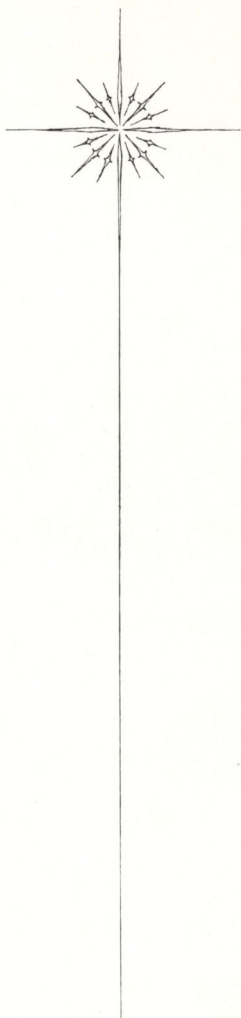


CHRISTMAS 1966

timely **TOPICS**
HAMILTON WATCH COMPANY





To My Fellow Employees:

With the arrival of the Holiday Season, it is again my distinct pleasure to extend greetings to everyone in the great and growing Hamilton Watch Company.

As 1966 draws to a close we may look back with some satisfaction on Hamilton's progress during the year—both in people and in business.

This year, this message goes to more than 800 new "Hamiltonians" including some 350 employees of Buren who are enjoying their first Hamilton Christmas. Our business progress, too, has shown important gains and the confidence for 1966 which I expressed on this page last year will be borne out with record results.

Looking ahead, I can only renew my confidence that Hamilton people—working together the world over—will bring our company to even greater achievements in 1967.

The officers and directors of the Hamilton Watch Company join me in wishing to our employees, friends and customers a Holiday Season filled with happiness and good fortune carrying through the coming year.

Arthur D. Finkler

President

timely

TOPICS

Christmas 1966

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Our Cover: An Evergreen tree full of goodies and gaily-wrapped presents underneath is a universal symbol of the wonder Christmas holds for children. A small reflection of this mood is related in our story, "Christmas Wonder" on page 3.

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Editor Richard F. Charles



*Have a
Merry Christmas*

timely TOPICS Staff

Christmas Wonder



CHRISTMAS is not one story, but many, most of them small like this.

In a family we know, Christmas morning is when the children see the tree for the first time.

But you don't just run downstairs and look at it.

First, if you're about ten, you slide in Dad's side of your parents' bed, and your little sister climbs in next to Mother. This is after your parents have stalled as long as they can—till about 6:45.

There in bed, all snugly and excited, you talk a little, about night noises on the roof perhaps, and some jingling bells someone might have heard. Then you sing in the dark, "Santa Claus is Coming To Town," and "Away in a Manger," Mother has a fine voice, softened a little by sleep. Sis does very well—for a little sister, and Dad sort of grumbles around the tunes. The dark bedroom is full of music.

Finally Dad, who is a methodical man and a tease, admits that maybe you could get up and get ready to go downstairs; but nobody is allowed down until after Dad shaves. So he leaves for the bathroom, and you hear water running, and,



after a long time, the tapping of his toothbrush against the sink to shake off the water.

You go in and brush your teeth over the bathtub with your little sister while Dad shaves. The blade scrape-scrapes through the lather, then by the time he is rinsing his face, you're hopping up and down waiting for him to finish.

You know Dad has to go downstairs first and turn on the lights. Your little sister doesn't yet know that's why Dad tells you all to wait at the top of the stairs.

Sis, not quite four, just barely remembers last Christmas as she stands there on the top step holding onto Mother's hand. Dim morning light shows pale grey at the window on the landing, and you can make out that your sister's flannel robe is blue, not black. But the stair well is still black, until suddenly there is a warm glow of light, and you, with the sophistication of remembering other Christmases, know that Dad has plugged in the tree lights.

"Okay, come down now," Dad calls, and you scramble down the stairs.

There is the tree over in the corner, green and

full of colored lights, and your old favorite feather-winged angel is on top. Underneath is a blur of packages and ribbons, and the train hums out from behind the tree, its tiny headlight glowing. Then your practiced eye focuses, and there is your sister's big present.

"Hey Sis! Look what you got—a three wheeler!"

You turn around as you say it, but your words are still in the air.

For there she is, still on the stairs, still holding her mother's hand, her hair a warm gold in the colored light, her eyes and mouth all big "O's." She is not seeing a bike; she is seeing a whole shimmering, wonderful dazzle.

Then what you said reaches her, and she blinks and runs down the last few steps and across to the shiny green and white bike. And to her special world of wonder.

Well, that's our small Christmas story.

And our wish for you on Christmas of 1966 is that you again find some of that wonder for you and yours.

Yes, Virginia . . .

*With A Rush Of People, The Whir Of New Machinery,
Activity At Hamilton's East Petersburg
Plant Prompts "timely TOPICS" to ask*

What's Going

OF ALL HAMILTON'S rapidly growing areas, none has expanded faster in both people and plant than the East Petersburg facility.

Time was, only a few years ago, when East Pete, as it is affectionately known, was a quiet building with several dozen employees, its main function a storage area. With an ever increasing tempo during the past twenty-four months, East Pete has regained the hustle and bustle of the early 50's when it was built and will soon be "home" to more than 500 Hamiltonians.

East Pete began its renaissance with the lo-

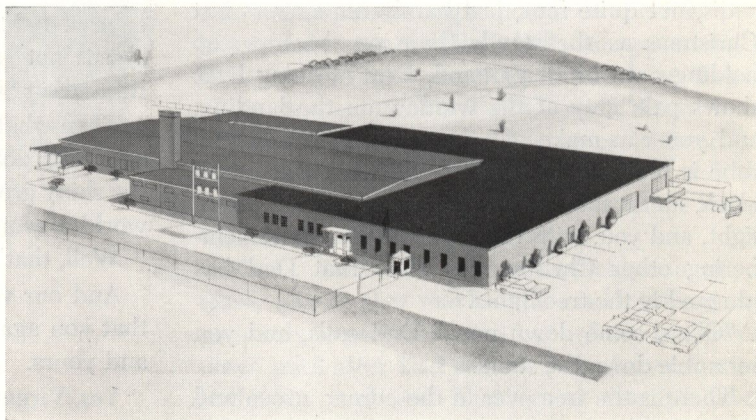
cation of several industrial division production operations—timers, gages and Photoforming®—and was helped along the way by the Vantage watch assembly and general office location there.

The really big push is now underway by the military division. Almost complete the military products operation—producing safety and arming programmers—will employ some 400 people by early 1967, and was largely responsible for a 50 percent addition to the plant itself.

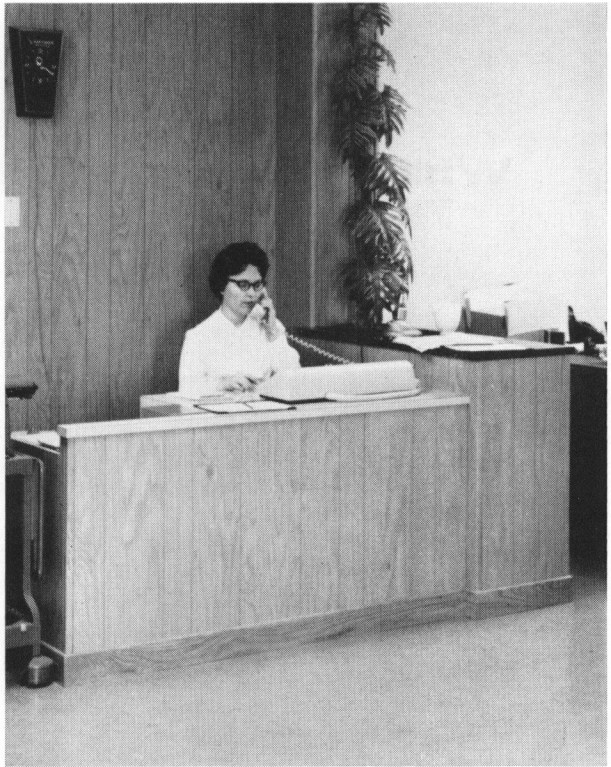
Here, *timely TOPICS* presents a photo essay to give some idea of "What's Going On Here."

®Photoforming is a registered trade mark of Hamilton Watch Company.

Now complete, East Petersburg is nearly double its original size and will soon be "home" to more than 500 employees.



A pleasant smile from receptionist
Daisey Patton welcomes each visitor to the
East Petersburg plant.



on Here?



Thomas D. Reese (left), Vantage merchandising manager and William G. Gassman, Vantage general manager, discuss new watch models for 1967.

What's Going on Here?

continued





Orders and billing for Vantage watches are handled in this office supervised by Michael Hermann (foreground), manager of sales services.

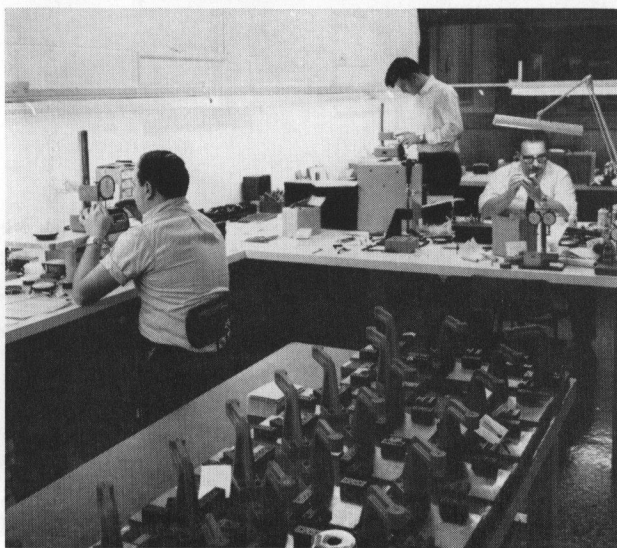
Final assembly, inspection and timing of Vantage watches takes place in this large, well lit and dust controlled room. Transparent plastic hoods with positive pressure blowers over each bench enables watches to be assembled under nearly dust-free conditions.

Assembly of Hamilton's elapsed time indicators is another major East Petersburg activity. Supervisor Richard Hershey (center) is in charge of industrial timer assembly.



Completed watch "heads" meet the attachments (bracelets or straps) in this efficiently organized attachment fitting and shipping area. Completed, boxed watches ready for shipment are transported by conveyor to the inventory racks where they await selection for individual orders.

Hamilton dial indicator gages, gaining wide acceptance in American industry are still another product from East Petersburg. Here, John Michael (left) and Russell Miller (center) are checking two of the products. Rowland Bitzer (right), manager of precision measuring instruments, supervises this activity.



What's Going on Here?

continued



Photoforming® is a relatively new Hamilton operation which produces precision parts photoetched out of ultra thin metals. Lucille Herr prepares some material for processing while researcher Larry McDonald checks on its progress through the ovens.



Checking a parts inventory tab-run are the three men primarily responsible for East Petersburg military operations. From left: George Wells, project supervisor M564 safety and arming programmer, Albert Bell, project supervisor—M523, and John James, production manager.



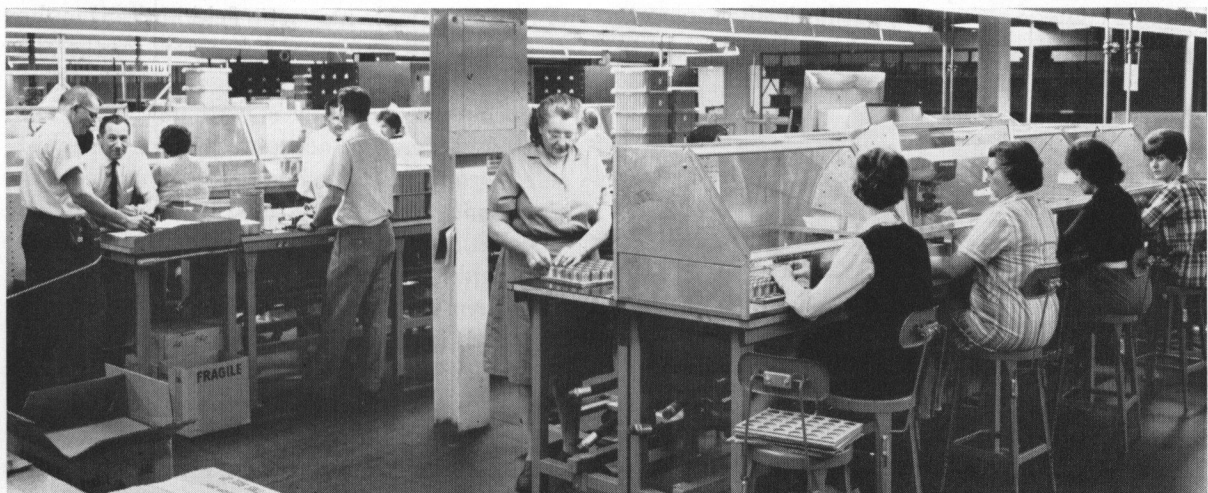
Operators are using two ultra-precise optical comparators to measure and inspect intricate parts. A battery of six similar comparators is the back bone of the East Petersburg inspection department. From left: Gloria Frederick, Julia Meyers and John Hilliar, supervisor.



A general view of the movement sub-assembly area for the M564 safety and arming programmer. in the foreground girls hand assemble the gear train, in the background, girls are operating automatic screw drivers.



The M532 safety and arming devices are completed in the area above all except for loading of the detonating explosive.



General view of the explosive loading area. The protective hoods, nicknamed "dog houses," protect the operators while the loading takes place. Explosives handled here are actually detonators, not the full charge of the final ordnance.

PLACOVAR®

Hamilton's Space Age Baby COMES

THE PUZZLE IS GONE from Placovar®, an exotic and expensive metal alloy which has a vital capacity for maintaining magnetism in a tiny package for long periods of time.

Placovar's engineering properties, spawned from Hamilton electric watch research, have found widespread application by American science and industry which has awakened to the material's usefulness. The once puzzling alloy, then too precious for commercial use, has come of age.

Principally a laboratory curiosity for most of its life, Placovar today is widely used where parts and components must have light weight and long-term magnetic strength. It is basically a permanent magnet metal that is especially important to

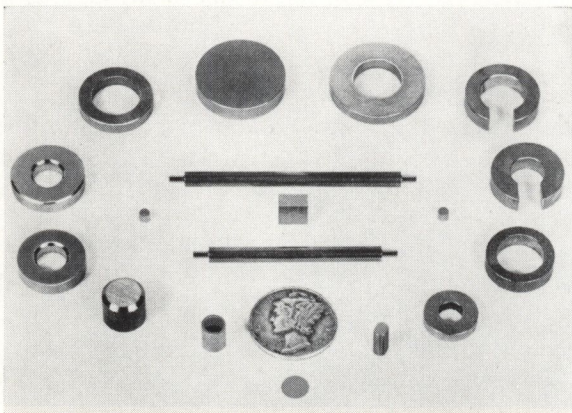
the space industry, with which it matured.

Placovar is an alloy composed of platinum and cobalt. Unlike other permanent-magnet alloys, which are brittle, Placovar is easily formed into strip, bar, rod and wire. Its birth came in the 1920's at about the same time that Robert Goddard sent a small space vehicle several miles into the atmosphere to become "father of American rocketry."

In 1955, while developing its electric wrist watch, Hamilton research engineers concluded that platinum-cobalt was the best permanent-magnet material for the new watch application. Placovar's successful performance as the source of a strong, stable magnetic field in the Hamilton electric watch suggested other uses for the alloy where space and weight savings are critical.

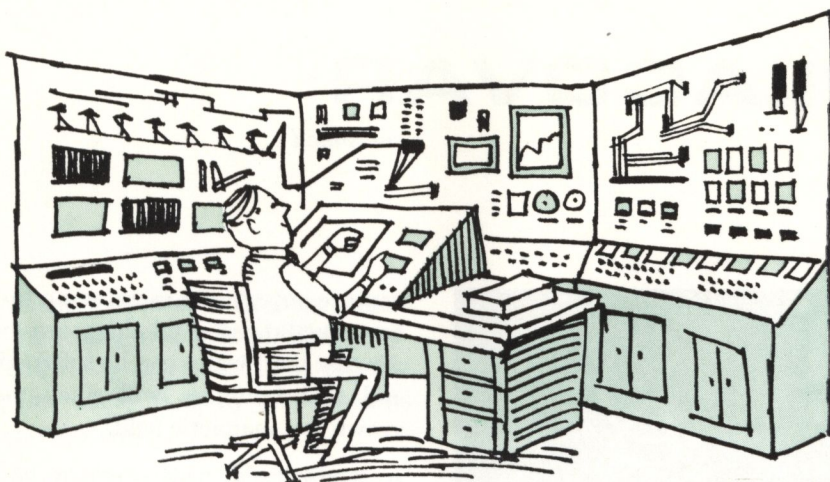
Since then, Hamilton's platinum-cobalt alloy has found increased acceptance in many sophisticated products. Traveling wave tubes for space communication probably use the greatest amount. Check sorting machines use Placovar magnets to help banks take money out of the right account. Non-corrosive properties of Placovar have proven important in medical and dental fields.

Familiar names such as Relay, Syncom, Early Bird, Mariner and Apollo in the space field make extensive use of traveling wave tubes and hence Hamilton Placovar permanent magnets. These magnets were, for instance, part of the miniature



Being relatively easy to form, Hamilton Placovar® magnets come in almost any size or shape.

®Placovar is a registered trade mark of the Hamilton Watch Company



Live TV from anywhere in the world is now a reality. Placovar magnets in Early Bird and Syncom communication satellites help make this modern miracle possible.

OF AGE

relays in the highly successful Mariner II Venus probe. The miniature relays were used to turn the power off and on for all the scientific instrumentation in the spacecraft.

Small Tubes Do Large Job

Microwave tubes made for the National Aeronautics and Space Administration (NASA) are helping man tune in on the universe.

Carried into space in a variety of NASA vehicles, they have made possible communication over a span of many millions of miles, have brought continents into instantaneous voice contact, and will ultimately provide television in areas now without this service.

Known as traveling wave tubes (TWT), many of these tubes have operated efficiently for more than 30,000 hours in the strange and harsh environment of space. The tubes depend on Placovar permanent magnets, arranged around the outside, for control and "focusing" of electronic signals. Systems using them have come to be called magnetic lenses. Microwave beams can carry many telephone and television channels simultaneously, and microwave transmission is essential for communication in outer space.

TWT's designed for NASA's Syncom, the world's first orbit-repeating communications satellite, became the prototype for other space programs. TWT's were used and are still operating in Syncoms II and III, Early Bird and in Mariner IV.

Another descendant is scheduled to be used in the Surveyor soft-landing lunar vehicles for communications with earth from the surface of the moon. Still others will be used in NASA's Lunar Orbiter to help decide where Apollo astronauts will land; in the Apollo craft itself to amplify communications with the three moon-bound astronauts; Pioneer sun probe in 1967; and advanced technological satellites, and future Early Birds.

Wonderful World of Magnets

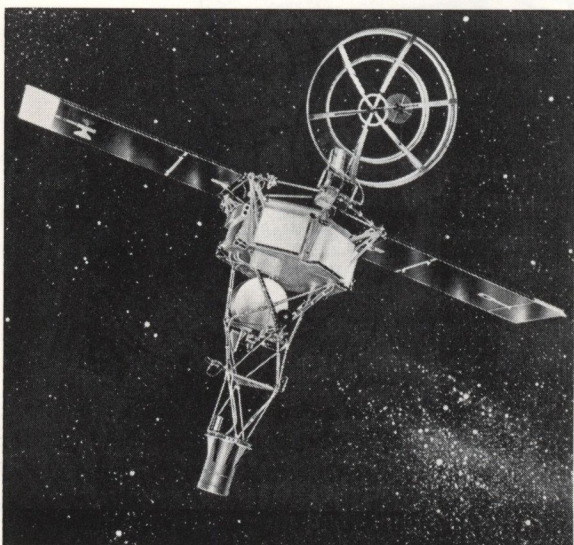
Magnets mean many things to many people. To the housewife, they can provide the means to attach a grocery list to the refrigerator. To her children they can be anything from magnetic darts for the younger tot, to slot racing cars with permanent magnet motors for the teenager.

To her husband, magnets can mean the magnetic field in the speakers of his stereo or hi-fi set, the permanent magnet motors in his battery-operated electric shaver or toothbrush, or the magnetic latches he just installed on the kitchen cupboards.

Permanent magnets retain more than 97 percent of their magnetism practically forever. They lose about 1 percent of their magnetism as soon as they are energized, and another 0.2 percent during their first year of life. They lose only another 1 percent during the next 100,000 years. That's why they're called permanent magnets.

PLACOVAR

continued



"Tuning in on the universe," the Mariner space probes rely on Placovar magnets as integral parts of switching systems controlling power for the instruments.

Many Uses

The aircraft industry is a large user of permanent magnets. As many as 200 magnetic devices may be used on one plane. Small permanent magnet motors may serve as actuators for rudders, ailerons, and wing flaps. And of course communications and air traffic control systems rely heavily on radar and other microwave devices which use permanent magnets.

Magnets play a primary role in health, too. Magnetic probes remove foreign metallics. Opposing Placovar permanent magnets may soon be popular for keeping dentures securely in place and to eliminate annoying clicking. Used in brain surgery, permanent magnets seal off brain aneurysms, or blood-containing tumors to reduce pain and pressure symptoms. Development of a small but powerful permanent magnet has made possible an electrocardiograph machine which can be taken to the heart patient, rather than vice versa.

Even cows benefit from permanent magnets. Imbedded in a cow's stomach, the magnet will

capture any wire or metal scrap the animal might have swallowed. And there are even those who say that hard water can be softened magnetically, and that tomatoes will ripen more rapidly if grown in a magnetic field.

Guidance

Hamilton Placovar magnets are used in the navigation systems aboard a large number of our nation's aircraft carriers and nuclear-powered attack submarines. Specifically, they are used in the Ships Inertial Navigational System as the fixed magnetic field for a precision inertial component.

In the Mariner Venus probe of 1962, Hamilton platinum cobalt magnets served as the source of magnetic latching energy in a unit called the Latching-Contact Ball Relay. The unique magnetic-ball relay was selected for use in the space-



That beautiful set of "store bought teeth" may, in the future, be held firmly in place with Placovar magnets implanted in gums and dentures.

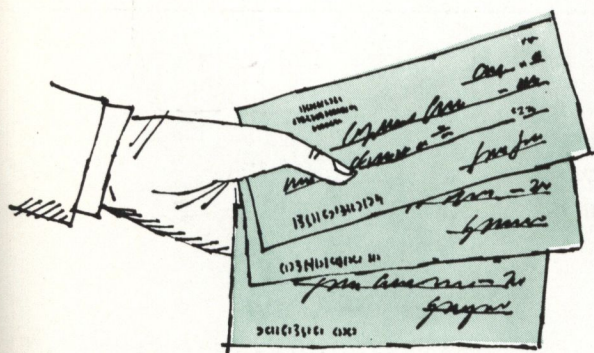
craft's SPS (scientific power switching) unit. More reliable switching was gained. The properly mounted Ball Relay was found to be capable of performing four times as many operations as the standard relay systems.

Hamilton's Manufacturing Sequence

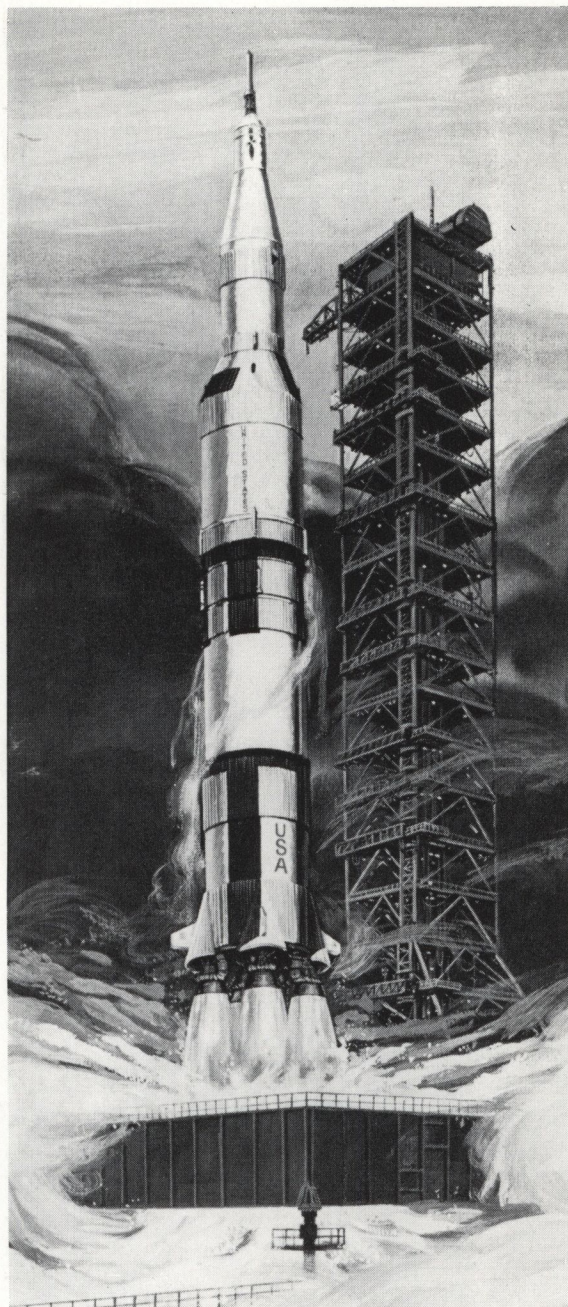
Placovar is produced at Hamilton starting with pure platinum and pure cobalt. The elements are alloyed by melting and then cast into an ingot which is fabricated into various sizes. Magnets are made from the wrought alloy. A variety of magnet shapes have been produced.

The platinum content of Placovar makes this alloy highly resistant to corrosion. This property is especially valuable in magnets produced for medical research work where magnets are in contact with body fluids. Some magnets made of Placovar have also been used in medical instrumentation in which a variety of corrosive fluids have been involved.

Because of their special properties, Placovar magnets will find expanding applications in many industries. Since they are "power packed," they will be particularly useful in applications requiring high magnetism anywhere minimum size and weight are of paramount importance.



Those crazy-looking numbers on the bottom of your bank checks tell quite a tale to Placovar magnets used by some manufacturers of check sorting machines.



When the first Apollo astronauts are on their way to the moon, communications to earth will be stronger and more reliable because of Placovar "focusing" magnets.

HONOR ROLL ANNIVERSARIES

October, November, December 1966

40 Years

Ida D. Young, *Order Services*

35 Years

Dorothy M. Lowery, *Attach. Fit. and Box.*

Arlene B. Patterson, *Watch Assembly*

30 Years

Lloyd S. Arnold, *Plate*

Clarence W. Coppock, *Payroll*

Norman F. Daniels, *Wallace Sales*

Mary S. Gochenauer, *Credit*

Albert N. Kiely, *General Inspection*

Lavern W. Laube, *Mil. Prod.*

Assembly

J. Roger Lawrence, *Movement*

Assembly

Dorothy M. McComsey, *Watch*

Assembly

Esther R. Miller, *Accounting*

Richard H. Nauman, *Spring*

Irene Peters, *Service Office*

Granville D. Smythe, *Mil. Prod.*

Engrg.

Robert C. Taylor, *Holloware Pack*

and Ship

25 Years

Catherine B. Dieter, *Automatic*

Joseph T. Festa, *Sterling Flatware*

Make

Richard F. Fitzgerald, *Ind. Prod.*

Shop

Raymond A. Fritsch, *Maintenance*

Joseph W. Jackowski, *Holloware*

Solder

John T. Kosnoff, *Sterling Flatware*

Buff

Sophie J. Kowalski, *Sterling Flatware*

Quality Control

Paul J. Mackredis, *Automatic*

Walter P. Pietras, *Sterling Flatware*

Buff

William M. Risheill, *General*

Inspection

John F. Springer, *Plate*

Michael M. Sullo, *Sterling Flatware*

Trim

J. Howard Swarr, *Metallurgy*

John P. Wood, *Wallace Payroll and*

Cost

20 Years

Alma V. Basher, *Attach. Fit. and Box*

Louis Cerato, *Holloware Buff*

Mary H. Czajka, *Holloware Pack and*

Ship

Pearl J. Firestone, *Plate*

Kenneth A. Fry, *Automatic*

Barbara A. Howland, *Wallace*

Purchasing

Russell C. Hoxworth, *Parts Scheduling*

Harry G. King, *Metals Processing*

William G. Kipphorn, *Manufacturing*

Stocks

George F. Miller, *Service*

William L. Post, *Wallace Machine*

Die

Robert F. Shenk, *Photoforming®*

Robert E. Sherick, *Metals Processing*

15 Years

Edward J. Ganse, *Machine and Tool Shop*

John W. Martin, Jr., *Ind. Prod. Shop*

Charles H. Martzall, Sr., *Plant*

Security

Edith M. Messner, *Attach. Fit. and*

Box.

Clarence G. Ober, *East Petersburg*

Exp.

Donald T. Vallar, *Systems and*

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