

The H.I.A. Journal

OFFICIAL PUBLICATION OF THE HOROLOGICAL INSTITUTE OF AMERICA



APRIL 1949

MEMO TO WATCHMAKERS:
Order Bulova
Material Cabinets
From REID'S

GENUINE
BULOVA

MATERIAL CABINETS

CREATED BY THE BULOVA FACTORY FOR YOUR CONVENIENCE

SAVE \$30.50

\$130.00 worth of Bulova parts for only \$99.50 plus free 2 drawer steel cabinet.

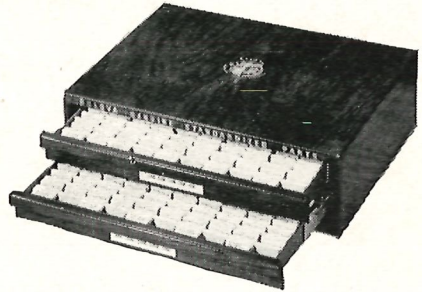
540 BULOVA PARTS

for

5AB—6AH—7AM—7AK—8AE
 8AH—10AE—10AK—10BA—10BC

54 items are supplied for each of the models listed as follows:

- | | |
|-------------------|--------------------------|
| 5 Balance staffs | 1 Winding pinion |
| 5 Stems | 1 Clutch wheel |
| 5 Mainsprings | 5 Crown wheel screws |
| 5 Setting springs | 5 Setting lever screws |
| 5 Click Springs | 5 Lower cap jewel screws |
| 1 Setting lever | 5 Top cap jewel screws |
| 1 Yoke | 5 Ratchet wheel screws |



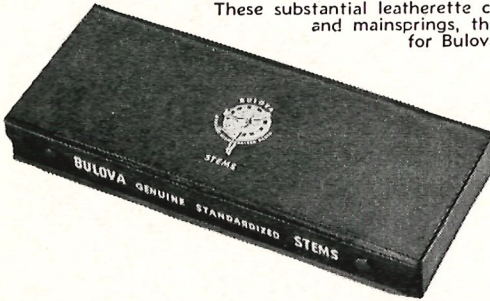
FREE 2 DRAWER STEEL CABINET

Striking wood-grained, heat and chemical stain resisting finish—Drawers equipped with movable plastic dividers—Designed with removable pegs to permit stacking with standard size cabinets (13 1/4" x 10 1/4")—For beauty and efficiency, this up-to-date cabinet is without a peer.

#1. GENUINE BULOVA FACTORY MATERIAL CABINET..... \$99.50
 (\$9.50 down and \$10.00 per month if you wish)

Bulova Bench Drawer Material Cabinets

These substantial leatherette cabinets give a larger coverage on staffs, stems, and mainsprings, than the #1 cabinet. A cabinet is also available for Bulova crowns. Please note that there are no crowns included in the #1 cab.net.



INTERCHANGEABILITY CHARTS SUPPLIED WITH EACH CABINET

- | | | |
|-----------------|--|----------------|
| | BULOVA STEM CABINET | |
| | 36 stems to fit 97 different models | |
| #3. Each | | \$11.75 |
| | BULOVA STAFF CABINET | |
| | 34 staffs to fit 101 different models | |
| #4. Each | | \$13.75 |
| | BULOVA MAINSPRING CABINET | |
| | 44 mainsprings to fit 100 different models | |
| #5. Each | | \$19.75 |
| | BULOVA CROWN CABINET | |
| | 83 crowns to fit complete Bulova line | |
| #6. Each | | \$30.00 |

ALL MATERIAL IN INDIVIDUAL BULOVA FACTORY SEALED ENVELOPES

To order any of these Genuine Bulova cabinets just check below:

#1 #3 #4 #5 #6

Check terms desired below:

Send open acc't Send C.O.D.

Send installment contract

BURTON M. REID SONS INC.

"The House of Friendly Service"

1st and Washington

Springfield, Illinois

... Bulletin from The Watchmakers of Switzerland

IT'S HERE!

Distribution of Staffs and Stems in the New Official Package for Swiss Watch Repair Parts Has Started!



- Package is made of heavy foil, protects parts from damage.
- Package is carefully sealed against moisture and corrosion.
- You're sure to get the staffs and stems you order, in factory perfect condition.
- The label carries complete data for quick and easy identification.
- Label identification is keyed to the system set up by the Official Catalogue.

The first parts to be packaged are staffs and stems for the most widely used Ebauches movements shown in Part I of the Official Catalogue of Swiss Watch Repair Parts. You'll receive advance notification when the package is used for additional parts; and future plans include efforts to package *all* parts for *all* Swiss watches.

Your regular supplier will fill your orders with the packaged staffs and stems. However, until full national distribution of the packaged staffs and stems is attained, your orders will be filled with genuine, unpackaged parts. So, for a while, you may be getting some unpackaged staffs and stems.

Be sure to order by the Official Catalogue of Swiss Watch Repair Parts (Part I). Whether the part you're ordering is packaged or not, you'll find your work easier, you'll find that orders come back faster when you work by the Catalogue. And, if the part you want is packaged, you can *only* get it by ordering with the Catalogue; for the identification of the new package is based on the system set up by the Official Catalogue.

What's the difference between packaged and unpackaged genuine Swiss parts? Very little. All genuine Swiss Watch Repair Parts are factory-tested to meet rigid specifications. But, with packaged parts, you're *certain* of getting a factory-perfect part that will fit the movement.

MORE NEW FEATURES

There's a new Official Cabinet of Swiss Watch Repair Parts. It's the only cabinet specifically designed for both packaged and unpackaged parts. It's fully described on page four of this bulletin.

And, A new Speaker's Kit is ready, too. It contains instructions, display material, easel presentations, and slides. Write to the Official Swiss Watch Repair Parts Information Bureau, 730 Fifth Avenue, New York City, for these kits; or to arrange for a speaker.

CONTINUED ON NEXT PAGE

The WATCHMAKERS OF



SWITZERLAND

... Bulletin from The Watchmakers of Switzerland (Cont.)

Now there are Seven ways in which the Official Swiss Watch Repair Parts Program helps you!

1. The Official Swiss Watch Repair Parts Information Bureau, located at 730 Fifth Avenue, New York, N. Y. Write, phone, or come in for information on your watch repair problems.
2. The Official Catalogue of Swiss Watch Repair Parts (Part I) has set up the new standardized system for identifying and ordering Swiss Watch Repair Parts.
3. The Official Dictionary of Watch Parts defines and illustrates all parts of all Swiss watches, with watch terms given in English, Spanish, French, and German.
4. The Official Swiss Parts Package is completely described on the preceding page of this bulletin. A heavy foil package, it protects parts against damage, corrosion and moisture.
5. The new Official Cabinet of Swiss Watch Repair Parts has been designed for both packaged and unpackaged parts, and is described on page 4 of this bulletin.
6. The new Speaker's Kit, described on the preceding page, is just the thing for dinners, banquets, trade meetings, wherever there's a speech to be made.
7. Advertising! Yes, every ad in the big consumer campaign sponsored by The Watchmakers of Switzerland drives home this repair slogan . . .

No matter what the make of your watch, your jeweler can service it economically and promptly.

And here's the ad that will be working for you every day in the month of May . . . No. 13 in this great watch-selling series.

What Will Be Your Share of Watch Sales in May?

THE LAW OF AVERAGES will give you some . . . salesmanship will give you more . . . and salesmanship plus advertising will give you a lion's share!

The ad on the opposite page is part of your advertising! It talks to people by the millions . . . reminding them that you—their jeweler—have the perfect gift—a watch.

Now too—as the ad points out—is the time to start driving for anniversary, Father's day and graduation gifts.

Alert jewelers will find a wealth of sales ideas in these advertisements.

They'll find it pays to follow them from month to month. To tie-in with their own efforts where possible. And, by writing to the Watchmakers of Switzerland, 730 Fifth Ave., New York City, it's possible to get permission to use the slogan that appears on every ad, every month in the year . . .

**For the gifts you'll give with pride—
let your jeweler be your guide**

The WATCHMAKERS OF



SWITZERLAND

**DURING MAY, THIS AD WILL MAKE 45,764,140 READER-
IMPRESSIONS IN LIFE, TIME, NEWSWEEK, COUNTRY GENTLEMAN**



1. Now is the time to buy that watch as a gift for the new bride or groom, to think of graduation and anniversaries. For there is no more eloquent gift than a watch for someone you love, the gift that stands

for constancy and friendship. Out of nearly 300 years of Swiss watchmaking traditions come the finest of today's jeweled lever Swiss watches—famous the world over for styling, dependability and downright value.



2. The Swiss have always designed their timepieces as precious jewelry. Your jeweler can show you wonderful new watches for women—watches with precious stones or platinum or gold or steel cases and quality jeweled lever Swiss mechanisms.

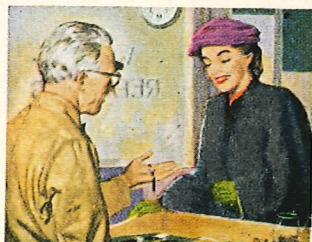


3. If your gift is for a man, remember that men are particularly fond of the new water-repellent and shock resistant watches, calendar watches, automatic self-winding watches, chronographs—and other contributions of Swiss craftsmanship.

Something old, something new in the watch you buy today...



4. When you buy a watch, remember that the *works and workmanship inside are what count*. The balance wheel alone makes half a million single swings a day. So be sure to buy a watch you can wear or give with pride—a jeweled lever Swiss watch.



5. When you buy a jeweled lever Swiss watch—you can always have it serviced economically and promptly. Your jeweler's watch repair experts are professionally trained and equipped to give your fine Swiss watch the care it deserves.

For the gifts you'll give with pride—let your jeweler be your guide

The WATCHMAKERS OF SWITZERLAND

© 1949 Swiss Federation of Watch Manufacturers

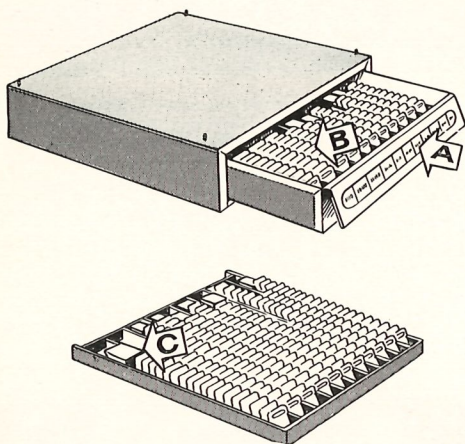


... Bulletin from The Watchmakers of Switzerland (Cont.)

INTRODUCING —

The New Official Cabinet of Swiss Watch Repair Parts

- The only cabinet that's designed for both packaged and unpackaged parts!



- Efficient, good-looking, new design! It's light, compact; measures only $13\frac{1}{4}'' \times 10\frac{1}{8}'' \times 2\frac{1}{8}''$. Smooth working drawers and cabinet are made of steel, in mahogany color. Tray inserts are of molded bakelite.

A The drawer carries its own index listings.

B Special slots in the tray channels hold the New Official Swiss Parts Packages, in an easy to get at, easy to see position.

C Plastic bins also fit the tray slots, are provided to hold unpackaged parts. Each bin has a hinged top and a card telling the movement and model no. of the parts it contains.

- Special flanges make it easy for you to buy the tray alone, and use it with the cabinet you now have.

The new Official Cabinet of Swiss Watch Repair Parts is the standard size approved by the W.M.D.A.A.

Your regular source of supply will handle distribution of the new cabinet. You can buy the cabinet complete with drawer, tray, and bins; or you can buy the tray and bins alone, with a special flange to fit the cabinet you now have. Your supplier will notify you when he receives his stock of cabinets and trays.

Important note: The ordering, production, supply, and manufacture of the new Official Cabinet is entirely a U. S. operation. It's made according to a design furnished at no cost by the Watch-

makers of Switzerland, and approved by the W.M.D.A.A. It's the *only* official cabinet of Swiss Watch Repair Parts.

Adoption of the Official Cabinet of Swiss Watch Repair Parts has been a cooperative step, involving much time, thought and effort on the part of U. S. Horological and Trade Associations, Importers and Wholesalers. Thanks and congratulations are due to *all* for the fine work in making possible the rapid, nation-wide introduction of this new Official Cabinet.

The WATCHMAKERS OF

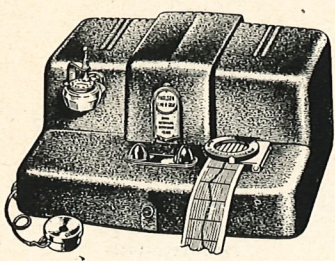


SWITZERLAND



AT EASE!

The scientific Paulson closes each day with a profit



And That Isn't All....

"Paid for Itself Many Times"
writes Weist & Bitterman,
Lodi, Cal.

Only \$490

Liberal Payment Plan

And What's More....

"Cannot begin to say enough"
writes Fred McAtee, Faribault,
Minn. "I have used other makes,
but your crystal control and con-
tinuous tape give it advantages
over any other machine."

ASK ABOUT
OUR NO RISK
TRIAL OFFER

PAULSON TIME-O-GRAPH

HENRY PAULSON & CO. 131 S. Wabash Ave.
CHICAGO 3, ILLINOIS

RADIO STARS LAUD SWISS WATCHMAKING



Dorothy Kilgallen and Dick Kollmar, a favorite Mr. and Mrs. radio team for millions of American listeners, are shown above personally inspecting the famed Swiss watchmaking skill during their late summer visit to Switzerland. In a series of transatlantic broadcasts of their daily "Breakfast with Dorothy and Dick" radio program, they have described their amazement at the myriad tiny parts almost invisible to the naked eye, which this Swiss workman is checking, involving an inaccuracy of 1/100th of a millimetre.

The heavily publicized slogan, "For the gifts you'll give with pride—let your jeweler be your guide," which has received the enthusiastic endorsement of the trade, will continue to popularize and promote the jewelry store as in 1948. The ad schedule will include important national magazines and newspaper supplements.

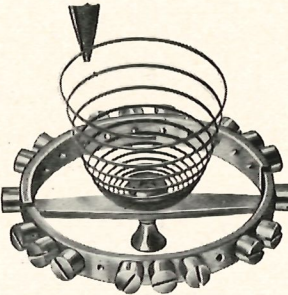
Know Your Vibrator • Mail Direct • Same Day Service

Flat, \$1.75
Breguet, \$2.50

Fitted to bridge . . .
No leveling necessary

Heavy mailing envelopes and
containers sent on request.

Jobbers inquiries invited.



Swiss and American

Send balance bridge, balance
wheel, stud and collet.

Contract estimates given to
Watch and Clock
manufacturers.

FREE SERVICES — (New hairspring not necessary)
*POISE BALANCE *RESTUD *RECOLLET

OUR UNCONDITIONAL GUARANTEE: A new hairspring supplied free of charge if you spoil the one previously supplied by us.

THESE AND MANY OTHER LETTERS FROM CUSTOMERS PROVE OUR SERVICE

Gentlemen:

"If we weren't already 'sold' on your work, we sure would be for the way you handled our last job. One of the boys ruined a collet by trying to open it and we sent the spring on to you in hopes you could put in a new collet and when it came back marked 'no charge,' that did it. We sure do appreciate your kindness and whatever we get in will be yours." FOX'S TIMING SERVICE, 104 E. Congress Lane, Savannah, Ga.

Dear Sir:

"I had sent the spring to two other places before you, with terrible results. I put it up to you to produce and you did! I put the spring in the watch—it was perfectly centered and level—my amazement was complete when the Watch Master showed it in perfect beat and only 15 seconds fast in dial up position—crown down, 30 seconds fast—crown up, straight across! I have already started to spread the good word around." J. A. FREW, 10228 Park Heights Rd., Cleveland 4, Ohio.

HAIRSPRING VIBRATING COMPANY

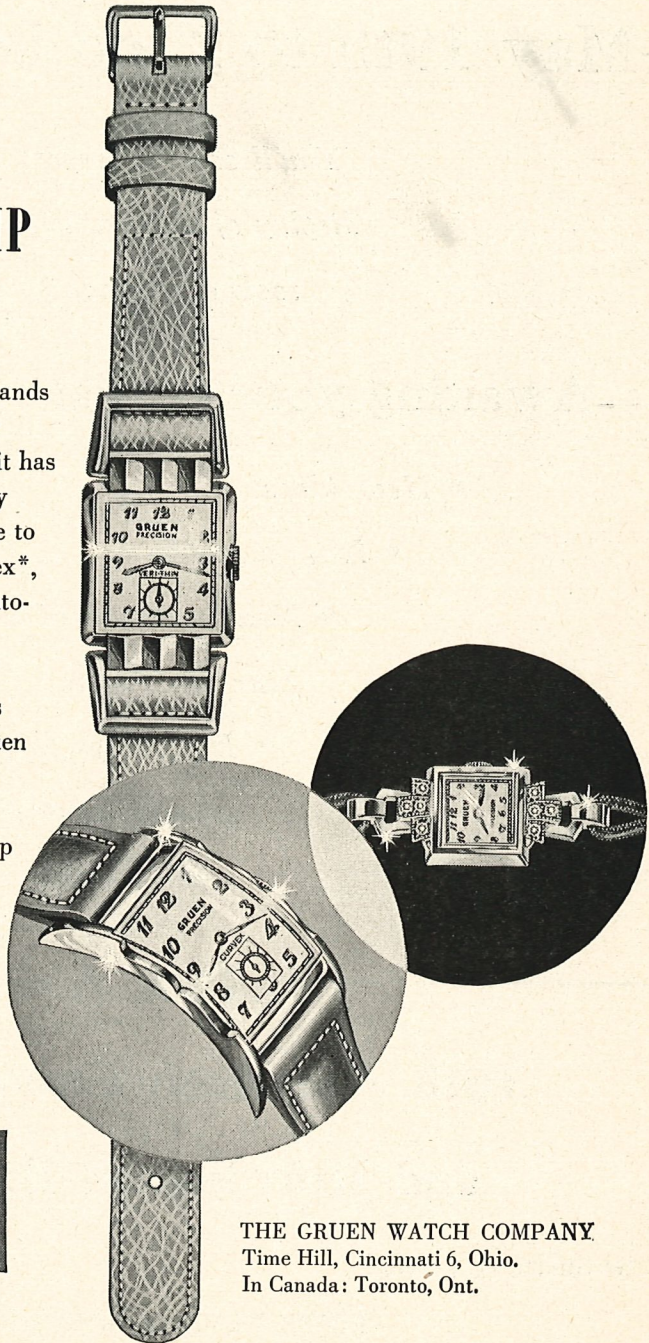
P. O. Box 330 -:- 406 - 32nd Street. CHARLES THOMAS

Union City, New Jersey

(Formerly in charge of Hairspring Dept. for Bulova Watch Co.)

LEADERSHIP

In almost every field of endeavor, one company stands out above the rest—not for what it says, but for what it has done. In the watch industry Gruen can point with pride to the popularity of the Curvex*, the Veri-Thin*, and the Auto-wind*—to a continuous procession of successful merchandising innovations which have made the Gruen franchise invaluable to thousands of jewelers. Follow Gruen for leadership in watch styling . . . for leadership in watch value . . . and for leadership in watch sales!



THE GRUEN WATCH COMPANY.
Time Hill, Cincinnati 6, Ohio.
In Canada: Toronto, Ont.

*Reg. U. S. Pat. Off.

—Chicago is the place—
—May 19th to 22nd is the date—

*You'll see the largest
display of fine precision
tools ever made*

Awaiting your arrival . . .

- *New ideas*
- *New methods*
- *New methods of making
your job easier*
- *New ways to gain
greater control
of precision*

U. H. A. A.

**16th American Convention
and Horological Exhibit**

Hotel Sherman, Chicago

May 19 to 22

LOUIS LEVIN & SON, INC.

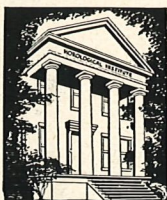
The ESEMBL-O-GRAF method **makes chronograph repair PROFITABLE**

There is no guesswork in servicing chronographs and other complicated watches when you use the new Esembl-O-Graf method. Complete direct procedure for disassembly and assembly covers more than 100 commercially known chronographs. All the details of fitting, lapping, oiling and screw sizes and threads are there, each step fully illustrated and explained on a separate page of the Esembl-O-Graf. Each part is shown both by photograph and by isometric drawing.

The Esembl-O-Graf is not a text book. It is a streamlined, standardized guide that will enable you to take a chronograph apart, clean it thoroughly, and readjust it in less than two hours!

Classes in chronograph repair at Western Pennsylvania Horological Institute are now learning the profitable way to service chronographs by actual practice under close supervision. Upon completion of the course, the watchmaker keeps his bound 23-volume Esembl-O-Graf set as a permanent reference.

The first and only veteran approved fully-illustrated chronograph-complicated watch course is open to practicing watchmakers and graduates of horological schools. Inquire now for details.



WORLD'S LARGEST WATCHMAKING SCHOOL

WESTERN PENNSYLVANIA HOROLOGICAL INSTITUTE

DESK 4, 808 RIDGE AVE., PITTSBURGH, PA.

The last word in Material Cabinets!

This BULOVA JEWELER'S CABINET #1 belongs in every Jewelry Store!

JEWELER'S CABINET NO. 1

Striking wood-grained — all steel. The expertly designed steel drawers, equipped with movable plastic dividers, open smoothly and easily. For beauty and efficiency — the finest small cabinet ever designed for the jeweler! Height — 4 $\frac{1}{8}$ " ; width — 13 $\frac{1}{4}$ " depth — 10 $\frac{1}{4}$ ".

Complete with 540 parts for the repair of the 10 most popular Bulova models!

LIST PRICE OF MATERIAL—\$130.00

\$99⁵⁰

\$25 Cabinet FREE!



It offers you these ADVANTAGES:

1. SAVINGS — \$30.50 is saved by purchasing this cabinet containing a total of \$130.00 worth of material for only \$99.50.

2. INCREASED EARNINGS — Give faster and surer service to customers with no time or money lost while waiting for parts.

3. CONTENTS—The 14 most essential parts for the 10 most popular Bulova Movement Models — 540 parts in all.

5AB — 6AM — 7AM — 7AK — 8AE
8AH — 10AE — 10AK — 10BA — 10BC

4. RAPID PART SELECTION — Each part is individually packaged in an identifying envelope and is systematically filed in specially designed drawers according to model and part number in a true File-A-Way system.

5. FLEXIBILITY—Movable Model Indicators and Dividers enable you to add new models and parts to fit your particular requirements.

6. RESERVE SPACE — You will find that the space reserved for expansion purposes will be sufficient for even the larger repair shops.

Available from your Material Jobber
for Immediate Delivery

BULOVA WATCH COMPANY, INC., 630 FIFTH AVENUE, NEW YORK

Morgan Vocational Schools

BALTIMORE, MD. and RIDGELEY, W. VA.

"Certified Schools for Certified Watchmakers"



School at Baltimore, Maryland



School at Ridgeley, W. Va.

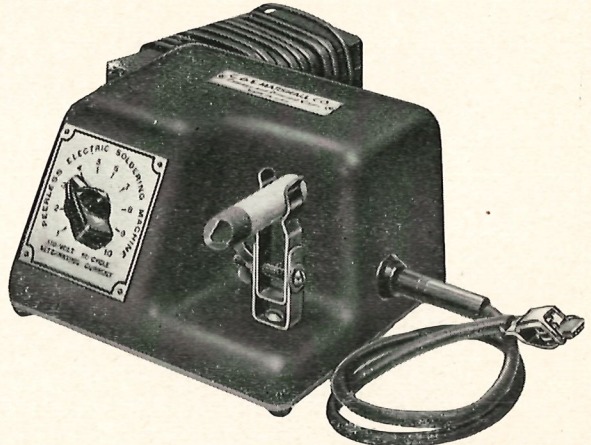
Courses offered in
Horology, Precision, Mathematics, Machine Work and Mechanical Drawing

P. K. MORGAN, Owner of the Schools

MARSHALL QUALITY TOOLS

PEERLESS SOLDERING MACHINE

**A QUALITY
PRODUCT
BUILT TO LAST
A LIFETIME**



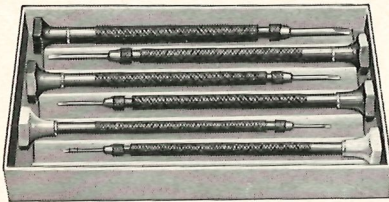
No more guessing when it comes to selecting the proper heat for soldering all kinds of jobs from baby rings to the heavier jobs such as silver spoons, ladles and men's heavy rings. The Peerless Electric Soldering Machine gives you positive heat control because it has a Dial Heat Regulator. This regulator has heats numbered on the dial from 1 to 10 for progressively hotter heating. You just turn the dial indicator clockwise. The method of selecting the proper heat has really made SIMPLIFIED SOLDERING a by-word in the jeweler's repair department.

Comes complete with foot control, round tapered carbon, round beveled carbon, contact cord and clip, cord and plug. Ready to plug into any electric outlet and use. Book of illustrated instructions included. Machine is encased in metal

covering, black crackle finish. Clip, carbon holder, etc. are nickel plated. For 110-120 volt, 50-60 cycle A.C.

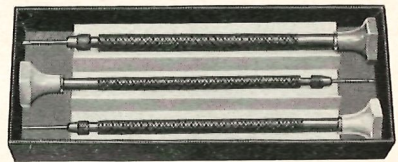
No. 42575 **\$32.75**

WATCH-CRAFT SCREW DRIVERS



No 42183—Set of 6..... **\$2.75**

No need to be handicapped in your precision work with clumsy, heavy screw drivers. You will get the right "feel" when you use Watch-Craft Screw Drivers, because the diameter and the length of the handle are in proportion to the blades. This set has reversible blades and 3 different diameter sizes in handle. . . . 2 of each size handle. . . . Sleeve style blade holder . . . body is made of high grade steel. . . . Each top is of different color for quick, easy identification.



No. 42185 **\$1.35**

A well balanced tool for precise work . . . diameter and length of handles are in proportion to the blades . . . two body sizes. This set of 3 Jewel Screw Drivers has the same design, quality and feel as the larger set. Three different colored plastic tops . . . body and reversible blades of high grade steel.

Extra blades for both sets as low as \$1.00 per dozen. Please write for details.

C. & E. MARSHALL CO.

BOX 7737, CHICAGO 80 AND PRINCIPAL CITIES

THE H. I. A.

DEDICATED TO THE PROGRESS
AND DEVELOPMENT OF
HOROLOGY IN AMERICA



JOURNAL

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April, 1949

Number 11

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—O—

ADVERTISING

All advertising material must be received
before the 5th of the month of publica-
tion. Advertising rates will be sent on
request.

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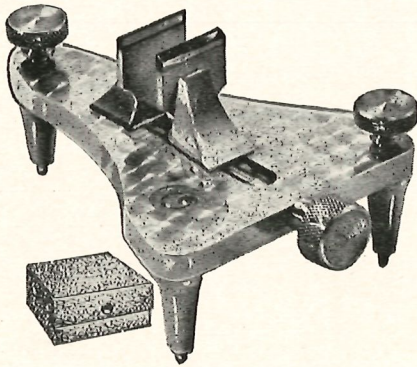
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Subscription Price of H. I. A. Journal

The subscription of the H. I. A. Journal, single copy, is 25 cents. It is mailed free to members of the Horological Institute of America. The subscription price to individual members of State Horological Associations and/or Guilds (Certification of membership MUST be made by Secretary), is \$2.00 per year, which includes Institute membership. The subscription price to all others is \$3.00 per year. Checks are to be made payable to: "The Horological Institute of America, Inc.," and should be mailed to: "RALPH E. GOULD, Secretary, Washington 12, D. C.

NOW RUBY JAWS SPIRIT LEVEL *ON OUR TRIUMPH POISING TOOL*



No. A-531346
IN FITTED CASE

Now—at an unheard of low price, we proudly offer a completely dependable and accurate poising tool—and one that incorporates improvements and refinements every watchmaker will appreciate. Machined from solid brass for permanent accuracy and beautifully finished. Large synthetic ruby jaws. Two adjustable legs and spirit level for utmost precision.

While we offer you the opportunity to save money on this fine tool, we know you will derive complete satisfaction from its use in your daily work, where efficient, dependable tools save you time and money.

AT SWARTCHILD'S

SPECIAL LOW PRICE \$10.50



SWARTCHILD & CO.

World's Largest Watchmakers' and Jewelers' Supply House
CHICAGO NEW YORK DALLAS ATLANTA
BOSTON BUFFALO DENVER

Preliminary Plans Completed for 28th Annual H. I. A. Convention



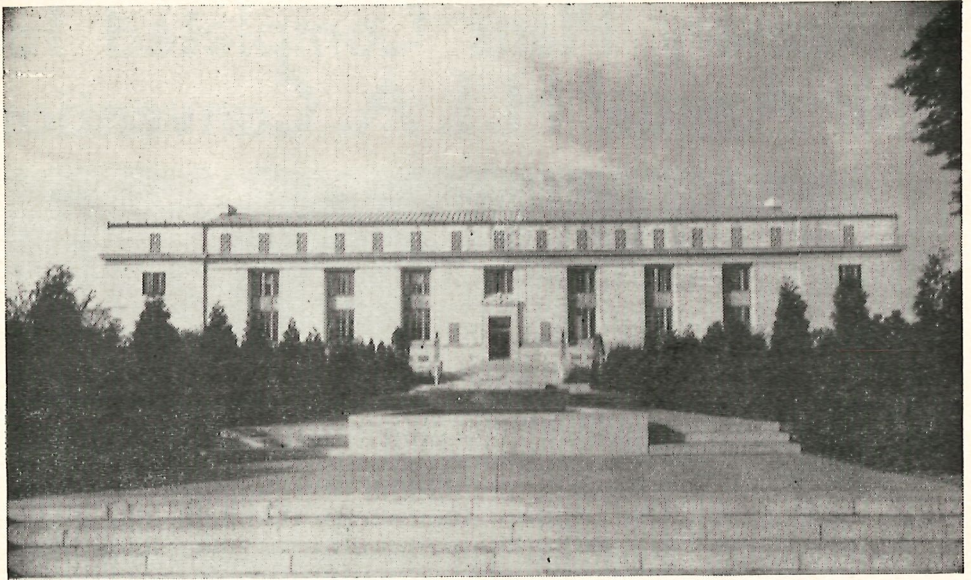
Shown above are the original founders of the Horological Institute of America. First row, left to right—Ferdinand T. Haschka, Mr. Zissinger; Mr. Freund, Edward A. Marsh, George W. Spier, first H.I.A. president; Alfred Noyes, and Alford G. Stein. Second row, left to right—William Manby, Samuel Swartchild, John J. Bowman, Edward H. Hufnagel and W. L. Jones. Third row, left to right—Mr. Povelsen, Henry W. Bearce, Unknown (?); Frederick Jennings, A. F. Beal and Albert T. Barrows. Fourth row, left to right—C. F. Kleinfelter, W. Colver Moore, Webb C. Ball, Paul Moore, Robert C. Nathan and Edwin C. Lilly.

Washington, and its charming surrounding countryside will be at the peak of its world-famed "cherry blossom" season during the period when the Horological Institute of America, Inc., will hold its 28th annual convention in the nation's capital, May 8-9-10. Springtime will provide its glory for the convention visitors.

Preliminary arrangements have been completed for the most successful, in point of interest and attendance, ever held by this distinguished horological society.

The Sunday, May 8th meeting will be devoted to official business and will be held in the Raleigh Hotel. The officers and executive committee will hold their opening session at 2:00 p. m. At 8:00 p. m., the joint sessions of the officers, executive committee and advisory council will be held.

The 28th annual H. I. A. convention will start Monday morning, May 9th, at 9:00 a. m. with registration (no registration charge) in the foyer of the beautiful National Academy of Science building,

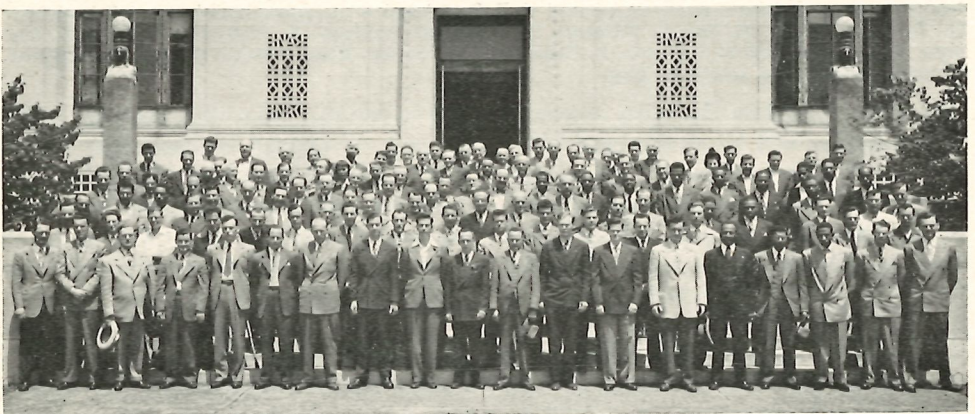


The National Academy of Science Building, Washington, D. C., where the 1949 annual H. I. A. Meeting will be held May 9-10.

2101 Constitution Ave., N. W., at 10:00 A. M. The convention will get under way in the auditorium of the National Academy of Science with the delivery of the President's message.

From the opening of the convention, by President A. S. Rowe, to the final adjournment, Tuesday afternoon, every moment will be crowded to the limit with helpful and constructive talks by America's

most outstanding horologists. Among those who will address the convention are: Mr. Horace Bowman, of the Time testing division of the National Bureau of Standards; Mr. Fred A Swindall, of the Westclox, will have an interesting and constructive message to present to the convention; Mr. V. E. van Hoesen, technical adviser to Karl Plepla, 5th Ave., N. Y. C., whose address at the 1948 convention received such a fa-



Partial group of officers and members attending the 27th Annual Meeting of the H. I. A., Washington, D. C., May 24.

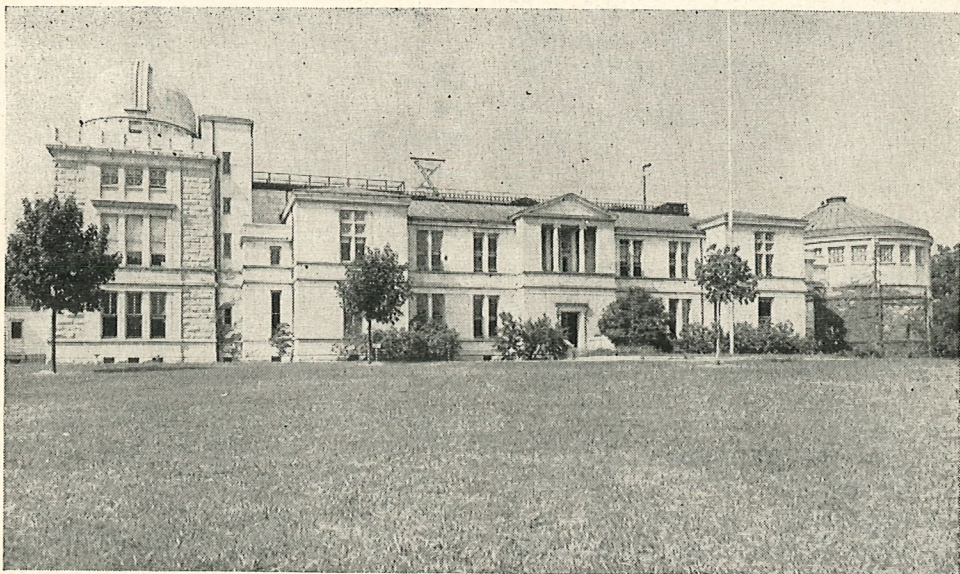
vorable reception again will address the convention on an equally informative subject; Mr. Paul A. Tschudin, director of the Information Bureau, Watchmakers of Switzerland, will have some valuable information to give the convention; Mr. Alvin Levine, former editor of "JEWELRY," will also address the convention on "The Value of a Competent Watch Repair and Service Department as a Medium for Increasing Store Traffic."

The premiere showing of the new Hamilton Watch Company's sound film, "How

again address the convention on "Balance vs. Mainspring."

Howard L. Beehler, past president of the H. I. A., and technical director of the Joseph Bulova School of Watchmaking, and dean of the Beehler School of Watchmaking, will address the convention.

Mr. Paul Morrison, Regional Vice-President of the American National Retail Jewelers Association, and member of the H. I. A. Executive Committee, will also address the convention.



U. S. Naval Observatory Building, Washington, D. C.

a Fine Watch Works," will add much to the interest and education of those attending.

Richard W. Slough, head watchmakers of the Hamilton Watch Company, will deliver an informative talk on "How to Keep a Fine Watch Working."

C. N. Challacombe, research physicist of the Elgin National Watch Company, who many members and guests of former H. I. A. conventions have had the privilege of hearing his enlightening talks, will

An interesting lecture by a representative of the Gruen Watch Company, will address the convention.

Many other prominent horological authorities will have interesting subjects to discuss at the 28th annual convention, so make a red ring around May 9-10 on your calendar, and make your arrangements to attend the 28th annual H. I. A. Convention, National Academy of Science Bldg., 2101 Constitution Ave., N. W., Washington, D. C.

Basic Points for Operating a Successful Watch Sales and Service Dept.

By BENJAMIN MELLEHOFF

This is the third of a series of articles by Benjamin Mellenhoff, a well-known watch-maker, of New York City.

WATCHES OF TODAY AND THE PAST

Third and Final Article

In the June, 1922, issue of the A. N. R. J. A. Bulletin was published an article by an eminent horologist under the title "What Is a Fine Watch?" In this article he described in detail how fine watches were manufactured. He stressed the fact that the materials used and all component parts are hand finished and hand polished. I shall quote one paragraph: "In a fine watch the brass or nickel is rolled or hammered hard and the number of stamped out parts are fewer, as required accuracy permits of only perfect pieces. This also applies to the cutting of wheels and pinions to assure the correct shape and size of the teeth and the gears have more and finer teeth than in a cheap watch."

I knew this great scholar of horology for many years, and many were the friendly chats and arguments we had. He was an arch enemy of mass production of watches. No matter how much we argued, I could not convince him that the watch factories here and in Switzerland were gradually falling into step with the progress of industrial civilization, striving to develop the finest precision machinery ever known in the field of horology.

For example, you take a watch that retails for \$50.00 in a gold-filled or stainless steel case. I have found several makes that are giving satisfactory results, are well-constructed and good timekeepers. Compare these watches of today with those that were manufactured 25 years ago by the same companies at the same price, and you will see the great progress they have made.

(Please do not confuse this statement with regard to the very high-priced watches.) I am talking of mass production in the \$50.00 to \$100.00 line of the present day. There are several different makes (I am not mentioning names) that are well-constructed; the parts are of high precision and most accurately gauged so that there is no problem with interchangeability. Besides, great craftsmanship is not a requisite in repairing these watches, but is required in the older high-priced, hand finished watches.

Today, even well known high grade watches are made with interchangeable parts. Of course, these watches and parts are made in semi-mass production, but they still require skillful workmen to repair them with utmost care. In older high-grade watches, if parts are worn out or damaged by an inexperienced workman, they have to be made by hand, thus increasing the cost of repairs. We are well aware that the ranks of experienced craftsmen are becoming thinner and thinner. Therefore, manufacturers of high-priced watches are wise in adopting new precision instruments to make their modern watches with interchangeable parts.

Manufacturers of medium grade watches are always ready to listen and take advice from the men in the shop. They appreciate *just* criticism of their products, and, if the conclusions of a number of shop men are in the same direction, they will either improve or discard a particular model and build a new one. Never in my 51 years at the bench have I seen the manufacturers striving so hard to obtain the cooperation and opinions of the shop men as they are doing today. The success of some manufac-

urers in producing better watches can be credited in part to the foregoing statement.

The problem of finding skillful craftsmen is a grave one. Before long, we will be hearing this advice to owners of old high grade watches: "Sorry, we have no one who can repair this masterpiece." As for the men now being trained as watchmakers in a short period of 18 months, some will receive a fair training if they were fortunate in attending a reputable, well-equipped school with good instructors and adequate curriculum. There are schools that are making an honest effort, but they are few (from a statement made to me recently by a nationally known authority in this field).

In conclusion, I wish to say a word to every jeweler who sells watches—that they

have never made any attempt to enlighten the public, who is so time-minded today, about the importance of how to take care of their watches. They fail to explain intelligently the wonders of this little engine that plays so vital a role in our lives every day of the year. Every jeweler selling a watch should give the customer instructions contained in a neat little booklet. If this will help to eliminate as little as 10 per cent of trouble, it is worth the effort. Jewelers have, through lack of vision or carelessness, failed the public miserably. Little gadgets, even as low as 25 cents, have instructions attached. But all the jeweler says when he sells a watch, "I guarantee the watch for one year," and this is when his troubles begin.

CHARLES KIRK & LITCHFIELD MFG. CO.

By BROOKS PALMER

*(Data from the author's American
Clockmakers List.)*

Charles Kirk, from the presently available meager data, must have been quite an astute craftsman in clocks. Mr. Coleman's questions come at a fortunate time as a fine musical clock by "KIRK & TODD" c 1838 has just (1949) been added to the splendid American Clock Collection of Edward Ingraham.

Moore and Baille both list him "Bristol-1823", nothing in Abbott. Nutting in his Clock Book and duplicated in his Furniture Treasury III list him twice — "Bristol, 1823-33" and "New Haven, 1847—brass marine clocks."

According to the Ingraham Barr Buell study of Bristol, Kirk was on the tax rolls as a clockmaker 1828-1831. A "John Kirk" was on for the year 1831 only. This then may be the story of this clockmaker.

Charles Kirk's early history in clockmaking is obscure in Bristol, Conn., as early as 1823. He did build the "Burwell Shop."

By 1828 he was operating a plant north of the Pequabuck River on the east side of Middle St. A little later he purchased the shop on the east side of Race Street. An example of his work of this period was #74 in the Flint-1926 sale described as "a square case, carved and fluted columns; broken arch carved top, and door with mirror below." It brought \$4.00. (At that price I would have liked to add it to my small collection.) There is a tradition that in 1831 he sold out his shop to Elisha C. Brewster, who was at clockmaking 1831-62, and that he continued on with Brewster running his plant till the depression in 1837.

About 1838 he moved to Wolcott, six miles south of Bristol, with his sons. There he continued at clockmaking, specializing in musical clocks—the period of the "Kirk & Todd" musical clock.

Sometime later he removed to New Haven. From there he received his patent

on spring drives for clocks #5045 dated April 3, 1847. There is no definite data as to how long he stayed in this business in New Haven. There is further mention of his activities in connection with the product of "Marine Clock Manufacturing Co. of New Haven"—about 1847. One of these labels read in part: "Eight Day and Thirty Hour Marine Timepiece Clocks manufactured by Charles Kirk—". The winding hole in the dial was between "9" and the cannon tube opening. The dial had a regulator slot for adjustment lever. Both dial

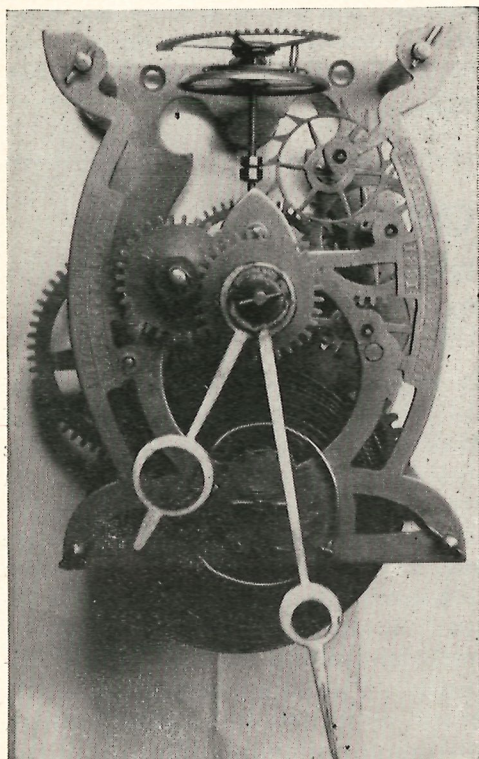
in clocks made by the Litchfield Manufacturing Co., and this is an attempt to answer friend Jesse Coleman's query about the possible connection. We become concerned about at least three men, Bainbridge Barnes, Theodore Terry, and P. T. Barnum.

Bainbridge Barnes of Bristol in 1848 perfected a marine movement that gave successful performance. It was made and marketed aggressively by at least two firms, *Laporte Hubbell*, and the *Matthews Jewel Co.*—1851-53;—David Matthews, Lyman Jewell, and Samuel Botsford. The shop was on Union Street in Bristol. Among their customers for these movements was "The Litchfield Mfg. Co. (or Clock Co.) until they failed."

Theodore Terry, fifth son of Samuel, was also in the clock business in Bristol, in the firm of TERRY & ANDREWS 1842-50. He removed to Ansonia in 1850, where he made clocks under his own name. The destruction of his factory by the almost customary fire did not improve his finances, as narrated by C. Jerome. P. T. Barnum owned real estate for development in East Bridgeport. The two got together and with the firm name TERRY AND BARNUM a new factory was built on these lands. It is understood that not many clocks were made. This concern later merged with the Jerome Mfg. Co. of New Haven shortly before it failed, to be followed by The New Haven Clock Co., too long a story for here.

Phineus T. Barnum was the famous showman. He is recorded as one of three who started the LITCHFIELD MANUFACTURING Co., producers of the clock with the marine type escapement. The listed stockholders were J. G. Beckwith, John van Nest, and P. T. Barnum. Theodore Terry's name did not appear, though there has been mention that he was associated. It is believed that he and Barnum got together as above described.

Their clock product was described (by H. M. Baker of Jamestown, R. I.) "as a good grade clock with a peculiar balance



Early Model, Litchfield Manufacturing Company Clock.

and movement were marked "C. Kirk's Patent." This particular clock had the two-wheeled escapement. One spring furnished the power for both strike and power after "a certain European practice."

Movements similar to Kirk's were found

wheel and cam escapement with a movement heavier than average grade, some in hour glass like shape. Cases were of good quality, some of paper maché about two feet high." There is one in the collection of Floyd Thoms. The concern also made articles of paper maché. Their failure was reported in 1856. It is further believed the business started about 1850 or 1851, in Litchfield, Conn.

The query about Litchfield clock movements in Ansonia cases may be explained partially by the above adventures of Terry and Barnum. Jerome had to say about Terry's Ansonia fire that some clock cases

were not entirely destroyed by the fire. Some of these, or others, could have been used. *Ansonia Clock (and Brass) Co.* got started in Ansonia in 1851. Clockmaking in Connecticut was even then oft times an assembled job; cases by one man, movements bought from others, accessories similarly acquired. It is a fond wish that there still was sufficient data that these and other questions could be properly answered, but research is rocky going. There just doesn't seem to be any records left today.

Munger of Auburn, N. Y., and Fasoldt of Albany, N. Y., have cased somewhat similar type movements.

HOW TO MAKE APPLICATION for H. I. A. CERTIFICATION

- (a) Request an H. I. A. Certified Watchmakers' Application Blank from Ralph E. Gould, Sec'y, Horological Institute of America, Washington 12, D. C.
- (b) Fill in the Application Blank complete, enclosing your remittance of \$10.00, made payable to the Horological Institute of America.
- (c) Be sure to give the name and address of your voucher (who must be a watchmaker).
- (d) Be sure to give the NAME, ADDRESS and OCCUPATION of your monitor for your written examination, who may or may not be a watchmaker.
- (e) Send in a cased 12s or 16s, 15 jeweled or better grade watch of American manufacture, capable of being restored to its original factory timekeeping condition (need not be in running condition).
- (f) The make, size, grade and serial number of your test watch will be registered.
- (g) After being prepared for reconditioning, by the certifying committee, your test watch will be returned to you for repairing and overhauling.
- (h) After restoring the test watch to its original watch factory time-keeping condition, and not varying more than 30 seconds a day in pendant-up position and exceeding not more than thirty (30) seconds in any two positions (dial-up-dial-down) safely pack and return to Ralph E. Gould, Sec'y, H. I. A., Washington 12, D. C., along with the sworn affidavit of your voucher and monitor that you only performed the work required to restore it to its present condition.
- (i) Your test watch will then be given to Time Division, National Bureau of Standards, Washington, D. C., for a

seven (7) day rating test (pendant-up-dial-up-dial-down).

- (j) Your test watch is then given an identification number *only* and forwarded to the Examining Committee for inspection and grading of workmanship. At no time do the members of the Examination Committee know the names of watchmaker submitting the test watch.

How to Apply for H. I. A. Certified Master Watchmaker Certificate

- (a) Request application blank for H. I. A. Master Watchmaker Certification from—Ralph E. Gould, Secretary, Horological Institute of America, Washington 12, D. C.
- (b) Fill in application blank complete, enclosing remittance of \$17.50, made payable to the Horological Institute of America, Inc.
- (c) Be sure to give the name and address of your voucher, who must be a watchmaker.
- (d) Be sure to give the name, address, and occupation of your monitor, who may, or may not, be a watchmaker.
- (e) Send in your test watch which shall be 12s or 16s, 17J or better grade pocket watch.
- (f) Send in with your pocket watch, one (1) well known make 15J grade or better wrist watch, not to exceed $10\frac{1}{2}$ lignes, if round, and not to exceed $6\frac{3}{4}$ lignes if rectangular. (The size to be taken as the shorter of the two diameters).
- (g) The size, make, grade and serial number will be registered and the two watches will be prepared for reconditioning, along with a plate and blue print instructions for the mounting of five different type jewels, and specifications and drawings for the turning of a balance staff.

- (h) After completing the reconditioning of the two watches, the setting of the jewels in the jewel plate, and the turning of the balance staff, return to Ralph E. Gould, secretary, Horological Institute of America, Inc., Washington 12, D. C., along with the SWORN AFFIDAVITS of your VOUCHER and MONITOR that you, and only you, performed the work required to restore them to their present condition. The pocket watch will then be rated in five (5) positions by the Time Division of the National Bureau of Standards, Washington, D. C. These rating tests require eleven days to complete.

- (i) On completion of the Government timing tests, your watches, which BEAR AN IDENTIFICATION NUMBER ONLY, are sent along with your jewel plate and balance staff to the H. I. A. Examining Committee for grading of your mechanical ability and workmanship.

On completion of the grading, the watches, jewel plate, and balance staff are returned to Washington, where the jewel plate and balance staff ARE FILED AS A MATTER OF RECORD and your watches returned to you.

At no time do members of the H. I. A. Examining Committee know the name of the applicant whose work they are grading.

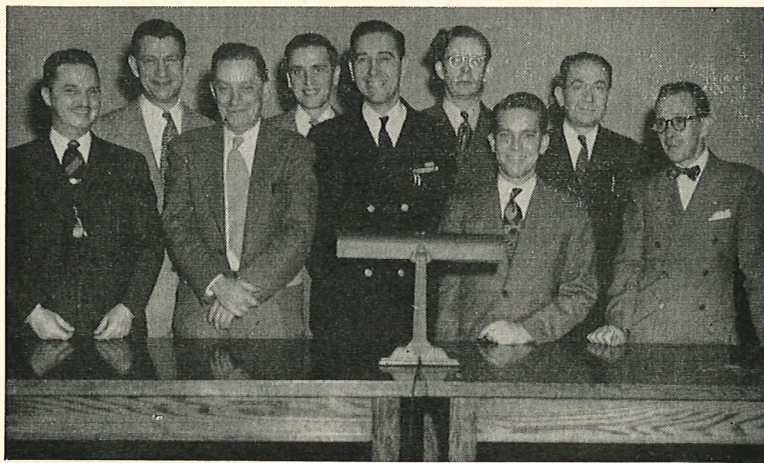
Before submitting watch for final examination, check as suggested below:

- (a) Shape, size and polish of pivots.
- (b) End, side, "shake" of balance staff.
- (c) Trueness and poise of balance wheel.
- (d) Perpendicular and position of roller jewel "face."
- (e) Condition of hairspring and regulator pins.

- (1) True on collet (2) round (3) centered (4) circle of overcoil (4-a) Overcoil located in center of regulator pins (5) Regulator pins parallel and perpendicular (6) Regular pins properly closed.
- (f) Escapement action.
 - (1) Lock (2) Drop (3) Corner Freedom (4) Jewel Pin "shake" (fork slot) (5) guard pin roller "shake" (6) slide.
- (g) Cleaning and oiling (removing rust, etc.).
- (h) Winding and setting mechanism.
- (i) Proper fitting of canon pinion.
- (j) Hand spacing and clearance.
- (k) "Anchor" all screws in proper places.
 - (1) "Anchor" movement in case. (2 case screws).
 - (m) "Anchor" dial in place. (Usually 3 dial screws).
 - (n) Before placing the back on the watch case, lightly wipe off the upper plate, and steel parts, with a chamois buff-stick which has been very lightly (just a "trace") moistened with alcohol, using a circular motion.

CLOCKWISE: Moving in the same direction as the hands of a clock—from left to right, looking at the top of motion.

WASHINGTON D. C. GUILD ELECTS OFFICERS



Front Row: L. to R.—L. W. Morris, Director; Mark F. Massey, Corresponding Secretary; J. J. Gilliam, vice-president; W. O. Ritchie, secretary and treasurer, and H. Ewen, Director.
 Back Row: L. to R.—W. J. Fleming, president; V. Bernott, director; R. M. Dunn, director and past-president, and E. Burk, director.

CREDIT LINE: Photo by W. F. Brewer

The Horological Guild of Greater Washington has just completed its first year (February 9, 1949). The members and officers feel that the Guild is firmly established and will continue to be of more and more value to the watch and clock makers of this area in the future.

Meetings will continue to be held on the second Wednesday of each month and will

include talks on various subjects of interest to the members by guest speakers, films from various manufacturers, and a question and answer clinic which has come to be popular as it offers a means of obtaining information on any and all subjects pertaining to watch and clock making not readily available otherwise.

Program 28th Annual Convention
HOROLOGICAL INSTITUTE OF AMERICA, INC.
Washington, D. C., May 8-9-10, 1949

SUNDAY, MAY 8

Raleigh Hotel

Pennsylvania Ave. at 12th St.

- 2:00 P.M.—Officers and Executive Committee Meeting.
8:00 P.M.—Point Meeting of Officers, Executive Committee and Advisory Council.

MONDAY, MAY 9

National Academy of Science Building

2101 Constitution Ave., N.W.

- 9:00-10:00 A.M.—Registration. (No fee)
10:00 A.M.—Welcoming Address. Dr. R. L. Zwemer, Executive Secretary, National Research Council.
President's Report.
Secretary's Report.
Address, "The People's Friend," Fred A. Swindall, Westclox.
Address—A. L. Combs, Director, VA Educational and Training Service.
Address, "Congress Interested in GI's Vocational Training"—Hon. Harley Spaggers, Rep. 2nd District, W. Va.
Adjourn for Lunch, War Department Cafeteria.
1:30 P.M.—Convention called to order. "It Can Happen Only in America." Address, "Balance vs. Mainspring"—C. N. Challacombe, Research Physicist, Elgin Watch Co.
"How a Fine Watch Works"—Hamilton Watch Co. Premier Showing of New Technical sound film.
Address, "How to Keep a Fine Watch Working"—Richard W. Slough, head watchmaker, Hamilton Watch Co.

"How to Order Swiss Watch Replacement Parts"—Paul Tschudin, director, Information Bureau, Watchmakers of Switzerland.

"Value of a Competent Watch Repair and Service Department as a Media for Increasing Store Traffic" Alvin Levine, former editor JEWELRY magazine.

Meeting of H. I. A. Certified Horological Schools.
Adjourn.

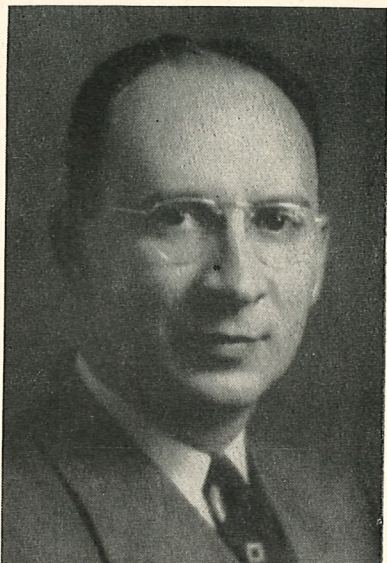
- 7:30 P.M.—Banquet and Entertainment, Sphinx Club, Almas Temple, 1315 "K" St., N.W.

TUESDAY, MAY 10

National Academy of Science Building

- 9:45 A.M.—Convention called to order. "H. I. A. in Peace and War"—Howard L. Beehler, Past President, Director Beehler Watchmaking School—Joseph Bulova School of Watchmaking.
"Adjustment of Watches and Their Historical Background"—V. E. van Hoesen, technical director, Karl Pliepla, 5th Ave., New York City.
Precision Isochronism Measurements—Horace Bowman, Time Testing Division, National Bureau of Standards.
Adjourn for lunch.
1:30 P.M.—Convention called to order. "Switzerland and Its Watchmaking Industries," technicolored picture, taken by Daniel Geeding of the Gruen Watch Co., on his recent visit to Switzerland.
Business meeting.

RICHARD W. SLAUGH
Head Watchmaker
Hamilton Watch Company



Richard "Dick" W. Slaugh

Dick is a member of the Horological Institute of America and a certified master watchmaker (number 639). This year marks the completion of his 30th year with Hamilton. Half of that time, Dick worked in the Service Department. The latter fifteen years has seen him moving from one department to another in a supervisory capacity for both the Quality Division and the Research Division. In 1946 he was placed in charge of developing the new line assembly that is in existence at Hamilton today. In addition to his duties as head of the product performance department, Dick was recently promoted to Head Watchmaker of the Hamilton Watch Company. He is married, has two sons—ages 18 and 20—and he is a former president of the Lancaster Foreman's Club and the Eastern Pennsylvania Foreman's Club.

"DROP" is the distance between the "let off" corner of escape wheel tooth and the "let off" corner of the pallet stone or jewel, when locked on the opposite tooth.

**KANSAS JEWELERS HOLD
ANNUAL CONVENTION**



Wm. "Bill" Brasfield (Deceased)

The Kansas Retail Jewelers Association held "The Bill Brassfield Memorial" convention April 2-3-4 in Wichita, Kan., and commemorated the memory of one of its outstanding members. Former convention attendance records were broken.

Speakers featured on the program were Armin Friedman of The American Weekly; R. L. Carter, vice-president of the American National Retail Jewelers Association; and Ken Matsumoto of Cincinnati, Ohio.

The annual banquet, held Sunday night, April 3, was a colorful event. A "fellowship session" was held Saturday night, April 2. Over sixty wholesalers and manufacturers were represented at the convention.

CAM: An irregularly shaped part of a mechanism, which rotates to give variable motion to another part pressing against the cam. Example: The heart-shaped piece that returns sweep-seconds hand to zero in a timing watch or chronograph.

Bulova President Among Passengers Making Emergency Landing at Indianapolis

John Ballard, N. Y. C., president, of Bulova Watch Company, was one of the 44 passengers aboard the American Airlines four-engine D. C. Flagship, bound from Los Angeles to New York City, which made a successful landing a Weir Cook Airport, Indianapolis, late Saturday night, March 26th.

The landing gear of the big four-motored plane had been lowered for the landing at Chicago, and, because of extremely low visibility, failed to clear some high tension power lines.

Not knowing to what extent the landing gear had been affected by this mishap, the pilot, Captain Ray Wansey, decided to attempt to make an emergency landing at Weir Cook Airport, Indianapolis, the nearest airport large enough to accommodate the big ship. Captain Wansey radioed officials at the Municipal Airport to stand-by for

an emergency landing, and then headed the big four-motored plane to Indianapolis. After a seemingly endless nerve-wracking trip, the big plane made a perfect three-point landing and taxied smoothly to the landing apron of the big airport, much to the relief of all aboard.

Mr. Ballard stated that it appeared to him that the landing gear had struck some object more solid than high-tension wires when attempting to land at the Chicago airport. However, Chicago officials of the company stated they had failed to locate any other obstacles which the landing gear might have encountered.

Among Mr. Ballard's fellow-passengers to land safely at Indianapolis, were Mr. and Mrs. Boris Karloff.

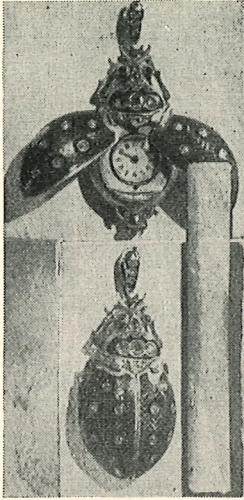
WICK TIMEKEEPER—

A wisk or rope made of some fiber resembling flax or hemp with knots tied at regular intervals and so treated that upon ignition it would smolder instead of breaking into flame.

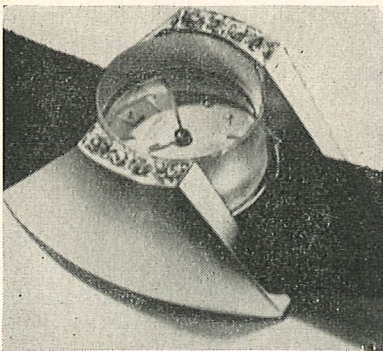


Students at the Chicago Institute of Watchmaking, 7 South Pulaski Road, Chicago, recently selected Chicago's "Girl with the Most Beautiful Wrist-watch Hands," with Paul Leeds, director of the school, acting as official score-keeper for the judges. Here are the student judges selected by the students with four finalists in the contest (left to right): William Galanis, John Vandenberg, R. C'Dealva and Robert J. McGuire. The winner was the girl on the extreme left whose hands are being examined by Galanis. Her name, Jo Sanders, a Chicago model, who lives at 1127 West Farwell in that city. Her prize—a Clinton Wristwatch donated by the school. Later, Paul Leeds and Miss Saunders were interviewed by radio station WCFL.

THE BEETLE WATCH

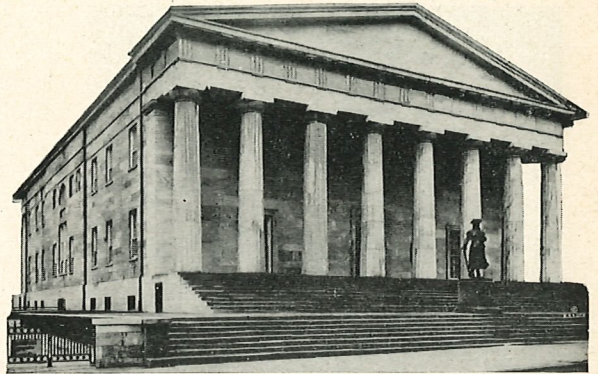


The beetle watch shown above is a beautiful example of the watchmakers and jewelers' art. The wings are enameled red and set with diamonds. The cigarette to the right is to show the comparative size of the movement and care. The lower illustration shows the case closed. This unusual collector's item is from the collection of the late Louis Aisenstein, New York, N. Y., watch importer.



Display of watches is just as neat a trick as the window design. Here the designer of the "Chess Board" window pushes a pin through the rigid gold bracelet of a woman's watch to keep it in upright position. This watch is one of the very latest Swiss designs.

N. A. W. C. C. Convention to Be Held May 20-21-22



The Old Custom House, 420 Chestnut Street, Philadelphia, where one of the Convention meetings will be held.

The annual convention of the National Association of Watch and Clock Collectors will be held May 20-21-22 in Philadelphia, with the Philadelphia Chapter as convention host. Tentative convention plans have been made and an unusually large turnout of members and visitors is anticipated.

The featured event will be the annual dinner on the evening of May 21, with John Lowry Ruth, editor of *Timepieces*, as the principal speaker, who will talk on "Two Ducal Time Pieces."

Other convention speakers scheduled are George Eckhardt, Penrose Hoopes, and Dr. Thomas D. Cope.

A special exhibit of timepieces and allied items will be held in the Free Library of Philadelphia.

Robert Franks of Bryn Mawr, Pa., is president of the national organization. Prof. Willis I. Milham, of Williamstown, Mass., vice-president; Brooks Palmer of New York City, N. Y., second vice-president; J. S. Fuchs of New York City, N. Y., secretary; and Edward E. Chandlee of Philadelphia, Pa., treasurer.

Elgin Executive Completes 45th Year



Howard D. Schaeffer, vice-president of Elgin National Watch Company, in his office surrounded by flowers and messages from well-wishers on completion of his 45th year of continuous service with the company.

Howard D. Schaeffer, vice-president of Elgin National Watch Company, completed his forty-fifth year with that organization recently and observed the day hard at work in an office bedecked with flowers for the occasion—tokens of esteem from his many friends in the trade.

The career of Schaeffer at the watch

company has an overtone of Horatio Alger which reads in part: "From Office Boy to Vice-President."

He recalls being highly impressed with the company the day he reported for work as an office boy in Elgin's Chicago office in 1904. The day being Washington's birthday, he received a half-holiday.

After a short stint as office boy he became billing and shipping clerk. Subsequently he worked in various departments at the watch plant to gain a thorough knowledge of manufacturing processes.

In 1916 Schaeffer entered the sales department, and after seven years' experience as a territorial representative was promoted to sales manager.

He was named assistant to the president in 1928 and just four years later became vice-president in charge of sales.

Today he holds the unofficial distinction of being able to call more jewelers by their first name than anyone in the business. He is a past president of the Chicago Jewelers' Association and helped organize the Chicago Jewelers' Club.

Schaeffer resides in Kenilworth, Illinois, with his wife and daughter, Betty, a student at Wellesley College.

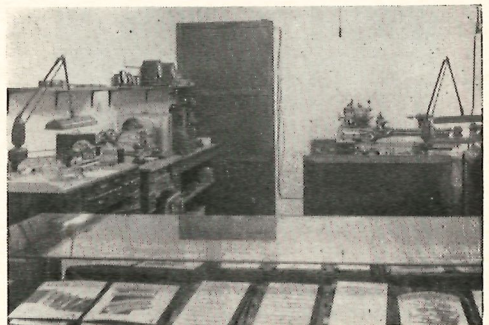
HAMILTON METALLOGRAPHS ARE AWARDED PRIZES

The Hamilton Watch Company, of Lancaster, Pa., was awarded two prizes for metallographic photomicrographs in the National Metal Congress and Exposition held in Philadelphia.

A blue ribbon prize and honorable mention were awarded for two of the eight Hamilton metallographic photomicrographs entered at the exposition, held recently in Philadelphia's Commercial Museum.

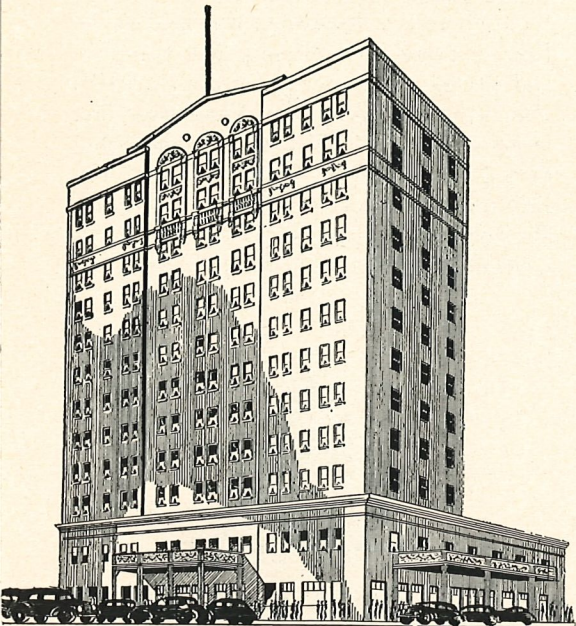
The blue ribbon prize was awarded to a specimen prepared by R. E. Gaul, a metallographer in Hamilton's metallurgical research laboratory, and entered in the tool-steel classification.

Honorable mention was given a specimen prepared by R. E. Shafer, another Hamilton metallographer, and entered in the weld structure classification.



Modern Watch Repair Shop and Retail Jewelry Store of Grady L. Sharp, Albuquerque, New Mexico.

SOUTHERN WATCHMAKERS PLAN TRI-STATE MEET



Admiral Semmes Hotel, Mobile, Ala.

Plans for the Tri-State convention of Watchmakers of Alabama, East Mississippi and Northwest Florida to be held in Mobile, Ala., May 15-16, are being completed, according to announcement by Cedric V. Ludtke, secretary of the convention committee of the Mobile Watchmakers Guild, the host guild of Alabama.

The convention will be held in the Admiral Semmes Hotel, shown above, and is expected to be one of the outstanding conventions ever held by southern watchmakers.

Featured on the program will be Frank Snidley of Gruen Watch Company; "Watchmaster Charlie" Purdom, American Time Products, Inc., and Mr. Story, a representative of Henry Paulson Company.

Films from Elgin, Gruen and Hamilton will also be shown at the convention.

Another interesting "highlight" of the displays at the convention will be the Gruen Quadron Watch, Mr. Ludtke said.

The Mobile Watchmakers Guild was

organized in December, 1946, with a membership of fifty watchmakers and has been active in holding practical monthly meetings and watchmakers' demonstrations.

Several hundred watchmakers from Alabama, Mississippi and Florida are expected to attend the convention.

Program for the Tri-State Watchmakers Convention, to be held in the Admiral Semmes Hotel, Mobile, Alabama, Sunday and Monday, May 15-16, is as follows:

SUNDAY—

- 10:00 A. M. Registration and Exhibits open.
- 1:00 P. M. Convention called to order. Welcoming address by President of Mobile Watchmakers' Guild.
- 2:00 P. M. Address by Mr. W. H. Samelius, Director of Elgin Watchmakers' College, "The Escapement and Its Evolution," with slides.
- 3:30 P. M. Address by Mr. Charles Purdom, Watchmaster.
- 7:00 P. M. Address by Mr. E. Hoffman, Gadsden, Ala., "Organizing the Watch Repair Department."
- 7:45 P. M. Sound Films from Hamilton and Elgin Watch Companies.

MONDAY—

- 9:30 A. M. Address by Mr. Story on the Time-O-Graph.
- 11:30 A. M. Color film, "Mobile's Azalea Trail."
- 2:00 P. M. Address by Mr. Schneider, Gruen Watch Co. Gruen film, "Guardians of Precision."
- 3:00 P. M. Mr. W. H. Samelius presents the film, "The Dura-power Mainspring."
- 7:30 P. M. Banquet.

For further information, address: CEDRIC V. LUDTKE, Convention secretary, 2159 Emogene St., Mobile 18, Ala.

H. I. A. PRESIDENT GIVEN RECEPTION



A. S. Rowe

President A. S. and Mrs. Rowe, who have been combining Institute activities with a much-deserved vacation in Texas, were the guests of honor at a dinner given by the Houston (Texas) Watchmakers Guild, Friday, March 18th, at the Felix Mexican Restaurant in Houston, Texas.

President Rowe was cordially received by the Watchmakers and Jewelers of the Lone Star State and the result of his visit is being reflected by the increase in H. I. A. membership in that state.

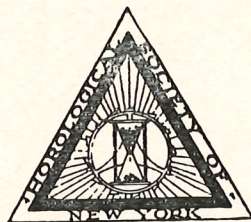
Mr. Rowe was given an honorary degree of Master Watchmaker by the Houston Horological College. He also received an honorary membership in the Houston Watchmakers Guild.

Mr. Rowe visited in New Orleans and Birmingham on his return to Indianapolis.

Plans are well under way to make the 28th annual H. I. A. Convention, which will be held in Washington, D. C., May 8-9-10, the most successful from point of interest and attendance.

Indiana Jewelers Elect Officers

The annual convention of the Indiana Retail Jewelers Association was held in the Lincoln Hotel, Indianapolis, February 2-3, and elected the following officers for 1949: President, Leon A. Simon, Vincennes; first vice-president, Sol Blickman, Indianapolis; second vice-president, Roby Mohlman, Lafayette; secretary-treasurer, Earl Grinsby, Indianapolis. A banquet Wednesday night concluded the social program.



N. Y. HOROS HELD SERIES of Interesting Meetings

The Horological Society of New York staged an "Information Please" program at their March 7 meeting in Caravan Hall, 110 E. 59th Street. Featured on the program were several expert horologists who responded with expert data in answering horological questions.

Included on the panel-jury at the meeting were C. K. Johns, I Liemer, Dr. A. L. "Time Clinic." Walter Hoffsomer dem-Mellenhoff. Henry B. Fried, executive secretary of the Society served as "moderator" of the program.

At the February meeting of the Society, over 375 watchmakers were present, packing the hall. O. R. Hagans, editor of the American Horologist and Jeweler, was the principal speaker. Two excellent sound color movies on "Hairspring Vibrating" were presented. Paul Zwillinger held a "Time Clinic." Walter Hoffsommer demonstrated the electronic mass-producing hairspring vibrator.

Members have been invited to attend one of New York University's endowed lec-

tures on April 7th at 8 p. m. to hear George P. Lockley, vice-president of Hamilton Watch Company, speak on "Time and Its Mysteries."

The Society is overhauling its constitution to adapt it to new conditions and amendments have been submitted for ratification by members at later meetings.

HOOSIER LEGISLATORS GET HOROLOGICAL DATA

Indiana Legislators got a "liberal" education in Horology during the recent General Assembly when sections of horological textbooks were read during an attempted filibuster.

In fact, the General Assembly had "lots of time" on its hands throughout the sixty-odd days when factions clashed over "fast time" or "CST." Both factions appear to have "lost," however.

One legislator "lectured" to his colleagues, reading "Clockmaking, Past and Present," and also "The Sun" during the filibustering "killing-time" period during the closing session, after the hands of the legislature clocks were "set back" to prevent the advent of midnight on the sixty-first day.

Just how much horological knowledge was absorbed by the Hoosier legislators is not known—perhaps none at all—but a torrent of horological data was dinned into their ears and read into the official record.

And, incidentally, when one of the legislators "set back" the clock, he provided some Indianapolis clock-repairer a job, for it broke the works of the clock, it is said.

AMERICAN JEWELERS HEAD OPPOSES TARIFF INCREASES

Maurice Adelsheim of Minneapolis, president of the American National Retail Jewelers Association, has sent a telegram to the Senate Finance Committee, opposing any change in the Reciprocal Trade Agreement Act. In the telegram, Mr. Adelsheim pointed out that the American Retail jewelry business was largely dependent on the

sale profits from Swiss watches and that any change in the act increasing tariff on such watches would adversely affect American business.

The Association comprises 6,500 retail jewelers and approximately 50,000 employees.



Jeweler Ernest P. Tomlinson, Atlanta, Georgia, holds the 992B Hamilton railroad watch mounted on a Parker pen set which was presented to Madame Marie Geoffrey by the Atlanta 40 and 8 when the Mercier train visited there February 10th.

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means best
quality in

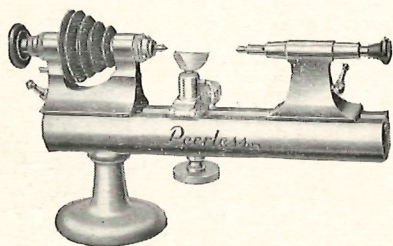
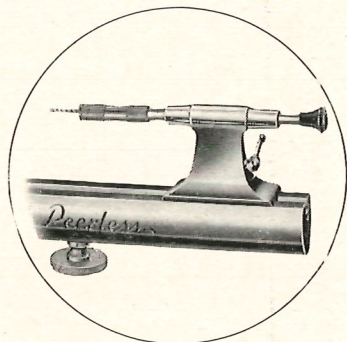
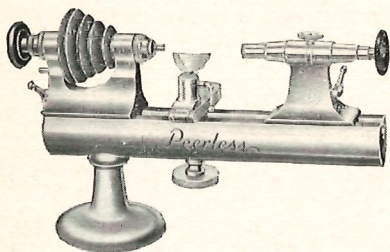
STAFFS

1/2 DOZEN # —
"THE BESTFIT"
Genuine
BC2
STAFF
REFILLS

CORRECTION

On page 39, February issue, H. I. A. JOURNAL "EXAMINERS' GRADING SHEET", under PERFORMANCE, the first item should have read: P. U. (Pendant Up) NOT P. D. (Pendant Down).

"WHEN NAMES MEAN



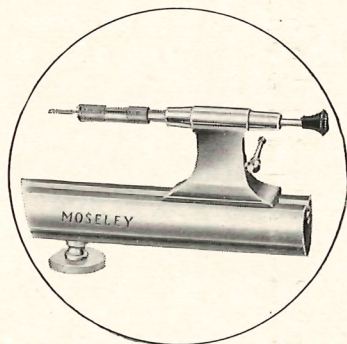
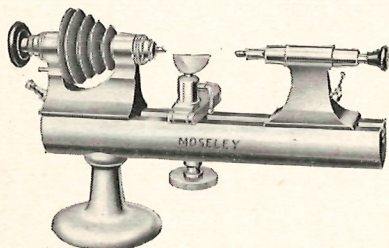
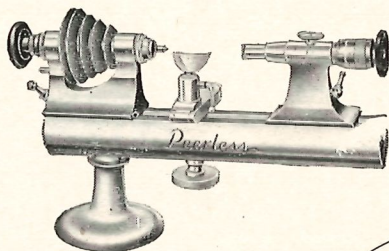
PEERLESS
\$107 and up
 WRITE FOR DETAILS

MARSHALL
 LATHES
 HAVE
 HARDENED
 and
 GROUND
 STEEL
 BEARINGS
 Individually
 LAPPED

MOSELEY

\$114 and up

WRITE FOR DETAILS



C. & E. MARSHALL

SOMETHING TO YOU"

When you are about to buy a lathe, does the use and endorsement of more than 90% of leading horologists in the United States mean anything? They have insisted on names they know . . . MOSELEY AND PEERLESS. They know the lathes are dependable. If the lathes were not dependable, THEY . . . AND YOU . . . WOULD NOT KNOW THE NAMES BECAUSE THE NAMES WOULD NOT HAVE BEEN ESTABLISHED. (The names of some of these outstanding horologists are available on request).

THE FIRST LATHE EVER BUILT WAS A MOSELEY

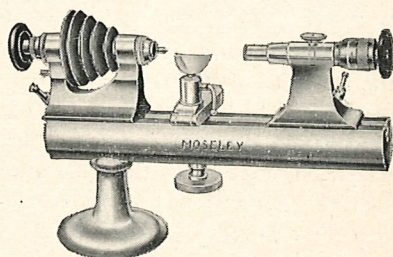
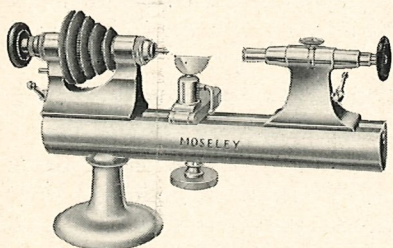
And the world's finest lathes still bear the same name. . . . MOSELEY . . . after almost 100 years. This is proved performance. And Moseley and Peerless lathes are manufactured only by C. & E. Marshall Company. A manufacturer YOU KNOW and CAN WRITE if you wish.

WHEN YOU BUY A "NAME BRAND" . . .

Genuine Attachments and parts are always available. Perhaps you will not buy a full set of chucks now. But you will always know that Genuine Moseley and Peerless Chucks will be available whenever you want them. Or perhaps you will want a slide rest . . . a 3-jawed chuck . . . a face plate or some other attachment. You know you can get them at any time. . . . GENUINE PARTS AND ATTACHMENTS . . . made only by C. & E. MARSHALL CO. for Moseley and Peerless lathes You can buy either of these lathes complete with any one of the 4 tailstocks shown on these pages. Pick the type you want from illustrations.

C. & E. Marshall Co. has the highest financial credit rating it is possible for any company to get . . . a dependable company. C. & E. Marshall Co. manufactured about 95% of all lathes used by the U. S. Government during the war. Every one of these lathes was inspected by an industrial technician . . . working for the U. S. Government . . . as it came off the production line NOT ONE LATHE WAS REJECTED.

ALL LATHES COMPLETE WITH TAILSTOCK.



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AND PRINCIPAL CITIES

"In the Case of Waltham . . ."

The estimated 9 million dollars necessary to refinance the reorganization of the Waltham Watch Company, and to retool its plant, now appears to be a certainty.

It was announced early this month that the Reconstruction Finance Corporation had tentatively agreed to loan the Waltham concern \$4 million; Boston financial interests to underwrite a loan of \$1 million; the remaining \$4 million is expected to be raised among employees, local merchants, and others interested in the continued operation of America's oldest watch factory.

It is, indeed, unfortunate that this pioneer watch factory, employing more than 2,300 skilled technicians, should be compelled to suspend operations so shortly after the introduction of their new "33" series of watches, which showed such marked improvements in both style and mechanical construction. This greatly improved model would, in a comparatively short space of time, restore dealer and watchmaker confidence and acceptance, especially among the self-employed-jeweler-watchmaker outlets, which accounts for more than 60 percent of the retail watch sales.

It would appear that the future of the Waltham Company centers on the "SELLING" of the watchmakers who are responsible for the maintaining of their watches in a satisfactory timekeeping condition.

It has been the prevailing opinion among the majority of the men at the watch repair benches that the watches produced by the Waltham Company, especially the smaller sizes, contained more than the average mechanical defects found in the other watches of similar grade, and required more time to restore them to a satisfactory timekeeping condition.

It is also the opinion of the majority of watch repairmen that the Waltham Company produced too many different models, which required a larger investment in vari-

ous repair parts. However, this is understandable, considering the Waltham Company has been manufacturing watches for practically a century. It is also the opinion of men whose job it is to maintain these watches in a satisfactory timekeeping condition that only a few models of the quality of the "33" series are necessary, and that the standardization of parts would greatly aid the watchmaker in speeding up customer service.

It has been reported by some sources that the unfortunate financial condition in which the Waltham Company now finds itself is due to the importation of foreign watches to this country. However, this statement is debatable, due to the fact that the Elgin and Hamilton watch companies have been producing watches at peak capacity, yet they have been unable to supply the demand for their products.

It is sincerely hoped by all concerned that the Waltham Company will be adequately financed and efficiently managed, and again will resume its place as a manufacturer of fine American timepieces.

However, the "come-back trail" is not going to be smooth or the recovery speedy. It will first be necessary to resell the self-employed jeweler-watchmakers, their watchmakers and apprentices (future jewelers) before any noticeable consumer acceptance is obtained.

Watchmakers of Switzerland Extend Help to Waltham

Press services out of Boston on February 28, 1949, carried the following cablegram received from the Watchmakers of Switzerland by the federally-appointed trustees of the Waltham Watch Company on February 28:

"The Watchmakers of Switzerland want to offer their help to their colleagues, the watchmakers of Waltham.

"We have viewed with a great deal of regret the financial problems which have beset your company.

"We realize what the closing of a local plant can mean to the local community, for here in Switzerland the watch industry represents approximately 25 per cent of our entire economy.

"We note that statements have been made that a major part of Waltham's difficulties are due to lack of proper machinery and equipment.

"We, the Watchmakers of Switzerland, are prepared to furnish your company with additional horological machinery you might still need in order to help overcome this lack of adequate equipment. The conditions which cover acquisition of any new equipment from Switzerland would continue to be on the same advantageous basis under which we dealt before which would, we hope, will be of aid to you in your new financial structure.

"There still exists in Switzerland a

shortage of certain types of horological machinery for our own watch factories. However, we stand ready to intervene in your behalf and do everything possible to facilitate the manufacture and shipping of new machinery you might desire to any reasonable extent.

"The Watchmakers of Switzerland are proud that their democracy, the oldest in the world, is America's best cash customer in Europe, for we too believe in reciprocal trade.

"We trust that this offer will be received in the spirit in which it is made in an endeavor to extend a hand of cooperation across the seas.

Yours sincerely,

The Watchmakers of Switzerland."

Trustees of the Waltham Watch Company have cabled thanks to the Swiss Watchmakers' Federation for the offer of additional modern watchmaking machinery to aid the company out of its difficulties. The offer was cabled from Geneva. The Swiss manufacturers had previously provided twenty-four machines for Waltham on a lease basis.

TENNESSEE WATCHMAKERS ASSOCIATION NOW HAS EIGHT GUILDS



Two more watchmakers' guilds have been added to the Tennessee Watchmakers and Jewelers Association, following a meeting of the board of directors held February 27 in the Andrew Jackson Hotel in Nashville, Tenn. The organization of the two new Guilds brings the total to eight Guilds in the Association.

Discussion of pending legislation was led by Rueben Brazzell, attorney for the Association, who explained the progress made and urged members of the Association to

give full support to the program of licensing watchmakers in Tennessee.

Hubert Harding, educational chairman of the association, was authorized to publish "A Tennessee Monthly News."

Robert DuBose, convention chairman, gave a report on progress for the 1949 convention to be held May 1-2-3 in Nashville, Tenn. He urged members to make convention reservations directly with the Andrew Jackson Hotel.

State officers and Guild representatives present at the meeting were Ray Kinsten, state president; H. C. Johnson, state secretary, and Hubert Harding, chairman of the board.

Guild representatives present were: Howard Stone and Ed. Cochran, Guild No. 1; Sam Cordell, Robert DuBose, L. D.



Andrew Jackson Hotel, Nashville, Tenn., where Joint Jewelers-Watchmakers Convention will be held May 1-2-3.

Stallcup and S. George Cochran, representatives of the convention committee; Ira Brown, C. G. Clements, Mr. Kingston, Mr. Harding and Mr. Johnson, all of Guild No. 2; Edward Jones, Guild No. 3; C. W. Costello, A. L. Lunaman and "Shorty" Thomas, Guild No. 4; Mr. Carpenter, Guild No. 5; Clyde Page and Loy Sturdivant, Guild No. 6; Harry Whitworth, Mr. May and Mr. Harris, Guild No. 7; and Earl Nash, E. B. Gray, Jr., Murray Ball and Avery Ball, Guild No. 8.

The Association also held a meeting Feb. 16 in the B. & B. Cafeteria in Cookeville, Tenn., when Guild No. 8 was organized, with twenty watchmakers and jewelers from Cookeville, Crossville, Livingston, Gainsboro and Sparta present. Earl Nash of Sparta, Tenn. was named temporary chairman; and E. B. Gray of Livingston, Tenn., was named secretary pro-tem.

Attending this meeting were M. H. Borden of Cookeville, who has been a watchmaker for fifty years; A. E. Ball, C. E. Dockney, A. C. Huffer, L. A. Chaffin,

Carl Gentry, W. E. Mayberry, G. W. Hide, D. P. Madwell, P. P. Conner, B. R. Matthews, M. W. Burns, Odell Bybee, E. R. Nash, H. W. Glidwell, Harvey Naboir, Hermit Gentry and E. B. Gray. State Secretary H. C. Johnson attended the meeting. The new Guild held a meeting March 15 in Livingston, Tenn. to perfect an organization program.

The 175th regular monthly meeting of Guild No. One of the T. W. & J. A. was held at the Andrew Jackson Hotel Tuesday night, March 1. Mr. William S. Klein, Jeweler of Nashville, was elected active member. Mr. C. C. Breece of Franklyn, Mr. Weakley Ruth of Shelbyville, Tennessee were elected Life Members, in the Guild.

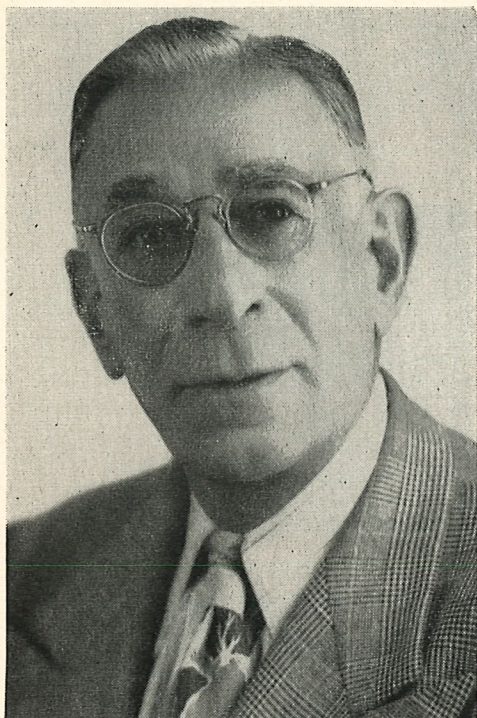
The organizing of the new guilds in middle Tennessee and the Legislative program along with the Convention program has created a greater interest among the watchmakers and members of the guild and the largest group of members along with several visitors made the largest meeting held in several months.

The program was made up of reports of the activities of the association of the last four months. Mr. Stone, on the Board of Directors, meeting, Mr. Ed. Cochran, progress on the licensing law, Mr. DuBose the Convention, Mr. Sam Cordell, President, presided.

Meeting adjourned at 8:55 o'clock to the home of Mrs. H. J. Webb to pick up their ladies who were attending the auxiliary meeting.

CANNON PINION: A hollow cylinder with pinion leaves at its lower end, fitted friction-tight to the center post extension of the center pinion of a watch or clock, and forming the first member of the dial train, with its leaves engaging the teeth of the minute wheel. The minute hand is usually fitted to the top shoulder of the cannon pinion. Sometimes spelled **CANON** as in French.

"The Half-Century Club"



Leon Aurich

Leon Aurich of San Francisco, Calif., of Nordman and Aurich, has celebrated his fifty-first anniversary of watch material business, marking him as the "dean" of the watch material business on the Pacific coast.

A native of Virginia City, Nev., he came with his parents to San Francisco at the age of six years; completed his education, and began work as an errand boy for the Nordman Brothers in October, 1896. He served his apprenticeship with that firm and in 1902 was made manager of the material department.

In 1913, Mr. Aurich formed a partnership with Bert Nordman, son of the founder of Nordman Brothers, a concern that had then only two employees. The firm now has

15 employees and does a wholesale business, featuring watch materials and jewelers' supplies.

Mr. Aurich has been one of the most indefatigable traveling men on the Pacific coast, covering the Santa Clara Valley territory regularly every week for twenty-seven years from 1914 to 1941, having never missed a trip during that period.

Mr. Aurich recalls vividly the disastrous San Francisco fire and earthquake in 1906, when he helped Nordman Brothers to re-establish themselves in business.

In 1907 he helped organize the San Francisco Wholesale Jewelers baseball team, captaining the team and playing as catcher, wearing one of those "handlebar" moustaches, he admits. He has been an ardent baseball fan ever since. He is also an enthusiastic fisherman and expert fly-caster.

In 1928, Mr. Aurich and Miss Frieda Lind were married. They have one son, Stanley, 17 years old, who is a student at San Jose State College. The Aurichs live in Oakland, Calif., and Mr. Aurich commutes daily to his place of business, the Jewelers Building, 150 Post Street, San Francisco. He is still active in the affairs of the firm.

½ DOZEN # _____

"THE BESTFIT"

Genuine
**SECOND
HANDS**
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= 175 Assortments

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IS YOUR ASSURANCE
OF FIRST QUALITY

SECOND HANDS

**NOW PACKED
IN SEALED ENVELOPES
FOR YOUR PROTECTION**

• ASK YOUR JOBBER •

GARY WATCHMAKER DIES

William Olson, veteran watchmaker of Gary, Ind., died Feb. 26. Born in Sweden on Aug. 16, 1886, Mr. Olson came alone to the United States as a lad of 16 years and obtained work in a lumber camp.



WILLIAM OLSEN

He later entered the Chicago Institute of Art and learned the fundamentals of engraving. Following his course at the Art Institute, he opened a jewelry store in Jamestown New York. He had learned watchmaking under his father and grandfather in Sweden.

Mr. Olson came to Gary, Ind. and was active in the organization of the Northern Indiana Watchmakers' Guild.

One of his finest horological achievements was the making of a beautiful seven-foot "grandfather-clock" which was sent to Mr. Olson's son in New York. He had retired from watchmaking but at the time of his death was active in doing fine engraving.

Mr. Olson was a personal friend of Justice Robert H. Jackson, member of the U. S. Supreme Court.

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BEST QUALITY
IN

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REFILLS FOR

Genuine
"THE BESTFIT"

CROWN

Assortment # _____

**ASK
YOUR
JOBBER**

Paulson's NEW BALANCE TRUING CALIPER

**TRUES
QUICKLY**

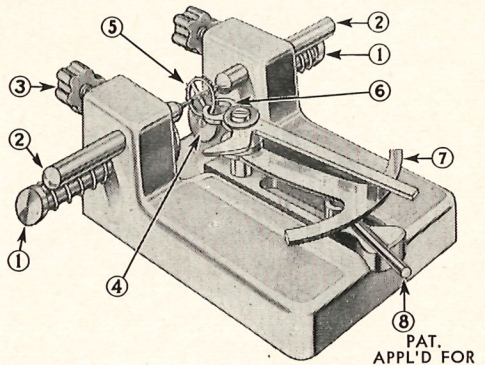
in BOTH ROUND and FLAT

SIMPLE AND EASY

You Can Use It Immediately

SATISFACTION GUARANTEED

**SAVES YOU TIME, LABOR AND MONEY ON ALL SIZES OF BALANCES
EXCELLENTLY MADE FOR PRECISION WORK**



(1)—Spring grip to hold balance wheel in flat while bending.

(2)—Removable balance holder for holding pivots small or large.

(3)—Set screws.

(4)—Flat face of balance gripper.

(5)—Balance wheel in position.

(6)—Two prong lever for bending.

(7)—Handle for sliding lever forward and backward for all sizes of balance wheels.

(8)—Lock lever.

ONE OF THE MANY NEW IDEAS
IN THE "VOICE" RECENTLY
MAILED

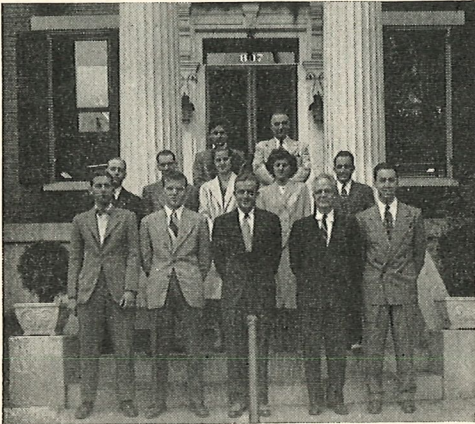
No. 947—Paulson balance truing caliper including two extra balance wheel holders for all sizes of balances... **\$8.50**

HENRY PAULSON & CO.

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CHICAGO 3, ILL.

PREMIER SHOWING OF "ESEMB-O-GRAF" PLANNED

Plans for a premier display and discussion of the new 22-volume set of "Esembl-O-Grafs," produced by William O. Smith, president of Western Pennsylvania Horological Institute, in Chicago during the convention of the National Association of Horological Schools, May 19-22, are being completed.



(Back row, left to right) W. O. Smith, Jr., technical director, and W. O. Smith, Sr., president W. P. H. I., who originated the ESEMBL-O-GRAF method of chronograph-complicated watch repair, with the staff, consisting of four chronograph technicians, two draftsmen, two stenographers, and artists, and the school's printing personnel, shown on the steps of the Western Pennsylvania Horological Institute, Pittsburgh.

Watchmakers of the country are to be invited to attend the display, which will explain the purpose of the "Esembl-O-Graf" volumes as an educational aid for watchmakers and students of horological schools.

The "Esembl-O-Graf" books explain in a step-by-step method how to disassemble and re-assemble over one hundred different chronograph watches. Special photographs and chronological drawings of the parts of chronograph watches illustrate the books, making possible the cleaning of chronograph watches in one and a half to two and a half minutes, it is said.

Education of chronograph technicians is made possible by use of the new 22-volume "Esembl-O-Grafs," and many horological schools are expected to make use of them in extending their curricula to include chronograph watch repair work.

CENTERS: (1) Lathe centers—steel tapers with V-joints, held in female tapers in lathe chucks, tailstock spindles, etc. (2) Locations of centers of motion for rotating parts in watch and clock mechanisms.

VETERAN SALESMAN WAS HONOR GUEST

Fred Wilkerson, dean of the Longines-Wittnauer Watch Company's salesmen, was recently honored at the 83rd annual "black-tie" dinner held in the Park Lane Hotel in New York City in celebration of his fiftieth year with the company. Executives and employees of the company from the United States and Canada attended the dinner. John P. V. Heinmuller, president, congratulated Mr. Wilkerson and paid a glowing tribute to him.

New advertising and sales program plans were announced by company officials. Everett Mayer will be the sales manager of the new Vacheron and Constantin-Le Coultre headquarters in New York.

Indianas' Largest Watch Material & Jewelers' Supply House

Has expanded their facilities and personnel to give your mail orders immediate and efficient service on genuine American or Swiss Watch Materials, Tools, Equipment and Jewelers' Supplies.

One-Day Service on Odd-Shaped Crystals.

INDIANA JEWELERS SUPPLY CO.

428-435 State Life Bldg., Indianapolis 4, Ind.

Your Questions Answered Here!

By "THE PROFESSOR"

EDITOR'S NOTE: *A nationally renowned professor—who prefers to remain anonymous—has consented to answer questions from our readers pertaining to the science of horology and its various practical applications in the field of watch repair. Simply address your questions to the editor, H. I. A. Journal, 921 State Life Building, Indianapolis 4, Indiana. It will be our pleasant duty to forward all questions received to "The Professor" for a prompt reply and publishing in these columns every month.*

Dear "Professor":

Will you please tell me the best way to cut out the arms in making a small watch train wheel when only an occasional wheel is needed on a repair job?

H. E. P.

ANSWER: This job has to be done with a jeweler's saw; it is of the variety of sawing called "piercing." Before sawing, however, the thin metal of the wheel must be reinforced by clamping it between two other pieces of flat metal, brass or nickel; or by soft-soldering the wheel onto one piece of flat metal. In either case, make these pieces of supporting metal large enough to handle conveniently, supporting the job while sawing, on a wooden "bench-pin" such as is on all jewelers' benches, and ought to be on watchmakers' benches. Scribing the lines for the arms or spokes can be done with the wheel-blank in the

lathe, setting a flat-filled T-rest up to rule or guide the scriber-point, using the index-holes on lathe pulley to divide the spaces, etc. Drill a hole in each place to be sawed out; pass the saw blade through and clamp it; saw carefully, leaving a trifle of metal standing, which is to be filed off exactly to the lines, using escapement files for this, and finishing the inside of rim and the spokes by draw-filing. All of the work above outlined should be done before separating the wheel from the supporting metal.

"THE PROFESSOR"

Dear "Professor":

Our head watchmaker has just brought to my attention the fact that a number of our new watches are being returned by customers, which, after examining he finds the oil to be thick and *syrupy*.

It is the opinion of our watchmaker that

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Temporarily, applicants are on waiting list, until "jam" lessens, which we hope will be soon.

this condition is caused by watches being kept in our vault. (Vault constructed of granite and reinforced concrete, 7 months ago.)

We would like for you to make suggestions as to how we may remedy this condition and as to any chemical or substitute that we can place inside vault to absorb moisture.

Thanking you in advance for any information you can give us, we remain

C. S. B., Elberton, Ga.

Answer:

We can hardly believe that the condition described affecting oil in new watches is caused by the atmospheric conditions in your vault; moisture in air would not promote evaporation and thickening of oil. The first thing that occurs to us is to write to the supplier of these watches, and ask them to investigate the oil matter, especially if the watches in question all come from one source; it is possible that one lot of any make of oil may prove out defective; it happens occasionally. You should also investigate whether the oil in these watches was applied perhaps a long while ago; even good oil thickens in time.

“PROFESSOR.”

Dear “Professor”:

I am writing for any information you may be able to give me regarding a clock.

I need a set of works for a Mantel Fashion Clock Pat. Dec. 28, 1876, put out by the Southern Calendar Co., St. Louis, Mo. I have the calendar part but need the works.

Any information you can furnish would be greatly appreciated.

Enclosed is a self-addressed envelope for your convenience.

W. R., Tylertown, Miss.

Answer:

The firm named has been out of business for many years, so you cannot obtain a movement there. The Seth Thomas Clock Co., Thomaston, Conn., may have resumed their pre-war department that supplied sep-

arate clock movements without cases; we suggest writing that firm about this. Or, you might be able to find a second-hand or used movement in some shop, if not in your own, that you could adapt to fit the case of your calendar clock.

“PROFESSOR.”

Dear “Professor”:

Could you give me some information on old clocks, as to their age and whether they are antiques or just old clocks? I have received a number of these old mantle clocks lately and I wonder if some of these so-called antiques were not a lot of “malarky.”

F. M. A., Indianapolis.

Answer:

We believe the best source of information on your subject is a book “American Clocks and Clockmakers,” by Carl W. Drepperd, published by Doubleday & Co., Inc., Garden City, N. Y. This book could be bought of any of the watchmakers supply houses or booksellers, whose addresses are given in their advertisements in the H. I. A. JOURNAL.

“PROFESSOR.”

Dear “Professor”:

I have my clock-shop in a room to myself. I have an old hand-made grandfather clock—one shaft is broken on the strike side. The left pinion is lost.

Do you know of anyone who could make this pinion for me? Thanking you,

E. H. H., Terre Haute, Ind.

Answer:

A job like this could be done by Charles K. Johns, 790 Riverside Drive, New York, N. Y., or by some competent toolmaker, the skilled man in that higher branch of the machine trade known as toolmaking. In either case, it would be an expensive job, especially if the leaved portion of the old pinion is missing and wouldn't be available to “copy” for making the new pinion, which would then have to be calculated from data of the remaining parts.

“PROFESSOR.”

Dear "Professor":

I have an old key-winding watch marked thusly: 2/C E #67828, detached Sever full jeweled, Argent, (I. F.) or J. T. Cooper, London, and etched on inside back underneath Cooper's name is a running greyhound dog. It is all intact except the crystal and keys.

From what I can gather from antique records, it is quite aged. Do you have a customer who would be interested in such a relic for horological collection? Remembering, of course, that other offers have been fair and above.

R. M. H., Summerland, Miss.

Answer:

The H. I. A. JOURNAL has no department that could undertake to sell antique watches for owners. You could, if you wish, try running an ad in our Classified columns, offering the watch for sale. Another suggestion is that you write to Mr. Robert Franks, Jr., Caversham Road, Bryn Mawr, Penn., who is President of the National Association of Watch and Clock Collectors, and ask him for terms for circularizing your watch for sale to the list of members of the association.

"PROFESSOR."

Dear "Professor":

I have a question pertaining to a clock which is bothering me. I have had little experience with clocks, but I have to repair clocks in this town if I want its watch work.

I have an eight-day Session clock that strikes when the minute hand is on 11 or five minutes before the hour, and it also strikes 25 after or five minutes before the

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Waltham 21-J., 16-S., Adjusted, \$22;
Adjusted to 5 positions, \$27.

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RAILROAD WATCHES**

Bargains in Wrist Watches

MORRIS FREY WATCH CO.

915-16 Holland Bldg., St. Louis 1, Mo.

half past. How can—or where—is the adjustment made to bring it on the 12 and 6?

E. L. T., Enosburg Falls, Vt.

Answer:

Your description, merely that this clock is an 8-day Sessions clock, doesn't give us any idea whatever about the type of striking-work there is in the movement. The Sessions Co. has made hundreds of different models of clocks in its time. We cannot advise any alteration in the striking work without seeing what design of mechanism is there. However, a simple way of getting the strike to sound at the right time would be to change the setting of the minute-hand on the arbor that carries it, so as to swing the hand and refasten it at a position 5 minutes toward the right, as looked at above the center of the dial. This could be done in various ways, depending on how the hand is fastened to the center-arbor or minute-post.

"PROFESSOR."

Dear "Professor":

I have under observation one 16s. 992 Hamilton. I have repaired and adjusted to all five positions, regulated within 5 sec. in 24 hours on WatchMaster, and a few hours later this watch will be gaining or losing as much as 30 seconds in 24 hours.

In trying to determine the cause I have replaced balance staff and balance jewel,

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also main spring, and yet the result is the same.

This watch is, what I would say after examining it thoroughly several times, in perfect condition.

Any advice as to where I may look for this trouble will be appreciated.

J. O. B., Vidalia, Ga.

Answer:

There are so *many* possible things that *could* cause the irregularity of rates that you state of this watch, that it would only be guesswork for us to attempt to advise on the case. In your inspection you must be overlooking one or more mechanical faults in the movement that would produce the results described. We suggest that you write to John J. Bowman, Chairman, Educational Committee of the Horological Institute of America, P. O. Box 96, Lancaster, Pa., and ask him to advise you on selecting books to study on diagnosing faults in watches in connection with adjustments to positions.

"PROFESSOR."

Dear "Professor":

Is it correct to put a very small drop of oil on the center wheel arbor before putting on the cannon pinion? I have found that if I didn't a fairly snug cannon pinion would tighten up after being turned a little, especially on a new watch being cleaned for the first time.

D. N. COMOX, B. C., Canada.

Answer:

Do *not* put any oil on the center-post, where the cannon-pinion fits with sufficient friction to hold the pinion stationary on the post except whenever the hands are set to time. Your trouble is probably due to rough surfaces on either post or in hole in pinion, or on both of these surfaces.

"PROFESSOR."

Dear "Professor":

Would it be possible for you to publish an article or two on sizing diamond and wedding rings?

D. N. COMOX, B. C., Canada.

Answer:

The H. I. A. JOURNAL does not deal with jewelry-work problems; only, as far as possible, with problems in horology.

"PROFESSOR."

Dear "Professor":

In reference to the question and answer of "H. D., Ft. Lauderdale, Fla.," in September issue of H. I. A., I have the same trouble with my hands perspiring. I went to the druggist for the mixture of 4 dr. zinc oleate and 3 dr. boracic acid. He looked in every book he had on the premises and could not find zinc oleate listed. Please send me some information on the chemical content or if it goes under some other name. I tried the soap mentioned in the answer, but to no avail. I have also tried all sorts of deodorants but they either don't work, or when they do, they leave my hands greasy. Your help will be appreciated.

L. R. E., Forsythe, Montana.

Dear "Professor":

I notice in the September issue of the H. I. A. JOURNAL the question on page 33 by H. D., Ft. Lauderdale, Fla., "How to Keep Tools From Rusting." Of course the better they are cleaned, the more the steel is exposed to the moisture of the finger tips. I tried most everything I heard of until a shipyard worker told me about how tools could be used in salt water and kept free from rust.

Go to the drug store and get a block of camphor gum; put it in your bench and staking tool case and forget about rust.

A. K., Huntington, W. Va.

MAINSRING—

The long steel ribbon used for driving a clock or watch. The spring is coiled into a circular metal box called the barrel and the outer end of the spring is fastened to the barrel; the inner end to the arbor of the great wheel. First applied, by Peter Henlein of Nurember, about 1500.

Overseas Press Club Awards Were Presented



Shown holding Overseas Press Club award Hamilton watches are (left to right) Wm. F. Brooks, vice-president of NBC, who accepted Henry Cassidy's award; James Reston, N. Y. Times; W. W. Chaplin, president of O. P. C., who made the presentations; Elmer Davis, American Broadcasting Co., and Daniel Longwell, chairman of the editorial board of Life, who accepted award for Jack Birns. Not pictured here: Edwin L. James, who accepted for Harold Callender, New York Times and Homer Bigart, New York Herald Tribune. Correspondents working in Europe heard the presentation speeches by shortwave overseas.

Awards of Hamilton watches for "outstanding reporting of foreign news" were announced at the tenth anniversary dinner of the Overseas Press Club held March 4 in the Waldorf Astoria Hotel in New York City. More than 2,000 persons, including diplomatic, military and government leaders, attended the dinner.

W. W. Chaplin, president of the club, made the presentation of the awards.

Those to whom watches were awarded were: Henry Cassidy of the National Broadcasting Company, James Reston of the New York Times; Elmer Davis of the American Broadcasting Company; Harold Callender of the New York Times; Jack Birns of Life Magazine; and Homer Bigart of the New York Herald Tribune.

The awards to Messrs. Cassidy, Callender and Birns, who are working in Europe, were accepted respectively by Edwin L. James, managing editor of the Times; William P. Brooks, vice-president of NBC; and Daniel Longwell, chairman of the editorial board of Life Magazine.

Mr. Bigart, in addition to winning one of the Hamilton watches, also received a

special award of \$500 for obtaining "the year's outstanding news story under the most difficult conditions."

A special electrical transcription of Mr. Cassidy's acceptance speech, made in Europe, was played while Mr. Brooks accepted his award for him at the dinner. The program was re-broadcast by short wave by the State Department to a dinner of the Anglo-American Press Club in Paris, which honored Mr. Callender and Mr. Birns.

Principal speakers at the dinner were Gen. George C. Marshall, honor guest; Wilhelm Munthe Morgenstjerne, Norwegian ambassador to the U. S.; Secretary of State Dean Acheson; Major General Frederick Osborn, Deputy U. S. Representative on the UN Atomic Energy Commission; U. S. Senator Henry Cabot Lodge, Jr. of Massachusetts, and Lt. Gen. Albert C. Wedemeyer, deputy chief of staff.

The award watches were 14K natural gold, Secometer "C" models, Hamilton 748, 18-jeweled, sweep seconds movement. Engraved on each was: "Award—OPC—1948."

How To Handle Watch Servicing

By WILLIAM C. HENRY, JR.

(Editor's Note: Mr. Henry, Jr., is a competent watchmaker and jeweler in Evansville, Ind., and this article deals with suggestions on how the watch repairman should deal with customers. It is another practical article all watchmakers can read with profit.)

Watch repair work brings more traffic to the jewelry store than any other avenue of trade, but this factor of business is valuable only as long as the watch repair department is maintained on a basis of high integrity, honesty and fair and equitable charges are made to customers.

We will assume that the repair customer is familiar with his, or her, timepiece, knowing its past performances and its present condition, arrives in the store with his, or her, watch, either "stopped" or in poor timekeeping condition.

At this point, however, the customer is actually in complete ignorance of the real source of trouble. Therefore, the watch repair man must be most mindful of the customer's distress and inconvenience; he **MUST** be patient, sympathetic and show a desire to aid the customer to the fullest extent.

Examine the watch carefully and completely; take time to review plainly **WHAT** must be done, using simple terminology; and, if questions arise, as they will, answer fully.

Your customer has a back-shrouded thought of "years of service," so explain to him, or her, that if this is to be a reality, **YOUR SERVICE** and **CONTINUED MAINTENANCE** is a **MUST**.

In estimating the cost of the repairs, be sure to include a remuneration for complete rejuvenation of the **OUTSIDE** appearance as well as the movement work entailed. A polished case, a clear dial and crystal mean so much to the average customer's acceptance and appreciation of all repair work on a watch.

Having discussed charges for necessary work, be sure to fulfill your estimate; do

your best to satisfy your customer's desire for a **DEPENDABLE** timepiece. Do not slight hairspring repairs, broken screws, scratches and finger-prints. **DO NOT RUSH YOUR WORK.**

As **HOROLOGISTS**, let us all strive to **IMPROVE** the **SERVICE** derived from repair work.

Instill in the consciousness of your customer that you are fully equipped in every way to solve and do this repair and servicing problems; that you are master of the situation, capable of dealing with any problems quickly, reasonable and accurately.

Impress upon your customer that his **HOROLOGIST** should be chosen with the same thought and concern as is given in the case of a physician.

All satisfactory repair work and servicing are accomplished by **WORK**—there is no "hokus pokus"—by your understanding of repair work and by constant maintenance of new methods and promotional activities.

Your **QUALITY** of workmanship, salesmanship and customer-relations will provide you with continued and satisfied patronage.

Expert Watch Repairing

We Specialize in Fine Watch Repairing
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HAMILTON SALES FORCE HOLD CONVENTION



Sales plans to meet the keener competition of the present buyers' market were outlined at the annual meeting of the Hamilton Watch Co., sales organization during the week of February 14th. Hamilton district managers and field men from all sections of the country journeyed to Lancaster, Pa., to participate in the 4-day conference.

The daily sessions were devoted to open discussions and talks covering general sales policies and problems, advertising and dealer services, and factory production. During their stay in Lancaster, the field

men toured various departments in the factory to see the progress made in Hamilton's modernization program and changes in production methods since last year.

The final session was devoted to a review and summary of the previous sessions and a last minute briefing of the salesmen in attendance before they returned to their territories.

The Hamilton sales organization is shown grouped at the entrance to the company's office building during a recess in the meetings.

Watch Parts Importers Soon to Receive Swiss Parts Packages

Watch parts importers in the United States can expect to receive the new Official Swiss Watch Parts package containing staffs and stems within the next six weeks.

Shipments, scheduled to arrive in this country during April, have been temporarily delayed due to unavoidable manufacturing and transportation difficulties, according to Paul Tschudin, director of the Swiss Watch Repair Parts Information Bureau.

Develops Revolutionary New Type Lady's Automatic

An entirely new type of lady's automatic wrist watch, with the swinging weight operating on a unique and revolutionary principle, is reported by the Eterna Watch Co., Grenchen, Switzerland. This new movement, which can be mounted in small, ultra-fashionable cases, is expected soon on the United States market.

After more than two years of intensive work and testing, this new type automatic has overcome certain design and technical problems which have affected the sales of lady's self winders.

One problem was caused by the smaller size required for the feminine wearers, since, in most instances, reduced automatic winding power. To this was added the fact that most women carry their handbags on their left arm, resulted in less swinging motion for the weight that winds the main-spring.

This lady's automatic watch enables the swinging weight to act as a real "rotor," with friction reduced to an absolute minimum through a completely original horological development. Furthermore the mounting of the weight has been tested under extreme stresses and is believed to be unbreakable.

Eterna has pioneered many new horological advances including one of the first practical man's automatic in 1939 and a

lady's automatic 8 years ago. It is this combination of almost a century's technical experience with a decade of intensive research and production in automatic movements which has created advance interest on the part of retail jewelers in this latest Eterna Lady's automatic.

(For further information, please refer to Eterna Watch Co. of America, Inc., 580 5th Ave., New York City).



Highlighting the recent Fourth Annual Banquet of the Staff and Faculty of the Peters School of Horology, Washington, D. C., was the presentation by Mr. Forrest E. Peters, Technical Director of the school of an Honorary Degree in Watchmaking to Charles T. "Captain Charlie" Felter. Mr. Felter is the retired Chief of the Veterans' Administration Training Facilities Section.

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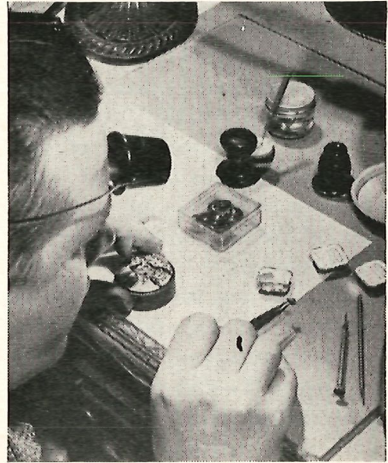
SWISS WATCH MAKERS OFFER PACKAGED PARTS

Watch parts suppliers in the United States are now receiving the new Official Swiss Parts package containing staffs and stems, according to an announcement by Paul Tschudin, director of the Swiss Watch Repair Parts Information Bureau in New York City, N. Y.

The new cabinet for Swiss repair parts has also been made available to regular suppliers, designed for both packaged and unpackaged parts, Mr. Tschudin stated. It is light and compact, with cabinet and drawer made of mahogany color steel and inserts of molded bakelite.

Special slots in the tray channels of the cabinet drawers carries index listings for parts packages. Plastic bins that fit tray slots are provided to hold unpackaged parts, each bin having a hinged top and card to identify the movement and model number of the contained parts.

Made in the United States, the cabinet has been approved by the Watch Material Distributors Association of America, and is the result of the cooperative efforts of horological and trade associations, Mr. Tschudin said.



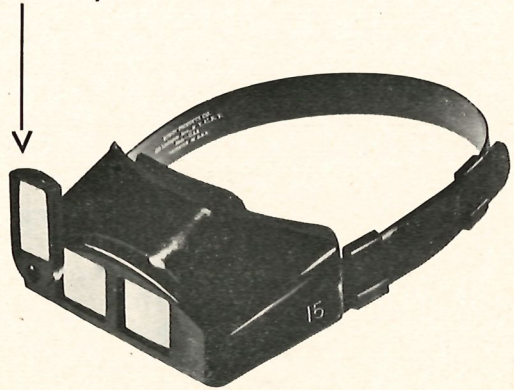
A watch repair part is removed by the watchmaker from one of the new Official Swiss Parts Packages as he prepares to repair the timepiece on the bench in front of him. Two other packages, both still sealed against moisture and erosion, rest near at hand.

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It's a *binocular magnifier* that enables you to use *both* eyes for most work—for true third dimensional vision, greater eye comfort, longer life for your eyes. It gives binocular magnification of $2\frac{1}{2}$ times at 10" focal range or 5 magnifications when using the auxiliary lens at 4" focal range. The auxiliary lens can be flipped up easily when extra power is not needed. \$12.50 complete. Order today from your supply dealer, or write to us.

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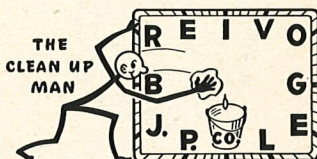
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N. J. HOROS MEET



The regular meeting of the Watchmakers' Association of New Jersey, Inc., will be held at the Ivanhoe, 925 Springfield Ave., Irvington, at 8:30 P. M., March 8, 1949.

The February meeting was so well attended that we overflowed into the corridors and have made arrangements for a larger meeting room. It is gratifying to see so many come out and show their interest. We wish to thank Mr. Benjamin Mellenhoff for the fine talk he gave at this meeting. It is very generous of a man with the skill and ability attained by Mr. Mellenhoff in this craft to be willing to give of his time and energy to assist an organization such as ours.

Thomas Buckner, Vice-President, was appointed chairman of the committee to revise our constitution and by-laws.

Our guest speaker for the March Meeting will be Mr. Barney Goldstein. Mr. Barney, as he wishes to be called, is a prominent clockmaker and is also known as a horological inventor with many patents on watchmaker's tools. Mr. Barney operates

a clock repair and antique clock and watch shop in New York City. His collection of clocks is internationally known. Six pages in the January issue of the American Horologist and Jeweler were devoted to an article about Mr. Barney. This meeting should bring out every clock and watchmaker in this territory. I assure you it will be an evening well spent. So tell your fellow clock makers to come and hear this lecture and see the movie on clocks.

A notice has been sent to each member by the D. Van Nostrand Co., Inc., giving a detailed description of the publication just off the press, "The Watch Repairer's Manual," written by Henry B. Fried. I have reviewed this book and feel this book should be in the hands of every watchmaker, especially those just beginning this craft, as each step in the process of watch repairing is fully explained and illustrated. Mr. Fried is the horological instructor of the George Westinghouse Vocational High School, New York City.

Any Junior member who did not receive his copy of the Joseph Bulova School of Watchmaking book, can get it from the secretary at the April meeting.

Each meeting brings out new friends—come and enjoy them.

L. H. Hayenga, President.

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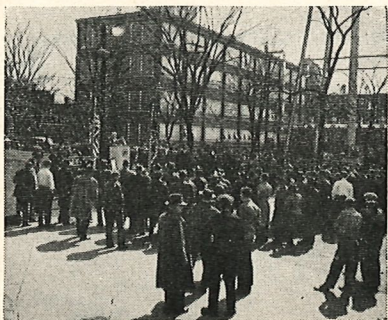
Ground Broken for Hamilton Laboratory



R. M. Kant, Hamilton's president, is pictured breaking ground for the new engineering laboratory building while Calvin M. Kendig, board chairman, directs the procedure from the speakers platform.

Ground was broken on March 9 for the new \$700,000 Hamilton Watch Company engineering research laboratory at Lancaster, Pa., during a special noon-hour ceremony attended by company employees and officials of the company.

Calvin M. Kendig, chairman of the board of directors of the Hamilton Watch Company gave a short talk at the ground breaking ceremony, in which he stressed the importance of research and development of new production methods, new machinery and materials in the watchmaking industry.

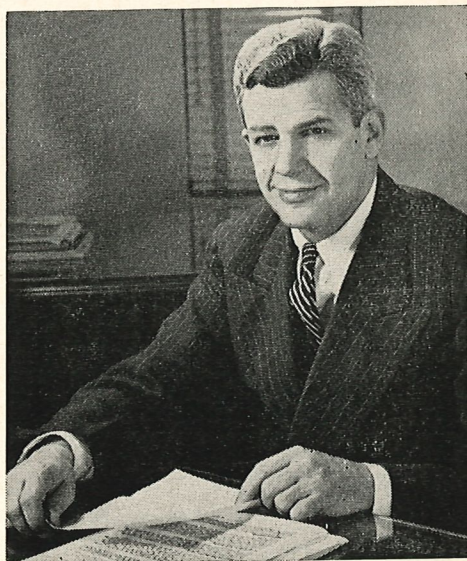


Mr. Kendig explains advantages of plant expansion to employees attending the noon-hour ceremony. Rear of Hamilton's main plant can be seen in the background.



The new building will be a four-story structure of brick and steel, and will be located on a company parking lot behind the main plant. It will house all of the company's various engineering research and development work.

The new building will be approximately 263 feet long and sixty-two feet wide. It was designed by Prack & Prack of Pittsburgh, Pa.



ELGIN PRESIDENT URGED MILITARY DEFENSE AID

James G. Shennan of Elgin, Illinois, president of the Elgin National Watch Company, recently told the Senate finance committee that the American jeweled watch industry does not now have "enough capacity" to supply all the military timing devices needed in another emergency.

Mr. Shennan told the Senate committee that any new trade pact with Switzerland

should include an escape clause whereby, through negotiation, the American jeweled watch industry could gain "equity at the border" with importers of Swiss movement, and thereby "a highly essential defense facility" could be maintained.

Mr. Shennan urged the committee to approve "realistic duties" on imported Swiss movements to equalize the cost to importers with the cost of domestic manufacturers.

He cited the jeweled watch industry's "essentiality" to national defense and he quoted military leaders that, "in case of war, domestic manufacturers would have to supply all grades of timepieces, as well as military timing devices."

Mr. Shennan said that over fifty-five million jeweled watches and movements have been imported into this country since 1941, an average of seven million annually, compared with two and a half million from 1936 to 1940. The war imposed on American industry difficult reconversion problems, he said.

"We ask only for equality at the border and realistic duties which will equalize the cost of movements comparable in America by American labor," Mr. Shennan testified.

Proper correction of present tariff inequities, Mr. Shennan testified, would not only stimulate American watch movement production, stimulate competition, but "would strengthen the defenses of the United States by preserving and enhancing the skills necessary for the production of precision time mechanisms."

"Speaker Kits" Available

The world-wide confusion in ordering correct replacement parts for Swiss watches has now been eliminated through the formation of the "Watchmakers of Switzerland," an organization of more than 450 watch manufacturers and allied industries, for the purpose of simplifying and expediting the ordering of Swiss watch replacement parts by standardization.

Their new WATCH PARTS CATALOG (Part 1) was released recently for distribution by the Information bureau of the Watchmakers of Switzerland. This catalog climaxes over 300 years of watch-making experience and careful investigation into the problems of those responsible for maintenance of the public's timepieces in a satisfactory timekeeping condition.

Wherever watchmakers gather, one of the chief topics of conversation is the new Official Catalog of Swiss Watch Repair Parts (Part 1). However, any innovation is always subject to adverse criticism due to the lack of a clear understanding of its advantages. This subject, therefore would prove to be a most interesting and informative topic for discussion at watchmakers Guild meetings.

To better acquaint watchmakers with the many advantages and the speed and ease with which the correct replacement part can be located in the Official Catalog of Swiss Watch Repair Parts, the Watchmakers of Switzerland have released an interesting and informative 20-minute talk on how to quickly locate correct replacement parts. This includes illustrated slides to clear up any misunderstanding which may exist as to the proper method of using the Official Catalog.

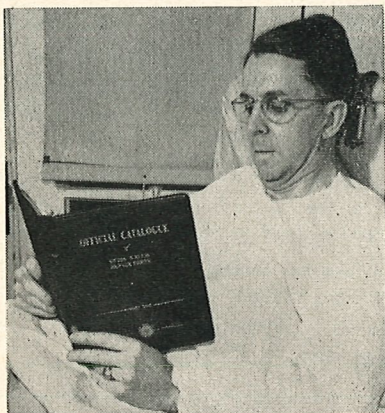
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HOSPITALIZED VETERAN LEARNS WATCHMAKING

J. A. Spaulding, a World War I veteran, former chemical engineer in Kansas city and Mount Vernon, Ill., now a bed-fast patient in the Veterans Hospital since 1943, has turned to watch repairing as a hobby. He works on the timepieces of his fellow patients, nurses and hospital employees.



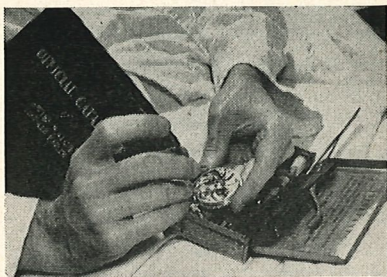
Disabled veteran J. A. Spaulding catches up on some "must reading," in the Official Catalogue of Swiss Watch Repair Parts (Part 1), in his bed at Veterans Hospital, Tucson, Arizona.

He is able to do minor repairs, adjusting, cleaning and parts replacements, but his bench work is being done by John Ayraud, also a war veteran who lives across the street from the hospital.

Spaulding has been using the Official Catalogue of Swiss Watch Repair Parts,

distributed by the Watchmakers of Switzerland to obtain repair parts, and is able to identify each part needed.

This plucky veteran has won the admiration of his friends and associates in the hospital and is an example of what can be done by aspiring physically handicapped men to learn watch repairing work.



A metal box serves as a make-shift horological bench for J. A. Spaulding, bedridden veteran in Veteran's Hospital, Tucson, Arizona. His Official Catalogue of Swiss Watch Repair Parts (Part 1) rests nearby for quick reference.

HARD-TO-GET

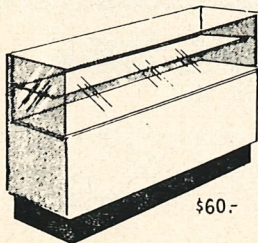
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SWISS WATCH INDUSTRY

Bienne, Switzerland—The Swiss watch industry, with a long record of harmonious labor relations and high employee living standards, reports that employment climbed to an all-time high of 53,000 in August, 1948, several thousand more than were employed by the industry in the boom year of 1929 and higher than the 1947 employment record of 50,000.

This remarkable industry, the world's oldest and largest horological enterprise, is also the most flexible. Under the generic term, The Watchmakers of Switzerland, which includes almost all Swiss horological production, the world's need for every type of time-keeping device is met.

In the matter of style and design, Swiss timepieces are consistently pioneered, and are a combination of the engineer's precision and the jewelry designer's artanship.

Among many of the benefits of the Swiss

watch industry is the reciprocal trade it creates for other countries. The horological earnings make up a great part of the Swiss economy, and help to stabilize the financial structure of this oldest democracy in Europe. Industries and retail business in other countries are furthered through the import of Swiss movements. In the United States, for example, out of every \$1.00 spent by a consumer for a watch with a Swiss movement, 88c remains in this country while only 12c returns to Switzerland. In terms of reciprocal trade, Switzerland buys more than twice as much, in dollar volume, from the United States than this country buys from her.

Switzerland's fifty-three thousand watchworkers are spread through almost 2,500 different manufacturing enterprises, including factories which assemble the actual watch, and make jewels, watch cases, dials, hands, basic movements, clocks and watch-making tools.

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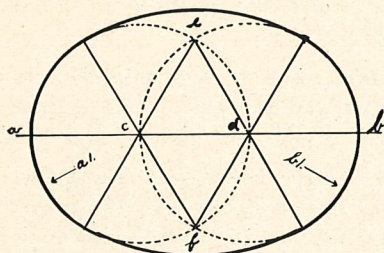


Fig. 1

TO DRAW AN ELLIPSE (Fig. 1)

3. (1.) Draw a horizontal line a-b, the length you desire the completed ellipse. (2.) Divide line a-b into three equal spaces, c-d. (3.) Using the distance, a-c as circle radius, place divider on "c" and scribe circle a-1. (4.) Repeat procedure using as a radius point, scribe circle b-1. (5.) Where circles "a" and "b" intersect at top, (e), draw a line through radius "a" to circle at "a-1." (6.) Repeat, drawing line through radius "d" to circle "b-1." (7.) Using point "f," draw a line through radius "c" to circle "a-1." (top). (8.) Draw a line from point "of" through radius "d" to circle "b-1." (9.) Using distance between "f" (along angle line to circle a-1) as radius, place your dividers at "f," and scribe arc, joining circles "a-1" and "b-1." (10.) Repeat procedure using point "e" as radius, completing the ellipse.

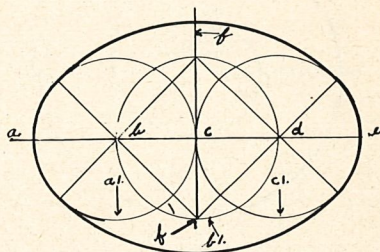


Fig. 2

TO DRAW AN ENLONGATED ELLIPSE OR OVAL (Fig. 2)

4. (1.) Proceed as described in drawing the preceding ellipse. (2.) Divide the line into four equal parts. (3.) Scribe three equal circles, using radius points "b"- "c" and "d." (4.) Erect a perpendicular (f) to horizontal line a-e at a point where circles a-1 and c-1 touch. (5.) Draw a line from the intersection of "f" (top) and circle a-1. (6.) Repeat procedure drawing a line from "f" (top) through radius point "d" to circle c-1. (7.) Repeat procedure, using "f" (lower) and radius points b-d. (8.) Use the distance between "f" (lower) along line to circle a-1 (top) as your radius. (9.) Using point "f" as radius, scribe an arc, joining circles a-1 and c-1, at top. (10.) Repeat procedure, using "f" (top) as radius point; scribe an arc joining circles a-1 and c-1, at bottom, completing elongated ellipse.

REMOVING BROKEN STEEL SCREW FROM WATCH PLATE

1. (a) Remove all steel parts from plate containing broken screws. (b) Place plate in a solution formed by dissolving 50 parts of powdered alum. (c) Let plate remain in solution until screw has been converted to rust. (d) Thoroughly remove all trace of the solution from the plate. (e) Clean out the screw hole with a pointed piece of pegwood dipped in oil; clean out the threads

by screwing the pegwood into the screw hole. The process may require several days until the broken screw has been converted to rust.

2. Remove the temper from the broken screw and with a drill of smaller diameter than the screw, drill about one half the length of the broken screw. Insert a triangular steel punch into the drilled hole and turn like a screw driver.

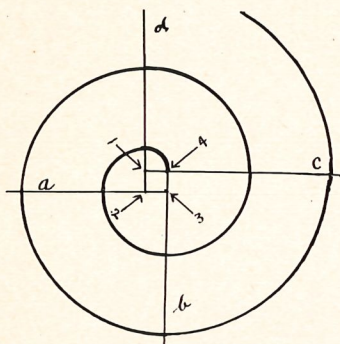


Fig. 3

TO DRAW A SPIRAL CURVE (Fig. 3)

The distance between the curves are regulated by the size of the square drawn in the center. (1.) Draw a square, extending the lines as a-b-c-d, as shown in Fig. 3, using corners 1-2-3-4 as radius points. (2.) Using distance between corners 1 and 2 as radius distance, place divider at corner 1, and scribe an arc from horizontal line "c" to perpendicular line "d." (3.) Set divider at corner 2 and intersection of perpendicular line "d" and first arc, using corner 2 as radius point. Scribe arc from perpendicular line "c" to horizontal line "a." (4.) Measure distance between corner 3 and the intersection of the second arc and line "a," using corner 3 as radius point. Scribe an arc line "b." (5.) Using the distance between corner 4 and terminal of third arc and line "b" with corner 4 as radius, scribe arc between line "b" and "c" completing the spiral curve. Repeat former procedure until the desired number of coils are completed.

SELECTION OF STEEL

Steel is produced by the introduction of carbon into refined iron ore by intense heat. There are three general classifications of steel: low, medium and high carbon. The medium and high carbon steels are subject to increased hardening by higher heating and quickly "chilling" in water or oil.

This sudden change from hot to cold

contracts the elements into a compact, hard, brittle mass.

Various uses to which steel is subjected requires different methods of production and preparation.

Spring steel requires a special grain or texture and elasticity. Burr, cutters and gravers require "toughness" and "body."

Steel that has been "hammered" or "rolled" below a red heat will prove more satisfactory, as this method forces the elements of steel into a more compact mass.

To test the texture or "grain" of steel, break and examine the "fracture." If the break shows a compact gray appearance, you can safely consider the steel has a high-carbon content, and satisfactory for the watchmaker needs.

The steel objects which the watchmakers are called upon to harden are usually small and, as he is not equipped to scientifically "heat-treat" steel parts, therefore he must depend on his "eye" to judge the various heat-color stages which the steel undergoes during the hardening process. As color standards differ in individuals, the table below will aid the watchmaker in recognizing the various color changes which occur during the hardening process:

Color	Degrees F.
Red	980
Dull Red	1240
Light Cherry Red	1470
Cherry Red	1650
Clear Cherry Red	1830
Dark Orange	2010
Clear Orange	2190
White	2370
Bright White	2550
Extreme white	2730-2910

As previously stated, the objects which the watchmaker is called upon to harden are small, and can be placed on a charcoal soldering block, and heated to the required color by the use of an alcohol lamp and a mouth blow-pipe.

TO HARDEN STEEL

1. Place a receptacle containing cold water, or oil, close to the alcohol lamp, where the object being hardened may be dropped quickly into the chilling bath when the desired color is reached.

2. Warm the object to be hardened and place on a piece of common laundry soap to cool. This will reduce the "scaling" of the object to a minimum. Reheat slowly and evenly to proper color and quickly immerse in "chilling-bath."

3. There are three general degrees of hardness: (a) tough. (b) hard. (c) gloss hard. (a) Water or ice water—tallow—oil—beeswax—4 parts gum arabic, dissolved in 100 parts water: (b) water—20 parts, salamoniac, 1 part; salt, 5 parts; (c) mercury, nitric acid—cyanide. If the article is a garver, be sure that it enters the "chilling bath" perpendiculary. This will reduce the "warping" to a minimum. The hardness of the object can be tested by filing. If the file will not "cut" the object, you can consider it hard and also "brittle." Before tempering, the hardened object must be "smoothed" off with emery stick or wheel.

TEMPERING STEEL

There may be some who consider hardening and tempering as the same process. This is an error, as the two processes are definitely different. The hardened object being "brittle" will not hold an "edge" and must be "toughened." This is called TEMPERING. The "drawing the temper" does not affect the hardness of the object unless the color is drawn beyond a pale blue-green. Should this occur, the object should be re-hardened.

In actual practice, the tempering of drills, cutters, gravers, etc., become tougher each time they are "drawn," provided the desired temper-color is not increased. All but a small amount of "temper-color" should be removed each time the object is "drawn." This remaining temper-color will act as a "re-matching" color guide when "re-drawing" the temper.

The table below will aid you in recognizing standard tempering colors:

Color	Degrees F.
Light Yellow (Cutting tool).....	430
Darker Yellow (Cutting tool)	450
Medium Straw (Cutting tool)	470
Dark Straw	490
Brown yellow	50
Light Purple	530
Dark Purple (Springs)	550
Dark blue (springs)	570
Light Blue	590

When a small object is to be tempered, place it on a flat piece of copper to protect it from the flame, and heat carefully, noting the color changes. When the desired color is reached, remove from heat and let cool in oil, beeswax or yellow laundry soap.

When tempering larger objects, such as drills, cutters, gravers, etc., gradually heat evenly, usually from the back to tip, or from heavy part to the lighter part, as the heat required on the heavy or "thick" part of the object will "travel," thus, heating the lighter or thinner part.

CAUTION

Carefully watch the color changes until the desired temper color is reached, then quickly insert object into oil, beeswax or yellow laundry soap, to stop and hold color at the desired point.

ANNEALING STEEL

The heat required to re-harden steel destroys a certain amount of carbon. There will be occasions when the steel object has been re-hardened so many times that the carbon content has been destroyed. If the object is to be of any practical use, the carbon must be replaced. Or, you may wish to remove the hardness from an object in order to make it more convenient to "work." This is called ANNEALING.

There are two easy methods for annealing steel objects: (a) Heat the object to a dark red color and quickly pack in a receptacle containing powdered charcoal, bone dust and steel filings, and let remain until

cold. (b) Pack object in a closed fire resistant receptacle containing powdered charcoal, bone dust, and steel filings, and heat the entire receptacle until the proper heat is obtained; remove from heat and let stand until cold. Then proceed to harden and temper.

TO REMOVE TEMPER FROM PIVOTS, ETC.

There are occasions when the watchmaker is called upon to re-pivot a balance staff, train wheels, etc. To do this successfully, it is necessary to remove the temper from the pivots to a point that it can be drilled for the insertion of the "plug." To prevent the heat from "traveling" insert the undamaged end into raw garlic, raw onions, raw potato or raw apple. Any of these vegetables will quickly absorb the heat and protect the original hardness of the part so embedded.

New H. I. A. Insignias



Reproduced above are the three designs which have been approved by the H. I. A. official insignia for "Certified Watchmakers" (formerly "Junior Watchmaker") and "Certified Master Watchmaker" (formerly "Certified Watchmaker") and "Certified School."

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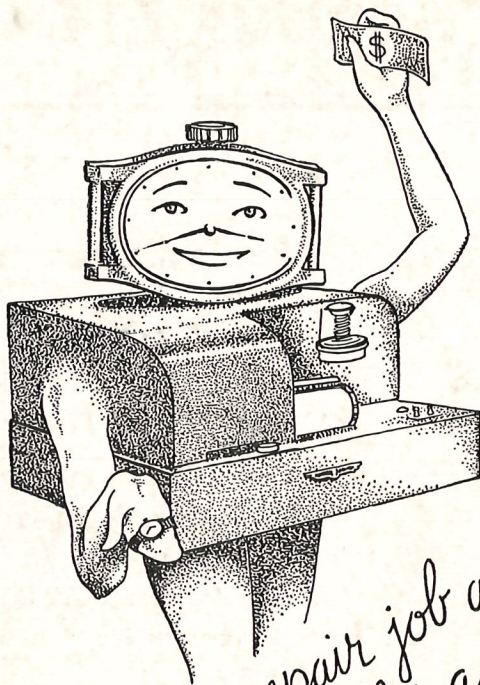
With this issue, the H. I. A. JOURNAL celebrates its "Third Birthday" in its new format, and this anniversary is again "symbolized" by the third candle shown on the Cover-Page drawing, done by Lester C. Nagley, Sr., of Nashville, Brown County artist.


In three years, we are proud to have attained an enviable record in the horological publication field. With pardonable pride, we can point to many accomplishments and achievements UNEQUALED in this nation. Many letters are on file testifying to the fact that THE H. I. A. JOURNAL is "tops" in America.

Adhering to the basic principle of publishing an informative horological magazine, dedicated to the advancement of Horology, presenting articles of interests to all horologists, much space has been given during the past three years to NEWS of horological organization activities in the nation.

During the coming year, we shall make every effort to improve THE H. I. A. JOURNAL. Carefully selected articles will be published to keep members of the Horological Institute of America informed of progress in the horological field of the world.

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