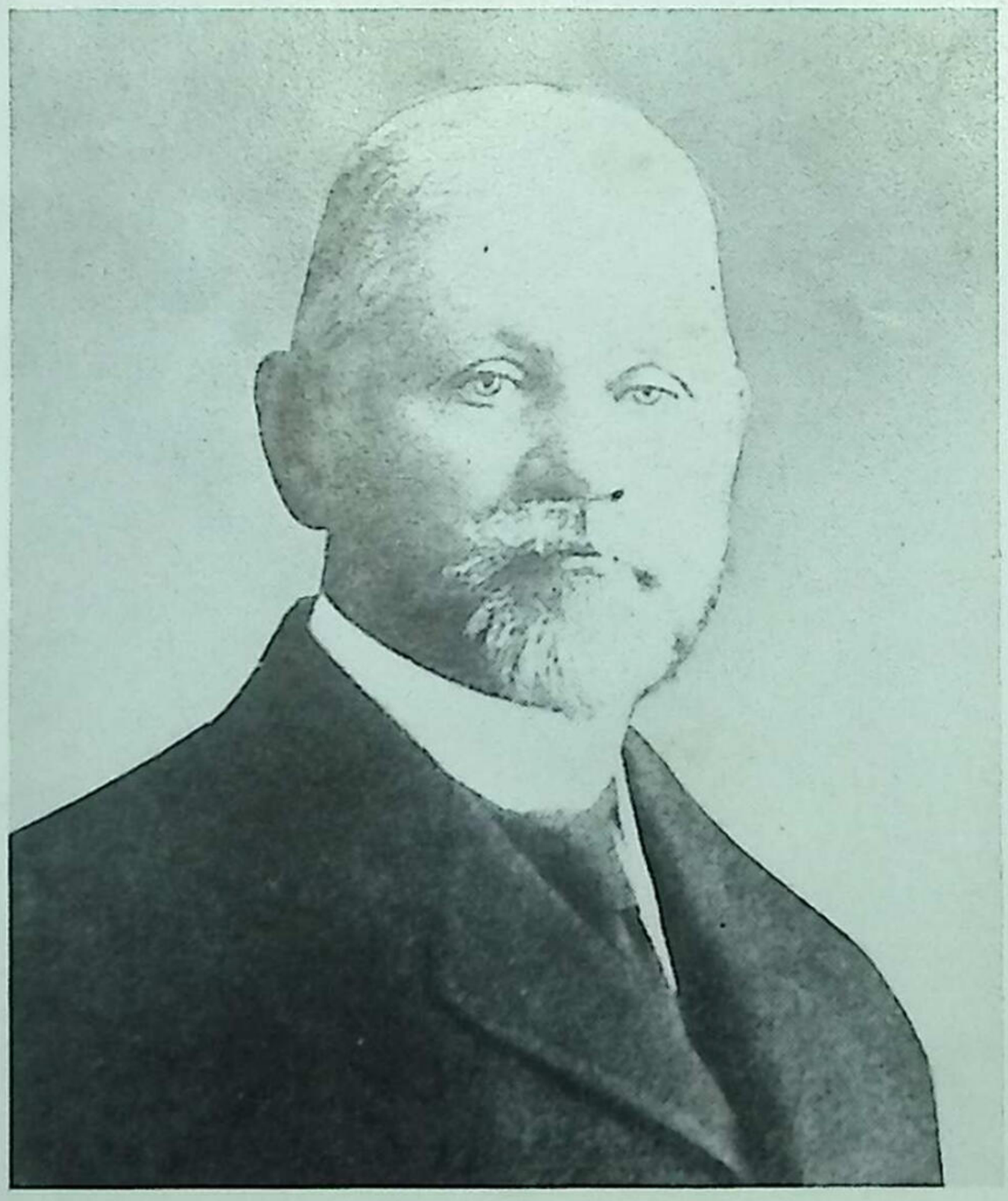
OCTOBER, 1948

The Lapidary Journal



George Frederick Kunz
Memorial Issue

A National Magazine for
GEM CUTTERS + COLLECTORS + JEWELRY CRAFTSMEN
Hollywood, California

VOLUME 2 50c PER COPY NUMBER 4

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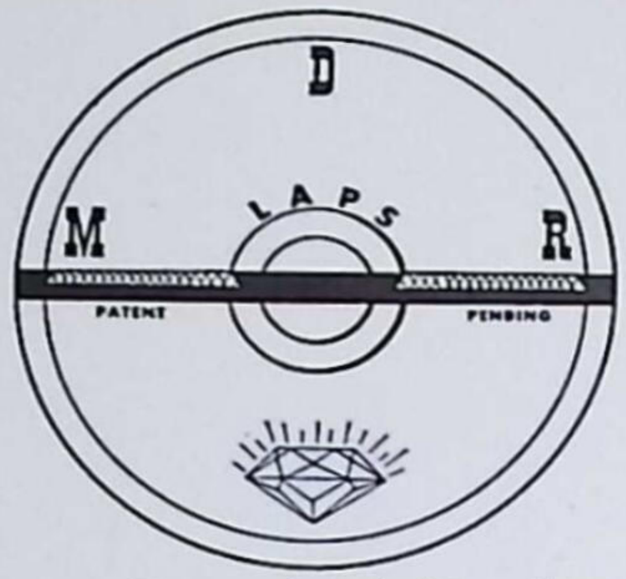
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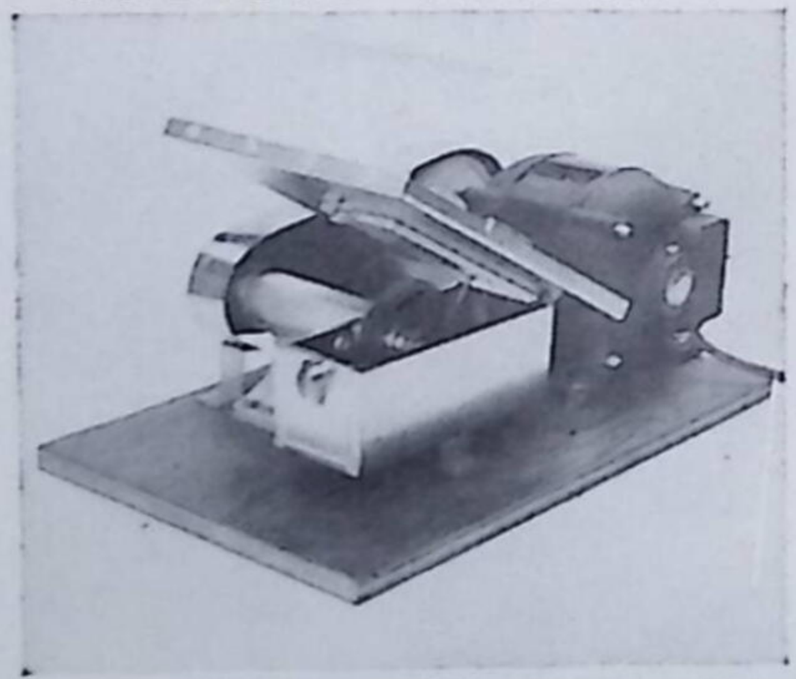
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The Lapidary Journal

A NATIONAL MAGAZINE
for
THE GEM CUTTER, COLLECTOR
AND JEWELRY CRAFTSMAN

EIGHTH ISSUE

PUBLISHED BI-MONTHLY ON THE FIRST OF FEB.-APR.-JUNE-AUG.-OCT.-DEC.

Volume Two | October, 1948 | Number Four

TABLE OF CONTENTS

COVER—GEORGE FREDERICK KUNZ—1856-1932—Printed on a background of Kunzite colored ink.

	PAGE
GEORGE FREDERICK KUNZ by Lelande Quick	204
GEM MINERALS OF SAN DIEGO COUNTY, CALIFORNIA By Norman E. Dawson	208
HOW I CUT KUNZITE by three nationally known faceters	216
Summary of the three methods	226
INDIAN JEWELRY by Joe Stetson	228
A NOTE ON JADE by Robert Tesmer	232
THE SAN DIEGO SHOW	236
PERSONAL FACETS	238
THUNDER ON DISPLAY IN LOS ANGELES	244
CARTOON by Millie	244
SHOP HELPS	246
GEM MINERALS OF CALIFORNIA by George Frederick Kunz	248
GEM NEWS	260
FROM MEXICO TO CANADA, The Field Trip Unique By Lelande Quick and Dr. Henry C. Dake	264
NEWS OF THE SOCIETIES	272
BEGINNERS PAGE	274
CLASSIFIED ADVERTISING	275
INDEX TO DISPLAY ADVERTISERS AND CATALOG LIST	279

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LELANDE QUICK .... *Editor and Manager*
ALETAH QUICK .... *Circulation Manager*

◆ George Frederick Kunz

By LELANDE QUICK

About a year ago the idea occurred to us that we would devote an entire issue to California gems and the memory of Dr. George F. Kunz whose name carries so much weight in Southern California particularly, because of his activity in the early 1900's in the gem mines of San Diego County, and because the area is the hot bed of amateur gem cutting. When we began asking amateurs "who *was* George Kunz?" few had any reply to offer except that occasionally someone would say that he was Vice President of Tiffany's.

When we attempted research on his life we were stymied in every direction. While he *was* Vice President of Tiffany's *(for 53 years!)* and we were attempting a dignified and deserved memorial to him Tiffany declined to cooperate in any way as it was "not their policy." They referred us to his daughter Mrs. Hans Zinsser, the widow of one of the greatest bacteriologists of all time who was author of the widely read biography "As I Remember Him." But Mrs. Zinsser merely referred us to "Who's Who", a book which gives cold facts about a person's life but tells nothing about a man as a human personality.

It hardly seems credible that a man decorated by four foreign powers, awarded honorary degrees by several universities, author of 531 books and magazine articles, could so thoroughly cover the tracks of his private life that he is hardly remembered as an individual but only as a cold statistic and authority. In all of our research we uncovered but one photograph which indicated that Kunz looked like a cross between Andrew Carnegie and Ulysees Grant. After much treatment with positives, negatives, retouching, etc., we have managed to achieve the best photograph and likeness of Kunz that has ever appeared in print. It is on our cover and it is a picture published about 1933, but we do not know when it was taken or at what age.

Most of the old associates who might have revealed something of the man's personality have passed on. One mutual friend, who knew him well, reports that about the only advice he can now remember that Kunz gave him was to "lie with his head down hill if he was overcome by high altitudes."

Another correspondent in the east, who knew him much better, writes that "it is hard for people to realize what a prominent place he had in the life of New York in the gay nineties, not only in the social but in the scientific and cultural activity. No squab-fed deb considered herself really engaged, even when the proposal had been accompanied by the formal genuflection of the era, unless Dr. Kunz had selected the engagement ring. During business hours he could be found behind Tiffany's counter of colored gemstones but he had also put Tiffany in the mineral business. On an upper floor was a huge stock of fine mineral specimens which were used as the nucleus of displays at world fairs. That was the period of the great collectors of objets d'art and many financiers got the mineral bug there; notably J. Pierpont Morgan who later presented to the American Museum of Natural History the collection of Clarence Bement of Philadelphia. Some of the outstanding specimens in the collections of Roebling and William Boyce Thompson came from there not to mention the various gem collections. Kunz himself made and sold no less than six mineral collections.

"He was affable and suave. When Charles Hoadley of the New York Mineral Club tried to needle him by referring to kunzite as pink spodumene whenever Dr. Kunz was around he ignored it completely. He was President of this club for many years until some young Turks, knowing that he was always late for the meetings, began the annual meeting on time and elected their own nominating committee. But these superficialities do no justice to one of the most colorful figures of New York in the days of its prime."

The 29th of the month seemed to play a large part in Kunz' life for he was born, married and died on the 29th and this Memorial appears on his 92nd birthday. George Frederick Kunz was born on September 29th, 1856 in New York, the son of

J. T. and Marie Ida (Widmer) Kunz. He was one of several children, the others believed all sisters, but this information is obscure. At the close of the war between the states the family moved across the Hudson River into New Jersey to the then very small community of Hoboken. The town was new and there was a lot of excavating. As a nine year old boy Kunz began digging in the excavations for pretty rocks and collecting them. When he would get to New York he would stop at Tiffany's to have them identify his finds. He worked so prodigiously and corresponded and traded abroad so much that by the time he was twenty years old he had attracted national attention for his collections. He then sold a complete mineral collection to the University of Minnesota and three years later he had built a new collection which he sold to the Rose Polytechnic Institute of Terre Haute, Indiana. Later he built and sold collections to Amherst College, the New York State Museum at Albany, the Field Museum at Chicago and Thomas A. Edison.

Kunz was self-taught and in the dedication of his book on rings he refers to the Cooper Union in whose laboratories, lecture rooms and library he spent many "useful, profitable evening hours at a time when there were no other opportunities of a similar nature in the City of New York." His knowledge of minerals became so remarkable that he could identify by the eye alone all but the rarer minerals. At the young age of 23 he joined the staff of Tiffany as a gem expert and immediately became Vice President, a position he held until his death. This was the first time that a mineralogist had been employed in this capacity in a jewelry store. He then began to travel extensively and collect intensively so that by the time he was 34 he was able to write his famed book "Gems And Precious Stones of North America."

In 1904 he was made Honorary Curator of Gems at the American Museum of Natural History, a position he held for fourteen years. At the same time he was offered and declined the Directorship of the National Museum. The year before that (1903) he was given a degree (Doctor of Philosophy) by the University of Marburg and this began his international recognition as a great figure in Science. In 1898 he had been awarded an honorary degree of Master of Arts by Columbia University. In 1907 he was honored with the degree of Doctor of Science by Knox University. During these years he was decorated as an officer of the Legion of Honor by France, made a Knight of the Order of St. Olaf by Norway and an Officer of the Rising Sun by Japan. He was also made a Fellow of the New York Academy of Sciences and served as President in 1914.

Dr. Kunz founded the New York Mineralogical Club in 1888 and became its first Secretary. The club had no President at the beginning but Kunz served in that capacity from 1914 until 1926. He bequeathed his great collection of minerals of Manhattan Island to the Club. Other chairs he held were Vice President of the American Institute of Mining and Metallurgical Engineers from 1899 until 1901; President of the American Scenic and Historic Preservation Society and President of the Museum of Science and Industry in New York, of which he was one of the founders.

George Kunz married Sophia Hanforth on October 29th, 1879. She died in January, 1912. He had two daughters; Mary Elizabeth, killed by a runaway horse in 1921, and Ruby who married Dr. Hans Zinsser in 1905. He named this daughter after his favorite gem (?).

In the years immediately preceding and following 1900 Kunz became intensely interested in the gem activities of Southern California and the California State Mining Bureau engaged his services to compile complete data about California gems. This was published in 1905 under the title "Gems, Jewelers' Materials And Ornamental Stones Of California." Given away free by the state, a copy in good condition now commands prices between $50 and $100. This was a bound book of 171 pages and it was an exhaustive but intensely interesting account of every gem location and gem find in the state and profusely illustrated. The *Lapidary Journal* has secured permission from the State of California to republish in its pages anything from Kunz' book it deems of interest to present gem cutters and collectors. There is nothing that could be written today that would supplement Kunz' account very much and it will be noted that the beginning installment of Kunz' report on Page 248

does not differ materially from the fine account Mr. Dawson presents on Page 208 of the gem mines in San Diego County. From time to time we shall offer more of Dr. Kunz' highly interesting account of "the nations gem box."

It was Kunz who identified the new lilac gem found in San Diego County as a crystal form of spodumene and it was later named Kunzite in his honor. It is the orchid of the gem world; one of the most difficult to cut. We present on Page 226 cutting methods of three great lapidaries and we have attempted to convey in the cover color the unusual shade of color of Kunzite but this becomes a great problem with printer's ink.

Kunz was a prodigious writer. In 1883 he began to contribute a section on gems and precious stones to "The Mineral Resources of the United States" which he continued for twenty-three years until 1906. Then he began writing yearly chapters on gems for "Precious Stones," continuing this task until his death. His greatest book was the "Book of the Pearl," a monumental work which he wrote with Charles H. Stevenson in 1904. Among his best known works were "The Curious Lore of Precious Stones," "The Magic of Jewels and Charms" and "Rings For the Fingers," published in 1913, 1915 and 1917 respectively. Copies of any of these works bring between $60 and $150 each in the book markets depending upon their condition.

On June 29th, 1932 at 1 P.M. George Frederick Kunz passed on to the Marble Halls after a few days' illness from a cerebral hemorrhage. The New York Times commented editorially that probably no one approached the streets of gold and jasper and the jeweled cities of Heaven with greater knowledge of what he would see than Dr. Kunz. He was buried in Trinity Churchyard, New York, after a funeral at the Cathedral of St. John the Divine on July 1st, 1932 attended by more than 500 persons.

In all of his writings Kunz revealed nothing of his own philosophy or of himself, which is characteristic of scientific writing of course. But one cannot help, after reading the biography of his son-in-law, "As I Remember Him", wishing heartily that Kunz' prolific pen had set down accounts of the contemporaries he knew, of his travels with nabobs, his spending of other people's millions at the ends of the earth, his association with princes and kings. He was a star in the brightest skies of our nation's history and his account of his times would no doubt have been as precious as the gems he loved.

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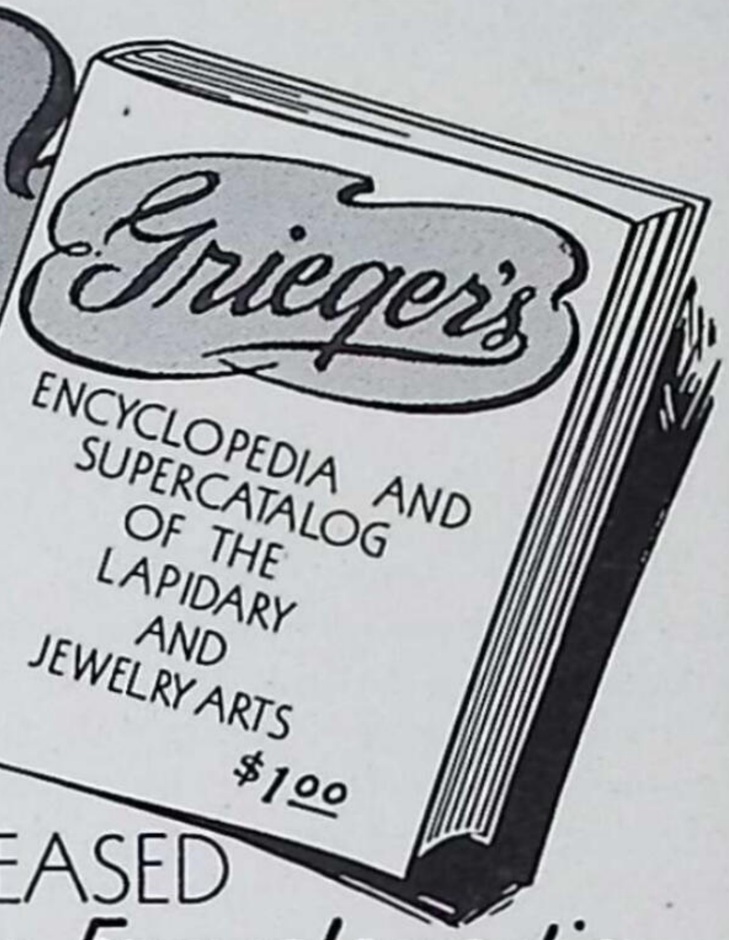
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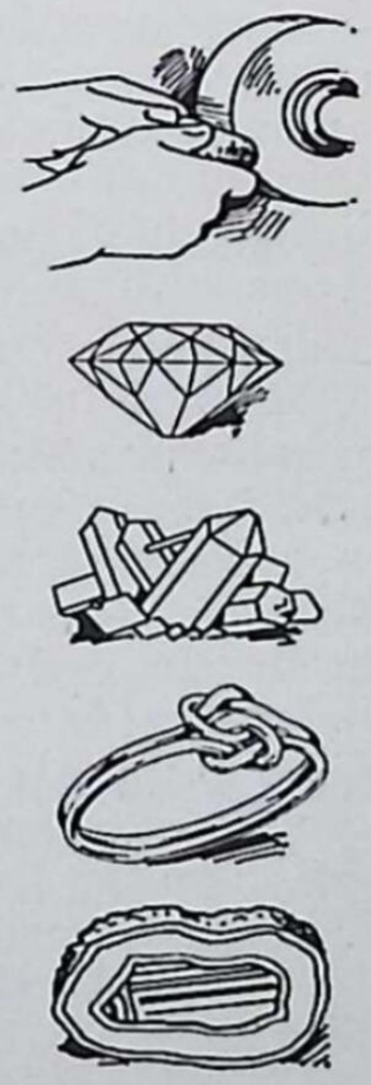
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◆ Gem Minerals of San Diego County, California

By NORMAN E. DAWSON
Route 2 Box 447, San Marcos, California.
Member of the San Diego Mineral & Gem Society.

Toil for hours with pick, single-jack and chisel; follow a seam of lavender lepidolite through the hard silicate minerals of a pegmatite vein; notice the crystal plates of the Lithia Mica become coarser and darker colored and the rosettes of Clevelandite (the characteristic variety of Albite found locally) become more frequent; and finally, by careful hand work with light tools, break into a cavity filled with mud or mineral clay. Then you have struck a gem pocket! Carefully remove all the contents, such as matrix rock, loose crystals and just plain "mud." Soak this clay in a pan of water for you will find that many "mudballs" contain nodules or crystals of Tourmaline and other gem minerals. Then place your matrix specimens, crystals, and gem nodules on a white paper (or even your handkerchief if the wife isn't along) and sit back to gloat over your new possessions.

The interesting crystal forms of Tourmaline, and the intriguing color zones which occur in the same crystal, from one end to the other and from center to outer portion of the prism, are always fascinating to the mineralogist and the collector. This is the attainment of one's objective through patience and tedious work, plus the careful application of knowledge gained by previous experiences. Much satisfaction is derived from such an accomplishment.

Work for hours with charts, mechanical devices and abrasives, faithfully follow the steps outlined for producing a round brilliant stone; commence with a rough pencil or striated prism of Tourmaline which is first trimmed on a diamond saw; then mount it on a dop stick, being careful to cut the table parallel to the crystal prism so as to take full advantage of the mineral's dichroism, the color being deeper through the prism than it is lengthwise (just the opposite of Kunzite); adjust the faceting head to the correct angle for each facet, then carefully grind each one down just so far and no further; then carefully check every facet and apply the final polish; and lastly, remove the stone from the dop stick and clean it—a beautiful rose-pink faceted gem! Even the busiest lapidary must sit for several minutes to admire the sparkling brilliance of reflected light and the delicate color tones called forth. This is the creation of a thing of lasting beauty through patience and careful work, plus the application of one's personal creative abilities and the quickening and perfecting of his technique by each successive achievement. A different, and perhaps a greater, satisfaction is derived from an accomplishment of this nature than in actually mining the gem.

Gemstone faceting is being embraced as a hobby by rapidly increasing thousands of rock hunters. It was only a few years ago that the art was a closely guarded "trade secret" which was passed down from father to son, or from professional lapidary to trusted apprentice. Those days are now gone. Manufacturers have designed many fool proof faceting heads with which an operator, who has acquired the basic knowledge of stone polishing and is able to follow printed instructions, may produce stones cut to exact angles and dimensions. Publications now on the market give detailed diagrams of the various styles of cuts, and the recommended styles and necessary data for each gem species. For many years I have been an ardent seeker of the elusive gem pockets which occur erratically in the local pegmatites. I have had the good fortune to collect many outstanding examples of crystals and matrix pieces of the gems and their rarer associates and to study the geology and occurrence of San Diego County's famous gems or "semi-precious" stones, if you prefer that obsolete term. Just recently I acquired a faceting head and have

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found time to run out a number of interesting stones; but until I have had much more practice I'll continue to take my Kunzites to George Ashley, of Pala, the man "who knows how"!

The gemologist makes several groups of the types of minerals used as gems: First, those qualified by their refraction or dispersion of light, such as the Diamond; second, those having an attractive transparent color, such as the Emerald and Ruby; third, those displaying some phenomenon, such as the "fire" in an Opal or the chatoyance of a Cat's-eye; and fourth, those stones of opaque or nearly opaque colors, such as Turquoise and Lapis Lazuli. The local gems all fall into the second group. Many members of the San Diego Mineral & Gem Society are now taking up faceting, mainly through the enthusiastic efforts of Solon S. Kipp who will conduct classes in this advanced lapidary technique during the 1948-49 season. Our local gems are of diverse types which offer the cutter a good range of practice. Quartz, Garnet and Beryls possess no complicating features. Tourmalines and Kunzite are dichroic and hence must be cut in certain crystallographic directions. Precious Topaz and Kunzite (the mineral species Spodumene) have perfect cleavages, the former in one direction (basal) and the latter in two (prismatic, nearly at right angles). Kunzite is the softest of these gems (hardness 6.5 to 7) but due to its other two characteristics it presents a challenge to the advanced lapidary. No other gem approaches its delicate color which ranges from lilac to rose-pink.

With but few exceptions, the gem-bearing pegmatites of San Diego County occur in belts trending northwest-southeast, paralleling the mountains of the Southern Peninsular Range which compose the San Diego batholith. The first belt lies east of Mt. Palomar, extending from Coahuila (in Riverside County) to Chihuahua Valley (just south of the county line). The second belt runs from Pala through Rincon to Mesa Grande, following a remarkably straight line. The third is from Ramona southeast to Jacumba, and perhaps on into Mexico. Erosion has removed miles of these dikes, on the one hand; and, on the other, has exposed pockets containing tons of Tourmaline (Mesa Grande). Gem crystals are not known to have formed any placer deposits, though small Garnets are common in stream beds. In the first belt, red and green Tourmalines are found in Riverside County and the blue ones in Chihuahua Valley. In the second, Smoky Quartz, Aquamarine, Morganite, Spodumene and Kunzite occur in addition to Tourmalines. The third belt differs in being predominantly a producer of Essonite Garnet and Topaz, with Smoky Quartz and Beryl, and only minor amounts of Tourmaline. On Aguanga Mountain, a southeastern shoulder of Mt. Palomar, a large quantity of Topaz was found, this being the only locality in addition to Ramona to produce it. The other gems were likewise associated in these pockets. All references herein to Topaz are to Precious Topaz (the gem variety of the mineral species Topaz which is No. 8 on the Mohs scale of hardness) and never to quartz.

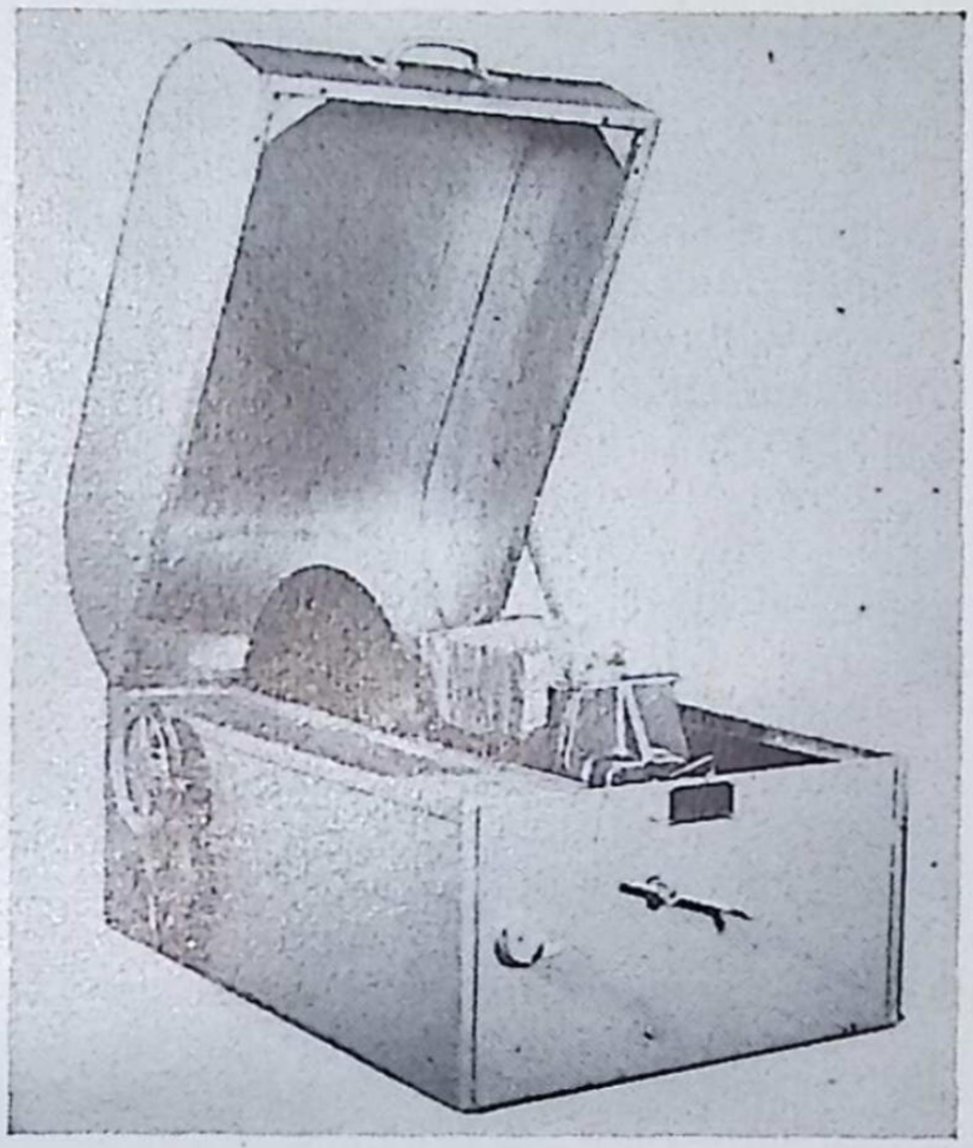
Pegmatites are veins of irregular texture and composition. Their common essential minerals are quartz, potash feldspars (Orthoclase or Microcline, or both) and a smaller amount of Albite (the soda Feldspar). Accessories include one or all of the micas (Muscovite, Biotite, Lepidolite), Garnet and Tourmaline. A dike is a sheet-like body of rock which has solidified from a magma (molten rock); a vein is the same type which has originated from solutions. However, no sharp line of demarcation can be drawn. Pegmatites have long been classified as dikes, but the modern petrologist considers them high temperature veins which are always associated with batholithic intrusions as a late phase in the solidification of the huge body of rock.

As the mass slowly cools, shrinkage takes place so that fissures are opened in the cooler portions, and the residual fluids and vapors are injected into these cracks. The large size of pegmatite crystals is accredited mainly to the favorable action of vapors which are unable to escape from the cooling magma. These serve as "mineralizers", decreasing the viscosity, lowering the "freezing" (solidification) point, and permitting excellent crystallization of minerals not possible from dry magmas. The development of these pegmatites involves, after the original injection of quartz-orthoclase, a continuous series of replacements under high temperature and pressure, during which the rarer and better crystallized minerals are formed. The walls of a pegmatite vein are generally finer grained at the contact with the

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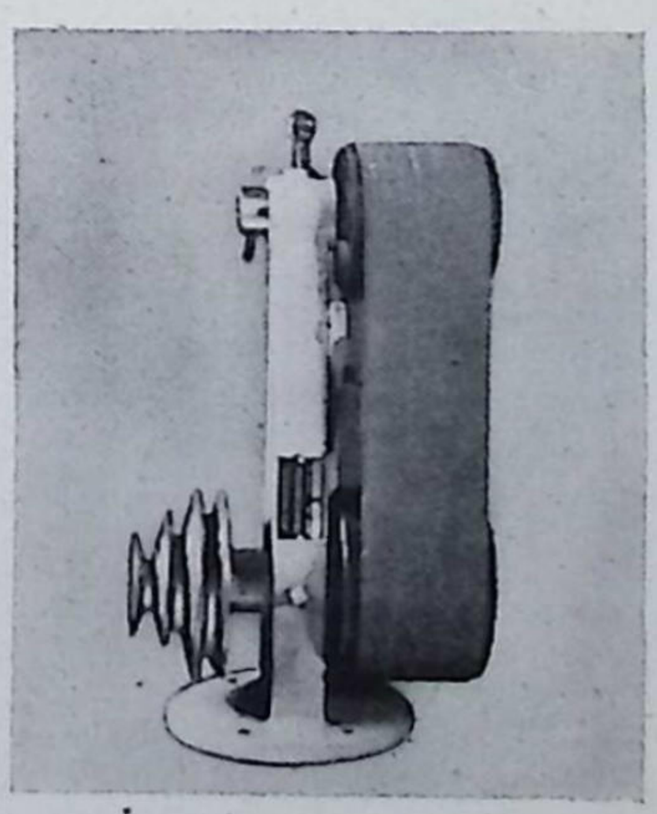
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country rock due to more rapid cooling. The lower or foot wall often shows bandings of small Garnet or Tourmaline crystals, which, because of a higher specific gravity, sank downward in the viscous magma. Miners call this the "line rock." Inward from the walls of a pegmatite the texture changes to a coarse aggregation of quartz, feldspar and Muscovite. The quartz and orthoclase feldspar nearly always form an intergrowth called "graphic granite" which is due to contemporaneous crystallization of the two minerals. Toward the center, subject to suitable conditions, openings may develop into which are projected large crystals of orthoclase or microcline, quartz, and Tourmaline. Quartz usually being the last mineral to crystallize frequently encloses gem crystals, in which case the miner terms it "frozen" —a nice specimen but not usable as a gem. During the million or more years since these minerals solidified within the veins, many fluids and vapors have acted upon them, and the stripping away of several miles of mantle rock by normal processes of erosion has permitted surface and ground waters to enter into the picture. Albite and Spodumene, as outstanding examples, have undergone alteration, furnishing white, pink and red clays which we find as a safety-blanket enveloping the loose gem crystals, affording them the surest protection from shocks due to earth movements or mining operations. The Spodumene (Kunzite) was originally formed as lath-shaped crystals many of which were much larger than a man's hand. But the solutions attacked the mineral, working into the cleavage planes and acting upon the exterior portion until it became an opaque mineral clay, leaving the unharmed. transparent center with etched surfaces. Any piece of Kunzite that comes from these workings may be safely judged the residual part of a much larger crystal.

The first gem Tourmaline was reported from Riverside County in 1872, on Thomas Mtn., near Anza. About 1890, the "sunbursts" of Rubellite or pink Tourmaline in Lepidolite were reported from Pala and production began in 1892. Indian children are credited with finding the first transparent Tourmalines within the County in 1880, while at play near the Mesa Grande postoffice, but the ledge was not discovered until 1898. At Pala, in 1902, occurred the greatest finds of Tourmaline, and the discovery of a new gem variety, Kunzite, on Heriart Mountain. Tourmaline was found the same year on Aguanga Mountain, and in 1903 properties were operating at Ramona and Jacumba. Some of the important mining districts are discussed below in the following order: Chihuahua Valley, Aguanga Mountain, Jacumba, Ramona, Mesa Grande, Rincon and Pala.

CHIHUAHUA VALLEY. Dark blue Tourmaline, associated with Quartz crystals, Albite, etc., has been found as interesting specimens here, but most of the prisms are small and too dark for gem use. The region is rather inaccessible.

AGUANGA MOUNTAIN. The Mountain Lily Mine was located in June, 1903, and later renamed the Emeralite. It was operated for many years by the late J. W. Ware, who opened an enormous pocket of precious Topaz. Tourmalines found were red, pink, blue, and a dark green called "Emeralite." Beryl occurred as Aquamarine and Morganite. Quartz was common but not in colors. This vein bears no relation to any others of the county, its gem content being entirely different. It was recently sold by Mrs. Ware.

JACUMBA. Beryl seems to be the only pegmatite gem reported from this area. Essonite is found over a wide area in the contact-metamorphic deposits bordering the deserts.

RAMONA. The gem mines of this district lie northeast of the town and follow a series of parallel veins. The workings are mostly open cut and there has been no recent mining. The gem minerals are Morganite, and some greenish and colorless Beryl; Topaz of blue and a greenish-blue color (the latter being favorably compared by the Smithsonian Institution with that of the Urals of Russia) and minor amounts of yellow and colorless Smoky Quartz is found in large crystals of a superior tint; Tourmaline is common in fine black, terminated crystals, but the only gem type is green in color. Essonite Garnet is abundant as small fragments from light cinnamon to reddish in color, while pieces furnishing several-carat stones have been found. The McFall mine produced gem Epidote and Essonite.

MESA GRANDE. The San Diego and Himalaya Mines are adjoining, and the Esmeralda is about 1½ miles away. Work was started on the San Diego in 1901



Fargo Mine — Gem Pocket



The author and his wife at entrance to Fargo Mine at Heriart Mountain

and more development has been done on this claim than on any other gem mine in the state. The Himalaya was richer and produced tons of rose-red Tourmalines which went mainly to China for carving. The minerals of both properties include Tourmalines in rose-red, deep red, green, yellow-green, and a little blue; Beryl of both the Morganite and Aquamarine varieties; clear Spodumene; Rock Crystal and Smoky Quartz; and Essonite and Spessartite Garnets, though not of gem quality. The Tourmalines from this locality are said to be the finest yet produced in the state, and the quality and perfection of their crystals unsurpassed by any. Among the associated minerals are Apatite, Cassiterite, Stibiotantalite, etc.

RINCON. The Mack Mine is 9½ miles southeast of Pala and was located in November, 1903. The pegmatite consists largely of Quartz, Feldspar and Muscovite, and much fine Beryl has been produced without extensive development. The colors are mainly Aquamarine, but some blue, yellow and rose have been reported. The Victor Mine produced pink and blue Tourmaline and minor amounts of Kunzite. The Clark Mine was worked for optical Quartz, though the Smoky variety was excellent gem material.

PALA. The pink Tourmaline in Lepidolite had long been known to the Indians, but when a specimen was shown an old prospector named Magee he promptly located the claim as a Cinnabar deposit. Being unable to extract any metal he gave up his claim, and it was later relocated as a marble quarry. In the late 80's Lepidolite was recognized as a source of lithia and claims were staked on many deposits. The first commercial production from Pala seems to have been in 1892 when 18 tons were shipped to Rochester for specimens, so that the Tourmaline "sunbursts" soon graced collections all over the world. In the late 90's, Fred Sickler found Quartz crystals, pink and blue Tourmalines, and a strange transparent, lilac-colored mineral, on Heriart Mountain. Later, hearing that two sheepherders had located a claim on that mountain he did some prospecting and staked out the White Queen claim on June 8, 1901. In the same year the Vanderberg, Sempe, Anita and Catarina claims were filed. While doing their assessment work on the Catarina in May, 1902, the Sicklers found colorless and lilac crystals imbedded in clay. Being unable to get this new mineral identified, Fred Sickler finally sent specimens from the White Queen to Tiffany and Company in New York, in December, 1902, and Dr. George F. Kunz recognized it as Spodumene. It was later named Kunzite in his honor. Fine pink, blue and green Tourmalines were also found that year, and in 1903 the great Pala Chief mine was located. The pink cesium-bearing variety of Beryl which was named Morganite was also first found at Pala.

To the north of the town of Pala is Tourmaline Queen Mountain, with the Stewart Lithia, Douglas Gem, Tourmaline Queen and Tourmaline King mines; at the summit of Pala Chief Hill is the famous Pala Chief mine; and on Heriart Mountain, to the southeast, are George Ashley's Catarina, Heriart, Vanderberg and Naylor claims; Charles Reynold's Sempe; and the writer's Fargo, El Molino and White Queen. The claims on Heriart Mountain have long been idle but the new owners are "moving dirt" in a feverish attempt to supply the demand for Morganite, Aquamarine, Kunzite, blue, pink and green Tourmalines, and Smoky Quartz!

In conclusion let me state that all the exposed ledges have undoubtedly been found; that careful prospecting and study will reveal sections in some veins which are potential gem producers; and that mining, on a one man basis, is a slow proposition, hence the more people we can get working these veins the greater will be the yield, and much quicker. The San Diego County pegmatites have given up innumerable crystals of many mineral species, interesting matrix pieces showing the sequence of crystallization and the rare mineral associations, and superb gem material from which the lapidary has fashioned stones unequalled in quality. Many of these now repose in the Smithsonian and other large museums, but countless numbers still remain in San Diego collections. Much fine material has been brought to light in recent years also, such as 90 carat Kunzites, 50 carat Morganites, 30 carat Tourmalines, etc. To those who would enjoy seeing the "cream of the crop" we extend a hearty invitation to attend the San Diego Mineral & Gem Society's own show in Balboa Park on Saturday and Sunday, October 16-17. There will be on exhibit all types of materials from this County's gem districts.

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(Rough)

CORUNDUM

	1000 carats Price per carat in one color	Per carat in smaller lots
ALEXANDRITE		
medium	3½ cents	5 cents
dark	4 "	6 "
BURMA SAPPHIRE	4½ "	6 "
GARNET	4½ "	6 "
CEYLON SAPPHIRE	3½ "	5 "
GOLDEN SAPPHIRE	3½ "	5 "
GREEN SAPPHIRE	7 "	9 "
KUNZITE	3½ "	5 "
ROSE SAPPHIRE	2½ "	4 "
RUBY	2½ "	4 "
WHITE SAPPHIRE	2½ "	4 "

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	1000 carats Price per carat in one color	Per carat in smaller lots
AQUAMARINE		
light	3 cents	5 cents
dark	3 "	5 "
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KUNZITE	2.15	2.95	3.95	5.95	10.00	12.00
ROSE SAPPHIRE	2.00	2.50	3.40	5.40	8.00	10.00
RUBY *	1.75	2.35	3.25	5.25	8.00	10.00
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◆ How I Cut Kunzite

Three nationally respected amateur lapidaries tell how they cut and polish kunzite. It is the most difficult of all crystal gems to facet. The same information is applicable to hiddenite, a green form of the same gem, which is crystalline spodumene. This "orchid of the gem world" is also orchid in color. We have endeavored to duplicate a good kunzite color in our cover.

Method of J. Daniel Willems, M.D.

Author of the New Book "*Gem Cutting*"
20 N. Wacker Drive, Chicago 6

The faceting of a kunzite gem stone is an *experience*. This mineral is as delicate in its structure as in its color. Its capriciousness and sensitivity surpasses that of the Kodachrome emulsion on an unexposed color film. Neither tolerates the slightest error, nor rudeness, nor even an inadvertent sneeze. In fact, among the inflexible requisites for success is the ability of the cutter to hold his breath for the duration of the cutting. And yet the kunzite responds readily to gentle handling and coaxing. This is taking the horns by the bull, so to speak; an exaggeration but it places the emphasis where it is important.

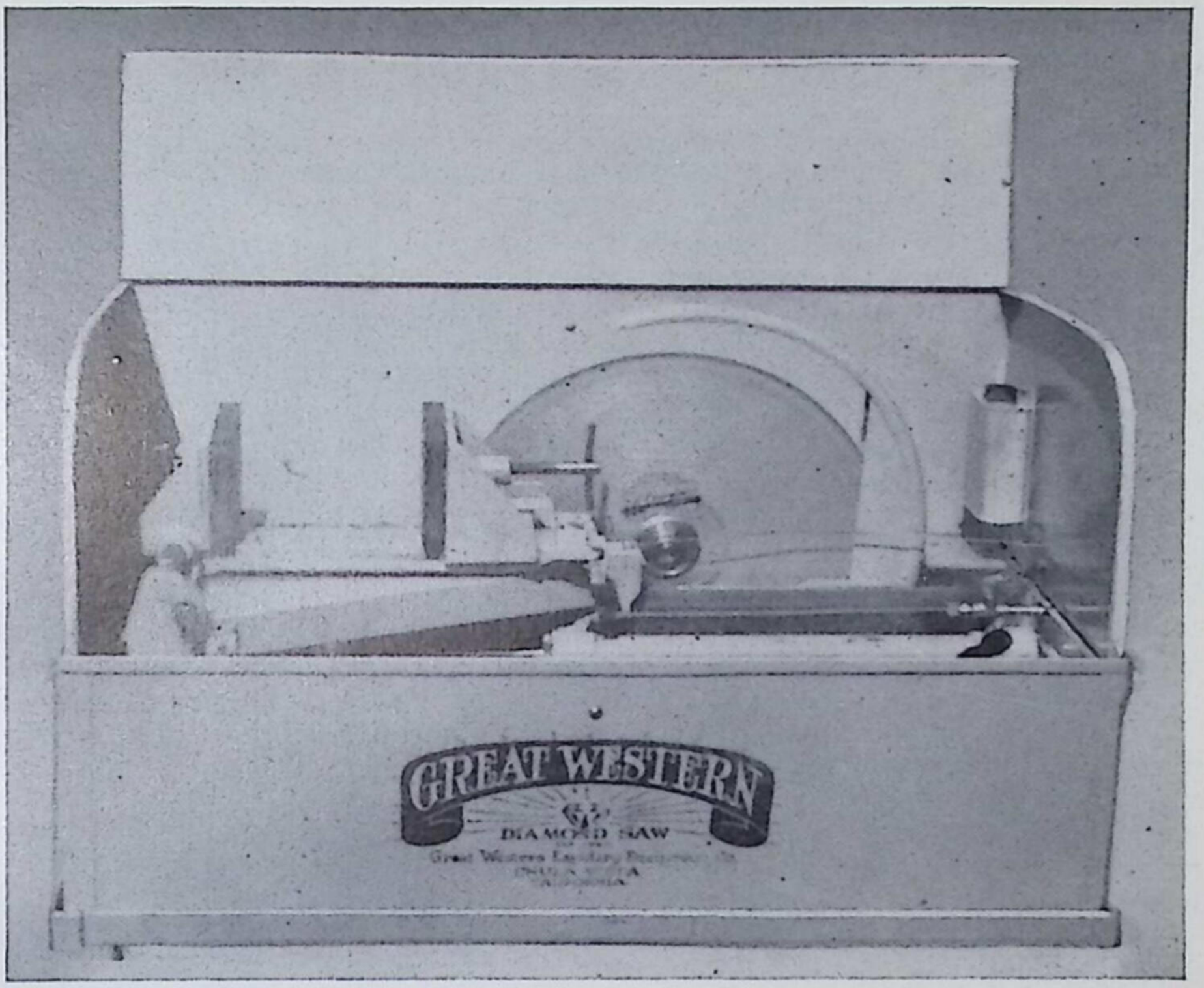
Kunzite is not cut—it is caressed, fondled, and flattered into shape. I personally know of three accomplished professional cutters who will not touch it. They have tried and failed in their attempts. They did not understand its nature. I do not claim to be temperamental, but when I approach kunzite I am sure that I am in top form before starting. Like performing surgery, nothing is allowed to interfere in the slightest with the matter in hand.

In beginning the rough material is thoroughly examined to find cleavage cracks within. Any crack is sure to enlarge during the cutting and this often completely cuts the stone apart. An area within the crystal is then selected which is free of all cracks and feathers. Orientation of the gem within the crystal is then decided upon. This is most important. For this purpose the table of the phantom gem in the cutter's mind is used as the reference plane. As far as it is possible to do so, every facet plane is so placed that it deviates from the cleavage planes of the crystal 10 to 15°. In no event can a facet plane lie in, or parallel to, the long axis of the crystal, nor at right angles to it. Thus the table is either approximately 15° or 75° off the long axis. In addition to that the table must be tilted away at approximately the same inclination in the other of its two dimensions. In this position every facet can be made to lie diagonally across the cleavages of the crystal. Only when that position has been found in the stone is there a chance for success.

Sawing is done with a blade which is new and has only been run enough to assure smoothness in cutting with a minimum of pressure. Saw cuts which parallel the cleavage planes are studiously avoided, since the stone will easily split apart. The saw is run at a moderate speed. It is my custom to remove as much excess material as possible by careful sawing, rather than grinding.

For the roughing out phase I use a carborundum wheel of 400 grit. I use this wheel for opals and other fragile stones as well. Medium speed, a true-running wheel, and only the most delicate pressure are essential. The table can thus be accurately placed and trued and the girdle fully outlined. At no time is the stone

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held to the wheel for more than just a few seconds. The points presented to the wheel are constantly changed. The process is tedious and time consuming but it pays.

After roughing out it is best to polish the table. This is done by hand before dopping. It is easier to equalize the pressure and to have all points of the table in equal contact with the wheel that way. Dopping is next but this presents no particular hazards.

Now comes the cutting of the crown. For this I use a bell metal bronze lap, charged with No. 300 grit diamond dust. I avoid a new charge. The lap is first used for some time on other stones so that all the coarser particles have been eliminated. As the wheel gets smoother, and as it cuts gentler with less tearing and ripping, it eventually comes to a state which is approximately right for a kunzite gem. However, this waiting is not carried too far; not to the point where the gem stone will find no diamond dust left, and where it will pick up metal from the wheel. The preferred speed is 600 r.p.m. At all times the gem is brought down upon the wheel with the gentlest possible touch. Only a touch at a time is enough; just a second or two on the smaller facets. And thorough watering is essential. A word of special caution is important—don't overcut, leave plenty of material to take away by polishing. And another—don't cut the smallest facets, especially the corner facets, beyond the faintest "set", just enough to indicate the position and plane. Leave the rest for the polishing.

At last comes the polishing. This is the most difficult part for it requires sustained effort to be gentle with the stone. The tendency is to apply more and more pressure, to hold the gem to the wheel longer and longer. A tiny chip may come away from the near edge of the facet and be dragged across it, tearing a groove into it. Or the polishing powder may reach a point where it is dry enough to allow a tiny lump to form which delivers a tiny jolt to the gem. This can cause a crack to appear along the cleavage planes. Also by holding to the lap too long the powder may suddenly become dry and heat develops in a second or two to cause damage. There are nearly always some facets which fail to take a smooth polish when their turn comes. This means that the lap runs against the grain, or at least partly so. With the versatility of the professional dop stick (and also with my own faceting device) the jamb peg can be used on a right angled stand rod. It can be swung around, reaching over the running lap toward its center, or it can be swung out away from it. This makes it possible to place the gem on the lap at varying angles, thus avoiding polishing straight against the grain. It usually solves the problem but in the few instances where it failed I had to redop the stone in reverse before attaining a satisfactory polish.

The polishing wheel I have the best success with is 66⅓% lead and 33⅓% tin. It is scored with a thin knife blade to make narrow deep depressions. The scorings are worn down about half-way with another gem stone until they are quite smooth. For a polishing agent I use tripoli in powder form and plenty of water.

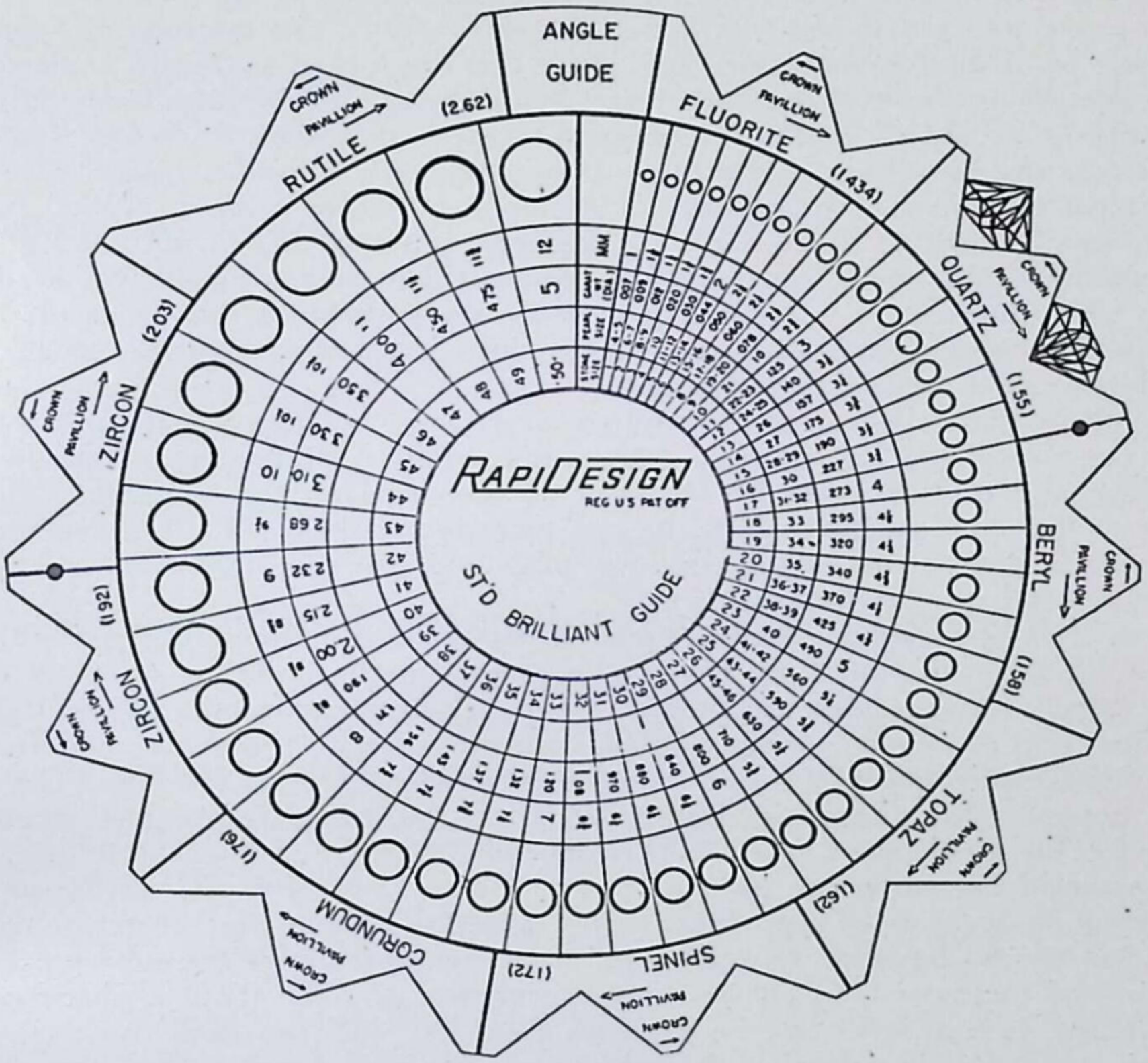
Above all the cutting of kunzite requires patience and gentleness. But the results are gratifying for kunzite is the orchid of the gems.

Method of Thomas L. Daniel

Chairman of *The Faceteers*
of the Los Angeles Lapidary Society
2238 Midvale Ave., Los Angeles 25

When asked how to polish kunzite, the writer's first answer was "tin oxide on a tin lap." However, there are a great many steps, and certain precautions, that must be taken before the actual polishing is done. Dr. Frederick H. Pough, Gem Consultant for Jewelers' Circular-Keystone, says, "The cutting of kunzite is a critical operation and the test of a lapidary." Others say, "kunzite is not for the amateur." It has been cut by many amateurs and there is no reason why it connot be cut successfully by many more.

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To obtain the best color orient with the table across the long axis. Preforming of the stone on a carborundum wheel is not recommended regardless of how true the wheel is. The slightest jar or shock may start a fracture that may not show up until the stone is almost finished. If it is necessary to saw the stone the saw must be very thin and run perfectly true, using very light pressure. Instead of preforming, best results are obtained by dopping to yield the largest stone, letting the rough piece determine the shape of the finished stone. Rough grind on a diamond lap, not less than 400 mesh, and finish on an 800 mesh diamond lap.

Always cut and polish the pavilion of the stone first. The machine or facet head used must be of the free swinging type; those that are locked at certain angles cannot absorb the jar or shock of even the truest running lap. *Hold your index finger on the stone, using thumb and other fingers to move dop stick or holder back and forth across the lap. Exert pressure on stone only with the index finger.*

Whatever method is used for keeping the lap wet (except dripping water), a piece of felt, small brush or cloth wetting-plug, *keep it on the lap at all times* and *just ahead of the stone.* Any chips from the stone are then picked up and removed from the lap when more water is applied. Otherwise the little chips that break off have a bad habit of knocking off more and larger chips if allowed to hit the stone. This procedure is also used in the polishing.

By cutting and polishing the pavilion first a larger surface is left for redopping to cut the crown and less chance of the stone coming off the dop. But the same procedure and caution must be followed as was used on the pavilion. There is danger of the stone splitting until the last facet is polished. While it remained all in one piece during the rough grinding, polishing can give disastrous results too. Always remember—"haste makes waste."

If you are interested in angles, a brilliant cut kunzite shows up best with four rows of facets on the pavilion, having the critical angle of *39° at the very bottom of the stone.* Other angles can be 69° for the girdle skew facets; 59° and 49° for the other rows of facets. Always polish from the culet to the girdle, and from the table to the girdle, regardless of the order in which the facets are cut. The crown facets are 43° for the main facets, 28° for the table facets and about 47° to 50° for the girdle skew facets. This depends upon the size of the table.

An emerald cut stone can have as many as five rows of facets on the pavilion, depending on the size of the stone. The larger the stone the greater number of facets, but always have the critical angle at the very bottom of the stone or 39°. If five rows of facets are put on we suggest a change of only about 8° between each row. Three or four rows can be changed about 10° between each row.

Some authorities believe that the gem is less likely to break if it is covered with grease between any lengthy periods of inactive grinding operations, such as leaving it overnight before finishing.

Method of J. Harry Howard

Author of "*Handbook for the Amateur Lapidary*"
504 Crescent Avenue, Greenville, S.C.

Until recently I roughed out kunzite on a fine silicon carbide wheel (#220 or FF) and faceted it on a lead wheel with #220 silicon carbide grains. The whole operation was very slow and annoying and the casualty rate was high due to splitting of the gem during roughing out.

When I began investigating in an attempt to improve on this system I first tried coarser silicon carbide wheels for roughing out. This treatment almost invariably shattered the stone. I then tried #150 grit sintered diamond wheel, manipulating the kunzite just as I would have done any other gem material. Again I got shattering and splitting and "fraying out" at the edges of cuts. I also tried #200-300 grit diamond charged copper wheels for faceting and again I got splitting and "fraying". I then changed to a #1200 grit diamond charged copper wheel and got such slow cutting that this scheme was ruled out. I formed the opinion that diamond could not be used on kunzite. This opinion was concurred in by others who had tried it.

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The purpose of the previous preamble is to let the reader know that my adoption of the system that I am going to describe is not the result of a mere "I tried it and it worked." It is, on the contrary, the outcome of a considerable amount of experimenting; much of it with disastrous results. Many others may have tried diamond wheels for kunzite and had the same negative results that I did in the beginning. I want to make the point that it is the *abuse* of diamond and not its *use* that wrecks kunzite. I have cut enough of this material (probably more than 100 carats) to know that the result of my system is not a freak result. Also, the material worked was from *four crystals*, at least one of which was definitely "weak".

The chief problem of the researcher is to properly tie in results with causes. Every experimenter is liable to error in this respect. What I feel is important may not be so and I may overlook other points of real importance. All I can plead is—"this is the way I cut kunzite."

Approach this material remembering that it is a mass of parallel fibers of molecular diameter very imperfectly cemented together. It should never be subjected to any strain across the fibers. For sawing across the crystal embed the stone on back, sides and ends in chasers' cement or dop cement. This can be done by building on the side of a 1″ board a pen of thin boards or heavy cardboard, about ½″ longer and ½″ wider than the crystal and a little higher than the diameter of the crystal. Pour a bed of cement about ⅛″ deep in the bottom of the pen. Let it partially cool. Warm the crystal and place it in proper position on the cement base. Pour the pen full of cement up to, but not over, the face of the crystal. Let it harden, remove the pen, clamp the board in the vise of the diamond saw and proceed to saw the crystal to lengths that are equal to the depth of the desired gems. Use a saw that is true and do not crowd it.

A word about the depth of the gem. It is needlessly courting trouble to bring the girdle of kunzite to a knife edge. It is safer to put on the pavilion a row of girdle facets inclined 75° to 80° from the girdle. These rectangular facets are prolongations of the skew facets and may vary in length from 1 mm. to 2 mm. depending on the size of the gem. These should be taken into account in calculating the depth of the gem.

Another word as to the shape of the gem. One cannot always tell, when sawing across the crystal, just what diameter of gem he will be able to cut. Sometimes the surface etching of the crystal extends into the material further than is apparent from examination of the rough material. When this happens (the gem having already been sawed for depth) it is evident that the sawed depth is too great for the diameter if the gem is to be cut to an ideal shape. Rather than risk grinding the gem down to an ideal depth, it is quite permissible to modify the shape of the pavilion and put on one or more extra rows of pavilion facets. The degree of inclination of these is not a serious matter if the facets next to the culet are inclined approximately 39° from the girdle. Leave the crown the ideal height for the diameter of the gem, putting all the extra depth in the pavilion. This makes a perfectly good gem even when the ratio of depth to width is as much as one to one.

After all cross crystal cuts are made, do not try to pry the slices out of the cement. Warm the entire mass and remove the slices without putting any strain on them. The re-sawing of the slabs is parallel to the fibers and this sawing can be done safely without embedding the material in cement.

Roughing is done on a #150 grit sintered diamond cup wheel; speed about 1000 r.p.m. for a 5″ wheel. This material "loads" a wheel quickly and frequent light touches with the dressing stick are advantageous. Use plenty of water and always grind parallel to the fibers of the material. It usually is easier to hold the blank by hand while it is being ground to cylindrical form. It is positively recommended that the blanks be ground to cylinders. While some material can be saved by grinding it 8 sided, the grinding of any flat on this material, on this wheel, involves considerable danger of the gem "fraying" at the edge of the flat. Use light pressure, just enough to keep the gem from bouncing.

The cylinder is then dopped and the incline for the crown is ground. It is recommended that the front main facets be inclined about 53° from the plane

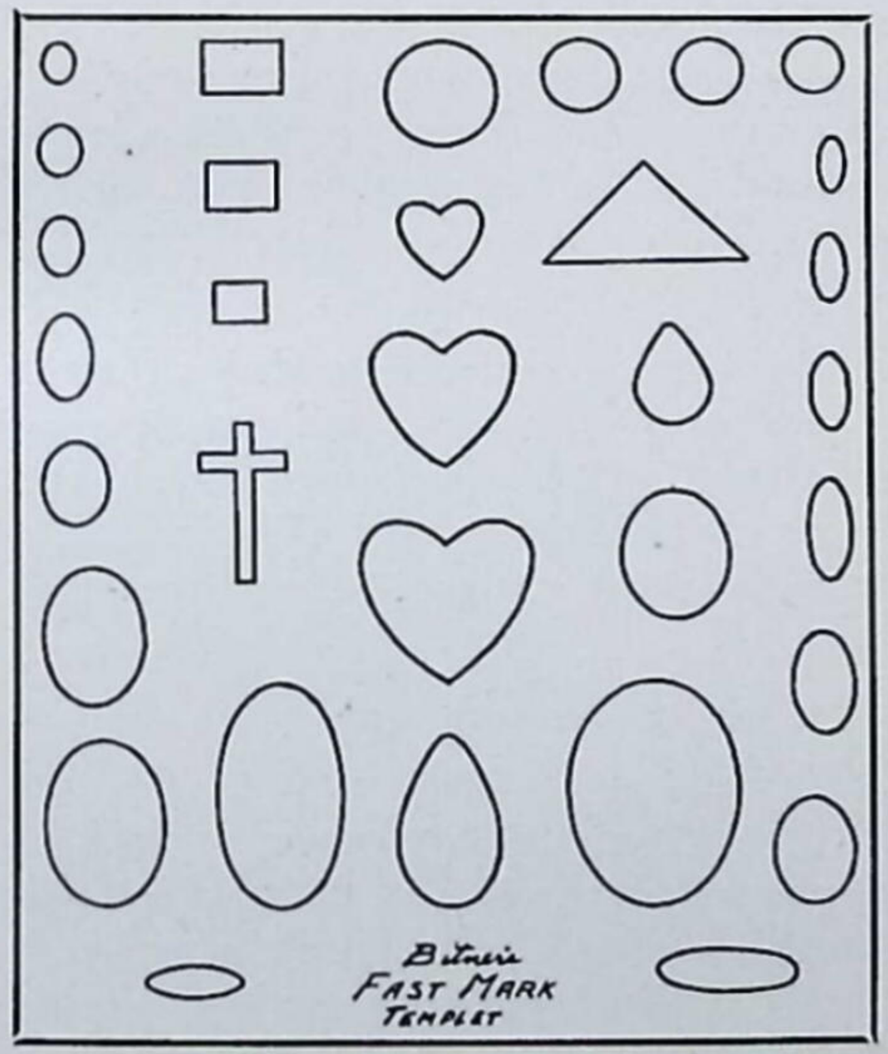
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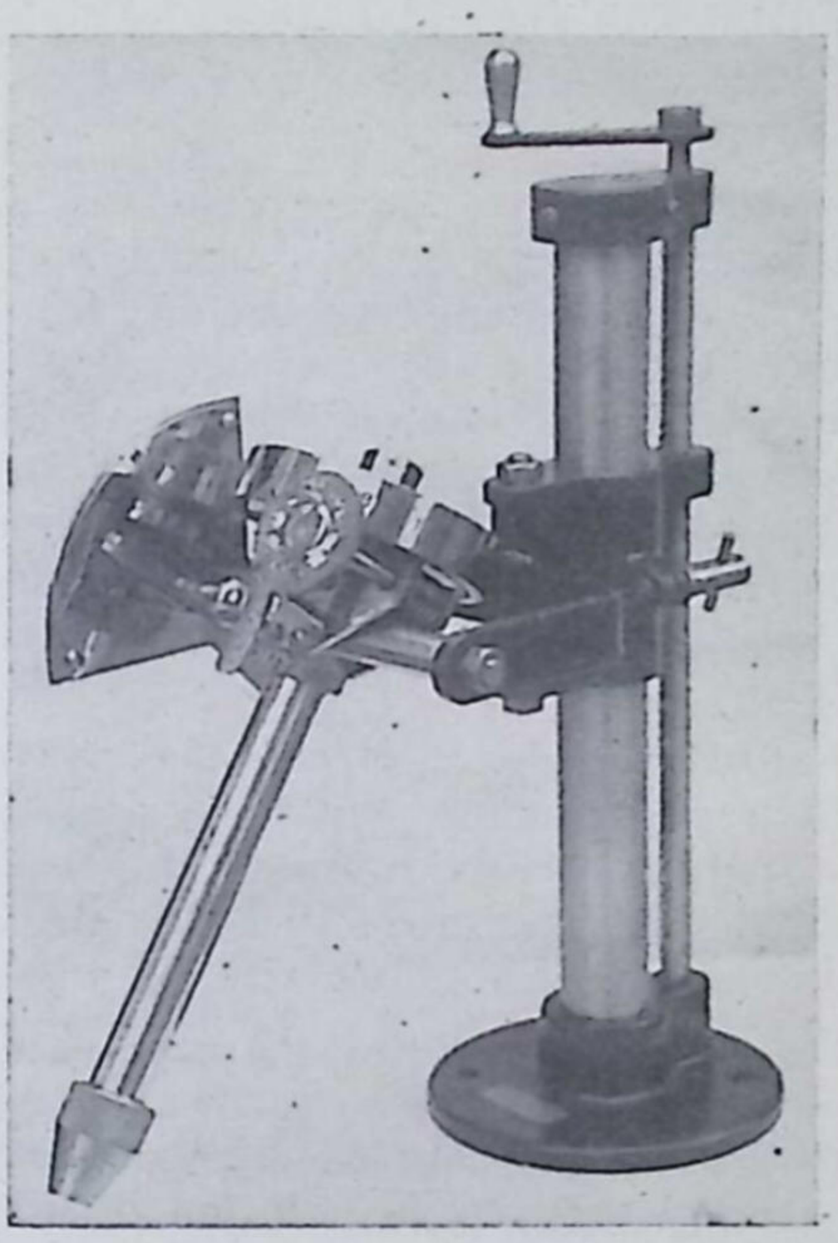


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of the girdle to avoid "thinning" of the girdle. Use plenty of dopping cement and let this cement extend up the side of the cylinder to approximately the position of the girdle. Then reverse the stone on the stick, and grind the pavilion cone. Be sure the cement extends on the side of the cylinder to beyond the location of the girdle. The purpose of this is to furnish as much support as possible to the fibers.

To repeat and emphasize—plenty of water—pressure light—direction of grind parallel to fibers—sides to be supported by cement—keep stone moving—do not grind long in one place on the stone. In all operations with kunzite warm the stone and the cement to remove stone from cement—never try to pry a stone away from cold cement.

In this matter of roughing out, one point is still in doubt in my mind. The old cutters say to never rough the culet to a point. For some reason kunzite does seem to have a tendency to split through the culet about the time it is brought to a point. There is a logical reason that may account for this. When one is grinding the shape conical, whatever pressure is applied to the stone against the wheel is distributed over a relatively large area. But when the cone approaches a point the entire pressure will, part of the time, be applied just at the point, resulting in a greatly increased pressure per unit of area. This might very well be the cause of splitting. It is therefore recommended that the cone be not quite brought to a point.

Faceting presents no problems. Use a copper or phosphor bronze wheel charged with approximately #600 grit diamond with speed about 750 r.p.m. Here again this material tends to sludge the surface. It pays to hold a small wad of wet cloth against the wheel just ahead of the contact point between the wheel and the gem. This can easily be done with the hand that is holding the gem against the wheel.

No special precautions are necessary except such as are dictated by sound judgment; pressure light to moderate and do not allow the gem to "bump" against the wheel. It pays to be especially careful on the facets that touch the girdle. Almost invariably the gem is so oriented that at least one and often two or three points of the girdle lie close to the surface of the crystal. And often there are weak cleavage planes adjacent to the etched crystal surfaces. Special "tenderness" in handling the facets that touch the girdle will often prevent the splitting off of thin slivers at the girdle.

In polishing use a tin wheel, Linde Grade A Powder or Damascus Ruby Powder; speed about 150-200 r.p.m. on a 6" wheel. Use a very thin mix and finish almost or entirely dry. With speed of up to 200 r.p.m. there is little danger of overheating. When the wheel is wet there is no such danger. When the wheel is dry the gem should not be applied to it for more than 10 seconds at a time. Pressure should be always light to moderate.

CONCLUSION—Points of superiority of foregoing system over the old one mentioned are:

1.—In roughing out on a #220 wheel one uses either a hard wheel or a soft one. If the soft wheel is used it cuts faster but wears fast and has to be trued often as a very slight amount of bumping on an untrue wheel will wreck kunzite. If a hard wheel is used it glazes quickly and has to be dressed frequently to remove the glaze. In either case a lot of time is wasted. The #150 grit sintered diamond wheel will rough out a gem with a greater degree of safety and in far less time than the #220 wheel under the most favorable conditions.

2.—The #600 grit diamond charged wheel for faceting is much faster than the silicon carbide grains on lead and the control is much better. The rate of cutting with the diamond wheel is uniform. If it takes 10 seconds to cut one facet it will take about the same time to cut each of the corresponding facets. The cutting rate of the loose grains on the lead wheel is quite variable, depending on consistency of the mix, varying amounts applied to the wheel, etc. A person using this method has to inspect the amount of cutting more than twice as often as when using the diamond wheel. With loose grains there is a tendency to overcutting of parts of a facet while the diamond wheel cuts them flat.

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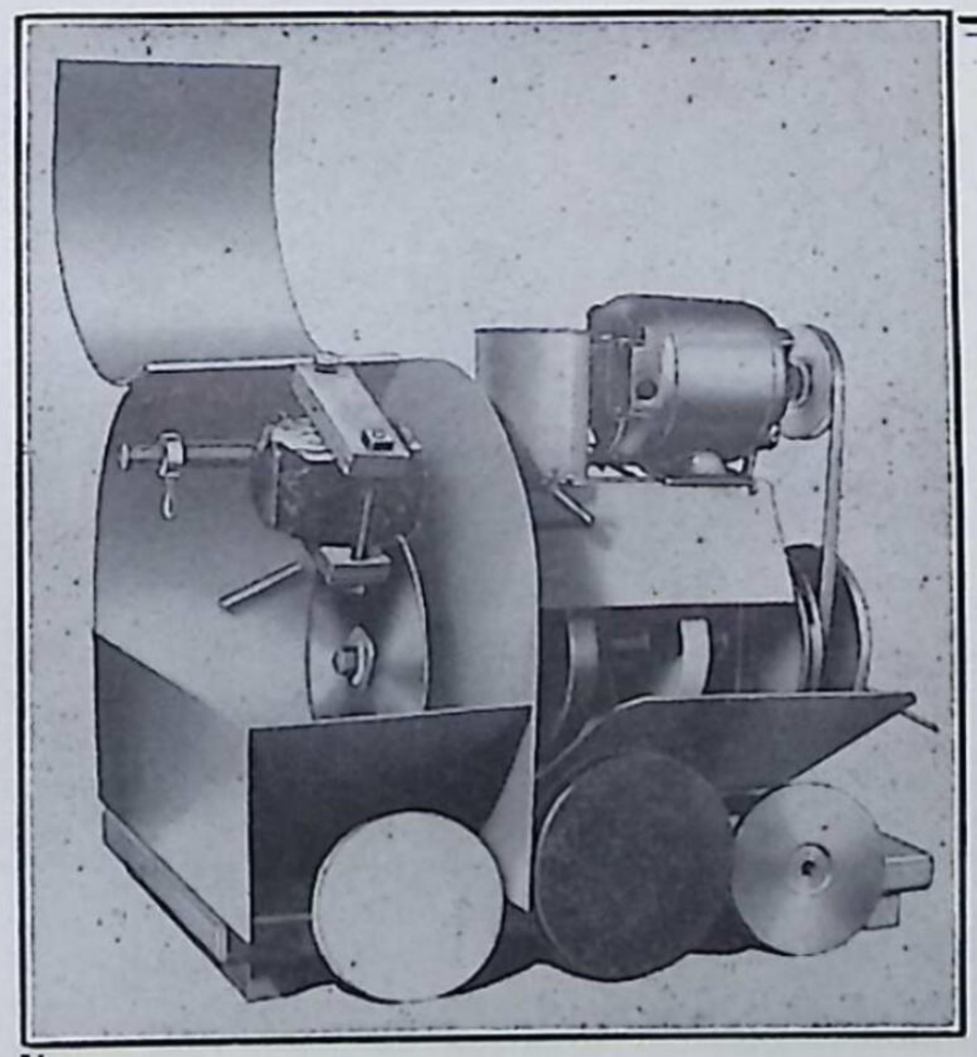
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3.—Unless one has the patience of Job, a subconscious resentment builds up in him at the snail like pace of the work under the old system. This has to overwhelm his judgment for only an instant to induce him to put a little too much pressure on a gem, or to allow it to bump once too often against a flat on the wheel. The result is a split stone. The #150 grit diamond wheel, properly used, works so beautifully that shaping kunzite on it is an actual pleasure.

Summary of the 3 Methods

	WILLEMS	DANIEL	HOWARD
Sawing	New blade, slightly used. Moderate speed, minimum pressure. Horizontal to cleavage plane. Remove as much material as possible with saw rather than with grinders.	Very thin and true and light pressure.	Embed crystal in cement. Do not crowd. Same length as desired depth.
Grinding	#400 carborundum wheel. Medium speed, delicate pressure. Contacts frequently changed. Grind a few seconds at a time.	No wheel grinding. #400 diamond lap and finish on #800 diamond lap. Hold index finger on stone. All pressure from index finger. Keep laps well washed.	Never grind to a knife edge. #150 sintered diamond cup wheel. 1000 r.p.m. for 5″ wheel. Grind to cylinder by hand. Plenty water, light pressure.
Faceting	Bell metal bronze lap charged with #300 diamond, not too new. 600 r.p.m. A touch at a time, lots of water. Do most of facet cutting in final polishing.	Cut pavilion first. See angles below. Wetting plug ahead of stone. Keep stone greased when not working on it.	Do not cut culet to a point. Copper or phosphor bronze wheel, # 600 grit diamond, 750 r.p.m. Light pressure.
Polishing	Not long at a time. ⅔ lead and ⅓ tin lap. Never polish against grain. Redop in reverse if some facets are stubborn. Powdered tripoli, plenty of water.	Tin oxide on a tin lap. From culet to the girdle. From table to the girdle. Wetting plug ahead of stone.	Tin lap with Linde A or Damascus Ruby powder. Thin mix, almost dry. 150 to 200 r.p.m.
Angles	None recommended except that all facets be diagonal to the long axis by 10 to 15°.	Orient table across long axis for *best color;* otherwise not necessary. Brilliants—4 rows on pavilion. Critical angle 39° at bottom. Girdle skew 69°. 59° and 49° for other rows. Crown 43°, table 28°. Girdle skew 47 to 50°. See last paragraph for emerald cut.	Girdle facets 75 to 80° recommended. Other facets not a serious matter if facets next to culet inclined about 39° from girdle. Depth to width can be as much as equal. Main facets 53°.

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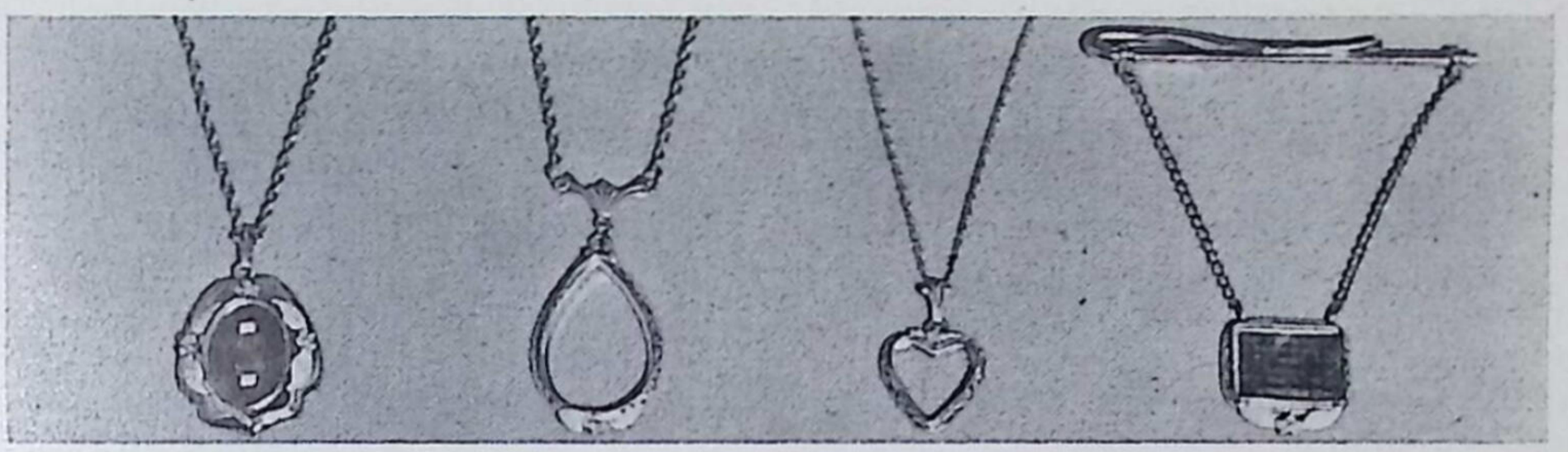
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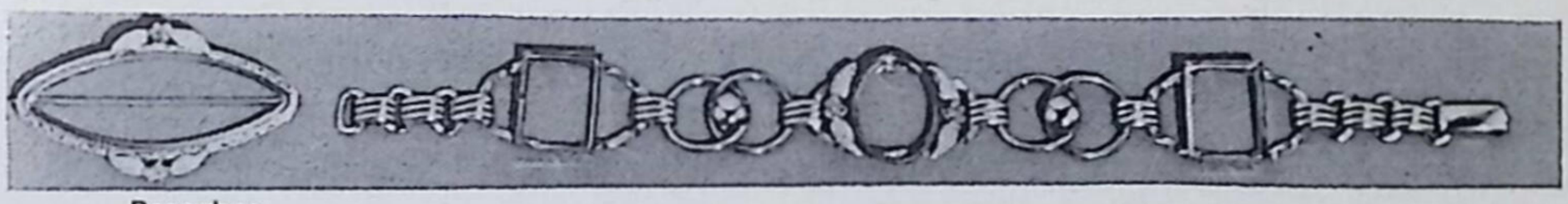
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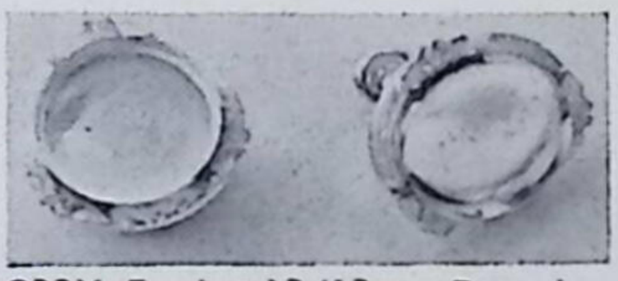


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◆ Indian Jewelry

By JOE STETSON of *STETSON'S*
2550 Ridgeway Dr., National City, Calif.
Member of San Diego Mineral and Gem Society

Probably no silver work in the past fifty years has created as much interest with the American public or influenced the craft as much as the offerings in various types of silver jewelry made by our western Indians. There is a tendency among amateur silversmiths particularly to feel insulted if people refer to their work as "indian jewelry" but they should feel complimented for few amateurs can match in artistry the work of the old time Indian silversmith. Unfortunately confusion is caused by too much machine stamped silver jewelry that is "assembled" by Indians but not 'made" by them.

In the early days one found in the Indian line buttons, bracelets, conchos, rings, ear wires, necklaces and practical bridle ornaments, spurs, bow-guards etc. The old silversmiths among the Indians worked under difficult conditions, using a fire and bellows similar to the old blacksmith's to melt silver into slugs. After the slugs were made they were painstakingly beaten into the desired lengths and widths. Today silver can be bought from the refinery in sheets of the desired thickness but there are many 'smiths who still follow the old methods of working up their own silver and they are usually great artists in the line.

When the Indian first started making jewelry he did not set it with stones of any kind but turned out beautiful and simple designs with a smooth expanse of silver as the main objective. The Zunis were the first to use various stones in their silver work and the nearby Navajos quickly followed suit although the latter still prefer plain flowing lines of silver with very little design.

It has always puzzled me how these people could turn out such beautiful work with the crude methods they used. I venture the opinion that the great majority of today's silversmiths would be almost helpless if they had to create creditable silver work under similar conditions and with similar tools.

My father was an Indian of Navajo and Comanche blood and he could turn out superior and beautiful work with only a pair of old pliers, a blowtorch and a piece of old railroad rail for an anvil. I would sit by the hour and watch my father create magnificent pieces of jewelry from practically nothing. And boy-like, for all my fascination, I did not care very much for the simple task often assigned me of beating out a slug of silver or filing away for hours removing the hammer marks and flaws. Now I use a flexible shaft power tool for that purpose and accomplish the task in a few minutes. However I have my father to thank for any ability I possess as a silver- and goldsmith.

Most people think of "Indian jewelry" as the kind found in gift and souvenir shops all over the country. Some of it is pretty terrible for much of it is stamped and machined in white men's factories and has never felt the touch of an Indian's hands or gathered any of his spirit. Some manufacturers will engage a few Indians to assemble the stamped parts and set them with stones. The resulting product is sold as "genuine Indian jewelry" (perish the deception!) and for their part in it even the Indians doubt if they will reach the Happy Hunting Ground. However there *are* shops that sell only genuine Indian hand made jewelry and to these relatively few people the Indian owes a great debt for preserving an art equal to that of aboriginal craftsmen anywhere.

I believe that good silverwork should be fairly free from flaws and made of a heavy gauge. For a bracelet, for instance, nothing less than 16 gauge silver should be used. If turquoise settings are used they should be a good blue color and not dyed or oiled as is too often the case. If one is in doubt about the turquoise a good way to test it is to hold the stone tightly in the hand or leave it in the sun and the oily paraffin will appear if it has been "treated". Some traders hold a lighted match under the stone to detect treatment.

Of course all green turquoise is not bad and it is not all treated to make it

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blue. However despite good green turquoise the Indian desires only a good blue color which he calls "male turquoise".

The average gemcutter usually has a yen to make some mountings for the stones he has polished, whether the mountings be "Indian" or otherwise. Many of them go to good schools or classes that teach jewelry making and many accomplish creditable work. When you begin I hope you will take my father's advice for it has helped me considerably. He said, "Joe, always finish every piece you ever start for if it is terrible looking you will learn nothing unless you finish it and profit from your mistakes."

I have seen very few fine pieces of Indian-type jewelry made by white people. I believe one has to be Indian or part Indian to get that certain look exclusive with Indian jewelry. Perhaps I am prejudiced. I do see, and am surprised by, other fine work done by amateurs that is a credit and joy to the creators. In our shop we do little Indian jewelry but we do endeavor to create the best in genuine hand-made pieces. When I speak of "we" I mean of course the most important part of the home and shop and that is Martie Stetson (Mrs. Joe B.) who is one of the best gem cutters around and one of the very few skilled women faceters. But again—I'm prejudiced.

In conclusion I plead with the amateur not to mistake the synthetic Indian jewelry for the real thing and if they can successfully imitate the real thing they will never have cause to be ashamed of their work.

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	C	3.65	4.48	5.35	Franklin Park, Ill.	
	D	3.80	4.63	5.55		
1	A	3.54	4.35	5.30	$ 7.48	$ 9.55
	B	3.85	4.51	5.78	8.14	10.38
	C	4.15	4.90	6.24	8.80	11.22
	D	4.31	5.28	6.47	9.10	11.63
1½	A	4.70	5.81	7.08	10.31	13.66
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A Note On Jade

By ROBERT TESMER
4400 Pearl Road, Cleveland 9,
Member of Cleveland Lapidary Society

Being an ex fourth rate poet turned rockhound it was only natural that sooner or later the call of the pen and the paper would echo through the agate bin and bounce off the cut-off saw. It is not difficult to understand how the first cabochon could bring on an emotional verse, or just how the sight of a huge star sapphire would be responsible for an essay.

It matters not with what particular stone the amateur has the pleasure to begin his hobby. When he is finished with that fine polish he is going to think of those rough gem materials beyond the horizon. And surely he will think of one in particular; that humble yet kingly stone with the magic name—*jade*. My daughter of five has placed it among the few choice words in her small vocabulary. No gemstone is spoken of more, in ignorance and wisdom, by so many people. I have seen the proprietor of a chop suey restaurant wearing a ring of blue jade while he repaired his neon sign. I have heard of Dorothy Dix taking time out from writing her daily column for the lovelorn to fasten her ancient jade pendant. And I noticed a guard eyeing an elderly jade "fan" as he pushed his nose on the museum case to examine that Oriental polish.

The questions most always asked by the customers or the interested passers-by are, "What kind of jade is the best jade?" "How good is American jade?" "How much is jade?" To these questions I reply: "the jade that *you* like best *is* the best; some American jade is *very good;* jade costs as much as the jeweler asks for it." The rockhound, gemologist, or mineralogist is generally aware that the emerald green, pure and translucent, is the most prized jade of all. In nine out of ten cases they have never seen an emerald or Imperial cabochon. People read of them, hear talk of them but few have seen one. To the person with a dash of adventure in his makeup and a longing for an education in rarity, I present a challenge. Tour your city; stroll past the old stores; walk slowly past the elaborate old houses with their heavy glass doors. Tour your city well and let me know how many Emerald jade cabochons you find among the treasures.

From the realm of American jades I have chosen one that we hear the least about—the pebble and boulder type from Monterey, California. This is wasteful and full of checks and feathers. But when a clean piece is found of the medium blue-green variety you may place it next to the best of the Wyoming and Alaskan material and you will certainly give it first choice. These California pebbles make fine pocket pieces just as they come. They give a man a chance to carry a piece of the world around in his pocket. In many cases the translucency is better than in Wyoming jade. And most important—California jade polishes well.

If you only learn one fact about jade from any source make it this simple one: the ugliest piece may contain a beautiful heart. Remember that the Imperial green lies hidden in the white boulders and more than once a fine and expensive cabochon has come from within a dark green "rock". Though I must give credit and a fine thought to the large masses of Wyoming nephrite, yielding slab after slab of fine quality material, the best piece I have ever seen from that location came from a fractured and seemingly yellow boulder. However three cabochons from nine pounds of nephrite can hardly interest the rockhound if he has to buy the lady of the house a new hat each time he buys a new saw.

As with many other gem materials the hobbyist is not getting the best material to try his skill. The amateurs get the culls. There is always a fair grade at a fair price but most of the finest colors of jade are going to the Orient. The amateur may read his many catalogs, make his selections, and the finest equipment is delivered to his door. Faceting heads of excellent planning and workmanship; saws and drills that confirm American mechanical perfection. All this to work with but only fair material

An Intensely Interesting Book By A Lifelong Mineral Collector

POPULAR GEMOLOGY

By Richard M. Pearl

Mr. Pearl has written this book for the gem lover, the mineral collector, the jeweler and the lapidary. It is a book that you will find so entertaining . . . so easy to read . . . that you will enjoy picking it up and relaxing with it after a hard day's work.

The **Denver Post** describes **Popular Gemology** as—

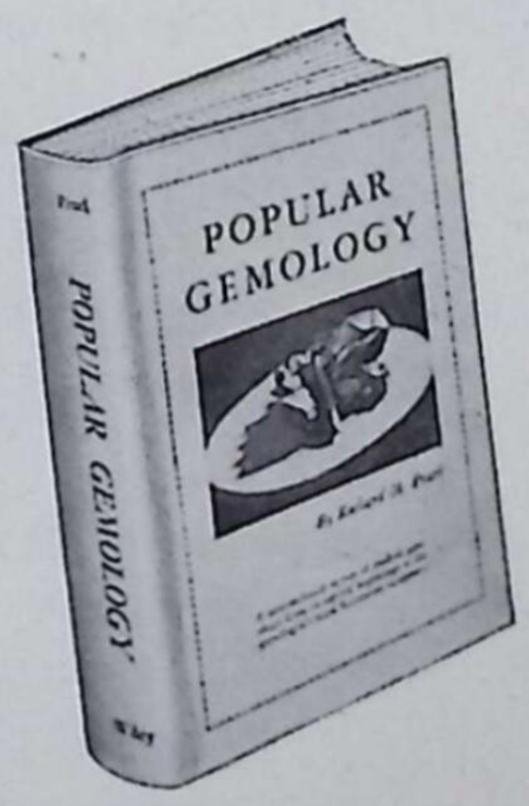
" . . an intensely interesting volume describing all precious and semi-precious stones, where they are found, how they may be cut and polished into jewels, their scientific composition, their crystalline structure, their geological source and a great deal of historical lore about them . . . Pearl's book is a book of wonder, one to inspire the adventure of discovery. It should interest many readers and arouse interest in many who don't know a cabochon from orthoclase feldspar."

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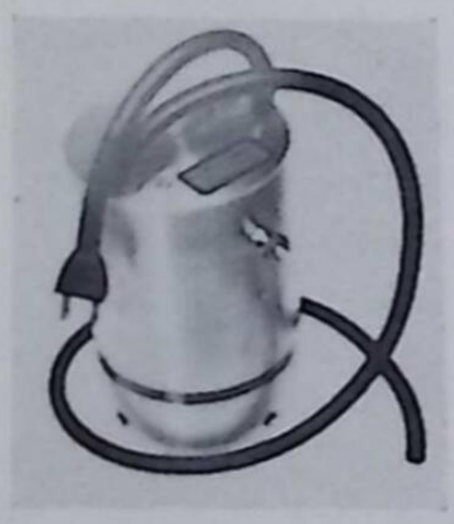
to work *on*. If he will buy the best in equipment he should surely out-bid the Chinese buyer if he is given a chance. He *is* given a chance now and then. He can have his choice between a piece weighing 630 pounds or one weighing 375 pounds. This is just about enough to make book-ends for everyone in the neighborhood and there is sure to be enough left over to make cuff links for your favorite baby sitter's boy friend.

I think that this gem we call jade is the last of the bargains for those hunters who look for a "steal" in the dusty antique shop. It is the only gem that can be found in some corner at a "buy". I know a prominent jeweler and gemologist who won't permit a single piece in his store. "I just don't like it", he says. I have imagined that his real reason was the simple fact that when he saw a cab or a carving he did not exactly know what to sell it for. Would it bring $2.00 or $500.00? And why was it worth $2.00 or $10.00?

I have yet to see the rivers that toss the jadeite boulders through Burma or that mass of green nephrite resting on a porch in Lander, Wyoming. I have only imagined the fun in finding a six inch boulder in Monterey and only visioned a Chinese girl taking the noonday rice to her father in the carving shop. I am sure to leave the history of jade to the professors and the carving to the crafty Chinese. I have a good friend who will carve me a fine leaf or a scarab in trade for a few slabs of this green stuff. The history of an ancient vase or a girdle ornament does not move me. But I am interested in the very stone itself—any shape, any color—and of the little incidents that happen wherever a piece of the Yu stone goes. I shall uncover the mystery of just how one piece is offered for sale at $97.50 while an identical cabochon in another shop lies buried beneath a little pile of arrowheads waiting to be sold for $3.50 to the first finder. I shall always be interested in hearing the question, "How do you tell good jade from ordinary jade?"

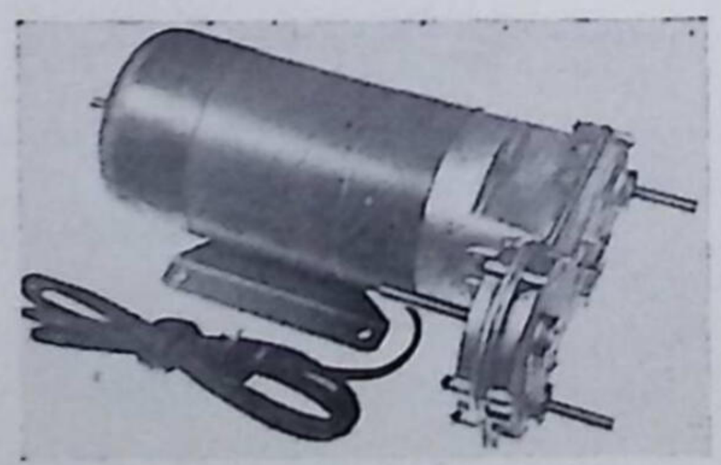
To those who have a cabinet full of varied kinds and colors, and to you with that single cabochon only half polished, I say—Good Luck. There is some poetry in you somewhere.

Somehow Jade and Man go fine together. And somehow I am sure they both have a splendid future.



NEW!! A compact coolant pump designed specifically for gem cutters—3-¾" diameter by 6" high—aluminum housing—110 Volt AC motor—¼" outlet with 3 feet of hose—bolt and knurled thumb nut for quick mounting—use ONE unit for BOTH SAW and GRINDER—simply plug into outlet and direct coolant where required. $12.50 plus $.75 for packing and shipping.

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◆ The San Diego Show

Probably the largest mineral and gem show ever put on by an individual society will be held by the San Diego Mineral and Gem Society, Inc. in the Federal Building in Balboa Park at San Diego on Saturday and Sunday, October 16th and 17th. There will be a large parking area directly in front of the exhibition hall (free) which will be flood lighted after dark. The society will provide complete and useful programs of the exhibits and free checking service for wraps and parcels. A public address system will take care of announcements and admission is free with no raffles. Costs of the convention are being borne by rental of commercial space and most of the lapidary supply and equipment firms in Southern California have rented space as well as jewelry supply firms.

Solon Kipp (see KIPP'S SHOP in June *Lapidary Journal*) will practically dismantle his marvelous shop and take it intact to the show where society members will constantly demonstrate every lapidary technique at all hours, 10 until 10 on the 16th and 10 until 6 on the 17th. Hot and cold refreshments will be dispensed by the park concessionnaire. There will be plenty of chairs for weary visitors.

This will be the most completely educational show the public has ever witnessed for silversmithing will be demonstrated as well as all phases of the lapidary art. The finest crystal specimens, mineral and matrix specimens, gem materials of all kinds in the rough will be displayed. A booth attended by society members will illustrate the properties of minerals, define terms used by mineralogists, geologists and prospectors, how to locate a gem pocket, stake out a mining claim or do gold panning.

Emphasis on making the show an *educational show for the public* rather than a decorator's dream should interest new thousands in America's fastest growing hobby and art form. Almost everything we have thumped the tub for in these pages and in the DESERT MAGAZINE for a long time is about to come to pass with the exception of a small admission charge and we hope that the sale of commercial space and advertising in the program will cover all expenses. The society is wisely reserving the right to sell certain materials exclusively such as Priday Ranch nodules and grab bags. They will take subscriptions and renewals to the *Lapidary Journal* and sell back issues.

The Mineral Society of San Diego was formed in March, 1934 as an outgrowth of government sponsored classes in mineral identification. A small group broke away in September, 1936 to start the San Diego Gem Society, their interest being mainly in crystals and gems. The groups got together again in August, 1938 as the San Diego Mineralogical Society, which name it retained until February of this year when it changed the name to the San Diego Mineral and Gem Society. The membership declined until, in September, 1944, the group had but 26 members. When the present tide of gemcutting set in the society's membership steadily climbed until it now has 238 paid up members and it is probably the largest society in the country. The members have revived the gem mining industry in San Diego County by buying inactive claims. Alive to every possible opportunity of maintaining interest in the earth sciences the society is considering the addition of a ceramics section. The key to success is in good organization and the management of society affairs by tactful and capable officers.. Ralph Salsbury is President and the mineral collecting and gem cutting activities are separated into two groups.

This looks like the perfect show—plenty of parking room free, free checking services and available refreshment, a free program that indicates the position of every exhibit in a map on the cover, education in every phase of craft and mining, everything needed for the "pursuit of happiness" available in dealers' exhibits, an unparalleled display of gems and minerals, no hawking raffles, plenty of room with the temperature practically guaranteed at 68 to 70° and plenty of hotel and court accommodations. Those interested in commercial displays should write to Roddy Marshall, 4010 Alameda Dr., San Diego 3.

(For news of the other shows see Page 262)

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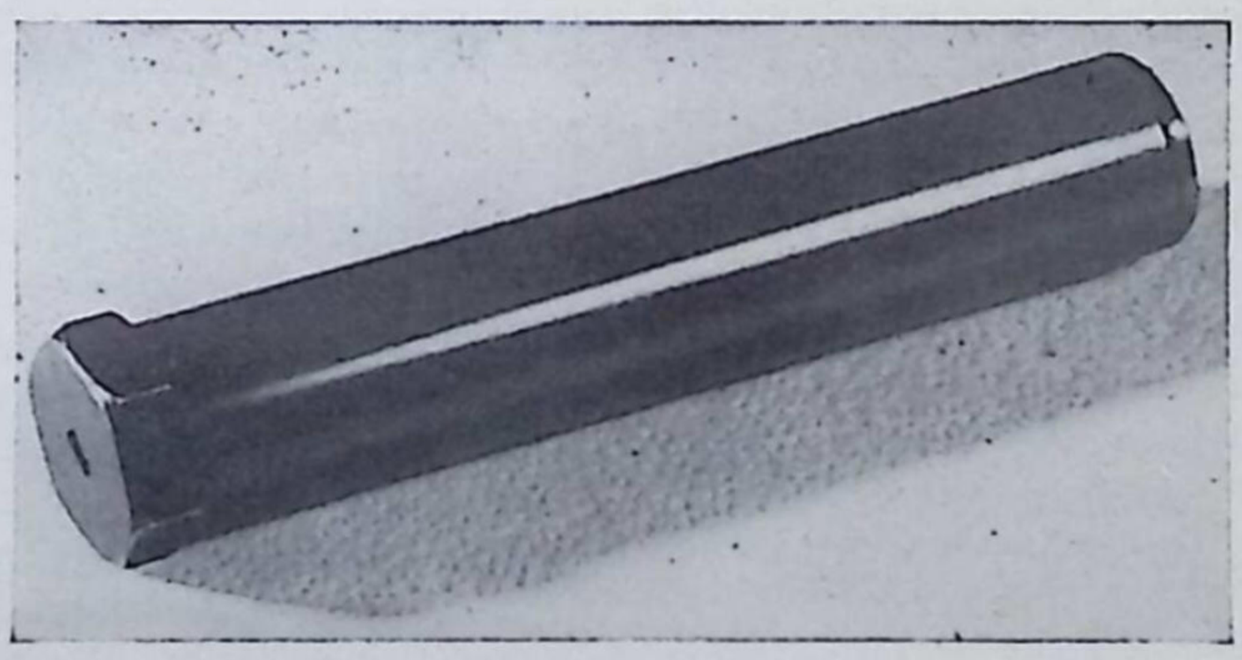
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Personal Facets

By LELANDE QUICK

We have a friend who has a fine idea. He believes that there are many G.I.'s who are handicapped veterans, that they do silver work but have no stones to set in the silver and no facilities for cutting any. He also believes that there are many lapidaries who would gladly give some of their finished cabochons to such veterans or pass along some of their surplus material to those having machinery. My friend is Charles Schlagel at 100 North Cordova St., Alhambra, Calif. He is entirely trustworthy, a good lapidary himself and absolutely beyond appropriating any donated materials to his own use. He is not far away from a half dozen large veteran hospitals and he will see that anything you donate will get into worthy hands. Do not send materials to the JOURNAL *please*. Some smart society will have a "veteran's night" some time when surplus material can be collected. This is something that the Government cannot do for them; *you* must do it. Perhaps you have forgotten the veterans? People *are* indifferent we find but if *anyone* ever becomes indifferent to those still paying the price of our security—our *handicapped veterans*—then we deserve anything that comes along. We hope Mr. Schlagel is absolutely swamped with donations. With *good* material that is and not with junk. If you wouldn't set it in silver yourself don't send it to some poor boy to set in *his* silver.

* * *

The articles in the JOURNAL rarely call for fine writing. They demand factual reporting, useful mechanical information, at times good description but not often do they require lyrical prose. Sometimes however a manuscript crosses our desk that starts the heart pounding faster and we adjust the bifocals and read it again. That is what happened when we first read SNOWFLAKE MAGIC IN SILVER by Thomas D. Gotshall and 3000 YEARS OF JADE IN AMERICA by Stephen N. Green. Both of those fine manuscripts were in our Jade Issue (January 1948). L. Floyd Keller's articles on the Petrified Forest in the July 1947 and April 1948 issues also had "that thing".

And so it is with high satisfaction that we publish in this issue A NOTE ON JADE by Robert Tesmer. The author makes you *feel* the loveliness of jade when he claims that "if you own it at all you have poetry in you somewhere." Bert Rhoads of Lander, Wyoming sent me a jade "lucky" pocket piece last Fall which I have been carrying ever since. The jade probably has had nothing at all to do with this year being the happiest year so far in my life but I love it and I always carry it. However, with my long experience in writing I could not express that feeling quite as aptly as Tesmer when he says of a jade pocket piece that "it gives a man a chance to carry a piece of the world in his pocket." More than the shop helps and news of the societies it is those little phrases scattered throughout our pages that give the JOURNAL a flavor that indicates "good cooking" and we hope we can publish more of the things that titillate the heart and mind as well as the mechanical bent. We want to help educate people to *love* their gems for gems were the first things that savage man took to his own heart when he climbed down out of the trees.

There are too many gem collectors and cutters who are what our friend William Kelley calls the "penny ante crowd" and another friend, Rolland Willis, calls the "meat ball and spaghetti crowd". But we believe that the mere fact that a person is interested in gem cutting and silvercraft indicates a striving for something better in their lives and we hope they don't miss these gems of articles we publish now and then that contribute little to their craft knowledge but which will enrich their thinking if they read them.

Mr. Tesmer's article promotes the thought that people do not *know* jade. Mr. Kelley (Gems International) recently wrote us that he sold a four inch slab of really fine Alaskan jade to a corres-

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prize awarded for naming new material

CHRYSOJADE, submitted by Marjorie Dowgan, 12849 Marlboro St., Los Angeles, was the name most aptly describing the newly discovered gem material shown for the first time in July at Long Beach at the California Federation of Mineralogical Societies' Convention.

The gem portion of CHRYSOJADE will be named after tests are conducted by Prof. Rogers of Stanford University and Kenneth Peer of Multiphase, Inc.

Results of these tests, which will include spectrograph, specific gravity, chemical structure, refractory, hardness, etc., will be published in these columns.

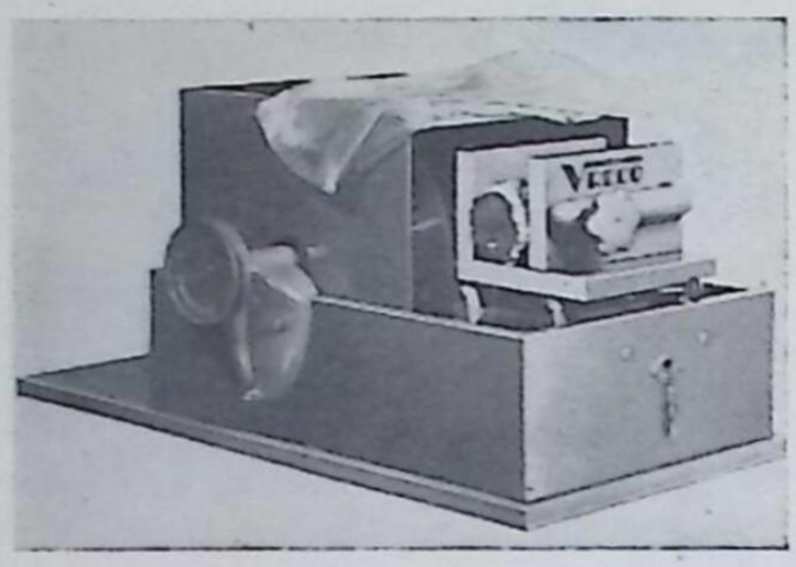
The new gem material known at present as CHRYSOJADE is being negotiated for by an internationally known jewelry firm for gem cutting. Until contracts are let, small quantities will be sold to lapidaries.

CHRYSOJADE is as hard as jade and agate. Polishes beautifully. Color range is as complete as the spectrum, has numerous translucent areas. What cabochons!

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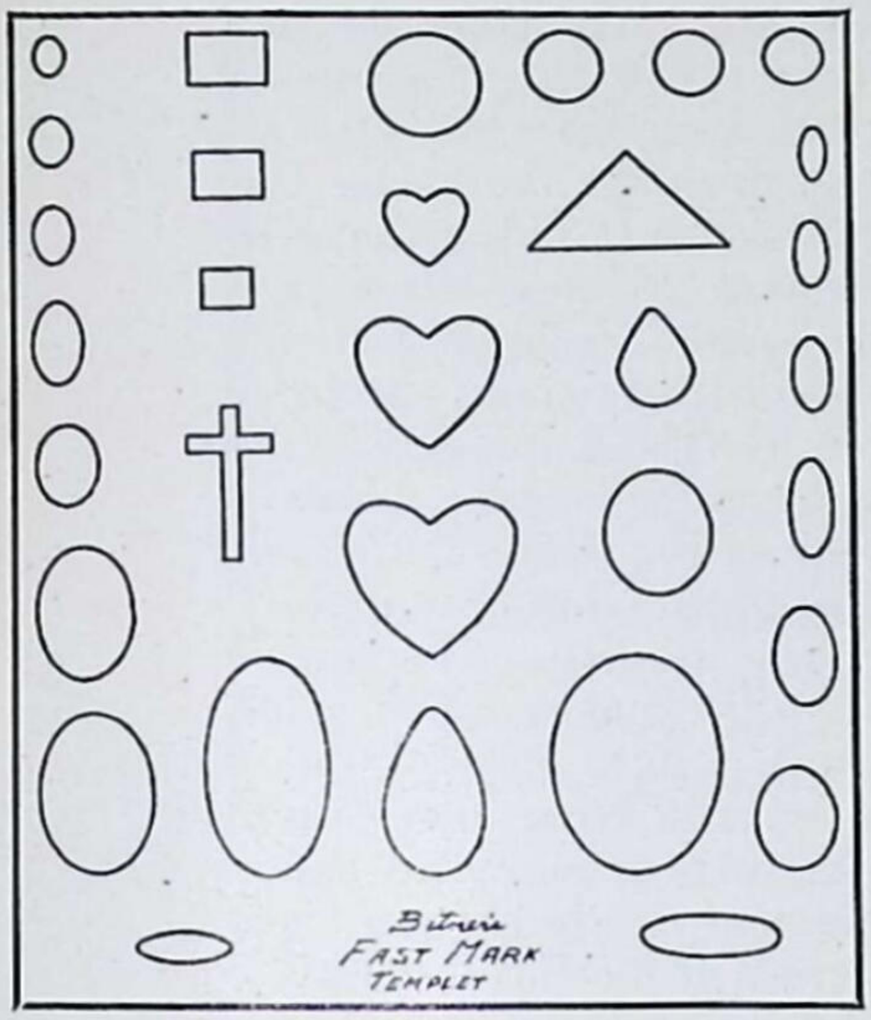


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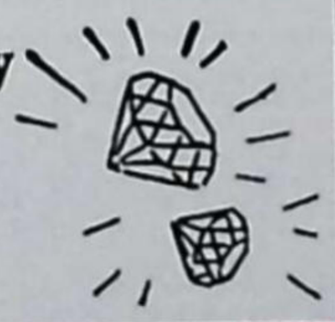
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pondent for $6.00. He returned it saying it wasn't worth cutting. Kelley was righteously indignant and proceeded to fashion it into cabochons. He sold three cabochons from that piece for $50 each! The day before the Denver convention opened we took the Gordons of Long Beach and the Dr. Ralph Muellers of Kansas City up to Central City, Colo.; one of the quaintest mining towns in all America. Not a half dozen people at the convention visited Central City; everyone wanted to see the Mint. At Central City we purchased a dirty old matchbox for $2.50 in an antique shop. It was magnificently carved Imperial green jade and we wouldn't take 50 times the price we paid for it. It even had feet of carnelian and coral! In the September issue of DESERT MAGAZINE we told of the woman at the Long Beach convention who sold a cabochon she had carried for years for $3.50. She never knew what it was and when she saw all that Horse Canyon agate there she lost interest in her treasure thinking that was what it was. It was priceless white jade with Imperial Green tracings and the buyer later refused thirty times the price he paid her for it. These incidents confirm what we have said many times—that there is nothing for which the American public spends more and about which they know so little as gems. It's difference of opinion that makes horseracing of course and this is only *our* opinion—we'd rather know jade from agate when we see it than know how many husbands Lana Turner has had or the batting average of Joe Elmstick of the Boston Braves.

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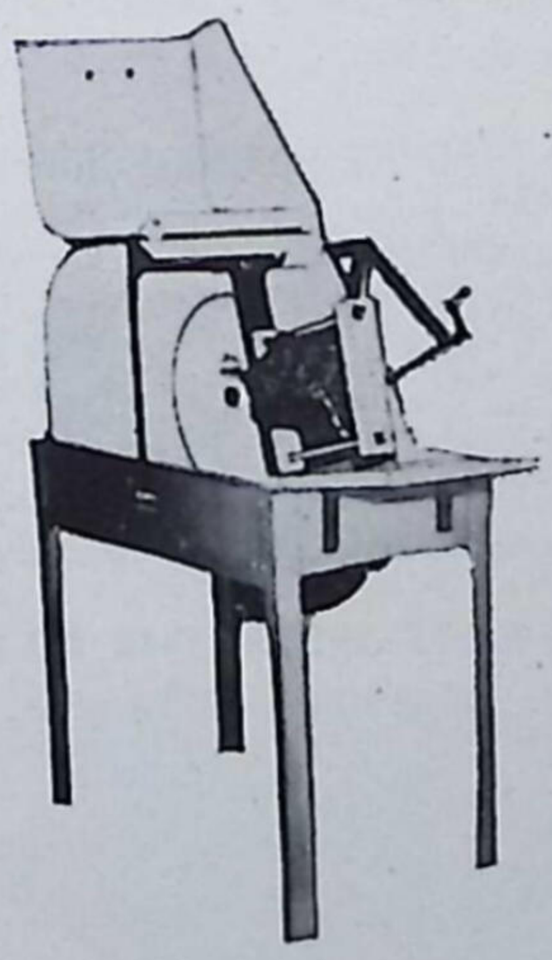
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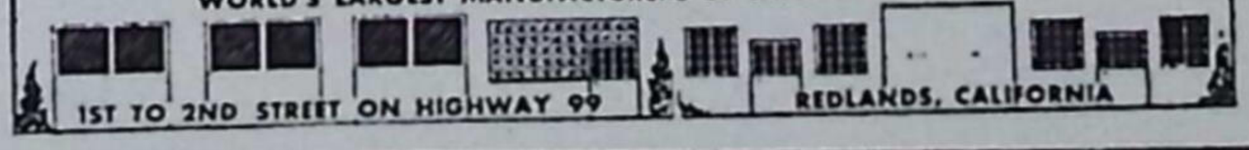
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◆ Thunder on Display In Los Angeles

At last we are able to tell you that THUNDER, Donal Hord's now famed and Academy winning sculpture in jade pictured on our January Jade Issue, is on display daily except Sunday, from 10 until 6 o'clock. Anyone is welcome to see it without charge at the Dalzell Hatfield Galleries in the Ambassador Hotel on Wilshire Boulevard in Los Angeles. It will remain on display until sold. The asking price is $24,000 which includes all taxes but the California sales tax.

We inspected it again to see the improvement in polish that Mr. Hord spent two months upon after the jade issue appeared. THUNDER looked like an old friend to us and we were indeed glad to have the opportunity of seeing him again. While you are there don't fail to see the carvings in lignum vitae that Mr. Hord has done. These are much lower in price and you may want to pick one up for a Christmas present at from $3500 to $5000.

Not for a long time did we ever expect to have a cover to come up to the THUNDER cover but we will match it on the December issue. For we are again fortunate in being able to picture another of Mr. Hord's sculptures. This time it is a human head in black obsidian from the Casa Diablo Hot Springs area of the Sierra Nevada Mountains. This was sold recently by the same galleries for $3500 and it is a magnificent subject titled LA CUBANA. Mr. Hord will also have an original article on sculpturing in hard materials in the next issue. He has become accepted as an authority on the subject and was recently awarded the Academy of Arts and Sciences' gold medal for his work in hard materials. Don't miss the December issue—and see THUNDER if you can.



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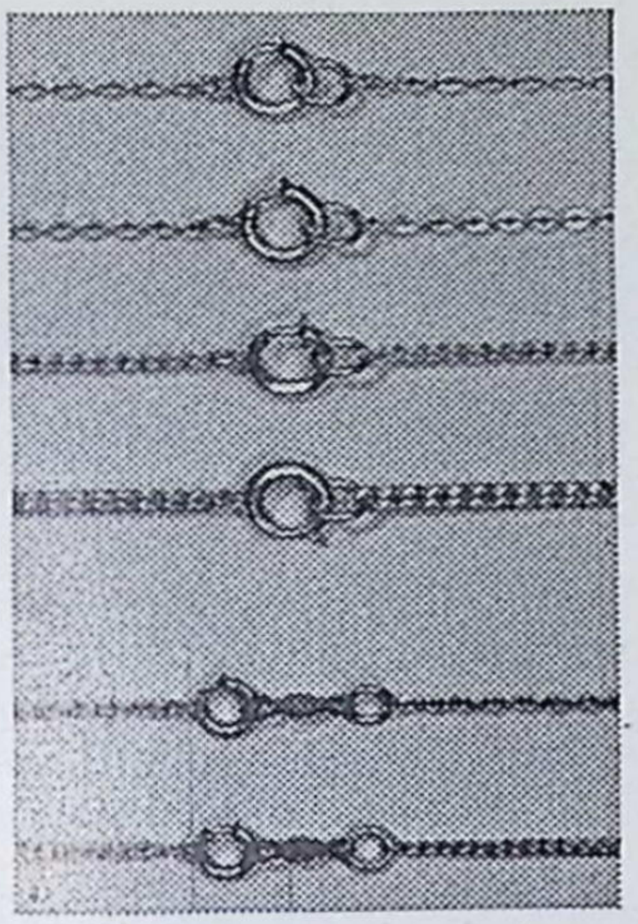
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* * *

Another idea from a doctor's office is supplied by Dr. H. H. Snook of Palmdale, Calif. Doctors buy sterile solutions that are rubber stoppered for hyperdermic injection from pharmaceutical houses. "These stoppers," says Dr. Snook, "hold the grit and oil on drills. I cement them to the rocks with plastic household cement." There is something else you can salvage from the doctor's waste basket and find very useful.

Dr. Snook also advises that he holds rocks on the table with an aeroplane clamp he purchased at Sears and finds it better than the conventional C clamp. "When the drill comes through it doesn't break out a piece," the doctor claims.

* * *

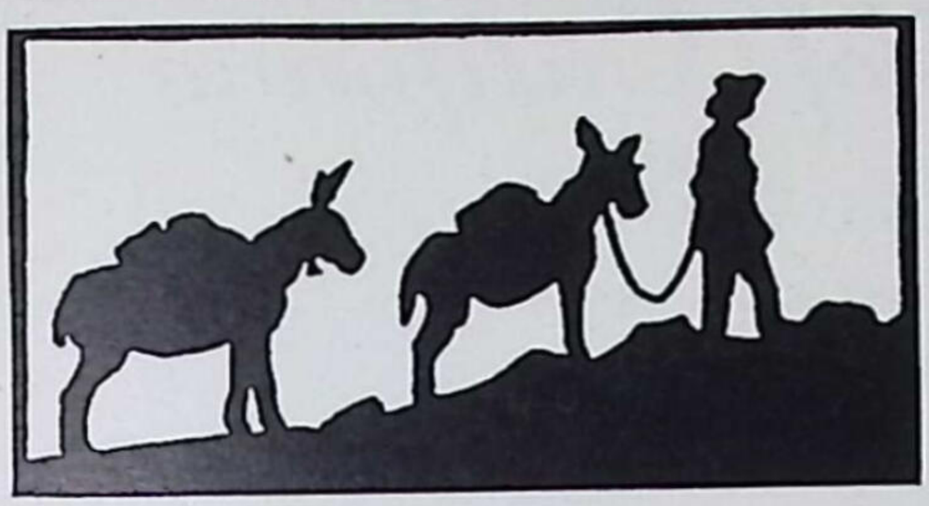
I was somewhat amused, although very sympathetic, in the experiences of your writers in cutting small cabochons for eyes for the small animals made of stone. Small stones of this type should be delicately handled with light pressure. I generally grind them on a pewter lap, carefully hand sand them and finish them in the usual manner. As a matter of record I prepared an onyx stone in this manner in the total elapsed time of nine minutes. This included roughing and cementing as well. The stone is 2.5 mm. No difficulty is experienced until sizes below 1.5 mm. are reached.

Furthermore, match sticks serve a useful purpose but they are of no value as lapidary sticks. These should be made in hard wood. For cabs I use birch dowels turned to shape and size and for facet stones I use Mexican Rosewood (Coco Bola). I have made them in other types of rare hardwood—Ebony, Lignum Vitae, Lemon, Bublinga, Brazilian Rosewood and Tulip. The latter is a very colorful wood and quite satisfactory. I am using dozens of lap sticks that I made over 25 years ago, practically all of them made of Coco Bola.

Another useful item has just come to light and is obtainable at Woolworth's. This is a small bowl, almost cube in form, made of transparent plastic complete with snap-on cover. The size is 4x4x2½". I have been hoping for such an item for a long time for they could have saved me many dollars by preventing accidental damage to stones while cutting. They may be used as water bowls within the lap box or as powder containers. For this they are ideal as they can be had in a number of different colors, thus preventing the error that may occur in the use of polishing powders of the same color. (Ed. note: similar plastic boxes, but smaller, are offered in ad on Page 200 of August JOURNAL). *Francis J. Sperisen, San Francisco.*

* * *

Some people are having trouble making the agate silver ware (See article in October, 1947 JOURNAL) because the soldering softens the silver so that the knife blades and the fork tines lack the proper stiffness. This can be overcome if all the soldering is done before the blades and fork tines are cut to their final shape. Solder the shanks to a heavy rectangular piece of silver ¼" *narrower* than the finished blade will be. After soldering hammer this out until it's wide enough for the blade or tines. Then saw out to the desired pattern. The hammering restores the temper to the silver. This plan works well when making fancy forks with long, thin, tapering, twisted tines. Leave as much hammering as possible to be done *after all soldering is completed. J. W. Anderson, Baltimore, Md.*



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◆ Gem Minerals of California

By DR. GEORGE F. KUNZ

Reprinted by special permission from Bulletin 34 of the California State Mining Bureau
Originally published in 1905

In preparing this report upon the gem-minerals of California, a few general considerations may be noted at the outset. Prior to the Mexican war, California was a land but little known—a romantic, dreamy region of far-away southern life, where the Catholic fathers had founded their missions, and brought the language and the architecture of Spain to the shores of the Pacific. With the transfer of the territory to the United States, and the discovery of gold in 1848, a swift and mighty change set in, and a wonderful era of progress began, which has continued to the present time.

In this great development of California, there may easily be recognized three distinct steps or stages, the later ones coming in not to replace the earlier, but as successive additions to the productive power of the State. For a number of years California was chiefly known and sought as the land of gold, the El Dorado. Later came the development of the soil for agriculture—the rich harvests of the great valley, and the luxuriant horticulture of the southern section, where the fruits of southern Europe are now gathered on so vast a scale. Lastly, within a few years, has come into view the wonderful richness of the State in gems and precious stones, as a third aspect of productiveness. With this, the present report has to deal.

Many notices of separate observations and discoveries of this kind have from time to time appeared, and lists of minerals found in the state have been published at various periods in different reports of the earlier surveys and by the State Mining Bureau. These will be enumerated further on. But thus far there has been no general record of the distribution of California gem-minerals as such; and the facts have, moreover, been accumulating so rapidly within a very short time past, that they have assumed an importance much greater than before. In 1890 and 1892 the full list of the discoveries known was collected and published with other gem material.

The discoveries made within the past ten years have been reported almost entirely by the writer, in his capacity as Special Agent of the U.S. Geological Survey for this particular branch, in the annual reports on the Production of Precious Stones in the United States, published in the Division of Mineral Resources, in the annual reports of the Survey. All that has appeared in those volumes, together with a large amount of additional material, earlier and more recent, and much of it from personal communications and other unpublished sources, has been brought together, and corrected up to the date of going to press, so as to present to the people of California a general conception of the wealth of their State in gems and precious stones. It is hoped that this work may give an impetus to further discovery and advance. The developments in this line during the last four years, especially in southern California, are phenomenal, and have not been paralleled by those of any other State or country. They seem, however, only to have commenced, and it is quite possible that in a few years many new and important discoveries will be made in this region, and California be known as one of the greatest gem-producing countries of the world hence, while this report is designed to comprise all gem-minerals found in the State, it will deal especially with the newest region of discovery.

It is time, and it is fit, that this body of information should be given to the people of the State; as many of her mineral products are better known and better represented abroad than they are at home. Altogether, probably more than a billion dollars' worth of gold, gems, and minerals of California have been diffused to the ends of the world—the first aiding in commerce and strengthening the banker, the others forming the ornaments and the pride of important museums and other great collections. The tourmaline, spodumene, rock-crystal, and other gems—as familiar



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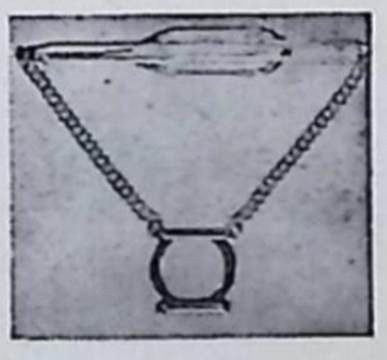
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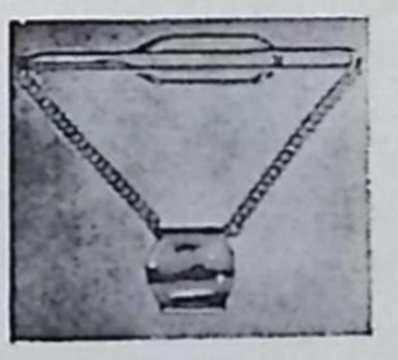
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now to experts and collectors as the gold itself—have been better known to the residents of Russia, Spain, or Germany, than to the inhabitants of the Golden State whence they came. It is a singular fact that these gems are better represented in the American Museum of Natural History in New York, the United States National Museum at Washington, the British Museum in London, the Musèe d'Histoire Naturelle of Paris, and other great institutions in the East and abroad, than they are in the State Mining Bureau of California or the State University at Berkeley—both of which have collections that rank well for the authenticity and the richness of their specimens, and for their magnificent examples of foreign minerals. If this report shall tend to increase the interest and awaken the pride of the people of the State in their remarkable mineral treasures, it will have served a purpose of permanent utility.

GEM-MINERALS IN CALIFORNIA

The distribution of gem-minerals in California may be very broadly outlined somewhat as follows:

I. There is, first, the gold region of the central and northern counties along the western base of the Sierra Nevada; in this are found the gold-quartz used so much for jewelry and ornamental work, and the few but interesting diamonds. These latter occur loose in the gold-bearing gravels, sometimes of the surface placers, but generally of the old river-beds now covered and compacted by lava-flows. In these last also is found much of the agatized and opalized wood, which is sometimes capable of use as an ornamental stone. In the same gravel filling of an ancient stream bed, in Calaveras County, has also been found the wonderful deposit of transparent quartz crystals (rock-crystal) of great size, which have yielded some of the finest material for art work ever known anywhere. These occurrences, it is true, are adventitious, and not in the nature of mines that can yield any permanent supply. But they have been found, and may be found again at any time. The gold-quartz is different in this respect, and a fairly steady production of it in certain of the quartz mines may be relied upon hereafter, as before.

The diamonds found in the gravels are neither numerous nor large, but some of them are beautiful and all of them possess much interest. Their occurrence will be described further on in some detail. All have been found incidentally, and no search for them has ever been made. One or two suggestions, however, may be offered here:

(1) As the U.S. Geological Survey is projecting a special study of the occurrence of platinum in California and the Pacific States, it would seem not unlikely that if some attention were paid to the occurrence of the diamond, it also might be found in this exploration; as the diamond is one of the heavier minerals and is almost invariably met with in the riffles with the gold and platinum.

(2) The new grease-board separator used in the South African diamond mines, recently devised through the keen observation of one of its employès—Mr. Kersten of Kimberley—might prove a valuable adjunct to some of the present gold-stamps, or in the sluices, to detect the occurrence of diamonds in California. It is a remarkable fact that while almost all other minerals pass over a board coated with mutton tallow, when such a board is vibrated or "jigged," all diamonds present remain adhering to the tallow, and can thus be separated. With a contrivance of this kind, diamonds down to the size of a pin-point are at present saved in the South African diamond washings, while otherwise they would surely be lost.

II. There is next the region of Tulare County, centering around Visalia, where the recently developed chrysoprase mines occur at several points. This rare and beautiful stone exists here apparently in some abundance; and associated with it are a number of other forms and varieties of quartz minerals capable of use in the arts for ornamental purposes, such as rose-quartz, chrysopal, etc., besides several species of garnet, some of which have yielded material for gems. Another interesting and rather peculiar stone found in this section, on the borders of Tulare and Fresno counties, is that named by the writer *californite*—a compact green variety of vesuvianite, that perfectly resembles the celebrated ornamental stone known as jade, so much prized in the Orient for elegant art-work. This is also found in Siskiyou County, at the northern extremity of the State.

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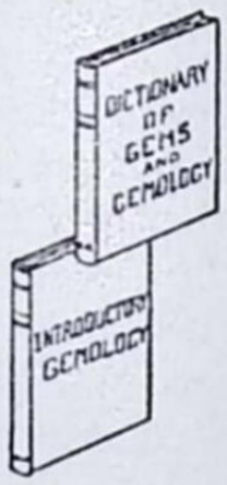
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III. The desert region of the southwest, bordering on Nevada and Arizona. Here, in a country arid, barren, and desolate, consisting largely of volanic rocks, are found some interesting localities of opal and of turquoise, the latter giving evidence, as in Arizona, of long and extended working by prehistoric tribes, who have left their stone tools and their rock inscriptions around their old places of labor. These turquoise mines occupy a considerable area in the northwestern angle of San Bernardino County, and are operated by the Himalaya and Toltec mining companies. The latter company has three groups of mines, all of them patented, situated on the great desert, about 100 miles northwest from Needles station and about 50 miles north of Manvel, which is on a branch of the Santa Fe railroad. The three mining centers are some 6 miles apart, in the old Solo Mining District, and are known as East Camp, Middle Camp, and West Camp, the latter being within 20 miles of Death Valley. The altitude is between 5000 and 6000 feet, and as there is no water at either camp, it is necessary to draw it over mountains from 1 to 5 miles. The same company also operates turquoise mines in Nevada, some 60 miles due east of the others.

The other company, the Himalaya, has a group of five mines in the same district (the Solo), but some distance from the former, being about 60 miles west of Manvel, reached only by team. These claims are all on one ledge, which is described as a "bird's-eye porphyry" with some granite, striking north and south, with a dip of 75 degrees west. Turquoise is the only gem found, and occurs in pockets surrounded by a white friable substance, said to be a lime silicate. Two shafts have been sunk to a depth of 80 feet, but no turquoise was found below half that depth; and from there up most of the material has been stoped to the surface. All the work was done by hand, with giant powder, and was laborious and costly, and has been suspended since February, 1903. During the last year of working, the amount shipped was 431 pounds of matrix and ordinary turquoise, and 49 pounds of picked material.

IV. The most remarkable gem-region of the State, however, is that developed within a few years past in San Diego and Riverside counties, at several localities where lithia minerals occur, among which the gem-tourmalines and gem-spodumenes are especially prominent. Besides these, other gem-minerals have lately been found in adjacent or associated workings, especially topaz, transparent epidote and axinite, pink, green and blue beryl, and essonite garnet—the whole forming an assemblage of such minerals that is scarcely, if at all, equaled anywhere in the world. Many of these mines are as yet only prospects, or trial openings; but the indications are that the region is full of possibilities. Lack of water and fuel are the chief obstacles thus far to a much more extended development.

In general, it may be said that throughout the granite region of San Diego and Riverside counties there is a widespread prevalence of an igneous rock of gray color which is generally called a diorite, with a little disseminated quartz and mica (biotite); some samples, however, Prof. T. C. Hopkins, whose account is quoted further on, determined to be gabbro rather than diorite. This rock, and the granite, appear in a series of ridges, or mountains, with a prevailing north and south course, and are traversed by dikes, or perhaps, as Professor Hopkins thinks, veins, of pegmatite—very coarsely crystallized granite. These have a general direction of northwest and southeast, and dip southward or southwestward at varying angles at different points. It is in these pegmatite veins or dikes, which vary more or less in their structure, but possess great general similarity, that the gem-minerals are found. In the notes given further on as to the several mines, these special features will be stated in detail.

There are in this region several centers of occurrence, as thus far recognized, of two somewhat distinct types—those yielding lithia minerals, with gem-tourmaline and sometimes gem-spodumene, and those yielding principally garnet, beryl, and topaz. Of the former, three are especially to be noted, in San Diego County—(1) the Mesa Grande mines, which yield crystallized gem-tourmalines of splendid quality, almost exclusively; (2) the Pala district, in which there are three parallel ridges—Pala Mountain on the west, with the great lithia mines and some colored tourmaline; Pala Chief Mountain, in which are found very fine tourmaline and the new and remarkable gem-spodumene (kunzite); and Heriart Mountain on the east,

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with a number of openings yielding both tourmaline and kunzite; then, northeast of these, in Riverside County, there is (3) the region near Coahuila, in the San Jacinto Mountains; here was the first discovery of gem-tourmaline in California, so far as known to the whites, and kunzite and other lithia minerals have recently been found in association with the tourmaline. There are also other localities between this latter and Mesa Grande, and probably many others may yet be found. About half-way between Mesa Grande and Pala is a fine beryl mine, near Rincon.

The other class of mineral localities appears to lie along a line somewhat southwest of those just noted, extending from near the Mexican boundary, at Jacumba, northwest to Ramona and perhaps beyond, following the general strike of the pegmatite veins, and almost exactly parallel to the line from Mesa Grande to Pala. At Ramona are found abundant fine garnet (essonite), with topaz and beryl, notably the rose variety, but not much tourmaline, no kunzite, and in general little of the lithia minerals. Around Jacumba are found beryl and essonite garnet (often called hyacinth); the latter is abundant, and at one or two points has been worked for several years to some extent. Jacumba, or Jacumba Hot Springs, is close to the Mexican line, some 20 miles east of Campo, and almost on the western edge of the Colorado Desert.

With regard to the character of the rocks, and the relation of the minerals thereto, the following statement from Prof. T. C. Hopkins, of Syracuse University, Syracuse, N. Y., is very instructive. Of particular interest is his distinction between the gem-minerals of the pegmatite veins in the gabbro (diorite) and in the granite. In many of the notes on special features of the several mines, given further on, will be seen phases of the vein-structure that Professor Hopkins here mentions, especially the differences between the upper and lower sides of the vein, which are constantly alluded to. The pockets in which the gem-crystals occur are usually in a somewhat central zone; above is the more typical pegmatite, and some of the describers use that name only for this portion; below lies a finer-grained feldspathic division, which is commonly called the "line-rock," from its being so often lined or banded with minute garnets, as Professor Hopkins describes, or in some cases with minute black or blue tourmalines. The question between gabbro and diorite, for the rock traversed by the pegmatite veins, or dikes, may well be one of locality, as Professor Hopkins concedes in part. The rock may vary in constitution at different points, as it does in physical structure. At one or two places, especially near Dehesa, it takes on the peculiar concretionary character known as orbicular diorite, and this may be valuable as an ornamental stone.

The Gem Regions of San Diego County, California, by Prof. T. C. Hopkins.—"The gems occur in the midst of pegmatite veins which are formed in the granite and gabbro rocks. These rocks form a range of hills and mountains running through the west and west central portions of San Diego County. Both the rocks occur in great quantities over large areas and meet along very irregular lines of contact, sometimes a long tongue of the granite extending into the gabbro and sometimes the reverse. The gabbro varies considerably in both color and texture. In places it is finely crystalline, grading into basalt with its characteristic columnar structure, and elsewhere it is quite coarse-grained and massive. The granite likewise varies from a coarse-grained texture to a fine-grained felsite and porphyry. In places also it has a gneissoid structure and grades into mica schist. It is a dark gray biotite granite, containing in places dark blotches due to imperfect crystallization of the magma. The pegmatites occur in both the gabbros and the granites, but nearly all of the rich gem-bearing veins are in the first rock. The rich tourmaline and kunzite veins at Pala and Mesa Grande are all in the gabbro. The topaz, garnet, and beryl veins at Ramona are in the granite. The veins are locally very numerous; in some places in the vicinity of Ramona they form nearly half of the rock mass. The gems invariably occur in pockets in the midst of the pegmatite—not always the exact middle of the vein. Generally the vein on one side of the pocket is more coarsely crystalline than on the other side, and in many instances the finer-grained portion is finely banded with small brown garnets. The gems commonly occur embedded in loose clay, but occasionally they are attached to the walls of the pocket and may even be embedded in quartz or orthoclase feldspar.

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They are almost invariably accompanied by crystals of albite, lepidolite, and quartz. The latter are sometimes quite large, single crystals weighing from 100 to 150 pounds. The country rock has been called a diorite, but a microscopic section from one locality proves it clearly a gabbro, although it may be diorite at other points. The evidence appeared to me pretty conclusive that the pegmatites are veins and not dikes."

In the summer of 1903, Dr. Waldemar T. Schaller, of the department of geology of the University of California, now of the U. S. Geological Survey, visited the tourmaline and kunzite mine recently opened on Pala Chief Mountain, and reported upon the occurrence in detail. His account of it will be cited further on; at present it is merely mentioned as an authoritative description of this locality, giving the same general facts as indicated over a wider area by Professor Hopkins.

The general geology of the granitic region of southwestern California, in which these remarkable developments of minerals have recently been made, has been repeatedly described, but never very fully or exactly determined. At the time of the second geological survey, under Prof. J. D. Whitney, 1860 to 1865, the whole region was little known or settled, save at a few points on the coast. Professor Whitney gives certain broad outlines, but not based upon any detailed examination of that part of the State as a whole. He points out the disappearance of the Great Valley, with its clear definition of the two mountain systems on either side, the Sierra and the Coast Ranges, and the apparent intermingling of the two, as the Sierra bends toward the southwest, cutting off the central valley. This southwestward extension of the Sierra passes across what is now Kern County, and, with the Tehachapi Mountains, divides it into two well-marked portions. Professor Whitney observes that it is only by the age and position of the sedimentary rocks, and not by any topographical features, that the mountains below this line can be judged as to their relations. As the two systems approach and intermingle, the lines of disturbance are so closely related, and so influenced by secondary ones, that the topography gives no clew to the actual facts of structure.

His determination was that the Coast Range ends at about San Luis Rey, and is not traceable farther south; and that the principal mountains of what are now San Diego and Riverside counties belong geologically and orographically to the Sierra Nevada, which stretches on southward to form the long peninsula of Lower California.

This close relation of the region under consideration to the system of the Sierra was recognized and confirmed ten years later by Prof. W. A. Goodyear, who made a reconnaissance of the country in 1872. His notes were published many years afterward, in the eighth report of the State Mining Bureau, 1888. They are clear and vivid in their topographic portrayal. He describes the geological and geographical features of San Diego County (including also what is now Riverside County) substantially as follows:

The broad mountain range which, stretching south from the San Bernardino Valley, occupies all the western part of San Diego County, from the Pacific east to the Colorado Desert, and south to the Mexican line, is essentially a region of granite, nine tenths of it being composed of this rock. Along the coast it is flanked by Tertiary sediments; and much of it, especially in the eastern part, is traversed by belts of highly metamorphic schists, micaceous and hornblendic, with a prevailing northwesterly course. The detailed topography is exceedingly complex, the ridges trending in different directions and inclosing valleys at various altitudes.

Along the shore extends the Tertiary mesa, which rises gently eastward, and sometimes reaches far inland among the mountains, to heights varying from 500 to 800 feet. The mountains gradually increase in elevation, until at some 50 miles from the coast they form a crest line of some 6000 or 7000 feet, from which they fall off steeply and rapidly on the eastern side some 5000 feet to the western edge of the Colorado desert; thus resembling, says Profssor Goodyear, on a smaller scale, the form and contour of the true Sierra Nevada.

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of San Jacinto, near the San Bernardino line, whose height is given by Lieutenant Wheeler as about 11,000 feet.

Professor Goodyear then describes in some detail his examination of the rocks and the structure in ascending the cañon of the San Diego and traversing the ridges and valleys to Ramona, Ballena, Santa Ysabel, Julian, and Banner, some of which are in the region of the recent discoveries. Everywhere the predominant rock is granite, of varied type, sometimes becoming a syenite, "consisting of feldspar and hornblende, with but little quartz and almost no mica, which might almost be called a diorite." This latter rock is now recognized as a distinct formation from the granite, as elsewhere described herein. He notes the occurrence of the orbicular diorite at several places, saying that the granite "often contains dark-colored hornblendic nodules, * * * whose texture is still granitoid." The pegmatite dikes, now found to be so rich in gem-minerals, are well described, as follows: "The granite country here (*i.e.*, near Julian) is frequently traversed by veins of very coarse granite, which sometimes furnish plates of mica one to two inches in diameter, with correspondingly large blocks of feldspar"; he also noted the black tourmaline crystals in the same veins, but did not encounter the colored ones.

The ascent of Cuyamaca Mountain is then described; and the general features of the whole region, as seen from that fine point of observation, are so clearly presented that it is well to quote them in detail. The view is extensive and grand—northward to the San Jacinto and San Bernardino mountains, westward along the coast and out to sea, and southward far into Mexico; northeast lies the Colorado Desert and the Coahuila Valley, and a long stretch of the San Bernardino Mountains running toward the Colorado River along the northeast side of the desert.

"From this standpoint," Professor Goodyear says, "The whole country from just back of San Diego * * * to the western edge of the desert is like an angry ocean of knobby peaks, more or less isolated, with short ridges running in every possible direction, and inclosing between and among them numerous small and irregular valleys. As a general rule, the higher peaks and ridges rise from 1000 to 2500 feet above the little valleys and cañons around their immediate bases. But in going eastward from the coast, each successive little valley is higher than the one * * * preceding, and the dominant peaks and ridges also rise higher and higher * * * until we reach the irregular line of the main summit crest, or water-divide, * * * when the mountains break suddenly off and fall within a very few miles from 4000 to 5000 feet or more, with an abrupt and precipitous front to the east, to the western edge of the desert. It thus follows that this chain of mountains, as already stated, though made up of a confused mass of minor ridges and peaks of granite, having in their detailed topography but little connection with or relation to each other, nevertheless has a general orographic form very closely allied to that of the Sierra Nevada in the more central portions of the State."

In the volume published by the Miners' Association, in 1899, for the California meeting of the American Institute of Mining Engineers, the following similar, though much more recent, account is given as to this region. Referring to the mineral wealth of southern California, that term is defined as that portion of the State south of the Tehachapi Mountains—"which unite the Sierra Nevada and Coast Ranges, inclosing the upper (*i. e.*, southern) end of the central valley, and topographically dividing the State into two regions of distinct characters." The belt on the west is fertile, salubrious, rich, and prosperous, the mineral resources are chiefly oil and asphalt; otherwise, the mineral wealth of southern California lies eastward, in a very different area, comprising most of San Diego, Riverside, San Bernardino, and Los Angeles counties. The chief mining region is the desert country east of the Coast Ranges, "a region of rugged mountains, bare and forbidding hills, and sandy plains, divided by a series of mountain elevations into the Mojave and Colorado deserts." Gold and other mines exist all through this arid country, in which the rocks present great diversity, of all ages and types, the igneous ones being very numerous and marked. This report was chiefly concerned with gold mining; but the general presentation given is very good, and may well be taken here as descriptive of the recently developed gem-regions of southern California.

The two contrasted areas above noted have their separate types of gem produc-

tion—those already mentioned as III and IV—in the extreme southern part of the State. The fertile region on the west is the Tertiary plateau or coast mesa; then comes the broad zone of granitic hills and ridges, so vividly pictured by Professor Goodyear, and identified by Professor Whitney, as in reality the southwestern extension of the Sierra, although in its geographical relations it occupies the place of the Coast Range. Through this hilly zone run the pegmatic veins, so rich in lithia minerals—tourmaline, kunzite, lepidolite, etc.—and in garnet, beryl, and topaz, at many points from the Mexican border to the heights of the San Jacinto Mountains. Then comes, on the east, the steep falling-off of the mountain area, as described by Professor Goodyear, to the arid stretch of the Colorado Desert, bounded on the northeast by the San Bernardino range, beyond which, to the north, lies the Mojave Desert, with its borax mines. In the Colorado Desert, among the volcanic rocks, are the opal and turquoise localities mentioned under III—some of the latter far up on the San Bernardino heights, and others away to the eastward in Nevada and Arizona.

(Dr. Kunz' account will be continued in an early issue.—Ed.)

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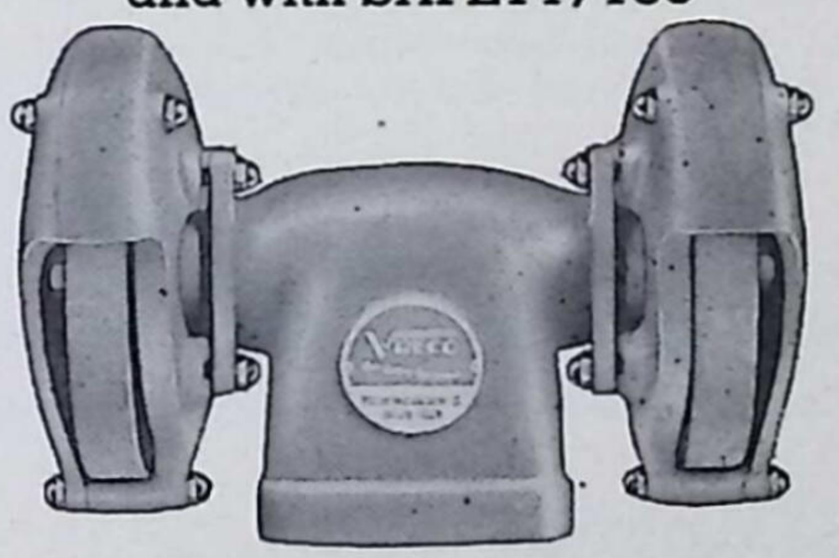
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Heavy, strong, quality gray iron cast construction. Runs quietly and smoothly on ball bearings, sealed for life in grease. Built-in water supply with regulating valve. Takes 8 by 1 inch wheels with 5/8 inch center hole. Drive shaft, pulley and belt completely enclosed. Bare metal parts rust-proofed. Has adjustable wheel guards for your protection. Equipped with a 44 inch belt. Weight 43 pounds.

Write for literature describing this and other VRECO equipment.

No. 601 GRINDER.....$39.00
Less wheels or motor

No. 601-W GRINDER.....$49.85
With wheels, less motor

F.O.B. Portland, Oregon

VREELAND Mfg. Co.
2028 S.W. JEFFERSON
PORTLAND 1, OREGON

A good buy on cherry tiger eye.

See the middle spread of

GORDON'S

PICTURE AGATES

Don't Pass This "Buy"

Here is a fine new scenic agate from The Mother Lode District of California. From this material can be cut scenic gems that rival the finest from any locality. Dendrites in two colors, black and reddish brown. Most of the trees and bushes are black with red tops.

Here is your chance for excellent cutting material at a price and terms you can't afford to pass up. Yes, we are so sure you will like this material that we offer it *on approval only—In other words—"See before you buy."*

Sold as sawed slabs only. Priced from 25c to $5.00 per slab. Send for an approval assortment, select what you wish and return balance with remittance.

ROBERT O. BUCK

P.O. Box 218 **Valley Springs, Calif.**

NOW!!

Synthetic ☆

☆ *Star Ruby*

and

Star Sapphire

☆

ACE LAPIDARY CO.

INQUIRIES INVITED

92-32 Union Hall St.

Jamaica, N. Y.

◆ *Gem News*

On November 1st we expect to give a faceting demonstration on potatoes before the Los Angeles Lapidary Society and several guest societies. Dr. J. Daniel Willems of Chicago, author of the new book GEM CUTTING and originator of the method will be present. Each person in the audience will bring a paper sack with a couple of potatoes and a paring knife and great fun is expected as they place the facets of an emerald cut upon a potato. The method will be written for you by Dr. Willems in the December issue. At least 500 persons are expected to attend the meeting and probably it will be the largest society meeting ever held anywhere. This will be the first time in the history of the world that potatoes have been turned into carats. Cash prizes will be awarded for the best "gems" and Dr. Willems will act as judge of the "lapidary" work.

* * *

One of the handsomest young leading men in Hollywood is tall, blond RICHARD WEBB whose next picture, Paramount's "Isn't It Romantic" comes out in October, but Dick does more than meets the camera's eye. He's also a *lapidary*, and he was on the Mutual-Don Lee Network telling all about his rock hunting, cutting and polishing on "It's A Living" on Sunday, September 5th.

Being a romantic leading man and a rock-hound sounds like quite enough for one person, but Dick Webb further demonstrated his versatility on September 4th at the great St. John's Hospital charity circus show as a barker.

We were present at the making of the electrical transcription and Dick told how Gene Allen had told him how to cut rocks. That was cut out of the radio broadcast of course. Try to get a free ad on the radio like you do in the *Journal!* Dick gave the best definition of a gem we've ever heard. The announcer asked "how can you tell a gem from a rock"? "That's easy", said Webb, "all you do is break open any rock and if it doesn't still look like a rock it's a gem." Tell your next pest on the field trip the same thing so you can enjoy yourself.

* * *

Hollywood is now on the map and our mail to you is now going out with a Hol-

lywood postmark. While our official address is Hollywood post office it is never-the-less a division of Los Angeles and all mail going out of here has been post-marked Los Angeles. But some months ago, as a gag, Ralph Edwards of the "Truth Or Consequences" program began circulating a petition to put Hollywood on the map. 4000 pens were used to secure more than a million signatures and now letters are actually post-marked "Hollywood." But we don't feel any different.

* * * *

MaryAnn Kasey, well known mineral and gem dealer in Prescott, Arizona has moved to a new location at 1720 Chester Ave., Bakersfield, Calif. Mrs. Kasey also carries a complete line of jewelry and would like her many friends to stop and see her as they tour California.

* * * *

Dr. William Foshag, formerly Curator of Minerals at the Smithsonian Institution has been appointed Head Curator of Geology to succeed Dr. Bassler who retired on August 1st. Drs. George Switzer and Edward Henderson remain as Associate Curators.

* * * *

Dr. Mark C. Bandy and Robert Crowningshield of the Los Angeles headquarters of the American Gem Society recently opened a new eastern branch at 5 East 47th St., New York City.

* * * *

Allan Caplan of New York City and Edward Swoboda of Los Angeles have both returned home from buying trips to Brazil. See their ads in this issue.

* * * *

We don't know if our readers were aware of the acute shortage of abalone pearls—or cared. But they *are* practically non-existent and Bill Frink of Scheer & Co., New York tells why. He says:

"The reason for the scarcity of abalone pearls can be directly attributed to the following circumstances.

"The shell of the male abalone contains five holes through which in the early spring, he sounds the mating call. The seductive tones of this cadenza are something like a cross between a Chinese fiddle and an Indian flute and are guaranteed to cause the abalone maidens to turn flip-flops in their shells.

"Now comes the strange part of our

NEW RARDIN TEMPLATE

With 38 different size ovals, hearts, pendants, etc. $1.75

SLABS

Sardonyx (Brazil)	35c sq. in.
Carnelian (Brazil)	30c sq. in.
Silica Onyx	30c sq. in.
Turritella Agate	17c sq. in.
Algae Agate	20c sq. in.
Breccia Jasper	25c sq. in.
Minnesota Jasper	20c sq. in.
Banded Chert	15c sq. in.
Tiger Eye	35c sq. in.
Dinosaur Bone	25c sq. in.

THE NEW HOBBY MINERALIGHT
MODEL H $12.50

THE NEW COVINGTON DIAMOND SAW
BLADES $6.60 & up

COVINGTON
Lapidary Equipment and Supplies
LAKELAND MINERALS
Hayfield, Minn.

FIRE OPAL - MEXICO

10	small pieces—average ½"-¾"	$1.00
5	larger—average ¾"-1"	1.00
6	still larger—1"-2" or over	2.00
1	small vial clear fire opal	1.50
50	rough mixed Mexican Opals, including honey, cherry, etc., average 1"	1.50

ALL 5 LOTS POSTPAID—$6.00

Although these are sold chiefly as cabinet specimens and have plenty of fire, many of them will work up into nice cabochons.

Money Cheerfully Refunded if Not Entirely Satisfactory

Polished Mexican Opals and other gem stone cabochons on approval to responsible persons.

DR. RALPH E. MUELLER
3701 Valentine Road Kansas City 2, Mo.

Oregon Plume Agate

Quality is the far cry in the lapidary field; this agate from the noted vein deposit in Central Oregon is unsurpassed in beauty and variety of design and color; does not undercut and takes a superb polish.

Smoke and Flame Plume Slabs, now ..... $1.50 sq. in.
Carnelian Plume Slabs ..... $1.00 sq. in.
Black and Red Plume Variegated Slabs, $ .75 sq. in.
Moss Agate, rough, (same vein) in reds and dark, ... $1.50 lb.
Moss Agate, excellent rough vug material in red and yellow .... $3.00 lb.
Variegated Vein Agate, highly colored, $1.00 lb.
Wood Casts, Banded, some dendritic, $1.50 lb.
Cristobalites in Obsidian .....25c per ball
One to three balls in each specimen. Rare!
Plume, best quality in small chunks, $5.00 lb.
Add postage for rough material; minimum on all orders, $2.00, please.
Plume Slabs on Approval with $5.00 deposit and reference.

No Materials Exchanged.

C. G. SPRINGER

862 Roosevelt Ave., Bend, Oregon

$3.00 special

1 cluster sand crystals (perfect)

1 chunk rose quartz

1 piece Eden Valley wood

2 pieces yellow and purple lepidolite

All for $3.00

Plastic ring holders, 6 on a bar —$1.50 (2 bars for $2.75)

Alabaster book ends—$5.00 per pair

Alabaster vases $4.50 each

★ ★ ★

THE BLACK HILLS AGATE & GEM SHOP

Rapid City, South Dakota

nature study. Due to the detonation of so many torpedoes, depth bombs, etc., during the recent hostilities in the Pacific, the eardrums of the female abalones have burst, leaving them stone deaf. As a result, the males are blowing their lungs out and getting exactly no place with it. Even you can realize that nature cannot take its course when there ain't no course to take."

* * *

If you can't get to the San Diego show perhaps you'll want to take in one of the following shows. They are free and non-commercial.

First Annual Lapidary and Gem Exhibit of the Hollywood Lapidary Society to be held at Plummer Park Recreation Building on Saturday and Sunday, October 16th and 17th, the same days as the San Diego show. From noon until 10 P.M. on Saturday and 10:00 A.M. until 6 P.M. on Sunday. The address is 7377 Santa Monica Boulevard, Hollywood, Calif.; less than three blocks from the JOURNAL office.

The annual gem and mineral show of the San Fernando Valley Mineral and Gem Society will be held at North Hollywood Park (Calif.) at Tujunga and Magnolia Streets on Saturday (1 'til 10) and Sunday (10 'til 9), October 9th and 10th, the week before the shows aforementioned.

The annual gem and mineral show of the Orange Belt Minerological Society will be held on Saturday and Sunday, November 6th and 7th at the National Orange Show building in San Bernardino, Calif.

* * *

The four gem dealers at Bayfield who occupy Gem Village are using the name of the village in their advertising as an advertising venture. They cooperated at the Denver convention by all taking space along one wall and decorating their booths as the "Street of Gems". The firms are Gem Exchange, Shipley Mineral House, Colorado Gem Co. and Frank Morse.

* * *

A certain well known lapidary couple in Hollywood (he writes a certain movie series) accomplished the ultimate in forgetfulness recently. They went to the Town and Country Market for dinner only to find after they had eaten that they both had forgotten to bring any money. Luckily they were known but

when they went to get their car neither could remember where they had parked it. They couldn't even start to look for it for both of them forgot *which* car they had come in. After an hour or so they solved all their problems. Oh yes, they remembered where they lived. Couldn't happen to a nicer couple but—*gee whiz!*

* * *

There are no more "perfect" and no more "blue-white" diamonds in the advertising of members of the American Gem Society.

Alfred L. Woodhill, executive director of the society, recently announced that "perfect" has been banned as descriptive of diamonds. "Blue-white" was ruled out last year.

Now the term "flawless" is to be used to describe a diamond free from all blemishes or faults under skilled observation.

Woodhill said the word "perfect" acquired such varied usage as applied to diamonds that standardization became impossible.

HONEY-COLORED
TIGER EYE
Africa's Golden Treasure
Imported for
Your Cutting Pleasure
$2.25 Lb. **TOP QUALITY** *35c Sq. In.*

WANT SOMETHING NEW?

CUPRITE—Penna.
Orange and red in green epidote. Many different patterns. Brilliant colors, with veins of pure copper often appearing!!! Real gem quality. Exceptional value.
$1.25 Lb. 25c Sq. In.

TRY THESE

UNAKITE—Va.
Salmon-colored feldspar crystals in green epidote. Cuts into loveliest of pastel-colored cabochons. The Blue Ridge Mts. brings you an exciting treasure! Makes gems that women swoon over!
$1.25 Lb. 25c Sq. In.

IRELAND & MITCHELL
821 South Irving St., Arlington, Va.
All Prices Postpaid Anywhere in U.S.A.

JEWELRY MAKING
Anybody can make fine Jewelry with our Findings and ready to use Mountings
Very low prices. Large catalog—10c.
George Sassen
154 Nassau St. New York City 7, N. Y.

THE UNUSUAL IN:
Agates, etc. Custom Jewelry Work.
TREASURE TROVE
Crater Lake Hiway
22 miles from Medford
Shady Cove Oregon

Staurolites
Fairy Crosses of Good Luck Charms
Three beautifully formed Virginia Crosses
$1.10 Postpaid
MaryAnn Kasey
P.O. Box 968 Bakersfield, Calif.

AGATE CUTTING AND POLISHING
Rates are 12c to 20c per sq. inch, depending upon the kind of material. Limit 6" in diameter.
Ring and Brooch Stones made to your specifications by skilled cutter.
LEE STRADLEY
8325 S.E. Mill Street Portland 16, Oregon

OPAL—ROUGH OPAL
SPECIAL SHIPMENT FROM AUSTRALIAN OPAL FIELDS

We have received a direct shipment of flashing red and green rough Opal.

A few weeks ago this treasured stone was dug out of the wild, sun-scorched plains of the Stuart Ranges, Central Australia, exclusively for you.

Beautiful clean cutting material. $5-$10-$15 deposit brings you a fine selection of Opal Rough for your examination.

Special orders filled on demand.

New England Gem Cutting
333 Washington Street
Boston 8, Mass.

From Mexico to Canada

The Field Trip Unique

By LELANDE QUICK and
DR. HENRY C. DAKE, Editor of "*The Mineralogist Magazine*"

When we first started the LAPIDARY JOURNAL we received many helpful suggestions regarding its format and most of the best ones came from the dealers. Practically all of the poor ones came from the dealers too. Among the poor ones was the suggestion that we run no "field trips" for they were bad for the dealers' business. One correspondent strongly insinuated that if we ever ran a field trip he would never advertise with us—and he hasn't. But we maintained our prerogative of a free press and the three-installment 8000 mile trip of Hal Pearsall probably was one of the most popular stories we shall ever print. People react differently however and we are in sympathy with the correspondent who wrote to the effect that every time Hal stopped for ten gallons of gas he sent home 300 pounds of rock and what did he do with it all etc. etc.?

We repeat what we told the dealers at the Denver convention. If it were possible to enact a law to prevent anyone from ever gathering a rock on a beach, mountainside or desert again 90% of the dealers would be out of the business in six months. For if NEW thousands of persons do not hear for the first time *this* year the ring of a rock hammer on a rock and *see the inside of a rock they have found and broken* then business will indeed be bad for the dealers *next* year. No one there disputed the statement. In fact they applauded.

On the other hand we believe, with justice, that the dealer should be visited. For hobbies can not last long without dealers. The lapidaries need the dealers in the same proportion as the dealers need the lapidaries. Therefore we urge that you *visit the dealers too* while you are on your rockhunting trips and vacations. *No one is going to find the quality in the field very often that always can be found in dealers' shops.*

To help you do this the LAPIDARY JOURNAL, in cooperation with the MINERALOGIST, offers the field trip unique —a trip through the dealers' shops on the Pacific Coast from Mexico to Canada. We will take you from Mexico through California to the Oregon border where Dr. Dake will pick you up (in the concurrent October issue of the MINERALOGIST) and take you on through Oregon and Washington.

Now there are some dealers who do not like "browsers". Often they waste a lot of time, usually try to pump the dealer for location information, pick up a free catalog and depart without hardly a "thank you". Human nature being what it is there will always be that type of person. On the whole dealers welcome the browsers who earnestly want to see their stocks and no dealers will ever lose by being courteous to the vacationer or traveller who spends some of his time in the shop. After all, it is a high compliment for a man to take any part of his vacation time to visit any dealer any where.

As we leave the Mexican border the traveller may want to see what George Ritchie is doing with his *Great Western Lapidary Equipment.* George has a big machine shop at his home and is preparing for a production line basis elsewhere. Nestled in the lemon groves and celery fields at Chula Vista he usually can be found at home at 740 Hilltop Drive at the extreme east of the town.

Before driving into San Diego the *Stetsons* should be visited for Joe and Martie have one of those unique "husband and wife jewelry teams" that produces some of the country's finest jewelry. Martie is an expert faceter principally, while Joe makes the mountings. See Joe's article on Indian jewelry in this issue. They have faceting materials imported directly by them from mines all over the world for they have a wide correspondence. Their home is decorated in the Indian motif and Joe has acquired one of the best collections of Indian decorative materials we have ever seen. Indeed it IS the best. Don't miss

Beautiful Agate

From
Arizona, New Mexico and Utah

PETRIFIED WOOD in colors and pictures. AGATE in Red Moss, Golden Moss, Tubes, Black Banded, Red Banded, Red and Black. MOSS JASPERS in many colors and patterns.

Let me send you some of the agate and wood. Every inch will make a gem.

15 cents per square inch
Will assort — Minimum order $1.50
Money back if not satisfied
Approximate postage please!

We also have PERIDOT CRYSTALS and GARNETS

★ ★ ★

Make your next rock hunting trip in our back yard. Tourists welcome. Good cutting material as low as 35c a pound. Tons to select from. Come any time.

GEORGE C. CURTIS
"The Agate Man"
645 First Street
HERMOSA BEACH. CALIFORNIA

PLASTICS
for Gem Displays

We manufacture all types of display cases and showcases for gem cutters and gem dealers. Protect your collection or your merchandise from dirt and pilferage.

We make sawhoods, trays, and we can carry out any idea in plastics you may have. Correspondence invited. Send postal for illustrated circular.

Our TRAN-TRAYS are so attractive that even unpolished sagenite slabs look like polished prize winners. Priced at $2.95 up plus sales tax on California purchases.

AMERICAN PLASTICS COMPANY
204 Myrtle Road Burlingame, Calif.

THE SAN DIEGO MINERAL & GEM SOCIETY
cordially invites everyone
to its Eleventh Annual
FREE GEM AND MINERAL SHOW
In Balboa Park's BIG Federal Building
Saturday, October 16th (10 'til 10)
Sunday, October 17th (10 'til 6)

See jewelry made and every phase of gem cutting demonstrated. Get a FREE copy of a program containing many useful lapidary and mineral articles. Worth a dollar—costs nothing. No admission—no raffles—free parking and checking service. Hot lunch and refreshments available. Plenty of room and a place to rest.
Thousands of gems on display cut by San Diego County residents from local gem materials from the "Nation's Gem Box."

This advertisement courtesy of

MISSION MINERAL MART
818 Ft. Stockton Dr., San Diego 3, Cal.
Visitors welcome on Friday and Saturday all day
Appointments must be made for other times

Choice CALIFORNIA CUTTING MATERIALS

October and November Special

AGATE and MOSS AGATE
JASPER and JASP-AGATE
PALMWOOD (red or dark fiber)
50c per pound
(regularly 75c to $1.50 a pound)
Minimum order $2.50
Add tax and postage
You will be pleasantly surprised at the quality of the above materials

★ ★ ★

NEVADA RHODONITE
High rose pink color with black
75c a pound

LAPIDARY EQUIPMENT AND SUPPLIES
BOOKS
SILVER AND TOOLS FOR THE SILVERCRAFTER

S-T Gem & Mineral Shop
6924 Foothill Blvd. Tujunga, Calif.
Jean and Bill Kuhn SUnland 9358

Mineral Specimens
Cutting Material
Magni-Focusers
Gifts and Novelties

Covington Lapidary
Machines

The Sterling Shop
8679 Castro-Valley Boulevard
California—U.S. Highway 50
Castro-Valley **California**

The Bowsers have moved!
Gordon and Thelma Bowser
Announce the opening
of their **new lapidary shop**
Located on the **Mission Route** in
beautiful Santa Barbara
WRITE FOR OUR PRICE LIST
Visitors always welcome
SPECIALIZING IN SAGENITE AGATE
Bowsers
110 N. Milpas St. (Mission Route)
Santa Barbara, Calif.

Flexible Mold Material
AM70
Make your own duplicating molds easily. Unsurpassed for fine reproductions of details and undercuts encountered when casting jewelry by the "lost wax method." A liquid when heated but rubber-like and flexible when cold. Can be remelted and used over again many times. No special vulcanizing equipment required. One pound pkg. with instructions, $4.25 postpaid.
SPECIAL EQUIPMENT CO.
2900 El Roble Dr. **Los Angeles 41, Calif.**

WANT TO TRADE?
I have LOTS of good extras
OPALS — COPPER — FLUORESCENTS
JASPERS — AMETHYST XLS, ETC.
Stop in—bring your extras
W. N. WHITTEMORE
209 E. Islay Santa Barbara, Calif.

ATTENTION NON-CALIFORNIANS
LAVIC GEM JASPER
75c per pound—POSTPAID
AL. COLOMBO
1036 N. Harper Ave. Los Angeles 46, Calif.

seeing their attractive home and meeting these charming artists.

Arriving in San Diego there are several gem shops to visit—the *Mission Mineral Mart* at 818 Ft. Stockton Dr.; (open to visitors on Friday and Saturday only); *Scott's* at 5029 Newport Avenue; *Gem Arts* at 4286 Marlborough Ave. and the *Gem Shop* at Bacon & Niagara Sts. *Roy Plummer* at 5068 Brighton Ave. specializes in San Diego materials. There are many lapidaries in San Diego and the town has three gem and mineral societies, two of which are among the leading in the country. The dealers will tell you when they meet, and probably take you to a meeting if one is being held during your stay. Visit the Hyatt Lapiday Equipment Co., makers of the "Streamliner" saws at 4751 Chollas Rd.

Coming up the coast along Highway 101, and enjoying the most beautiful 100 mile automobile trip in America, you arrive at *Gordon's* at 1850 E. Pacific Highway in Long Beach. Lowell and Florence Gordon are good hosts and have a yard full of rocks for the browser. In their big store they have about every conceivable gadget for the lapidary and silversmith and offer for sale a wide selection of gem materials from all over the world. Gordon has developed several specialties in extensive use by the lapidary fraternity everywhere. He's a believer in "field tripping" and will offer advice freely. Visit *H. F. Ohlsen* at 618 W. "M" St. for slabbed material as you pass through Wilmington.

In the 25 mile journey between Long Beach and Los Angeles don't pass by *George Curtis*, "The Agate Man", in Hermosa Beach. You'll find him in the center of town at 645 First St. George has tons of rocks from his own agate claims in Arizona and New Mexico. You can pick rough material or buy slabs. He has thousands of slabs to choose from. Of if you come to Los Angeles via Lakewood Blvd., you should see the large yard full of gem materials at *Abercrombie's Agate Shop* at 16505 S. Lakewood Blvd., Bellflower.

Los Angeles itself has few gem dealers as they are located in the other Los Angeles County towns. But the visitor soon discovers that Los Angeles *County* is really the city, regardless of the name of the particular spot. In the city itself one should certainly visit *R & B Art-*

craft at 11021 S. Vermont Ave. Here they will find one of the largest silver stocks in the country, several lines of lapidary equipment (they like to have you "try them yourself," an idea we have long advocated) and hundreds upon hundreds of varieties of gem materials. They specialize in faceting material. Both Rogers and Boblet are highly agreeable hosts and then there's "B"—Rogers' wife and Boblet's daughter. A cheerier hostess never dusted a showcase and she *knows* materials. Not far away is the plant of *M.D.R. Mfg. Co.* at 5710 S. Western Ave. This is hidden away in the back at this address and while they have no showroom you'll find Dick Mitchell will be most happy to show the merits of the Master Faceting Device and answer faceting questions. Don't linger too long here for they have no store and you know how valuable machinists' time is. The faceter should certainly stop here however. Nearby is *Hickerson Supply Co.* at 1557 Arlington Ave., specializing in grinding wheels.

Then you had better skip over to see *Chuck Jordan* at the Town & Country Market at 3rd and Fairfax. You'll enjoy a good lunch at this wonderful display of the world's merchandise and Chuck has one of the best selections of really fine mineral specimens in the country and a great wealth of gem materials. On the way over you'll have to pass right by the *Allen Lapidary Equipment Company's* plant at 3632 West Slauson Ave. Gene Allen can show you a line of equipment of all types that he has been years developing. He can equip a great big shop or show you neat equipment designed for the apartment dweller with little space. Allen also carries complete supplies for the silversmith.

If you get "downtown" in Los Angeles don't fail to visit *Edward Swoboda* at 220 W. 5th St. to see one of the largest selections of faceted gems and rough faceting material in the country. You'll probably want to visit *Wildberg's* at 635 S. Hill St. the west's leading silversmith suppliers and *Myco Precision Casting* at 424 S. Broadway.

Of course every one will want to head for Pasadena and see *Grieger's* big yard and large stock of materials, one of the largest stocks in the country. However don't plan to visit Johnny on any day but Friday and Saturday as they are the

Announcement

Rock Collecting Friends

I have left Arizona and have opened a store at 1720 Chester Avenue, Bakersfield, California, featuring

SPORTANNA JEWELRY

Also Natural, Imported and Plastic Jewelry

Novelties Souvenirs
Cabochons Polished Slabs
Mineral Specimens

All of my past, present and potential friends are cordially invited to visit with me whenever it is possible to include Bakersfield in their itinerary.

Mary Ann Kasey

Mail Address: P.O. Box 968
Bakersfield California

Howlite

WONDERFUL FOR NOVELTIES

See article on Page 14 of April Lapidary Journal

Nodules—¼ lb. to 4 lbs. each
50c per pound
Have a few larger nodules
Slabs at 10c per sq. in.
Postpaid. No orders less than $1, please.
See our other ad on Page 269

Valley Art Shoppe
21108 Devonshire Boulevard
Chatsworth, California

Mineral Notes and News

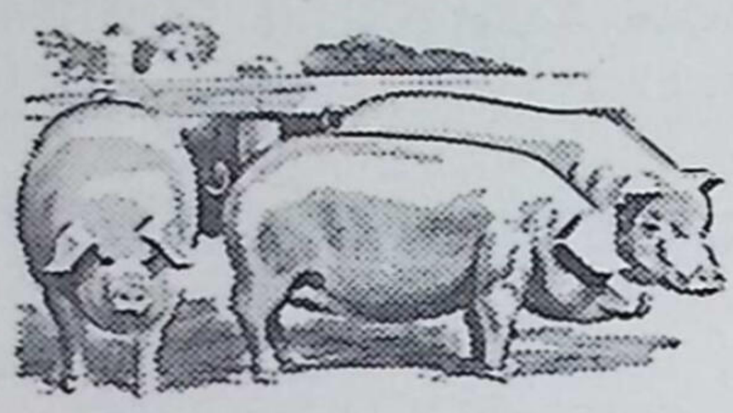
A monthly magazine about Minerals, Gems, the Lapidary Art and the activities of Mineral and Gem Societies everywhere. The official magazine of the CALIFORNIA FEDERATION OF MINERALOGICAL SOCIETIES. Subscription price $1.00 a year. Single copies 10c. Club rates to societies. Apply for advertising rates.

Paul VanderEike, Editor
Rt. 5, Box 177
Bakersfield, California

Hope you didn't miss the best deal on amethyst rough offered this year. See the middle spread of

GORDON'S

Pig in a Poke



Group of 3 Blank Sterling Silver Ladies' Rings
$4.20 plus taxes

Group of 3 Blank Gentlemen's Sterling Silver Rings
$5.40 plus taxes

Satisfaction guaranteed
And will YOU be surprised!!!!
Send for Literature and Prices
Wholesale and Retail

THEODORE'S
Jewelers to the Craftsman
P.O. BOX 292 GLENDALE, CALIF.

NEW! BRAND NEW!
TO THE AMATEUR CUTTER
The Perfect
CABOCHON SANDER
Commercial Lapidaries Use Them. Why Shouldn't You?

10" Disc Takes 6", 8" or 10" cloth
No wasted cloth
No wetting of cloth
No loose grits from wetting process
No wrinkles in cloth
No waiting for cloth to dry, change from one grit to another in a jiffy
Cloth lasts much longer
Most economical sander on the market
Send For Free Illustrated Price List
And don't forget we have a large selection of modern jewelry mountings. Now is the time to start making your Christmas presents.

ABERCROMBIE'S AGATE SHOP
16505 So. Lakewood Blvd.
Bellflower, Calif. Box 727
VISITORS WELCOME

only days the establishment is open to the visitor. Their mail order business is of first importance and it now takes four full days a week to take care of this old and well established business. Grieger's is at 1633 E. Walnut Street in Pasadena. On the way there you should stop at *Highland Park Lapidary Equipment's* store and see their full line of their own lapidary equipment. They are located at 1009 Mission Street in South Pasadena. In the west end of the County you should visit Ben and Edna Morton *(Morton's Minerals & Mining)* at 453 E. Garvey Blvd. in El Monte before you go over to Monrovia (128 S. Encinitas) to see George and Wayne Burnham *(Burminco)*. Both places have large selections of minerals and gem materials and the tourists are welcome every day, except that Burminco is closed on Tuesday and Morton on Sunday. When you're in El Monte stop at *R. X. Laboratories* at 1317 Seaman Ave., and see their line of machines.

And when you're in Pasadena don't fail to see *J. J. Jewelcraft's* establishment at 915 East Washington St. Here you will see *Theodore* doing his fine silver and gold smithing. Ed Foerster is an accommodating host and will show you a large and diversified stock of gems (rough and cut), books and supplies. Ed is agent for several lines of equipment too and the *Alta* line is made right here. This is a fine "one-stop" visit to see and learn a lot.

On your way out of the county, as you head north, be sure and visit *Valley Crafts Shop* (Don Metzgus) at 14135 Oxnard St. in Van Nuys and take home several of his fine copper letter openers set with California gems. They are practical and beautiful souvenirs and gifts for the friends at home. Then visit "Hard Rock Annie" at her *Valley Art Shoppe* at 21108 Devonshire Blvd., Chatsworth. Annie has loads and loads of desert stuff she has gathered herself and her boy does beautiful jewelry work. Lots of interesting things here. Don't fail to stop and see the large selection of Brazilian gem materials of *Kilian Bensusan* at 8615 Columbus Ave., Sepulveda. He lived in Brazil most of his life and receives the best materials monthly from his brother who is still at the Brazilian mines. Also visit *S-T Gem & Mineral Shop* at 6924 Foothill

Blvd., Tujunga for an interesting display of everything.

When you reach Santa Barbara be sure to see *Gordon Bowser* at his new shop on the Mission Route at 110 North Milpas St. if you want to see *real sagenite* material. *Gems International* in the Granada Building has a wonderful selection and collection of Alaska jade from their own mines. Here you'll see the now famed cabochon machine, or "lapidary brain" of Van Leuven's. The well heeled will want to take home a carved jade figure made in the Orient as an artistic memory of the California visit.

If you head north on Highway 99 be sure to see the personable *MaryAnn Kasey* at 1720 Chester Ave. in Bakersfield. Recently removed from Prescott, Arizona she has a large selection of crystal minerals and gem materials.

If you enter or leave California on Highway 99 you should see the full line of *Covington Lapidary Engineering Co.* at First St., on the Highway, as you pass through Redlands. They are one of the pioneers in equipment manufacture. If you do not come that way you should examine their line at some of the dealers' establishments you visit along the way.

Once in San Francisco you surely want to visit *Francis Sperisen*, another pioneer, and see his splendid line of equipment at 166 Geary Street and then visit *Kane's Lapidary* at 1651 Waller street where you can find a stock of quality gem materials. Bill Kane specializes in cut gems for the collector and has a wide following among eastern collectors not interested in cutting their own stones. If you miss *Wildberg's* in Los Angeles, you should visit their San Francisco offices at 742 Market St.

If you travel the coast route (No. 101) you should stop to see *Mrs. B. F. Nonneman* at 107 Church St. in Salinas. Mrs. Nonneman specializes in mail order gems and specimens but would like to see any of her customers visiting the state but only in the afternoon (except Thursday). You should also visit *S. N. Parmelee* at 1850 Bay Road in East Palo Alto if you're interested in California jade. He discovered it. And if you are interested in plastic display cases be sure to see Morton Bachrach *(American Plastics Co.)* at 204 Myrtle Road in Burlingame. Many interesting

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I shall be arriving home from a 3-month buying trip in Brazil just as this issue appears. Drop me an inquiry about your interests in Brazilian materials.

Descriptions sent on request

EDWARD R. SWOBODA

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Los Angeles 13, California

things are to be seen at *The Sterling Shop* at 8679 Castro Valley Blvd., on Highway 50, near Hayward. The places mentioned in this paragraph are South of San Francisco. If you drive north through "the valley" and you are interested in faceting heads then by all means see the Taylor outfit at *M. D. Taylor's* in Stockton at 1560 Picardy Dr.

From San Francisco north to the Oregon border there are many places along the roads selling rocks, as there are in other sections of California. We do not imply that they are not O.K. because we fail to mention them. They are not known to us however because they do not advertise. Many of them are the "hangers-on", the parasites who get the leftovers from the well known dealers. The advertising dealers are reliable for they have to stand the test of good values and satisfied customers. They do not long appear in these or other pages if they're not absolutely reliable because we "cut them off" when justified complaints come in. That's as true of gem, mineral and equipment dealers as it is of local merchants absent from the columns of the local papers.

We haven't mentioned our own place. Do stop and see us at 7231½ Santa Monica Boulevard in Hollywood any day but Sunday. We have "California Gem Trails" for sale for $1.50. It gives you all the collecting spots in California, with maps. Better send for it before you start your trip. And we have loads of other interesting books on gem cutting and silversmithing for sale. We welcome the browser; will make you comfortable while you sit all day and look at books or back issues of the JOURNAL. We can't talk rocks all day because we're always too busy. We'd like to, but business must go on. However ours is a "mail order" business and we're happy at the compliment of a visit by anyone.

Once you cross the Oregon border you will find gem dealers in nearly every town on the way to Canada as you pass through Oregon and Washington. We have many friends up there but we're letting Dr. Dake, Editor of the MINERALOGIST conduct you along that part of the journey in the current (October) issue of his old established magazine. Carry the October 1948 issues of the LAPIDARY JOURNAL and MINERALOGIST with you on your trip. Enjoy it —and DRIVE CAREFULLY. *Don't wind up with a tombstone instead of a gemstone!*

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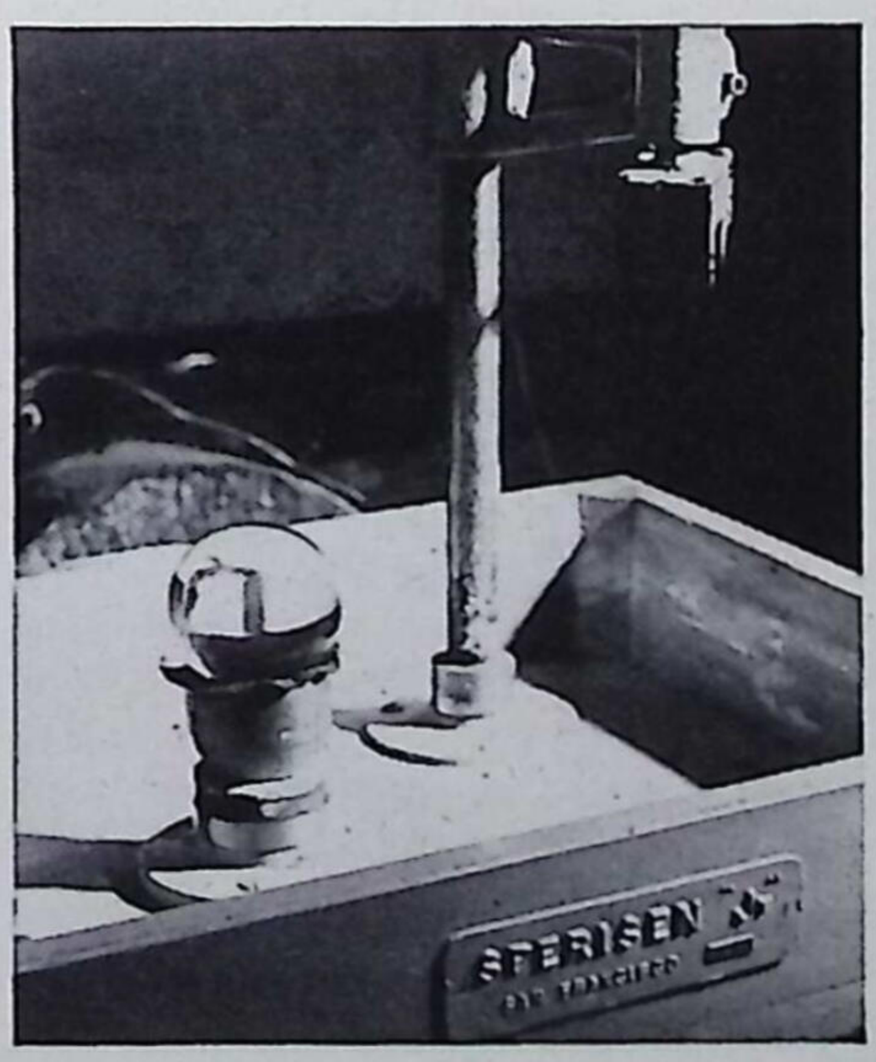
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◆ News of the Societies

LOS ANGELES LAPIDARY SOC. will hold its second annual picnic at Oak Grove Park, Pasadena on Sunday, October 24th. This is the picnic attended by ALL the societies for it's a mineral and gem society picnic sponsored *by* the Los Angeles Lapidary Society. Last year's picnic was attended by several hundred people. There will be games, MANY prizes and lots of fun. See that YOUR society is represented. For a notable meeting in November to which everyone is invited see item on Page 260.

* * *

JUNIOR ROCKHOUNDS (Prescott, Ariz.) must have a problem that does not trouble other societies (?). They are giving a prize at each meeting for the "best behaved" member. They gave the second annual gem and mineral show on September 4th and 5th and made $67.

* * *

CHICAGO ROCKS & MINERALS SOC. was host to the 8th Annual Convention of the Mid West Federation of Geological Societies at the Field Museum in Chicago on August 21st through the 23rd. A jewelry exhibit was a feature of the convention.

* * *

YAVAPAI GEM & MINERAL ASSOCIATION (Prescott, Ariz.) heard a talk on September 14th on "Minerals in Pharmacy." We hope all members thoroughly understand the action of magnesium sulfate in the human system. It is not recorded that the lecturer mentioned the increasing value of gold in treating arthritis of the rheumatoid type. Field Trip Chairman Michael recently won a prize for the fanciest beard in Arizona. Remember it at Denver? When we last saw Michael (at Long Beach) he found us stalled in our car, climbed on his horse and rode off when help arrived.

* * *

OKLAHOMA MINERAL & GEM SOC. (Oklahoma City) added 10 new members in August. The meeting was held in the gardens of J. B. Lankford, who preceded a fine talk on fluorescent minerals with a display of magic tricks. He was able to continue to pour water from a pitcher that he apparently emptied many times. Mr. Lankford, why don't you do something *useful?* Produce grinding and polishing wheels that never get dry. The September meeting was held at the home of T. F. Carey and featured a geode auction.

* * *

SAN FERNANDO VALLEY MINERAL & GEM SOC. (San Fernando, Calif.) heard Myor Wolfenson give a talk at their August meeting on "Casting by the Lost Wax Method." See item on Page 262 about their show on October 9th.

* * *

SEQUOIA MINERAL SOCIETY (Fresno) reports that the editor of its BULLETIN, Elmer Geese (Guise), died of a heart attack on August 21st at the age of 79. This saddened us greatly for we have spent many an hour listening to his cheery chatter at conventions and reading his fine bulletins. The Society is considering acting as host to the 1950 convention of the California Federation.

* * *

DONA ANA COUNTY ROCKHOUND CLUB (New Mexico) recently explored the Tiergarten Cave, a cavern similar to Carlsbad. The editor of their Bulletin (Don Alfredo) will have an interesting article in our next issue.

* * *

SAN DIEGO MINERAL & GEM SOCIETY will hold its annual show on October 16th and 17th. See Page 236 for complete details.

* * *

SOUTHWEST MINERALOGISTS (Los Angeles) heard Gene Allen (Allen Lapidary Equipment Co.) give a talk at their August meeting on the history of gem sawing and the development of modern saws.

* * *

NEWARK LAPIDARY SOCIETY (Newark, N. J.) is being formed to encourage and stimulate interest in cutting and polishing gem materials. Meetings will be started in the Fall and anyone interested in receiving notices should communicate with Louis Andl, Pres., 107 Melville Pl., Irvington 11, N. J. Please

state if you are doing any cutting and the type of equipment you may have. This is the first Lapidary Society on the East Coast and we hope it will encounter huge success.

* * *

DELVERS GEM & MINERAL SOC. (Downey, Calif.) is the name of a new group organized by the past presidents of the Los Angeles Lapidary Soc. with the editor as Chairman on July 27th. Thirty-five persons joined at the first meeting and meetings will be held on the 2nd Tuesday evening in the Downey High School Auditorium. Any interested person is welcome to attend.

* * *

ORANGE COAST MINERAL & LAPIDARY SOC. (Corona Del Mar, Calif.) celebrated its first anniversary with a picnic at Irvine Park attended by 127 members and guests. The society now has 129 members. The picnic was followed by a square dance.

* * *

HOLLYWOOD LAPIDARY SOC. (Hollywood, Calif.) will give its first annual gem show on October 16th and 17th. See details in item on Page 262.

* * *

POMONA VALLEY MINERAL CLUB held a field trip to the California Institute of Technology on August 6th to inspect their gem and mineral collection.

* * *

ORANGE BELT MINERAL SOCIETY (San Bernardino, Calif.) will hold their annual show on November 6th and 7th. See details in item on Page 262.

* * *

MINERAL & GEM SOCIETY OF CASTRO VALLEY (Hayward, Calif.) is the new name of the society formerly known as EDEN MINERAL & GEM SOCIETY. The society held a field trip to San Francisco to examine the gem collection at the Academy of Natural Science under the personal guidance of William Pitts, Honorary Curator of Gems and Minerals at the museum and compiler of the exhibit which is regarded as one of the outstanding in the nation and certainly the best on the Pacific Coast.

* * *

GLENDALE LAPIDARY & GEM SOCIETY (Glendale, Calif.) recently held a picnic meeting to which it invited other societies. There was a large attendance.

Have a good time and make new friends at the Northwest Convention? **We did!** Lots of things we don't have but what we have is good or you can't have them. Will try to serve your needs to the best of our ability. All orders given full consideration.

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◆ Beginners Page

When we first began doing cabochons we turned out some of the world's most original shapes. Many were oval on one side and round on the other. But there is no excuse today for not turning out perfectly shaped cabochons for a number of manufacturers have placed fine templates on the market. These may be purchased and crosses, hearts, ovals, rounds and all other types of cabochons can be marked with accuracy and cut right to the marked line. Some of these templates have standard millimeter sizes all set up for you so that if you do desire to set a stone later you can purchase a ring or earring setting the size of your gem.

If you mark the rough blank with a pencil the mark will wash away as you grind. It is best to secure a piece of bronze wire at a machine shop or a piece of aluminum wire and make a "pencil" of it by grinding a point on it on your grinder. Go to a hardware store where they sell aluminum clothesline and have the merchant snip off a six-inch length for you. Straighten it out and grind a point on it and it will last you as a highly satisfactory marker for the rest of your life.

Unless you are going to mount every stone you ever do then attempt to stick to a size large enough so that the material can be appreciated in a collection. We seldom ever do a cabochon less than the size of a quarter if we know we are not going to mount it, for then the full character of the gem can be seen and studied. We have never seen the sense of cutting a bunch of cabochons no larger than a lead pencil eraser for a cabochon collection. There are times, of course. when expensive materials like opals must be salvaged no matter how small they cut. But if one is cutting a piece of snowflake obsidian, for instance, it should be large enough to show several spots and present the full character of the material.

We also incline to the idea of cutting about a dozen cabochons of one kind of material and then forgetting about that material as we turn to something else. This enables one to do his own experimenting on various polishing agents and wheels and making notes for future reference as to the best results obtained. We also incline to the belief that it would be good for one's soul if he took each dozen cabochons he does of a material, make a selection of only perfect ones to be saved and dispose of the rest somehow, preferably by tossing them away. Why should a collection be cluttered with cracked, pitted, ill-shaped gems? Always remember that if you show a stone to another lapidary and he says "that's pretty good" that it isn't finished. If it was really finished it should be perfect--not "pretty good." We know a man who has thousands upon thousands of cabochons but you could look for a week among them and not find a perfectly done gem. In the last analysis we suppose the best rule of thumb is "if it satisfies YOU then it's GOOD." We just hope that someday we have the moral courage to toss away about half of all the stones we have ever done for some of them are sure terrible. It is unreasonable to suppose that the first dozen stones a lapidary attempts are going to be perfect, but he usually cherishes them beyond all he ever polishes after that. People will toss away their first poems (never soon enough!), destroy their first paintings, burn their first stories, etc., but no lapidary ever throws his first cabochons at the jack rabbits as he should.

Therefore, if the beginner knows that he is going to be different and destroy the first twenty stones he polishes, it is only wise to make them from materials that are secured at a low price. For the purpose, then, we suggest jasper. Consult the pages and buy some jasper of various colors from dealers. Wait until you are fairly skilled before purchasing the opal and good moss agate.

* * *

While the old-timers are still doing research on polishing agents, we believe that the beginner can forget those problems and stick to tin oxide. Tin oxide cannot be purchased again. During the war it was unprocurable and it just started to loosen when the government recalled all shipments and now it is again off the market. (Indication of war?) Cerium oxide can be procured freely.

The Lapidary Journal

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CAMEOS—One large Cameo shell measuring between 6 and 8 inches. Should make enough material for hundreds. Cassis cornuta from the Sulu Sea. $5.00. JOHN Q. BURCH, 4206 Halldale Ave., Los Angeles 37, Calif. "Dealer in fine sea shells."

SPECIAL ON MONTANA AGATE for gem cutting. SELECTED STONES—not field run. 6 pounds colored agate and spotted moss—assorted. Postpaid for $8.00. R. L. HARRIS, Miles City, Montana.

NEW FIND of Washington wood. Beautifully colored slab and limb sections. Our selection, 5 pounds—$2.00. Still have some Howlite & Oolite left. These are solid nodules; no junk. Write. TACOMA LAPIDARY SUPPLY CO., 631 St. Helens Ave., Tacoma 2, Wash.

ARIZONA PETRIFIED WOOD. All colors, from beautiful reds to jet black. Highly colored gem woods, gray and black gem wood 20c inch, $1.50 pound. Have logs to 300 pounds. Jet black and picture wood 25c inch. Very fine.
AGATES. New find. Escadillo agate, bluish translucent, clear or banded. Takes high polish. You will like this. Blue Hills agate—another new find. Opaque, brown and red coloring, with fossil-like trees and plants. Also fine golden moss agate. All 20c inch, $1.00 pound. Extra fine red and golden moss 25c inch. These are all gem materials. Money back if not well pleased. We prepay postage. SEQUOIA GEM AND MINERAL SHOP, 321 West Tulare Avenue, Visalia, California.

ELLENSBURG, WASH.—HEAVENLY BLUE AGATE. Very scarce. Cabs only. Standard Ring Mount sizes. Polished $10.00 plus 20 per cent tax. Postpaid. Larger sizes $15.00. H. C. WEBSTER, 814 N. 16th Ave., Yakima, Wash.

THUNDER EGGS—Filled with blue agate. Size of oranges. 25 lbs., $8. 100 lbs., $27. CUTTING MATERIAL in the rough. Assorted mosses, jaspers, woods. Gem quality, 10 lbs., $5. MELVIN L. KATHAN, 11 S. E. 78th Ave., Portland 16. Oregon.

AUSTRALIAN OPALS. Fine Cabinet Specimens, or Cutting Opal. Good trial assortment, $15.00. LISTS FREE. Correspondence Invited. NORMAN L. SEWARD "HIGHLANDS," 2 Studley Ave., KEW, Melbourne, Australia.

SADDLE MOUNTAIN *Christmas Specials* — Polished petrified wood pins, various shapes, 75c. Paper weights—$1.00. Flat slices, 50c or 75c labeled with name of wood variety. GILBERT MORGAN, Smyrna, Wash.

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BATEMAN'S DIAMOND SAW SHARPENER. Acts instantly. PREVE[illegible] SIMPLE to operate. PROI[illegible] $3.00. Send 10c postag[illegible] STRUCTIONS on ea[illegible] NEST S. BATEMAN, [illegible] Seattle 6, Wash.

FOR SALE OR TRADE [illegible] 16″ saw, complete. [illegible] bench arbor, complete [illegible] lap, complete. Hand to[illegible] maintain foregoing mach[illegible] slabbed and rough material. GAS STEAM HEATER for shop. A bargain for anyone in the market for tools and equipment. W. M. RUCKER, 721 West Schmidt Rd., El Monte, Calif. FOrest 8-2769.

BATEMAN'S DETERGENT. One dip cleans old jewelry like NEW. Non-injurious to metal. HARMLESS to hands. Most professional JEWELERS use formula. Price $1.00 for 4-oz. vial. 10c postage, with COMPLETE instructions. ERNEST S. BATEMAN, 5108 W. Olga St.—A—Seattle 6, Wash.

(Continued on Next Page)

CLASSIFIED ADS

(Continued from Previous Page)

DOLLAR SPECIALS, New Cabochon Template, standard sizes, 32 popular shapes. *Home Lapidary Shop*—a Booklet, Illustrated. Genuine Arizona Garnets or Peridot packets. Free Lists with orders. BITNER'S, P.O. Box 1191, Santa Monica, Calif.

BATEMAN'S SUPER AGATE polishing method. Produces MIRROR FINISH, with minimum effort. COMPLETE detailed instructions, on each step in process. Price $1.00 postpaid. ERNEST S. BATEMAN, 5109 W. Olga St.—A—Seattle 6, Wash.

DIAMOND BLADES. Unused, recharged five years ago for quartz crystal cutting. Average diameter 7½ in. x ⅝ arbor. Were 8 in., about ¼ in. removed for recharging like new. Selling for value of diamond. $3.50 each, 5 for $16.50 postpaid. GUILD, 2753 Hawthorne, Franklin Park, Ill.

CUSTOM BUILT SPECIMEN CABINETS built to YOUR specifications. Send us a sketch or drawing for FREE ESTIMATE, with no obligation. DEAN ARTS, 20700 Lake Chabot Rd., Castro Valley, Hayward, Calif.

Miscellaneous

FOR SALE for anyone who wants to start a jewelry store: Hundreds of gold ring mountings and wedding rings, diamond rings, birthstone rings, supply of gold for casting, jewelry tools, casting machine, soldering machine, display fixtures, etc. Will instruct you how to do casting, repairing, etc. $4500.00 takes all. SAM WAAGENAAR. Diamond cutter. 7268 Sunset Blvd., Hollywood 46. I still have some diamond powder $1.50 per carat. Diamond splinters (chips) $2.50 per carat.

WANTED: A *good* transparent gem of AXINITE, EUCLASE, EPIDOTE and HIDDENITE. Will buy, sell or exchange unusual gems. Correspondence with advanced collectors invited. E. E. JOACHIM, 1710 Inverness Ave., Atlanta, Ga.

BOOK ENDS. See page 182—August Lapidary Journal. Book ends exhibited at Long Beach and many others never shown are now offered for sale. Priced as follows: Petrified wood, various locations, $18 to $40. Utah Septaria, $12.50 to $18.00 Agate, various locations, $22 $12.50 to $18.00. Agate, various locations, $22 $15 to $25. Serpentine, $8 to $12. Agate filled Geodes, $15 to $25, and numerous other varieties. All perfectly matched and highly polished. Natural Rock Exterior where possible. Correspondence invited. C. KENNEDY, 628 Alvarado St., Redlands, Calif.

FRANKLIN, NEW JERSEY. In the past we have received requests for cutting material from Franklin. Not all fluorescents are suitable for cutting into cabochons, hearts, pendants, etc. So we have waited to build up a stockpile and can now offer choice fluorescent pieces for cutting at $1.00 per selected piece. Use tin oxide for final polish. Cut with water or soluble oil, no kerosene or motor oil. As all pieces are over one pound please include 25c postage and packing charge. GARDEN STATE MINERALS, 1034 Bloomfield Street, Hoboken, New Jersey.

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* * * *

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* * * *

This is to express my gratitude for the little article in August regarding Mr. Blanchard's dog. You did not need to publish this just to fill up space as we know you have more material than you can possibly use. Every lover of dogs will appreciate this article and the kindness which prompted it. *Eldon Soper, Glendale, Calif.*

* * * *

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* * *

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* * * *

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* * * *

It is a good thing you have broad shoulders Mr. Quick. All the praise and the troubles would literally floor anyone else! *Jean K. Kuhn, Tujunga, Calif.*

* * * *

I am immensely pleased with the quality of your magazine; there is nothing in any other publication to touch it. *William D. Loughman, Ventura, Calif.*

* * * *

I would like to add my words of praise and commendation to those you are constantly receiving for the outstandingly fine magazine you are publishing. I know that you and Mrs. Quick have worked hard and sacrificed much to put out a really GOOD lapidary magazine. You have succeeded even beyond the hopes of all of us who are so interested. No need to say "keep up the good work"—you have consistently done so. *Jean Bennett, Alhambra, Calif.*

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ADVERTISER	PAGE
Abercrombie's Agate Shop	268PL
Ace Lapidary Company	255- 260
Alaska Lapidary Service	257
Allen Lapidary Equipment Co.	201C
Alta Industries	211L
American Plastics Co.	265
Ames, Clarence A.	249
Arizona Agate Mines	257
Bateman, Ernest S.	253
Bensusan, Kilian E.	226
Bitner's Mineral Specimens Co.	223
Black Hills Agate & Gem Shop	262
Bones, Thomas J.	277
Bowser's	266
Buck, Robert O.	260
Burminco	235C
Burton, Robert S.	270
California Mold-N-Cast School	255L
Callahan, A. P.	249
Caplan, Allan	239
Columbo, Al	266
Conley Co.	227PL
Covington Lapidary Engineering	243C
Curtis, George C.	265
Davey, George T.	219
Dickinson, Vernon E.	273
D-K Instruments	237
Ells, Dick, Co.	273
El Paso Rock & Lapidary Supply	243
Flathead Hobby Museum	257
Fryer, S. A.	270
Gault	253
Gem Arts	206
Gem Exchange	Back Cover-C
Geminlap Mart	245PL
Gemological Institute of America	251
Gem Shop	206
Gordon's	240- 241PL
Great Western Lapidary Equipment Co.	217
Grieger's	207C
Guild	231
Horton, Grahame	244
Houghtaling, R. O.	244
Howard, J. H.	277
Hyatt Lapidary Equipment Co.	242L
Ireland & Mitchell	263
Janoko Bros.	253
J. J. Jewelcraft	280C
Jordan's, Chuck	247
Juchem Brothers	257
Kane's Lapidary & Supply	221
Kasey, Mary Ann	263- 267
Kehoe, James J.	277PL
Keweenaw Agate Shop	249
Lakeland Minerals	261
Lapidary Equipment Co., Inc.	244
Lapidary Journal	242- 278PL
Lawyer, James T.	225
Mail Merchandising Co.	239
Mariett & Co.	270
M.D.R. Manufacturing Co.	Inside Front Cover
Mewburn & Co.	247
Michigan Lapidary Supply & Research Co.	Inside Back Cover-C
Midwest Surplus Sales Co.	242
Mineral Book Co.	257
Mineral Notes & News	267
Minerals Unlimited	271
Minton's	230
Mission Mineral Mart	265
Morton's Minerals & Mining	245
Mueller, Dr. Ralph E.	261
New England Gem Cutting	263
Nonneman, Mrs. B. F.	237PL
Ohlsen, H. F.	277
Parmelee, S. N.	242
Parser, A. G., Inc.	221PL
Pioneer Lapidary & Silversmithing School	273
Plummer, Roy O.	206
R&B Artcraft Co.	202C
RX Laboratory	225L
Sassen, George	263
Schwab, Henry, Lapidary, Inc.	215
Seward, N. L.	259PL
Silver Mine	230PL
Southern Oregon Mineral Exchange	270
Special Ad (blind)	206
Special Equipment Co.	266
Sperisen, Francis J.	271
Springer, C. G.	262
S-T Gem & Mineral Shop	265
Sterling Shop	266
Stetson's	229
Stewart's Gem Shop	255
Stewart Lapidary Institute	242L
Stradley, Lee	263
Swoboda, Edward R.	269
Tacoma Lapidary Supply Co.	273
Taylor, M. D.	223L
Technicraft Lapidaries Corp.	231C
Tesmer, Robert	253
Theodore's	268
Treasure Trove	263
Ultra Violet Products Co., Inc.	257L
Valley Art Shoppe	267- 269
Valley Crafts Shop	235
Vassco Products	234
Veteran's Gem Shop	255
Vreeland Mfg. Co.	259L
Waite, Griffin Grant	270
Ward's Natural Science Establishment, Inc.	209C
White Eagle Trading Post	230
Whittemore, W. N.	266
Wildberg Brothers Smelting & Refining Co.	229C
Wiley, John, Sons, Inc.	233

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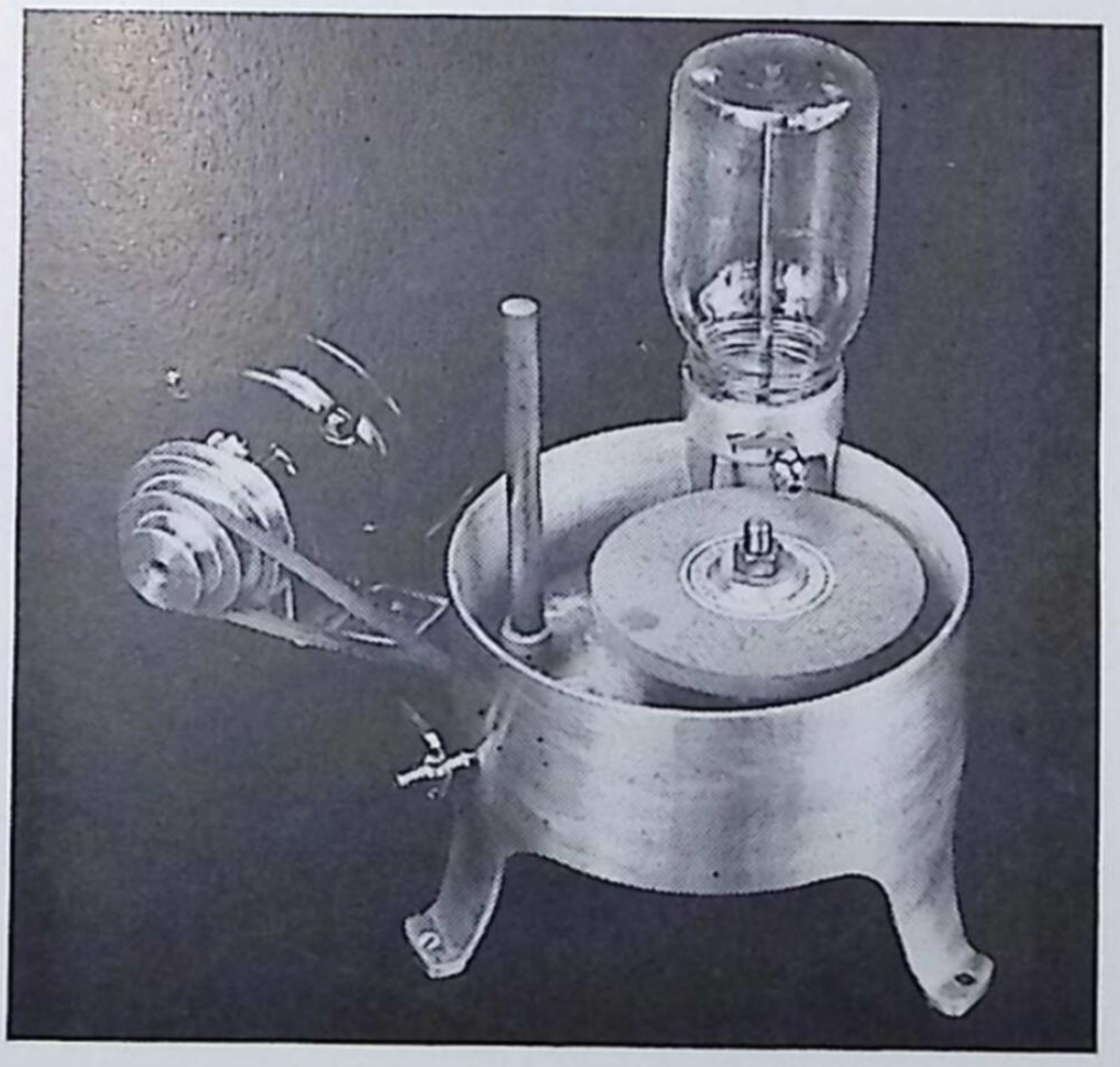
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