Gem Stones

By SYDNEY H. BALL

JEWELRY INDUSTRY IN 1946

JEWELRY sales in 1946 totaled some $1,709,000,000, an appreciable gain over the previous record year of 1945. For the first 6 months, sales by retail jewelers showed greater gains over those of the previous year than did those of other retailers. During the period many purchases of consequence were made, and the question of price was immaterial; thereafter sales dwindled, and in the last quarter the slight gain over the corresponding period of 1945 was due, not to volume, but to higher prices. The Christmas trade was slightly less than that of 1945, and high-priced goods—including fine diamonds—moved slowly. Customers were more discriminating and more interested in the quality of the goods offered. By the year end prices of mediocre diamonds were appreciably off. The more fashionable stores fared less well than the average. Sales by wholesalers showed greater gains than did those of the retailers, and in consequence retail jewelers' stocks increased during the year.

The 1946 prosperity of the industry was built on a high national income, full employment, an all-time high in marriages, and some drawing upon wartime savings.

On April 29, 1946, platinum was released for civilian use, and thereafter the industry had all the raw materials it needed. In the fall the last price controls were removed from jewelry merchandise.

In 1947 the jeweler will have more competition for the consumer dollar from durable goods, and his customers will seek better values than in 1946. Sales could dip appreciably, however, and the industry remain prosperous.

FASHIONS IN JEWELS

With the war behind us, formal functions are increasing in number; in consequence, there is a more lavish display of jewels, and many a fine gem has emerged from safety-deposit boxes. For evening wear, the white motif is dominant—platinum and diamonds or pearls. The latter have staged a slight come-back. Palladium is still being used, particularly in imposing earrings and clips, where its lightness is an advantage. Gold, often of several tones, is still widely worn, particularly with black gowns. Jewelry continues to gain in colorfulness; diamond pieces often are set with rubies, sapphires, or even less valuable colored gems. More women are acquiring jewelry especially designed to their taste.

Styles in the past year have changed little; but there is a tendency to abandon massive designs, and many of today's designs are lacy

and delicate, with fragile look. Motifs were myriad; flowers were dominant, but leaves, bowknots, snowflakes, sunbursts, and pinwheels were also popular.

Clips, pins and brooches, bracelets, earrings, necklaces, and rings held their popularity, while the use of jeweled hair ornaments grew. Bracelets and necklaces frequently were woven of flexible wire. Necklaces tended to be longer. Many had pendant jewels and others, attached clips. The vogue of pendants from earrings increased; other earrings were clips attached to the top and bottom of the ears.

Some women wore a number of matching clips of graduated size; others, two or more bracelets and even several necklaces. Ensembles of like gems and mountings, say, matching clips, earrings and bracelets are highly prized. Jewelry which can serve a double purpose—an imposing pin separable into two clips or a necklace which can be divided into bracelets—is serviceable and is gaining in popularity.

Although the double-wedding-ring ceremony has become normal, an attempt to induce men to wear more jewelry has been only slightly successful.

The demand for old jewelry, much of it Victorian, is tapering off.

Small cabochon rubies and sapphires replace melee diamonds in some jewelry. The diamond was, by far, the most popular stone, followed by the ruby, sapphire, pearls (both natural and cultured), the emerald, aquamarine and turquoise. Fine aquamarine, while rare and expensive, holds its popularity; turquoise is gaining, but citrine and topaz are losing ground.

The ever-insistent demand for diamonds caused colorless gems to be most popular, followed by blue and red gems; green, yellow, and purple gem stones were in less demand, in the order named.

DOMESTIC PRODUCTION

Plenty of gasoline and greater leisure have permitted the mineral hobbyist to collect more minerals, some of which warrant cutting. The lapidary industry, professional and amateur, in the Western States continues to expand markedly; and now that its best customer, the auto tourist, is again on the road, the demand for cut-gem stones has increased. The American costume-jewelry industry, shut off during the war from European sources of supply, is a second outlet for the product. In consequence, production of gem stones may have skyrocketed from an estimated value (at the source) of $40,000 in 1945 to some $325,000 in 1946, but these figures are at best, rough estimates.

Prices during the year increased considerably, warranting the producer in risking capital today that he would not have dared to do in prewar days.

Jade, followed by agate, turquoise, and then variscite, were the most important gem stones produced. Of the States and Territories, Wyoming led, followed by Oregon, Alaska, Washington, and Nevada.

The jade (nephrite) industry of the Kobuk River region, Alaska, is likely to employ a few miners and may employ some of the local Eskimos cutting for the tourist trade. Nephrite occurs as float and pebbles, also in place in the Jade and Cosmos Hills. Most of the

material is poor, but part is suitable for objets d'art and for tourist jewelry. The Arctic Circle Exploration Co. is the principal producer and fabricator. B. D. Stewart, Alaska Commissioner of Mines, informs the author that, in the summer of 1946, the company shipped 13¾ tons of jade and that a Fairbanks trader exported 100 pounds, some of which was of excellent quality. Some of the material in the rough is worth $5 a pound, and selected material is said to have brought $55 a pound.

Wyoming increased its production of nephrite from the Lander region, and at least one new occurrence of jade in place is reported. Many miners from outside the State visited the area in 1946. There are three lapidaries at Lander; in addition, some jade is exported to China, where it is cut. Some of the rough was sold for as much as $15 a pound. Most of the material is of more or less the quality of New Zealand jade, although some is said to be equal to that of Chinese Turkestan. Much of the jade land was located under the Placer Act, but apparently only in a few instances has enough work been done to hold them legally. Whether one buys or sells jade boulders, he gambles, for in no case is the value of the material known until it is cut.

After jade, agate and related quartz minerals, were the most important gem stones produced and are the principal materials cut by the large number of professional and amateur lapidaries in the West. Although some deposits have been worked out, the numerous agate prospectors have found deposits more than compensating for the exhaustion of the old deposits. Where virtually all of the float has been collected, underground work has started in several districts, a condition permitted by the higher price paid for the raw material. Dr. H. C. Dake, Portland, Oreg., believes that central Oregon is the chief producer. From a single pocket near Post, $8,000 worth of agate was recovered in 3 days, including a single mass weighing 186 pounds, which was sold for $1,000. Plume agates and other types of chalcedony are the principal products. Washington was perhaps the next most important producer.

The moss agate deposits of the flats of the Yellowstone River, Mont., are partly exhausted, but they still supply material to six professional lapidary shops and to scores of amateur lapidaries. A. Harrington reports that Idaho's production of moss agate increased in 1946 but that there were no new discoveries of importance. Owyhee County is one of the larger producers. The nodules called "thunder eggs" are in demand.

Gordon Bowser of San Luis Obispo, Calif., produced about a ton of moss agate worth $6,000. A little agate was also produced in San Bernardino County. Considerable plume agate was produced in south central Colorado, according to Richard M. Pearl, and from the Embargo mining district, Colo. T. D. Benjowsky reports that red jasper was mined near Hot Springs, Sierra County, N. Mex., and other agate species in Socorro and Catron Counties. A new source of dendritic chalcedony was discovered during the year near Fort Cummings, Luna County, N. Mex. When cut, it finds a ready market in the Southwest and in southern California.

Charles E. Hill reports finding a new agate locality in Yavapai County, Ariz., from which he mined some fine stones.

Agate nodules, weathering from lavas in Trans-Pecos, Tex., were collected in quantity in 1946 and sent to various lapidaries. Arizona produced some agate.

Alfred M. Buranek reports that the number of lapidary shops in Utah has grown remarkably during the year and that several new deposits of agate have been discovered. Agate was produced in the Dugway area, and moss agate and jasper from the Topaz, Jericho, and Beaver areas. So much material is being shipped to other States that the Mineralogical Society of Utah is preparing a bill to be presented to the legislature to prohibit nonresidents from shipping these minerals in quantity beyond the State boundaries.

In value, turquoise was probably the third most important American gem stone produced in 1946, although statistical data are scanty. Nevada was probably the leading producer. The Nevada Turquoise Co., of Mina, Mineral County, is said to have produced turquoise valued at more than $20,000. The Pedro claim of the Copper Canyon Mining Co. produced perhaps nearly as much. During the last 5 months of 1946, rough turquoise was recovered by the Castle Dome Copper Co., Inc., through the sorting of a small percentage of the ore broken in its routine mining operations, according to R. W. Hughes, general manager. The turquoise so recovered ranged in grade from thin, hard flakes with deep blue color through various degrees of hardness and shades of blue down to colorless chalky material.

The King turquoise mine at Manassa, Conejos County, Colo., leased by Horace and Wallace King, produced 2,000 pounds worth $30,000.

A "composite turquoise" (small fragments of Arizona turquoise in a matrix of black cement) is on the market and is rather attractive. Los Cerrillos, N. Mex., produced a little turquoise, largely by local labor near the mine. It was sold to lapidaries in the vicinity. The United Indian Traders Association has set up standards for hand-made Navajo and Pueblo jewelry and is prepared to license its mark.

Utah continues to produce some variscite. Alfred M. Buranek reports that the Clay Canyon deposits were worked, as was the Lucin (Box Elder County) on a somewhat smaller scale. Junius J. Hayes reports that collectors got some variscite from the Grantsville deposit in Tooele County.

Some geophysical work was done in the vicinity of the Murfreesboro, Ark., diamondiferous pipes. The main company is again in litigation. Some 40 years ago a few small, alluvial diamonds were reported to have been recovered at a gold placer near McCall, Idaho. Late in 1946 that ground was leased and some development work started.

Montana apparently produced no sapphire in 1946.

A considerable amount of "flowering" obsidian was mined in Utah. In Arizona some "marekanite" was produced. This is a semitransparent smoky glass nodule occurring in obsidian.

Kelley and Branson[1] describe small Tertiary pegmatite masses on the west slope of the Black Range, Grant County, N. Mex. The pegmatite consists largely of quartz and sanidine; the latter, which occurs in fair-size masses, "displays blue and white opalescence, giving rise to a moonstone of commercial quality." A little may have been produced in 1946.

[1] Kelley, V. C., and Branson, O. T., Bull. Geol. Soc. America, vol. 57, December 1946, p. 1255.

The Barton Mines Corp., North Creek, Warren County, N. Y., sells some of its garnets to lapidaries. The color is good, but the market is of limited scope. Valley and Adams Counties, Idaho, have garnet deposits, but as far as is known none was worked in 1946. In the extreme southeastern part of Utah pyrope garnets of good color, some over a half inch in diameter, occur in gold placers.

Other gem stones produced in small amounts in 1946 include agatized wood (Arizona and New Mexico); alabaster (South Dakota); amethyst (Dugway area, Utah); aquamarine (Deep Creek, Utah, and San Diego, Calif.); kunzite (San Diego, Calif.); kyanite (Upson County, Ga.); opal (17 miles south of Marsing, Idaho); opalized wood (central Washington); pipestone (Pipestone, Minn.); rock crystal (Crystal Mountain, Ark.); rose quartz (South Dakota); staurolite (Cherokee County, Ga.); topaz (Tarryall Mountains, Colo., and Topaz Mountain, Utah); and tourmaline (San Diego, Calif., and Mount Apatite, Maine).

GOVERNMENT REGULATIONS

A number of Government regulations enacted in 1946 affected the trade in precious stones. The majority of such measures were passed in the hope of increased revenue.

The United States removed control from all jewelry items, but apparently for some time to come is not to reduce the excise tax (20 percent). Maine in 1946 placed a 5-percent luxury tax on jewelry sales in addition to the 20-percent Federal tax. During the year, the United States also removed controls on the price and export of industrial diamonds and diamond-set tools.

Canada removed all controls from diamonds and gem stones on March 15, 1946, and India on July 29, 1946. Import duties on jewelry were increased by Argentina, Czechoslovakia, Mexico, and Paraguay. Luxury taxes on jewelry were established in China (50 percent), Spain (20 percent), and France (25 percent), and Mexico added a 5-percent sales tax on jewelry sold in the Federal district. Italy, permitted the purchase, sale, and transfer of jewelry and precious stones after April 26, 1946, but not their exportation. Egypt, while still prohibiting transit trade in gold and jewelry, now permits the importation of gold, provided it is reexported within 6 months. France no longer requires a license for exporting jewelry and precious stones. On the other hand, such commodities exported from Burma require a license granted by the Reserve Bank of India. As France received fewer industrial diamonds than its needs, the commodity was placed under Government control.

IMPORTS

The value of imports of precious and semiprecious, real and imitation stones, exclusive of industrial diamonds, as listed by the United States Department of Commerce, totaled $189,017,646—65 percent more than in 1945. Diamonds were over 88 percent of the total. Fine gem stones and pearls and cut imitation stones showed large increases.

Precious and semiprecious stones (exclusive of industrial diamonds) imported for consumption in the United States, 1945–46 [1]

Commodity	1945		1946	
	Carats	Value	Carats	Value
Diamonds:				
Rough or uncut (suitable for cutting into gem stones), duty free	893, 761	$43, 122, 622	1, 044, 517	$48, 668, 843
Cut but unset, suitable for jewelry, dutiable	377, 243	64, 185, 406	604, 638	117, 968, 206
Emeralds:				
Rough or uncut, free	1, 085	252	544, 711	579, 745
Cut but not set, dutiable	106, 684	181, 834	11, 902	210, 274
Pearls and parts, not strung or set, dutiable:				
Natural		352, 947		619, 463
Cultured or cultivated		155, 548		1, 280, 867
Other precious and semiprecious stones:				
Rough or uncut, free		134, 698		329, 552
Cut but not set, dutiable		5, 113, 937		8, 932, 862
Imitation, except opaque, dutiable:				
Not cut or faceted		3, 220		68, 108
Cut or faceted:				
Synthetic		805, 838		1, 640, 426
Other		242, 988		8, 044, 674
Imitation, opaque, including imitation pearls, dutiable		31, 136		298, 545
Marcasites, dutiable:				
Real		101, 140		344, 907
Imitation		3, 665		31, 174
		114, 435, 231		189, 017, 646

[1] In the corresponding table in Minerals Yearbook, 1945, p. 1548 and Minerals Yearbook, 1944, p. 1518 data for 1944 should be revised as follows: Diamonds, rough or uncut, $43,549,837; cut but unset, $29,003,536; emeralds, cut but not set, $70,924; pearls and parts, natural, $244,879; total value, $77,367,188.

DIAMOND

For mining companies, wholesalers, and retailers, 1946 was even a better year in the diamond industry than the previous record year, 1945. The cutters, on the other hand, had a far from satisfactory year.

Production was less by weight than in 1945 but greater in value. Output of gem stones in southern Africa and Tanganyika Territory increased, whereas the break-down of war-worn machinery cut deeply into Belgian Congo's production, which is dominantly of industrial grades.

Sales of rough by the principal wholesaler, the Diamond Corp., were £30,000,000, or 22 percent greater than those of the previous record year 1945. Production did not meet sales, and stocks were depleted further; the day when all sales must be made from current production approaches.

With the war over, the market for cut diamonds is broadening, but few countries are as yet able to pay for luxuries, although investment buying continues. The American retailer never sold so many cut diamonds, although demand weakened in the last quarter of the year.

The cutting industry alone was not prosperous. During and since the war the industry mushroomed, and its capacity to cut exceeds the rough now available. In consequence, unemployment, strikes, and lock-outs were common, and there was a tendency toward lower wages.

Prices of rough were raised moderately in gem grades and somewhat more so in industrials, which during the war sold at less than prewar prices. Prices of polished diamonds were slightly increased in the first half of the year but weakened in the last quarter, particularly prices of mediocre-quality stones.

As was to be expected, with the end of the war, fewer industrials were used. In 1946 the users were, however, importing stones of finer quality than those used during the war, hence the dollar value approached that of wartime imports.

Share Dealings.—The shares of the leading diamond mining companies on the London Stock Exchange, their principal market, gained about 17 percent. Quotations early in June 1946 were at practically an all-time high. Thereafter they fluctuated and declined slightly. All of the principal diamond-mining companies except Premier paid dividends in 1946.

Imports.—Imports of gem diamonds into the United States increased from $107,308,028 in 1945 to $166,637,049 in 1946—a gain of 55 percent.

The accompanying table shows comparative figures of imports during 1945 and 1946. The imports of rough in the latter year were greater by 17 percent, as to carats, and 13 percent, as to value. The gain in imports of cut was 60 percent, as to carats, and 84 percent as to value. The grade of the 1946 rough imports was poorer, and the grade of cut about the same.

Diamonds imported for consumption in the United States, 1945–46,[1] by countries

[Exclusive of industrial diamonds]

Country	Rough or uncut			Cut but unset		
	Carats	Value		Carats	Value	
		Total	Average		Total	Average
1945						
Argentina				4	$2,000	$500.00
Austria				12	1,136	94.67
Belgian Congo	10,054	$86,793	$8.63			
Belgium and Luxembourg				104,840	14,612,123	139.38
Brazil	14,349	628,325	43.79	28,472	4,988,200	175.20
British East Africa	7,413	207,556	28.00			
British Guiana	1,774	42,715	24.08	580	67,471	116.33
British West Africa	1,158	21,402	18.48			
Canada	1,110	16,650	15.00	1	100	100.00
Cuba				64,737	11,439,698	176.71
France				44	7,511	170.70
Germany				1,230	133,496	108.53
India and Dependencies				703	134,641	191.52
Mexico	13,838	504,641	36.47	9	5,003	555.89
Netherlands				2,599	520,516	200.28
Palestine and Trans-Jordan				105,899	17,684,997	167.00
Portugal				18	6,405	355.83
Switzerland				271	39,738	146.63
Union of South Africa	834,393	41,290,329	49.49	46,096	10,720,816	232.58
U. S. S. R.				3,569	562,617	157.64
United Kingdom	5,699	173,797	30.50	17,535	3,176,270	181.14
Venezuela	3,973	150,414	37.86	624	82,668	132.48
Total 1945	893,761	43,122,622	48.25	377,243	64,185,406	170.14

See footnote at end of table.

Diamonds imported for consumption in the United States, 1945–46,[1] by countries—Continued

[Exclusive of industrial diamonds]

Country	Rough or uncut			Cut but unset		
	Carats	Value		Carats	Value	
		Total	Average		Total	Average
1946						
Argentina				114	$20,754	$182.05
Belgian Congo	5,649	$48,834	$8.64			
Belgium and Luxembourg	3,104	135,882	43.78	288,929	51,150,251	177.03
Brazil	59,142	2,766,768	46.78	15,939	3,228,079	202.53
British East Africa	12,685	636,129	50.15			
British Guiana	3,246	175,033	53.92	752	84,802	112.77
British Malaya	2,500	20,169	8.07	617	177,379	287.49
Canada				127	8,674	68.30
Cuba	383	4,743	12.38	38,325	7,502,503	195.76
Denmark				4	610	152.50
Egypt				34	10,082	296.53
France				6,042	1,186,641	196.40
Greece				240	16,444	68.52
Hungary				107	4,575	42.76
India and Dependencies				929	183,941	198.00
Iran				200	40,243	201.22
Japan				3	1,215	405.00
Mexico				313	62,566	199.89
Netherlands	124	15,335	123.67	37,473	7,724,355	206.13
Palestine and Trans-Jordan	3,566	115,927	32.51	121,627	21,972,027	180.65
Portugal				671	146,431	218.23
Siam				40	9,411	235.28
Sweden				10	2,183	218.30
Switzerland				7,776	1,470,574	189.12
Union of South Africa	935,824	44,015,089	47.03	56,120	16,783,704	299.07
U. S. S. R.				4,796	1,002,000	208.92
United Kingdom	10,693	351,113	32.84	23,198	5,134,475	221.33
Venezuela	7,601	383,821	50.50	252	44,287	175.74
Total 1946	1,044,517	48,668,843	46.59	604,638	117,968,206	195.11

[1] In the corresponding table in Minerals Yearbook, 1945, p. 1550 and Minerals Yearbook, 1944, p. 1521, data for 1944 should be revised as follows: Rough or uncut: Brazil, total value, $830,996; average value, $32.44. Grand total value, $43,549,837; total average value $48.58. Cut but unset: Brazil, total value, $4,014,301; average value, $160.37; U. S. S. R., total value, $147,604; average value, $102.79. Grand total value, $29,003,536; total average value, $171.52.

Cutting.—At the end of 1945 there were some 25,000 cutters in the world; at the end of 1946, some 35,000. Decreases in Brazil, the United States, Cuba, and Puerto Rico were more than offset by a large increase in Belgium and a smaller one in Palestine. Even in 1945 there was inadequate rough to insure full employment; and in 1946, as the supply was not much greater, there was a chronic shortage of rough, resulting in unemployment for the artisans and inadequate profits for the master cutters. Belgium is by far the largest cutting center, followed by Palestine, New York, and Cuba. Some of the war-born centers will disappear over the next few years, and others will be deflated. The best cutting of sizes is done in the United States and that of melee in Palestine, Belgium, and the United States.

World Production.—Accurate figures regarding diamond production still are not available for many countries, but the estimates in the following table are believed to be fairly reliable. World production (gems and industrials) in 1946 is estimated to have been 10,313,000 carats (2.27 short tons) worth at the mine about $81,400,000 which compares with 14,384,000 carats (3.17 short tons) in 1945. The quantity was 72 percent of that of 1945, but the value at the mine showed an increase of about 25 percent. The increase in value was

due to the increased production of gem grades (both as to carats and value) and the advance in the price of cuttables. By weight, about 1,228 pounds were gem stones and 3,315 pounds industrials.

Belgian Congo was the leading producer by weight (59 percent), although it represented only 11 percent of the value. On the other hand, the British Commonwealth, accounting for only 29 percent of the weight, represented about 70 percent of the value.

Union of South Africa, South-West Africa, Tanganyika Territory and Gold Coast showed gains, and Belgian Congo a loss. At Kimberley, the Dutoitspan and Bulfontein pipe mines continued to operate, and in a year or two Premier and New Jagersfontein will resume production.

The accompanying table shows available statistics and estimates of world production for the past 5 years.

World production of diamonds, 1942–46, by countries, in metric carats

[Including industrial diamonds]

Country	1942	1943	1944	1945	1946
Africa:					
Angola	791,853	794,990	799,120	803,887	[1] 808,000
Belgian Congo	6,018,236	4,881,639	7,533,365	10,386,000	6,033,452
French Equatorial Africa	46,345	56,183	60,000	82,849	87,381
French West Africa	49,866	36,193	69,726	79,802	51,834
Gold Coast [2]	1,055,735	1,317,798	1,165,858	812,451	830,000
Sierra Leone	1,046,187	834,492	608,744	504,309	559,229
South-West Africa	56,420	94,427	154,379	152,629	163,611
Tanganyika	40,327	52,998	90,667	115,666	[1] 119,446
Union of South Africa:					
Mines	858	84,342	552,974	878,713	1,025,019
Alluvial	117,963	217,987	380,708	262,529	256,768
Total Union of South Africa	118,821	302,329	933,682	1,141,242	1,281,787
Brazil [1]	300,000	275,000	301,000	275,000	325,000
British Guiana	22,207	18,272	[2] 13,911	15,442	30,958
Venezuela	34,048	22,846	22,037	12,769	20,912
Other countries	6,788	6,804	12,000	2,000	[3] 1,600
Grand total	9,587,000	8,694,000	11,764,000	14,384,000	10,313,000

[1] Estimated.
[2] Exports.
[3] Partly estimated; includes India, Borneo, Australia (New South Wales), and U. S. S. R.

Industrial Diamonds.—In the first year after World War II ended, the imports of industrial diamonds decreased markedly in carats but in dollar value compared favorably with all previous years except 1942–44. Consumption and production approached balance, but many grades were in short supply. Manufacturers of diamond-set tools must still be careful in using those industrial stones available.

From the spring of 1946 on, the principal wholesaler of industrial stones was Industrial Distributors (1946) Ltd.

On July 23, 1946, the Strategic and Critical Materials Stock Piling Act (Public Law 520, 79th Congress) was approved. All diamonds then in the hands of Government agencies were transferred to the stock pile, and additional industrials are to be purchased.

After World War II broke out, the price of crushing bort was halved and that of other grades remained steady during the war. In 1946

the price of crushing bort was raised 80 percent and that of other grades somewhat less.

The year saw many improvements, but few innovations, in the use of industrial diamonds.

Figure 1, originally prepared by Herbert Backman several years ago, shows the tremendous increase in use and the sharp decline in the price per carat of American imports in the past 28 years.

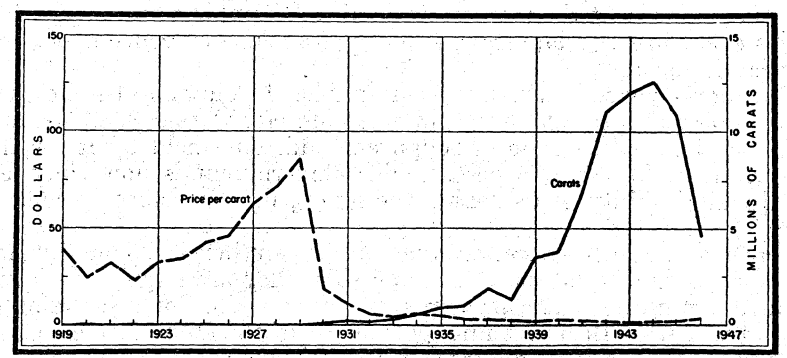

FIGURE 1.—United States imports and average price per carat of industrial diamonds, 1919–46.

Imports of industrial diamonds into the United States during the past 5 years were as follows:

Industrial diamonds (glaziers', engravers', and miners') imported for consumption in the United States, 1942–46

Year	Carats	Value		Year	Carats	Value	
		Total	Average			Total	Average
1942	11, 203, 704	$22, 057, 577	$1. 97	1945	10, 729, 869	$12, 810, 932	$1. 19
1943	12, 084, 133	21, 890, 568	1. 81	1946	4, 625, 282	14, 297, 536	3. 09
1944	12, 614, 507	22, 894, 244	1. 81				

RUBY, SAPPHIRE, AND EMERALD

Because of the dominant position of the diamond in the gem market and the fact that ruby, sapphire, and emerald deposits do not lend themselves to large-scale operations, gem mining by large companies is confined to the diamond. Fine rubies come from Burma; sapphires from Siam, Ceylon, Indochina, and Kashmir (according to rumor, the deposits in the latter two countries are practically exhausted), and emeralds from Colombia and U. S. S. R. Burma, Siam, and Indochina are none too peaceful at the moment, a condition scarcely conducive to large production. The Colombian emerald mines are not being operated, and the Ceylon sapphire production is still subnormal. Shipments from the mines are greater than in the past war years; but fine gems are in short supply, and jewelers' stocks and outmoded jewelry still contribute the major part of our supply.

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Fine gems are by no means modestly priced, and American buyers must compete with Oriental lovers of these gems.

Wadia and Fernando (see Bibliography) have written an interesting article on gem mining in Ceylon, an important producer of sapphire and many of the lesser gems.

Siam would welcome American capital in developing its gem resources, but so far there have been few candidates. Who will eventually own the sapphire deposits on the common boundary of Siam and Indochina is at the moment in doubt. Sapphires and even a few rubies occur in Brazilian gravels, but no known occurrence is of commercial importance.

During the year, the Bank of the Republic of Colombia (the Government hoping to interest tourists in emerald matrix) sold 828.75 carats of cut and 342,552 carats of rough emerald, long held by it for the Government, for 573,076 pesos. The Government is now considering the advisability of reopening the mines, inactive since December 1938.

Transvaal, South Africa, produces a few gem beryls, some of which are dark enough to be classed as emeralds; they are largely, however, of mediocre grade. The principal producer is the Somerset mine of the South Africa Beryl Mining Co. Most of the stones are exported to India. In the first quarter of 1946, 2,902 carats worth £1,433 (about $5,732, or $1.98 per carat) were sent to India.

It is reported that the American synthetics, "Chatham synthetic emeralds," are being improved in size, depth of color, and quality.[2]

LESSER GEMS

In 1946, there was a scarcity of desirable gem stones; due to this, plus higher cutting costs and good demand, prices advanced. In the last quarter of the year, prices softened, and particularly those of mediocre qualities fell.

In February 1946 new and rich opal fields were found at Coober Pedy, Central Australia, 1,200 miles from Adelaide.

Due to the inflation in China, the Chinese are investing in jade, and prices are 5 to 10 times those of prewar days. Shelves of the dealers are practically bare, and little is being exported to the United States. The jade centers of Peking and Canton are languishing, war having cut them off from the jadeite of Burma and the nephrite of Turkestan. As master cutters no longer receive imperial subsidies, the lapidary art is deteriorating.

The popularity of aquamarine continues to grow. The supply of fine Brazilian is inadequate, and prices still are rising. Late in October, an aquamarine weighing 56 pounds was flown from Brazil to New York. The stone was found near Resplendor, Minas Gerais. It is a rough, hexagonal prism, 11 inches high and 10 inches in diameter. The stone, it is claimed, was insured for $500,000, and the owners hope the cut stones from it will be worth $2,500,000. The Indian deposits of beryl have recently been described.[3] The Bisundni Mine, Rajputana, produces a little gem material of pale green color, as well as rose quartz,

[2] Switzer, George, Gems and Gemology, Spring 1946, pp. 305-307.
[3] Bureau of Mines, Mineral Trade Notes: Vol. 22, No. 3, March 1946, pp. 4-9.

and the Vasanta Kalyani mica mine, Madras, some beryl suitable for gem purposes.

The precious stone industry of Brazil is, under government patronage, to create a Precious Stone Exchange. Among the objects are to assist diamond mining, protect cutters, reduce taxes on precious stones, and simplify exporting. Before World War II, Brazil exported most of its precious stones to the Idar district, Germany. During the war, lapidary shops sprang up in Brazil. Attempts are now being made to introduce modern methods in these shops.

Emerson I. Brown, minerals attaché at the United States Embassy in Rio [4] gives an interesting summary of the precious stone industry in Brazil. He states that supply exceeds demand, the American market being dull, although the European market is becoming active. Export prices are off as much as one-third.

Edward R. Swoboda describes the spodumenes of Brazil (see Bibliography). While most of the material is colorless, kunzite and yellow spodumene also occur, and rarely deep green spodumene.

Philip Lichtenberg [5] describes the mica-tourmaline deposit of Cruzeiro, Minas Gerais, which he says is the most important producer of tourmaline in Brazil.

Some fine olivines have appeared on the American market from stocks of the mining company that once operated the well-known deposit on Zebirget Island in the Red Sea.

The Soviet Government, under the current 5-year plan, is to increase notably the production of its lapidary trust, Russkie Samotsvety. Sverdlovsk and a town in the Altai are cutting centers, and the personnel is to be increased. The production of the lesser gems and ornamental stones is to be raised, and objets d'art and stones for jewelry cut.

The French are attempting to revive the gem-mining industry of Madagascar, an important producer of gems for jewelry as well as industrial applications. Mining taxes were reduced as of June 2, 1945. Madagascar produces a large number of gem stones, but the percentage suitable for cutting is small, most of them being used industrially.

E. Ruff [6] describes the large number of gem stones which occur in New Zealand. Jade (nephrite) alone is, however, of commercial importance.

Before World War II, South-West Africa was an important source of gem stones for the German lapidary industry. In 1939, the last year of export to Germany, the total value was but £1,132.

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[4] Bureau of Mines, Mineral Trade Notes: Vol. 23, No. 5, November 1946, pp. 49–52.
[5] Jewelers' Circular-Keystone, December 1946, pp. 236–238, 310–311.
[6] Jour. Gemology, September 1946, pp. 551–553.

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