



The
Scintillator

MAY

The Scintillator

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DIRECTOR OF INDUSTRIAL
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Division, Bendix Aviation Corporation

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Memorial Day

It may have sounded ridiculous when an arrogant Japanese announced, a few years ago, that he would dictate the terms of peace from the White House. It may have sounded foolish when rumors were circulated, not many months ago, of a German rocket bomb that would bring havoc to cities and towns in our own country. But did the possibility ever occur to you that we could have lost the war.

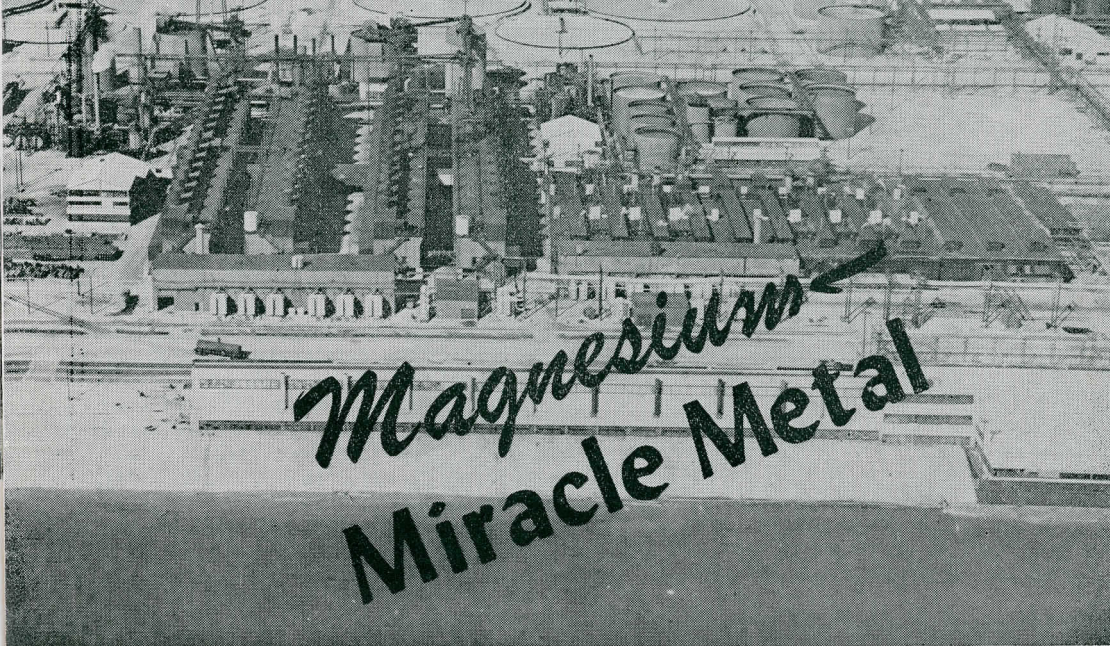
How many of us remember today the black headlines of the days of Bataan . . . of Wake . . . of Anzio . . . of the Battle of the Bulge . . . unless, of course, we or our loved ones were directly involved?

May 30th, 1946, will mark our first peace-time Memorial Day in several years. To countless numbers this year, it will be more than just a holiday from work . . . for the full meaning of the day has been brought home harshly to many.

But what about the rest of us . . . those of us who have no pointed reminders of the significance of this day? Will it be for us a day of commemoration . . . a day of pledging our faith to our fallen men that we have not forgotten them, and that we shall ever keep in mind the principles for which they gave themselves?

Will it be for us a day of re-dedication to the cause of freedom and justice . . . so that such a catastrophe as the one from which we have emerged can never again plunge the world into chaos and despair?

Let this Memorial Day be, for all of us, a day of remembering . . . remembering these men who made it impossible for the forces of right to lose a conflict that could have plunged the entire world into darkness and slavery.



Aerial view of the Dow Chemical Company's magnesium plant at Freeport, Texas, where magnesium is extracted from sea water. This is an outstanding example of what science and industry are doing to make the ocean relinquish its stored-up vital elements.

Photo courtesy of Dow Chemical Co.

Most Americans, including the members of the Scintilla organization, have become acquainted with magnesium only since the beginning of World II, because it was about 1941 when it appeared on Government lists as one of the materials most critical in supply. We know now that magnesium is a sturdy metal, lighter than steel, copper or aluminum, and that it has played an important part in making our military planes fly faster and carry greater loads.

Although we are familiar with magnesium alloys as used in our magneto housings and covers, and in harnesses used for radio shielding purposes, what most of us do not know is that numerous manufacturers have been using magnesium successfully in such varied products as conveyors, typewriters, fans, and reciprocating machinery. Hundreds of other manufacturers are now introducing new postwar merchandise made lighter, stronger and more durable, or offering other definite attractions to the buying public.

Among the new products is a magnesium griddle that appeals to housewives because of its light weight and good distribution of heat. There's also a magnesium catcher's mask which, because of light weight combined with strength, is a boon to the man behind home plate.

Then there's a new fly rod case that's not only a feather weight, but is also so strong that it can be run over by a car without damage. And for canoeing addicts, magnesium canoes are lighter and more durable than standard canoes, yet cost no more.

Magnesium is particularly useful in reducing dead or unproductive weight in anything that moves or is moved, such as in portable tools, blood pressure instruments, cameras, film magazines and binoculars. New light-weight magnesium lawnmowers and baby bathinettes are now on the market, and other similar household items will appear soon.

Besides being the lightest of metals, magnesium has other properties of special interest to manufacturers. It is readily adaptable to all types of fabrication and

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is obtainable in the form of sand, permanent mold and die castings, extruded bars, tubing and shapes, and rolled plate, sheet and strip. Because of its excellent strength, it is possible to design and execute structures in magnesium which are stronger yet lighter than the old design using other metals.

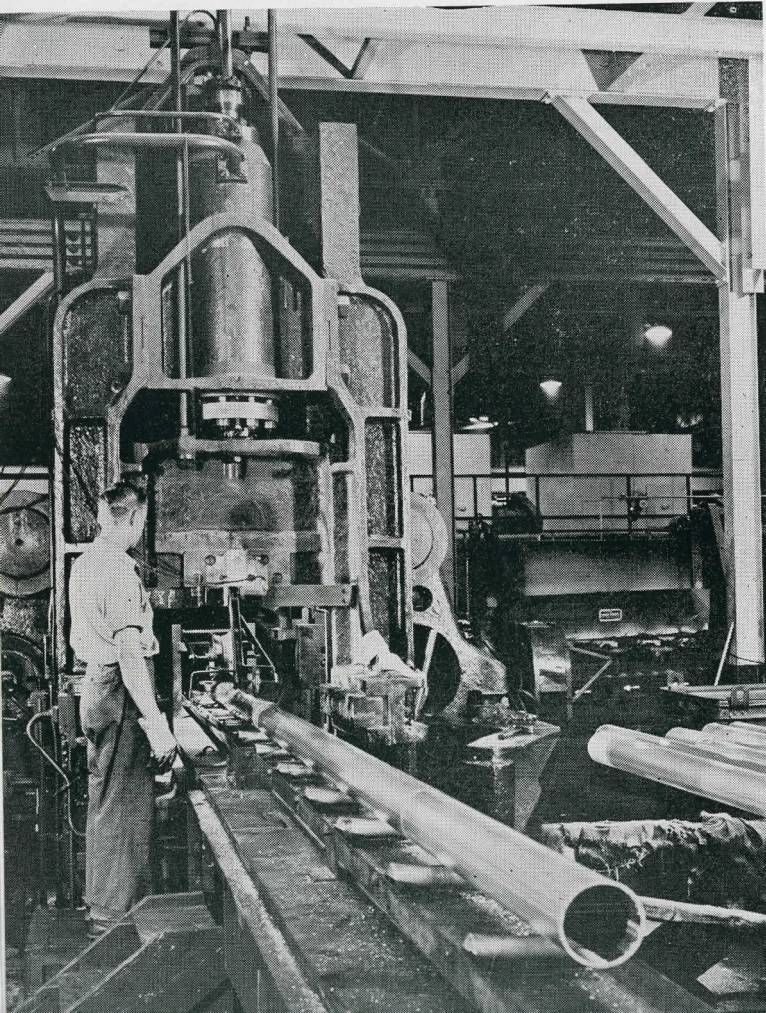
It is so easily machined that deep cuts may be made at very high speeds, yet with little or no difficulty in obtaining smooth surfaces. Machining costs may be reduced as much as 75% when magnesium replaces iron or steel castings.

Under ordinary atmospheric conditions, the bare metal is very stable. A gray film of oxide forms on the surface which retards further oxidation. It is also exceptionally resistant to alkalis, concentrated chromic and hydrofluoric acids and many organic chemicals. No doubt you have

noticed that many of the magnesium alloy castings used by Scintilla wear a brassy color instead of a silvery white, which is the color of magnesium. This color results from the Chrome-Pickle, a chemical treatment given most magnesium products, except ingots, at the producer's plant. This treatment provides a good paint base.

The Dow Chemical Company is the largest producer of magnesium in this country. The company was founded in 1890 by the late Dr. Herbert H. Dow, who pioneered in the development of extracting magnesium from salt brine. Five thousand feet below the surface of inland Michigan, near Midland, is a prehistoric sea. Years ago Dr. Dow, then a young man, began tapping this brackish water to see what he could make out of it. As a result of his experiments, he discovered that the water contained the chemical

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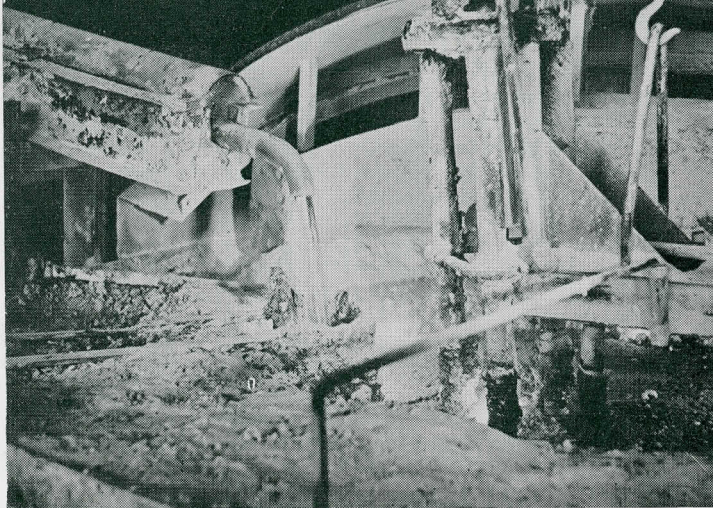


Here magnesium, once an element of sea water, becomes a tube designed for industrial use. Tubing is being extruded from a 5,500 ton Loewy press.

*Photo courtesy of
Dow Chemical Co.*

Magnesium can be pumped like water. Here metal is being transferred from a reverberatory melting unit to a holding pot, from which it will be pumped to the ingot casting machine.

*Photo courtesy of
Dow Chemical Co.*



MAGNESIUM *(from Page 4)*

elements bromine, calcium, chlorine, sodium and magnesium. On this basis he formed the Dow Chemical Company which today produces more than 500 chemicals.

Starting with bromine, Dow progressed to a variety of chemical production, and in 1915 his chemists tackled magnesium, one of the five basic elements contained in the underground sea. They developed a chemical and electrolytic process to recover the metal, thus providing America with its first supply of magnesium.

Widespread use of magnesium as a structural material developed very slowly in this country. However, prior to World War II, our Army Air Corps approved the metal for use in war planes, thereby adding impetus to its production, and necessitating an expansion of production facilities. Adapting the process employed in extracting magnesium from brine, the Dow engineers turned to ocean water as an inexhaustible source of supply. Thus began a spectacular chapter in chemical history.

On January 21, 1941, Dow poured the first ingot of magnesium . . . the first metal of any consequence, in the history of the world, to be taken from the waters of the ocean. This unprecedented feat took place at the newly constructed Dow plant at Freeport, Texas.

The sea water magnesium process is basically an adaptation of the one already in use on the natural brines in Michigan. It consists of treating the water with lime to precipitate magnesium hydroxide, fol-

lowed by the subsequent treatment of the hydrate with hydrochloric acid which reconverts it to magnesium chloride in much more concentrated solution. This is then evaporated and the dry magnesium chloride becomes the feed for electrolytic cells. Actually the process is too complicated to be understood unless the reader has the benefit of training in chemistry, therefore we will dispense with the more technical details of the operation.

At this point, it is well to emphasize the almost incomprehensible extent of the resources offered by the sea. Covering virtually three-fourths of the globe, and touching nearly all nations, and its chemical analysis being essentially constant, it represents a resource potentially available to nearly all peoples of the world. Although some of its elements are found in seemingly minute concentrations, their aggregate is astounding, provided sufficiently efficient means could be found for reclaiming them. For example . . . while magnesium appears only in the ratio of 1280 parts per million, it has been estimated that each cubic mile of sea water contains some four-and-a-half million tons of magnesium!

Although many Scintilla employees are not actively engaged in machining operations on magnesium alloy parts, it is nevertheless very important that every employee be familiar with the fire hazards incident to machining the metal. Magnesium alloys present a fire hazard only when molten or in finely divided form. Powder, dust, and fine chips or

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shavings are easily ignited.

Finely divided magnesium turnings, shavings, and dust, when moist with water or water soluble cutting oils, present a very serious fire hazard. When ignited, such wet mixtures burn with extreme violence and, if confined in a deep melting pot or drum, will develop enough pressure to spray the burning metal over a large area.

Fine, dry particles will easily take fire from a flame, sparks, or friction from dull tools. Closed iron containers should be used for dry, finely divided scrap magnesium.

Dust from sawing, grinding or buffing operations will burn rapidly when ignited. Under certain conditions, mixtures of

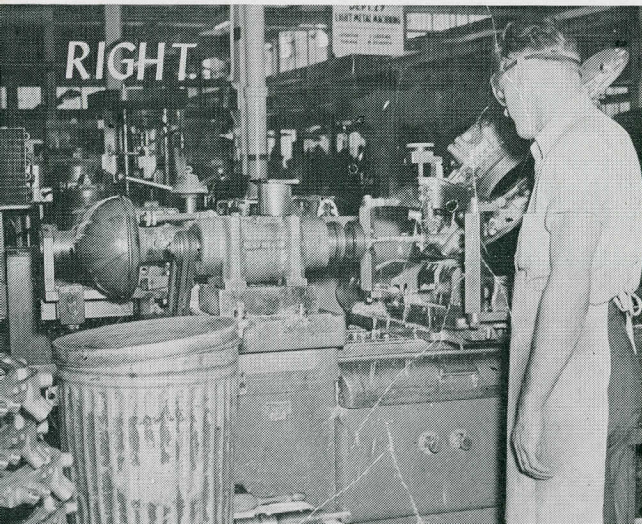
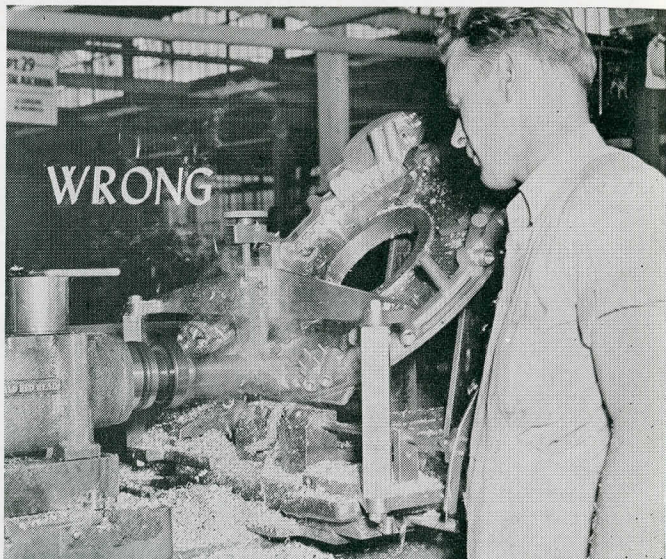
magnesium dust and air are explosive. A special fire hazard is encountered when grinding or wire brushing Chrome-Pickled magnesium, since sparks are very readily produced.

Melting, casting or otherwise handling molten magnesium can be hazardous if proper precautions are not taken. Here again moisture is dangerous. Ladles, skimmers and sludge pans must be perfectly dry and hot before contacting molten metal. They also must be kept free from iron scale. Leaking pots and crucibles which allow molten metal to contact concrete or hot iron scale are dangerous.

Fires may occur when heat treating magnesium if there is lack of proper temperature.
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Burton Wayman, 29-64, posed for these photos illustrating safe and unsafe practices as applied to magnesium machining. This is the "wrong" way. Magnesium chips have been allowed to pile up, creating a serious fire hazard. No fire extinguishing compound is available within easy reach. Operator is not wearing goggles . . . flying chips make goggles a "must" for this job. Chips clinging to operator's arm might mean serious burns in case of fire.

Photo by Norman C. Meagley



This is the right way. Machine is kept clean of chips, thereby reducing fire hazard. Chips have been removed from operator's arm. Can of G-1 powder, for use in extinguishing fires, has been placed within easy reach. Cover of can has been loosened and may be removed quickly. Operator is wearing goggles.

Photo by Norman C. Meagley



Steel drums, painted bright red for identification purposes, are provided to hold magnesium chips. Cover fits tightly to prevent chips from igniting in case fire breaks out nearby. As a safety measure, chips should be removed frequently from machines and deposited in these containers.

Photo by Norman C. Meagley

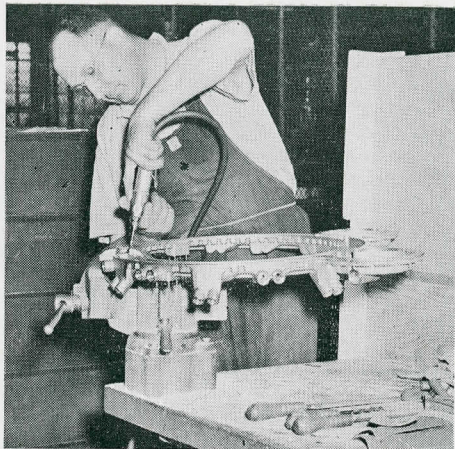
MAGNESIUM (from Page 6)

perature control, or if the surface of the work is not free from dust or fine particles of metal.

If a magnesium fire occurs on a wooden surface, the heat of the fire (approximately 2700 degrees F.) will generate gases from the wood, and these gases will accelerate the combustion of the metal. A magnesium fire on a wooden surface is difficult to extinguish, while an equivalent fire on a non-combustible surface can be easily extinguished with a covering of a suitable fire extinguisher. For this reason, iron or iron-covered work benches are recommended, and closed iron rather than wooden containers should be used for finely divided scrap.

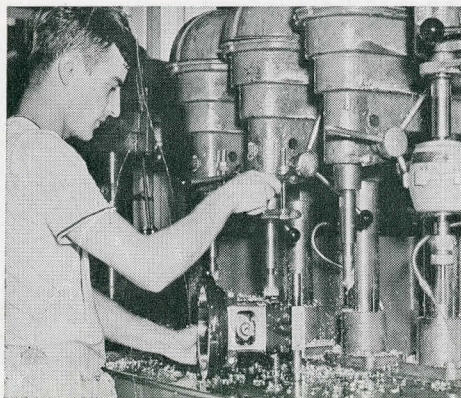
While an ordinary concrete floor is relatively safe in contact with small metal fires, it should nevertheless be borne in mind that with a hot magnesium fire, the concrete will explode and scatter the fire. Floors in the vicinity of melting units should be of iron or hard-burned paving brick.

The usual materials employed in extinguishing ordinary fires are all hazardous when used on a magnesium fire. These include water, carbon-dioxide gas, dry chemical, foam type, and the vaporizing liquid type extinguishers. These substances applied to a magnesium fire will



Walter Hofmann, 29-53, performs a burring operation on magnesium harness. Fine particles of magnesium produced by this operation constitute a fire hazard. Dust should not be allowed to accumulate on bench. Clothing should be dusted thoroughly before employee leaves plant, otherwise a spark from a match or cigarette may set clothing afire after worker is outside plant. Air hoses should not be used in dusting clothing . . . magnesium particles may be blown into eyes.

Photo by Norman C. Meagley



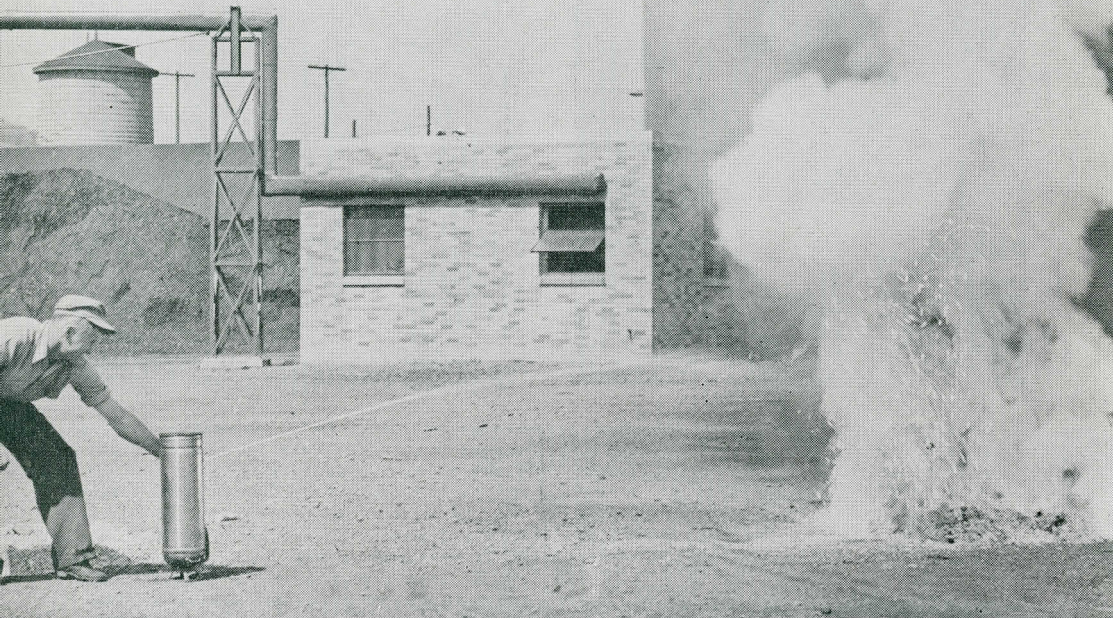
Bastine Caracciolo counter-boring, counter-sinking, tapping and spot facing holes in magnesium housing. Carbide tools and cooling lubricant are used in this operation, thereby reducing fire hazard.

Photo by Norman C. Meagley

accelerate the burning, and may cause an explosion.

A powder extinguisher, known as G-1 powder, (black in color) has been de-

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Here's what happens when soda acid extinguishing fluid is turned onto a magnesium fire. Although only a small stream is played on the fire, it explodes and burns more intensely.

Photo by Norman C. Meagley

MAGNESIUM *(from Page 7)*

veloped for this purpose. It is harmless to machine tools because it is substantially non-abrasive. A supply of G-1 powder should be in a container within easy reach of every operator who is machining magnesium. The amount of the powder should be sufficient to extinguish any fires at once, and will be dependent on the quantity of chips produced.

At the first sign of fire, a layer of G-1 powder should be applied as rapidly as possible, without scattering the metal that is burning. Usually a layer of powder $\frac{1}{2}$ to $\frac{3}{4}$ of an inch thick is ample. If the smoking continues in certain spots, this indicates that the fire is still burning under that area and more G-1 powder should be stirred gently into the metal at that place. Operators are cautioned against violent stirring of the burning metal. The greatest speed consistent with the foregoing directions is desirable in the application of the powder, since fires are more difficult to extinguish as they become more active.

Best practice is to clean chips or fine particles of magnesium from machines or benches before they accumulate in large

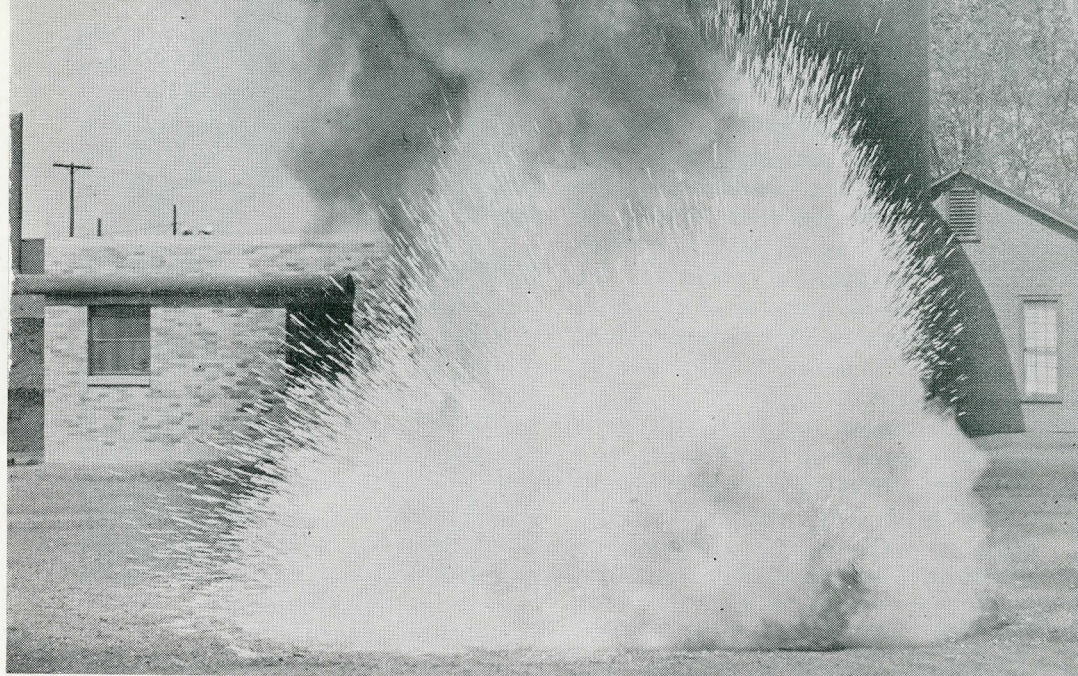
quantities. The Scintilla plant provides steel containers, painted bright red for identification, and equipped with covers. Magnesium chips or other waste should be carefully collected and placed in these containers to await disposal.

Operators should not attempt to smother or brush away small magnesium fires with their hands, as serious burns will result. A handful of the G-1 powder thrown on a small fire will put it out.

No one should look directly at a large magnesium fire unless he is wearing protective goggles, because of the great intensity of the light produced.

Editor's Note: We take this opportunity to thank the Dow Chemical Company, Midland, Michigan, for their cooperation in supplying the data included in this article.

He was attending a meeting of the Henpecked Club. Suddenly the door opened. His wife sailed in, grabbed him by the collar, shook him until his teeth rattled, and exclaimed, "What do you mean by attending this club? You're not henpecked!"



↑ This definitely is the wrong way to extinguish a magnesium fire. The explosion was caused by throwing a bucket of water onto a small quantity of burning magnesium chips. While the result is magnificently spectacular, it is also highly dangerous.

Photos by Norman C. Meagley

↓ The approved method of extinguishing magnesium fires . . . using G-1 powder. The powder should be applied in thick, heavy masses to form a blanket over the entire fire.



FERGUSON NEW BENDIX PRESIDENT

Malcolm P. Ferguson, of South Bend, Indiana, on May 17th was elected president of Bendix Aviation Corporation to succeed Ernest R. Breech, who has resigned, effective June 30, to become executive vice president and a director of the Ford Motor Company, it was announced following a meeting of the Bendix board of directors.

Mr. Ferguson has been a director and vice president of Bendix, and group executive in charge of its divisions producing automotive equipment, as well as fuel injection carburetors, direct fuel injection systems and struts and brakes for aircraft.

Born in Elmira, New York, the son of J. C. Ferguson, formerly president of the Eclipse Machine Company of Elmira, the new Bendix president has worked for Bendix and Eclipse Machine Company, acquired by Bendix in 1929, all his business life.

He is a graduate mechanical engineer of Syracuse University, and in 1919 joined Eclipse Machine Company as a field service engineer. He rose to assistant general manager and in 1938 was transferred to South Bend as general manager of the Bendix Products division of the corporation. He became a vice president in 1941, group executive the following year, and a director in February, 1945.

He is married to the former Vera Kilmer of Elmira. He is a trustee of Syracuse University, and a member of the Society of Automotive Engineers and of the Institute of Aeronautical Sciences.

In a resolution adopted at the meeting, the Bendix board of directors expressed appreciation of

the great contribution made by Mr. Breech to the success of the corporation during the difficult period of the past four years.

"Assuming the presidency at the time when Bendix, in order to meet the demands of the Armed Forces, was required to expand to 30 times its prewar volume of production," it was stated, "Mr. Breech, through his leadership, understanding, and unusual business judgment, skillfully guided the corporation through this momentous period. Moreover, the corporation, under his direction, has substantially completed its reconversion job, which has been of comparable magnitude."

The resolution further stated that "the corporation is indebted to Mr. Breech, not only for his own contribution, but for the excellence of the corporation which he has developed during his presidency, on which Bendix now confidently will rely in carrying on its expanded operations."

DO YOU KNOW---

A pitcher can pitch a fast ball to the catcher in about 3/10ths of a second.

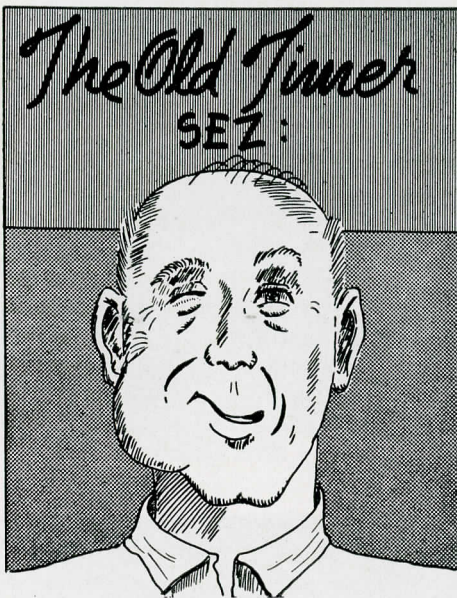


Science cannot state the specific cause of cancer, but in the early forms cancers are about 100 per cent curable.



Departmental News Wanted

Editor's Note: We realize that we've lost a lot of our regular departmental correspondents in this reconversion period. But there must be a lot of you folks who would like to represent your respective departments in the Scintillator. How about it? Why not get together and appoint someone to send in the news from your departments? We'll be looking for contributions from you in the June issue. News deadline will be June 14th.



T'other evenin' I was reedin' in a magazine where one o' them writer fellers was braggin' about what a sense o' humor us Americans has. From what he sez, we're a bunch of joakers. Movies and shows is full of laffs. Radio comedians jest about blow a gaskit tryin' to coax chuckles out of us. Yes, even th' funny papers comes out with somethin' funny . . . even though it's hid in a lot of murders and asasinations that pass fer comic strips nowdays.

Most of us like to tell a joak, an' hear one too. An' there's plenty of guys that will go to a lot o' trouble jest fer a belly-laff. Yeah, that writer had th' rite doap, I guess . . . we *are* kinda corny that way.

But as I see it, a feller's sense o' humor oughtta serve a more useful purpose. There's more to it than bein' able to laff in the rite places when the boss hauls out joaks with whiskers on 'em.

Quite a lot o' fellers I know would git along a heap sight better if they had a sense o' humor that could help 'em take things as they come, without flyin' off the handle at every little thing they don't like.

There's too many guys that will laff theirselves sick over a moth-eaten gag on Sunday nite's radio, an' then come to work Monday A.M. with a sour disposition that lasts fer a week. My foreman is a tipical example of what I'm drivin'

at. Don't git me wrong . . . I ain't singlin' him out cause I wanna take a crack at him. It's jest that he's th' first one to come to my mind. Off the job he's a swell guy . . . the kind of bozo what they call the life of the party. He keeps everybody in stitches . . . rolls 'em in the iles. But comes the dawn, and he's a regular Jeekle-Hide.

By the time he hits the department, his mouth is pulled down at the corners, he's got a mean glint in his eyes, and the big chip he's carryin' on his shoulder makes 'im walk lop-sided. He's tightened up like a banjo string. Little things that oughtta roll off him like water off a duck's back, they git his goat. Instead of tryin' to see some humor in his work an' his associates, an' havin' a good time outta his job, he makes things tuff fer himself an' everybody else.

Now ain't it the truth that there's a lot of fellers like that? Yer dern tootin', bud . . . you an' me included. Let's kinda cultivate our sense o' humor so's we kin git some benefit from it on the job. By that I mean takin' things as they come, doin' the best we kin, enjoyin' the job we're doin' an' gittin' paid fer, an' generally treetin' our feller workers as we wish they'd treet us.

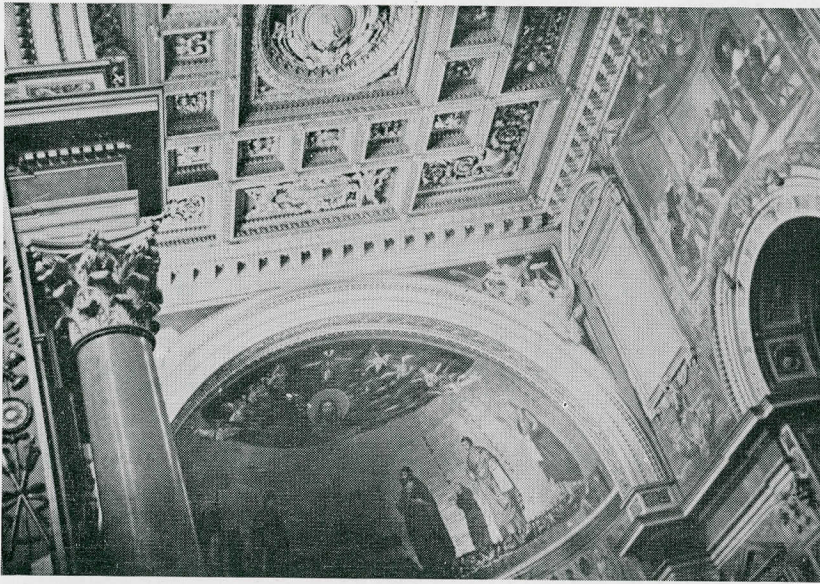
Calling All Camera Fans!

Now that cameras, photographic equipment and supplies are back on the market again, the photo "bugs" are coming to life!

During the past few weeks several Scintillites have mentioned that they'd like to see formed a Camera Club for members of the Scintilla organization. Apparently the time is ripe for such a move, and the Scintillator is glad to take the first step.

We hereby go on record as definitely favoring the proposal, and invite all interested parties to contact the Editor, who, by the way, cannot qualify as a photographer of merit, but who nevertheless is interested in good photographs.

How about it, folks? Do you want a Camera Club? If the proposition meets with your approval, call P. J. DuBois, Extension 465. If enough of you fans are ready, willing and able, maybe we can get something started. Reach for the nearest telephone and dial 465.



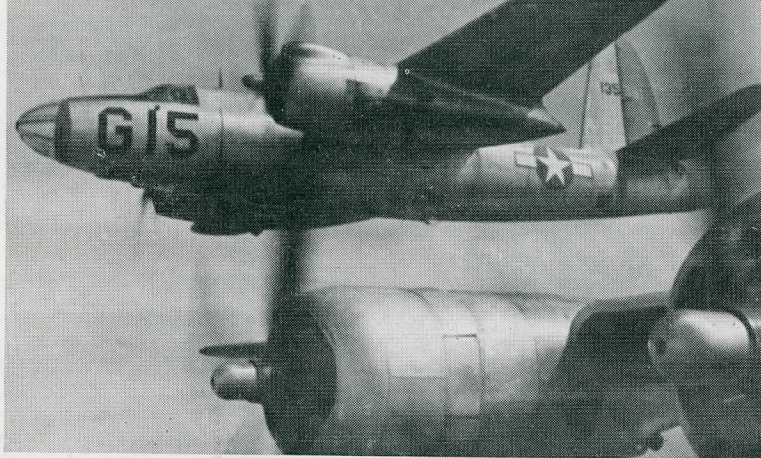
PLAN WELL FOR VACATIONS THIS SUMMER

According to reports from authorities who are supposed to know all the angles, the lid on vacations will be blown sky high this summer. Yes, the sky's the limit. It was a long war . . . no tires . . . no gas . . . crowded trains and buses . . . hotel and resort reservations almost non-existent . . . so to hell with everything. Let's go places this year!

Briefly, this sums up the kind of thinking that's going on in a lot of heads right now.

Scintillites have known for some time that our vacation this year is scheduled for the period of July 29th-August 12th. To most of us, it has meant that we have had plenty of time to decide what we want to do, and where. Nevertheless, some of us are apt to procrastinate in our planning, with the inevitable resulting disappointment of having to revise our plans at the last minute.

This is just a little reminder that times are by no means normal (as if you didn't



Jim Ludwig, Engineering Dept., found numerous opportunities to enlarge his photographic collection while serving as navigator of a B-24 bomber crew stationed in Italy. Upper left shows Jim (rear, second from left) with other crew members who were with him at Cirignola, Italy. Upper center—A couple of the boys at the Cirignola base add their best wishes to a bomb destined for Nazi consumption. Upper right—Over the Atlantic! "That B-26 was too d--- close," says Jimmy. Lower left—Interior view of the Colosseum at Rome. Lower right—Looking upward at the mosaic splendor in St. Giovanni's Cathedral, Rome.

already know it!), and that a feller can't depend on everything coming his way. The war may be over, but hotels, motels, and resorts of every description are getting more people than they can handle. So be sure to make reservations well in advance, and also make certain that you get a confirmation. You're just sticking your neck out if you do otherwise. The same applies to railroad and bus reservations.

If you intend to drive Old Faithful, don't forget to have a competent mechanic give her innards a thorough going-over.

There are an awful lot of places in this beautiful country of ours where you can still get stranded high and dry. It's no fun spending four or five days of your vacation at some cross-roads filling station while you sit around waiting for a part or a tire to come in by pony express.

And last but not least, use common sense and observe common safety rules. Just because there already are a lot of old wrecks on the road, don't think you have to make one of your car just to be in style.

Strictly

FOR THE GIRLS!



SNACKING SMALL FRY have a new friend! Now it's the doctor who says nourishment between meals is a fine thing for young hopefuls. To be sure the things they sandwich between breakfast, lunch, and dinner, are real builder-uppers, try the "Snack Jar Plan," whose fame is spreading far and wide. Give your youngsters their very own cookie jar, letting them paint a sugar or flour canister themselves, and decorate it with decals, postage stamp pictures, or cut-outs. Then see that it's filled with foods that are good for them, like these protein-packed peanut cookies.



Said one woman to another, "I hear Mrs. Jones has completely lost her voice."

"Poor dear!" said the other. "I must call on her. I have been wanting to have a good talk with her for a long time."



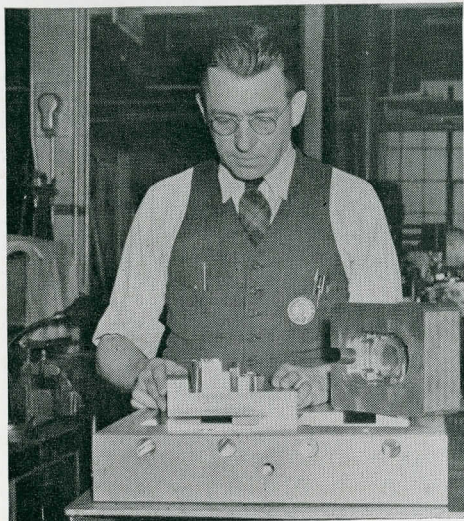
SUMMER IS A'COMIN' IN! Looking at the white blouses and sheer dresses lined up in your closet probably has you worried about white slips. There's a new one by Textron which hits the all time high for fine finishing, without a fancy price tag. (It's under four dollars.) Trimmed with delicate embroidered net at top and hem, it's as soft as silk and sure to launder like a dream. If you're a little woman you'll appreciate the fact that there are special versions for short and average misses, too.



WAS IT SNOW WHITE who popularized the intrinsic candor of a gal's mirror? For the sweetest complexion story your mirror can tell—and incidentally, for Maytime dating—better make sure you're off to a good start! A cake foundation called Make-Up Pat, with lanoline in it, can do a thoroughly bewitching job on all types and shades of skin. Use a dampish sponge or wad of cotton to wash a lovely film of color over your face. Whisking away any surplus with a tissue, you'll discover that those little skin flaws, "circles," or other problems seem miraculously to have vanished. You'll discover, too, what a perfect base it is for your powder, rouge, and lipstick. And—twice blessed!—how it will keep your make-up quite literally "pat."



Meet Your Supervisors



JOHN BEYEN

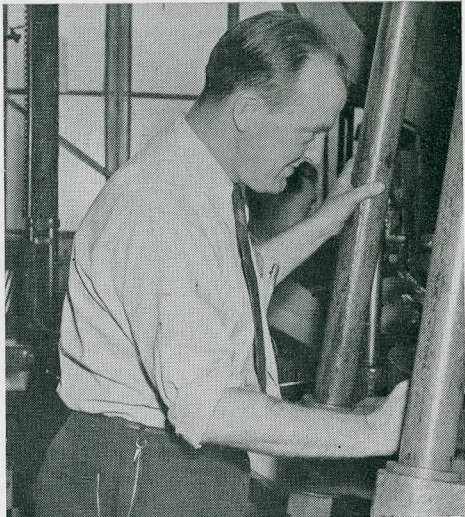
Editor's Note: This month we present the first two thumb-nail sketches of a series designed to acquaint employees with the Shop Supervisors and Foremen of Scintilla Magneto Division. Alphabetical order will govern the future sequence in which both Supervisors and Foremen will appear.

John Beyen, Supervisor of the Tool Room, was born July 28, 1898, at Neuefehn, Germany. Throughout his life, since completion of his school days, he has been actively associated with things mechanical. His first experience in the field of mechanics was gained at the Hansa Lloyd Werke, an automobile plant at Bremen, Germany, where he enrolled as an apprentice toolmaker. Including the four years spent as an apprentice, he worked at Hansa Lloyd about seven years.

Upon leaving this company he was then employed as a foreman in Nord Deutsche Metallwaren Fabrik, a company manufacturing small metal parts at Hemelingen. However, after about one year in this position, he returned to Hansa Lloyd as a toolmaker, where he remained until 1925 when he came to the United States. He acquired full citizenship status in 1932. He resumed his toolmaker's trade

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Meet Your Foremen



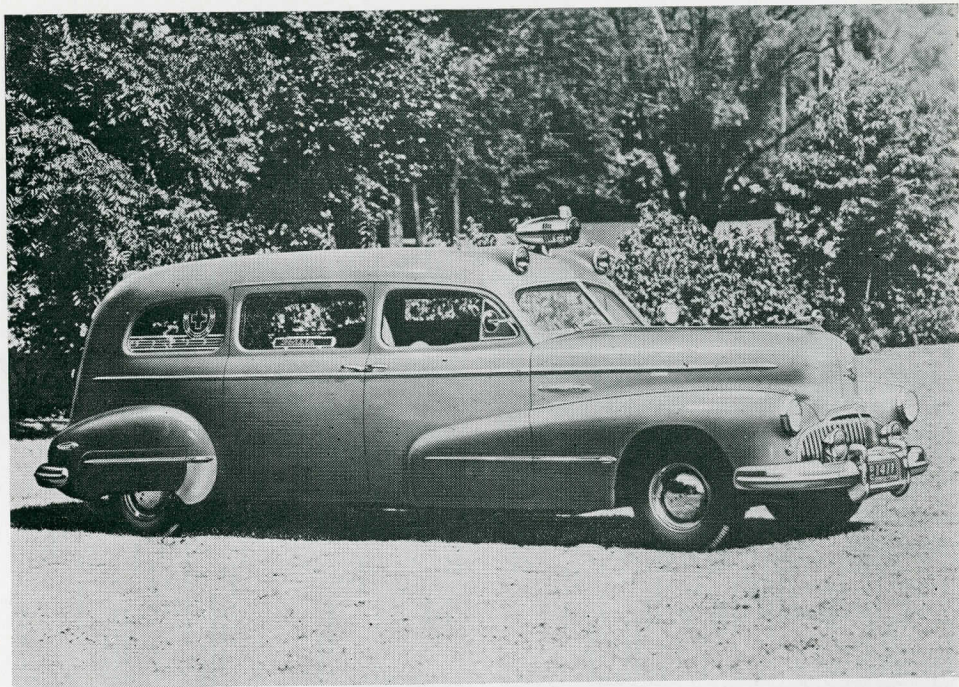
ALFRED W. BAGNALL

Brooklyn, N. Y., home of "dem bums de Dodgers," also is the hometown of Alfred W. Bagnall, Foreman of Departments 26 and 27. Al put in his appearance on October 22, 1899, thereby beating the arrival of the twentieth century by a little more than two months.

His family eventually pulled up stakes in Brooklyn and settled in Susquehanna, Pa., where Al graduated from high school . . . and where he also acquired a perpetual appetite for hunting and fishing.

It was only natural that Al should be attracted to a railroad job, since Susquehanna was predominantly a railroad town. He started in the telegraph office of the Erie Railroad, at Susquehanna, later transferring to the shop as an apprentice machinist. Then along came World War I and Al enlisted in Uncle Sam's Navy, serving two years as a seaman on the battleship "U.S.S. Maine"

(Continued on Page 16)



Here's what the Emergency Squad of the Sidney Fire Dept. will be shooting for during the first week of June, in a public campaign to raise funds for purchasing a new ambulance. Completely modern in every respect, this new ambulance will be available for emergency calls in and around Sidney. Every Scintilla employee will have an opportunity to help buy this much needed public facility. Give as generously as possible . . . your contribution may even be the means of saving your own life some day!

John Beyen (from Page 15)

in Binghamton, N. Y., where he was employed for two and one-half years at the 1900 Washer Corporation. In 1928 he came to Scintilla as a toolmaker. Since that time he has been, successively, Assistant Foreman of the Tool Room, Job Methods Dept., Experimental Dept. Foreman, and in 1936 Supervisor of the Tool Room and Experimental Dept. Reorganization during the past several years placed the Experimental Dept. under separate supervision, and he now is Supervisor of the Tool Room.

John resides with his family at 23 Pearl St., Sidney, and has one son, now a student at Sidney High School. Although fishing used to be one of John's favorite pastimes, lack of spare time has necessitated his indulging less frequently in this sport. However, he is an ardent home movie fan, and has compiled a large collection of home-made films. He is a member of the American Society of Tool Engineers.

Alfred W. Bagnall (from Page 15)

which was engaged in patrol duty on the Atlantic.

Upon being discharged, he returned to the Erie and Susquehanna where he spent four years as a tin, pipe and copersmith apprentice. Incidentally, he also worked independently at this trade for three years. When the Erie's Susquehanna shops were closed he went to their Hornell shop, following the same trade. After a while the Susquehanna shops were re-opened and he returned there, remaining until their eventual complete shutdown.

He then came to Scintilla . . . February 20, 1928, to be exact . . . where he spent his first eight years in the Experimental Department. In 1936 he was transferred to Foreman in the Burring Department, and in 1941 he was made General Foreman of Departments 19, 21 and 27. His present status as Foreman of Departments 26 and 27 came as a result of re-

(Concluded on Page 17)

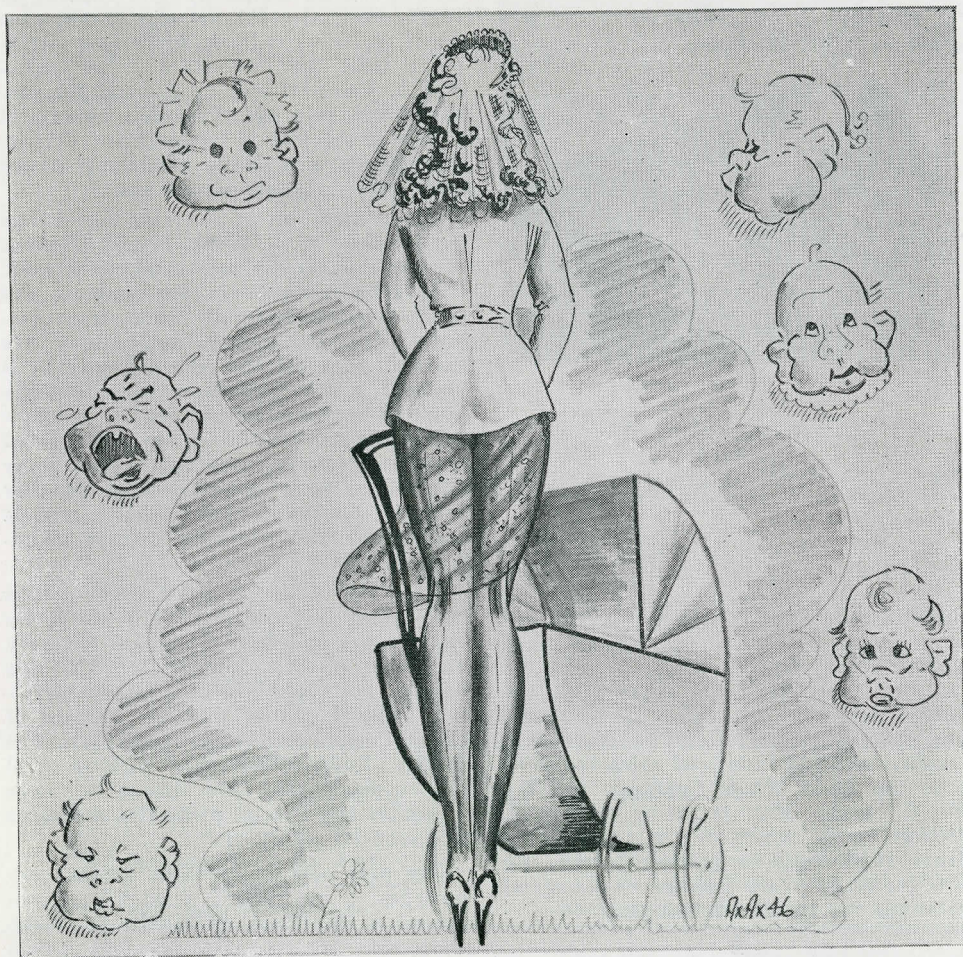
organization following V-J Day.

Al lives at 7 Pleasant St., Sidney. He has two sons . . . one in the Naval Air Force, stationed at Brooklyn . . . the other in Sidney High School. Actively interested in boys, Al is a Committee Member of Sidney Boy Scout Troop 88. He also is a member of the American Legion, the American Society of Tool Engineers, and a charter member of the Gun Club.

The Cover

Though the days are still cool and the nights even cooler, signs of summer are becoming evident. A typical harbinger of summer and the growing season is the profusion of apple blossoms shown on our cover. We hope it is an indication of a bumper apple crop for 1946!

Photo by Norman C. Meagley



Open season on romancing,

Inspires a gal to be entrancing.

But all her wiles that lead to marriage

Catch up with her in the baby carriage!

HEIDT BECOMES A VICE-PRISIDENT



M. A. HEIDT

The election of Marvin A. Heidt as vice-president in charge of industrial relations of Bendix Aviation Corporation was announced recently by Ernest R. Breech, president.

Mr. Heidt, who is a resident of South Bend, Indiana, joined the Bendix organization on May 1, 1939, as director of industrial relations. He was born in Detroit and served in the United States Navy during World War I.

After spending eight years with the Dodge Brothers Corporation in personnel and sales work, Mr. Heidt specialized in employment and industrial relations work with the Budd Wheel Company and the E. G. Budd Manufacturing Company, Detroit, with which he was connected from 1926 until he joined Bendix. He was for many years director of industrial relations for the Budd Company.

●

*From life's book of tears and laughter,
I've gained this little bit of lore;
I'd rather have a morning after,
Than never a night before.*

Bendix Claims First Direct Action Electronic Phonograph Pick-Up

An entirely new "armored vacuum" tube in the tip of the phonograph tone arm instantly translates mechanical sound from the record into electronic modulations in "the world's first direct action electronic pick-up" which has just been announced by L. C. Truesdell, general sales manager for Radio and Television, Bendix Radio Division of the Bendix Aviation Corporation. He declared the device to be revolutionary in its simplicity and capable of reproducing the full beauty of recorded music including delicate tones now lost to other than the best studio type reproducers. The new pick-up is ideal for consumer use said Mr. Truesdell because it resists abuse and is incapable of damaging records, practically abolishing record wear and high replacement costs.

Basic operation of the new device was described by W. L. Webb, Bendix Director of Research and Engineering who said: "We believe this to be the simplest and most direct pick-up of sound from records: The mechanical undulations are transmitted from the record groove by a filament which introduces them directly into the electron stream within the new 'armored vacuum' tube—all within a small fraction of an inch. By this means many intervening steps are eliminated together with the danger of loss of fidelity, trouble possibilities and increased cost of manufacture.

"Our use of the armored vacuum tube means that the new pick-up is absolutely temperature and humidity proof. Not only do we see universal demand for it in this country, but the world-wide market previously denied quality pick-ups because of climatic conditions is now wide open. The Bendix Radio Electronic pick-up will neither deteriorate from disuse, nor does it require any special protective measures to insure its operation."

The new pick-up contains further advantages in overcoming scratch and possessing a minimum of distortion, Webb continued. "Needle talk" that has driven other manufacturers to elaborate means of insulating cabinets with grooves and felts is virtually absent. Vertical needle

(Continued on Page 21)

In Memoriam

On this first Memorial Day since victory over the Axis powers of darkness, our thoughts turn to our former comrades who made the supreme sacrifice in defense of freedom.

We revere their memory, and are proud to have been their associates. We are grateful for the stimulus and inspiration of their lives which they so gallantly laid down to preserve our country's freedom. However our viewpoints differ through the accident of birthplace, environment or ancestral background, we who remain are united in our respect for their unblemished personal honor, their devotion to duty, and their singleness of patriotic purpose.

SCINTILLA'S GOLD STARS

Sgt. Scott Cleveland
S/Sgt. Truair Halbert
Pvt. Warren Haskins
Pvt. Burdette Davie
Lt. Herman Hoegger
Lt. Carl Pierson
2nd Lt. William Dana
Sgt. Bud Rudnitsky
Pvt. Stanley Brown
Pvt. Edson Smith
Cpl. James Panaro
S/Sgt. Richard McCarthy
Lt. Arthur Teetsel
Pfc. Wilford C. Mesic
Cpl. Harold Forshee
Pvt. Russell Weeden
Pfc. Kenneth Webb
Pvt. Gordon Huntley
Pvt. Donald MacIntyre



Sgt. Jack Wellman
Lt. Leroy C. Manley
Pfc. Ralph C. Georgia
Lt. Kenneth Keeler
Sgt. Carl Daniels
Pvt. Charles Finch
Francis TerBoss, Rdm 2/C
Pfc. Harold J. Cannon
Sgt. Walter Walinski
Pvt. Richard Parsons
Sgt. Earle Sutliff
S/Sgt. Henry Hoo
Pfc. John B. Moffat
Pfc. Homer Dutcher
Cpl. Lewis J. Cope
Charles A. Root, MMM 1/C
Pvt. Paul Allen
Sgt. Nelson J. Sheppard
Ernest Pollak, S 1/C



There Is No Death

I tell you they have not died,
They live and breathe with you;
They walk here at your side,
They tell you things are true.
Why dream of popped sod
When you can feel their breath,
When flow'r and soul and God
Knows there is no death!

I tell you they have not died,
Their hands clasp yours and mine;
They are but glorified,
They have become divine.
They live! they know! they see!
They shout with every breath:
"Life is eternity!
There is no death!"

Gordon Johnstone



Walter Meiner, Carpenter Shop, was the first Scintilla employee to purchase a pair of safety glasses offered at cost under the new plan set up by the Safety Section, Industrial Relations Dept.

Photo by Norman C. Meagley

Eye Safety Program Under Way

There's an old quip to the effect that "people are funnier than anybody" which seems to be especially applicable to the matter of eye protection on the job. For some obscure reason which no safety expert has ever been able to figure out, the average workman seems to spleen against taking care of his eyes . . . eyes that once destroyed can never be replaced. Psychologists tell us that self-preservation is man's dominant instinct, but the theory goes haywire on the eye angle . . . for the chances we take with our eyesight certainly go a long way toward disproving this misleading gem of philosophy.

Scintilla employees are no exception to the rule. Knowing full well that refusal to wear goggles on many operations may mean eye injuries, many of us still blissfully continue to ignore the goggles. To prove that we are not merely talking through our dilapidated Stetson, we point out that during the last year, our First Aid department treated an average of 55 eye injuries per month.

The Safety Section of the Industrial Relations Dept. agrees that there is some merit in the general complaint against eye protective devices . . . that they're uncomfortable, don't fit the wearer, and that vision frequently is distorted. So after considerable study and investigation, the Safety Section has developed a plan which already is meeting with the approval of many of you folks. Here it is.

First, it was decided that safety glasses need not be any more uncomfortable than ordinary glasses. They should be strong and sturdy, not unattractive, and be

ground to the wearer's prescription. This eliminates the necessity of wearing protective devices over regular glasses, or removing regular glasses in order to wear protective devices.

Accordingly, arrangements have been completed to furnish safety glasses (with shatter-proof lenses), ground to your own prescription, at actual cost to you. Frames are available in three different styles. If you do not ordinarily wear glasses, lenses will be ground neutral. Prices for frames and lenses, ground to prescription if necessary, range from \$6.00 to \$12.60, complete. Lenses may be plain or tinted, with or without bifocals.

Since nearly every job calls for use of safety glasses from time to time, it is recommended that you take advantage of this unusual opportunity. If you want a pair of these glasses, first obtain your prescription from your own oculist or optometrist. Be sure that the prescription carries the necessary measurements for frames. Then bring the prescription to the Safety Section, located in the Personnel Department. Glasses will be delivered within seven to ten days after the optical company receives the order. The cost of your glasses will be deducted in full from your next regular pay following delivery of the glasses. Due to bookkeeping costs, glasses may not be purchased on the installment plan. A representative of the optical company will visit the plant periodically to make any necessary adjustments.

You are invited to call at the Safety Inspector's office and discuss your own eye-safety program.

Millions Will Die Unless We Act!

Unless we heed their cries, five hundred million human beings in Europe and Asia may succumb to the most terrible tyrant in the world—Famine. These people, one-fourth of the human race, are depending on the rest of humanity to lend them a helping hand.

The Emergency Food Collection, which began May 12, on behalf of UNRRA, provides each of us with the opportunity to make a personal contribution toward the relief of these starving people overseas.

Milk (evaporated, condensed or dried), meat, fish, baby foods, baked beans, stews, soups, honey, fruits, vegetables and juices are all desperately needed.

It is a world-wide mercy plan. Sugar from Cuba, cattle from Canada, rice and sugar from the Dominican Republic, fruit from the Latin Americas—so goes the list of gifts from nations everywhere.

Contributions of canned goods or money to purchase foods are greatly welcomed by the committee which is conducting the collection in the United States. Cash contributions to the Emergency Food Collection will be utilized to purchase food only. No deductions for operating costs are made from contributions.

Surely in this bountiful nation of ours which has been spared the ravages of war there is no family that cannot spare one can of foodstuff. Won't you give that others may live?

●

"Conceit is God's gift to little men."—

Bruce Barton.

Rendix Electronic Phonograph Pick-Up *(from Page 18)*

noise is overcome by introducing compliance into its mechanical design.

"While we might employ either sapphire contact points or those utilizing semi-precious metals for full tone response, our pick-up will probably eliminate the jewels for their tendency to chip when dropped or struck. Our design has banished record damage, and we believe it is of prime importance that our instrument is safe in the hands of the public including the naturally careless and children," Webb emphasized.

"Record wear is eliminated by the fact that less than two-thirds ounce pressure is exerted on the record. This light weight and a minimum of inertia makes it possible for the pick-up to reproduce freely all of the most delicate tone vibrations in the record. The tone arm is designed to the 'minimum tracking error' permitting the contact point to follow faithfully each record groove, even though the heaviest bass passages."

"When it becomes necessary, the entire reproducing element may be replaced by simply plugging in a new tube," said Webb. "Since it contains all of the elements necessary to translate faithfully mechanical vibrations into electrical energy, replacement instantly restores its full capacities. In addition, the radio chassis itself includes a pre-amplifying tube to maintain perfect input balance. It is not required for secondary transmissions—to detect or clarify them—but to provide perfect input balance only."



Early May visitors at Scintilla were, l. to r.—E. C. Kiekhaefer, Vice-President & General Manager of the Kiekhaefer Corp., Cedarsburg, Wis.; Noble Sherwood, Chief Engineer, Kiekhaefer Corp.; C. C. Miller, Western Auto Supply Co.; and pilot Nicholas. The group flew to Scintilla to discuss K-series magneto contracts. Plane is a Cessna, owned by Mr. Kiekhaefer.



Members of the Engineering Library Board, l. to r.—Floyd Root, Frank Borchert, Tullio Tognola, Frank W. Taft and Mrs. Beatrice Ainsworth, Librarian. William Uline, also a Board member, was absent when photo was taken.

Photo by Norman C. Meagley

Engineering Library Centralizes Technical Data

Although surrounded by the routine buzz and clatter of our Engineering Research Department's several sections, the Engineering Library manages to maintain an air of academic distinction. Apparently the conglomeration of no'ses has little effect on the concentration powers of our studious engineers . . . they peruse the technical tomes as placidly as though they were in the sanctified surroundings of a deathly-silent public library where a whisper is a sacrilege.

After passing by the door of the library numerous times in the last several years, your editor, who is of a naturally nosy turn of mind, finally collected the courage to go in and start asking questions. As a result we learned a couple of startling facts. First, that engineers are people like the rest of us. Second, that possession of a college degree in engineering is no indication that an engineer intends to stop digging for new facts . . . which, by the way, answers the question "Why the library?"

According to the Library's Committee, the Library had its inception in a small way several years ago. Fostered by the Chief Engineer of Electrical Devices, and nursed by members of the Engineering Department, it was organized to provide a central clearing house of data and facts

pertinent to the needs of our Engineering staff. From its small start, the Library has gradually accumulated a storehouse of factual material more comprehensive than is found in many large public libraries.

Although an accurate figure is not at present available, it is estimated that the Library now houses in excess of 1300 books and magazines dealing with various phases of engineering applicable to our type of business. Mrs. Beatrice Ainsworth is librarian. Prior to V-J Day, the Library boasted a full-time librarian and a staff of assistants.

Ours is not a library in the commonly accepted sense of the word. That is, it is not merely a collection of books, magazines, pamphlets, etc., classified, indexed and arranged, and kept for reading, consultation or recreation . . . or one that loans books for general use at home or elsewhere.

No, it is rather an "Instrument Crib" . . . a place for work, a laboratory which serves, and is the scientific eyes and ears of the Division . . . a research and development organization acting in the interests of our business. As such, it has less to do with orderly rows of books arranged on shelves than with agility in pursuing

(Concluded on Page 23)



Jim Ludwig, Engineering Dept., peruses a technical volume from the Engineering Library's unusually complete selection of specialized books.

Engineering Library (from P. 22)

facts which have a bearing on our future success.

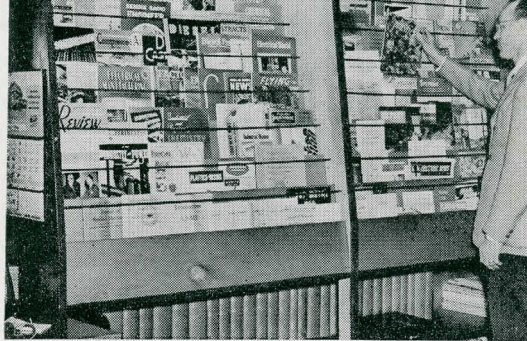
Because Scintilla Magneto Division is a forward looking organization, with the highest standards of precision in performance to maintain . . . new designs, new methods, new materials and new products must constantly be sought. Every element must be considered, researched, developed, tested, experimented with and produced. Nothing can be ignored, unconsidered or left to the judgment of others.

By keeping ever alert to all published information, and making this material quickly available to the Engineering staff, the Engineering Library becomes indispensable to the efficient functioning of the organization.

One of the main requirements of the Library is to obtain all pertinent published information and material, and to make such material quickly available for use. Often the progress of laboratory and development work is dependent upon a quick answer to a specific inquiry.

It is also charged with interpretation of such information as to the degree of exactness required to properly answer such inquiries.

Although too numerous to mention here, reference works and texts include well-known titles on general sciences affecting general engineering such as Mathematics, Physics, Chemistry, Statistics, Aero-



Ken Donaldson, Dept. 90, examines the current display of technical magazines in the Library.

Photos by Norman C. Meagley

nautics, Aircraft Engines, Electricity, Radio, Radar, etc.

Others are technical encyclopedias, standards and specifications, magazines, periodicals and journals, commercial translations, trade literature and catalogs, research reports, aircraft ignition service manuals, micro-films, etc.

Put them all together, plus dozens of other features too numerous for inclusion here, and they all add up to an orderly collection of facts that pay dividends in our everyday working lives . . . that help keep Scintilla's name foremost in our field of endeavor.

Shipping and Receiving

We were all sorry to see Roy Boggs, Al Bender and Harry Downing leave Scintilla. Here's hoping to see all of you back . . . and in the meantime, "Good Luck."

Sometime ago Receiving lost Marie Oberg due to illness. Marie is back now, and not only is she well . . . she now answers to the name of Marie Coddington!

In a lifetime you always meet people you like, and those you don't. There's one guy we all like . . . that's "Mike," our Railway Express driver.

Mistaken identity or something . . . it's true that "Hub" was at that fire in Oneonta, but he didn't start it, nor did he put it out.

Our good friend Don McPherson was seriously injured May 11th in an automobile accident. "Mac" is doing as well as can be expected, and here's wishing him a speedy recovery.

We're all tired of strikes, but now we

(Concluded on Page 24)

BARTER COLUMN

Am now taking orders for the book "History of World War II." Book contains over 1100 pages, covering over 6 year period of war, including signing of Treaty in Tokyo Bay. Robert L. Cook, 12 Weir St., Sidney.

WANTED: Motors and Electrical Appliances to rebuild and repair. Also modern wiring installations done. Drop card for estimate to Stanley W. Scutt, 216 Johnston Circle, Sidney.

FOR SALE: Rotenone Dusting Powder and 5% DDT solution for insect spray use. Norman Allen, 112 River St., Sidney.

FOR SALE: Gunn sectional book case . . . two bottom sections 9" high . . . middle section 13" high . . . next section 9" high. Complete with base and top. Price, \$35. H. C. Earl, 13 Maple Ave., Sidney. Phone 3831.

FOUND: Service man's discharge button. Call for it at the Scintillator office, Personnel Dept.

FOR SALE: Flower stands and boxes . . . new, home made. Also book rack, brand new. Floyd Tuckey, 15 Pleasant St., Sidney. Or Dept. 99, Nights.

WANTED: House trailer. Will pay cash. Ralph B. Cass, 27-54, Days. Or R. D. 2, Bainbridge.

FOR TRADE OR SALE: Four building lots, French Ave., Orange City, Florida. Stanley W. Scutt, 12-55, or 216 Johnston Circle, Sidney.

FOR SALE: Sears Silvertone Table Model Radio, ivory case . . . in good condition and working order. Price, \$10. S. B. Merritt, 90-90, or phone Sidney 6758.

LOST: Grey gabardine top coat, brand new. Carr's Clothing Co. label. Pair of brown pigskin gloves in pocket. Reward for return. F. W. Taft, Engineering Dept.

FOR SALE: 4 HP outboard motor. Inquire Harland Alberta, 29-78, First Shift.

Shipping & Receiving

(from Page 23)

can see one we all like. Yes sir, at the ole ball game. Get out and support your team, fans.

Wes Colyer lost \$5 a few weeks ago. We don't know how, but Wes is driving just a little slower nowadays.

"Aft" Sowersby is in the hospital undergoing a throat operation. Take it easy, "Aft," and we're looking forward to seeing you again soon.

Hank Hawver has the nicest disposition of anyone we know. Always a cheerful guy, and a good one to have around.

Glad to see Seely Stilson on the electric truck again. That's one department that really has a lot of work for a very few men.

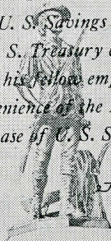
Art Fargo is back and doing nicely after his accident. Welcome, Art!

OFFICIAL APPOINTMENT

Notice is hereby given that

E. M. Van Name

is appointed Official U. S. Savings Bond Officer for his organization. The U. S. Treasury extends its thanks for his efforts in keeping his fellow employees advised of the availability and convenience of the Payroll Savings Plan for the regular purchase of U. S. Savings Bonds.



Frederic M. Vinson
SECRETARY OF THE TREASURY
Go Sack
NATIONAL GUARANTEE SAVINGS BOND DIVISION

This is a reproduction of the original appointment designating E. M. VanName as Official U. S. Savings Bond Officer for Scintilla Magneto Division. It also serves as a reminder that every Scintilla employee is invited to save regularly through the Payroll Deduction Plan.