composition is oxide of aluminum, 70 per cent.; magnesia, 27 per cent.; oxide of chrome, 2 per cent., and traces of iron. It is generally found with rubies and sapphires.

Topaz

Topaz is the type of yellow stone. In commerce, whenever they were in doubt as to what a yellow stone could be, they simply called it topaz. But the mineral is not only yellow, but pink, blue, or greenish, also colorless. Its chemical composition is alumina oxide, 56 per cent., 30 per cent. silica, 14 per cent. fluor and iron oxide. It belongs to the rhombic crystalline form and is double-refractive. Its hardness is 8 and its specific gravity 3.50, the same as a diamond. It is found in most countries, but most of them and the finest pieces come from Brazil. Our own state, Colorado, furnishes some, but they are mostly colorless or with just a tinge of blue. They are found in the neighborhood of Florissant in the Pike's Peak region.

Beryl (Emerald, Aquamarine)

This gem does not contain the large percentage of alumina of those named before and, consequently, is not as hard as those. But it is still hard enough to spoil your file, if you try one on it. Its hardness is 7½. Its chemical composition is 14 per cent. berylium, 19 per cent. alumina, 66 per cent. silica, and small fractions of chrome natran and magnesia. Its crystalline form is hexagonal and therefore double-refractive. Its specific gravity is small—only 2.70. Its colors are green, blue, yellow and pink. The nice pure green ones are called emeralds, probably the most expensive precious stone. The oldest deposits we know of were in upper Egypt, not far from the coast of the Red Sea and a little south of Kasseir. But the mines in that locality have not been worked since 1819, as they did not prove profitable in spite of the high prices the stone brings. A few are found in the Ural mountains in Russia. The present localities where they are mined are Peru and Colombia, S. A. In Colombia it is a great factor for the national treasury, as the Government collects a high export tax. But even there a fine, clear stone is very scarce, hence its high prices.

The blue ones are called aquamarines. These are much more plentiful and come in fine large pieces. They are found in most localities

where precious stones are found. In the United States they are found in North Carolina, Maine and California and very nice ones are found in our state of Colorado on Mount Antero near Buena Vista. But the most and the largest come from Brazil. About nine or ten years ago they found a crystal nearly without flaws that was sixteen inches in diameter and nineteen inches high. It was sold to a dealer in Idar, Germany, and cut. I myself had two pieces of it, about the size of my hand, without a flaw. I think it was a crime to cut up into small stones such a specimen, which logically belonged to a museum. But commerce does not consider sentiments—only money counts.

The yellow and pink species are not nearly so plentiful as the blue, but are found in nice clear pieces. Their home is California and Madagascar.

Zircon (Hyacinth)

Here we have a gem only as hard as an emerald, namely 7½, but its density and refractive powers are very strong and nearest to the diamond. A fine brilliant-cut, colorless zircon might be hard to pick out from a lot of diamonds. It is also the heaviest stone we have, its specific gravity being 4.60. Its chemical composition is 24 per cent. silica and 76 per cent. zirconium. It belongs to the tetragonal crystalline form and is double-refractive. It comes colorless, green, yellow, brown and red, and a native I saw had some in a blue aquamarine color. The brownish red are called hyacinths. They are found in many localities where precious stones are found, but most of them come from Brazil and Ceylon. In Colorado they are found near Colorado Springs in the Cheyenne mountains, although none have been found yet which could be cut for gems.

Garnet

This is in its main composition a silicate, 40 per cent. alumina, 22 per cent., and 34 per cent. of a mixture of iron, magnesia, lime, chrome, etc. It belongs to the cubic crystalline form and is single-refractive. Its colors are from deep to light red, yellow and green. Its hardness is 7¼, except the green variety called demantoid, which contains no alumina and is only 6½ hard. Its specific gravity has, according to color, a wide range, from 3.60 to 4.30. It is known under many names—pyrope, almandine, hessonite, Cape Ruby, Arizona ruby, demantoid, etc.

They are found in India, Africa, Madagascar, and Bohemia, and our Rocky Mountains are full of them. The best come from the Navajo Indian Reservation, often taken for rubies, as they have a fine ruby color and excellent brilliance.

Tourmaline

This is the most complicated in its composition. The main factors are alumina, 44 per cent.; silica, 38 per cent., and a mixture of fluor, iron, mangan, magnesia, lime, natron, kali, lithion and water. Its hardness is 7½, its specific gravity 3 to 3.20. It is found colorless, but most are green and pink, also some red, yellow and blue. It is found in Russia, India and Ceylon, in Brazil, and in the United States in Maine, North Carolina, most in California and some in Colorado near Canon City.

Quartz

In this column comes the quartz crystal (rock crystal), the amethyst, and the yellow and smoky topaz. This yellow topaz you must not mix up with the real, precious topaz; its scientific name is citrin, although its appearance is just about the same as the real topaz and very puzzling not only to the layman but to men in the trade as well. Its hardness is 7 and its specific gravity, 2.60. In its composition the quartz crystal is a pure silican, while amethyst, citrin and the smoky species contain as a by-product oxide of iron.

Brazil is the country where most of these stones are found, especially in fine large crystals.

Uruguay also produces fine ones, especially amethyst. But the amethyst that comes from Siberia is unexcelled in its color.

In the United States fine specimens were found in North Carolina and in a good many other states. Colorado has lots of them, especially in the locality of Creede, but they are mostly a conglomeration of small crystals, and a fine stone can seldom be cut from them. A fine lot of amethyst I saw once which came from Boulder County, but it seems it was an accidental find of one nice pocket in a mine, and no more were found.

Opal

Opal is not like the aforementioned, a nicely formed crystal, but an amorphous mass. It is 90 per cent. silica and 10 per cent. water. This

percentage of water is the cause of that superstition that the opal is an unlucky stone. After you know its contents it will be plain to you that if you take out anything from under ground and expose it to light and air, the water, if it contains any, will evaporate. Wood will warp and stone will crack, or—better explained—when the water evaporates, it leaves an empty space which will look like a crack. You can fill up this empty space again by putting the stone in oil, but it will evaporate again and you can repeat the treatment.

The oldest locality where the opal was found was Hungary. These stones were always held to be better than from any other locality, but not rightly so. A fine Australian is just as fine, also a Mexican, although of a different appearance. But put a fine stone from each locality together, and a person would have a hard time to decide which one was the nicest.

Idaho, Oregon and Nevada have some of the most wonderful specimens. But they contain much more water and, therefore, it is hard to cut them, because by warming the stone to cement it on a stick, it will break six times out of ten. These are of a different formation, too, being opalized wood, which is proven by finding perfect branches of trees of it.

Turquoise

Turquoise is the same as an opal, an amorphous mass and perfectly opaque. The oldest localities we know of are those near Naishapur in Persia. But we do not know how long our Indians were digging, shaping and wearing turquoises. Very likely they found some fine scarabs on the mummy of King Tut, made out of turquoise from the Peninsula of Sinai. The Cliff Dwellers of Mesa Verde, Colorado, most certainly got some from the mines of La Jara and Manassa, Colorado. While the Egyptians were not so good in color, the Persians were the best, but we have a good many fine ones in Colorado, New Mexico and Nevada. The Arizonas, while large pieces are found that look good after they are cut, have a tendency to turn green very easily, while these last-mentioned change their color very easily. Nobody should guarantee any turquoise not to change color, because they are all liable to do so by being exposed to the light and air, and especially by coming in contact with the human body when worn.

There are many more gems which should be mentioned and explained, but I will only name them:

1. *Chrysolite* (Peridot, Olivine), a magnesia silicate found in Egypt, Navajo Indian Reservation, New Mexico, and Arizona.
2. *Andalusite* (Chiastolite), a silicate, alumina mineral.
3. *Hiddenite* (green), spodumen lithian silicate.
4. *Kunzite* (violet), spodumen lithian silicate.
5. *Phenacite*, found on Mount Antero, Colorado, a white silica-berylium mineral.
6. *Lapis Lazuli*, found in Russia, a silicate alumina, iron, lime, soda mineral.
7. *Jade* (nephrit), Chinese light, and New Zealand dark green.
8. *Agate*.

Imitation gems I will mention briefly. In commerce we understand by an imitation gem a glass stone, nicely cut. All of you know that the doublet is made out of two pieces, a thin garnet plate for the surface and glass for the bottom part. But the most interesting are the so-called reconstructed or synthetic stones. Let me mention right here that so far they have succeeded only in making synthetic corundum. That means the ruby and many shades of sapphire, like blue, yellow, white, pink, purple. The purple ones are sold for synthetic alexandrites.

How would you classify them—semi-precious or precious? They have every feature of the real stone's color, hardness, refraction, composition and specific gravity, and I leave it to you to call them as you please, because the only difference is that one is made by Nature, the other in a crucible. How are they made? I can only tell you what I have read about it, as I have not seen it. The contents of 98 per cent. oxide of alumina, finely powdered, cleaned with 2 per cent. oxide of chrome, mixed in and melted in a crucible, make the ruby. For the other colors use with the alumina a mixture of iron and titanic oxide.

Some things of importance in the trade I have to mention yet. Almost every one I meet seems to think that black onyx, sardonyx, etc., are of a natural color. That is an error. We have somewhat blackish agate, and we have the cornelian, which are natural colors. But most of them are artificially colored. The original is a gray agate. They are sawed into slabs, and after that, by using different formulas, you can color them any way you want them. Black is a process of saturat-

ing the stone with sugar (or honey) and burning the sugar in the stone by cooking it in sulphuric acid. That makes the black onyx. For the red sardonyx an iron solution is burned in. So do not be deceived. Almost all these agates in their different shades are artificially colored. So is the so-called Swiss lapis. This also is made out of a gray jasper and colored. All these different colors—black, red, green—after they are done are permanent; only the blue will fade.

SILVERWARE AND PRECIOUS METALS

A SHORT HISTORY OF ENGRAVING

(Reprinted by Courtesy of the *Jewelers' Circular*)

In his work, "The Art of the Goldsmith and Jeweler," Thomas B. Wigley writes:

"The great antiquity of the art of engraving on metal and stones is shown by the reference made to it in the Bible. In Exodus, Chapter xxxv, 30-35, it is stated that Moses said unto the children of Israel, 'See, the Lord hath called by name Bezaleel, of the tribe of Judah, and he hath filled him with the spirit of God, in wisdom, in understanding, and in knowledge, and in all manner of workmanship;

" 'And to devise curious work, to work in gold, and in silver, and in brass, and in the cutting of stones, and to set them, and in carving of wood, to make any manner of cunning work,

" 'And he hath put in his heart that he may teach, both he, and Aholiab, of the tribe of Dan. Them hath he filled with wisdom of heart, to work all manner of work, of the engraver, and of the cunning workman.'

"And in Chapter xxxii, 2-4, it is written—and Aaron said unto them 'Break off the golden earrings, which are in the ears of your wives, of your sons and of your daughters, and bring them unto me. And all the people brake off the golden earrings which were in their ears, and brought them unto Aaron. And he received them at their hands, and fashioned it with a graving tool, after he had made it a molten calf.'

"The above passages show that not only was the art of engraving known, but also that teachers were specially appointed to give instruction in various branches connected with the goldsmith's art. In the British Museum and the South Kensington Museum, London, may be seen numerous examples of engraving upon metal and stones, wrought by the ancient Egyptians, which are worthy of our notice. It has been stated that among the best-known artists in gold and silver

in ancient times, Mentor is in the front rank. The exact time when he produced his works is not known, but it is said that four pairs of silver vases perished in the burning of the Temple of Diana at Ephesus, B.C. 356. Mentor and his brother artists were embossers and chasers, as well as engravers. After Mentor, other distinguished artists followed, among whom Pliny mentions Antipater, as the maker of a bowl on which was a sleeping satyr, engraved so wonderfully as to seem laid on in relief. (Pollen.)

"The style of engraving known as niello work is said to have been invented by Maso Finiguerra, a native of Florence, and the reported inventor of copper-plate engraving and also of copper-plate printing. It was practiced in the Middle Ages. . . . Maso Finiguerra was followed by other famous artists, who did much to bring the art to an important position in Italy. Among them was the wonderful goldsmith Benvenuto Cellini, in whose hand, it is said, the goldsmith's work of the sixteenth century reached its greatest splendor and beauty. Jean Vauquer (or Vanquier), a native of Blois, who labored as a designer and copper-plate engraver from about 1670 to 1701, produced most beautiful designs. His prints were published in Paris as a book of reference under the title of the *Livre des Fleurs*, which comprises twelve plates of fifty-one engravings of refined designs, suitable for watch-cases, bracelets, lockets, snuff-boxes, and other goldsmith and decorative work. During the eighteenth century England produced some excellent engravers, among others, Thomas Bewick, who ranks high as a wood-engraver; William Hogarth, the founder of the modern school of gold engravers; the London apprentice, Draper, who did so much to raise the position of the craft that he became familiarly known as the 'father of engravers.' He improved the form of the graver (or burin), and did much to advance the art by greatly simplifying the process, and by assisting in the production of more beautiful effects.

"In the present century we have in England some very excellent engravers, among them being G. H. Lancaster, of Birmingham, whose handiwork in engraving, carving, saw-piercing, and etching have embellished many excellent pieces of presentation plate. Mr. Lancaster engraved the arms of England and Russia on the magnificent silver plate which our Queen Victoria presented to the Czar on his coronation, the combined arms of the Duke and Duchess of York upon their beautiful silver plate used at their wedding. . . ."

THE ART OF DECORATION ON STERLING SILVER

(Contributed by the Sterling Silverware Manufacturers Association)

Silversmithing of today has been aptly termed "a combination of a business and an art." Therefore, let us start our journey with the art. The initial step will lead to the designer's department.

THE DESIGNER

The designer usually is one who had shown genius for drawing in early years. As time passed that genius was developed by a keen and ever-increasing love of the beautiful, in shape, line and ornament.

He learns history, for the history of ornament is the history of the taste and refinement of all civilizations; he becomes familiar with the decorations of every period. He must have imagination and ideals. He must create, not copy; yet he must build on the basic foundation of the principles of ornament as a composer of music builds on the principles of harmony, else his composition would be meaningless and inartistic.

He may be found with pen or pencil in hand, deftly tracing out his ideas, or may be modeling in wax, or indeed with cunning hand actually working with the hammer or graver or chasing tool.

His knowledge often covers every phase of the silversmithing art, and behold a drawing here of a tray decorated in the style of Tut-Ankh-Amen, the ancient Egyptian Pharaoh, a fine tea set adapted from the luxurious style of Louis XIV, or a toilet set for milady's boudoir in the most modern version of l'Art Nouveau.

His place is a riot of sketches of beautiful decorations, working drawings, models, shapes, plaster casts and whatnot. Examine each in turn and one can note the genius, keen perception and taste of the designer, for here lies the root of the product that is to come.

The buyer, keen in his perception of the particular tastes of his trade, chooses this ornate piece with repoussé chasing, or that hexagonal shape with the flat chasing, or the other graceful outline in bright effect, ornamented with engraving, and so on.

Let us journey on, omitting for another time and booklet, the spin-

ning, shaping or hammering, and other processes of making, directly to the ornamentation.

Chasing

Chasing is the art of producing figures and ornamental patterns on metallic surfaces, either raised or indented by means of steel tools or punches.

It is an art of the highest type. The craftsmen who produce beautiful chased work are men of long years of experience who work constantly in an atmosphere of art.

Chasing has been known to the world for centuries. As far back as the fourth century B.C., Siris, the great metal craftsman of that age, gave to humanity his great works of chased bronze that are destined to pass through the ages as pieces of art and beauty.

The article to be chased is covered with a yellow pigment called "gamboge." This gamboge is a brownish yellow gum resin obtained from a species of Garcinia in Siam. After this is allowed to dry, the working design, having been powdered with black lead, is placed face down in the proper place on the silverware and rubbed. The black lines of the design are thus found transferred to the silver, when the paper is removed.

There are two styles of chasing—flat and repoussé.

Flat chasing is worked all from the front or outside surface; the design is traced with myriads of punches, all shaped for a different purpose, a small curve here, a straight line there, the chaser deftly holding the right punch in the fingers of one hand and lightly tapping it with the hammer in the other hand.

One can easily imagine the delicate touch required to produce the wonderful effects of mat and line and curve.

The salesman should examine this work closely, for it is often imitated mechanically (but like every imitation falls short of the real). A close inspector will note the crispness of the design, the little irregularities here and there that make for the life of the pattern, the occasional indications of the pulsing hammer strokes that indicate the human touch.

Mechanical work is an impression, perhaps several impressions, each losing a little from the original. In flat chasing, look for the craftsman's "touch."

Repoussé chasing—this method is used when the ornamentation requires higher relief than the thickness of the metal. The metal must be pushed up from the inside in the high parts of the design. This is done by the "snarling" process, so-called because of the tools which are used—tools known to the chaser as "snarling irons."

These are bars of steel bent at an angle at both ends. The turned-up ends of these irons are shaped to a rounded point, some smaller, some larger, according to the space of metal to be pushed out.

One end is securely fastened in a vise. The craftsman places the vase, or other hollow piece, over the upturned end; reaching the spot he wishes to raise, he holds the vase firmly against the point and gives the shoulder of the iron a sharp blow with the hammer near the vise. The return spring or percussive stroke dents the metal on the inside and throws up a bunch in relief on the outside of the vase or pot.

After this snarling process that brings all the high bunches of the design in full relief, the pot, or vase, is filled with molten chaser's pitch which is allowed to cool and harden. This pitch is made with care, of ingredients that will maintain the right resistance of the chasing from the outside which follows.

The piece is then placed on a sandbag for the convenient handling of the craftsman, and he then proceeds to work at the detail of the ornament with his multitude of various punches and hammer.

This work may be identified easiest of all methods of ornamentation from the fact that it is raised ornamentation. One can easily note the marks on the inside and the crispness and hand touch on the outside. This is the highest form of craftsmanship and the results of hours of careful work. Some of it, most minute in detail, gives to the beauty-loving world articles of silverware that are a pride for the owner and to the maker as well.

Engraving

This is an art that dates back to the ages when our hairy ancestors carved crude images and lines in rough stone. Of course at that time it was crude, unscientific, embryonic—but it was nevertheless engraving, for the word means no more than the marking on surfaces of wood, stone, or metal by incision; by cutting into or otherwise removing a portion of the substance.

But the engraving of the fine sterling silverware of the present day is an art of the highest type, requiring craftsmen of proficiency and great skill to produce. These men are not youngsters of the present generation, turning out piece after piece in rapid succession to fill the clamoring demands of a buying public; they are artisans who, by the sweat of the brow, served years of their boyhood as apprentices under great masters. Apprenticeship is gradually becoming obsolete, due, of course, to the commercial basis of business that pays an errand boy higher wages today than the apprentice of yesterday received.

To stand by the elbow of an engraver of beautiful scrolls, figures, and ornaments on sterling silver is to appreciate what years and years of constant effort and study and practice will do. Let's watch him for a moment!

The piece of silver to be engraved comes to him with surfaces practically finished. He places the design on the piece by the same "gamboge coating" process that the chaser employs, and then begins the careful, painstaking and skilful engraving.

He lays the piece on various shaped sandbags, some reminding one of big doughnuts and others of enlarged pancakes. This sandbag, which is used to give a firm foundation to the article to be engraved, is then placed on a small turn table, or gig, as it is sometimes called, directly in front of the engraver. It is on this gig, which is turned to suit him, that he works.

Before him, in long rows, are arranged his multitude of tools. They fit in holes in a rack that remind one of test-tube racks in a chemists' laboratory. There is a tool for each grade of work, each line or various combination of lines, for scrolls and for every conceivable pattern he may be called upon to produce. These tools are slim bars of steel, fitting into wooden handles that look like mushrooms with one side cut away. There are tools of different grades—tools known as single or diamond quoins, and round tools. The principal tool in the engraver's kit, however, is the burin, or graver, so shaped that when sharpened the cutting end takes the form of a lozenge, point downwards.

These tools act like plows; they make furrows and turn out shavings of metal, as the plow turns the soil in a field. However, there is a difference—the plow is pulled to do its furrowing, while the engraver's tools are pushed. This, of course, immediately establishes the engraver's instruments as different from any other artist's instruments,

such as pens, pencils, or brushes that, in the hands of masters, produce works of art with a downward stroke.

Engraving may be easily identified from flat chasing from the fact that while the chased lines are dented in, the engraved line is cut out, and usually with an angular, pointed tool, while the chasing line is round-bottomed.

The engraved line is continuous and often polished, while the chased line is intermittent and dulled.

Yes, engraving is an art, and as an art it will be engraved in the tablets of history.

Etching

Etching is in reality a process of engraving in which the incised lines are produced by the biting of an acid. But, despite the fact that acids play the paramount part in the production of this type of work, we must classify it with chasing and engraving as an art. Thus far we have talked of each method of the decoration on sterling silver as an art. Nor shall we deviate from such a classification; indeed, it would be difficult to find any business that encompasses so many arts as the business of decorating fine silverware. It is indeed an unusual equation, so to speak—art plus art plus art equals art. Is there any wonder why the finished pieces, be they chased, engraved, or etched, are so beautiful in workmanship, so compelling in appearance?

The articles of silverware to be etched must be kept spotlessly clean from the time they enter the etcher's shop until they go to the finishing department. The slightest scratch or irregularity is apt to appear on the piece after its immersion in the acid bath.

When the piece arrives to be etched, it is covered with a thin coating of asphaltum paint—a variety of bitumen which is not influenced by the action of the acid. If the piece be a silver pitcher, for instance, the joints where the handles meet the body of the pitcher are coated with wax to further prevent any eating and biting away by the acid. The design is then scratched through this coating with the etching needle. This process leaves the exposed design or lines subject to the corrosive acid and is known as scratch etching.

Occasionally etching is combined with line engraving, the design being first etched and then finished by the engraver with his burin. This type of etching is known as etching engraving.

Next, the article is placed in the "tub" in its acid bath of nitric acid and water. Great care must be taken in the temperature of this bath. If the water is too hot, the acid eats too fast; if too cold, the acid eats more slowly. The happy medium, so to speak, can be arrived at only after careful experimentation and years of experience. The length of immersion varies according to conditions and the size and shape of the article being etched. One important point that must be carefully attended to is to keep the articles moving in the bath. This is done to assure perfect coverage by the acid and to prevent streaks.

Line etching may be identified from either flat chasing or engraving from the character of the line. It is more like a pen stroke. An infinitesimal "burr" is often thrown up in engraving or line chasing, but never in line etching. Moreover, on very careful examination under a glass one may discern the "acid line," which is not so clean-cut as the engraved line.

Etching on silver may be just as artistic as etching on copper, the only difference being that the etching on copper is done in reverse, that the impression from inked lines of the plate may show the proper effect on the white paper background, while in the silverware the etched lines are oxidized black while the white of the silver itself furnishes the background.

Engine Turning

An engraver may be the master of his art, may have years of practical experience at his heels, and may have turned out a great number of beautiful pieces of work; but, to put the matter in twentieth-century slang, he is "up against it" when it comes to engraving of a straight line.

It was to make possible this physical impossibility that the remarkable engine turning machine was devised by the silverware manufacturer.

Engine turning is merely the engraving of straight lines by machine and is used for the engraving of such pieces of sterling silver, for instance, as mirror frames and watchcases. Though done by machine, however, piece after piece isn't vomited with the uncanny regularity of an automatic drop hammer; it must be operated by hand and that operation, though slow, is perfect.

There is one operator to each machine and he sits on a stool or high

chair with the piece to be engraved directly opposite his eyes and fastened perpendicularly in a wood frame modeled to fit so that it holds it securely throughout the operation.

The cutting point or machine burin, so to speak, is a diamond and works up and down in a groove. This perpendicular movement is accomplished with a crank that the operator turns with his left hand. This point cuts or engraves only on the upward stroke, because quite frequently there is some preliminary scroll engraving required before the piece is ready for engine turning and the operator can see these scrolls only when the graver cuts upward.

While operating the cutting arm in its grooved channel with his left hand, the operator's right thumb presses against a metal finger that controls the diamond point cutter. With this he gauges the exact depth of the incision he wishes to make and has the same control over the graver as though it were in his hands.

The cutting arm, moving, as we have said before, in an upward and downward stroke, also moves to the left and right on a long screw or spindle and reminds one instantly of a lathe carriage. This left-and-right movement is controlled by a spacer that the operator works with his right hand. It clicks for each desired spacing and moves the entire cutting arm with mathematical precision.

A great variety of combinations of straight engraved lines is possible with the engine turner. For instance, one line is engraved, a space is clicked off on the spacer, and the arm moves to the left when another line is cut, another space and another line and so on until five engraved lines are massed. Then the operator clicks off perhaps seven spaces and the operation of engraving five more massed lines is repeated. It is also possible with this machine to get deviations from straight lines and patterns interspersed with quaint designs. This is accomplished by dies that throw the cutting arm off the straight line in a particular desired spot, as you can see from the illustration.

Here, then, was the opportunity for science to create that art might produce.

Coloring

Whether a piece is chased, engraved, etched or engine turned, the effect is heightened by proper coloring.

Perhaps the design calls for a new, clean, shiny, bright finish, which

is quite usual in engraved or engine turned work and sometimes in flat and even repoussé chasing. This is accomplished by polishing and yet so carefully polishing as not to destroy the detail of ornament so carefully wrought.

Again oxidizing may be used. Oxidizing is nothing more or less than mechanically or chemically "aging" the piece. Take, for example, a piece in a museum wrought by a master years ago. It was probably bright when wrought, but the chemicals in the atmosphere tarnished the piece and the faithful butler polished and polished it, but always there was left a bit of the tarnish in the indentations and surrounding the ornaments that heightened the effect.

These old pieces thus acquired a patina in time hard to reproduce, yet it is reproduced. Hence the oxidized chased figure or line, the gray or butler-finished surface, all bring out to the full the high lights and background so essential to the completion of the picture. Who will say upon examination and with the knowledge this booklet imparts, that the decoration of fine hollow ware is not a real art and the hollow ware itself an heirloom of worth to be treasured and handed down to posterity that they may have respect for the taste and discernment of their ancestors in acquiring "gifts that last"?

A HISTORY OF STERLING SILVER

By Harold E. Nock
Towle Manufacturing Company

(From an Address Delivered before the Women's Club of Fall River, Massachusetts)

A short while ago I came across a few written words from one of those nameless writers who we wish had given us the opportunity of finding out more regarding himself, and it seems to me that these words were particularly applicable to our subject. He wrote, "The history of man is written in many ways. The geologist delves into the earth and finds records in bones and footprints buried for ages. The scholar searches crumbling monuments and musty scrolls. The artist finds the history he deems essential in the form of things beautiful. What is the true history of man? The record of wars and triumphs, or the record of the slowly-awakening soul, the inner self that sees and tries to create, that struggles to leave behind some message of its nobler aspirations? We may find the story of the body of man in spears and armors, but for the deeper history of the spirit we must turn to the creations of art."

It seemed to me as I read these words that they conveyed one of those truths that we so readily accept but which we do not appreciate until we really begin to study some of the things to which the writer refers. Let us commence at the beginning.

It is very generally recognized that art is a concomitant with the spirit of reverence and aspiration in all primitive peoples. Just as soon as man rises above the normal he begins to feel the necessity of expressing himself in some definite form and in some definite way, and the religious emotions of reverence and aspiration finally develop themselves in definite forms of an artistic nature. In very early peoples of the tribal nature these art tendencies find their expression in such things as clay and wood, in very primitive forms, but just as soon as nationalities arise they are developed in forms of stone, bronze, gold and silver.

So it is with some of the peoples in the earliest records that we have of the history of man upon the earth. In far-off Babylon, Assyria, Persia, Chaldea, artisans wrought an art that was rude but gorgeous, naturally representative of the proud and warlike but barbarous people. We might almost call it an orgy of splendor; but as the centuries pass on the passions die out and Egypt rises and, certainly for a time, as the historian says, reigns supreme. In fact, so splendid was the art of Egypt, particularly in relation to the gold and silversmith, that even in the days of her declining splendor we still find an art worthy of very careful attention. Then arose the Golden Age of Greece, and it seems to me as I have studied the Grecian civilization that the ancient Hellene was a person very like ourselves, and in his habits of thought and his methods of expression closer to things which we have in America today than almost any of the so-called ancients.

Then Rome came into its own, and we find her a conquering nation that gathered to herself not only the riches but the artistic splendors of the people whom she conquered. And not satisfied with becoming a great nation in the art of governing, she developed for herself an art which was to become the forerunner of much that we have today. And then in its turn Rome declined, and we have a period of Eastern greatness at Byzantium, which, through early Christian, Romanesque and Gothic art, brings us up to the real beginnings of art as we know it today, that great wave of human feeling and expression known as the Renaissance. It seemed as if after a thousand years or more of repression, during which human feelings had expressed themselves through art solely for the benefit of ecclesiasticism, that the human spirit burst forth in new expressions, not only for the Church but for secular purposes as well. This great wave of human expression was coincidental with the unearthing of some of the ancient cities of the old Roman Empire, and spread in a great wave of art expression over the entire western part of Europe.

Italy reached its high-water mark in such men as Michelangelo and Benvenuto Cellini, the latter having been called the father of modern silversmiths.

In a series of waves, as I said, it passed across western Europe, and its first expression is that of the Louis XIV period in France and the Jacobean or Tudor in England. Later expressions or waves find them-

selves in Louis XV and Louis XVI in France, which correspond in England to that of Chippendale and Adam.

We must always bear in mind that the periods to which I have referred and which are so apparent in many of our artistic productions today were periods when men of ability and strong character had an opportunity to create the best that was in them, and so it was that these periods developed men of ability, who have left these records behind as a mark of their day and generation.

Directing our attention to developments in our own country, we find that Colonial art had definite characteristics of its own, and it is most remarkable that the early colonists not only found time to conquer a continent, to establish a government of their own, to wage a war with the mother country, but also to gather to themselves much of the best thought of the periods to which we have referred and then to create a definite art of their own.

During the seventeenth century in America we find that silversmiths were so active that several hundred were listed in the cities of New York and Boston. Such well-known names as Holland, Sanderson, John Bird, Noyes and others. Of Paul Revere it has been truthfully said that he "graved an immortal name on the works that he wrought," and among these famous men the name of Moulton of Newburyport stands out prominently as being one of those who built permanently and from whom the Towle silversmiths of that city today trace direct descent.

I think we can, as we look back over the history of art before we turn to its modern expressions, truthfully state that silver creations have in the past been indeed a measure of civilization and of character. Much remains to us of what was done by these older civilizations, and if at times we are a little disappointed at finding the record incomplete, at finding less of these fine silver goods which we know from records, from writings and from the few examples, were created, we must remember that it frequently happened that in an effort to obtain the silver necessary for his own art expressions, to meet his own desires, the silversmith of one generation would melt up the priceless works of another.

Where do we stand today? Does the modern factory as we know it in America measure up to the standards of the past? Does the silversmith of today indeed create works that express his characteristics and

his individuality? Let us analyze for a few moments the factors that go to make up the silverware organization in America at the present time.

In relation to design I do not think that there is any other industry that makes as great demands upon the designer for a knowledge of the past as that of silver. The silverware designer must today be associated with all those motifs of the past which are continually stimulating us, whether they be Italian, French, English or Colonial. He must be acquainted with the Eastern stimulus, with the models of ancient Greece and Rome, with the motifs of the ancient Hindu art, and with an understanding of Egyptian. He must appreciate the gathering waves of Eastern feeling that are today sweeping over us in a marked manner, and are materially affecting much of our art work of today, as particularly exemplified in our wearing apparel. He must appreciate the strong Egyptian feeling that has been accentuated through the recent discoveries of Luxor.

It has seemed to me as I have sat with our own designer in the banquet hall of the Copley Plaza in Boston and noted how accurately he picked out each detail of ornament and laid it in its place, an ornament of perhaps Louis XIV origin, and, further, as I sat with him at one time in the Egyptian dining-room of the Essex Hotel and noted how clearly he understood the motifs that stimulated the ancient Egyptian in the ornaments that he created, that I might say of him, as the poet remarked:

"Their lives were spun as the threads of his cloak,
Through the woof and the warp of his whole.
His hands were theirs, and his eyes were theirs,
And his mould, and himself, and his soul."

But there is still something more demanded of the successful silverware designer today. Not only must he be thoroughly associated in his thoughts and his ideas with the past, but he must go out into the highways and byways of life, and he must find that intangible something, that unexpressed expression, if I may use such an anomalous phrase, which represents our own tendencies, our own feelings, and our own desires, and, having as a basis classic thoughts and classic methods, he must modify them until they express our own feelings and our own desires in the things that we use today.

Now let us turn to the making of silverware, for, as you know, with our head in the clouds we certainly must today, as I believe it was necessary in the past, keep our feet on the ground. I am going to ask you to consider for a short time solid silver tableware—knives, forks and spoons, things that come in contact with our food and with ourselves, without which we should recede into barbarism, and which, properly selected, add the crowning touch of beauty and dignity to our dining-rooms.

I believe that a careful consideration of the work that we are doing today would indicate that in this field at least there have never been created more beautiful things, and a careful study of classic origins and classic works of this nature in our great museums quickly confirms this thought. Developments during the last twenty-five years have been the result of intense study and intense thought. Present-day developments in so-called table flatware are comparatively simple but very exacting—beautiful outlines carefully graduated from tip to bowl, comparatively plain surfaces, but during the last few years a few well-defined moldings to remove monotony and add those details of beauty which continue to please as we closely examine each piece.

There is today, I think I may say, an increased tendency toward restrained ornament even in table flatware, and I think we can safely assume that present-day developments are real expressions of our own characteristics and contain elements of permanency that at some future time will reveal to our own descendants distinct elements in our character.

It is, of course, perfectly true that designers occasionally make mistakes. That living in museums a little too closely, they sometimes make a spoon to look like a Greek temple, as in the early nineteenth century we built houses. You will readily remember the type, with heavy Greek porches at the door and immense Doric columns entirely out of proportion. Or occasionally someone makes a spoon with a large cabbage rose at the end of it, reminiscent of the vagaries of the early Victorian period. But these expressions are not in accordance with the general trend of today.

It is interesting to turn to the methods of making spoons, and, if there were time, I should like to explain to you and to draw on the blackboard the difference between making spoons by hand as the old silversmiths did in Colonial days and how we make them today.

With these few simple tools the early silversmith wrought remarkably well, and produced many of the models that stimulate us in flat tableware, but by means of cutting presses, rolling mills, stamping presses, beautifully wrought steel dies, trimming presses, and high-speed polishing lathes, we are enabled to produce flat tableware of a character such as has never been seen before; and if we turn to hollow ware for the table, we find that in the making of a teapot eight or nine skilled trades are needed—the drafter, stamper, spinner, silversmith, chaser, engraver, finisher, buffer and polisher.

It is not at all unnatural that someone asks, "And what becomes of the craftsman today?"

Let us stop for a moment and see if there is any serious danger of losing craftsmen in the machine. It does not seem to me that there is any real conflict between the machine, the so-called iron man, and the work of the craftsman, any more than we have found that there is a real conflict between science and religion. The machine does not create. It reproduces. The fear that has at times been expressed that we live in a machine-made age is entirely without foundation. Beautiful works of art are born of the spirit of the artist and the craftsman, and are made into realities by the skill of their hands.

In a great republic, art is no longer reserved for the favored few—indeed, the republic itself would be impossible if it were not possible to give to the people the spirit of the creative craftsman. This is the function of the machine. Without the loom not only our ordinary clothes but the wonderful fabrics that we so much admire would still be possessed solely by the rich, and without the machine-made phonograph our greatest singers would still sing to the favored few, and the voice of a Caruso would be forever stilled.

Without machines the finest expression of human effort in silver today would be confined to the few people of wealth, who would secure exclusively for themselves the original gems of the craftsmen. And further, the machine makes possible today even the originals themselves, which we could not afford to make without the compensation that comes to us from the replicas.

It is a pleasure to repeat what I have before illustrated as to the spirit of the craftsman. In one of the beautiful jewelry store windows in your city let us imagine for a moment a beautiful vase or loving cup. It has been finely wrought by the silversmith, splendidly chased

and lustrously polished. The silversmith passes by, and remembering the effort that he has made to obtain the splendid proportions and form, he remarks to the man who is with him, "I made that." The chaser passes by with his friend, and noting how the detail of ornament seems to live again as he created it, until the fine leaves and beautiful flowers and the little moldings seem to breathe with real life, he remarks to his friend, "I did that." By and by the finisher comes along and, recognizing the beautiful luster and what we might almost call the resiliency of the surface which silver alone can give and which he took such pains to produce, he says to his friend, "I did that." The designer passes by, and, remembering his early conceptions and seeing in the final development as it has materialized the child of his imagination, he says to the gentleman who is with him, "That is one of mine." And, further, by and by the general manager of that organization comes by and, remembering the efforts that he has made to bring into a comparative whole all those who assisted in making the splendid piece of work, feeling that without those efforts it could not have been created, he says to his associate, "That is one of mine."

And, friends, they are all right; for they all express the true craftsman in the silverware business in this country of yours today.

A teacher once wrote on the blackboard, "Don't throw matches about; remember the fire in London." And some facetious fellow added, "Don't spit on the floor; remember the flood." It is easy to exaggerate, and I know there is usually much danger of overstepping, but sterling silver—solid silver—is in a unique position different from other things. William Morris once said, "Things in our houses should be either beautiful or useful." Silver is both. It is not only beautiful but is an expression of ourselves through art. Not only useful, but has an intrinsic value as a precious metal, a lasting value as a heritage. In our homes it is a criterion of refinement, a last and crowning development of our dining-room. It not only gives us the pleasure of possession, but leaves the mark of that possession on those that come after us.

The English home life for centuries has been the backbone of England's greatness, and the one definite tangible thing that has stood out through all those years in the home life of England has been English silver. The English hostess, the same as our own grandmother in

Colonial days, felt that her family silver was something not only for herself but for her children and their children. She was proud of the dignity and the richness that was derived from its daily use, realizing that it was something that never would wear out.

You will notice that I have continually referred to sterling silver and solid silver in an apparent effort to make myself clear, and there is indeed very great need for making one's self clear on this point in America today.

In about the twelfth century, in the reign of Richard I, there was formed in the eastern part of Germany a league of merchants known as the Hanse League. These merchants imported many things into England, among which were some very beautiful silver goods of a quality that was greater than anything that had been used up to that time. It was 925 parts pure silver and 75 parts copper. These merchants were known to the British as coming from the East, the Esterlings, and as years went on the term was abbreviated to sterling in place of esterling, and was used to define this high-grade silver, the same indeed which we are using today and which was for many years the standard for the British coinage, and is the standard for American coinage at the present time.

Many of our misunderstandings in relation to the term "silver" have been caused through clever American advertising. The term has been and still is applied to electro-plate, which in reality is a mixture of nickel, copper and zinc, with a very thin coating of electro-deposited silver on its surface. The term "plate" which would seem to be a reasonable one as applied to electro-plate is in itself confusing, for all our old histories remind us that less than a hundred years ago it was a term that was applied to solid silver and solid gold, particularly as such do we find reference to old church plate and old family plate, and all of which were solid through and through. In fact, there are so many "almost" things in the silverware business today that one is reminded very much of that classical essay recently written by a little Norwegian boy in regard to the frog. He wrote, "What a wonderful bird the frog are. When he stand he sit, almost. When he hop he fly, almost. He ain't got no sense hardly. He ain't got no tail hardly, either. When he sit, he sit on what he ain't got, almost."

During a recent exhibit of sterling silver at the Brockton Fair, the young lady who sat near by dressed as a Colonial dame was asked an

almost continuous question, "Is it solid silver?" The president of our company, riding a short while ago in the Pullman smoker, discussed with a friend the loss of his silver by burglary. An examination of the piece which the friend had with him showed that it was electro-plate, a name still used and properly used at the present time to define plated goods in England and Canada.

Sterling silver—solid silver—is something that never loses its value and beauty, and if I continue to reiterate, please remember that sometimes reiteration is necessary for appreciation. We must learn, as indeed I believe we are learning in this country, to look into the real things, as Maeterlinck said, "soul things" if we are to understand and find happiness in them. You will remember his wonderful story of the bluebird when he introduced this thought into the minds of the children who were searching for happiness.

H. W. Kent, secretary of the Metropolitan Museum of Fine Arts, recently wrote, "The test of appreciation possessed by a people lies not only in what a few sophisticated characters or a few superfluously rich people buy, but in the average home."

The question naturally arises, Are we in America justified in feeling that our country is taking its place in those things by which civilization has been judged? We will not attempt to answer this rather momentous question ourselves, for we have an excellent reply in the words of Sir John Foster Frazer, the great English traveler and art critic, written several years ago. He wrote: "America is slowly evolving and developing a type of art that is not Jacobean nor Georgian nor Moorish nor Byzantian nor Renaissance nor Uranian nor Allah-knows-what, but just American. I have seen and stayed in their wonderful houses which are an expression of the American temperament. I discerned in my easy dilettante rambles about the United States a splendid striving after the beautiful. The hand is not always steady but the vision is sure. I believe that in the heyday of American art, not only will there be as firm a national type as the Greeks produced, but, owing to the increased culture, houses will not merely be living places, but will be distinctive of the people who have built them. Those who proclaim that the canons of art have been defined for all time portray a lack of imagination. There is only one canon of art, and that is beauty."

And I feel, friends, that we have real reason to believe that in relation to silverware, the criterion of civilization in the past and what I believe

we shall also be judged by in the future, we in this America of ours, despite our quarrels in government, despite our commercialism, despite all those things which seem so foreign to art itself, are really developing an art that will truly measure up to that remarkable prophecy.

FREDERICK S. TAGGART
Secretary

STERLING SILVER AS AN ART PRODUCT

By Marguerite Walker Jordan

The Gorham Company

There was a time in the early history of America when silver was the most favored object of art. It was so considered in the old countries and we merely transplanted the idea to these shores. The traditions of the world's great artists were still close and they had considered silver the most pliable and most beautiful of all the metals. It was ever the emblem of royalty, the household vessel of those to the manor born, and they guarded those rights jealously.

Under the guidance of England's great Petticoat Queen, trade and commerce thrived. Merchants became rich and displayed such a varied assortment of beautiful silver objects that royalty became jealous, and so an edict was passed which prevented those of lowly origin from making handsomer displays of silver than could be afforded by those who were born to the purple cloth.

The old English castles and manor houses consisted of one huge room. On either side of the door was a dressoir or buffet on which the silver vessels were displayed; sometimes there were even four dressoirs. The only other furniture was a chest or two and a few stools. Only the lords of the house had a chair or that which resembled it—a canopied seat, the top being necessary to protect his highness from the rain, because the roofs always leaked. The table, or, more correctly speaking, the "eating board," stood on a raised platform at the end of the hall. The bare board held one object of art, the tall silver *saltcellar*, and the social status of the guest was determined by whether he sat above or below that silver salt. The honor guests drank out of silver "flaggons" —two or more using the same huge cup. Each guest supplied his own spoon, made of silver, pewter or wood, and those who carried not the silver spoons were far removed from the silver salt and the silver "flaggon." As forks and napkins were unknown, it was not mere ceremony which prompted the washing of the hands both before and after

meals. For this purpose, the silver ewer and laver was passed, and this, like the salt, was a product testifying to the art of the silversmiths.

With this kind of background, we know what memories the early settlers of America brought to this country—so it would have been indeed strange if silver on these shores was not again king of the household ornaments. This is proved by the fact that silversmithing was the highest developed of the Colonial arts. Even in 1607 Virginia had a registered silversmith. Until after the Revolution, every man of standing in the community presented the church with a piece of silver—the custom having been set by the European monarchs, who presented a silver service engraved with the royal coat-of-arms to the principal churches of these, their colonial possessions.

This is our background. This is our common heritage; this is the ancestry of the silver department in your store. Is your silver department worthy of it?

Articles of silver have fundamental definite reasons for being, which have—from time immemorial until approximately the last fifty years—made silver one of the world's foremost mediums for the expression of beauty of line and form. Those reasons remain as they always have. This comparatively limited period in which china, glass, pottery and other objects of art are shown in a hundred Fifth Avenue and other shops, is largely due to a situation which the silversmiths and jewelers have themselves allowed to develop. They have underestimated their own product; they have not realized that of all objects of art, silver has the strongest case. I should like to present the ten points of that case.

1. A woman's instinctive love of the metal, which existed even in the prehistoric ages and has followed her throughout all history in every age and every land. Her first ornament was a silver anklet and the prized decoration of our own North American Indians was silver.

2. The home is a woman's kingdom and the heart of that kingdom is the table, for this is the place where the family gathers three times a day. Therefore, women take joy in the beauty and appointments of that table.

3. The intrinsic value of the metal itself makes silver an investment.

4. Of all metals which may be converted to household use, there is none which exceeds the beauty and pliability of silver.

5. The indestructible quality of silver. Unlike china, it does not

break; unlike fabrics, it does not wear out; unlike tapestry, it is not moth-eaten; unlike paintings, it does not fade. With real beauty of line and form, it never goes out of style; it is always beautiful.

6. Sterling silver is cheaper in the end than plate, just as a brick house is eventually cheaper than a frame house.

7. Sterling silver, like a stone wall, improves with age. One might think that concrete was as durable as stone, but it really is not. When concrete wears, it becomes shabby; when stone wears, it becomes beautiful and mellowed by age. Such is the case of sterling and plate. You are proud of the fine old piece of solid silver, but of old plate you are ashamed. In other words, the value of a genuine object of art increases with age. The value of a makeshift decreases.

8. The associations, memories and romance which come with time and use, add such value to silver that houses, lands and furniture may go, but genuine heirloom silver is only parted with when in direct necessity, as money can always be realized on sterling silver.

9. Sterling silver always has and always will indicate better living, a higher standard of thought, atmosphere, more gracious hospitality and a definite badge of social standing.

10. There is also the custom honored by time and tradition of presenting those we love and those we wish to honor with gifts of sterling silver.

This is our foundation. But today, even we in the business do not think of it as *such*, we do not acknowledge it to be *such*, do not sell it as *such*, and, except in certain limited sections, silver as an art product is being backed off the boards.

Price

1. There are *six* distinct reasons for this. The first is that we have swapped our rich heritage for the mess of pottage. The majority of retail-silver salesmen in this country are selling only one thing, and that is *Price*.

In the face of the ten reasons which I have just enumerated, you can't fool yourself into thinking that a customer is buying only price. However, the majority of jewelers have left no stones unturned to teach her to buy only *price*. And now that some of our chickens are coming home to roost, we do not give them welcome, but try and

soothe birds in somebody else's coop. The other five reasons which are killing silver as an art product are:

2. Descriptive terms used by manufacturer and dealer.
3. Sheffield.
4. The interior decorator.
5. The gift shop.
6. The family skeleton.

Descriptive Terms Used by Manufacturer and Dealer

We have so handled our mark of quality that solid, Sheffield, sterling, plate and plated are somewhat of a goulash in the mind of the consumer. You have confused her to such an extent that you have let down the bars to inferior merchandise.

As for the term "hollow ware," I was with the Gorham Company several months before I knew what that was. I covered my ignorance as best as I could. I asked several clerks to show me a piece of hollow ware and each one looked sort of queer but brought me something different, which only added to my confusion. Hollow ware certainly presents no picture of beauty. Not being able to get anything from the clerks and feeling that it would be a bad *faux pas* to expose my ignorance, I asked a number of my friends what hollow ware was. One thought it was something like hollow tile as used for house building. Another thought that knife handles were hollow ware. One thought it was kitchen bowls, another something hollow to put a dish in. One suggested air circulation for a fern dish. The last one I asked was completely puzzled and wanted to know if solid silver was ever hollow. One of my friends has gorgeous ancestral silver and I wrote to ask if her collection included any hollow ware. She replied that it did not. So I was forced to gather up my courage and ask the least austere gentleman I knew what hollow ware was.

"Flatware" hit me, too. I asked a friend about that and she said laundry flatware was the only thing she knew; another that it was something connected with the kitchen, so I wasted no more time on this subject but again jeopardized my reputation by asking the same gentlemen who had solved the other tremendous problem.

What you have done is to thrust your terms on the American woman —which is an American characteristic. For example, we pack goods for

the South American market and send it down as we think it should be sent, not as they want it. So the terms used with a woman are not the ones she is familiar with and knows, but the ones you think she ought to know, and the process—like South American trade—is so expensive that other countries are taking the markets from us, and in the silver trade other lines of industry are taking our legitimate business.

Sheffield

The third thing that has helped to kill silver as an art product is the term "Sheffield." Sheffield began with George II and ended with George III. There were only fifty pieces made in this country. All the genuine Sheffield, both in this country and in Europe, which is available today, if it is not already in museums, is wanted there.

Sheffield, as such, was never used by the aristocracy. Strange as it may seem, however, Sheffield means more to the average American woman than sterling, and the jewelers are not profiting by the misunderstanding.

It has a peculiar romantic sound. They immediately associate it with beautiful form and design, and the idea is not taken by them from thin air.

Among the jewelry stores represented here, the majority of you are possibly saying we do not advocate the term Sheffield in our store. Our clerks are not supposed to sell it, but if a woman comes in and demands it we give it to her rather than let her go next door where she gets it. That is very true; but, on the other hand, I have visited practically every city in the United States in the last two and one-half years. I have gone into the jewelry stores as a would-be purchaser of silver and have actually bought a good deal. I have requested a wedding gift of silver and in 25 per cent. of these cases the clerks have definitely sold me Sheffield and extolled the virtues of plated. In one city where the finest American wallpaper is sold, the average price being $2.10 per roll, I was shown only Sheffield, and out of six stores not a single person raised his voice on behalf of sterling silver, quality or beauty. Yet the future of our business, the whole of our business, rests upon merchandise—a quality product. It is the backbone of your business. I have flattered myself that neither my appearance nor my behavior would indicate that I was less than I am. Imitation silver, imitation culture, imitation friends have not entered into my scheme of life. In

other lines of merchandise I do not have so much difficulty in getting that which is good rather than that which merely looks good. There is integrity of character in having a thing be what it *seems*.

The jewelers' placid acceptance of Sheffield has opened the floodgates for foreign importers. Cheap white-metal forms stamped "English Sheffield" are sent to this country in huge quantities, to be plated in the cheapest manner and then sold at a price equal, if not superior, to Gorham's best plate. The sort of merchandising that makes this kind of thing possible is based on the thought that the American woman is a fool. In times past she might have been—but she is learning very rapidly. Take her too far and there is a dangerous kick back.

For instance, there was a certain baking powder whose introduction to the market was heralded with expensive and beautiful advertising such as had never backed another baking powder. They did everything to it except one thing: they forgot to make it any good. The old darky who takes care of my apartment expressed it perfectly when I offered her a can of it. She said, "Miss Marguerite, it just ruins perfectly good flour." There was once a brand of coffee which was a household word. The manufacturers thought they could decrease the quality and still continue their output, the result of which is they are now spending millions to make another name good. Advocating "Sheffield" is not keeping faith with the public, and, as a friend of mine used to say, "Sheffield customers are like the hives: the more of them you have, the worse off you are."

However, the American people, more than almost any other nation, want the genuine thing—they want the best. As an example: my old mammy had always saved her wages; she lived in a little house of her own in the local negro circles; mammy was rich and therefore the target for every itinerant peddler. One day shining bowls and soup tureens were offered her for very little money. Mammy inquired, "What kind of silber you say dis is?" "Sheffield, Sheffield!" was the enthusiastic reply. Mammy said nothing but went to the cupboard, fumbled around and returned with an old flannel roll and opened to view four beautiful old solid silver spoons. She examined them carefully, saying, "Dunno nuthing 'bout your Sheffield; de quality always had Mr. Sterling's name writ on de silber." The bowl of one spoon was dented; lovingly she picked it up. "You see dem dents, Mister; dem is

de teeth of de Gubnor of Birginia. No sar, I dun want no Sheffield. I wants quality."

And this sort of thing, this genuine appreciation of quality which knows no class distinctions, is one of our great assets. Let's use it. Each one of us in our own organization and in our own way can do that thing which will put silver in its rightful place. Only co-operative efforts will do it. And we are not trying to put anything over. We are not trying to assume that which is not ours. We can render the world a needed, honest service, for which the world is always ready to pay.

Interior Decorator

The fourth thing which has hurt silver as an art product is the interior decorator. This is, comparatively speaking, a new art—a new phase of business, but it has come to stay. The colleges are making it a two-year course. All the women's magazines are carrying articles on interior decoration, and many of them correspondence courses—not for professional use—but simply to help a woman make her own home more beautiful. This is a business which, with the exception of silver, has set the standards for better taste. This is no doubt our fault. We are not able to see the handwriting on the wall.

The result of the work of the interior decorator coupled with our indifference is this:

1. In exclusive circles it is not good form to display silver. It is ostentatious.
2. Interior decorators do not consider silver a decorative object, and in truth it is difficult to arrange. Your store proves this.
3. Styles on table service are set from random causes with which the silversmith and jeweler have no connection or influence.
4. Silver used almost exclusively by women has been advertised from the manufacturer's and dealer's point of view rather than that of the ultimate consumer.
5. Therefore, the interior decorator has without opposition supplanted the time-honored silver with china jars and painted wooden bowls. The big dealers can testify regarding the results of this propaganda.

A certain western state has a silver queen, who is also a society queen, and she told me that all of her silver was put away because it was not good form to display it. Though this woman's financial power

is bound up with the use of silver, yet she, like the rest of America, does no individual thinking. One of the best little games we play is follow-the-leader, and the shelving of fine silver is one more mute witness to a national weakness.

Gift Shop

At the other end of the market there is a gift shop and this our smaller jewelers know of, and they, like the interior decorators, are also rather new in the field of merchandising, but they make attractive displays; they arrange objects with both art and color sense. In contrast to their displays, *we* put silver on black velvet with a mirror in back of it, adding shining surface to shining surface and getting lights which are as unrestful as looking directly into the bulb of an electric globe. Yet we expect a woman not only to make a selection in this maze of light, but in addition to that think they are beautiful, and then, by a gigantic stretch of the imagination, she is to take from these many glistening things one of the shining objects and imagine it in the peace and beauty of her own home.

Of course, you have always seen silver in just this way. You can't imagine it being shown in any other fashion, and when I begin to invade so sacred a domain as the arrangement of silver in your stores, I realize the ice is thin. In fact, I may find myself in the same position that I was in some several years ago when I was doing social-service work among the mountaineers in a mining village.

They fried practically everything they ate, including white California cherries. Seeing this kind of thing daily, I persuaded the coal companies to give me the equipment necessary to introduce domestic science into the village school. A meeting of the board was called. But they were mountaineers and I had not reckoned with my men. With the ignorance and enthusiasm of youth, I explained my plan. When I was quite finished, one of the men adjusted his quid of tobacco, looked at me and said, "Wall, Sis, we 'low as how gals come to school to git eddicated, to larn to read and write and figger. They ma's can teach 'em to cook. Good-bye, Sis," and that was the last I ever saw of them.

But you give more encouragement in the cooking of this problem. In the first place, you realize that it is a problem. You recognize that it is rather stupid to keep on arranging silver in the same old way. We all know that there are few good-looking silver windows. You put some-

thing else in your windows because it is easier to arrange, and the woman, encouraged by the decorator, does exactly the same thing with her buffet. Let us be careful of the example we set.

Our silver departments and our stores in general are apt to be drab —no spice, no snap. We are afraid of color. We do not know color; we do not distinguish between a raw, green blue and a no less brilliant but scintillating and beautiful hue, and so when we see it we do not like it. Neither do we know the psychology of color. We feel that certain tones give dignity. Yes, they do—and so does a mourner's outfit. But there are colors that give warmth, happiness and cheer. Let us work them a while and give the dignity blend a rest.

Family Skeleton

Last on this list is our family skeleton. There is no maker of silver, solid or plated, no jeweler big or little, who likes to mention this one fundamental thing in our business. We all avoid it, we all gumshoe it, but we all know it is there. Whether we sell silver in Florida or Oshkosh, whether our customer is Judy O'Grady or the colonel's lady, the same problem confronts her. It is the cleaning of her silver. I appreciate how impolite it is of me to drag this family skeleton out for your inspection. My only reason is that I represent the woman who has to apply the elbow grease.

You, O mighty men, have not had to clean silver. It is a messy household job, done when you are not around. You have had no personal experience with getting your hands rough and hard and your nails in such a condition that a manicure is the only thing which will bring them back.

But this cleaning has been an argument overused by silver's competitors, and recently it has taken on rather larger proportions. Wealth has changed hands since the war. The owners of many homes who could afford the finest silver are not accustomed to managing servants and the servants, ever ready to be relieved of work, make lengthy complaints which the mistress in her ignorance does not know how to combat. This is one of the avenues where we have allowed others to magnify our problem. Now it is up to us, through combined effort, each in our organization and in our own way to show the American woman that silver is not so hard either to get clean or to keep clean.

Every large jeweler might have an employee in his organization who was on call to clean silver or to instruct the servants in the quickest and most effectual way of handling the polish. When an important customer complained of cleaning silver, a demonstration might be made for her, if necessary, right in the store. This is feasible and not an original suggestion with me. Several stores are doing it.

Summary

Gentlemen, I appreciate that it has been a little difficult to have me in your presence. I represent the consumer and you are not accustomed to hearing that point of view. Perhaps I have bored you. But your point of view has also bored me many times, in fact it has been a strain on my manners. There is a very naughty story connected with this which I would like to tell you, but being as I am on New England's sacred soil and having my Boss present and the shadow of Gorham falling all over me, I hesitate. However, Mr. Brock, with his big Western smile encourages me and having some qualities in common with Charlotte Greenwood, I may be able to make the door if my Boss's frown gets too black. As stated before, it concerns manners.

I was the honored guest at a dinner down in the mountains of Virginia. We were a big family at the table, including the young grandson. We were all talking, but I heard the little four-year-old say, "Please pass me de draby." But like grown folks will, we kept on talking. Again I was conscious of the same request. Finally he slammed down on the table with the end of his knife and yelled at the top of his voice, "Dod dam it, dimme de drease."

So in dragging out so many things for your inspection you may think that my manners are on a par with the little boy's.

But I ask you to keep in mind these unseen forces which operate to the advantage of your silver department—our heritage as it were. Let us also keep in mind those ten basic reasons which account for the use of silver. I do not believe this record can be equaled by any other art or industrial product. If we have a proper regard for this we will realize how we limit our own selves by selling only price. Have a heart and do not puzzle women with "hollow ware." Sheffield needs a public funeral which has long been delayed. Our competition with the interior decorator and gift shops can be met with a little more study applied to their

method of attractive arrangements, which includes the use of color and feminine psychology. And there is always the emphasis on quality.

Some of you may be saying, "We have tried to sell that Quality and it has cost us too much money." Yes, it certainly has—if you have done it with a point of view which catered to your Fifth Avenue and 400. The snob element never was a large enough audience to play to, and what remnant there was died with the Hohenzollerns. So all the energy devoted to that crew since 1918 has been attention devoted to the memory of the dead. A few ghosts have responded.

But there are some jewelers, like Shreve, Crump & Low, Geo. T. Brodnax, of Memphis; Cowell & Hubbard, of Cleveland; Myron E. Freeman, of Atlanta; Mr. Brock, of Los Angeles; and Mr. Everts, of Dallas; and many others, who have felt the pulse of the public—who have realized that money was changing hands, and have adapted their merchandising policies accordingly. They have made money and made some of it on silver, too.

Conclusion

Gentlemen, I have stated the sales angle on silver as an art product. I have held it up for you to look at, as seen, not from the manufacturer's point of view, not with the jeweler's monocular, but from the American woman's point of view. The reason I ask you to give heed to it is just this. She spends 90 per cent. of the national pocketbook. *You've* got to get her—you've got to go after her! In the last analysis, it is she whom you must please. Without her patronage your establishment would close. Therefore, she is to be wooed—she is worthy of study and thought.

And woman, with the exception of the last fifty years, has, since the dawn of civilization, given silver a place as an art product and decorative object second to none. We have let its position slip through our fingers like sands of the sea—but it can be regained.

So in these days of price-selling and quality-cutting, it is well to remember the old Gorham Company that has stood in your midst, still the standard-bearer of quality, hammered within and hammered without, but, nevertheless, the biggest constructive force in the history of American silversmithing.

Only quality, only sterling worth, could have survived, and it is a living monument to the integrity of standards that Gorham is still more than a company. It is an American institution.

Gorham did a good deal of talking about selling department stores, but it was conversation only. In reality it was nothing. There are today three department-store accounts. Other companies did no talking, except about Gorham, but have, and are selling department stores. Gorham's policies are now, as they have been for the greater part of a century, shaped to recognize the needs and desires of the retail jeweler.

Criticisms have been made—just and unjust—but reputation is what we *think* a person is. Character is what he *is*, and Gorham's character is as firm as the rock-ribbed hills of New England. It is the great beacon light of quality which none question.

You have been its friends. You have recognized its value. You have helped to make it. Asking me to be on this program is a tribute paid to the Lion, Anchor and G, and as such I recognize it. It is a great privilege to be the spokesman for our artists-craftsmen, our salesmen and officials—to represent the men of the past and the men of the present who have grown gray in its service—men who have made a definite contribution to the constructive force of the world. To be placed before you today as their representative makes me very humble and in their behalf I want to thank you. And, as an emblem of their regard and appreciation for the work of this great Organization, I wish to present the National Retail Jewelers' Association with this gavel.

THE LARGER DISTRIBUTION OF STERLING SILVERWARE

By George C. Lunt

Sterling Silverware Manufacturers' Association

The Sterling Silverware Manufacturers' Association, which I am honored to represent before your convention, esteems the privilege offered and I bring their kindliest greetings and wishes for continued success and prosperity.

My mind naturally reverts to your convention at Buffalo two years ago, whereat through the courtesy of your officers, a committee from the Sterling Silverware Manufacturers' Association, of which I was a member, was invited to meet your committee on sterling silverware.

It seemed to me that previous to that time many of your members were more or less hostile to the sterling industry, owing largely to a misunderstanding of each other's economic needs, and here is just where the value of associations justifies their existence. They furnish the one point of contact so necessary nowadays in the accomplishment of any movement or purpose. The point of contact at that time seemed to be the turning-point towards better conditions between us; indeed we have gone far in friendly trade relations and co-operation since that time.

Your honored president, Mr. Hufnagel, has furnished me with the subject of my talk, "The Larger Distribution of Sterling Silverware." This naturally is the subject I am most interested in and moreover I am confident that said larger distribution can be had to our mutual advantage.

Your president also wrote me to the effect that according to a certain survey much distribution was going on through other channels, thus dissipating the rightful business of the retail jeweler, and it is necessary to divert these channels into the one large stream—the retail jeweler; therefore he believes much could be accomplished if I would embody in my address the most practical way of attaining this result. This certainly is a large order, yet upon careful analysis considerable can be said in the right direction.

Of the other channels referred to—drug store, hardware store and mail-order houses—the percentage is not serious. Many places, accord-

ing to the rate books, are drug and jewelry stores. The hardware sterling trade is not greatly developed, and of the mail-order houses many were regular jewelers doing a mail-order business. The department store is the largest stream, outside the regular jewelry channel, in the distribution of sterling silver, and after some experience with surveys and knowing, as I do, the impossibility of getting correct figures, I have reason to believe the total percentage is not as great as the survey indicated. The department-store trade in sterling silver is principally in the ten largest cities. I therefore am of the opinion that sterling silverware is very largely in the hands of the legitimate jeweler throughout the land today; in fact I believe there are thousands more jewelers in this country that do not sell sterling silverware than there are merchants of other classification that do sell it.

Nevertheless, the percentage may be on the increase and that is reason enough for the solicitude of your president and yourselves and it is indeed a subject for careful study—a study in economics.

Speaking of economics, it will pay us to philosophize a little. There are natural economics and commercial economics, and one is about as irresistible as the other. Competition goes on and on in our civilization as it goes on in the wilds of the forest. Therefore, for our lesson let us look to nature, where each tree, branch and twig or blade of grass verily fights for its share of the moisture and sunshine. It is said that a very minor injury to a young tree might easily reduce its size to one-half that of its neighbors in twenty years because of loss due to overshadowing while the growth of the injured one was impeded in its youth.

Then, again, do you realize that nature could get along quite well without the works of man? It got along before men existed. Man, through his God-given ability and energy, interrupts the course of nature and uses its infinite power to his own ends, but he has got to keep everlastingly at it or the reversion takes place.

How often do we note in our ride into the country that here and there a bend in the road has been straightened, perhaps less than ten years ago? Have you observed how the grass and bushes and young trees have nearly obliterated the old course?

Then again, by this same road, among the other growth, we discover a few lilacs in bloom. Surely these were not native to the place, and we stop to pluck them, and find that they, with a few tumbled stones of a cellar hole, are all the remaining evidence that here was once a farm-

house, and human life, endeavor and hopes, that for one reason or another had given way in the competition with nature.

I do not wish to pose as an alarmist, but born of that old Puritan stock that landed on this coast, to which you have journeyed, a sermon would not be a sermon did it not refer to that hell-fire ending, unless all our energies are bent in the right direction.

All this is to bring forcibly to your mind that it is the same in business economics. You must keep the broad channels open and free from obstructions. You must build the barriers and keep them everlastingly in repair and not sit idly by and watch the stream here and there diverted and lost.

How can this be done? Can it be done by artificially stopping the department-store channel? I think that is impossible, for that channel has been open for over thirty years and there are a few manufacturers that sell the bulk of their product through that channel, and if anyone now selling them should immediately stop, it would only add to the prestige of those that continued.

It seems to me the proper thing is to make a study of the department-store methods and adopt such as are found valuable, for you may set it down as a fact that the department stores of all other retail stores have made the most scientific study of merchandising.

You will learn the lesson of window attractions, timely display advertising, the psychology of numbers and prices, personal appeals of all kinds, and then *turnover*.

Turnover of capital invested is the one great difficulty of the jeweler and is really his one greatest problem of all problems, and this is the real place where the greatest menace lies.

You are constantly advised by the Harvard Bureau and others of what the average cost of doing business in your line is, *i.e.*, the overhead cost, and said reports give the turnover, as from once to twice in a year, while the department store gets three to five turnovers. I have heard several talks at state jewelers' conventions by statistic experts, and it seemed to me, in a half-hour talk they spent twenty-nine minutes on statistics and one minute on turnover. I think they should reverse the minutes in their advice.

The question of mark-up, especially in percentages, will fool you if you are not careful, and you will raise yourselves out. For instance, set these figures down and contemplate them. A 100 per cent. mark-up

means that every dollar's worth you sell gives you 50 cents towards your annual budget of expense—rent, light, heat, clerk hire and general expense. A 90 per cent. mark-up gives you 47.4 cents towards your annual budget. An 80 per cent. mark-up gives you 44.5 cents, a 75 per cent. mark-up gives you 42.9 cents, a 70 per cent. mark-up gives 41.2 cents, a 66⅔ per cent. mark-up gives you 40 cents, a 60 per cent. mark-up gives you 37.5 cents, a 55 per cent. mark-up gives you 35.5 cents, a 50 per cent. mark-up gives you 33⅓ cents.

The wide difference in percentage of mark-up appears considerable but when it is translated into dollar sales and the difference in cents you would have towards your annual budget, it does not seem so important. The percentages of mark-up in the example given range 50 points, while the cents range 16⅔ points.

Now, you gentlemen represent all sizes in volume of annual sales. Let us take, for example, a unit of $10,000 in capital invested and an annual sale of a like amount, meaning one turnover, which any of you can easily multiply into your own volume, and then take three of the most commonly talked-of percentages of mark-up and at one turnover see what it means in difference in the number of dollars you will have towards your annual budget of expense.

Ten thousand dollars in sales at 60 per cent. mark-up gives you $3,750 towards your annual budget; at 66⅔ per cent. mark-up gives you $4,000 towards your annual budget; at 70 per cent. mark-up gives you $4,118 towards your annual budget.

From 60 to 66⅔ per cent. only adds $250 per year to your gross earnings, only $2.22 more in every day's sales at the 60 per cent. mark-up would do the same trick. From 66⅔ to 70 per cent. only adds $118 per year to your gross earnings, only $1.00 more in daily sales at 66⅔ per cent. mark-up would do the same thing. Therefore, in competition with all other kinds of merchants, think more of daily volume than mark-up.

I do not wish you to underestimate the value of mark-up but I do wish you to see that it is really volume that "brings home the bacon."

Your grocer, for example, may have an average overhead cost of 20 or 25 per cent. He buys eggs of the farmer every morning at say 50 cents a dozen and sells them at 55 cents, a mark-up of 10 per cent. Does he lose money? Not much, for he turns his egg capital every one of the 300 business days in the year.

Now every one of you can fairly estimate your annual budget of expense at the beginning of the year. Just use your reasonable mark-up and figure how many dollars' worth you must sell in the year to cover it and make a profit, and join the "go-getters."

Say your budget on the above unit is $5,000 you would make a loss in one turnover. Now if you could keep your budget about the same and capital the same, and turn it twice or sell $20,000 or two turns, you would have respectively $7,500 or $8,000 or $8,236 against your annual budget and show a profit. And then note what five times your turn of capital would do. Of course in practice you could not keep your budget of expenses the same, because it would take more clerk hire, etc., but some of the items would remain the same, and it is a fact that while your figure experts give the jeweler from one to two turnovers these same people give the department stores from three to five. There lies the profitable merchandising.

He concluded by saying:

Now I have been talking economics when I am more fitted to talk sterling silver, from over forty years' experience in that branch of your business.

The Sterling Silver business is said to be a combination of an art and a business and both phases are interesting.

You have a code of ethics. I wish to call your attention to the ethics of the sterling-silver business as practiced by members of the Sterling Silverware Manufacturers' Association and a number of other sterling manufacturers. First compare the standard of metal qualities. Platinum may be alloyed with palladium or iridium or other alloys of the so-called platinum group. Are you sure of what you are getting? Then, again, I heard a discussion of the stamping on gold-plated chains at one of your state conventions, as to whether they should be stamped $\frac{1}{10}$ 14 kt. or 14 kt. $\frac{1}{10}$. It would seem to me that neither was ethical inasmuch as 14 kt. seems out of place on an article 94 per cent. base metal.

On the other hand, I point with pride to the sterling mark on silverware, which you can depend upon as solid all the way through and .925 fine.

Then there is the business dealing. The prices of one manufacturer may be different from another, but when you see his price list it means that those are the prices, whether you are a large dealer or a small one. There are no deviations; no special discount to the favored one, or the

mail-order houses, or to the department store; no consignment that doesn't have to be paid for until sold; no difference in time or terms. Is it not comfortable to know that when you buy a given article in sterling, your neighbor has absolutely no advantage? You have bought at as low a price as he, and at as reasonable terms as any other merchant can buy, whether he be big or small and, moreover, there has never been any profiteering in the business.

Then comes the art and the craftsmanship. Sterling silverware is not a quantity product, automatically run through the mill by the mile by pulling a lever here and there. It is designed in taste, wrought with skill and finished with care. The designer is a student of history of all time—not the history of wars and political divisions of generals and admirals. He studies the history of ornament, which is the history of the taste and refinement of all civilizations, for art endures while races disappear. He must have ideals and create, yet he must build on the basic principles of ornamentation as exemplified in the periods of the past, as a composer of music builds upon the laws of harmony.

A line of flatware or a tea set is not conceived in a second and completed in a moment; indeed a designer may work for a year and make a thousand sketches before one is adopted for a line, for there are many things to be considered, among which is the cost of the dies and tools, but the greatest is—will it meet with your approval and that of your exacting clientele? Maybe the whole gamut of periods has been worked, beginning with that of ancient Egypt, through the Greek and Roman, Arabesque and Gothic, Renaissance, the Louis XIII, XIV, XV, XVI and the Empire of France, the Jacobean, Cromwellian, Restoration, William and Mary, Queen Anne and the Georges of England and the Colonial of America.

Right here let me try to interest you and your sales people in this most interesting of studies—ornamentation—for the most valuable heritages of all time have been ornamented. I believe solid silver should bear ornament, and the best of ornamentation, not a riot of ornament, but a certain amount of refined ornamentation in keeping with the dignity of the metal. It is easier to keep clean and in condition than a plain spoon or pot and, furthermore, you find plain wares in the restaurants.

If you took a plain sterling spoon and finished out the sterling mark, scratched it a bit and mixed it with the restaurant plate, nobody would

steal it, while, on the contrary, a beautifully ornamented spoon would attract attention anywhere.

Sterling silver is for the home and should be so designed by the maker and sold by you to the customer to make for the dignity of that home. That word "home" is the keynote of the possible four times' increase in turnover of a part of your capital; at least work it for all it is worth. The home, after all, is the center of our world, and the dining table the very heart of it and it should be beautifully equipped. In these days of automobiles and Sunday picnics, the dining table, once the pride of the hostess, may be temporarily forgotten, but only temporarily. Indeed there is already a well-defined social movement towards its rightful function, for that same gracious instinct that made hospitality one of the fine arts long ago in homes of people of refinement will always and forever remain, and it falls far short of an art unless solid sterling silver, fine linen and fine china make up the setting.

Then, again, there is the long life of sterling solid silver. Like your gems and gold, it lasts after all else has gone. We will all be referred to as ancestors some day. What kind of ancestors were we? What will posterity say of us? Now silverware and jewelry have recorded the family taste ever since the days of King Tut and before, 5,000 years and more, because it is the lasting evidence. It is up to every one of you to see to it that posterity may be favorably impressed that we, in this most wealthy of nations the world ever saw, were people of refinement and taste, as evidenced by those beautiful heirlooms—"Gifts That Last."

THE INFLUENCE OF STYLES UPON CIVILIZATION

By George C. Lunt
Rogers, Lunt & Bowlen Co.

(From an Address Delivered before the Women's Club of Greenfield, Massachusetts)

I recently spoke before the Kiwanis Club and in that talk dwelt more on the care we take with the quality of the silver metal that it may always assay 925/1000 fine, the correct assay for solid sterling silver, but I feel that the ladies of the Greenfield Women's Club are more interested in the aesthetic side of the industry.

However, I wish to touch briefly on the metal side, as silversmiths all know that there is very meager popular understanding of the subject.

Perhaps the reason for even general misunderstanding is that in this country, and nowhere else, almost every sort of shiny white metal table accessory is grouped under the general term of Silverware, and this has come about through advertising.

Americans are the greatest advertisers in the world, and the American public is the greatest purchaser in the world of advertised goods. Some advertising is ethical, some takes an unfair advantage of terms and the public is not always able to discern from the wording the true character of the merchandise.

I therefore wish to say that there is only one class that has the real right to be called silverware, and that is solid-all-the-way-through sterling silver.

The other kinds are legion, beginning with the ten-cent kind made of low-grade steel and a sunshine plate, a silver plate so thin that a little "moonshine" would remove it.

The next is nickel silver. I recently saw an advertisement calling attention to "this beautiful nickel silver sugar spoon." Nickel silver has absolutely no silver in it. It is brass whitened by nickel, an alloy of copper spelter and nickel.

Then comes the hollow ware, made of soft metal, an alloy of tin, copper, antimony and bismuth, easily cast. This kind of merchandise is capable of a wide range in cost, from the poorly finished and thin sunshine plate to the well-made and heavily silver-plated. The maker's mark is the guarantee of quality.

A still better class of plated ware, both flat and hollow, is made with the afore-mentioned nickel silver base and heavily silver-plated. This is the ware in general use in the good hotels, and is the ware of the largest advertised brands.

All of the before-mentioned articles are plated electrically; *i.e.*, they are fully made and put into a chemical solution or bath containing silver, and an electric current turned on, which seems to have the power of taking the silver out of the solution and depositing it on the base metal.

The article is taken out of the solution and polished, and is ready for the market.

I wish to here tell you about Sheffield plate. From 1700 to 1800 England produced much beautiful solid sterling silverware. Silver metal was comparatively high in price and labor low, so about 1750 one Thomas Balsover made replicas of the solid silver articles at a lower cost for the metal. This was done by taking two flat pieces of metal, one silver and the other copper, and soldering or sweating them together, and more often three pieces sandwich-like, the copper in the middle and silver on both outsides. After sweating together, the thick piece was rolled down into a thin sheet and from this sheet various articles were made in the excellent styles of the period.

This ware was largely made in Sheffield, England; hence the name. It was made up to about seventy-five years ago and was then discontinued on account of the invention of the aforesaid electroplate bath, which was a much cheaper process.

Now you have no doubt read many advertisements within the last few years calling attention to articles in Sheffield plate. The stores have been full of it. It is safe to state that not one piece in a hundred thousand was genuine Sheffield plate, for to have been genuine it would be a genuine seventy-five to one hundred and seventy-five years old, and most of it that is advertised was made yesterday and is an imitation and a fraud.

The Federal Trade Commission has just ruled against calling this modern merchandise Sheffield plate as fraudulent.

We now get to sterling silver, the only real honest-to-goodness, solid-all-the-way-through silver—the real silver of all time. I believe I am to speak of it from the standpoint of the decorative art.

Silver is ductile and malleable, and the ancients wrought their vessels from a flat sheet with the hammer. To make a vase or pot, they hollowed the end of an upright log and then started hollowing the sheet of silver in the center, working up the sides bowl shape and then on a staking tool, a piece of bent iron in a block of wood, they hammered until the neck was drawn into the proper size and shape.

When we make a new piece for the line, we have men to make it exactly the same way; *i.e.*, in the development of the design handicraft is used, but as soon as the model is accepted as fitting to go into our line, then tools are made to reproduce the articles more or less mechanically as far as we can, but there still is and always will be more or less craftsmanship employed.

Decoration of solid silver is done in several ways, all of which are old. The decoration may be stamped on with hardened steel dies, same as the silver dollar. This is the most common method of making flatware and, indeed, hollow ware may be directly stamped if the shape is such as to allow it. Other methods are chasing, engraving or etching. The etching is done by blocking out the parts to be left, with wax or asphaltum, which the acid will not touch. The article is then immersed in acid and the exposed portion eaten away, leaving the ornament raised.

Engraving is really carving with a sharp tool by hand. Chasing is done with small tools and punches forced in with the hammer and may be what is called flat chasing—that is, the lines of the flowers and scrolls or decoration are punches in the flat surface—or repoussé chasing, that brings the ornament out in high relief. This is accomplished by driving out the high bunches from the inside with what is called a "snarling iron" and then filling the inside with pitch and chasing the figure back from the outside.

Another common form of decorating is piercing, *i.e.*, holes cut through, either with a piercing saw by hand, or with piercing dies fitted in a power press. This decoration was much in favor on certain articles in Colonial times, on sugar baskets and open salts having glass lining, and bon bon or fruit dishes.

Now the styles of ornament used in all times are similar to those used on wood, stone or other material, and a history of ornament is a history of ornament on silver, for silver is one of the things that has lasted longest and brought the history of the past before our eyes, indeed the history of silver and the history of ornament are the history of the taste and refinement of all civilizations. Ornamentation is a manifestation of the thought and the imagination as to what is beautiful. Man from the earliest time has chosen the object of his admiration and attempted to improve its appearance towards the satisfaction of his ideals. At first the imagination wandered but little from the natural objects seen with the eye, but time and history have built a fancied structure in ornament as surely and soundly as it has developed the utilities of civilization.

The history of ornament shows the perceptions and characteristics of every people and epoch, and a student may take for example an acanthus leaf as modeled in ancient Rome, and note the different renditions by the artists of the Renaissance and trace the development through the Louis's of France down to our time.

Artists, artisans, architects and designers of all times worked in the way natural to them, doing their very best with all their cunning, guided by the basis of knowledge at hand and influenced by their surroundings.

This age judges the refinements of the past by the expressions of thought in fancied ornament which has paralleled the influence, wealth and cultivation of all times, and posterity will so judge the present epoch.

It is intensely human—an inherent human trait—to desire something other than the plainly utilitarian; as witness, the dress of our own Indian aborigines and the recent style show at Lawler's Theater.

Archaeologists have long taught us to respect the taste of the earliest peoples. The recent find of the tomb of Tut has set the world agog for the early Egyptian styles in jewelry and toggery.

Prehistoric design was largely composed of geometric patterns, although crude figures of men and animals are found.

The Egyptian ornaments are perhaps the earliest of the historic group. Their ornaments were drawn from their surroundings, and the student can note that the designs then made form a basis on which subsequent design is built even to this day. I may mention that these

ornaments were largely taken from plants indigenous to the Nile—the lotus, papyrus and palm.

Art existed in Greece even in prehistoric time, and was continuously cultivated and perhaps rose to its highest development from three hundred to five hundred years before Christ.

It seems as though civilization has moved westward ever since. Rome in due time conquered the world and took her art from the Greeks and brought it to a high state of development to satisfy the luxurious tastes of the time of the Caesars. This was the Classic period—the period of the five orders of Architecture.

Centuries later the principles of ornamentation of the Renaissance and centuries still later the periods of Louis XVI in France and Adam in England were based and drawn from this so-called Classical period.

The fall of the Roman Empire and the victory of Christianity marked the decline of Classic Art. The succeeding centuries, however, developed new fashions, some which were combinations of earlier natural work and the Roman influence, as, for example, the Byzantine and Romanesque and Celtic, each of which has its own historic foundation.

About the twelfth century A.D. an entire change came over the people of Europe, and in northern France a style began to develop built on the old Roman style but taking its detail from the trees and leaves. This was the day of the pointed arch. The Italians designated everything barbaric that came from the North and called the new style Gothic. This style overran Europe, and as the Christian religion was paramount, many cathedrals and churches were built in this style and have been even to this day.

The Cathedral of Notre Dame in Paris, built 1163 to 1182, is a masterpiece of early Gothic.

Gothic art had never become a part of the Italian nature and during the fifteenth century a reversion to the Classic took place. By the year 1500 A.D. the movement was in full swing. Many of the world's greatest artists took part in the development. This was the time of Michelangelo, Benvenuto Cellini and Raphael.

The Italians called this period Rinascimento, and the French Renaissance, meaning rebirth.

Everything was classic, the five orders of Architecture were studied and reproduced in as nearly perfect form as possible. The

detail of ornament was taken from the early classics of Greece and Rome.

It was at this period that Francis I visited Italy and, imbued with the beauties of the work, brought many artists to France, among whom was no less an artist than Benvenuto Cellini. It was this period that produced the great architects that built the Louvre, the Tuileries and the Palace of the Luxembourg.

Post-Renaissance design and ornamentation are subject to closer analysis and seem to be grouped under the name of reigning kings and queens, as evidenced by the styles Louis XIII, Louis XIV, Louis XV, Louis XVI and the Empire in France; and Stuart, Cromwellian, Restoration, William and Mary, Queen Anne and Georgian in England.

The lines and basic principles and much of the detail of the Louis XIII and Louis XIV and the early English were built upon those of the Renaissance, but at the beginning of Louis XV's time much freedom of line is noted.

Perhaps the simplest illustration may be that the Classic and Renaissance ornament seemed to resemble a plant with a base or root and central stalk and branches from out either side in graceful curves, whereas the Louis XV seemed without root but the ornament being more like a group of shells beside one another and some free branches in graceful curves attached. Indeed on many an old-fashioned whatnot that sat in the corner of the parlors of our fathers having on its shelves curios from the far corners, there could be seen a beautiful shell with thousands of lined corrugations radiating spirally from the center.

Here is the great lesson of the Rococo of France, and the First and Second Georgian in England was a reversion again to the Classics of the Renaissance and the Ancients.

The most interesting study for us is the so-called American Colonial period and the influences that bore upon it. The earliest days of the Colonies were strugglesome times, but by the middle of the seventeenth century skilled artisans were among the emigrants.

Cabinet makers and silversmiths were among the number and they created excellent products in the manner of the time and of a style they had learned abroad or copied from the importations freely arriving. The output of the Colonial craftsmen often rivaled that of the foreign makers in contour and accuracy of design. We would therefore set from 1690 to 1800 as the most interesting period to study. Collections of

Colonial antique furniture, glass, china, and silver are practically all the products of this period.

Of course Spanish, Dutch, Italian and French had more or less influence during the period, but the English influence was naturally paramount and it so remains today.

We note in the class magazines that here and there are beautiful exteriors and interiors in Italian Renaissance or Louis XIV and once in a while an interior decorated in the most ultra-modern jazz version of the Art Nouveau, yet the vast majority of our better homes, the real homes of those of moderate means and of wealth as well, are patterned after the American Colonial and therefore the English, whence the American Colonial came. It seems more fitting to our natural environment. It is easy for the architect and designer to see why those of means seek the Colonial antiques, and if unable to fully furnish with them, fill in with good substantial furnishings, furniture and silver modeled after the Colonial styles.

Thirty years ago furniture and silverware were modeled after the Victorian style, and I doubt if it will ever be sought and admired as an antique, even if found a thousand years hence, as it had no real beauty, whereas articles dating a hundred years or more back had real art back of them.

Now, our modern mode of living of course requires many things that our grandfathers were not aware of; for instance, electric fixtures, some musical instruments, some articles of furniture and even forks and many table accessories.

Beer and wine were common drinks of the olden time, therefore tankards and cups. Tea came in about 1650 and silver teapots were very scarce in William and Mary's time. Queen Anne appreciated a silver teapot among her most cherished gifts.

Coffee pots were but little earlier, and it was thought somewhat ungodly to eat with a fork in Stuart times. Fingers should be used. The Italians, however, made some use of forks for centuries.

We today make a hundred or more different flat pieces of silver—forks for oysters, salads, dessert, fish; spoons for ice cream, iced tea, bouillon, soup, coffee, tea; knives for everything. But for all this, it may be set down as an axiom for furniture makers and silversmiths, while they may make many articles that were not produced in the past, they should base the designs of these modern articles on the

finest traditions of the past, perfectly understanding the detail of the periods and adapting them to present needs, as only in this way can freakish and meaningless results be avoided.

Now to revert to period again. You are no doubt more familiar with the succession of the periods of antique furniture. The early Stuart, or Cromwellian, is not so well adapted to our homes; its contemporary in America, the early turned furniture, is valuable, indeed very valuable as an antique, but hardly comes up to the desires of our home furnishings. The William and Mary style perhaps is the earliest that we really appreciate in our homes. This was the day of the six-legged highboy and lowboy and gate-leg tables, the bell-shaped legs and shaped stretchers, the tops with the single and the two cyma curves. Then comes the Queen Anne, the bonnet top, the broken arch, the curved back chairs, some with the Spanish foot, some with the cabriole leg and the finer pieces decorated on the leg with a shell and husk. Then come the Georges, I, II and III, and during this period came the greatest development of the lighter furniture by those great cabinet makers, Chippendale, Hepplewhite and Sheraton, styles freely copied by our American cabinet makers.

The brothers Adam set the styles in England from 1760 onward. They brought back the classic of ancient Rome and Greece. Robert Adam was architect to King George and dominated everything. He was prolific and designed everything from a door knob to a façade, from a sugar tong to a clothes cabinet. He employed Chippendale, Hepplewhite and Sheraton in their turn.

If you will go to Salem or Newburyport or Portsmouth or Plymouth, you will find many houses built from 1760 onward by our prosperous early merchants, and if you examine carefully the doorways and fireplaces, the pillars and pilasters, you will discover the influence of Robert Adam in every line.

It is safe to say that all that is best and, indeed, the common type that we readily admire in our Colonial houses and house furnishings is in the style of Adam.

As you go to the depot, look over to the old Hollister house on Bank Row. Note the festoon over the windows. That ornament Robert Adam made popular when he came home from his two years' study, 1756 and 1757, of the Palace of Diocletian at Spalatro in Italy, a genuine example from the classics of antiquity.

Now, silverware was exactly like the furniture. We followed the same general sequence, and while Chippendale was making furniture, Paul Lamerie was making teapots, and in the same free style of the period.

In this country the silversmiths came early; they settled along our coast, where the richer importers and exporters lived—Newburyport, Salem, Boston, New York, Philadelphia, Baltimore. As time went on they followed up the rivers as the wealth and taste and refinement moved inland.

I mention the most prominent makers: Sanderson, Hull—coiner of Pine Tree Shilling—Dummer, Coney, Turner, Cowell, the Moultons, Burt, Hurds and the Reveres and many others.

Each in his time followed the prevailing mode here and abroad. John Coney in 1698 was making teapots in the William and Mary style. They were true to the type, round with bell-shaped body, similar lines as in the bell-shaped legs of the highboys and lowboys.

Perhaps you might call them pear-shaped. Now, there is something about the graceful lines of a pear that reminds one of Rococo. The Rococo shields were often pear-shaped, more often like an inverted pear. Note the compound curves. This style was uppermost in France during Louis XV's time and in Queen Mary's and George I's time in England. Therefore, the pots and bowls of Queen Anne and George I and George II were mostly inverted pear-shaped bodies decorated with the free scroll work of Louis XV. Now, in George III's time comes the Adam influence and the study of the classics. Here comes the ancient classic Greek shapes—the urn. You can see it on the old fence posts as well as in the silver pots. And the decorations are just as classic; the festoon of husks, of drapery, the conventionalized palm and acanthus, etc., all classic to the last dot.

Now I mentioned before that our early silversmiths settled in those coast cities where the wealth and taste of the country congregated. The old nabobs bought considerable silver, and that silver today is either the choicest and most valuable heirloom of the family or has found a resting place in the museums of the country.

Since the days of King Tut, and indeed many centuries before, solid silverware has been the badge of honor and refinement and taste of all peoples. There is no substitute for the real, notwithstanding the many alluring advertisements that Mrs. Gotrocks and Duchess Fatwad have much plated ware. They may have, but you can be assured

they also have heavy, beautiful, and artistically wrought solid silver, and much fine linen, real mahogany, paintings by the great artists, and so on, and it does not have to be advertised.

Speaking of paintings, if there was an oil painting of one of your ancestors made by a good artist a hundred years ago, does it get into the attic? Not much!

Yet go to any attic and laugh over the photos of thirty years ago.

I saw in one of our trade papers recently that a jeweler in Atlanta had an exhibition in his window—a tea set. The story was that two young women of the South, back in 1844, were given a sum of money to visit New York and purchase some finery to take home that they might properly represent the taste and refinement of the family in that aristocratic society of the early South. One bought silks and satins, but the other was carried away with a beautiful solid silver tea set in a jeweler's window and bought it. The silks and satins are gone, but the tea set still remains as beautiful and valuable as ever, a choice family heirloom, which will be long cherished as evident proof that their ancestors were people of substance and quality.

When people of means fit out homes with real mahogany, antique or modern furniture, real imported rugs of fine quality, fine linen and china, it would indeed be inharmonious to buy an outfit of silver-plated ware for the table that will soon show just what it is; indeed at once show to the initiated.

In these days of automobiles and Sunday picnics, the dining-table, once the pride of the hostess, may be temporarily forgotten, but only temporarily, for the same gracious instinct that made hospitality one of the fine arts long ago in the homes of people of refinement will always and forever remain, and it falls far short of an art unless solid sterling silver, fine linen and fine china make up the setting.

I must once more call attention to the long life and use of sterling solid silver. It lasts after all else has gone. I use this thought in every talk I make, so you will pardon me, but we will all be referred to as ancestors some day. What kind of ancestors are we? What will posterity say of us? Now silverware has recorded the family taste for five thousand years, because it is the lasting evidence.

Let us all see to it that posterity may be favorably impressed that we were people of refinement and taste, as evidenced by those beautiful solid silver heirlooms—Gifts That Last.

PLATINUM

From Booklet of the South American Gold and Platinum Company*

(Reprinted by courtesy of the *Keystone*)

Platinum is the noblest of the metals, rare as the diamond, beautiful as the emerald and useful as iron. When the Spaniards came to South America they found the natives throwing it back into the rivers as useless. From that state of uselessness it has come to be the most useful and most ardently desired of all metals. It is always metallic when found, but chemists convert it to many other forms and states.

Without platinum, many refinements of modern life would be impossible, as no substitute has been found for it.

Its Uses Innumerable

For the making of fuming sulphuric acid and fixed nitrogen; for jewelry, watches and settings for precious stones; for lightning-rod tips, coloring for pottery and photographs and for the preservation of standards of measurements, it is the only metal. For the X-ray, radio, telephone and telegraph, no other will take its place. The dentist uses a third of all produced, for it will not oxidize nor tarnish. No acid will affect it but *aqua regia*, and for that reason it is universally used for chemical apparatus.

Under changing conditions it is the hardest and softest of the metals. Combined with 10 per cent. to 20 per cent. of iridium, it is the hardest, but pure platinum can be drawn into a wire invisible. An ounce will stretch about 50,000 miles.

Hard or soft, it is the best conductor of electricity known next to silver, and for that reason it is used as sparking and contact points in engines where great heat is developed. Its melting point is 1775° Centigrade or 3227° Fahrenheit. This point can be raised still higher by combining with other metals.

* Prices quoted herein correct for October, 1923.

Because it contracts and expands less than do other metals, it is the one used for lead-in wires for incandescent bulbs and for thermo-couples.

Platinum has properties almost magical, which even the chemists cannot explain. In powdered form it will absorb eight hundred times its own volume of oxygen, and a bit of this powder plunged into gas will burst into flame. Certain chemicals will combine only in the presence of platinum, the platinum remaining unchanged. It is the most marvelous of the catalyzers.

It is almost the heaviest thing in nature, being surpassed only by osmium and iridium, which are found associated with it. In the same family are palladium, rhodium and ruthenium, also remarkable metals. Osmium has a specific gravity of 22.48; iridium, 22.42, and platinum, 21.5. Gold weighs 19.3 times as much as water and, until these other metals were discovered, was believed to be the heaviest of the metals. This fact led to counterfeiting and a few hangings, but if the spurious coins were offered today they would be gladly received at four times their face values. Times change, also metals.

It Is Rare and Costly

In 1919 platinum sold as high as $170 an ounce. It is now worth about $110 an ounce, but the price is rising again. Iridium, its most useful alloy, sold at $610 an ounce in 1919 and is now in urgent demand at $275. There is only about 3 per cent. as much iridium produced as platinum, whereas the most common alloys call for from 5 to 20 per cent. of iridium. It is evident that a crisis is approaching in the iridium situation.

But, speaking of alloys, it is interesting to note that the firm of Johnson, Matthey & Co., assayers to the Royal Mint and the Bank of England, have produced platinum with a purity of 999.98773 per 1000 parts. This firm made the standard meter and measures which are preserved in Paris, some 8000 ounces troy of platinum of that degree of purity being used.

When the Great War began, Russia was producing 300,000 ounces a year and Colombia, in South America, 12,000 ounces. All the rest of the world produced only 1500 ounces.

Bolshevist rule has disorganized the Russian industry, so that not more than 25,000 ounces a year come now from Russia. Colombia is

now producing at the rate of about 50,000 ounces yearly, but the rest of the world is yielding no more than before. What production comes from other countries is incidental.

Its History a Romance

The story of platinum is like some fairy tale about a little lost Prince. After ages of neglect, the Prince has come into his own, with all mankind paying homage.

Thousands and thousands of years ago, the archaeologists tell us, ancients of South America worked the metal into ornaments for their kings and priests. In the American Museum of Natural History in New York is a collection of such jewels taken from tombs in Ecuador, supposed to be not less than two thousand years old.

But the art of working platinum was lost and was not rediscovered until three hundred years after the Spaniards came to America. It was another hundred years before it was recognized as having unusual value. Not until the Great War came was it considered unusually precious.

Now platinum has taken its place as the noblest of the metals and its uses are extending so rapidly that, unless more is found, it seems the development of many arts and sciences must be checked.

What is probably the first recorded mention of platinum among moderns was made by the eminent scholar Julius Caesar Scaliger in 1557. He did not call it by any name, but referred to it as a metal found in the region between Mexico and Darien—a metal not fusible by fire or by any of the processes known to Spaniards. He was answering another writer who had declared all metals fusible. Scaliger said here was one not fusible.

And so the world in general believed platinum to be infusible and not malleable until 1783, when the French chemist Chabaneau discovered a method of making it into ingots. But even then it was more of a curiosity than a useful metal and was chiefly used for making ornaments for kings and nobles. Many chemists had managed to make small ornaments of the metal before that, but none had ever rendered it malleable so that it could be utilized commercially. Chabaneau's discovery was of very great value to science.

Somebody learned that it has a greater weight than gold, and, as gold was then the heaviest metal known, platinum was ideal for

counterfeiting. Spurious doubloons made their appearance with only a thin coating of gold. Because the world in general had never heard of platinum, the counterfeits passed without suspicion until the gold began to wear off. The Encyclopedia of Diderot and d'Alembert, published in 1774, tells of Hollanders getting such counterfeits on the coast of South America, and relates how they stopped over there on their next voyage and hanged the traders from whom they had received them. Those doubloons would have been worth about $8 if pure gold. Today they would be worth $32 if pure platinum. Czar Nicholas I of Russia began making coins of platinum in 1828, but this coinage was suspended in 1845, when the coins became worth more than their face value.

Not only coins but ingots were counterfeited. So important a concern as the South Seas Company accepted an ingot supposed to contain £12,000 gold. Upon trying to melt it, a thin skin of gold came off, and the rest of the ingot was thrown away as worthless because no method of refining was known.

Chabaneau's First Ingot

When Chabaneau announced his discovery of a platinum-smelting process, Charles III, then King of Spain, called him to Madrid and made a hero of him. He let him live in the royal palace, settled a pension of $2,200 a year on him and established for him a professorship of metallurgy, chemistry and physics in the University at Madrid.

The Count of Aranda was the great man of Spain in those days and he became a friend of Chabaneau. The chemist took to Aranda's palace one day a sample of the new metal. It was a little cube of about ten centimeters. He placed it on a table and the Count reached to pick it up.

"You are joking," said the Count, "you have fastened it down."

"No, indeed," said Chabaneau, picking it up with an effort.

The little cube weighed above sixty pounds. No wonder the Count thought it was fastened to the table.

Aranda was made Ambassador to France and Chabaneau accompanied him there to teach the French king's goldsmith, Jeannety, how to use platinum on ornaments for the royal crown.

Thus was the noble metal introduced to public favor, but introduced on account of its most trivial quality. Its really useful qualities and its

superb gifts to humanity were not disclosed until in the fullness of time the world was educated to understand and appreciate them.

Being indestructible, all the platinum accumulated for ornaments still remains in the world for useful purposes as needed. But all the world has less than five million ounces of it, and of that four million ounces has been produced since 1840. A million ounces of this is in the United States.

How It Got Its Name

When Don Antonio de Ulloa was sent with others in 1735 by the French Government to measure an arc of the meridian on the plain of Quito, Ecuador, he visited the San Juan River valley in Colombia and saw the natives throwing platinum back into the river as worthless. They were finding it mixed with the gold for which they were panning the gravels. Ulloa called it platinum because it looked like silver and was found in tiny grains and plates—both called *plata* in Spanish.

Ulloa was helping to establish a standard of measurement. Many years later a standard was adopted and preserved in a bar of platinum and iridium. It is called the meter and is supposed to be one ten-millionth part of the distance from the Equator to the Pole. But it isn't, for they made a mistake.

However, platinum is fidelity materialized and the mistaken length is preserved as measured and is now the standard for all the world. Every capital has a platinum-iridium copy of the original meter. Only to platinum can any standard be entrusted with a certainty that there will be not even a microscopic change.

Ulloa was the first to write of platinum calling it by name, although it had been known nearly two hundred years before that. If the natives had called it anything they would have called it a nuisance, because it interfered with the gold washings and was sometimes so intimately blended as to make the gold difficult to recover. Natives have taken more than $600,000,000 of gold from the rivers of Colombia since the Spaniards arrived and have been throwing the platinum all back until within the last hundred years. So these streams are still practically virgin ground for platinum.

Rapid Increase of Value

This habit of throwing platinum away caused great excitement in the town of Quibdo about twenty years ago. The metal had a sudden

advance and natives remembered how they had been throwing it all over town from time immemorial. So they began panning the town. The Government stepped in and panned the streets and citizens mined their dooryards and gardens with rich results. One patriot burned his house down and, after panning the ruins, rebuilt his home and had a balance of $4,000 gold in the bank as a result of the fire.

Charles III, in 1778, ordered that all platinum found in his American domains be sent to the Royal Treasury. Nothing was paid for it and public traffic in the metal was forbidden. Very little was produced and ten years later the King offered to pay $2 a pound, but by that time the price was $12 in the markets of the world.

As the metal has increased in value, search has been made for it everywhere, but with meager results.

In 1806, some platinum was found in the Gaudilcanal River in Spain. In 1819 it was discovered in the Ural Mountains of Russia in the Iss and Veeya Rivers, where it has been produced in the greatest quantities.

But from a yearly production of 300,000 ounces in 1912, Russia fell to less than 25,000 ounces in 1920.

The great Russian production was from the Demidov and Shouvalov companies, which have ceased working on account of political conditions, and the business is such that individual production cannot be large. Duparc, the world's authority on platinum, estimates the Russian placers as good for only twelve years at the 1912 rate of production.

Of the Russian production, 80 per cent. was sent to France under contract, and practically all of that was reshipped to Johnson, Matthey & Co., in London, to be refined.

Colombia Only Large Producer

Only in the San Juan and Atrato Rivers in the Choco district of Colombia has platinum been found in large quantity outside of Russia. In the Tulameen River, British Colombia, there are some showings of the metal. Some is also found in sea sands along the Pacific coast of Oregon and the southern part of Alaska, but in such small quantities as to be almost negligible. The whole United States produced only 550 ounces of refined platinum in 1918 and that came chiefly as acci-

dental recoveries from other ores. Much of this was from nickel of Canada refined in the United States.

Thus it will be seen that the world must depend upon Colombia for its platinum. Even if other deposits should be found, it would take years to bring them into production. The properties now owned and operated by the South American Gold and Platinum Company, the principal producer of Colombia, have been in process of development in the hands of various owners for more than ten years. The development of platinum placers demands not only large capital but the highest degree of scientific and practical knowledge and skill. It was to obtain all these elements of success that the various companies developing placers of the San Juan River merged into the South American Gold and Platinum Company. In this merger were included the properties owned by the Lewisohn interests of New York, who for many years have been operating copper mines and gold placers successfully; the firm of Johnson, Matthey & Co., of London, assayers to the British Government, who are the leading platinum refiners of the world, and those of the Consolidated Gold Fields Company, of London. Adolph Lewisohn, of New York, is president, and the Board of Directors includes engineers and representatives of the various interests, every one having practical experience in his particular department.

As all previous production was by natives who employed the crude methods of past generations, the company was forced to do pioneering work on a great scale. The war made this difficult, but demand for platinum from the United States and the British Governments for war purposes was so urgent that large production was reached sooner than might normally have been expected. One 400,000-yard dredge has been at work for five years and a new steel dredge of 1,000,000 yards' capacity commenced operation in 1921. A third one of 1,500,000 yards' capacity is now in operation. Additional dredges will be added as rapidly as practicable, for the placers are so extensive as to make dredging on a great scale exceedingly profitable.

Placers Are Extensive

Some idea of the extent of the Colombian deposits may be learned from the fact that the leading producer has under development fifty miles of the beds of the River San Juan and its principal mineral

tributary, the Condoto, and 10,000 acres of banks. It has the dredging rights for the entire length of the San Juan River, which is more than two hundred miles from the ocean to headwaters.

One other company is coming into production on a lower branch of the San Juan, but all the other production of the country is from native workmen, who go singly or in small groups along the rivers, taking only such metal as it is easy to wash out. Under the laws of Colombia, natives may take any mineral they find in the rivers. As the production of Colombia has risen from 12,000 ounces of platinum in 1912 to a rate of above 40,000 ounces, it will be seen that the high prices have spurred even them to activity.

But now that the big company has three dredges at work there should be a great increase in the output of Colombia in 1923. There is no hope, however, that the shortage due to the decline of the Russian business will be made up. The United States alone demands fully 160,000 ounces of platinum a year and so much is not being produced.

The Choco natives are still using primitive methods for getting platinum. Women do most of the digging, while the men sit on the river banks and wash the gravel as the women bring it to them. These women dive into the water or tie heavy stones to their bodies to weigh them down while they walk into depths of from six to twelve feet, scooping the gravels from the bottom.

Enrichment Still in Progress

The region is tropical and torrential rains cause occasional floods. After every flood new values are found, showing that enrichment is still in progress. But the greatest values lie against bedrock from ten to thirty feet below the bottom of the rivers and far beyond reach of these native miners. Only the dredges can reach this enriched gravel. The bedrock is soft enough to cut, and dredge buckets dig into it from six to eight inches and bring up all possible values with a minimum of waste.

The river current is sufficient to carry out to the Pacific Ocean all silt and light matter and the heavy gravel lies where it has been worked. Thus the lower reaches of the river are not destroyed and in time will be dredged. Dredging is now in progress at Andagoya, about 185 miles up the river from the Pacific Ocean at a point where the Condoto enters. The work is proceeding upstream because values increase in

that direction. It will be understood that on account of the greater weight of platinum it will not be carried as far down the river as the gold. About 1½ per cent. of osmiridium is found with the platinum in the San Juan and Condoto.

Its Use by Jewelers

When mixed with from 5 to 20 per cent. of iridium, platinum forms a metal of such intense hardness that cobwebs can be made of it and subjected to rough usage without injury. Because of this, the most intricate designs can be carried out in jewelry by the use of an astonishly small amount of the metal. This overcomes the high cost per ounce.

When used as a setting for diamonds, it imparts a bluish-white luster to the stones, which greatly improves their appearance. It does not oxidize nor tarnish and, because for that reason imitations are easily exposed, it is a very popular jewelry metal. The jewelry trade at present consumes half the yearly output.

The ductility of platinum is astonishing. What is known as Wollaston wire is drawn to invisibility. Such wire is laid in minute squares across the lenses of great telescopes. Under high magnifying power it becomes visible and enables the astronomer to make extremely delicate measurements.

Wollaston drew the wire down to one thirty-thousandth of an inch. The Encyclopedia Britannica states that it is said to have been drawn to one fifty-thousandth of an inch. That is to say, a cubic inch of platinum would make a wire about 50,000 miles long—it would go twice round the earth at the Equator.

Wollaston wire is made by drawing it as fine as possible, coating it with gold, drawing it again and dissolving the gold, recoating, redrawing and repeating the process again and again.

Its Value in Electrical Work

Platinum is used as lead-in wires for electric light bulbs, for high-explosive bombs, as contact points for gas engines and in places where great heat is developed, because it has a high fusing point and expands less under high temperatures than any other metal. For that reason it

is used in pyrometers to measure temperatures in furnaces. Its action is absolutely constant under like conditions, so its readings can be depended upon.

Because of its present high price it is used now only as coating for lead-in wires on cheap engines and bulbs. But where absolute certainty of operation is needed, as for aeroplanes, submarines and racing automobiles, platinum-iridium points are demanded.

The freedom from oxidization makes the metal ideal for spark plugs, which, when it is used, are always clean and give an intense flame. There are from two to six platinum distributor contact points in every gas engine, at the least.

Its non-magnetic character makes it a necessity as a deflector in the X-ray. Its perfection as a conductor of electricity, plus its high fusing point, brings it into use for tips of lightning-rods, antennae of radio systems and for audion bulbs, submarine detectors and earthquake recorders. With iridium it is hard and desirable for contact points on the telegraph key, giving perfect connection with a loud click. It is necessary on all electrical switchboards.

A combination of platinum and iridium is used for high-grade gold pen points, but osmiridium is also employed. For cheap pens tungsten is used, but it oxidizes in the ink. The great value of platinum for many things lies in the fact that no acid but *aqua regia* will affect it. It is for that reason the dentist employs it. Acids of the mouth will destroy almost any other metal in time. Dentists use about a third of the output.

Dental surgeons and others used platinum during the war to save many lives and prevent much suffering. It was made into plates as thin as .0005 of an inch and these plates utilized for artificial roofs for the mouths of soldiers whose faces had been shot almost away. War surgeons also used it for bracing shattered joints and in several instances it replaced large sections of skulls. One famous Ace has a platinum frontal bone and sixteen other bone replacements in his body. Without platinum his life would have been lost. The metal is insoluble in any of the acids of the body and wounds heal over it so that after a few years the parts become practically normal.

Naturally, it is indispensable for chemical apparatus. For this purpose its freedom from acid combinations, its ductility and high fusing point make its use possible under almost any conditions which may

arise in analyzing any substance from iron to milk. Gold is assayed in platinum crucibles.

Tweezers and pincers for surgical work are for the same reason tipped with platinum, insuring strength and sterility. Platinum salts are used in the printing of high-grade photographs. The so-called platinum printing ink is not platinum, but aluminum, although it looks like platinum.

Platinum in the War

In addition to its spectacular use for surgery and for firing fuses, platinum played a very important part in the Great War. Without it the Allies would not have been able to make sufficient explosives or poison gas. The modern quick way of making nitric acid and fuming sulphuric acid is through the use of platinum as a catalyzer. Chemists cannot explain why, but it is a fact that only when in contact with platinum will certain chemical changes take place. The metal was therefore extensively used for gauze and for crucibles.

Before the war Germany was taking as much as 750,000 tons of nitrates from Chile every year and out of it was getting some 116,000 tons of nitrogen. During the struggle none was obtained there. But by using platinum catalyzers, Germany was found able, at the close of the struggle, to produce no less than 500,000 tons of fixed nitrogen a year out of the air. So far as explosives were concerned, the war could have been carried on forever. Platinum is the key that unlocked the inexhaustible supplies of Nature.

Not only for war but for peace is the nitrogen industry important, for, properly applied to certain lands, nitrogen will increase the crops fourfold.

THE PLATINUM DEBATE

at the PROVIDENCE CONVENTION
between
MR. DE WITT A. DAVIDSON, Jewelry Crafts Association
and
MR. CHARLES ENGELHARD, Baker and Company

ADDRESS OF CHARLES ENGELHARD

It is a high privilege for me to be asked to address you on the subject of iridium, platinum and palladium together with the other platinum by-metals, namely, rhodium, ruthenium and osmium.

I am glad to present my views on this subject, because I believe I am in the position to supply facts on the situation which might serve some good purpose toward the final framing of a law which will give general satisfaction, not only for today, but for all future time

For over thirty years I have devoted my life to merchandising these metals, and I believe I am thoroughly familiar with their possibilities.

I am frank to confess that I am in full sympathy with that section of the trade which favors platinum and iridium only and which wishes to protect this alloy by special law. On the other hand, it is impossible to deny that palladium has its "hat in the ring" and is entitled to the family name of platinum.

I believe also that a good federal stamping law should be good enough to cover a long period of time as an effective means of protecting the public.

Let us first look into the platinum metal iridium.

About twenty-five years ago iridium was a very cheap metal, indeed, and I bought and sold much of it at about $1.65 per Troy ounce.

As soon as platinum commenced to be used in jewelry it was found that platinum itself was too soft, and it had to be alloyed with one or the other platinum by-metal in order to harden it.

Iridium for hardening purposes was the most available metal at the

time, and this was the reason iridium found its first employment and became known in the jewelry trade. At that time, it was a banner day at our office, when hard platinum was ordered, because then we could use some of our iridium.

With the development of the automobile industry and other essential industries in the electrical and chemical fields, iridium became more and more important, until it is today the highest-priced platinum metal, and its consumption is higher than its production.

If you consider that there are probably 2,500 ounces of iridium produced in a year, and about 3,500 ounces consumed, you can see at a glance what is really at the bottom of this high price.

Further, if you consider that about half, or more than half, of this iridium goes into jewelry, you will realize at once that if the jewelers should decide to use a limited percentage of palladium and rhodium for hardening purposes, thus replacing iridium, the price of iridium for the essential industries would immediately decline without the slightest harm to the jewelry trade as a whole. As with any other commodity, the price of iridium, platinum and other platinum by-metals, is governed solely by the law of supply and demand.

For instance, if the production of iridium should unexpectedly rise from 2,500 ounces, which it is about now, to, say, 5,000 ounces per annum, I am sure that the price of iridium would fall very quickly below that of platinum and even palladium, because iridium itself has no specific use, apart from its use with platinum as an alloy. Therefore, I consider it a defect in the proposed law, as well as a danger to the trade, to single out iridium at this time, and permit it to be called platinum, just because it happens to be higher in price than platinum, for the simple reason that we do not know how long this condition will last.

There can be no question that palladium is potentially the most valuable platinum metal for all those purposes for which palladium can be used, the specific gravity of palladium being a little more than half that of platinum. Naturally, it will be used for this reason, wherever it can be used, as, for instance, in the dental industry.

The potentially higher value of palladium was emphasized during the war—and even before the war—by the fact that palladium was higher in price than platinum. The decline in price after the war, was chiefly caused by the fact that the dental industry slackened considerably in production, and that the production of palladium increased somewhat.

All this combined brought the price of palladium down, but to my mind it is only temporary.

Palladium was employed in jewelry in the United States during 1922 to the extent of about 10,000 Troy ounces, according to Government statistics. These 10,000 Troy ounces of palladium replaced about 17,000 ounces of platinum, and thereby certainly prevented a further increase in the price of platinum, which is difficult to estimate, but which I judge to be in the neighborhood of $20 to $30 per Troy ounce.

To explain: If palladium had not been used to the extent of 10,000 ounces, with platinum, for jewelry purposes, last year, I am satisfied the price of platinum today would be considerably higher than it is.

What the proposed law should prevent is the unlimited and unrestricted use of palladium for platinum under the name of platinum.

In short, the proposed law is meant to harness the use of palladium for the benefit of the trade at large, and for the platinum business in general, and thus prevent the indiscriminate use of this metal by some more or less unscrupulous speculators. This, I believe, can best be accomplished if we define by law how much palladium, iridium, rhodium, ruthenium, osmium, can be used with platinum under the name of platinum.

The law should specify what percentage of the platinum by-metals can be used in alloy with platinum, and be called platinum.

This does not prevent those who may wish to employ platinum and iridium only—because they happen to be the most expensive platinum metals at present—from doing so and giving this alloy some distinguishing mark, but what we maintain is, that the law should specify what alloy of platinum itself and its associate metals of the platinum group, may be called platinum.

If you combine under this law, a sufficient percentage of palladium, I am sure this will be the means of curbing the price of platinum, to the benefit of all, and reducing the price of iridium, which is entirely too high at present, and at the same time making it possible for one or the other by-metal of the platinum group to find its legitimate place, if these metals should become available in larger quantities as time goes on, which nobody can foretell at this juncture.

In short, a good platinum stamping law should protect the public as well as the trade, but it should not attempt to artificially create a bar-

rier which might tend to prevent improvement in price as well as in quality, if such are within reach.

My opinion is that platinum alloyed with twenty per cent. palladium and three per cent. rhodium is a much more harmonious alloy than platinum with ten per cent. iridium. It is more workable, it is whiter, and it covers about ten per cent. more surface, and the only reason this combination was not used twenty years ago was because sufficient palladium was not available at that time.

No metal expert will deny that a twenty per cent. palladium-platinum combination is unsurpassed by any other combination of the platinum metals including platinum-iridium, in beauty, workability, efficiency, as well as price, and if adopted as the general standard by you, I am sure the rest of the world will follow. But it will do more, it will act as a price-stabilizer for platinum, and it will bring down the price of iridium to the benefit of all the users of iridio-platinum in essential industries as well as for those jewelers who may desire to continue using platinum and iridium only, as long as iridium is higher in price than platinum.

If the twenty per cent. palladium standard should be accepted by you, I am satisfied the days of very high-priced iridium will be numbered, and it will not be long before this alloy of twenty per cent. palladium-platinum will find general acceptance all over the world as the most sound, efficient, progressive and best solution of the platinum problem for jewelry purposes, and a solution which I believe can, and will, successfully challenge any criticism which possibly could be offered against its general adoption.

Following Mr. Engelhard's address, President Hufnagel said that if anyone wished to ask Mr. Engelhard any questions that Mr. Engelhard would be glad to answer them. Then followed a number of questions upon the subject.

Ellis Gifford asked about the comparative wearing qualities of iridio-platinum and palladio-platinum. Mr. Engelhard answered that the wearing qualities of palladio-platinum are just as good as those of iridio-platinum. He said that he thought that the solution of the stamping problem offered by the legislative committee of the American National Retail Jewelers' Association a wonderful one, and believed that it will save millions of dollars when it is considered that about

$10,000,000 a year is paid for platinum and that with the substitution of palladium in limited quantities under Government control, we would save at least $2,000,000 or $3,000,000.

Josh Mayer, of Powers & Mayer, asked why it is that some of the jewelers who use palladium in the manufacture of platinum jewelry platinum-plate that jewelry after they make it.

Mr. Engelhard's answer was, "I don't know anything about it." Then came the following questions and answers:

Mr. Mayer—What was the price of platinum during 1916 and 1917?
Mr. Engelhard—That was during the war, $135 an ounce.
Mr. Mayer—What was the price after the war?
Mr. Engelhard—After the war it dropped gradually from $135 to $50.
Mr. Mayer—Some sold for $40?
Mr. Engelhard—I don't know.

Mr. Wilde in answer to Mr. Mayer's question as to why some of the jewelers platinum-plate jewelry in which they have used palladium, said that some of the manufacturers platinum-plate their finished product because of the fact that they use a low-grade solder in the assembly of the various articles. Mr. Mayer asked why they use a low-grade solder for assembly. Is there any reason for using it?

Samuel Bowles, of David Belais, Inc., submitted a ring to Mr. Engelhard and asked him to pass judgment upon it. He said that he had worn the ring for about eight months, called attention to the fact that it was stamped "platinum" and asked particularly as to the wearing qualities of the composition of metal contained in the ring stamped "platinum."

Mr. Engelhard was of the opinion that the wearing qualities would be the same as any ring stamped "platinum" and that he could not judge by looking at it. He stated further that it might be twenty per cent. palladium or that it might be something else.

Continuing the discussion, Mr. Bowles said that the point which he wished to bring out was that Mr. Engelhard might know the combination of the metal, the relative percentage of platinum and palladium, if there is any palladium in the ring, and also by examining the ring and seeing how it had worn over a period of eight months, determine what he thinks about the wearing qualities of that particular metal.

In answer to a question from the floor as to the color of palladio-

platinum, Mr. Engelhard stated that it is whiter, and in answer to the question as to whether the color would last, Mr. Engelhard answered that without question it would.

President Hufnagel next introduced Dewitt A. Davidson, president of the Jewelry Crafts Association, who took up the discussion of the question. Mr. Davidson said that the vital question involved is, *What can and what cannot be stamped "platinum"?* and argued for the need of a standard for platinum. He said, "We all understand with the growth of the use of platinum that competition is becoming keener and that with the unusual use of platinum, the absence of stamping laws to cover the conditions is the same as existed before the gold stamping laws were enacted." He pointed out that many platinum alloys are being marketed as platinum and that it is quite as easy to misrepresent as in the use of gold. He continued as follows:

Address of Dewitt A. Davidson

With the universal use today of platinum as the medium for mounting precious stones and in the absence of national stamping legislation, the trade at present is confronted, as far as platinum jewelry is concerned, with a condition identical with that which obtained in gold jewelry before gold stamping legislation was enacted. During that period, gold jewelry was sold and stamped 10, 14 or 18 karat, as the case may be, but actually assayed in many instances anywhere from 6 karat up. The same condition confronts us today in platinum jewelry. Many platinum alloys of various degrees of quality and value are all masquerading under the one name, term and stamp, "platinum."

It was quite easy to adulterate gold and misrepresent its quality to the buying public before the gold law was passed. It is, however, much easier today to misrepresent the quality of platinum jewelry, as there are several metals used to adulterate platinum that are of the same general color, and the detection by analysis of any given platinum alloy is a much more difficult refiner's problem than the analysis of a gold alloy for its quality or gold content.

The lack of a national stamping law defining just what may and may not be stamped, sold and billed as platinum has brought into the jewelry market of this country an endless number of platinum alloys of varying money value and many of them highly adulterated with inferior metals.

The manufacturer who honestly strives for a quality product and the retailer or distributor who is building up his business on the sale of a quality product in platinum jewelry is greatly penalized under the present conditions in the trade.

The manufacturer producing on a cheap-price basis, and the distributor or retailer whose business policy is to sell as cheaply as possible regardless of quality, is also, if you please, at a disadvantage, for in the absence of all restraining stamping legislation, the cheapest man is never cheap enough. There is always some fellow able and ingenious enough to go him one better and beat him to it. Thus standards are continually lowered, the price-cutting game continues, merchandise is misrepresented, and profits vanish.

You gentlemen no doubt will agree that a very large part of the capital of the legitimate retail jeweler is today invested in diamond jewelry. This means platinum diamond jewelry, and without the national legislation referred to, your large investment is at the mercy of the commercial adulterator and price-cutter. This is the meat in the cocoanut, gentlemen, as far as the platinum-jewelry situation is concerned.

The remedy presents a very technical problem, the intricacies and difficulties of which are many and must be given great care and deliberation by such committees in the trade logically and technically able to determine those things which are needed and, equally important, those things which are to be *avoided* as *pitfalls* in the proposed new national stamping act.

Following Mr. Davidson's address, he said that his committee believed that what is used should be marked for what it is and, in the opinion of his committee, it is unfair to try to cover palladio-platinum and iridio-platinum with the one stamp "platinum," it being unfair from a competitive basis. He pointed out that iridium is used as a hardening agent and that this is not so with palladium and that is where the distinction comes in. He said that palladium is greater in bulk than platinum by about forty per cent., and makes a big difference in the money value of the finished product. If palladium is used, he was of the opinion that the palladio-platinum alloy should not be called "platinum" but that this stand by no means precludes the use of palladium.

STATE CONVENTIONS, 1923

State	*City*	*Convention Date*	*Officers*
ALABAMA	Tuscaloosa	June 27-28	Pres. JOHN J. APSEY, Greensboro Sec. H. B. BRADLEY, Birmingham
CALIFORNIA	San Francisco	April 12-13-14	Pres. J. A. MONTGOMERY, Los Angeles Sec. M. A. HIRSCHMAN, San Francisco
COLORADO	Colorado Springs	May 7-8	Pres. MAX STRASBURG, Trinidad Sec. D. C. LARSON, La Junta
CONNECTICUT	Bridgeport	April 24-25	Pres. A. W. HULL, Wallingford Sec. GEO. P. SPAAR, Torrington
FLORIDA	Gainesville	June 20-21	Pres. T. S. McLAUGHLIN, Winterhaven Sec. NATHAN WEIL, Jacksonville
GEORGIA	Atlanta	July 23-24	Pres. HENRY MUENCH, Atlanta Sec. H. S. BANTA, Newnan
ILLINOIS	Galesburg	May 7-8	Pres. H. C. STERN, Chicago Sec. A. G. LAVY, Chicago
INDIANA	Culver	June 25-26	Pres. RALPH ROESSLER, Marion Sec. REGINALD GARSTANG, Indianapolis
IOWA	Des Moines	May 16-17	Pres. RAY REED, Chariton Sec. L. MAJOR, Perry
KANSAS	Emporia	June 12-13	Pres. ROBERT SHIPLEY, Wichita Sec. J. J. JONES, Emporia
KENTUCKY	Louisville	May 28	Pres. WM. IRION, Louisville Sec. P. B. STITH, Louisville
LOUISIANA	New Orleans	Aug. 15-16	Pres. G. R. KELLER, Shreveport Sec. M. A. FREEDMAN, Shreveport
MAINE	Old Orchard Beach	June 18-19	Pres. MATSON TINKER, Portland Sec. C. S. BENNETT, Guilford
MARYLAND-DELAWARE	Wilmington	May 3	Pres. CHAS. M. BANKS, Wilmington Sec. SAM. C. EVANS, Milford
MASSACHUSETTS	Springfield	March 27-28	Pres. ELLIS GIFFORD, Fall River Sec. LOUIS S. SMITH, Beverly
MICHIGAN	Grand Rapids	May 8-9	Pres. M. D. ELLIS, Kalamazoo Sec. L. E. PHILLIPS, Grand Rapids
MINNESOTA	St. Paul	May 15-16	Pres. J. E. STILES, Wells Sec. E. M. SCHWENKE, New Richland
MISSOURI	Kansas City	April 16-17	Pres. CHAS. P. WOODBURY, Kansas City Sec. MISS JOE CROW, Humansville

State	*City*	*Convention Date*	*Officers*
Montana	Boulder–Hot Springs	Sept. 16-17	Pres. H. E. Rakeman, Polson Sec. M. Hammerslough, Anaconda
Nebraska	Hastings	Feb. 12-13-14	Pres. R. A. Goodall, Ogalalla Sec. Ed. B. Fanske, Pierce
New Hampshire	Concord	May 23-24	Pres. Arthur DeMontigny, Nashua Sec. A. U. Burque, Nashua
New Jersey	Asbury Park	June 17-18	Pres. Jean R. Tack, Newark Sec. Richard P. Hartdegen, Newark
New York	Utica	May 28-29	Pres. Harry N. Clark, Syracuse Sec. Chas. E. Sunderlin, Rochester
North Carolina	Hendersonville	July 9-10	Pres. B. F. Roark, Charlotte Sec. Wm. G. Frasier, Durham
North Dakota	Fargo	Aug. 15-16	Pres. C. G. Conyne, Mandan Sec. C. G. Sherdahl, Fargo
Ohio	Cedar Point	July 16-17	Pres. C. J. Duncan, Massillon Sec. Glenn P. Heckert, Massillon
Oklahoma	Oklahoma City	April 9-10	Pres. Frank Ward, Anadarko Sec. D. A. Strasmick, Ardmore
Oregon	Portland	May 9-10	Pres. W. F. Boettcher, The Dalles Sec. F. M. French, Albany
Pennsylvania	Williamsport	Sept. 4-5	Pres. Wm. Sellers, Altoona Sec. Wm. Sutton, Philadelphia
South Carolina	Columbia	Feb. 9-10	Pres. W. R. Hale, Greenville Sec. W. P. Cart, Charleston
South Dakota	Redfield	May 1-2	Pres. W. D. Nelson, Pierre Sec. Carl Damuth, Redfield
Tennessee	Memphis	July 11-12	Pres. Z. C. Graves, Memphis Sec. E. H. Murray, Pulaski
Texas	Dallas	April 25-26	Pres. Marcus Baerwald, Dallas Sec. Myron Everts, Dallas
Vermont	Burlington	June 25-26	Pres. Wayne M. Reed, Montpelier Sec. Wm. S. Preston, Burlington
Virginia	Newport News	July 16-17	Pres. Frank R. Ford, Norfolk Sec. O. F. Russow, Roanoke
Washington	Seattle	July 25-26	Pres. Paul A. Benton, Seattle Sec. Grover Troth, Centralia
West Virginia	Charleston	March 11-12	Pres. W. L. Jones, Martinsburg Sec. Mrs. Bruce Fanus, Fairmont
Wisconsin	Fond du Lac	May 22-23	Pres. John P. Hess, Fond du Lac Sec. A. W. Anderson, Neenah

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