

GEMS OF THE MIDWEST

MIDWEST FACETERS GUILD

APRIL, 1982 NEWSLETTER

VOLUME 3 NO. 3



AN EDUCATIONAL PUBLICATION FOR THOSE INTERESTED IN FACETING

GEMS OF THE MIDWEST

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GEMS OF THE MIDWEST

Volume 3, No. 3

An official publication of the Midwest Faceters Guild

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 Jan Taylor, Vice-president
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 Ed Myers, Treasurer

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 Education - Helen Murray
 Membership - Art Kalinski
 Rules -
 Historian - Patty Rice

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Attention Guild Members

If your name and/or address information contains any errors, please notify Membership Chairman, Art Kalinski of these discrepancies in order to have proper corrections made.

Likewise, if you are joining the Midwest Faceters Guild as a new member or renewing your existing membership, deal only with the Membership Chairman, Art. Otherwise you may not receive the Newsletter or it may be seriously delayed because the mailing list will not have been properly processed.

If you wish to continue receiving the MWFG Newsletter, membership dues for the current year must have been paid by the May 22, Education Meeting in Flint. Send your \$5.00, and the Faceters Guild Membership Dues application form to Art Kalinski, 3357 Doremus, Hamtramck, MI 48212.

TEAR OFF

TEAR OFF

TEAR OFF

FACETERS GUILD MEMBERSHIP DUES

The fiscal year is Jan. 1, through Dec. 31. Dues: \$5.00/yr. or portion of the year.

NAME _____	NO. & STREET _____
CITY _____	STATE _____ ZIP _____
TELEPHONE _____	Make check payable to, and send to:
	Art Kalinski 3357 Doremus Hamtramck, MI 48212

Or make payment personally, or via a friend at the next Guild meeting.

NEWS AND VIEWS

Opportunities to Enter Gem Competition

All MWFG members are being encouraged to enter various gem shows competition. Preparing for a show provides an impetus for sharpening your faceting skill, brings new inspiration and revitalizes your interests, and results in much joy and reward in sharing your collection with others who have similar interests. Remember too, that these show entries can be good practice for preparing for our MWFG Second Annual Faceters Fair scheduled to be held May 14-15, 1983 in Maumee, Ohio. So if your interest is piqued, obtain an application form, with rules description from your editor or from Kathy Porter.

The following opportunities are presented for your attention. If the stated show dates do not have sufficient lead time or are past dated, keep them in mind for next year.

1. April 24-25, 1982 - Mt. Clemens, MI; Mt. Clemens Gem and Lapidary Society's "5th Annual Show."
2. May 8-9, 1982 - Kalamazoo, MI; Kalamazoo Geological and Mineral Society's "Gem and Mineral Show."
3. May 7-8-9, 1982 - Flint, MI; Flint Rock and Gem Club's "Artistry with Rocks."
4. July 8 through 11, 1982 - Houston, TX; American Federation of Mineralogical Societies' National Show.
5. September 10, 11, 12, 1982 - Toledo, Ohio; Toledo Gem and Rock Club's "12th Annual Gem and Mineral Show."

Proposed Uniform Rules Changes for Faceter's Exhibiting

Attempts are being made to revise the Regional Uniform Rules and the National Trophy Rules which govern competitive gem judging competition. The efforts in this regard are really geared to widening the avenues for the average faceter to choose in planning an entry in the various gem shows competition. The terms (vocabulary) used in the written rules are being redefined so that both the faceter exhibitor and judge can more easily understand what is expected. And perhaps most important of all, the addition of a second trophy for synthetic classes will at long last put to rest the old problem of "natural vs. synthetics" that has bothered faceters for so long. See letter from Kathy Porter in this regard, page 2.

For a copy of the uniform rules proposal, contact Kathy Porter. Write or call early morning (6:00 to 8:00 a.m.) or after 4:00 p.m. - (313) 686-0307; 303 Smith Street, Apt. #127, Clio, MI 48420.

Future MWFG Meetings

May 22, 1982 - Flint

August 14, 1982 - Cleveland. Education Meeting at the Museum of Natural History.
A possibility of a chartered bus from Flint to Cleveland.

October - an unspecified Saturday - Annual meeting in Mt. Clemens.

Make a Polariscope

Jim Thompson, of Toledo, built a polariscope according to plans that Ernie Michaud had included in the March, 1981 (Vol. 2 #1) MWFG Newsletter. Rather than a simple piece of polaroid material in the upper arm, Jim installed a commercial, round polaroid

(Cont'd on page 5)

MIDWEST FEDERATION OF MINERALOGICAL AND GEOLOGICAL SOCIETIES

Member of The American Federation of Mineralogical and Geological Societies

303 Smith Street #127
Cllo, Michigan 48420



Attention All Faceters:

For the past several years the question- "Why are not more faceters exhibiting at the Regional and National Federation Shows in competition?" has been ask all around the country. The answer always seems to involve dissatisfaction with the Regional Uniform Rules and National Trophy Rules as they exist for faceting- the CF Subdivision. (Page 27 Fifth Edition)

Since grumbling and dissatisfaction do nothing to get changes made, an action committee, made up of faceters has worked out, with the help of Paul Clifford Midwest Rules Ch, and submitted to the Uniform Rules Committee the enclosed proposals for major revision of the existing CF Subdivision rules and the addition of a second trophy for faceting classes.

We think all faceters will be quick to agree that this proposal is excellent and well deserving of your endorsement and the support of you and your group.

These proposals will come before the Uniform Rules Committee for action at their next meeting in Houston Texas at the National Show in July, 1982.

Your letters of endorsement, both personal and as a guild or club, should be addressed to the attention of the Uniform Rules Representative in your area, with copies to your Federation President.

The National Uniform Rules Committee consists of:

Kate Shaw, Chwn.
406 S. Yaupon
Richwood, Texas
77531

Virginia Smith
2337 St. Andrews St.
Billings, Montana
59101

Marion Godshaw
633 21st. Street
Santa Monica, CA.
90402

The Regional Uniform Rules Committee Chairmen are:

California
Robert Goldsworth
10361 Daniel Way
Rancho Cordova, CA 93306

Northwest
Ed Wilponen
E. 3717 Ermina Street
Spokane, WA 99207

Eastern
Roger Marble
102 Dorset Way
Lyman, SC 29365

Rocky Mountain
Royce Hutcheson
9482 S. 220 East
Sandy, UT 84070

Midwest
Paul Clifford
Cleveland Museum of Natural History
Wade Oval, University Circle
Cleveland, OH 44106

South Central
James Knight
124 Skyline Spur
Georgetown, TX 78626

We ask for your support of these proposals, which are a giant step in the direction of providing for more, better and fairer exhibiting for faceters in the future at Federation Shows.

Together we can be effective in bringing about change!!

Thank you for your help---

Kathleen Porter
Midwest Uniform Rules Committee Member

Midwest Faceters Guild
Educational Meeting; May 22, 1982
Flint, MI



AGENDA

- 9:30 A.M. Building opens for set-up and browsing. Have that early cup of coffee and greet friends.
- 10:00 - 12:00 Noon Board Meeting
- 10:30 A.M., beginning and through the day until completed. HAVE YOUR STONES JUDGED
You are invited to bring one to three faceted stones that you would like to have judged. Here is an opportunity for you to sit down with a qualified show competition judge and get her/his comments and suggestions for improving skills, if any. The selection of a judge, to assess your stone(s), will be by lottery. The judges will be: Ralph Whitney, Peter Riva, Ed Myers, Kathleen Porter, Bill Horton, and Alex Marshall.
- 11:00 - 12:00 Noon Committee Meeting, if called by the Chairpersons.
- Indefinite Timing Break for lunch - Orders will be taken for carry-out lunches, from local restaurants.
- 1:00 - 2:15 P.M. Business and General Membership Meeting
- 2:30 - 5:00 P.M. Education Program
- (1) "Panel Discussion by Faceting Competition Judges"
What we look for when judging stones - The point system - How to avoid loss of points - etc.
Bring in your questions.
 - (2) "Laps - Another Viewpoint"
A continuation from the last meeting. (Some panel members had to leave early.)
Dr. Edward Rugenstein.
 - (3) "Troubleshooting Your Own Faceting Machine"
Chairman Bill Schell will involve experts from the audience to help solve problems, and answer your questions. Bring in a list of problems associated with your machine; everyone can become an expert on her/his own machine. Also, if you do have machine problems, how you did, or perhaps, did not solve them.
If possible, we would like you to bring your machine (or a friend's) to this meeting. Troubled ones too!!!
- 5:00 P.M. Our day ends. But see other side for a FLINT TREAT !

A Flint Treat

The Flint Rock & Gem Club has arranged to have their annual After-Glow-Pot-Luck Dinner coincide with our Saturday Education Meeting day, on May 22, 1982. All of the Midwest Faceters Guild members are invited to attend the dinner, at 6:30 P.M., after our regular meetings. The main course meat dish will be provided by the Flint host group; but the MWFG members who will attend are being asked to bring their plate/table service plus a covered dish: a vegetable, salad, or dessert.

This would be an excellent meeting to bring along your wife or husband. We will have a listing of Flint Highlights and Special Events so that guests may spend the morning and afternoon sight-seeing or shopping. Or there is a lot of fun too, attending our meetings.

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Directions to Williams Community Education Center 3501 Minnesota Avenue, Flint, Michigan

From the north on I-75, US-23 and US-10

- East on Pierson Road to Dort Highway
- South on Dort Highway to Franklin Street
- South on Franklin Street to Utah Avenue
- West on Utah Avenue one block to the Center

From the South on I-75, I-475, US-10 and US-23

- East on I-69 to Dort Highway
- North on Dort Highway to Leith Street
- West on Leith Street 6 blocks to Minnesota Avenue
- North on Minnesota Avenue 4 blocks to the Center

From the East or West on I-69, M-78 or M-21

- North on Dort Highway to Leith Street
- West on Leith Street 6 blocks to Minnesota Avenue
- North on Minnesota Avenue 4 blocks to the Center

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NOTE!
I-475 is open!
Use Exit #9, Dort
Highway and Stewart
Avenue Exits.

Update on the Second Annual Faceters Fair

The second Annual Midwest Faceters Fair will be on May 14-15, 1983 - Lucas County Recreation Center, 2901 Key Street, in Maumee, Ohio.

We need volunteers. We'd like to get our "Worker Charts" filled. To date, the following Chairpersons are getting things organized.

- | | |
|---|----------------------------------|
| * Trophies, ribbons, exhibits & judging - Kathy Porter. | * Signs - Ernie Michaud |
| * Dealer Chr., at the Show - Tom Gibbs | |
| * Advanced tkts. & tkts. at the door - Jan Taylor | |
| * Raffle tickets - Frances/Bernard Bush | * Education - (Not filled) |
| * Teaching demonstrations - Bill Schell | * Demonstrations - Dave Miller |
| * Electrical, table coverings, set-up - John Gansen | |
| * Hospitality - Frances Bush | * Door prizes - Larry Kleinoeder |
| * Audio, library set-up - Bernard Bush | * Square Dance - Harold Rice |
| * Secure & return borrowed cases - Doris Shannon | |
| * Security Workers - Dorothy Loyd | |

At the Flint meeting, be sure to look at the Volunteer Worker Charts and sign-up to help. Each Chairperson needs a committee. Also there are many activities still without a chairperson; you are needed and very much wanted.

More detailed job descriptions, which will define the responsibilities for handling the show activities will be typed for each work area. These will be available on or before the August meeting in Cleveland.

filter which can be easily rotated. He demonstrated the instrument by checking a rough piece of rhodolite and material passed off as rhodolite. The garnet rhodolite is singularly refractive; it does not change its shading when rotated between the top and bottom polaroid lenses.

Dr. Thompson also demonstrated the "Jeweler's Eye" - Relative Reflectometer. This instrument is manufactured by the Hannerman Lapidary Specialties, in Castro, CA. Its operation is based on the reflection characteristics of gemstone materials.

The polished surface of each variety of gemstone has its own, unique reflection or reflectivity capability. The instrument has an electronic sensor which responds uniquely when a light beam is reflected into this sensor, from the gemstone surface. The dial on the instrument has been calibrated to correspond to the light response for different gems. The gem being assessed must always be well polished and patently clean. In a sense, the instrument provides measurements of relative reflectivity.

The instrument does not measure or provide a refractive index or a dispersion value.

New Lap Feedback

During the Education Program session related to "charging & cleaning laps," Dave Miller indicated that emerald polished very well on the newly marketed "Falcon " ceramic lap. According to Dave, it seems to be the best lap available at this time. One drawback of the lap may be its 6" size. Perhaps Guild members could provide additional feedback regarding size. Is a 6" ceramic polishing lap an adequate tool for all faceters, for finishing gemstones or should an optional 8" lap be made available also? Would the cutting of very large stones present a problem in this respect?

Auction

About 10 packages of faceting rough were auctioned at the Jackson meeting by Alex Marshal. These materials were donated by several Faceters Fair Show dealers last October, and were the final items sold off. Funds obtained from the sale, \$153.50, have been put into the Guild treasury.

Treasurer's Report - Ed Myers (3-13-82)

Income		
Balance from 12-5-81		\$3438.23
Show income		515.34
Dues		200.00
Auction		255.50
		4419.07
Expenses		
12-5-81 Joseph Zukowski-newsletter #144	217.92	
12-5-81 D. Loyd - 12 month show dues #145	39.14	
1-25-82 Midwest Federation dues #146	102.00	
	359.06	
Total		\$4060.01

New Book by Sinkankas

A new scholarly monograph, providing an excellent reference for jewelers, geologists, mineral collectors, and even the casual readers such as faceters, is now available for purchase: Emerald and other Beryls, Radnor, Pa., Chilton Book Company, 1981, 665 pp. (\$37.50).

John Sinkankas, who spent over fifteen years researching the beryl family, has put together a fascinating and very readable book covering almost every conceivable facet (sic!) of this generic mineral and its particular speciality, the emerald.

It has colored and B/W plates, along with line drawings, diagrams and water-color paintings of jewelry, gems, and personages tied to these illustrious materials. Some watercolors have been painted by the author. Also each chapter is documented by an extensive by an extensive and detailed reference listing. The printing type used in the general text is larger than usual. What makes the narrative particularly interesting is not only the author's "easy" style of writing, but that he writes a great deal from his own personal experiences and from professional relationships with a myriad of people whose lives were entwined with all phases of the emerald and the other beryls.

This reference is divided into three sections:

1. History and lore in antiquity; medieval and modern Europe; magic, mystery, and medicine; art and ornament.
2. Chemical and Physical Properties - Structure and composition; physical properties; optical properties; color; crystallography; inclusions; artificial and synthetics; cutting and polishing.
3. Beryl Localities - World sources of ore and gem beryl - from Afghanistan to Zimbabwe (pps. 357 - 609).

Respite

Novice cutter: Well, how do you charge a lap?
Well-seasoned cutter: Use a Master or Visa card.

Gem Lore

The birthstone listing for April is diamond; for May, emerald.

The emerald gemstone has held an extraordinary fascination in matters relating to human affairs. Since earliest recorded history in Egypt and before, its color and the color of vegetation assumed great significance. It was the color cherished above all others. "Green symbolized the cycle of sowing, nurturing and harvesting of crops, and it represented in particular the annual flooding of the Nile lowlands in what seemed to be a miraculous restoration of life to a land that stood parched and brown throughout most of the year. Green therefore became the symbol for joy and desire and fertility in females."

European lore also takes heed of the illustrious emerald. From C. W. King, Antique Gems, Their Origin, Uses and Value; London, 1860, pp. 396-98: (Stanza VII)

THE LAPIDARIUM OF MARBODUS

"Of all green things which bounteous earth supplies
Nothing in greenness with the emerald vies;
Twelve kinds it gives, sent from the Cythia clime,
The Bactrian mountain, and old Nilus' slime;
And some from copper mines of viler race
Marked by the dross drawn from their matrix base:

The Carchedonian from the Punic vale --
To name the others were a tedious tale..."
-----etc.

(taken from: John Sinkankas, Emerald and other Beryls; Radnon, Pa., Chilton Book Co., 1981, pp. 61-66)

GUILD MEETINGS - JACKSON

Minutes of the Board Meeting - March 13, 1982, Education Meeting

The MFG Board Meeting was convened at about 10:30 a.m., by Vice-President Jan Taylor.

Members present: Bernard Bush, Joan Connor, Dave Miller, Larry Murray, Ed Myers, Jan Taylor. Guests: Helen Murray, Show Chairwoman; Kathy Porter, Show activities; Joe Zukowski, Acting editor.

The Treasurer's Report was submitted by Ed Myer. (Report in text).

Show Chairwoman Helen Murray presented a detailed, tentative Maumee Show budget (May, 1983). She closely estimated the costs of all necessary Show needs and approximated probable Show income. Beginning in May, 1982, signing of contracts for the Show, will be initiated.

Larry Murray has drawn a tentative layout of the hall, showing spaces allotted to dealers, for displays, rest areas, and the like.

Extra security will be provided for the Show. Show raffle tickets will be available shortly. Square dancing will be a feature during the Show on Saturday evening.

The GIA has been asked to provide symposiums. Door-stem programs are being arranged.

Helen Murray and Kathy Porter are working out details for arranging the dealer spaces and demonstration areas.

Proposed budget for the May 14-15, 1983 Faceters Fair in Maumee, Ohio: Projected total expenses, \$6511.00; projected total income, \$6982.00.

Motion by Joan Connor: That we accept the proposed Show budget. Seconded by Dave Miller. Approved.

Kathy Porter presented further information on the proposed Education Meeting at the Museum of Natural History in Cleveland, on August 14, 1982. At the next meeting on May 22, a firm commitment by Guild members will have to be made in order to expedite a bus contract. If a positive response, arrangements for one or two, 40 passenger buses will be made.

Acting editor, Joe Zukowski, requested permission from the Board to announce in the Newsletter that those who have not paid their yearly dues by the May

meeting will no longer receive the Guild publication.

Editor "Gib" Hocking has returned from his sojourn in China and will resume editing activities.

Original copies of the "Arrow Profile Company" cutting designs are being sought for xeroxing. (The originals would be returned to the owner.) Reproduced copies that we have are of poor quality and cannot be reprinted for the Guild Newsletter. The cutting designs can be the numbered "Faceting Guides" or the "Faceting Teachers of America" series.

Correspondence from the Australian Faceters' Guild and the Texas Faceters' Guild was read.

Meeting was adjourned at 12:00 Noon.

Minutes of the Guild Business Meeting - March 13, 1982, Education Meeting

Meeting was called to order at 1:10 p.m. by V.P. Jan Taylor.

The Minutes of the last meeting were accepted as printed in the February, 1982 Newsletter. Motion to accept by Bill Schell. Seconded C. Wiltse. Approved.

Vice-President Taylor welcomed new factors, George and Mary Wilson from Mt. Clemens.

Treasurer Ed Myers presented the Guild financial report. Motion by E. Sinkovich to accept the report as read and file for an audit. Approved.

Dorothy Loyd reported that her audit of the Treasurer's books showed all to be in order.

The next Education Meeting will be in Flint on May 22, 1982.

Kathy Porter reported that the trip to the Cleveland Museum of Natural History has been set for August 14, 1982. There is a possibility of a 40 passenger bus, with the trip beginning in the Flint area and stopping at various points along the way (in the Detroit area), and ending in Cleveland. The return trip as well. If you are interested in making this trip, please come prepared at the next meeting in Flint, to pay \$10 to \$15 per person for the fare.

The Cleveland Museum has many excellent, interesting gemstone displays. Our group will get a chance to see the private collection of colored diamonds. Also other colored gemstone arrays.

The regular meeting of the MWFG will be at the Museum.

Show Chairwoman Helen Murray presented her plans for the next Faceters Fair, at the Lucas Country Recreation Center, in Maumee, Ohio on May 14 and 15, 1983. This site is within a half mile of the Masonic Temple in Toledo, Ohio.

Show set-up time will be during the day, on Friday, May 13, 1983. A square dance will be held from 9-10 p.m., on Saturday, May 14. Harold Rice will "call" the dances. Show time on Sunday, May 15, will be 10-6 p.m.

Camp sites will be available throughout the weekend; camper facilities will also be provided, with dumping capabilities.

Door-step programs, through the auspices of the GIA will be arranged.

There will be 12 selling dealers with 6 or more demonstrating dealers.

Gem cutting designs are being solicited from well-known gem cutters. These designs will be distributed at the Show.

Kathy Porter will be our Chairwoman for exhibits and judging. Dorothy Loyd has agreed to do her special birthstone exhibits again.

Guild members will be demonstrating faceting techniques on their machines. The Mt. Clemens Recreation Center will bring in seven Sapphire faceting machines, and let the public learn how to facet, all under the direction of Bill Schell.

Dave Miller indicated that a piece of emerald rough has been received from the Gilson Company. This rough will be cut by Dave Miller, who will have it mounted and photographed.

This mounted cut piece will be one of the raffle prizes and those who buy raffle tickets will have an opportunity to see a photograph of this item. Gold for the mounting is also being donated. Proceeds from the raffle tickets are helping to defray the cost of the Show.

A raffle chair was needed; Bernard Bush has volunteered to be the raffle chairman. Helen Murray has asked for donations of prizes for the raffle.

Some raffle prizes which have been committed are: C. Wiltse, CZ; Doc Thompson, 14K pendant; Howard Heinzman, CZ; Art Kalinski, 2 Falcon ceramic laps; Bill Schell, table cutting tool chuck; Jan Taylor, CZ/pendant; Bob Cuson, Malachite bullseye/belt buckle; Jim Lynch, stone/pendant/chain; Peter Riva, pendant; Bernard & Francis Bush, bolo/matching set.

Bob Cuson and Stan Franzak invited any faceters who wish to participate with the Midwest Mineralogical and Lapidary Society of Dearborn, on a trip to North Carolina. They are going to visit several non-salted mines, and a few gold mines. This activity will be during the last week in July, 1982.

Kathy Porter reminded us of coming gem shows that we can attend. Among them is the MGAGS Seminar in Flint, on June 19 and 20, 1982. Any of our Guild members who would like to volunteer, are welcome.

Kathy has received correspondence from various clubs in the USA and from abroad. Anyone wishing to communicate with another group may get

the address from her.

Some coming shows:

1. The Blue Water Lapidary Society. Port Huron, MI, May 1-2, 1982.
2. Flint Rock and Gem Club. Flint, MI, May 7-9, 1982.
3. Kalamazoo Geological and Mineral Society. Kalamazoo, MI, May 8-9, 1982.
4. Midwest Mineralogical and Lapidary Society. Dearborn, MI, May 14-16, 1982.
5. Michiana Rock and Gem Club. South Bend, Indiana. May 7-9, 1982.
6. International Gem, Mineral, and Jewelry Show. Southfield, MI, May 7-9, 1982.
7. American Federation of Mineralogical Societies. Houston, TX. July 8-11, 1982.
8. Midwest Federation of Mineralogical and Geological Societies. St. Paul, MN. June 24 - 27, 1982.
9. Toledo Gem and Rockhound Club. Toledo, Ohio. Sept. 10-12, 1982.
10. Livingston Gem and Mineralogical Society. Hartland, MI. Sept. 25-26, 1982.
11. Michigan Mineralogical Society. Detroit, MI. October 8-10, 1982.
12. Central Michigan Lapidary and Mineral Society. Lansing, MI. Oct. 15-17, 1982.

Door prize winners:

Morris Shelley, Charles Horn - candy
 Larry Murray, Max Kionka - amethyst rough
 Joan Connor - quartz rough
 Jim Schlottman - Falcon ceramic lap

Meeting adjourned at 2:15.

Education Program - March 13, 1982

Two education programs were scheduled for the afternoon period. The early program delved into the "Dopping and Transfer Process." Chairman Bob Cuson directed a panel discussion amongst members John Gansen, Al Cunningham, Larry Kleinoeder, Jim Schlottman, and Bob Benjamin. Points brought out during the discussion are summarized below.

1. Based on discussions with the panel, apparently many faceters are shifting from the use of wax in dopping, to epoxies and the newer superglues (cyanoacrylates).
 - a) The epoxy cements are stronger but take from several hours to overnight drying periods before cutting can commence.
 - b) Special solvents, such as "Attack," are required to dissolve the epoxy and superglues.
 - c) Heat is also used to weaken the cured epoxy and superglues. They tend to become "rubbery" and pull apart when heated above 250-300° F.

- d) Acetone can be used as a solvent with a few of the cements, and as a stone cleaning agent, after the superglues and epoxies have been dissolved or heat weakened.
 - e) Generally, the solvents used to separate the stone from the dop when using an epoxy or the superglues, or cleaning the stone after separation, are highly toxic and/or flammable. So for your own safety, BE CAREFUL when using these materials.
2. When using "Super T" (cyanoacrylate) cement to dop, put into cold water after waiting for the initial set (making sure the stone won't shift). The glue seems to set-up much better with this procedure.
 3. When using the "3M" structural strength epoxy (industrial glue), put into a 175° F. oven for about 30 minutes.
 4. Several different approaches are being used to dop stones when cutting.
 - a) Use epoxy for the initial dopping, and then use epoxy when transferring. Many faceters routinely use overnight drying/hardening periods with the epoxy.
 - b) Use a superglue initially to dop for cutting/polishing. Then use an epoxy for transferring. Put into a 175° F. oven for about 30 minutes to an hour. The low heat weakens the cyanoacrylate glue and at the same time hardens/cures the epoxy. The faceter can then proceed to finish the stone after an hour or less of waiting time.
 - c) Make the initial dop joint with wax. The stone can be centered easily with a little heat. Then use epoxy when transferring. No heat is need with the epoxy. The initial wax joint can be dissolved with alcohol.
 5. If you want to keep tight control and have a rigid accounting of the epoxy cement when dopping, in terms of where the glue moves and to what extent it covers the stone, mix in a little food coloring or lamp black (powdered carbon) with a toothpick.
 6. Auto engine head gasket shellac, thinned with a little bit of alcohol can be used as a dopping wax.
 7. The major problem associated with transferring seems to be misalignment.
 - a) Quite often, the frame of the transfer block can be "sprung" or twisted.
 - b) Be careful with different sizes of dop shanks. The dop body used initially to cut a stone can be several thousandths of an inch (or more), smaller or larger than the dop body used in the transfer process. This will cause a misalignment.

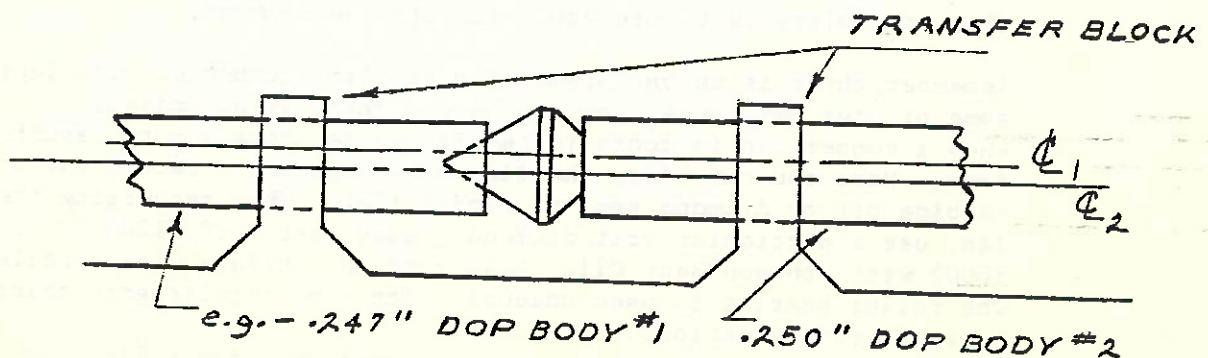


Fig. 1

- c) Many faceters suggest that the table/crown should be cut first. They claim that there is less chance for misalignment when the transfer is made with a flat-head dop on to the corresponding flat table.
- d) Another common source of misalignment is when the initially cut polished pavilion is transferred into a too shallow cone dop (Fig. 2). The culet hits the bottom of the dop "V." The solution to this problem is to drill slightly into the cone dop (Fig. 3).

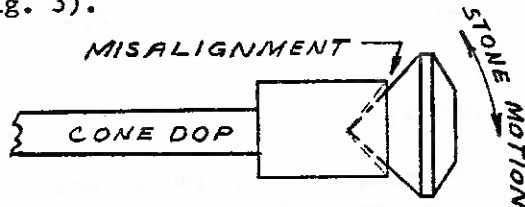


Fig. 2

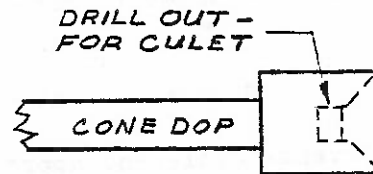


Fig. 3

The second panel discussion, later in the afternoon, dealt with "Principles of charging and Cleaning laps." This latter panel group had Peter Riva as chairman. The panel members who participated in leading the discussion were Cleon Kortge, Edward Rugenstein, Otis Edwards, John Forsythe, and Wayne Baird. Some pertinent and perhaps useful points which were raised are listed.

1. Use pure "Fantastik" household detergent to clean ceramic laps. Wipe with hand paper tissue which has been impregnated with the detergent. Then charge with 6B carbon stick and one squirt of Italdo - 100,000 grit diamond spray.
2. When using Italdo spray, cut with alcohol. Use a slow speed (10-50 RPM) for the polishing lap.
3. When cutting/polishing softer stones, clean the laps more often. Small stone particles flake off from the facet intersection edges. On the cutting laps, this is less of a problem because a liquid coolant/lubricant is being used and a flushing action is occurring. But on the ceramic laps or other polishing laps, using diamond with grease or oil, this becomes a more serious contamination problem because no flushing liquid coolant/lubricant is being used.

With the ceramic lap, using a stick carbon can sometimes help. Another possibility is to use baby oil with the diamond.

Remember, there is no one answer for problems connected with laps. Try some of your own ideas; you may be delightfully surprised.

4. When a copper lap is contaminated it may be necessary to resurface the face. Make one cut below the diamond charge and a second cut with a carbide bit or diamond tool to finish flat. When recharging the copper lap, use a particular grit diamond grease paste (600, 1200, 3000, or 8000) with Johnson Baby Oil. Roll into the surface with a roller bearing. The roller bearing is used uniquely with a particular grit charge only, to avoid contamination.)
5. Don't use soap and water to clean a copper or ceramic lap. Use "Lava" soap or household cleanser with a stiff bristle brush.

LAPIDARY WEIGHTS & MEASURES

CARAT:

The unit of weight used for gemstones.

One gram equals	... 5 Carats
One ounce avoird. equals	... 28.35 grams
One ounce avoird. equals	... 141.75 carats
One pound equals	... 453.60 grams
One Kilogram equals	... 1000 grams
One Kilogram equals	... 2.203 pounds

GRAIN:

the unit of weight used for pearls.

One grain equals	... 1/4 carat
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TROY WEIGHT:

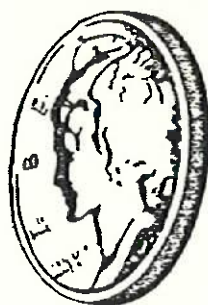
The weight used for precious metals.

24 grains equal	... 1 pennyweight
20 pennyweights equals	... 1 ounce
12 ounces equal	... 1 pound
One pound avoird. equals	... 14.58 oz. troy

MILLIMETER:

used to give dimensions of gemstones.

One millimeter equals	... about 1/25"
One inch equals	... about 25.4 mm.

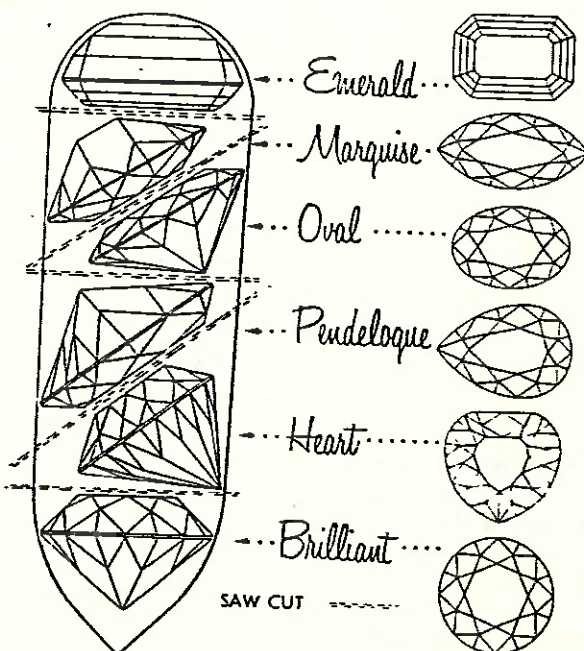


A thin dime weighs about 10 (+) Carats.

U.S. TO METRIC

Length		
1 inch	=	25.0 millimeters (mm)
1 foot	=	0.3 meter (m)
1 yard	=	0.9 meter
1 mile	=	1.6 kilometers (km)
Area		
1 sq. inch	=	6.5 sq. centimeters (cm ²)
1 sq. foot	=	0.09 sq. meter (m ²)
1 sq. yard	=	0.8 sq. meter
1 acre	=	0.4 hectare*
1 sq. mile	=	2.6 sq. kilometers
Mass		
1 grain	=	64.8 milligrams (mg)
1 ounce (dry)	=	28.0 grams (g)
1 pound	=	0.45 kilogram (kg)
1 short ton	=	9.071 kilograms
Volume		
1 cubic inch	=	16.0 cubic centimeters (cm ³)
1 cubic foot	=	0.03 cubic meter (m ³)
1 cubic yard	=	0.76 cubic meter
1 teaspoon	=	5.0 milliliters (ml)
1 tablespoon	=	15.0 milliliters
1 fl. ounce	=	30.0 milliliters
1 cup	=	0.24 liter (l)**
1 pint	=	0.47 liter
1 quart (liq)	=	0.95 liter
1 gallon (liq)	=	0.004 cubic meter
1 peck	=	0.009 cubic meter
1 bushel	=	0.04 cubic meter
Power		
1 horsepower	=	0.75 kilowatt (kw)
Energy		
1 calorie	=	4.18 joules (j)
*1 hectare equals 10,000 sq. meters		
**1 liter equals 1 cubic decimeter (dm ³)		

The
Economical
Way
To Cut
the 6
Basic Cuts
from
One Boule.



This is a diagram of a Spinel Boule which, by judicious cutting (with a thin diamond saw) can be used to create the six basic cuts: Brilliant, Oval, Emerald, Marquise, Pendeloque, and Heart.

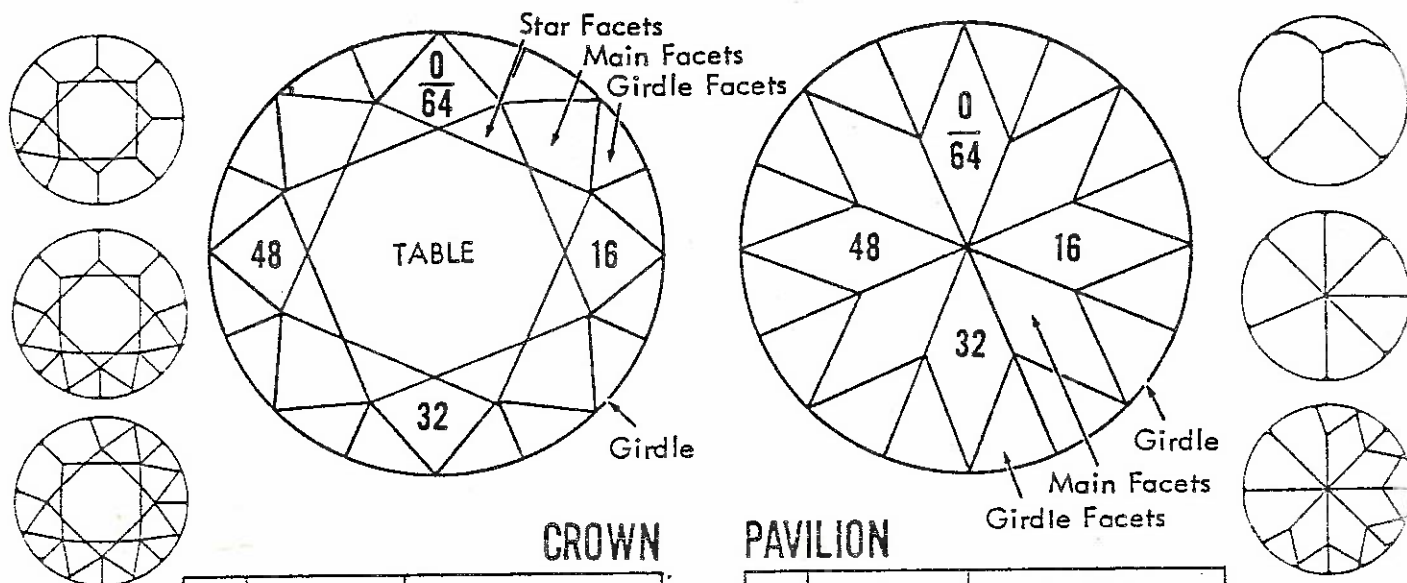
Courtesy of ARROW PROFILE CO.



FACETING TEACHERS OF AMERICA

Faceting the "American Brilliant" using a (64 Tooth Index Gear) Standard Sapphire Head®

NUMBERS and ANGLES are for QUARTZ and SPINEL



CROWN

	ANGLE	INDEX
M a i n s	37°	0 - 8 - 16 - 24 32 - 40 - 48 - 56
S t a r s	23°	4 - 12 - 20 - 28 36 - 44 - 52 - 60
G i r d l e s	44 1/2°	2 - 6 - 10 - 14 18 - 22 - 26 - 30 34 - 38 - 42 - 46 50 - 54 - 58 - 62

PAVILION

	ANGLE	INDEX
M a i n s	42°	0 - 8 - 16 - 24 32 - 40 - 48 - 56
G i r d l e s	45°	2 - 6 - 10 - 14 18 - 22 - 26 - 30 34 - 38 - 42 - 46 50 - 54 - 58 - 62

possible . . . variations in the size or proportion of the table, changes in the length of the star facets and the girdle facets of the crown and the pavilion.

The American Brilliant is one of the most beautiful of Gems and at the same time one of the least difficult to cut and polish, with a little practice the beginner soon acquires the necessary knowledge and "SPARKLER".

It seems that one of the most important things to consider is the Girdle, it must be a perfect circle and true with the center line of the Dop, the extra time spent in making it, will reward the faceter for his effort.

When the Girdle is true and perfectly centered, the cutting and polishing of the mains and girdle facets on both the crown and the pavilion are comparatively easy to accomplish. Once this is mastered one can then go into slight variations from the angles given by some of the Authorities, with delightful results. Many changes are

Of late we have seen many gems with somewhat larger table stars, and we kind of like them that way, that of course means that the crown girdles will not have to reach up so far to meet the stars, and corrections will have to be made so they will meet at the girdle at the same time.

Some cutters suggest that the pavilion girdles should reach 2/3 down to the point, we prefer 1/2 to not over 3/5 for the Quartz, Spinel and Corundums, this is of course a matter of taste and the faceter can follow his own inclinations with perfect freedom, staying within the limits of the refractive index of the kind of material he is working on.

We can make the above personal choices to create new brilliance with the stone. This is the reasons why our hobby is so facinating and richly rewarding.