



american
academy
of
gold foil
operators

Gold Leaf

November 2001

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2002 Dr. Scott B. Barrett
2003 Dr. David Thorburn
2004 Dr. David Bridgeman

AMERICAN ACADEMY OF GOLD FOIL OPERATORS

Annual Board Meeting October 10, 2001

INDIANAPOLIS MARRIOTT DOWNTOWN HOTEL

Meeting was called to order at 2:10 p.m. by Past President Tim Carlson. Members present were: Drs. Barrett, D. Bridgeman, Carlson, Cochran, Eichmiller, Gourley, Harris, W. Johnson, Keene, Lund, and Osborn.

The agenda for the meeting was distributed to all present. Minutes of the February 21, 2001 Chicago meeting were approved as published in the Gold Leaf in July.

Interim Treasurer's Report (not included in verbal report):

Assets - October 10, 2001		
CD	\$30,000.00	Matures 2/22/03
CD	25,000.00	Matures 6/19/02
Checking	25,120.11	

Total \$80,120.11

(Interest is compounding on CD's vs. receiving monthly payment.)

Receipts - 2000* 29,554.13

Expenditures - 2000** 14,763.95

\$14,790.18

* \$2,240 to be collected at meeting in addition. Also, greatest portion of dues collected in 2000.

** Does not include all expenses for this meeting.

Assets - January 1, 2001

CD	\$30,000.00
CD	25,000.00
Checking	12,994.28

\$67,994.28

Difference in Assets during 2001 +12,125.83

Dues + Journal Subscriptions 12,619.00

Journal Subscriptions Paid 5,910.00

Dues Received - 2001 6,709.00

Total members 277 (11 to be dropped, 2 deaths and there are 3 new applicants, bringing total to 267)

Dues paying members - 180 (plus the 3 new members for next year)

Life Members - 82

Honorary - 4

Correspondence:

Several letters from members not wishing to renew membership.

Letters from several members who were unable to attend this year.

Letter from MUSC and Marquette who are unable to host in 2003.

Invitation to host our clinical session at Nebraska in 2002.

Journal Report:

Dr. Cochran reports a good second year with the Journal. The backlog of manuscripts has been eliminated. Time for submission of articles to publication is just 12 months.

The symposium on Caries Management Alternatives was published as Supplement #6, with the same level of quality.

The Journal continues to grow in size each year. Due to the increase in size, and an increase in postage costs, there will be a \$10 increase in subscriptions for individuals in 2002. Students will be \$35.

Revenue has been increasing, thanks to Corporate Sponsorships, plus turning the monies from the two academies from loans into grants. Joan Matis has been instrumental in collecting new, as well as returning subscribers.

The Journal is being mailed to 592 subscribers in 56 countries outside of the USA.

2001 Meeting:

Dr. Keene has the essay program under control with several outstanding speakers on various subjects. Dr. Johnson had planned on two clinical days, but due to lack of operators attending, as well as some insurance problems, will just do one day, with all foil operations, a total of 13. Other arrangements are all in order, though numbers of attendees are down due to other commitments.

Future Meetings:

2002 - Halifax, N.S. October 9-12 with the Sheraton Halifax Hotel as our headquarters. We will be paying for clinic space at Dalhousie University, and probably will encounter problems with malpractice insurance for non-Canadians. Drs. Barrett and Keene will be working to get around this.

2003 - Lincoln, Nebraska. Dates not yet determined.

2004 - West coast. Will check Loma Linda, UCLA and Seattle.

Committees:

Literature and Research - Progress is questionable with the Museum at Maryland.

Nominating - David Bridgeman has been selected as the new Board member.

Interacademy Liaison - No report, other than mention of the Stibbs meeting and the Tucker Academy efforts.

Education and Clinical Seminars - No report.

Necrology - Two deaths reported: Don Fournier and Charlie Stebner. We also received the sad news that Bill Roberts' wife, Bea, had passed away.

Outstanding Clinician - Wendell Foltz has been selected.

Distinguished Member - Mel Lund will be this year's recipient of the honor.

Constitution and Bylaws - Nothing is pending.

International Meetings - No report at this time. Looking for other than U.S. areas that would be interested in courses, etc.

Gold Leaf:

Another well-done issue was distributed in August. Allan would be interested in stepping down as editor in a few years.

Unfinished Business:

Web site is in place at www.goldfoil.org thanks to the efforts of Von Hanks, new member.

New Business:

Thank you note was received from the Indiana student awardee.

Bob Keene mentioned a number of items: Possible updating of our focus to include east gold in the printed matter. Should we advertise the fact that we are a small group, as opposed to the size of the Operative Academy - members might get more out of it. Is the Gold Leaf our best way to get the word out? Committees need to have new blood. The average age of our members is on the older side. Should we have more input and membership from the many study clubs around the country? We need to enhance our image.

Bob expressed a desire to hire a particular speaker for the banquet, and volunteered to pay the honorarium himself. The group did not want to see him do that, and passed a motion to allow him to go ahead with his plan, at Academy expense.

A brief discussion was held to consider using some of our funds to enhance the meetings for those who attend, rather than save it for the sake of saving it. There was concurrence with this.

The meeting was adjourned at 4:30 p.m.

Respectfully submitted,
Ronald K. Harris, D.D.S., M.S.D.
Secretary-Treasurer

President's Message

FROM WHERE I SIT ... A MESSAGE FROM BOB KEENE

Two weeks have passed since the closure of our 2001 Annual Foil Academy meeting in Indianapolis. The quality clinical procedures and the excellent speakers more than made up what the meeting lacked in numbers. I want to thank all those who made the effort to gather, operate and speak. We have a great group of members and the hospitality of the dental school and city was what you would expect from the likes of Ann and Tim Carlson and La Verne and Ron Harris. Thank you!

Special congratulations are extended to Wendell Foltz (the Outstanding Clinician of the Year) and to Dr. Mel Lund (recipient of the Distinguished Member Award). Both richly deserve this special recognition from the Academy.

A recent letter from Ron Harris, written to the board, has lifted one of the challenges your council was to have faced. Ron has offered to continue as Secretary-Treasurer. He has been doing that work for ten years and earlier suggested that he needed to step down. I doubt that there will be any hue and cry for his replacement, but I would submit that some aspects of his "job" need to be shared by other members. His is a daunting task. Better to say "theirs has been a daunting task", since both Ron and La Verne have been double-teaming the chores of keeping this academy alive. Thank you Harris!

There are issues centered on our mission that I believe your council needs to consider:

1. The Academy of Gold Foil, in some respects, has become the Academy of Gold since we have elected to include indirect gold in our clinical focus. Will our name need to reflect this fact?

2. The increased difficulty we are having covering the operators with liability insurance makes members who wish to operate from

other countries problematic. We will be searching for alternative forms of coverage for national and international operators in order to keep alive the clinical presentations so vital to our mission.

3. The membership of our organization remains stable in a static sort of way. Are we willing to engage in an outright campaign to gain younger members? Is there a responsibility for each member to encourage new members?

My sincere thanks is extended to Richard D. Tucker for his leadership of the Academy this past year. Thanks also to the various committee members for their work as well. You will be hearing shortly of the new assignments to our committee structure.

Your council welcomed David Bridgeman as its' newest member. I look forward to working with him and other members of the council during the coming year. Due to the willingness of Dan Henry and Clyde Roggenkamp, Mike Cochran can hang up his camera during the clinical portion of our meeting. Mike (and Tim, too), you have over the years provided a very important part of the value of our meetings. Thank you very much. Dan and Clyde have big shoes to fill. Perhaps that's why there will be two of them.

Please mark your calendars now for our 2002 meeting in Halifax, Nova Scotia. October 9-13, 2002. Although this will be our 47th Annual Meeting we will have been in existence 50 years. So please help make this a real celebration year! You can be assured that Warren Johnson will have a superb speakers program and that Jim Gourley will have the clinic session well organized. We will be operating from a nearly new graduate dental clinic at Dalhousie University. Please plan on attending!

A note ... from the Secretary

October 21, 2001

To The Board Members:

Here is your copy of the minutes. Some of the voices on the tape were very soft, so, I may not have gotten the details completely correct. Let me know right away if there are any big omissions or changes.

Several items: mark your calendars for the Board Meeting in Chicago on Wednesday, February 20th, 2002, so we can sort out details for the next few years. I have decided I wouldn't have anything to bitch about if I give up this job, so if you want me to continue, I will do it. Something you may want to consider for annual meetings, where insurance precludes doing our clinical thing, how about having a number of members just go through clinical cases, with slides. Since we have trouble getting many students to attend the clinics, maybe this

would be a way to get our message across. Also, someone had mentioned returning to Portland and San Francisco for a meeting, but San Fran really indicated they don't want us, and Portland basically paid no attention to us at all. We could return to Hawaii and just do the slide show versus the clinical session. Same for San Francisco. Give it some thought!

I don't have the bills from the hotel yet, but will send out a report when everything comes in.

Hope you enjoyed your stay in Indy.

Regards!

Ronald K. Harris
Secretary-Treasurer

REGISTRATION & BOARD MEETING



Ann and La Verne welcome everyone to Indianapolis.



Social Hour ... with "heavy" hors d'oeuvres



and more ... Social Hour



BANQUET



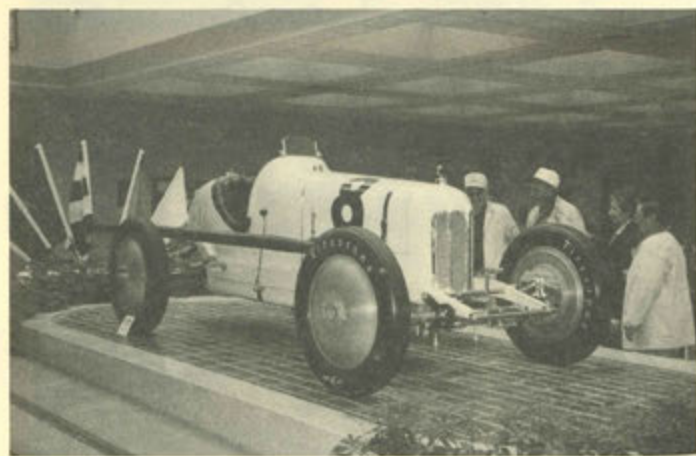
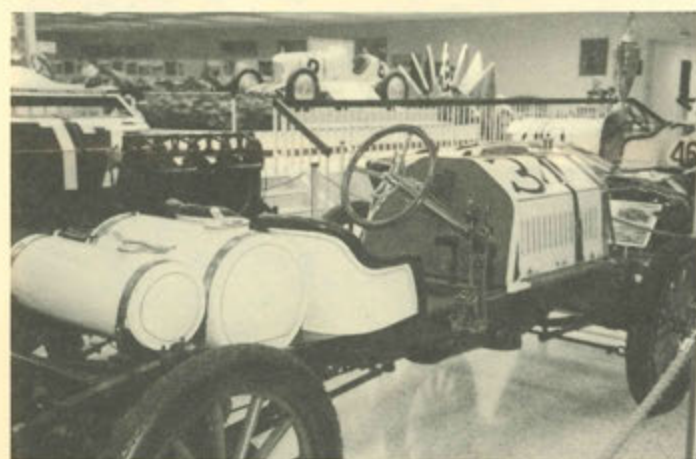
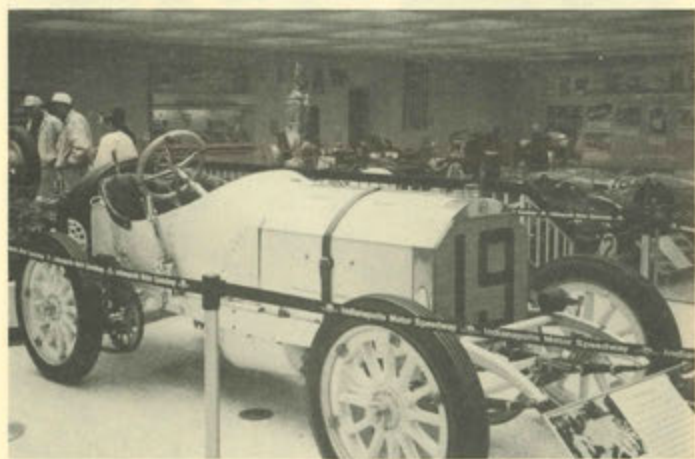
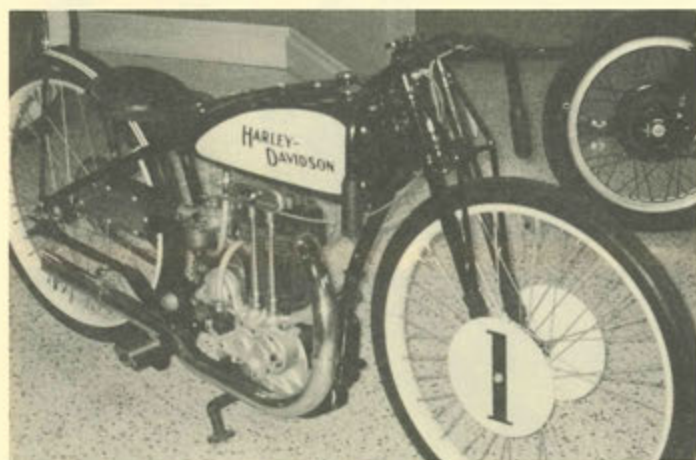
and more ... Banquet





and ... as you can see ...
A Great Time Was Had by All!

FAMOUS MOTOR MUSEUM AT "THE BRICKYARD"



CLINIC SESSION



Dr. Bruce Haasken



Dr. Chet Gibson admires the procedure, Dr. Wendell Foltz.



Dr. David Bridgeman



Dr. James Gourley



Dr. Dan Saucy



Dr. Barry Evans commences a class V.



Dr. Mark Modjean with a CI II.



Dr. Norman Tischer from Landshut, Germany.



Dr. Bruce Small sets the stage.



Dr. David Bridgeman ably assisted by Dr. Fred Eichmiller.

Clinician of the Year Award



Dr. Wendell Foltz "Clinician of the Year".

This award was established at the behest of Mr. Victor Williams of the Williams Gold Company to honor younger members of the profession who not only show great talent but who lead their profession and continue to inspire those with whom they come into contact.

Dr. Wendell Foltz amply fills these requirements he has a unique ability to solve dental problems, and a common sense approach to the complexities of today's dentistry.

Wendell's interest in dentistry commenced at an early age when he adapted anaesthetic carpules from his local dental office for use in his junior microscope kit. Upon entering dental school in 1973 he soon used up his total gold supply in the manufacture of jewellery, and in this way won the heart of the most beautiful girl on campus. In dental school besides being

one of the top students, he received the I.C.D. Outstanding Achievement Award.

Wendell runs a busy practice but still finds the time to devote to the D.D.S. program, the Northwest Medical Teams and numerous dental health screening programs.

Wendell has numerous outside interests. He is a farmer, a pilot, a motorcycle rider, a hunter, and a white water rafter. He has been married to his wife Gloria for 32 years and they have three children. Andrew, who is in the Air Force in Germany, Mindy, a Veterinarian and recent first-time mother, and Sarah, a homemaker and mother of two boys.

On behalf of the Academy, congratulations to you Wendell, for being selected to be the Clinician of the Year.

Chet Gibson



Dr. Chet Gibson introduces "Clinician of the Year" Dr. Wendell Foltz.

THE NEW BOARD



The New Board, introduced by Dr. Tim Carlson, Dr. Robert Keene, Dr. Warren Johnson, Dr. James Gourley, Secretary-Treasurer Dr. Ronald Harris, Dr. Scott Barrett, Dr. David Bridgeman.

AMERICAN ACADEMY OF GOLD FOIL OPERATORS DISTINGUISHED MEMBER AWARD DR. MELVIN R. LUND

It is a singular privilege to have an opportunity to publicly honor someone who has had an indelible impact on so many professional careers, including my own. It is a double pleasure to be asked by the recipient, himself, to deliver this honor. Thus, I find myself in the enviable position of presenting the American Academy of Gold Foil Operators' Distinguished Member Award to Dr. Melvin R. Lund, affectionately known as "Pug" to his friends.

Over the 28 years of our association, I have learned many things about this man. He was born in Wisconsin and spent his early years there before moving to the state of Washington to finish high school and complete his pre-dental training. I would like to note that he was honored in 2001 as alumnus of the year by his high school, Auburn Academy. Dr. Lund received his D.M.D. from the University of Oregon in 1946, married his wife Marg, and served in Korea with the Army Dental Corps for two years before leaving the service and setting up private practice in Camas, Washington. In 1953, Pug decided on an academic career and went to the University of Michigan to bolster his credentials by obtaining a Master's of Science Degree in Restorative Dentistry. He then joined the founding faculty at Loma Linda University School of Dentistry and spent the next 16 years working with Lloyd Baum and others to create an outstanding educational institution.

Our paths first crossed in 1973 when I entered his Graduate Operative Dentistry Program at Indiana University School of Dentistry. He had assumed leadership of the Department of Operative Dentistry in 1971 after chairing the Restorative Department at Loma Linda for 13 years. My first impressions were of a kind and gentle man who exuded an air of wisdom, competence and confidence with no trace of ego. He seemed to be completely comfortable and at peace with himself and quickly made his new residents feel welcome. He and Marg immediately treated us as members of their family and made sure that we understood that we had a new home away from home. As a mentor, Pug had a way of making us want, more



*Distinguished Member Award
Dr. Melvin R. Lund and Mrs. Margaret Lund*

than anything else, to please him with our work and accomplishments. He has a knack of bringing out the best in his students by correcting without criticism, demonstrating without intimidating, demanding without discouraging and constantly promoting the concept of excellence.

Dr. Lund's contributions to his profession, church and community are exemplary and extensive. Whether it is the National Association of Seventh Day Adventist Dentists, Lions International, or one of 13 Dental Academies he has never just been a member, but always actively served on various committees, boards and councils or held prominent office. Pug is one of the founding members of the American Board of Operative Dentistry where he continues to serve as an examiner, and is an active reviewer for our journal *Operative Dentistry*. He has authored or contributed to 12 textbooks, published over 45 papers, and lectured extensively both nationally and internationally. He has also been extremely active in promoting his first love, direct gold. Dr. Lund's dedication to his profession has been recognized with awards from both Loma Linda and Indiana Universities, from his graduate students and with the 1991 Award of Excellence from the Academy of Operative Dentistry. Somehow, he still finds time to be a loving father to three children, Mark, Chris, and Kelley, grandfather to nine grandchildren (we're not sure if they will make it into double figures, but it is a possibility). Pug is also an active snow skier, tennis player, and carrier of all the antiques that Marg finds to furnish their home.

I can't begin to estimate how many lives have been touched and improved by Pug's humanitarian approach to all things. He is loved and respected by his students and colleagues. With Marg by his side, he has gathered, trained, and nurtured an international family of exceptional dental professionals that are carrying the torch of excellence all over the world. Although he has officially retired and holds the title of Professor Emeritus, Pug continues to contribute to our educational program on a



Dr. Michael Cochran introduces the Distinguished Member.



Distinguished Member Dr. Melvin Lund thanks the Academy.



Dr. Melvin Lund with Dr. Michael Cochran.

weekly basis. He teaches one day a week in the pre-doctoral technique course, another day a week in the Graduate Operative Dentistry clinic, and also lectures in several of the graduate classes. He spends hours in the library and on the internet so that he can stay "current" for the students.

If I were forced to single out one attribute that makes Pug truly special, it would be that he has the unique talent of simply inspir-

ing by example ... both in his personal relationships and his professional activities. I have been privileged to benefit from his teaching and mentoring and am extremely proud to be his friend. I can't think of anyone who is more deserving of recognition by this Academy than Dr. Melvin R. Lund and it is an honor to present him with his Distinguished Member Award.

Michael A. Cochran

President's Ceremony



President Dr. Richard D. Tucker brings the banquet to order.



President Richard Tucker passes the gavel of office to Incoming President Robert Keene.



President Dr. Keene thanks Past President Dr. Richard Tucker.



President Keene adjourns the banquet.

DIDACTIC SESSIONS

Important Concepts in Restorative Dentistry

presented by Dr. Gordon J. Christensen

Dr. Christensen commenced his address by describing the evaluation process at the Clinical Research Associates Institute in Utah which he stressed is a non-profit organisation funded by courses and subscriptions (100,000 worldwide). The team, led by his wife Rella who has a Ph.D. in biological sciences, consists of physicists, biologists, electrical and other engineers (these are young scientists) and 400 volunteer dentists. The circulation of these results is a sound form of peer review, and mistakes have only occurred twice in 25 years. He also stressed that field usage of the materials and devices **MUST** be economically viable.

In demonstrating the work at the Institute it was shown that some departments, e.g., the "in vivo" digitised wear studies function 24 hours per day. Proceeding to infection control it was noted that 70% of the products *did not work*. C.R.A. utilise the polio virus and tubercle bacilli to ensure a seriously demanding test.

As a preliminary to discussing potential allergies it was mentioned that some 40,000,000 crowns are placed in the U.S.A. each year, and a breakdown of the alloys utilised showed that 31% were high noble, 15% all ceramic, 5% noble alloys (Pd containing), 8% gold, 6% resin, and 3% Titanium. Porcelain fused to metal at 71% remains the overwhelming leader, with 15% all ceramic, 8% gold and 6% composite.

Of the resin based systems Belle Glass showed some 60 microns of wear per annum and Targis Vectris 150 microns (amalgam 20 microns). The accuracy of fit of crowns from the average commercial laboratory is in the vicinity of 90 microns, and may be up to 150 microns.

A lengthy discussion of the potential for allergic response to various metals followed. Notably strong in this regard are the Ni alloys (a common element in jewellery) and also Cu/Pd alloys. Al., the most common element in the earth's crust, was

also noted as a possible allergen. A complete list of potential elements involved in allergic response was given as: Al. Be. Cu. Cd. Cr. Co. Au. Hg. Ni. Pd. Ag. Sn. Zn. There are no known allergies to Pt. or Ti. and those reported in relation to gold were in relation to the SALTS used to treat arthritis and not the Au element per se.

Turning his attention to direct operative dentistry and commencing with pin restorations he noted that pure Titanium pins were far superior (not Ti alloy) to all others particularly the Ni/Cr plated pins.

Amalgam he stated has "a splendid and **SAFE**" track record, and a wear rate of only 20 microns per annum. He feels that the use of amalgam will disappear in Europe and in North America, but continue elsewhere, making particular note that the *fees for amalgam* have always been "way too low"! Spherical alloys require low packing pressures, bonding helps to reduce post operative sensitivity.

DENTINE BONDING received attention following amalgam, and Dr. Christensen clearly stated that where VENEERS or similar applications were concerned that this was NOT A PRACTICAL APPLICATION, and that in the PROXIMAL BOX bonding agents are "A JOKE"! Retention is a must!

All ceramic systems and CAD/CAM are growing (unless they involve a "dentist accomplished" factor). Cerec 3 machines cost U.S. \$89,995 so that they require considerable amortisation. The amount of Al in Procera and Inceram systems was questioned but their strength praised. There is an urgent need for a great deal of research to be focused upon those elements that provoke allergic responses in people!

In conjunction with crowns the selection of cements for different situations was considered, whether it was the resin bonded for all ceramic systems or the popular varieties of G.I. cement for cast crowns. A significant concept is the ability to retrieve a crown by cutting and splitting (as to a total grind down).

Prior to commenting upon posterior composites a few remarks were made concerning the new DIAGNADENT (a red



Dr. Robert Keene introduces the lecturers.



Dr. Gordon J. Christensen



President-elect Bob Keene and Dr. Gordon Christenson



Dr. Melvin Lund

laser) method of caries detection that picks up 97% of the lesions as opposed to 50% detection rates from conventional radiographic techniques. Cost U.S. \$2,600.00!!!

Bonding agents fall into 4 classes: 1, Acid etch/Prime/Bond; 2, Acid etch/Prime and Bond; 3, Acid etch and prime/Bond; 4, Acid etch and prime and bond.

It was emphasized that microleakage occurs with all restorations, and that it really was not a significant factor in therapy. Indeed fluid is constantly being transferred through the dentine from the pulp and into the enamel exiting through cracks and similar features in teeth. Our most successful restorations, cast gold inlays/onlays, etc., still exhibit microleakage, and last for considerable periods of time!

The History of Gold

presented by Dr. Melvin Lund

Dr. Lund traced the use of gold, and the value placed upon this metal throughout known history. Many civilisations have extravagant and exotic displays of gold from the ancient Egyptians onwards. There is a remarkable display to be seen in Istanbul in Turkey, as there is also in Spain. Mexico, however, has relatively few cathedrals which are so decorated due to the Spanish lust for the metal.

Buildings around the world are decorated with gold leaf, fine examples of which may be found in Thailand and Burma (Myanmar) and indeed throughout the Far East.

The usage in dentistry has been widespread, particularly in North America, however two-thirds of the gold in North America is used for jewellery. Today large amounts are used in circuitry in the modern "wired age". It is possible to create an ultra thin coating on glass and thereby exclude ultraviolet light.

Much gold has been mined from open pit mines, and may also be retrieved utilising rockers or cradles in panning technique. Other deposits are extremely deep as in Kalgoorlie in West Australia and in South Africa. Certain techniques such as dredging or hosing have long been discontinued due to the extreme environmental damage occasioned by such techniques. Large quantities of blasted rock must be crushed to produce gold, a cyanide solution being used to help isolate the metal. Carbon grains can then be used to absorb the gold, and

then cyanide and NaOH used to create a precipitate. This is collected in a steel wool which is in turn flushed of its gold content. This is then melted into ingots which can be electrolytically purified to remove the silver and copper.

Russia, South Africa, U.S.A., Canada, and Australia are the principle producers with some 123,000 tons having been produced to this time. Gold can be reduced to 0.000027" thick and 1 grain made to cover 75 sq. yds. or produce a wire 550' long.

The manufacture of gold foil in its various forms through from the malleing of the 'clutch', the use of parchment from Westminster, and the hands-on and meticulous care required to make foil available to us once again demonstrated just how fortunate we are to have this material. The varieties of foil available were shown (some no longer made) and included Matt Gold, Goldent, Electralloy R.V. E.Z. Gold along with the traditional Gold Foil Books (no. 4).

In conclusion a video, demonstrating the manufacture of E.Z. Gold in the three different sizes, was shown. Spherical gold which has been passed through a 150 mesh screen is incorporated into extremely pure wax over a water bath. After this is rolled into set diameter ropes and cut, it is refrigerated to permit separation of the individual pellets which are enveloped in foil somewhat thinner than the standard no. 4 foil.

What We Need to Know About the White Stuff

presented by Dr. Steven Duke

Dr. Duke has devoted a considerable amount of time looking into and researching the properties of the composite resins and was quick to point out the difficulties experienced by people in his position in regards to presenting definitive positions due to the rapidity with which the manufacturers make modifications to their products. This makes it extremely difficult for researchers to run clinical studies of adequate length.

In earlier times definitive care was defined to be care that in a good environment could last for 25 years. This has been revised downwards recently to between 3-5 years.

In consideration of decisions that are made, it was stated that there should be good reasons for decisions, and this meant "performing the Right Thing for the Right Person at the Right



Dr. Steven Duke



Dr. Frederick Eichmiller

Time". Restorations fail at the interface, and it behooves dentists to understand the limitations of the materials and of course be cognascent of their own abilities. This was clearly demonstrated by slides of some 50-year-old Sevriton restorations, the comment being that they were from the hand of a superior operator!

In discussing the resins a history of the different types was displayed, and it was stressed that the changes that have taken place lie predominantly in the nature of the filler particles, the chemistry remaining essentially the same. There is a changed Rheology from the original formulations. We have seen quartz, various fibres and silica, whichever system is employed. However, it is the silane coupling which is the weak link in the chain.

In recent years much has been made of the treatment of Class V lesions without preparation. However, Dr. Duke stated very clearly that because altered dentine would *not* hybridise this strategy would not be successful and further, that the single system products would not solve the problem.

Postoperative sensitivity is frequently a failure in technique in which dentine tubules have been left exposed. A comparison between copalite and desensitizing bonding showed that the two materials are equal in this respect, and the "gasker" tendency produced by the bonding technique could be a particular drawback.

In reviewing the composite crown systems it was stated that the urethane/dimethacrylate of the Belle Glass showed the best results, and the Targis Vectris had demonstrated the least effec-

tive results, and is also a system which requires over development of the contours between the pontics and the abutments and also a manufacturers stipulated prohibition on post insertion adjustments which might cause fibres to be displayed.

C.A.D./C.A.M. looks promising with a fit now down to or approaching 40 microns. The scanning technique may be introrally of the tooth itself, or of a die created from an impression. Again there will be problems in obtaining full and accurate marginal impressions with either technique. Occlusion is an area that will require a great deal of development, currently a squash bite is utilized but it seems probable that programs can or could be developed to include border movements in the future.

The Current Status of the Mercury Battle

presented by Dr. Frederick C. Eichmiller

Dr. Eichmiller gave us an insight into the renewed battle that is being waged in regards to mercury. He spoke to those strategies that are being deployed to create a balanced, practical and fair resolution in regards to mercury and the environment.

It was stressed that mercury is a very common element in nature, and tht it is impossible to get away from it. Other elements such as aluminum are also very common and at one time were raised in regards to Alzheimers disease.

OBITUARY

DR. ROBERT CANNON

I regret to inform the Academy that my husband, Dr. Rus Cannon (Bob) passed away on July 7th after a long illness. He very much enjoyed a long association with his friends in America and looked forward to the meetings every year. Very best wishes for a long and happy future.

Sincerely, Jean Cannon, P.T.O.

P.S. I have several gold foil restorations in my mouth that Bob did over 30 years ago and they are still fine! Bob's hobby was to breed race horses and he called one Gold Foil. She did well and is now a very good brood mare.

By itself, mercury is non-toxic and has frequently been swallowed with no lasting ill effects. Indeed, suicide attempts, where above 10 lbs. of elemental mercury were swallowed produced neither problems nor ill effects. An intravenous injection of mercury disappeared through excretion in a few short weeks.

It is of particular importance to note that the *ambient level in nature and in the public water supply frequently exceeds the E.P.A. standards!* Dr. Eichmiller told of a dental office being closed down even though the discharge levels were in fact lower than that to be found in the municipal intake water supply!

Overall, there has been a very substantial decrease in usage. However, the 'Clean Water Act' has been expanded from power plants, halogen manufacturers and fossil fuels to include dental offices. Further, those who were opposing the use of dental amalgam (a relatively small number) have now joined forces with the environmental lobby to produce a much larger force (probably over 50,000).

Effluent into lakes is regulated at levels of 1.3 nanograms/litre (parts/trillion) for the Great Lake region surface water to 12 nanograms/litre for the remainder of the country. These levels are exceeded by 1.5 to 40 times by the standard drinking water level of 2.2 micrograms/litre. Urinary excretion is normally in a range of 3-4 micrograms/litre.

The ability to test for the element has increased dramatically going from 0.2 to 0.0005 micrograms/litre. It is intended that there be no further use of mercury after the year 2020!

Mercury, which is released into the environment and is changed in riverbeds to methyl mercury becomes extremely toxic with a maximum EPA allowable level in fish of only 0.3 parts per million. The compounds accumulate in the fat. At this time it is difficult to assess all the sources. many household products contain the element such as cleaning powders, and the source has yet to be quantified.

Strategies that are being developed include everything from evaluating various types of separators (up to 99+% effective) to hiring consulting groups with environmental engineers. The means of removal vary between sedimentation, filtration and ion exchange technology. **Regardless, it is absolutely essential that a workable, practical and economical approach to testing be adopted.** This is not the case at this time!

It is not only dentistry but also hospitals, medical practices and pharmaceuticals in the health field that are being targeted.

Plans are being propagated to ask for assistance from government, specifically from the E.P.A., and the Small Business Agency.

Clearly, there is no substitute for the mercury in amalgam, and as a compound it is completely safe to use! Dentists show no higher serum levels than the general population (encapsulation helped this) so that it is hopeful that a successful application for a 'VARIANCE' can be made.

The Riverview Hospital Blood Conservation Program

presented by

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A truly remarkable program in the conservative use of blood and blood products has been developed at Riverview Hospital in Noblesville, Indiana. There were teething problems and sceptics to be either overcome or persuaded, but the end result is a giant leap into the future.

The goals were the conservation of a diminishing blood supply, allow patients to give some of their own blood, to provide alternatives to the standard routines, and to create a centre for excellence in regards to blood and blood products.

An assessment of the requisite technology was made, and a suction with no more than 110 mms Hg was selected (so as not to lyse RBC), a self-regulating user friendly unit with salvage reservoir and cell washer.

Construction cornerstones:

1. Erythropoietin.
2. Acute Normovolemic Hemadilution.
3. Intra operation salvage of blood. (Must be sterile.)
4. Platelet Gel.

Patients presenting with a low Hb are given 3X IM injections preoperatively. Haemacure folic acid and iron. (\$1,500.00)

The platelets are used to create a platelet spray which enhances visibility considerably, reduces blood loss so that where 300 ccs were previously lost the new figure is 55 ccs. The spray is tested to ensure that it works. At an additional cost of approximately \$20.00, the white cells are discarded. An Hb. is taken both before and after the procedures. Autogenous blood (2 units) was being drawn prior, but the practice is reducing. All blood leaves the hospital with the patient, none is retained.

The platelet gel device is adaptable to all cell washers, and the units can process 6 units of blood before requiring a switch to a new sterile set. The whole process is extremely cost effective and it would indeed be possible to have such a unit installed in a private office.

The Riverview Hospital used only 12 units of blood in the previous year. There are now 8 other hospitals accredited as fully utilising this conservation technology, and a number that are partially utilising it. Regarding the budget for blood and blood products there has been a huge saving.



Ms. Nancy Chance and Ms. Rochelle Strong