

# The H.I.A. Journal

OFFICIAL PUBLICATION OF THE HOROLOGICAL INSTITUTE OF AMERICA



PP. 50

**JULY, 1949**

# YOU CAN FIT . . .



- ★ Any Hunting Case Watch ordinarily encountered, with our 180 piece assortment of 3 each of the 60 most used sizes of genuine glass Geneva Crystals.

**Order today. No. C131L—Priced at only . . . . . \$7.65**

- ★ Any Open Face Pocket Watch ordinarily encountered, with our one gross assortment which includes 1 each of every size from 14 0/16 to 20 15/16 inclusive.

**Order today. No. C132L—Priced at only . . . . . \$7.65**

- ★ Any regular style, Round Bezel Wrist Watch ordinarily encountered with our one gross assortment which includes 1 each of every size from 6 0/16 to 13 15/16 inclusive.

**Order today. No. C133L—Priced at only . . . . . \$7.65**

## SPECIAL OFFER!

- ★ All 3 above assortments totaling 468 Crystals.

**Order today. No. C134L—Priced at only . . . . . \$20.00**

Send no money—Shipment is made on approval, charged to your account—If you wish payment plan terms of \$5.00 per month for 4 months please say so when ordering.

- ★ Customers who have previously purchased assortments #132L or #133L are invited to buy the remainder of the group of 3 at the group rate. They are asked to call our attention to the previous purchase when placing their order.

**BURTON M. REID SONS INC.**

1st and Washington

*"The House of Friendly Service"*

Springfield, Illinois

# THE PAULSON TIME-O-GRAF

## It Skips Nothing!

"YOUR FUTURE GROWS ON FACTS"

### BECAUSE OF ITS

Superior Scanning Speed and Unparalleled Scientific Accuracy.

Only

ON THE PAULSON TIME-O-GRAF with continuous tape record, it is possible to get all the answers including the train, pallet stone, roller jewel, etc. on one complete record.

Only

ON THE PAULSON TIME-O-GRAF is it possible to reveal a continuous record of six positions on one tape without stopping the machine.

Only

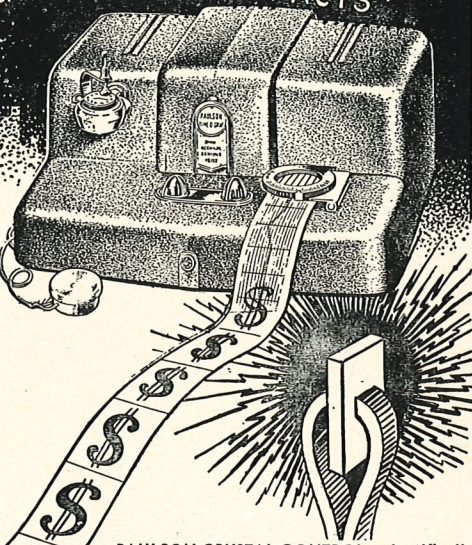
ON THE PAULSON TIME-O-GRAF can you regulate your watch and see exactly what it is doing as you move the regulator. Wonderful for hairspring work too.

Only **\$490<sup>00</sup>**

LESS 2% FOR CASH

PAYMENT PLAN AS LOW AS

**\$24<sup>27</sup> PER MONTH**



PAULSON CRYSTAL CONTROL, scientifically ground, infinitely accurate.



Only

ON THE PAULSON TIME-O-GRAF do you have 3 times the solvent power of any other timing machine with 90 inches of scanning space in one second.

### USE THIS HANDY COUPON

HENRY PAULSON & CO.,

131 S. Wabash Ave., Chicago 3, Ill.

- Please send information on no risk trial on Paulson Time-O-Graph.
- Please send Paulson Time-O-Graph at \$490.00 less 2% for Cash.
- Please enter order for Time-O-Graph—\$100.00 with contract. Balance \$24.27 per month for 18 months.

Name.....

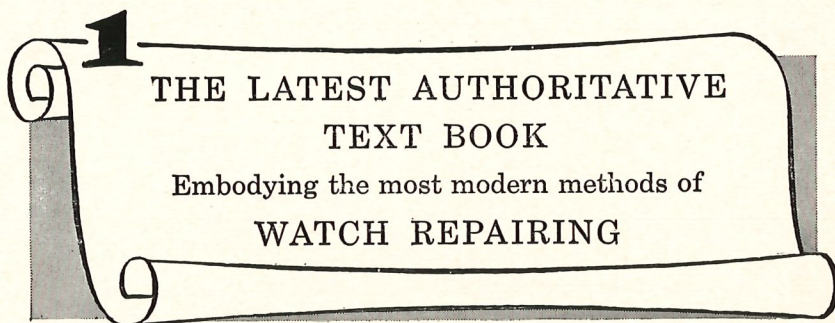
Address.....

City..... State.....

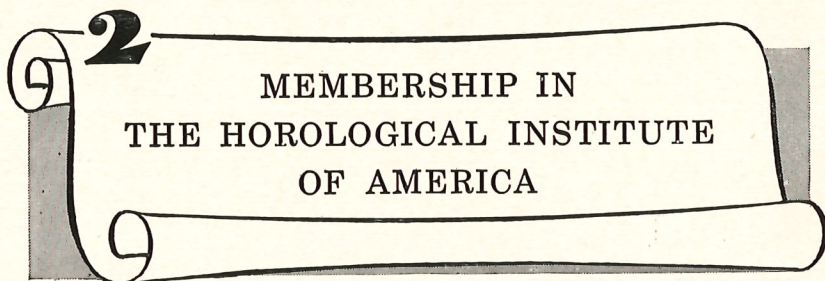
**HENRY PAULSON & CO**  
131 S. WABASH AVE., CHICAGO 3, ILL.

# THE HOROLOGICAL INSTITUTE OF AMERICA

*cordially invites you to take  
advantage of this fine Combination Offer*



These training units cover such subjects as: Balance Truing, Pivot Polishing, Poising, Hairspring Manipulation, Escapement Matching and Finishing.



The only nationally recognized Horological Institute for the Certification of Watchmakers.

*Both for only* **\$5<sup>00</sup>**



There's no lag or sag in Summer sales when you feature Hamilton, the fine American watch. For Hamilton's tradition of making only fine watches is backed by consistent, hard-hitting advertising in national magazines... advertising which increases customer demand.

To replace stocks which turn over rapidly, there are 40 Hamilton restocking stations ready with overnight delivery service.

Profits are good when you sell Hamiltons because Hamiltons sell all year 'round. And you know Hamilton prices are stable—just as your most discriminating customers recognize Hamilton's traditional high quality and value.

**READY  
PROFIT**

**YEAR 'ROUND  
SALES**



**HAMILTON**

*The Fine American Watch*

**RAPID  
TURNOVER**

**STABLE  
VALUES**

For a look at the future, be sure to visit the Hamilton exhibits at the 1949 Jewelry Trade Shows.

**NACJ**  
Hotel Stevens  
Chicago  
July 25, 26, 27, 28

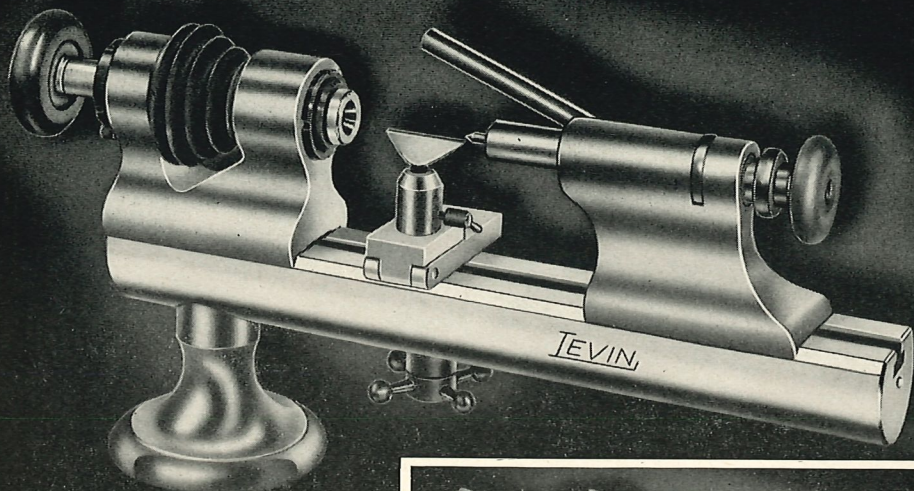
**ANRJA**  
Waldorf-Astoria  
New York  
August 15, 16, 17, 18

You will see new miracles of American watch-making smartly cased to stimulate Fall sales. You will be welcomed by sales representatives of the company that has been famed for its 57 years of leadership in fine American jeweled watch manufacture.

**HAMILTON WATCH COMPANY • LANCASTER, PENNSYLVANIA**

**LEVIN** *Introduces* **A NEW Lathe**  
not just another ball bearing lathe but...

**A PRE-LOADED BALL BEARING LATHE**



MODEL D LATHE, CAT. No. ABBT

**ANOTHER ADDITION TO THE  
LEVIN LINE OF LATHES**

**HIGH PRECISION**

The new **PRE-LOADED BALL BEARING** spindle has resulted in the highest degree of rigidity and precision obtainable.

**EVEN SPEED ASSURED**

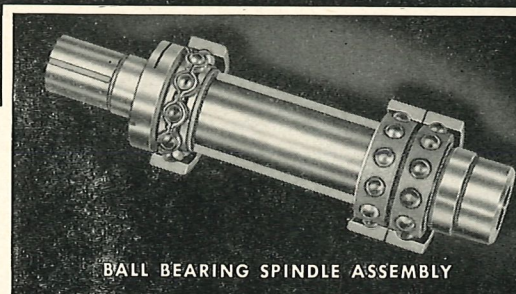
Low friction of bearings enables lathe to make heavy cuts without slowing down, making it also ideal for light manufacturing.

**NO OILING NECESSARY**

Lubricant is sealed in and is sufficient to last the life of the bearing.

GENUINE **LEVIN** TOOLS  
CARRY THIS TRADEMARK

ASK YOUR DEALER FOR 1949 CATALOG "E"



BALL BEARING SPINDLE ASSEMBLY

AFTER a long period of research, we are proud to offer two new lathes equipped with high precision, **PRE-LOADED BALL BEARINGS**. Model C, using standard WW wire chucks (5 mm capacity). Model D, using larger chuck with 8 mm capacity. Both models have same center height as all WW type lathes.

LOUIS LEVIN & SON, INC.  
782 E. PICO BLVD., LOS ANGELES





# to Help Sell Quality Watches—

Quality watch sales mean—

- ★ **More Profit**
- ★ **More Satisfied Customers**
- ★ **More Repeat Business**

## HERE'S HOW YOU CAN USE THIS CAMPAIGN TO SELL MORE QUALITY WATCHES

Follow through on advertising with a strong over-the-counter quality sales story. Jewelers are already finding these ads a big help in selling up. Use them for outlining watch sales points to your assistants, and for direct selling to customers.

Make full use of the merchandising promotions furnished you by The Watchmakers of Switzerland. These point-of-purchase displays tie-in with the nationally advertised quality story . . . act as silent salesmen in your store. Promotions for you are now scheduled for Watch Inspection Time (September 12-17), The Watch Parade (October 24—November 7) and Christmas.

Build store traffic with your watch repair department. Your ability to repair watches economically and promptly has been consistently pointed out in the advertising of The Watchmakers of Switzerland. The Official Swiss Watch Repair Parts Program plays an important part in helping you service the quality watches advertised in this campaign.

This campaign of The Watchmakers of Switzerland is *your* campaign—and it's one of the biggest quality watch drives *ever* launched. It's a real profit opportunity, so join in, tie-in with the Swiss quality watch drive. It means more business, it means *better* business for your store!

See the Watchmakers of Switzerland exhibits at the N.A.C.J. and the A.N.R.J.A. conventions.

**CONTEST NEWS  
ON NEXT PAGE!**

The WATCHMAKERS OF

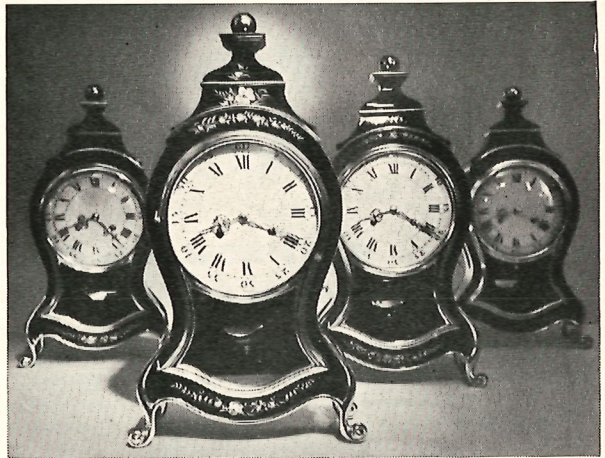


SWITZERLAND

# WIN A PRIZE AND INCREASE

Enter the big "Watch Inspection Time" Contest—  
sponsored by The Watchmakers of Switzerland

More than \$1500 in prizes for winning repair displays and letters! 4 grand prizes—each a beautiful Neuchâtel Clock, each a wonderful example of Swiss craftsmanship. PLUS 20 awards of merit—each award an Official Cabinet for Swiss Watch Repair Parts, stocked with staffs and stems.



## HERE'S ALL YOU DO TO WIN.

1. To enter, mail in the coupon to obtain contest rules and the free "Watch Inspection Time" display on the opposite page. One entry will be accepted from the owner or manager of any retail jewelry store or department.
2. Take a photo or snap shot of the display in your store window during "Watch Inspection Time", September 12-17.
3. Write a letter of 150 words or less on—"How I Made a Success of Watch Inspection Time."
4. Mail the snap shot and the letter any time after midnight September 17, and before midnight October 12, to The Watchmakers of Switzerland, care of The Swiss Watch Repair Parts Information Bureau, Contest Department, 730 Fifth Ave., New York City 19, N. Y.
5. Winners will be notified by mail on or about November 1. Contest results will be announced in the December trade magazines. Judges will be outstanding men in the jewelry field, and their decisions will be final.

**WIN A NEUCHATEL CLOCK, WIN A WELL-STOCKED OFFICIAL REPAIR CABINET!!  
MAKE "WATCH INSPECTION TIME" A SUCCESS—SEND COUPON TODAY!**

To: THE WATCHMAKERS OF SWITZERLAND  
c/o The Swiss Watch Repair Parts  
Information Bureau, Contest Department  
730 Fifth Ave., New York 19, N. Y.

I want to enter the "Watch Inspection Time" Contest, sponsored by The Watchmakers of Switzerland. My store is cooperating in the Official Swiss Watch Repair Parts Program. I'm looking forward to receiving and using the free "Watch Inspection Time" display.

MY NAME IS \_\_\_\_\_  
(PLEASE PRINT)

THIS ENTRY IS FOR \_\_\_\_\_  
(GIVE STORE NAME)

STORE ADDRESS \_\_\_\_\_

SIGNATURE \_\_\_\_\_



# Works With You, Not By You

YEARS OF RESEARCH AND DEVELOPMENT PROVE IT 'L&R-PERFECT'

*New* **L & R**  
Completely *Automatic*  
**WATCH CLEANING  
MACHINE**

*Just press the starter button and you'll enter a new world of watch cleaning. You'll never be satisfied with less than this all-new, automatic profit-builder that works with you, not by you!*



- Fully automatic through cleaner, rinse, second rinse and dryer.
- Complete cycle for 'L & R-Perfect' results—12 minutes. (Determined by L & R watchmaker-engineers and research chemists.)
- Hydraulic and mechanical operation for smooth, easy action.
- L & R's own NEW automatic reversing motor produces maximum mechanical efficiency by continuous reversing of baskets in solutions only!
- Automatically controlled one-direction spin-off in each solution jar. (Assures ultimate cleaning

results and keeps solutions in better condition for longer periods of time.)

- Controlled one-direction rotation in the drying chamber, together with the use of a separate motor and fan, produce absolutely dry parts.
- L & R method of watch cleaning eliminates air pockets in solutions which cause stains and spots. (Overwhelming trade preference for L & R equipment proves efficacy of L & R method.)
- Machine shipped complete with L & R No. 1 Basket and divider partition, Clock Basket, Clock Basket Inserts and L & R Cleaning and Rinsing Solutions.

List Price, \$249.50 complete

SOLD EXCLUSIVELY THROUGH

WATCHWORD OF THE WATCHMAKER  
**L & R**

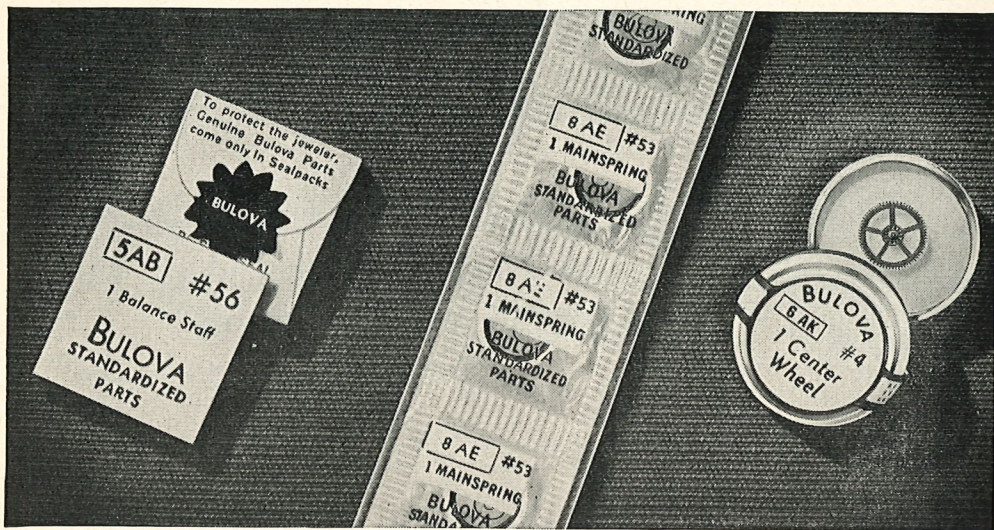
WATCH MATERIALS DISTRIBUTORS

Western Sales Office  
55 East Washington Street  
Chicago 2, Illinois

Main Offices and Plant  
577 Elm Street  
Arlington, New Jersey

Pacific Coast Sales Office  
355 South Broadway  
Los Angeles 13, California

# For Your Protection...



## GENUINE BULOVA PARTS are packaged ONLY IN THESE 3 WAYS!

*Look for them always—accept no others!*

When your Bulova parts come packaged in any of these three ways, you are assured that each part is genuine—truly standardized, individually packaged and factory sealed. In addition, you

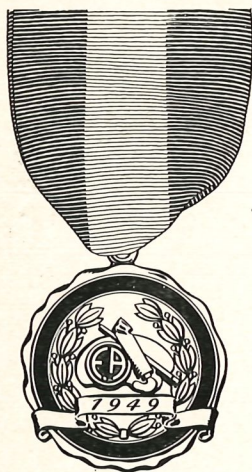
get convenience and ease of handling to make your repair work easier and faster. And, most important, these parts enable you to do a perfect job *always*—a job that means customer good-will for you!

**AVAILABLE AT YOUR LOCAL BULOVA MATERIAL JOBBER**

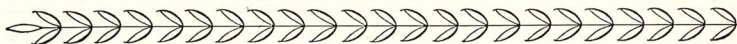
Use the NEW Bulova material cabinets for stocking these parts. Your jobber

has these cabinets available for immediate delivery. Ask to see them!

**BULOVA WATCH COMPANY, FIFTH AVENUE, NEW YORK**



# ELGIN *Wins 1949*



*"On the basis of originality in design  
and up-to-the minute styling, the  
new ELGINS are incomparable"*

Emil Alvin Hartman, *Director Fashion Academy*



The  
Fashion Academy  
annually chooses  
America's  
"best-dressed"  
women

**ELGIN'S** *fall advertising  
campaign will feature  
many of America's "best-  
dressed" women and men  
...who own Elgin Watches*



## FASHION ACADEMY

812 FIFTH AVENUE AT 62<sup>ND</sup> ST. · NEW YORK 21  
EMIL ALVIN HARTMAN DIRECTOR · REGENT 7-0231-2



Mr. James G. Shennan  
President, Elgin Watch Company  
Elgin, Illinois

Dear Mr. Shennan:

You will be pleased to learn, I am sure, that the Elgin Watch has been chosen to receive the Fashion Academy Gold Medal Award for 1949.

We compliment the Elgin Watch Company on its outstanding design talent, for it has endowed a practical accessory with exquisite charm and high fashion. On the basis of originality in design and up-to-the-minute styling, the new Elgin watches are incomparable. To have embodied, too, the sheer beauty and rich feminine appeal so evident in them is indeed an achievement.

The new Elgin watches should certainly enhance the smartness and add to the elegance of America's Best Dressed.

My sincere congratulations and best wishes to you.

Most cordially yours,  
*Emil Alvin Hartman*  
Director  
FASHION ACADEMY

EAH:g

# Fashion Academy Award!

## MORE STORE TRAFFIC WHEN YOU FEATURE THESE FASHION WATCHES OF THE YEAR

*Fashion is news.* Women in your community will be keenly interested in your news about Elgin's prize-winning style. The men will be equally interested—they want correct style in the watches they wear themselves and the ones they choose as gifts for women. The new Elgins are top fashion news!

*Make the most of this news.* Feature Elgin watches in your display cases and your windows. Increase your store traffic with announcements inviting people to see the Fashion Academy award-winning Elgins.

*Elgin will help you* with advertising material. A new series of newspaper ads features Elgin's Fashion Academy Award. Make a campaign of these ads in your local newspaper.

*Big campaign* to advertise the award. This ad is an example of how Elgin will announce the Fashion Academy Award. Campaign starts in mid summer and continues in magazines and newspapers during the Christmas season.

*Elgin wins*  
1949 FASHION ACADEMY  
*Award*

We congratulate the Elgin Watch Company on its outstanding design talent for the harmonized appearance of watches with complete charm and high quality. The high originality in design and its finish in metal setting, like most Elgin watches are unsurpassable.

J. Paul Henslee  
President, Elgin Watch Company  
Elgin, Illinois

**Lord Elgin and Lady Elgin**

12711  
12300  
11000

*Styled by Henslee*

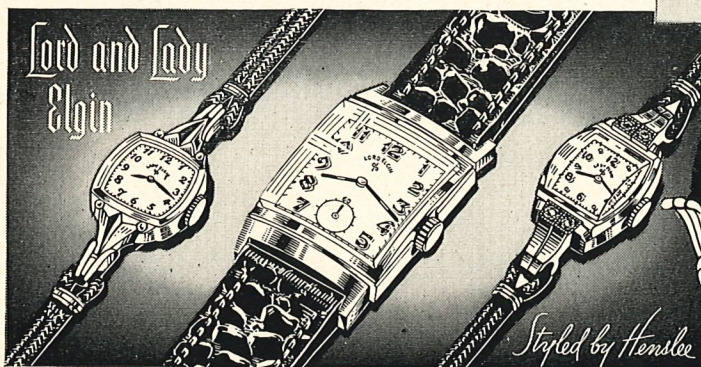
**THE DuraPower Mainspring**  
ELIMINATES 99% OF ALL REPAIRS DUE TO STEEL MAINSPRING FAILURES!

**BEYOND THEIR BEAUTY MORE ENCHANTMENT STILL**

For a long time it only had the glory of the name Elgin. And then fashion watches of the type in a new material of performance—the DuraPower Mainspring. No other watch in the world has ever done this year in correct engineering. Overcoming all a new Elgin is a watch of distinction. Elgin is worn by some of America's "New-Style" men and women. Make more loyal and important buyers with the gift of an Elgin. See the new beautiful watch in your jewelry store.

**ELGIN**  
MADE IN THE U.S.A.

The prices of Elgins in store on your visit



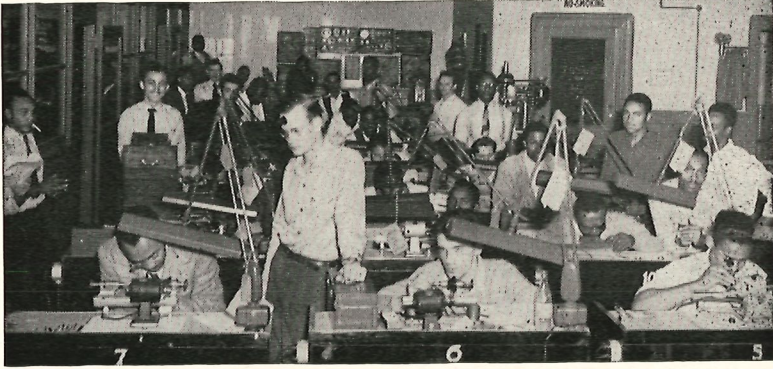
**THE DuraPower Mainspring**  
ELIMINATES 99% OF ALL REPAIRS DUE TO STEEL MAINSPRING FAILURES!

\* Made of "Elgiloy" metal. Patent pending.

# 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**



# 6

## REASONS WHY


### Watchmakers prefer the NEW Bausch & Lomb LOUPE



For years watchmakers have recognized Bausch & Lomb loupes as the finest made. To maintain this leadership *six* features have been incorporated in the *new* B&L loupes. A plastic body not only makes them practically indestructible, but also makes them much lighter and more comfortable to wear. The smooth, black exterior finish is rich in appearance. "Soft" interior surfaces reduce annoying light reflection to a minimum. In addition, the loupes have the precision ground lenses and fine workmanship for which all Bausch & Lomb products are noted.

Ask your jobber. Bausch & Lomb Optical Co.,  
524-H Bausch Street, Rochester 2, N. Y.

## BAUSCH & LOMB

OPTICAL COMPANY  ROCHESTER 2, N. Y.

## KNOW YOUR VIBRATOR!

SERVING MANUFACTURERS & JOBBERS SINCE 1935!  
OUR NECESSARY EXPANSION NOW PERMITS GREATER  
ACCOMMODATIONS. INQUIRIES INVITED.

Fitted to bridge...  
No leveling necessary.

Heavy mailing envelopes and containers sent on request.

OUR UNCONDITIONAL GUARANTEE: New spring FREE if you spoil the one we previously supplied!

Flat \$1.75  
Breguet \$2.50

Send balance bridge, balance wheel, stud and collet.

### FREE SERVICE • RESTUD • RECOLLET

THESE AND MANY OTHER TESTIMONIALS FROM SATISFIED CUSTOMERS PROVE OUR SERVICE

"Thanks a lot for putting a new collet on that Hamilton. Not very often does someone do a FREE job, so FAST!"—Roger W. Kraut, Doylestown, Pa.

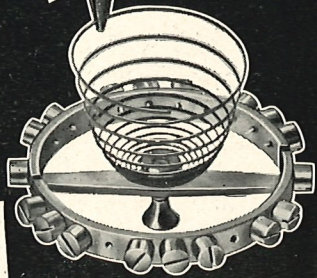
"I put it up to you to produce and you did... perfectly centered and leveled... completely amazed to find it in perfect beat, 15 seconds DU, plus 30 seconds PD, PU straight across!"—J. A. Frew, Cleveland, Ohio.

"I appreciate your quick service and expert workmanship..."  
—L. Genjian, Denver, Colorado.  
"I certainly appreciate the favor you did for me when you sent a 12 size Elgin balance for a new collet, and you fitted the same at NO CHARGE!... with your usual amazing speed!"—V. Koechel, Westfield, N. Y.  
"The machine says it's perfect, and in beat!"—J. P. Cavanagh, Brighton, Mass.

MAIL DIRECT

SAME DAY SERVICE

Swiss & American



## HAIRSPRING VIBRATING CO.

CHARLES THOMAS

P. O. Box 330 406 32nd St.  
Union City, N. J.

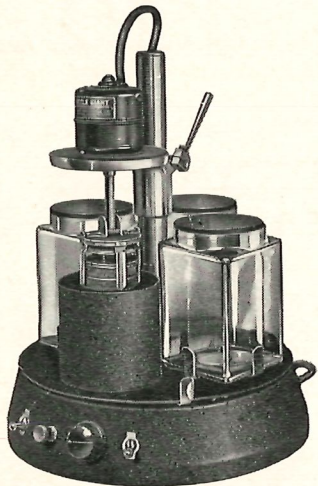
(Formerly in charge of Hairspring Dept. for Bulova Watch Co.)

**PEERLESS**  
REG. U.S. PATENT OFFICE

AND

**LITTLE GIANT**  
REG. U.S. PATENT OFFICE NO. 349883

# WATCH CLEANING MACHINES



**PEERLESS**  
REG. U.S. PATENT OFFICE

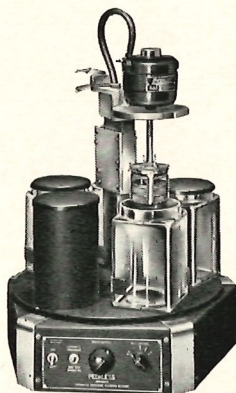
The Peerless is equipped with an automatic reversing operation which is controlled by a heavy duty Universal motor wound for both forward and reverse operation. This automatic action plus square jars prevents a vortex from forming in the solution and creates complete agitation of the solution over and through the basket at all times. Four square jars insure removal of all gummed oil or dirt particles commonly found on movement parts. No brushing necessary. Does complete thorough job. No. 36118

A "LEADER IN ITS FIELD" WITH  
AUTOMATIC REVERSING OPERATION

## BASKET FEATURES FOR BOTH MACHINES

The basket features more improvements. Made of stainless steel, or Monel Metal, it is so constructed that the various sections fit together in one frame. Thus the solution passes straight to the parts to be cleaned. The various sections of the basket are held in a new type of frame that can be removed or attached to the basket holder instantly. Finger-tip locking device at any height, no screws or knobs to turn.

FOR  
BEST  
RESULTS,  
USE  
ONLY  
PEERLESS  
CLEANING  
SOLUTIONS



**LITTLE GIANT**  
REG. U.S. PATENT OFFICE NO. 349883

- Push Button Reversing . . . Simply push a button to make basket turn in reverse.
- Metal Shielded Heating Unit . . . Prevents oxidation of heating coil and gives uniform heat to all watch parts.
- Black wrinkle finish . . . Designed to last and is attractive as well.
- Turntable keeps work in front at all times.

No. 36119 .....\$67.50

**C. & E. MARSHALL CO.**  
BOX 7737 CHICAGO 80, AND PRINCIPAL CITIES



DEDICATED TO THE PROGRESS  
AND DEVELOPMENT OF  
HOROLOGY IN AMERICA

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JULY, 1949

Number 4

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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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## Subscription Price of H. I. A. Journal

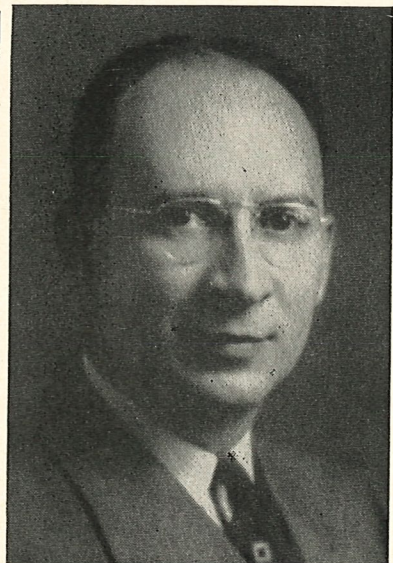
The subscription of the H. I. A. Journal, single copy, is 25 cents. It is mailed free to members of the Horological Institute of America. The subscription price to individual members of State Horological Associations and/or Guilds (Certification of membership MUST be made by Secretary), is \$2.00 per 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.



# HOW TO KEEP A FINE WATCH WORKING

By R. W. SLAUGH of Hamilton Watch Co.

How to keep a fine watch working is a subject that has received the most profound study of inventors, scientists and mechanics for the past two hundred years. From the hog bristle which gave us the name "hair-spring," from the hand-made novelties of the aristocrats and the wealthy of two centuries ago, to the interchangeable mass produced parts which put fine timepieces within the reach of everyone—the efforts of the watchmaking profession have been devoted to making finer and finer watches which would keep working longer.



Richard "Dick" W. Slaugh

To us, as practical watchmakers, "How to keep a fine watch working," and "How to achieve customer satisfaction" are synonymous. And "How to achieve customer satisfaction" can be summed up in just one word—*Quality*.

You can't TALK Quality into a watch any more than you can inspect quality into it.

QUALITY is a good investment and a happy way of life.

Quality, simple honesty, and good ethics—these are as essential to the character of a company as they are to the character of an individual. Without them there can be little confidence or respect.

Specifically, the Quality Division is primarily charged with the responsibility of making sure that Hamilton watches are fine watches. This division is made up of five sections, each responsible for a part of the job of maintaining and improving the high quality of Hamilton watches. The Inspection Department supervises all inspection operations throughout the factory. Statistical Quality Control Department sets up and controls various quality checks in manufacturing, through the use of records and statistics. The Works Laboratory controls and checks raw materials and supplies as received and makes up the various compounds, solutions, and materials used in manufacturing. The Standards Department controls, checks and in many cases designs the gages used throughout the factory. Here in this section machines and instruments are used which are capable of measuring to three millionths of an inch. Last, is the Product Performance Section.

The function of this Product Performance Section is to be the technical go-between for the factory and the watchmaker and jeweler. It gathers, analyzes and interprets the comments, compliments and complaints received from the trade, from men like you, from our salesmen on the beat, from our wholesale distributors. It examines and reports on Hamilton watches returned to the factory under the guarantee. By receiving complaints and unsatis-

factory watches, this section is the channel through which information about actual watch performance flows from the customer, the watchmaker, and the jeweler to the factory departments.

Sometimes it seems that I have two bosses, the factory and the jeweler. Actually you and I have only one boss—the customer. So long as we do a good job, give him good value, he will pay our wages. The fellow who said the customer is always right knew who his boss was. It doesn't matter whether he is paying for goods or services, if he doesn't like you he will fire you. I have to say, "Yes, the figures are good but, look here, some came back, even though the percentage is small some people didn't like us, some bosses are threatening to fire us if we don't do better." We dare not relax just because the figures look good, we dare not be complacent. We are very jealous of Hamilton's reputation and we mean to uphold it.

The watch is inspected by a watchmaker beginning with the attachments — bracelet, cords, clasp, straps and pins and continuing through to the case, crystal, external winding parts, motion, dial, hands, dial train, balance and hairspring, roller and pallet, train, barrel and mainspring, winding and setting parts, jewels, plates and screws. During this process of disassembly and inspection the watchmaker systematically checks and records information on the lubrication, end and sideshakes, trueness and uprightness of wheels and pinions, assembly, cleanliness, genuineness of parts, construction of parts, whether there is any rust or corrosion and whether any parts are worn, damaged or broken. A 45 power microscope is used for inspecting pivots, jewels and fork slot.

After the watchmaker has completed his inspection the information is studied to analyze the reason for failure and to fix responsibility. We may find a badly bent balance pivot which you would naturally assume is the responsibility of the customer. We may find that the watch was in use

only a short time but was out of the factory as much as 2 years and needed cleaning and oiling—because it was in stock too long. Even though the watch may have been out of the factory and in use for quite some time we may find an original factory defect and the responsibility is ours. Or it may be that a number of things may be found and that each — customer, jeweler and factory have a share in the responsibility.

If our examinations show a recurring fault it is immediately called to the attention of the factory. One such instance happened recently. A couple of complaints came in that watches stopped and upon examination the watchmakers found a bent tooth in the hour wheel. Now this was rather strange. There is no strain on the hour wheel. I immediately investigated. The error had been discovered by the factory people sometime before. The arbor used for cutting the hour wheel teeth had gone bad and a couple of lots got through to assembly, which were badly out of round. On the short side the hour wheel teeth would butt and jam against the minute pinion, stop the watch and bend the tooth. This had never happened before. Dialing production had been stopped, all of the wheels had been pulled out and inspected and even watches already dialed and cased had been torn out and inspected. We thought we had them all but apparently a few escaped. A check inspection has been put in at hour wheel manufacturing as insurance.

Building a fine watch is not in itself a guarantee of customer satisfaction. Another part, and a most important part of the quality team is the watchmaker in the store. A fine watch must be painstakingly and efficiently serviced. Whether the customer receives good service and continues to be satisfied depends on the training, the knowledge, the skill and the pride in fine craftsmanship of the watchmaker. Of all these, perhaps the last, pride in fine craftsmanship is the most important. There can be no compromise with shoddy work, with hit

or miss methods, if your customer is to continue to be your customer.

One of the most common problems with which the watchmaker is faced is keeping the watches out long enough after cleaning and oiling. Oil dries out, motion drops off, the watch runs off time or even stops, and the customer comes back. I have no panacea, no cure-all for this problem. We have, however, found that thorough cleaning procedures are vital. Contaminated, or dirty cleaning and rinsing solutions have a great deal to do with whether the oil spreads, dries out or stays in place.

Cleaning solutions and cleaning procedures are controversial subjects. Cleaning machines are doing an excellent job for a great many watchmakers. There are others who continue to get excellent results from the old tried and proven hand cleaning method. Each has its advocates and each done properly will give good results. There are innumerable makes and combinations of cleaning solutions, most of which do an acceptable job, and I have no intention of putting myself out on a limb by recommending or condemning any of them. But from work done in Hamilton's chemical research laboratory and from information recently gathered from first-class repair shops I can give you some general information. Most watch cleaning machine manufacturers advocate spinning off excess solution from the basket as it is transferred from one solution into the next. This "spin-off" should be for only a few seconds, not more than five, in order to prevent drying of the parts. In case carbon tetrachloride is used this is doubly important, as our chemists tell me that parts immersed in carbon-tet and then dried at high speed may rust. This, they say, is caused by extremely fast evaporation which chills the parts and which may cause condensation of moisture from the air on the parts.

Don't use solutions too long. In well organized repair shops a careful record is kept of the date when solutions were changed

indicating the length of time they were in use. An even better record would be by the number of watches which have gone through the solutions. If the cleaning solution has changed color, if foaming cleaning solution does not foam as much as originally or if there is the slightest trace of cloudiness in the final rinse—these are danger signs—signs that the solutions have become contaminated and it is dangerous to use them.

Cleaning has a tremendous influence on whether the oil stays put or not. You would be surprised at the number of first-class shops which advocate pegging the jewels after cleaning as a means of retaining oil. I recommend it to you.

Care should be taken to see that all train wheels are true in the flat, that adequate clearance exists, and that all wheels and pinions mesh properly. To insure these conditions, proper endshake of each element of the train is highly important. Freedom of the train should be tested, particularly to make certain that the staff of the fourth pinion does not rub against the hole in the thrust plate. This plate is employed only for endshake control of the fourth pinion.

Be sure to oil the center upper jewel before assembling the thrust plate. Oil the lower endshake shoulder and the large diameter at the lower end of the fourth pinion prior to inserting the fourth pinion into the center pinion.

In assembling the hands to the grade 748 movement be careful when pressing the hands into position. Very little pressure is needed. Too much pressure will disturb the location of the center and fourth upper jewels and may even cause damaged parts. A little extra caution on this operation will save time and trouble. The simplest and safest method of assembling the slotted type minute hand to the grade 748 movement is as follows: (1) place the minute hand on the bench, top up; (2) gently wedge the blade of a screw driver into the slot in the

hand; (3) place the hand in position on the cannon pinion; and then (4) holding the hand in position with pegwood, withdraw the screw driver from the slot.

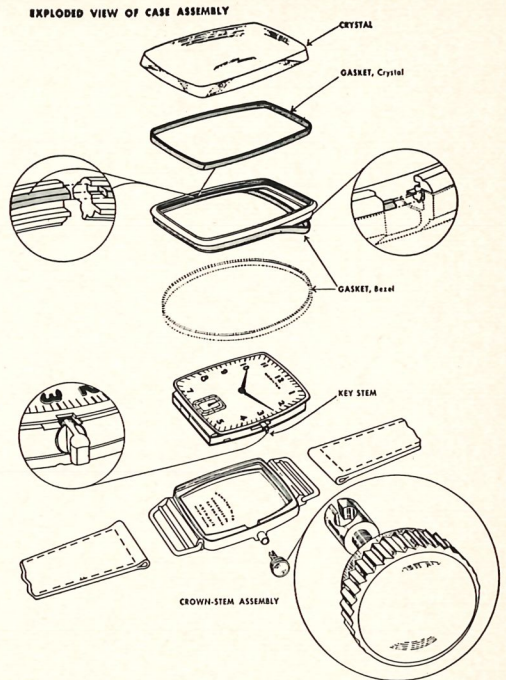
The hour wheel and the hour hand should be assembled to the dial prior to positioning the dial on the movement; with this procedure care should be taken to prevent the hour hand from scratching the dial.

When inserting the movement in the case, be sure that the alignment slot in the pillar plate is properly lined up with the tongue in the case before seating the movement.

Replacement of the mainspring requires removal of the balance unit, the pallet, and the train. Although this procedure may appear inconvenient, it is not likely that it will be frequently encountered because the mainspring, the barrel arbor and the click action in 748 have been designed with a more liberal safety factor than in the average movement. As a result, mainspring failures are infrequent.

This chart shows the construction of the new CLD Brandon case. Other case models of this type are the Langdon and the Norden.

The new CLD cases are a distinct advance in modern case design on which the Hamilton Watch Co. holds exclusive patents. It is covered by patent No. 2,467,062. They are protected against dust and moisture by an exceedingly simple arrangement. A plastic gasket fits in a groove in the bezel and the crystal is pressed in in the usual fashion against this gasket. The case is a two piece case, with the back being a comparatively deep cup. The bezel is fitted with a gasket which becomes compressed when seated in the case. Several gaskets are used in the crown and the inside of the crown is threaded. The gaskets are inserted and a brass nut is screwed in the inside of the crown, compressing the gaskets and creating a seal around the case pipe. This bezel snaps all the way around.



To open CLD cases hold the watch in a dail-up position. Insert a case opener under the slight lip on the bezel at 6 o'clock, and gently pry open as in opening a conventional watch case. Because the case bezel and case back fit together with telescopic friction on the sides as well as on the ends, the bezel does not snap free from the back when the case opener is inserted under the case lip. It will be necessary to lift the bezel free from the case back.

With the bezel removed, turn the crown until the interlocking key joint of the (two-piece) stem (to right of 3 o'clock on the dial) is parallel to the top and bottom of the case; then simply invert the case over the (tissue-covered) palm of the hand and movement will drop out. Should the movement tend to stick, return the case to "dial-up" position, check the alignment of the interlocking joint of the two-piece stem and re-invert the case. If the movement then does not come out of the case, return to the



dial-up position and carefully insert a case opener between the movement and case at 6 o'clock to loosen it. The movement can then be lifted free of the case.

To replace the movement in the case, turn the crown so that the Lock Stem—the part containing the female interlocking slot in the crown half of the stem (between 3 o'clock and the case edge) is parallel to the top and bottom of the case. Turn the Key Stem—movement half of the stem—so that it will key or interlock with the Lock Stem or crown half of the stem. Then insert the movement in the case in the usual manner and replace the bezel. The easiest way to replace the bezel is to begin the reseating of it at either the 12 or 6 o'clock and work towards the opposite end. Be careful not to dislodge or distort the bezel gasket. When the bezel is properly seated, the bezel and the back should be firmly pressed together to insure a tight fit.

To replace a broken crystal hold the bezel between the index finger and thumb of each hand—bezel inside towards you and exert a firm even pressure with both thumbs until crystal is released. If crystal is cracked or broken, use care to prevent cutting thumbs. If the crystal is broken a new, genuine Hamilton crystal and crystal gasket must be fitted to restore the original protective qualities of the case. Replacement crystals are supplied complete with gaskets. With the new crystal gasket properly seated, a new crystal is installed by simply positioning it in the bezel opening from the front and seating it by applying firm even pressure with the thumbs.

Stem breakage occurring in the Lock Stem—the crown half of the stem requires a new Crown-Stem assembly. Breakage in the Key Stem—the movement half of the stem—requires a new part, which is replaced in the conventional manner.

We have seen a number of instances where damage was caused by the repairman who was unfamiliar with the CLD

models. Just recently I received one on which the workman had attempted to remove the back from one of the CLD Brandon cases. He had badly marked the corner of the case with his knife and finally slid all the way across. He didn't know that the back does'nt come off. It is necessary to remove only the bezel.

*(To Be Continued in the August Issue)*

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## **Clem Hillig Appointed Member of Minnesota Watch Board**

Clem Hillig, Redwood Falls, was recently appointed to succeed Mr. Paul E. Teske, Hibbing, as a member of the Minnesota State Board of Examiners in Watchmaking.

C. W. Gaskell, Secretary of the Board, paid a high tribute to Mr. Teske in a statement released to the H. I. A. JOURNAL. Mr. Gaskell stated "On behalf of the Minnesota State Board of Examiners in Watchmaking, I wish to pay tribute to Paul Teske who served faithfully as a Board Member from the time of its organization until the expiration of his appointment on May 23, 1949.

He worked diligently, as did the other Board Members, in processing the multitude of applications that were received after our Law went into effect.

During the rush of examinees and apprentices which came shortly after the War, he gave freely of his time to advise veterans. It was his aim to make watchmaking a profession rather than a trade and he worked faithfully to raise the standards.

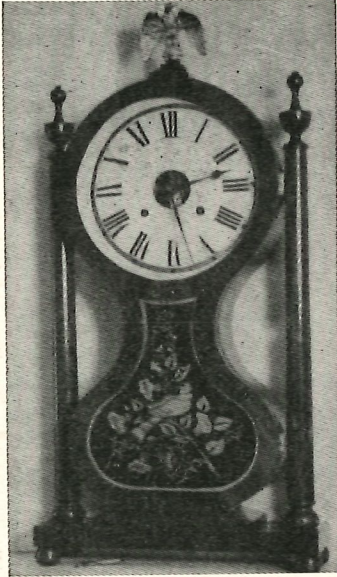
The members of the craft throughout the State owe Paul Teske a great deal for his efforts on their behalf.

I also wish to welcome Clem Hillig, Redwood Falls, as the newly appointed Board Member."

# THE HOURGLASS CLOCK

By BROOKS PALMER

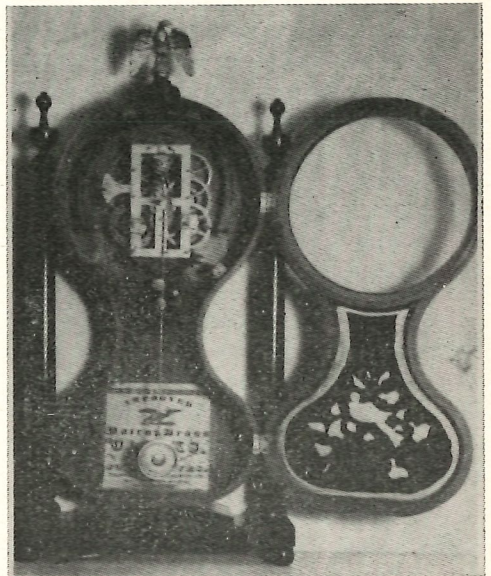
(Editor's Note—Mr. Brooks Palmer, a member of the National Association of Watch and Clock Collectors, is a specialist in American clocks. He is well known for his articles on clocks and has contributed to several well known magazines. He has recently completed the section on clocks and watches for the new Collier Encyclopedia. Horologists and collectors will be interested in his history and description of acorn clocks. We wish to acknowledge our gratitude to the magazine ANTIQUES for their permission to reprint Mr. Palmer's article, "The Hourglass Clock.")



This curiously shaped clock has some resemblance to acorns (see ANTIQUES, March, 1949), but it is a separate and distinct design. Like the acorn cases the hourglass is made of mahogany veneer on laminated wood. It is 24 inches tall, 14 inches wide, and 5 inches deep, with vertical side posts. The label shown in Figure 2 reads *Improved/Patent Brass/CLOCKS/Manufactured by/Joseph Ives/Plainville-Farmington, Conn.*

This clock mechanism represents Joseph Ives' attempt to meet the competition of the weight-driven 30-hour brass movement put on the market in 1838 by Chauncey Jerome,

Joseph Ives has been called the great genius of the Connecticut clock industry in the first half of the nineteenth century. He made with his own hand almost every type of clock movement, both wood and metal. From 1816 to his death in 1862 he was working on the famous wagon-spring power plant, developments of which he patented in 1833, 1845, and 1859. From 1825 to 1847 he had a hand in making the 8-day wagon spring, and then from 1850 to 1856 the 30-day variety, but it is not known just when he made the 30-hour type in the hourglass case. Town and other records provide no help.

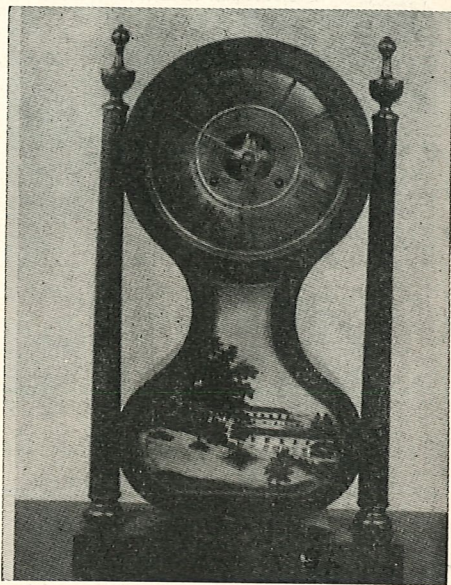


copied by many others, and made in huge quantities. The motive power and movement of Ives' hourglass clock are shown in Figure 2. Anchored at the top of the wooden case there is a long single leaf spring bent into horseshoe shape with the ends projecting downward around the movement. Cords are wound around the time and strike barrels reaching to either end of the bow spring, and there are no compensating levers, as there are in other wagon springs. The brass movement has rolling pinions on all the gears except for the reduction of the hour hand. All three large gears in the time train are the same size at a 5-to-1 ratio, resulting in a small escape wheel. This use of the leaf spring does not seem to be covered by any of Ives' patents.

There are two possible times when Joseph Ives might have made hourglass clocks with this type of 30-hour wagon spring. One is the period between 1847 and 1850. The firm of Birge and Fuller went out of business in 1847. Since 1844 they had been making the 8-day wagon spring and the conventional type of 30-hour wagon spring, as well as fuzee movement clocks. By 1847 Ives must already have been well beyond the model stage with his 30-day wagon spring, perfected in 1850. It is quite likely that the 30-hour one-leaf spring in the hourglass case might have been developed by Ives at this time. The production of hourglass clocks was probably not large, for so few exist today. It was quite a difficult clock to make. In addition to the two illustrated, there are examples in the collection of Robert L. McCarrell and James Arthur.

Another period when Ives might have made these clocks is after 1856, when he canceled his contract with the Atkins Clock Manufacturing Company (1854-1858). Since 1850 Ives had been supervising at the plant of Atkins, Whiting & Company (1850-1854), which produced clocks using the Ives patents, under royalties to Ives, including the 30-day wagon spring in

wall and shelf cases. In 1854 the name was changed to Atkins Clock Manufacturing Company. Trouble developed over the royalty payments, and Ives canceled the contract on June 23, 1856, when production of the 30-day model is believed to have ceased. By 1858, after the panic of 1857, Ives might have been at work in "Plainville-Farmington," as his label reads, turning out hourglass clocks.



There are two considerations, however, which point to the earlier period. In the first place, in 1859 Ives secured a patent on an 8-day tin movement, substituting tin-plated iron for brass, which was then expensive. He was probably developing this movement for several years before 1859, and would therefore not have been interested in hourglass clocks at that time. By 1860 he was in business in Bristol with Noah L. Brewster (son of Elisha). Ives died in 1862.

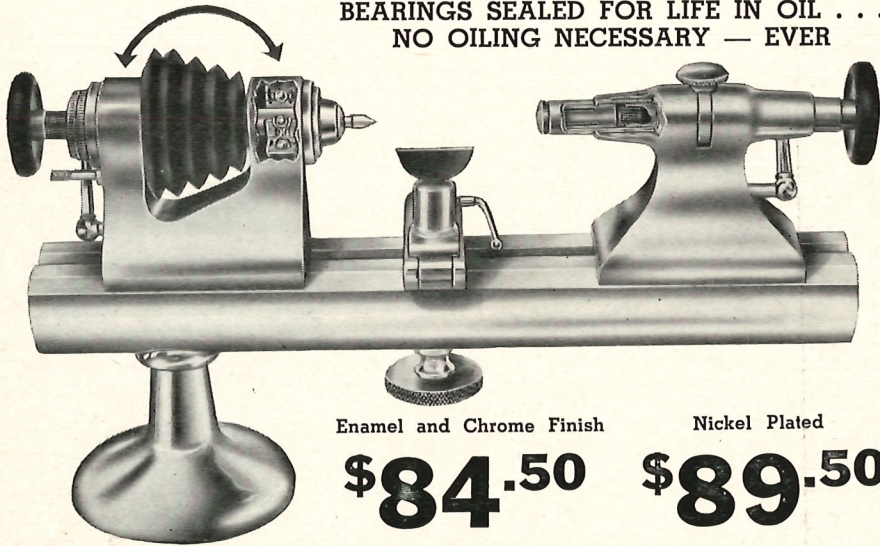
Another piece of evidence points rather definitely to the earlier period—an overpasted label found by E. G. Chichester in his example, reading *Wm. P. McKay & Co., corner Milk and Congress Sts., Bos-*

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\*Pre-Loaded Ball Bearings are scientifically designed to eliminate all possibility of side shake or end shake in the lathe spindle.

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Authorities have recognized for years that the most accurate and precise machines run on ball bearings. That is another reason why D. & E. Marshall Company absolutely guarantee precision performance and complete satisfaction with this lathe.

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1728 Newest and Most Popular Round and Fancy Crystals. Master Crystal System in 18 drawer Steel Cabinet. Individually labeled boxes.

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ton, which was removed by careful steaming to reveal the Ives label underneath. The firm of William P. McKay and Company was listed as "watchmakers" in the 1842 and 1846 Boston *Almanac*. In the 1854 edition, however, the firm was McKay, Spear & Brown. If the hourglass clock was made in the 1856-1860 period, it seems unlikely that it would have carried the McKay & Company label.

## INDIANA JEWELERS TO HOLD CONVENTION

The Indiana Retail Jewelers Association will hold their mid-summer meeting July 10-11-12, French Lick Hotel, French Lick Springs, Indiana. Leo Simon, Vincennes, is president, and Roy John, Indianapolis, is managing director of the association.

### A SUMMARY OF THE H. I. A. ANNUAL MEETING



BANQUET 28TH ANNUAL MEETING H. I. A.

At the annual meeting of the Horological Institute of America, held in Washington, D. C., May 8-9-10, 1949, past presidents were elected Life Members of the Advisory Council, and several changes were made in the Regional Vice-Presidents for the coming year.

The official attendance report showed in excess of 200 members were in attendance; many excellent papers were presented. The membership report as of April 23, 1949, was 4,009, in addition to 1156 student subscribers to the H. I. A. Journal. The H. I. A. Journal now has a circulation of 6,000 copies per month.

The report of the national treasurer showed that the finances of the H. I. A. are in excellent condition.

The Examining Board held 27 meetings, examined and graded 722 pocket watches, 82 wrist watches, 82 staffs, 85 jewel plates and 706 papers.

#### Applications

Received	1946-47	1947-48	1948-49
CMW .....	41	35	88
CW .....	216	407	580

#### Certificates

Granted	1946-47	1947-48	1948-49
CMW .....	23	22	35
CW .....	75	290	355

The National Bureau of Standards has tested 29 groups of watches, totaling 894 watches.

Resolutions were approved expressing appreciation to the National Research Council for the use of the Academy of Science Building; thanking the National Bureau of Standards for having given efficient service in testing various watches; thanking the speakers and others who helped make the convention a success, The American Watch Company and the Watchmakers of Switzerland, for their aid to American watchmakers, and memorializing the passing of several faithful members. Paul E. Morrison was chairman of the Resolutions Committee.

The following members passed away during the year:

- Frank Kroetz, 9 Franklin Ave., Valparaiso, Ind., on Sept. 28, 1948.  
 Edward H. Hufnagel, 403 McQuesten Parkway, Mt. Vernon, N. Y., Oct. 2, 1948.  
 Jacques LeRoy, 1056 3rd Ave., New York, N. Y., Nov. 15, 1948. ....  
 Leon C. Clarke, 2014 S. State St., Syracuse, N. Y., Dec., 1948.  
 Henry Blank, 17 Liberty St., Newark, N. J., Mar. 17, 1949.

The annual dinner was held at the Sphinx Club on the night of May 9, followed by an impromptu program directed by Forrest E. Peters, chairman.

A group picture was taken of many members attending the convention in front of the Academy of Science Building at noon on May 8th.

## HOROLOGICAL SCHOOLS CERTIFIED BY THE HOROLOGICAL INSTITUTE OF AMERICA

Following is the list of schools certified to date. Other schools are also being investigated for certification.

1. Elgin Watchmakers College.....Elgin, Illinois
2. Bowman Technical School.....Lancaster, Pennsylvania
3. Bradley University, Horological Department.....Peoria, Illinois
4. New York State College, Horological Department.....Morrisville, N. Y.
5. Waltham School of Watchmaking.....Waltham, Massachusetts
6. Morgan Vocational School.....Ridgely, West Virginia
7. Gruen Watchmaking Institute.....Cincinnati, Ohio
8. Southern Watchmaking School.....Ensley, Alabama
9. Bulova School of Watchmaking.....Woodside, New York
10. Cochron's School of Watchmaking.....Nashville, Tennessee
11. Greensboro School of Watchmaking.....Greensboro, North Carolina
12. Houston School of Horology.....Houston, Texas
13. Peters School of Horology.....Washington, D. C.
14. San Jose State College, Horological Dept.....San Jose, California
15. Baronian School, Inc.....Philadelphia, Pennsylvania
16. Chicago Institute of Watchmaking.....Chicago, Illinois
17. Emily Griffith Opportunity School.....Denver, Colorado
18. George Westinghouse Vocational High School.....Brooklyn, New York
19. Jes. I. Hansen Practical School of Watchmaking.....Denver, Colorado
20. Morgan Vocational School.....Baltimore, Maryland
21. Precision Instruments Laboratory.....Los Angeles, California
22. Tampa Horological School.....Tampa, Florida
23. Taus School of Watchmaking.....New York, New York
24. Theron O. Sowers Watchmaking School.....San Jose, California
25. Jewelry Training Service.....Chicago, Illinois
26. Massachusetts Trades Shops School.....Boston, Massachusetts

## H. I. A. Advisory Council and Officers for 1949-1950

### Past Presidents—Life Members

Harrison F. Babcock, Cleveland, Ohio.  
Howard L. Beehler, Chebeague Island, Me.

Frank D. Urie, Elgin, Ill.

### Term Expires 1950

L. R. Douglas, Indianapolis, Ind.  
F. M. Feiker, Washington, D. C.  
R. E. Gould, Washington, D. C.  
George T. Gruen, Cincinnati, Ohio.

†L. H. Hayenga, Irvington, N. J.  
M. F. Manby, Lancaster, Pa.  
Paul K. Morgan, Ridgeley, W. Va.  
Paul E. Morrison, Kalamazoo, Mich.  
Herman R. Pedrick, Collinswood, N. J.

### Term Expires 1951

John J. Bowman, Lancaster, Pa.  
Henry B. Fried, Brooklyn, N. Y.  
Harry D. Henshel, Woodside, Long Island, N. Y.

†Harold L. Herron, Chicago, Ill.  
Robert W. Mintmier, Peoria, Ill.  
F. E. Peters, Washington, D. C.  
A. S. Rowe, Indianapolis, Ind.  
†James R. Smith, Greensboro, N. C.  
†Ray F. Soucie, Denver, Colo.

### Term Expires 1952

\*S. George Cochron, Nashville, Tenn.  
\*Robert Franks, Bryn Mawr, Pa.  
†A. C. Henry, Houston, Texas.

\*Walter Kleinlein, Auburndale, Mass.  
\*W. H. Samelius, Elgin, Ill.  
\*George J. Schlehr, Morrisville, N. Y.  
\*Howard S. Schrantz, Cleveland, Ohio.  
†Theron O. Sowers, San Jose, Calif.  
\*George J. Wild, Peoria, Ill.

### Officers for 1949-1950

\*President—A. S. Rowe, Indianapolis, Indiana.  
\*First Vice-President—George J. Wild, Peoria, Ill.

### Regional Vice-Presidents—

- †1. F. E. Peters, Washington, D. C.
  - \*2. Howard S. Schrantz, Cleveland, Ohio.
  - \*3. S. George Cochron, Nashville, Tenn.
  - †4. Paul E. Morrison, Kalamazoo, Michigan.
  - †5. A. C. Henry, Houston, Texas.
  - †6. Theron O. Sowers, San Jose, Calif.
- \*Treasurer—George T. Gruen, Cincinnati, Ohio.  
\*Executive Secretary—Ralph E. Gould, Washington, D. C.

### Additional Members of Executive Committee—

\*John J. Bowman, Lancaster, Pa.  
\*Harry D. Henshel, Woodside, Long Island, N. Y.  
†R. W. Mintmier, Peoria, Ill.

\*Re-elected.

†New.

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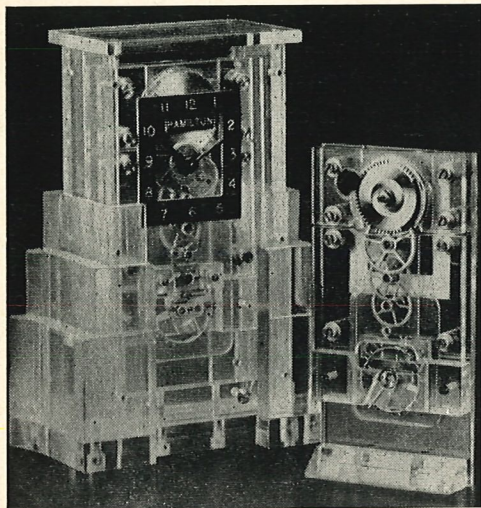
Serving the trade for over 50 years with a complete stock of GENUINE AMERICAN and SWISS MATERIALS, also JEWELS FITTED, DIALS REFINISHED, guaranteed ELECTRO-SEAL glasses inserted. We carry a full stock of tools, findings and Dennison Goods, BB glasses, KK glasses, Fulton glasses, G.S. unbreakables, L & R Products, all makes watch bracelets and jewelry of the following brands, HADLEY, JACOBY-BENDER, GEMEX, SPEIDEL, STURDY, VAN DELL and BLISS BROTHERS and many other brands.

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## FORMER MM 2/C BUILDS DISPLAY WATCH



Using the movement from a Hamilton comparing watch, Americo Frassanito, Long Island, N. Y., jeweler and watchmaker, built this transparent desk clock. Pictured at left is complete unit in lucite stand. View at the right shows in-line arrangement of train.

A wartime hobby, linked with his civilian occupation is now paying dividends for Americo Frassanito, a partner in the Frassanito Bros. jewelry store and watch repair shop in Corona, L. I., New York.

While stationed aboard the sub-tender U. S. S. Anhedon for 15 months, Americo, a former second class machinist's mate, combined his duties with his hobby and transformed a regular Hamilton comparing watch into a transparent lucite desk clock. He estimates that it took him about 90 hours to disassemble the Hamilton, carve the stand from a solid block of lucite, and reassemble the movement in "in-line" position in the stand.

The see-through case helps build customer confidence in the Frassanitos' repair shop. When a customer brings in an ailing timepiece, Americo examines it and points out the trouble spot with the aid of the lucite watch. In this way customers get a clearer understanding of the delicate operation of the movement and the skill required to put it in working condition again.

Americo, who was in the Navy for a total of 22 months, was in charge of servicing navigational timepieces on submarines and on the sub-tender while it was anchored in Subic Bay, Philippine Islands. Salvatore, the other partner in the Frassanito Bros. store, is also an ex-serviceman. For 3 years he was an instrument technician aboard a Navy seaplane tender, performing the same duties as Americo. Salvatore was in charge of the aircraft instrument clock and watch repair shop on the U. S. S. Tangere.

Before entering the service Americo operated a watch repair shop on Broadway in midtown New York.

## Ex-G.I. Buys Old Established Jewelry Store

Mr. Leonard L. Le Beau, formerly employed as watchmaker with Lodde Jewelers, Lafayette, Indiana, has just purchased the retail jewelry store of Charles A. Rinard, Kentland, Indiana.

Mr. LeBeau is well qualified by training and experience to successfully carry on the business established by Mr. Rinard. Mr. LeBeau graduated from the Elgin Watchmakers College in 1940, passed his Indiana State Board examination with a high-grade; served through World War II as specialized T 3 precision instrument repairman; is a member of the Watchmakers Association of Indiana (an H.I.A. affiliate) and the American Legion. A successful career as a retail jeweler is assured.

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## STOLEN WATCH RETURNED AFTER 17 YEARS

The importance of keeping a record of the movement and case numbers of a watch for legal identification was shown in a recent case in Indianapolis.

Bernard H. Campbell, 65 years old, a railroad employee, had a watch stolen almost 17 years ago, while working at Alton, Ill. The watch was a valued wedding present from his wife and he had had the watch only a week before it was stolen. He had a record of the watch movement and case, which he turned over to the police.

Two Indianapolis detectives, George Hubbard and George Connell, visited an Indianapolis pawn shop, checking up on pawned articles, and found Campbell's open-faced, silver watch had been pawned for \$10. They went back to police headquarters and checked back over old records kept there.

The pawned watch proved to be that watch which had been stolen from Mr. Campbell, and a police record showed the report was filed on May 28, 1932. The stolen watch was promptly returned to Mr. Campbell.

## PRECISION PLUS FOR MILADY



A new ideal timepiece for the modern miss in the laboratory or in her kitchen was shown at the Watch Pavilion in the Swiss Industries Fair, held at Basle. Madelaine Heller displays a chronograph that records observations up to 45 minutes with a precision of one-fifth of a second. The quality jeweled-lever movement Swiss watch has a lapped bezel and lugs, and is striking in appearance with its heavy flat crystal and tan leather strap.

## FRED GLUCK ELECTED W.M.D.A. PRESIDENT

Fred Gluck of Martin Gluck & Son of Pittsburgh, Pa., was elected president of the Watch Material Dealers Association of America at the convention held June 6 and 7 in Chicago.

Other officers named were: William R. Katz of William R. Katz and Company, Dallas, Texas, first vice-president; Sidney Prague of Prague-Kurtz Co., of Houston, Texas; Ben Glasser of Merit Company of Cleveland, Ohio; and H. Donald Richards of Philadelphia, Pa., executive secretary.

## Jewelry Training Service Opens Day Class in Stone-Setting

On July 11, the JEWELRY TRAINING SERVICE, Chicago, opened a day class for the instruction and training in stone-setting, at their training center, 226 South Wabash Avenue. Classes will be held five days a week. The class hours are from 7:30 A. M. to 12:30 P. M.

The Stone-Setting Training Program will include bezel, square, tiffany, fishtail, and channel type settings. Instructions will also be given in setting baguette, marquise, and emerald-cut stones.

The Jewelry Training Service has been conducting night classes in stone-setting for several years; however, this is the first day class in this particular branch of jewelry repairing and manufacturing industry.

The Jewelry Training Service School is sponsored by the Chicago Jewelers Association, of Chicago, and the Manufacturing Jewelers Association of Chicago.

I have three precious things which I hold fast and prize. The first is gentleness; the second is frugality; the third is humility, which keeps me from putting myself before others. Be gentle and you can be bold; be frugal and you can be liberal; avoid putting yourself before others and you can become a leader among men.—Lao-tzu.

## "SUNKIST LADY" CREW RECEIVED AWARDS



Keeping an airplane aloft for 42 days requires more than two skilled pilots. Here the ground crew that helped make possible the recordbreaking flight share in the rewards. From left to right receiving Hamilton watch are Lloyd Colboch, pilot Dick Riedel, pilot Bill Barris, Don Janson, and Frank Miller. Making the presentation is Taylor Jacobsen, Fullerton (California) jeweler, who headed the Chamber of Commerce committee that sponsored the flight. Dean Bellinger, another ground crewman, was not present at the presentation.

Under the leadership of Taylor Jacobsen of Fullerton, Calif., jeweler, his community held the national news spotlight for nearly 2 months while Bill Harris and Dick Riedel hovered overhead to set a new light-plane endurance record of 1008 hours.

The two men, aided by a ground crew of four, kept their plane, "Sunkist Lady," aloft from March 15th to April 26th, a total of 42 days. A portion of the flight was devoted to a cross-country jaunt from California to Miami, Fla., and return. During this trip the ground crew was flown ahead

to render refueling service from a speeding jeep at key points along the route.

The record-shattering flight was sponsored and financed by the Fullerton Chamber of Commerce, Mr. Jacobsen heading the fund-raising campaign that made the flight possible.

At a testimonial dinner following the landing of Barris and Riedel, Mr. Jacobsen presented each of the pilots and the ground crew with Hamilton watches on behalf of the Chamber of Commerce. Speaking at a dinner, Barris said that they had been swamped with letters, telegrams, and offers but that they appreciated most, the reception and gifts of the Fullerton people.

The two pilots appeared as guests on several network radio shows and were photographed by all the news syndicates and newsreel companies. Daily accounts of the progress of the flights appeared in newspapers all over the country.

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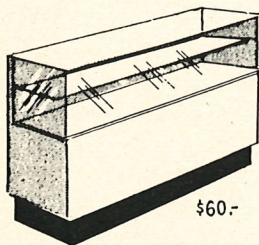
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Also available with 24" high glass enclosure  
around upper front and sides. \$75.-

## Chicago Institute of Watchmaking to Award Braille Watches to Blind Veterans

Twelve Braille wrist watches are being made available for blinded World War II veterans by the Chicago Institute of Watchmaking, 7 S. Pulaski Road, Chicago, Paul Leeds, director of the School and former chief of vocational rehabilitation information for the Veterans Administration here before establishing the School has announced.

The Braille watches will be awarded on the basis of the twelve best letters received by the school before July 15, 1949, recommending the veteran. Entries will be accepted from all parts of the United States, Leeds announced.

During the past year 63 disabled veterans of World War II have been trained and graduated from watchmaking courses at the Chicago Institute of Watchmaking. However, the blind is one class of disabled veterans that obviously cannot learn watchmaking, hence the Braille watches are being given to them by the School. The Chicago Institute of Watchmaking recently gave a scholarship and watchmaking equipment valued at \$1,150.00 to an ex-Merchant Marine Stanley M. Repel, of Chicago, in a nation-wide search to reward Merchant Marines interested in watchmaking for their war records.

## ILLINOIS WATCHMAKERS HOLD ANNUAL MEETING

The Illinois Watchmakers Association held its annual meeting in the Morrison Hotel in Chicago on June 17 and elected officers for 1949-50.

William Wekle was named president at the convention. Other officers named were: Robert L. Scott, vice-president; Fred Hope, recording secretary; William Bingham, treasurer; Fred M. Padgett, executive secretary; Jerald Kimes, William Pillaith, Jr., Jack Lund, Harold Herron, Bernard McGuire and Vernon Gros, directors.

## N. A. H. S. OFFICERS



Officers of the National Association of Horological Schools re-elected for 1949-50 at the close of the Association's fourth annual convention held in Chicago at the Hotel Sherman, May 19-22. Seated, left to right: Tod New, director of the American Academy in Denver, president; A. F. McGhee, director of the New Jersey and Pennsylvania Schools of Watchmaking, vice-president; Orville R. Hagans, president of the American Academy in Denver, executive secretary. Standing, left to right: Paul Leeds, director of the Chicago Institute of Watchmaking, director; William O. Smith, president of Western Pennsylvania Horological Institute, director; Arthur T. Johnson, principal of the Philadelphia College of Horology, treasurer; and Charles R. Percival, director of the Western Horological Institute of Los Angeles, director.

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Carl Campbell of the C. & E. Marshall & Company was the principal speaker at the June meeting. Speaking on the subject, "How to Make a Repair Department Pay," Mr. Campbell gave a report on a recent survey conducted by the business engineering division of the C. & E. Marshall & Company, and reviewed some of the important factors brought to light in the survey regarding operations of the new division.

The meeting was well attended and members indicated considerable interest in the activities of the coming year.

# 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":

Recently there was an argument at the shop where I am "training-on-the-job" about the center of oscillation and the center of gravity of a clock pendulum. Will you please define the difference?

L. A. R.

*Answer:* The center of oscillation of a pendulum is that point in a pendulum at which, if the whole mass of the pendulum were collected, the time oscillations would be the same.

If a pendulum ball or "bob" could be made to swing without support of a rod, the center of gravity would also be the center of oscillation. However, the pendulum rod increases the weight of the mass, thereby raising the center of oscillation above the center of gravity. If the

pendulum rod is of the "grid-iron" type, the weight will be considerably increased, in proportion to the weight of the pendulum ball or "bob." The time in which the pendulum will swing depends on the distance from the point of suspension to the center of the arc, which is called the effective or horizontal length and it is that which is given in all pendulum length calculation tables.

Any increase in weight above to the center of oscillation will cause the clock to run fast. Any weight added below the center of oscillation will cause the clock to run slow.

The center of gravity of a pendulum is that point which the pendulum can be equally balanced by placing on a knife-edged object.

"THE PROFESSOR"

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*Write for catalog.*

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

Dear "Professor":

I am a young watchmaker and I am confused about the theory of why, by increasing the end pivot friction on the balance staff, a watch will run fast in the dial position, or by reducing the end pivot friction of the balance staff, the watch will run slow in the dial positions. It appears to me that the results would be just the opposite. Will you please explain.

R. R. A.

*Answer:* Let us assume that the watch is in perfect condition and rates okey in the stem positions, but gains in the dial positions. Let us assume the balance is not "taking" the required motion in dial up position, due to the end friction of the balance pivot against the end stone, causing the balance to take a shorter arc, as the balance traveling a shorter distance will consume less time in returning, causing the watch to gain. However, by reducing the end pivot friction on the end stone, the balance will travel a greater distance, thus consume more time in returning, causing the watch to lose.

"THE PROFESSOR"

Dear "Professor":

I recently took an examination in a state having a watchmaking examination law. One of the questions: "How many revolutions does a 15-tooth, (180 beat) escape wheel make in 2 minutes?" My answer was 40 revolutions. This answer was marked wrong. What is the correct answer?

H. A. V.

*Answer:* The correct answer is 20 revolutions. Each tooth receives 2 beats, one on the receiving and one on the "let-off" stones or 30 beats or, 6 seconds per revolution. Six divided by 120 seconds equals 20 revolutions of the escape wheel in two minutes.

"THE PROFESSOR"

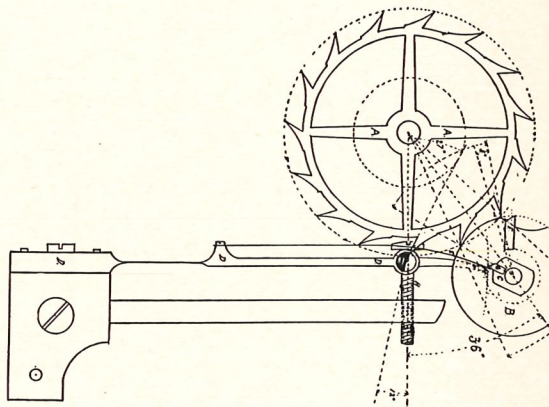
Dear "Professor":

I have been informed that the Marine Chronometers beat 14,400 per hour and that they use 15 ratchet-tooth escape wheels. I am also told that the balance receives 120 impulses per minute or four beats per second. I cannot understand why it should not beat 240 beats per minute if each escape wheel tooth accounts for two beats.

H. R. R.

*Answer:* The chronometer escapement is so constructed that the balance receives its "impulse" in only one direction, the "down-swing." The detent consists of a "bar" and a thin flat gold spring of sufficient length to obstruct the free passage of the roller jewel on the "down swing," forcing the detent spring against the "bar" which unlocks the escape wheel tooth giving the balance its impulse. However, on the "upswing" (dumb-beat) the thin detent spring permits the passing of the roller jewel without unlocking the tooth, thus, the balance receives its "impulse" every other "beat" which explains the 120 instead of 240 beats a minute.

"THE PROFESSOR"



Chronometer Escapement

CROSSING FILE: A file made of special form for forming curved-profile arms in train wheels.

## SWISS WATCHMAKERS SHOW LATEST STYLES AT FAIR

More than \$2,000,000 worth of the latest style pace-setters were shown in the watch pavilion of the 33rd Swiss Industries Fair at Basil, Switzerland, where manufacturers exhibited 1949-1950 models with jeweled-lever movements in round, oval, rectangular and square cases.

The 190 exhibitors stressed the quality jeweled-lever movements in particular for the United States market, the trend being toward making available the finest styles along with the best type of movement.

Watch buyers from all parts of the world attended the Fair, basing their purchases for the coming year on the various timepieces offered at the Watch Pavilion.

Strictly tailored models shared the spotlight with be-jeweled timepieces at the many exhibits. A number of the items shown are aimed at aiding the retail jeweler to sell "a second watch," with special purpose jeweled lever timepieces available for almost every type of specialist.

In addition to a wide variety of dress and sports models, chronographs, automatics, water-resistant watches, calendar watches and other special timepieces were shown.

# DEAN'S WATCH MATERIALS AND TOOLS

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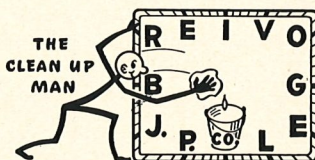
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If you're the kind of fellow who insists on fine work and prompt service, drop Dan a line today and receive his price list and free mailing envelopes by return mail.

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## NEW JERSEY WATCHMAKERS HOLD MEETING



The regular meeting of the Watchmakers' Association of New Jersey, Inc. was held at the Ivanhoe, 925 Springfield Avenue, Irvington, at 8:30 p.m., June 14, 1949.

The demonstration of the "Watchmaster" by Mr. Herman Bernstein of the New Jersey Jeweler's Supply House was very interesting and informative. There were a great many members present who were interested in the demonstration.

The 28th Convention of the H. I. A. held early in May was one of the best ever held, both in attendance and in interesting speakers. Mr. L. H. Hayenga was elected a member of the advisory council of the H. I. A. at the convention. The number of members from this association affiliating with the H. I. A. was a source of great satisfaction. You will receive the H. I. A. Journal regularly for the next year beginning with the July issue.

The May issue contained an article about Emil Haller and his picture. He has been made a member of the Half Century Club for his long service as a watchmaker.

### *Notice to Regular Members*

Come prepared to vote on each Article of the Constitution and By-Laws listed for revision in your May bulletin. This vote will take place at the June meeting.

We shall have the great privilege at the June meeting of hearing Mr. Richard W. Slaugh, head watchmaker of the Hamilton Watch Company. He has been with the Hamilton Company for thirty years and is on the advisory council of the H. I. A. He gave a lecture on the new 8/0 size gent's watch, no. 747 at the H. I. A. con-

vention in Washington. He has kindly consented to give this lecture and demonstration to us at this meeting. Mr. Slaugh is a very interesting speaker and what he has to say will be really instructive and a time saver when you have one of these watches to repair.

There will be no meetings in July and August. We shall resume meetings on September 13 at the same place, The Ivanhoe.

Let us have a big meeting before vacation time begins.

Come out one and all and let us have your views and comments.

L. H. HAYENGA, *President*

**CRESCENT:** A semi-circular notch in edge of roller table of a watch movement to permit the guard pin or point to pass the line of centers during unlocking and impulse — sometimes called **PASSING-HOLLOW**.

### YOUR STAKE IN THE

## *Esembl-O-Graf*

Every watchmaker, every jeweler has a real stake in the revolutionary new **ESEMBL-O-GRAF** method of servicing chronographs. The popular market for complicated movements has grown and will continue to grow to such an extent that the average watchmaker can no longer ignore it . . . nor will he want to.

Chronograph repair by the **ESEMBL-O-GRAF** method is a **PROFITABLE** undertaking. Finishing a job in only a fraction of the time formerly required, the watchmaker can realize a far greater return for his services. Similarly, many watchmakers whose crowded schedules have not permitted chronograph repair at **ANY** price can now take on this profitable activity without slighting their regular watch repair business. Jewelry department traffic is thereby increased.

As a dependable, fool-proof technique, the **ESEMBL-O-GRAF** method is a valuable prestige builder. Every customer for whom a chronograph is serviced quickly and satisfactorily becomes a walking, talking billboard for the watchmaker and the Jeweler.

Put **ESEMBL-O-GRAF** profits in your watch repair department now. Inquiries answered in detail.

## *Esembl-O-Graf*

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*The Esembl-O-Graf method of chronograph repair is currently taught at Western Pennsylvania Horological Institute, Pittsburgh, Pa.*



## Horological Society of New York Held Closed Session



The Horological Society of New York held a closed session for members only in Caravan Hall, 1103 East 59th Street, Monday, June 9, to discuss proposed amendments to the constitution which would bring it up-to-date. The meeting was the last to be held during the summer months. Regular meetings of the Society will be resumed in September.

Attending the 28th annual convention of the Horological Institute of America, Inc., held in the National Academy of Science Building, Washington, D. C., May 9-10, were: President Andrew Park; Secretary Henry B. Fried; Benjamin Meltenhoff, Paul Eschudin, Alvin Levin, V. E. van Hoesen, Howard L. Beehler, Teed Westlake, Teddy Taus. President L. H. Hayenga of the Watchmakers Association of New Jersey also attended.

Among the members of the H. S. N. Y. who gave informative and interesting talks before the annual H. I. A. meeting were: Henry B. Fried, who spoke on "Ball Bearing Watches"; Howard L. Beehler, "H. I. A. in Peace and War"; V. E. van Hoesen, Technical Director Karl Plepla, "Adjustment of Watches and their Historical Background"; Paul Tschudin, director, Watchmakers of Switzerland Repair Parts Information Bureau, "How to Order Swiss Watch Replacement Parts"; Alvin Levin, public relations consultant of Foote, Cone and Belding, "Value of a Competent Watch Repair Department as a Store Traffic Builder." President Park will give a detailed account of the 28th H. I. A. convention at the next regular meeting.

Richard Slaugh, head watchmaker of the Hamilton Watch Company, was the principal speaker at the May meeting. He was accompanied by Mr. Rivenburg, publications director of the Hamilton Watch Company. Mr. Slaugh discussed many innovations in modern Hamilton watches. He used numerous charts to show the technical advances made in certain watch designs and told of the systems in the factory to keep the new watches going and efforts to discover and eliminate the "bugs" in a new production. Mr. Slaugh, who has been with the Hamilton Watch Company for over thirty years, reviewed the steps taken to insure quality production and precision in the making of these watches. He pointed out that the new models are encased in dustproof patented cases and explained the service requirements necessary to dismantle these. Mr. Slaugh's talk was most interesting and in the question and answer period, he enlightened those who asked questions regarding technical phases of watchmaking with correct and understandable answers and references.

Also featured were entertaining magical acts of the now-famous Watchmaker-Magician Samborn. His skill as a magician was most ably demonstrated with stooges, including Messrs. Park, Fried, Epstein and Stern. Mr. Samborn actually made time go backward for President Park; made spliced ties reappear whole and colorful for Mr. Stern, for Mr. Fried and Epstein; he repaired ropes, produced animals of various sizes and kept the crowded auditorium both puzzled and amused.

Member Kroner of Old Dutch Place, Fryeburg, Maine invites correspondence from members who have engineering experience and would like to trade ideas about modern watch design (from the standpoint of a practicing watch repairer rather than from a factory man).

A very active and interesting set of programs has been planned for the fall season.

## NEW YORK STATE WATCHMAKERS ELECT

The New York State Watchmakers Association annual convention and election of officers was held June 12th, 1949, at Hotel Lafayette, Buffalo, New York.

Henry B. Fried of New York was elected President, A. Lynn Groat of Rochester was elected Vice-President. The other officers were re-elected for another year. They are Raymond D. Evans, Newark Valley, Treasurer; Philip J. Farrance, Syracuse, Recording Secretary; and Paul O. Beckes, Orchard Park, Executive Secretary.

At the meeting, Mr. Robert G. Taylor, retiring president, gave a resume of the progress made in the past year on the Registration Bill. It was presented at the early session, but failed to come out of committee. However, it has been assured of more favorable consideration next year when the legislative load is less heavy. Mr. Fried gave a very interesting forecast on "What Lies Ahead for the Watchmaker." His outlook is optimistic, and he believes passage of the Bill will make a more secure future for every watchmaker.

A meeting of the Legislative Committee of the Association is to be held in New York in August during the Jewelers Convention, to which representatives of all groups concerning, including publications, will be invited. There are a number of wordings and definitions in the bill which will be ironed out at this time, to make it meet the complete approval of everyone who will be affected by it. Also, the State Department in Albany made a number of recommendations which will be discussed at this time. It is hoped to receive the approval of the State Department, the Senate Finance Committee and the Assembly Ways and Means Committee by this fall, so the Bill may be introduced in final form at the first session in January.

## CHAPLIN RECEIVES GIFT



W. W. Chaplin, three times president of the OVERSEAS PRESS CLUB and dean of the N. B. C. commentators, times his news casts with a chronograph watch, presented to him by his fellow club members and The Watchmakers of America.

## Pathway to Success



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**Horology Division**

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# A Practical Training Program for The Engraver-Beginner

EDITOR'S NOTE: *Engraving is both an art and a craft, and it is not the intention of this added training feature to create artists but to develop and apply the watch-makers and their apprentices' craftsmanship ability along mechanical lines to produce in a more or less mechanical way, a passable artistic effort or "a reasonable facsimile."*

*It does not always hold true that an artist makes the most successful engraver, or is always true that a beautiful hand-writer makes a successful letter engraver. However, it is true that the outstanding engravers are a combination of both.*

*Therefore, this and the following series of instructions will be based on mechanical rather than artistic lines. A little practice each day, a little determination, and in a reasonable length of time you will be in position to do the simpler forms of engraving.*

## Conventional Old English



The Conventional Old English text, shown above, is more elaborate than the Simplified Old English text shown in the May issue of the H. I. A. JOURNAL. The most artistic effects of this type of Old English are obtained by "bright cutting" the shade lines with a flat face graver. The "hair lines" can be cut with a flat face graver; however, this requires considerable practice and the same results can be obtained by the use of a square or "script" graver.

The secret of an attractive bright-cut with the flat-face graver is keeping the inside cut of your shade the same depth.

Another point to remember is to turn outline design curves towards the graver (to meet the curve), NOT the graver to curve. The latter procedure will have the tendency to make a rough and uneven lower (inside) shade cut.

FIG. 1 (c) shows the completed receding curve cut, which is used with variations, more than any other cut in Old English capitals.

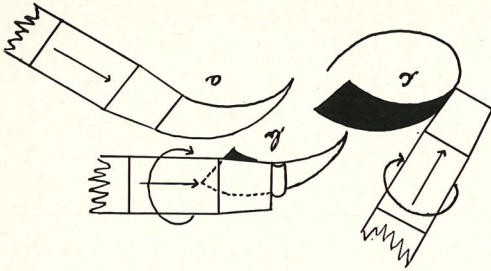


Fig. 1

**PROCEDURE:**

Place the full width of the graver in cutting position with the graver "rolled" towards you when starting the cut. This will make the inside shade cut deeper than the outside, permitting smoother control of the flat graver on the curves. FIG. 1 (a).

Start this cut by turning the design curve to MEET the flat graver—NOT the graver to meet the curve, and at the same time gradually "rolling" the graver towards you, reducing the shade. FIG. 1 (b). Continuing this procedure until the receding shade is reduced to a fine "hair-line" FIG. 1 (c).

This cut is used on all Old English capital letters and most of the lower-case letters as can be seen by referring to above text.

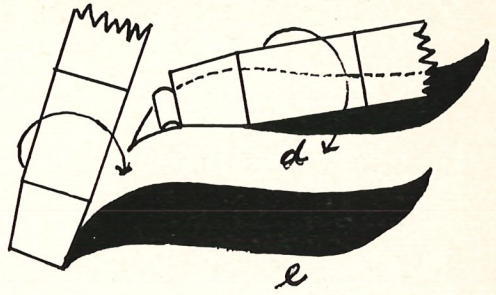


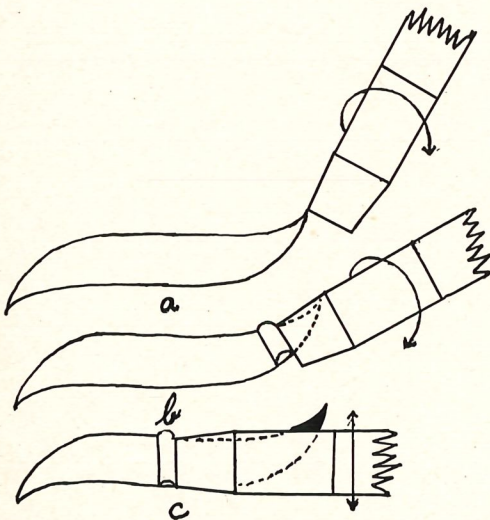
Fig. 2

The reverse curve shade shown in FIG. 2 is more difficult to cut than the receding curve shade (FIG. 1).

**PROCEDURE:**

This cut is started with the outside cutting edge of the flat graver, at the top of the cut, FIG. 2 (a). Gradually increasing the shade by "rolling" the graver towards you. FIG. 2 (b). Continue to "roll" the graver towards you until the full cutting face of the flat graver is reached. Continue the full width of the flat graver for a short distance (FIG. 2-c), then gradually "roll" the graver towards you, reducing the shade, FIG. 2 (d). Further reducing the shade by rolling the graver towards you until the shade ends in a fine "hair-line" as shown in FIG. 2 (e). Completing the reverse curve cut. This reverse curve cut is used in the Old English capitals B, F, H, I, J, K, M, T and Z.

The "bright-cutting" of the lower-case Old English is self-explanatory.



Bestfit ...

<p>1/2 DOZEN # <u>5</u></p> <p>REFILLS FOR</p> <p style="text-align: center;">Genuine "THE BESTFIT"</p> <p style="text-align: center;"><b>CROWN</b></p> <p>Assortment # <u>781</u></p> <p style="text-align: center;"><b>PINK</b></p>	<p style="text-align: center;">FIRST &amp; FOREMOST IN—</p> <p style="font-size: 24pt; font-weight: bold; text-align: center;">CROWNS</p> <p style="text-align: center;">IN SEALED ENVELOPES</p> <ul style="list-style-type: none"> <li>• FOR PROTECTED QUALITY</li> <li>• FOR EASY INTERCHANGABILITY</li> <li>• FOR MOST COMPLETE RANGE</li> </ul> <p style="text-align: center;">ORDER FROM YOUR JOBBER</p>
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## NEW ORLEANS GUILD HOLDS JUNE MEETING

The New Orleans Watchmakers' Guild held their regular June meeting at the N. O. A. C., in which sixty members attended. Albert A. Hopfensitz, chairman; Stanley Roques, secretary, and Joseph Catanese, treasurer. At the request of the members, a representative from an insurance business spoke about the health group insurance; and application cards were handled after questions were asked.

Mr. Alvin Crew announced that the dance for the members and their ladies will be held on the night of July 13, celebrating one year of Louisiana license law. Albert A. Hopfensitz presented a paper of suggestions to be published in the local news as the beginning of a series of articles to follow, related to watch repair education to the public. Mr. Ed. Volk reported that the apprentice committee had indentured one apprentice in the past month.

Mr. George Ochs read the code of ethics his committee drafted, which was unanimously accepted. It was proposed by Secretary Roques that he will write the state in an effort to have the entire state adopt the same code of ethics. Mr. Peter Nieto, national trustee, made a report of the recent U. H. A. A. convention held in Chicago; Mr. James F. Roques, president of the Board of Examiners in watchmaking, made a brief report of the first examination ever held in Louisiana; this report has particular significance because it is the first time that such a report has been made in our guild. Mr. Roques presented one of the new members who took the examination and successfully passed it.

---

## Texas Licensing Okeyed at Annual State Meeting

Plans for the licensing of all watchmakers in Texas were approved at the annual convention of the Texas Watchmakers Association held in Galveston, on June 5 and

6. It was one of the most successful conventions ever held by the Association.

Directors of the Association voted at the closing session to begin work immediately on the drafting of a bill to be presented to the Texas Legislature, requiring examination and licensing of all watchmakers in the state.

Charles Riggins of Sanderson was elected president of the Association. Other officers elected were: Joe R. Brown, of Galveston, first vice-president; Art Greenwood of San Antonio, second vice-president; W. E. Altfather of Dallas, secretary; and Dren Duffy of Houston, treasurer.

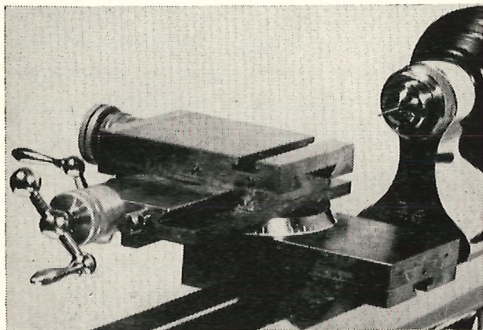
C. E. Mulholland of Austin, immediate past president of the association, co-founder with President Riggins of the Association, was one of the principal advocates of the program to examine and license all Texan watchmakers. He pointed out that the proposed legislation would not add to present state taxes, as, he said, cost of the operation and administration of the law would come from fees paid for examination and licenses.

A. S. Rowe, of Indianapolis, president of the Horological Institute of America, who was one of the principal speakers at the convention, emphasized the importance of organization of watchmakers in America and the need for raising the ethical standards in all states. He reviewed the accomplishments of states now operating under proper examination and licensing laws.

President Riggins announced that he would appoint a committee to draft the proposed legislation which will incorporate the best features of the laws of Indiana, Oregon, Oklahoma, Louisiana, Wisconsin and Minnesota.

At the installation banquet, the Association's first honorary membership was presented to Albert Pliner of Galveston, publisher of the TWA Official Journal, citing Mr. Pliner "for outstanding service to the watchmaking profession in Texas."

## WATCHMAKER STUDENT MAKES SLIDE REST



Three-way compound slide rest, shown above, was designed and executed by **RAYMOND M. WRONA**, Woonsocket, R. I., a student at the **Jes. I. Hansen School of Watchmaking, Denver, Colorado.**

Jes. I. Hansen, director of the Jes. I. Hansen School of Watchmaking, Denver, Colo., a nationally-famed horologist and precision tool designer, is justly proud of the skill and mechanical ability exhibited by Raymond M. Wrona, Woonsocket, R. I., a student at his school, in designing and building a 3-way slide rest.

The "friction-dials" are the large type and are metrically calibrated. The "swivel-dial" is beveled for better visibility.

The entire slide rest is "scraped," which adds to the attractiveness of the tool.

The slide rest is built to fasten directly

to the lathe-bed.

Mr. Wrona has designed and built a number of watchmaker's tools, among which is an adjustable index latch attachment that fastens directly to the lathe bed and is arranged so that the head stock can be used normally without removing the index-latch.

Mr. Wrona also designed and built an idler-stand and pulleys, adjustable to all directions and angles. The "Upright" is quickly removable from the base, which is low enough to permit the lathe to be moved aside without interference.

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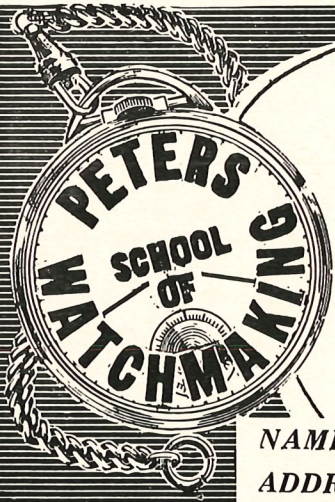
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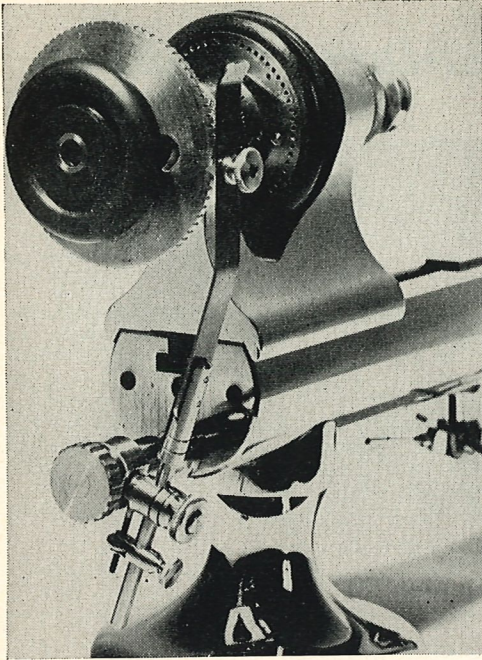
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Approved by the H. I. A.



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The above Index Lathe was designed and built by RAYMOND M. WRONA, a student the Jes I. Hansen School of Watchmaking, Denver, Colo.

#### NEW VOGUE IN WATCH STYLING



Model Judith Vogel displays the latest creations of Swiss watchmakers shown at the Watch Pavilion of the Swiss Industries Fair held at Basle. The 18-carat round jeweled-lever movement wrist watch features a black leather strap running through hand-worked gold rings spaced along the strap to suit personal taste, or taken off for less formal or dressy occasions. New rings may be given for gifts and added to the bracelet. The raised crystal adds another smart touch. The handsome lapel watch is one of those in which Swiss designers are emphasizing pearls this year. The clip, chain and covered-watch present a beautiful ensemble of pearls in different colors. The watch is suspended from the pearl clip by chains of pearls, and a pearl cover lifts to reveal the gold hands and numbers on the jeweled-lever movement watch.

## ETERNA-MATIC-WATCH MEETS "MILADY'S" NEEDS

Pierre Bohy of New York, vice-president of the Eterna Watch Company, predicts his firm's new watch, the "Eterna-matic," which will be on the market June 15, will revolutionize the sale of ladies' automatic self-winding watches and will mark the beginning of a new era in women's approach to watch buying.

He bases his prediction on two factors: that the "Eterna-matic" solves for the first time, 100 per cent, the automatic winding problems in ladies' watches which formerly hampered their sale, and that makes its debut at a time when women buyers are, of necessity, beginning to show as much interest in the mechanism and performance of a watch as in its case.

"The 'Eterna-matic' is the first ladies' self-winding watch to meet the exacting needs of the busy and intelligent American woman—whose way of life demands a functional as well as an ornamental watch," declared Mr. Bohy.

Bohy also pointed out that the 'Eterna-matic' winds clockwise and counterclockwise at the slightest flick of the daintiest wrist; is thin enough to appeal to the most feminine taste; and, should it be left on milady's dresser, will continue running and keeping accurate time for 40 hours after the last wearing.

Bohy points out that the "Eterna-matic" climaxes ten years of creative pioneering by the Eterna Watch Company in the field of automatics.

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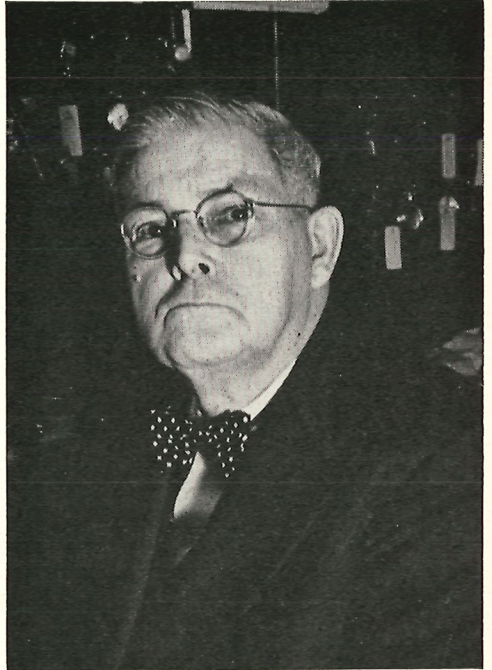
# "The Half-Century Club"

Frank H. Cadogan of Delmar, N. Y., who qualifies for membership in the Half-Century Club, has been engaged in the watchmaking business for 56 years. Mr. Cadogan has his shop at 128 Orchard in Delmar, which is a suburb of Albany, N. Y.

He was born in Norwich, N. Y., on August 1, 1878, and he started in the work as a watchmaker on July 3, 1893. Thus, next July 3, he will have completed 56 years. He was graduated from the American Horological Institute, at Lancaster, Pa., on Nov. 3, 1894. He had studied under Thomas Pendergast, former master watchmaker of the Lancaster Watch Company.

For forty years Mr. Cadogan operated his watchmaking shop in Utica, N. Y., and was one of the best known watchmakers in the Empire State. Then he moved to Delmar.

Mr. Cadogan became interested in the advancement of better watchmaking and has been a leader in New York to develop better ethics and techniques in watchmaking. He has led an active career in his



FRANK H. CADOGAN

chosen field and has kept abreast of new methods in watchmaking.

He is a charter member of the New York State Retail Jewelers Association.

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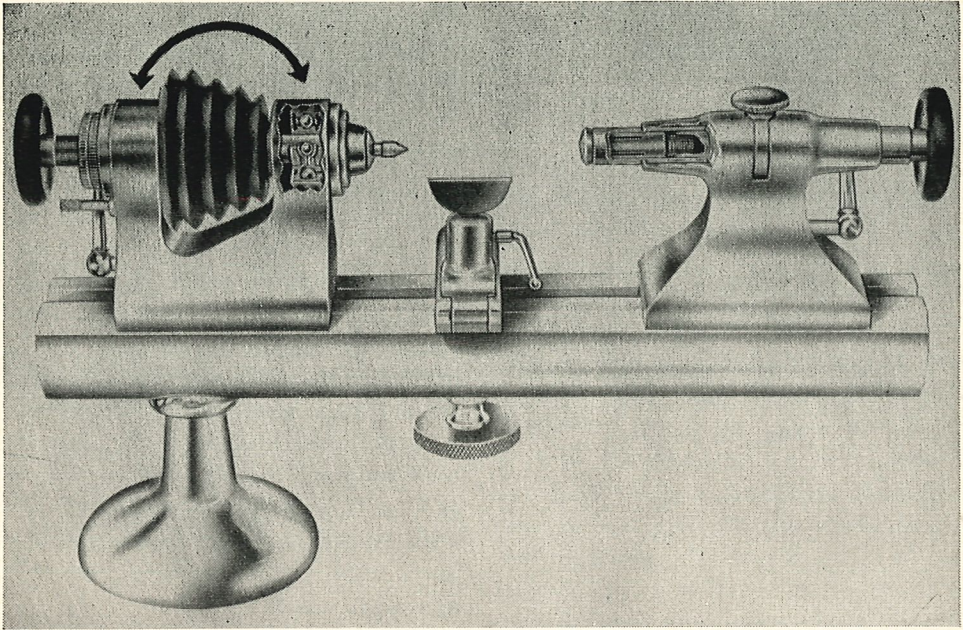
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## NEW TYPE OF LATHE NOW ON MARKET



More than five years of research went into the production and development of the new Marshall pre-loaded ball-bearing watchmakers' lathe, manufactured by the C. & E. Marshall Company of Chicago.

War-time development of ball bearings enabled the company to solve design and precision problems involved, and preliminary tests were made two years ago on the lathe. The new lathe was operated continuously for 1,100 hours without oiling or attention of any kind. Satisfactory subsequent tests have been made by the engineering department.

The first Marshall ball bearing lathe to come off the assembly line was sold to Charles Purdom for use in his laboratory. It has been acclaimed as the greatest advancement in precision watchmakers' lathes in many years.

Among the leading horologists who have heartily endorsed the new Marshall ball-

bearing lathe are George J. Wild, dean of the horology division of Bradley University, and W. H. Samelius, director of the Elgin Watchmakers' College.

The new Marshall lathe had its premier showing at the U. H. A. A. convention recently held in Chicago, where it created much favorable comment. Lathes in enamel and chrome, as well as models in polished nickel were exhibited at the convention.

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## Special Value Offered for Summer Mainspring Replacements

Now that the season of greatest mainspring replacements is here, the trade will be especially interested in Swartchild's advertisement on page 18. It features at a sale price, an assortment of Swiss mainsprings carefully selected to service watches most commonly requiring mainspring replacements. The springs are exceptionally good quality, reverse style with *beveled* riveted tongue ends. Each spring is in individual aluminum cup and in a numbered envelope; the entire assortment is in a partitioned reinforced, leatherette covered cabinet. Four dozen springs are included and the price is \$8.95; an exceptional value. It is offered by Swartchild & Company, serving Watchmakers and Jewelers since 1870, located at 29 E. Madison St., Chicago 2, Illinois, with branches in New York, Dallas, Denver, Buffalo, Boston, and Atlanta.



Junior—Tell mother the time.

## WHAT'S YOUR ANSWER?

Dear "Professor":

On page 30 of the April issue of the H. I. A. Journal there is a question about the advisability of oiling the center arbor where the cannon pinion fits. The dogmatic answer, "Do not put any oil on the center post" followed by six lines of meaningless filler material is not very satisfactory. Why not use oil on the center post? That point definitely has sliding friction and if not oiled at all the parts can conceivably gall and freeze, especially if they are not glass hard. In that respect many a broken minute wheel tooth could have been prevented had the center arbor been oiled. I used to put cannon pinions on dry with assorted sad results, even pulling a center arbor in two trying to remove one that had seized.

My employer suggested that he and his father before him always oiled the center arbor with never any bad results. Since then I have studied this problem at length and have been unable to determine any reason why not, in fact it is difficult to avoid oiling the center post while oiling the jewel beneath the cannon pinion on several models. And after the job is done what is to prevent a film of oil from creeping between the center post and cannon pinion from the properly oiled pinion beneath? There is never any oil groove provided or any other provision to prevent this except the natural tendency of good oil to stay where it is put, therefore the various thousands of watch designers of the past three hundred years must not have considered oil at this point to be undesirable.

Now I would like to see some good sound arguments in favor of no oil, or at least the reason for the professor's decision to use no oil at that point.

I. W. L.



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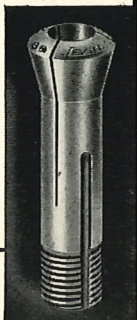
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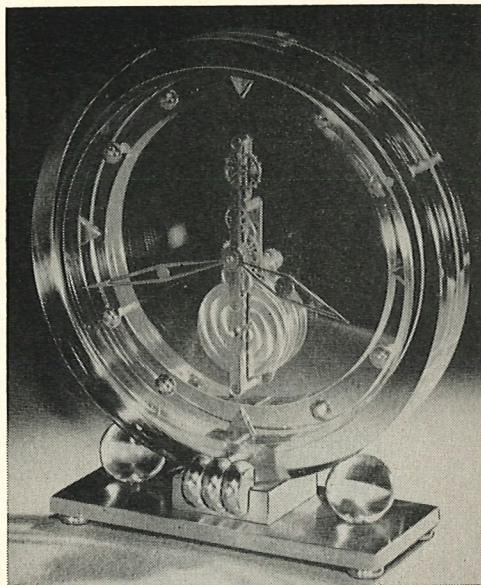
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Swiss designers have combined the craftsmanship of the quality jeweled-lever watch movement with the beauty of transparent plastic and translucent frosted glass in the new high-fashion clocks being introduced in Switzerland.

The watch mechanism employed in these clocks is known as the baton movement, with the wheels and mainspring lying in a single plane, and is similar to those found in world-renowned Swiss precision timepieces.

The clock shown above is one of the many new styles displayed at the Geneva Exposition. The movement is a jeweled-lever escapement with an "incline train." Mounted in a transparent plastic case.

## C. E. MARSHALL COMPANY HOST AT CONVENTION

C. E. Marshall Company recently held open house and a cocktail hour in the reception room of the company building at 1445 Jackson Boulevard, Chicago, for directors and deans of watchmaking schools, delegates, officials and others attending the 1949 U. H. A. A., N. A. H. S. convention at the Hotel Sherman in Chicago.

Cocktails and hors d'oeuvres were served to approximately two hundred guests during the reception that was held from three to five in the afternoon.

The visitors were divided into groups for a 35 minute tour of the company building so they could see Marshall tools in the process of being manufactured. These groups were guided by members of the executive and sales staff.

In each department, a spokesman briefly explained departmental operation.

The occasion of this open house, along with the company's exhibit at the Hotel Sherman, witnessed the first public showing of the Marshall Ball Bearing Lathe, which was in the process of development and manufacture for more than five years.

### WAFER-THIN TIMEPIECE



One of the most striking exhibits at the Watch Pavilion of the Swiss Industries Fair, held in Basle was the world's thinnest watch. This remarkable Swiss jeweled-lever movement timepiece shown above is the world's smallest watch. The handsome round man's watch, is only 0.117 of an inch thick in the middle, and 0.074 of an inch at the rim. The diameter of the case is 1.209 inches. The movement, whose diameter is 0.7995 of an inch, is 0.063 of an inch thick. The 9-line movement has 92 parts, and weighs only 0.105 of an ounce.

## *The July Cover Story*

### OLDEST KNOWN GENEVA WATCH NOW IN MUSEUM

The forerunner of the modern jeweled-lever watch developed from table clocks. It was only after the invention of the mainspring by Peter Henlein of Nuremberg, Germany, in about A. D. 1510 that portable timepieces were possible.

The oldest watches, made in Germany, were "egg-shaped" in their earliest stage, but later were made round or "drum-shaped," with hinged brass cases. The top lid had twelve openings, directly over the hour figures and the watches had only an hour hand.

The art of watchmaking spread rapidly into England, France and Switzerland, where it achieved its highest development.

The actual beginning of watchmaking in Geneva, Switzerland cannot be determined, since the oldest documents extant, dated about 1568, prove that only watches were sold there at that time. During the 16th century, the Geneva watchmakers did not sign their work.

The cover illustration of this issue of the H. I. A. JOURNAL is a reproduction of a photograph of the oldest known Geneva-made watch, now in exhibit in the watch section of the Geneva Museum of Fine Arts and History.

The case of this watch is cut mountain crystal. The motive power is transmitted from the barrel to the fuses by means of catgut.

*(Historical data supplied by Prof. Eugene Jacquet, famous Swiss Horological authority.)*

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## ● SPECIAL SERVICES

Assorted staffs for American Watches: Elgin, Waltham, Hampden, Howard, etc., 50 for \$2.95; 100 for \$4.95. Mainsprings, assorted, same—\$1 per doz.; 100 for \$5.95. MORRIS FREY WATCH CO., 915 Holland Bldg., St. Louis 1, Mo.

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Mainsprings—Swiss .....Dozens Only 1.50  
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**WATCHMAKER, H. I. A. certified BRADLEY** trained, experience since January, would like position to increase speed and efficiency. Permanent. Salary or commission. Illinois preferred. Lawrence Redig, 327 North Ninth Avenue, West Bend, Wisconsin.

### ● HOROLOGICAL BOOKS

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**OLD - NEW**—Practical, Theoretical, Historical, all phases Watch and Clockmaking. Liberal estimates entire libraries, books, periodicals, embracing horological subjects. Advise requirements; or what have you? "HOROLOGIAN," 841 S. Park, Springfield, Illinois.

**JOSEPH BULOVA School of Watchmaking Technical Training Manuals**—\$5.00, including 1-year membership in the Horological Institute of America, Inc., 1 year's subscription to the H. I. A. JOURNAL. The MANUAL contains more than 250 pages of practical information on every phase of successful watch repairing and more than 600 accurate drawings. Ralph E. Gould, Sec'y, Horological Institute of America, Inc., Washington 12, D. C.

**WATCHMAKERS, Apprentices, Students, Instructors**—THE WATCH REPAIRER'S MANUAL, by Henry B. Fried. A complete Manual on every phase of watch repair. See page 2. D. VAN NOSTRAND CO., Publishers, New York City.

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Increase your skill quickly and easily; 7th edition, "PRACTICAL BENCHWORK FOR HOROLOGISTS," by Louis and Samuel Levine; 25,000 copies sold. FOR SALE AT ALL LEADING WATCH MATERIAL AND JEWELERS SUPPLY HOUSES. PRICE \$5.00.

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**FOR SALE**—WATCH MOVEMENTS for sale. For practice, hobby, or material. Sold 'as is.' Hundreds listed. Send 25 cents in stamps. LEO KHALIF, P. O. Box 2441, New Orleans, La.

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