The Wisconsin engineer. Volume 49, Number 1 August 1944

Madison, Wisconsin: Wisconsin Engineering Journal Association, [s.d.]

https://digital.library.wisc.edu/1711.dl/7P3DBZ6M5SIJV8I

WISCONSIN ENGINEER

August, 1944

WHAT YOU SHOULD KNOW ABOUT THE TIMKEN BEARING

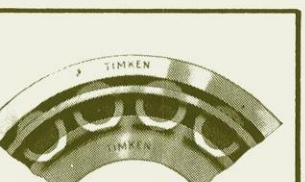
DESIGN

Essence of Performanc

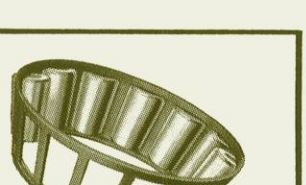
Timken introduced the tapered principle over 45 years ago to obtain an anti-friction bearing with the ability to carry radial loads, thrust loads or any combination of the two. During the ensuing long period of engineering development and experience, a constant refinement of design has taken place, making the Timken Bearing of today supreme in performance.

Here are the three most important features exemplified in the design of the Timken Bearing.

1. TRUE ROLLING MOTION: This basic necessity is assured by maki all lines coincident with the tapered surfaces of the rollers, cup a cone, meet at a common apex on the axis of the bearing, Figure 1. Tr rolling motion always has been incorporated in the Timken Bearin



2. POSITIVE ROLLER ALIGNMENT: During the development of t Timken Bearing, as speed, load and accuracy requirements increase various methods were used to stabilize the rollers and prevent the skewing in the raceways. The solution was found in establishing wid area contact between the large ends of the rollers and the underc rib of the cone, thus assuring constant and accurate roller alignme around the periphery of the raceways. The light areas on the ends of t rollers in Figure 2, show contact of rollers with undercut rib of co



3. MULTIPLE PERFORATED CAGE: All the openings in the Timk Bearing cage, Figure 3, are stamped out in one operation by means multiple perforating dies made to extremely close precision tolerance This assures exact center-to-center spacing of the rollers around t periphery of the raceways, so that every roller takes its full share the load when the bearing is in operation.

A thorough knowledge of Timken Bearing design and application will be one of your best assets when you graduate to enter the professional engineering field. Begin to acquire it now. The Timken Roller Bearing Company, Canton 6, Ohio.

KEEPING UP WITH
Electricity

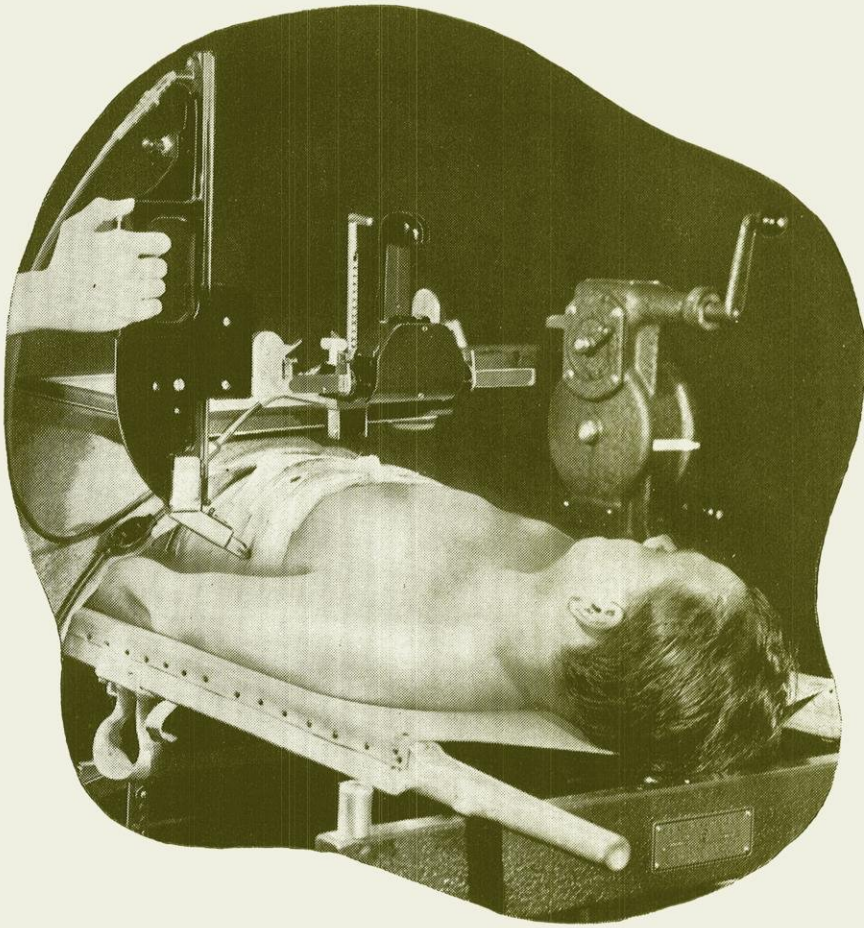
RADITIONALLY a welder is sur-ounded by the haze of smoke. low a portable Precipitron*, the ectrostatic air cleaner, is used by ıdustry to eliminate the welding noke. The unit clears 600 cubic et of air per minute.

OUNTING THUNDERBOLTS is the sk of a new device which has een thrown into the campaign to rotect power lines from damage y lightning. It consists of a saw-oothed and a straight-edged strip metal foil between two layers of ansparent plastic, and is about e size of a playing card. When ghtning strikes a power line, a bit the lightning is deflected to the il, jumps the gap from one tooth the straight-edge. In so doing it orches a black spot on the plastic ıd also burns away that saw-oth, so that the next discharge ust travel by another path. No o teeth are the same size; each scharge picks the shortest path d thus is registered only once.

RCHERY AND ELECTRONS are work-g together in that most modern scientific instruments, the elec-on microscope. Quartz filaments 30,000 of an inch in diameter—e-sixteenth the thickness of a man hair—are used to calibrate e magnifying power of these croscopes. Westinghouse engi-ers have found that a modifica-n of the medieval cross-bow is e simplest and most efficient de-ce for drawing out molten quartz o such a filament before it can ol or harden.

• • •

t us send you a free copy of the v booklet, "Books by Westing-use Authors." Titles listed are only in the fields of Electricity l Electronics—many of them ndard texts—but also cover a le variety of other subjects,



Surgery by triangulation

The life of a soldier wounded by a bullet or shell fragment may depend on the speed with which the metal can be located and removed.

Today, in army field hospitals, *only one minute* is required to discover the fragment and locate it in two planes, incidentally giving the surgeon two points at which incision may be made and also the correct angles and depths beneath the skin.

This is made possible by the Westinghouse Bi-Plane Marker, a device which translates the conditions shown by the fluoroscope into "guide posts" for the surgeon's knife.

Used with the Bi-Plane Marker is the Re-orientating Device, which makes certain that the position of the patient on the operating table is exactly the same as during the fluoroscopic examination.

Bi-Plane Marker and Re-orientating Device were designed by Westinghouse x-ray engineers to meet requirements outlined by Colonel Alfred A. de Lorimier, Commandant of the Army School of Roentgenology, Memphis, Tennessee.

Westinghouse Electric & Manufacturing Co., Pittsburgh 30, Pa.

WESTINGHOUSE PRESENTS: *John Charles Thomas, Sunday 2:30, EWT, NBC.*
"Ted Malone," Mon. Wed. Fri. 10:15, EWT, Blue Network

AN INTRODUCTION TO THE ISSUE - - -

AFTER a brief rest, during which time old matters were being caught up, straightened out, and a new staff being collected, this is the first issue to be put out this semester. This is also the first issue of a new volume and it should prove good reading under some nice shade tree as there is nothing technical in it.

As regular parts of the magazine, we still have Campus Notes, Alumni Notes, and incidentally, the Static. The latter will be found scattered here and there (the censor had to use his big red pencil.) Then there are the articles—one on the future of airplanes after the war, another on television, one on supersonics and the highlight of the issue—an answer to the question, why are women in engineering?

Writing the Campus Notes is Mae Zimmerman, a Sophomore chemical. Mae, one of the few co-eds seen on campus with the familiar slide-rule comes from Ladysmith, located somewhere in northern Wisconsin. Heard of it? Well, we didn't either, but it must be there if that's where Mae comes from.

Melvin Sater is writing the Alumni Notes and taking over Arnold Ericsen's place in that department. Melvin is also a chemical and was on the staff last semester which gives us a little added boost.

The other regular feature is the Static. This semester it is being written by Fran Tennis and Bob Clayton. Both seem to have a really great sense of "humor". Plenty of material was turned in, and the remains of it can be found by careful searching. (It's really not that bad.) Both Fran and Bob are new additions to the staff.

Another addition to the staff this semester is Don Hyzer. He hails from Reedsburg and is a sophomore in mechanical. "Looking at the Future of Airplanes", appearing in this issue is a product of his writing. Don, being right up there with his marks, also takes time to give out with the music every Tuesday and Thursday night with the University Concert Band. Incidentally he plays the bass.

There are two other articles by engineer co-eds this month. The first of these, giving the low-down on a co-ed's viewpoint of engineering, is written by Dorothy Miller, a chemical. We sincerely hope this will answer the big question, "Why?". The other article on television is written by an e. e. who has been introduced to you in some former issue. That's me.

To help keep us equipped with articles, we have Bill Winkler and Ed Brenner on the staff. Both are Seniors, Bill is a mechanical and Ed is a chemical. Ed is a staff member from last semester. Bill is a new addition but has promised us an extra-special article for the September issue. (You can't back out now, Bill.) It ought to be worth reading.

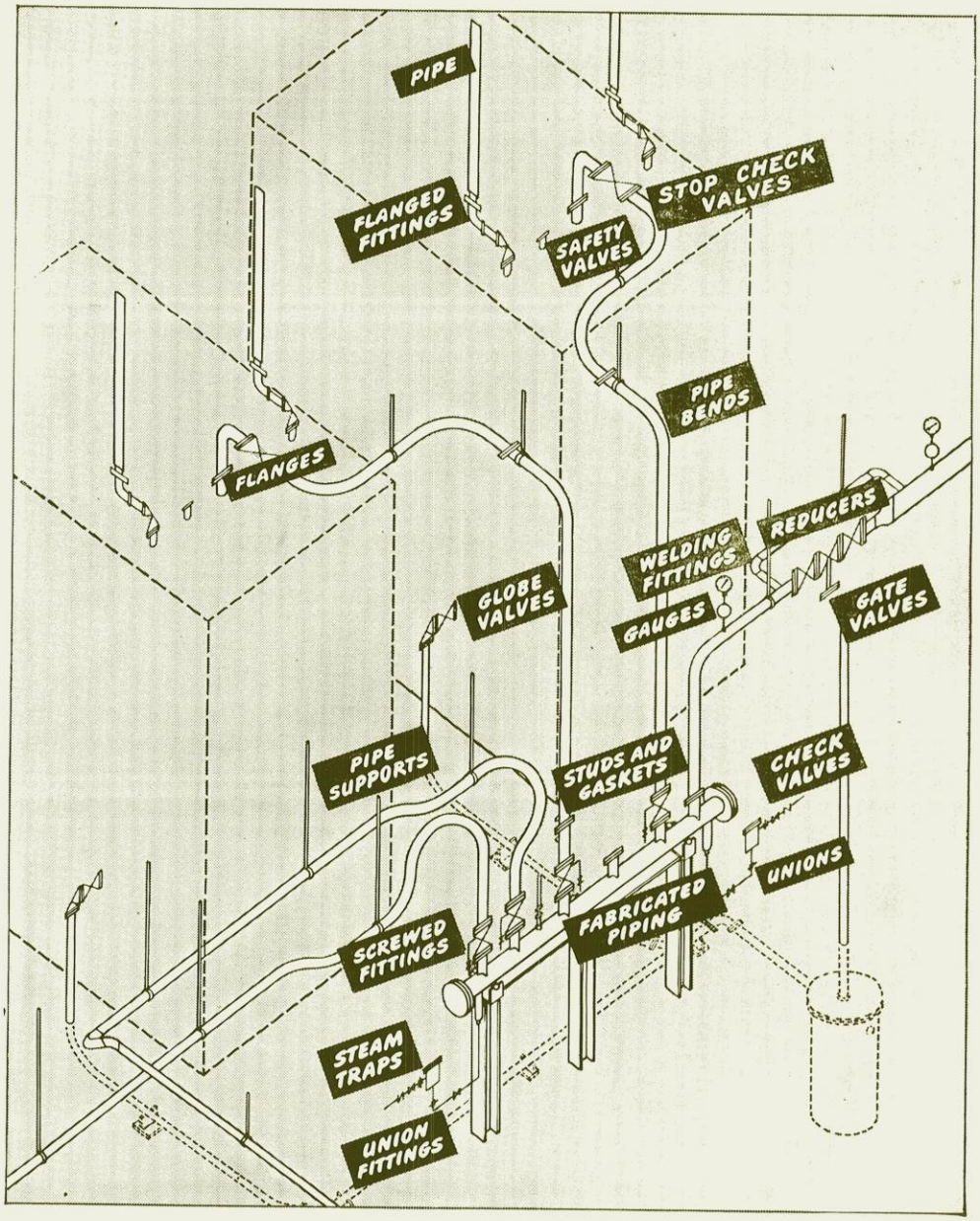
Been wondering what's happened to the old staff? At present, most of them are at Great Lakes—Glenn Jacobsen, Harold May, Don Caldwell, Tom Lee. With a few more members joining them down there, they could have a staff reunion.

I've got something to say, so I guess I'd better say it. We need articles for this magazine, lots of them. It should contain three or four main ones each month with several smaller ones. All I can do is ask you to write them and then they don't come in on time. If any of you are interested in writing on something that interests you, you can be sure it will interest someone else. Contact anyone on the staff and you can be assured there'll be a place for you.

Now let's turn the page and see what we have—

—June Hartnell

IT TAKES PIPING TO MAKE IT WORK



HETHER it is a hydro-electric plant or an oil refinery ater works or a steam line—a cargo ship or a erating system, or any of eds of other engineering cts that you can mention—g controls the flow of air, oil, steam and gas that are cessary to their operation. piping means more than on the blue print—it means s of pipe of the correct ter—it means valves and s and traps and joints—it flanges and cocks and s and floats of the proper nd proper types to assure the maximum service for the system you are designing.

But many and varied as are the parts of the piping system, it will interest you to know that they are all included in the complete Crane line.

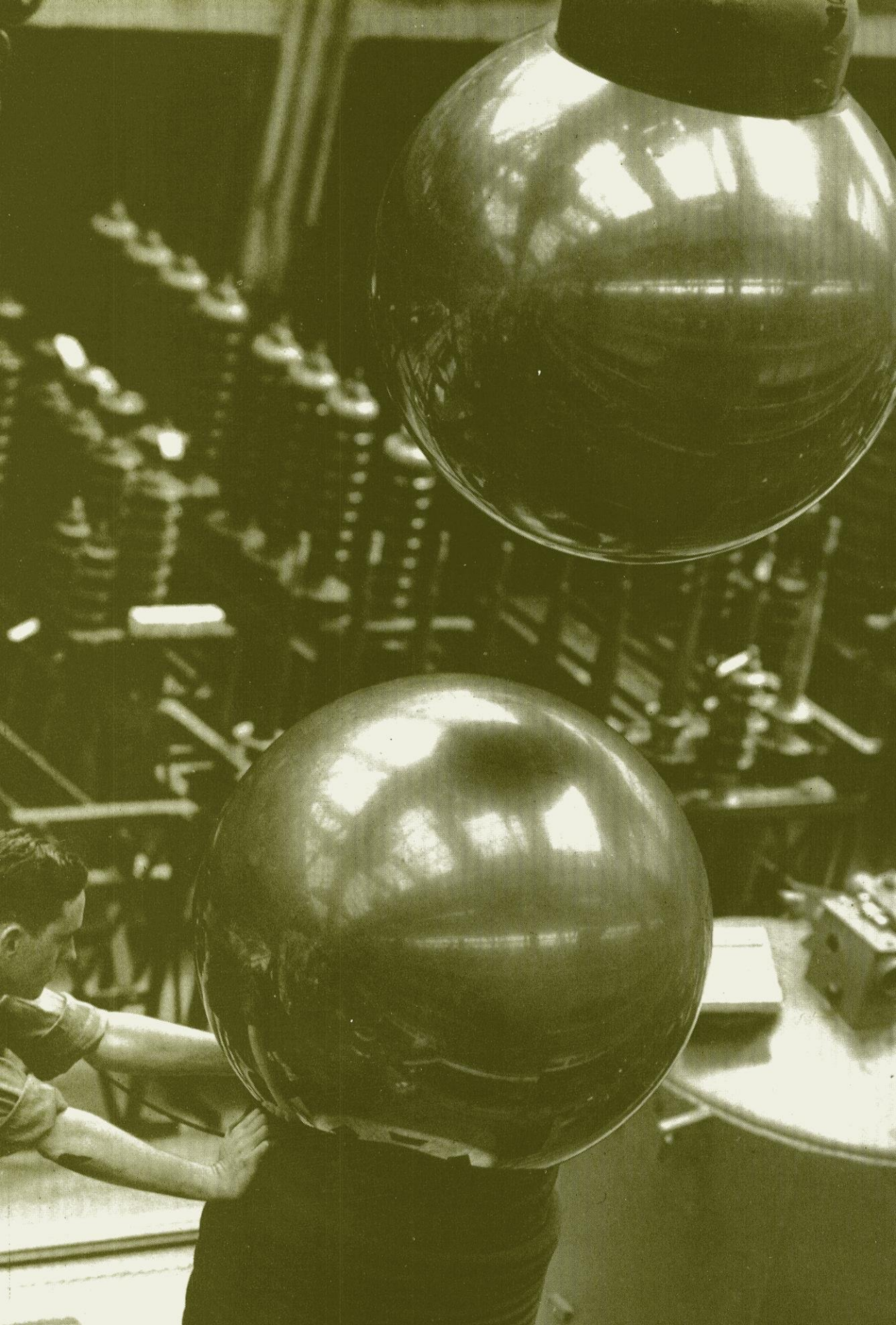
And when it comes to writing specifications, you will find what many engineers before you have discovered: that by specifying "Crane" for the whole system, you are assured of matched piping with all parts designed to work together, plus the long life and low up-keep that mean efficient, satisfactory service.

CRANE CO. 836 S. MICHIGAN AVE., CHICAGO 5, ILL.

HERE'S DATA TO HELP YOU

Crane engineers have prepared several important books and treatises on piping systems. These include the Crane Catalog, *listing more than 48,000 piping items and containing valuable engineering data—* Piping Pointers Manual, *packed with piping information—*Flow of Fluids *and* Combating Corrosion, *two technical papers. This material is available from the following persons in your school, for reference.*

PROF. L. A. WILSON, *Chairman, Mech. Engrg.*
PROF. G. L. LARSON, *Mechanical Engineering*
PROF. R. A. RAGATZ, *Chairman, Chem. Engrg.*
PROF. J. C. WOODBURN, *Civil Engineering*



WISCONSIN ENGINEER

Founded 1896

me 49 AUGUST, 1944 Number

•

red as second class matter September 26, 1910, at the Post Office at Madison, consin, under the Act of March 3, 1879. Acceptance for mailing at a special rate ostage provided for in Section 1103, Act of Oct. 3, 1917, authorized Oct. 21, 1918.

•

ublished monthly except July and October by the Wisconsin Engineering Journal Association, 356 Mechanical Engineering Building, Madison 6.

•

In This Issue . . .

A LITTLE ON SUPERSONICS

by K. E. Palm, ee'44

ADVANCEMENT in the field of supersonics was very slow up until about 20 years ago. These waves, having a frequency of 20,000 cps. and above, had to be produced mechanically by methods which were inefficient and gave low output. But in the early 20's, electronic means of generating these waves were developed. And only since then has any work of real practical importance been done.

Two of these purely mechanical methods of supersonic wave production are still of some importance. The Galton whistle is simply a whistle designed for these higher frequencies. It has the advantage of simplicity and reliability. Also, the note emitted is quite pure. However, the hissing of the air stream is audible. Its output is relatively low, the input air pressure must be kept constant, and it can only be used in a gaseous medium. This limits its use considerably.

The other type of generator which is of some importance was first developed by Holtzmann. He produced these waves using a glass tube clamped at the center and excited by the friction of two silk-covered leather belts. This generator gave an output 100 times as great as the Galton whistle generator at a frequency of 33 kc.

The first electronic source of supersonic waves was a simple crystal oscillator, the frequency generated being entirely dependent upon the physical dimensions or the crystal. This type of generator had the disadvantages of low output (the acoustic energy delivered was only a fraction of a watt per square centimeter) and requiring an extraordinarily large crystal. However, the same principle was used in later models of electronic generators as the art of electronics progressed.

Another type of generator developed was the magnetostriction oscillator, also an electronic device. A rod half wavelength long usually of nickel or an iron-nickel alloy is excited by a vacuum tube oscillator which has its plate and grid circuit coils wound around the rod. Energy from the plate circuit is fed back into the grid circuit by the magnetic coupling of the rod. This generator has the advantage of simplicity and cheapness of construction but its upper frequency limit is under 100 kc.

After these electronic generators were improved, more thorough investigation of these supersonic waves was undertaken with the result that many practical uses were discovered. Some of the more important are echo depth-sounding, acceleration of chemical reactions, destruction of bacteria in food products, and underwater signaling.

Since the war began, many large companies have utilized their electronic research and development facilities in developing instruments for inspection of materials and the thousands of parts which were produced for the armed services. Supersonic experiments were conducted on many items such as cartridge cases, bullet cores, engine parts, etc.

Three general methods were developed for the inspection of these parts—comparing the tone of vibration of the test part to that of a standard, measuring the duration of the vibration, and measuring the reflection or absorption of supersonic waves by the test part. Since supersonic waves are inaudible, an audio heterodyne amplifier must be used for the comparison test. Deviation from normal frequency is caused by such flaws as cracks, differences in hardness, differences in dimensions, and changes in density.

The second test mentioned above is still in an elementary form, but is being used for testing glassware. Some types of castings are also tested by this method. The article to be tested is simply struck lightly and compared to a standard. The comparison is by ear. This comparison can be made electronically also, but it is much more complex and costly than in this next test.

In the third method, supersonic waves are actually passed through the specimen and the reflection or absorption of these waves is measured. The specimen is used as one of the electrodes of a crystal and is made to oscillate by the crystal which is part of a crystal oscillator. Vibrations from the specimen are picked up by another crystal fastened to the specimen. This second crystal is connected to an oscilloscope. The resultant pattern is then compared

(turn to page 18)

LOOKING AT THE FUTURE OF AIRPLANES

with Don Hyzer, me. '46

JOE is just a fellow. Not a hero, not a famous or great person, he is just Joe. Maybe he fought in the campaign for Africa, France, or Guam; he may be one of those men that Uncle Sam can't use, so he is working in an essential industry or going to college; he may be the fellow working on the farm. After the war, Joe, being an American, will have many plans which he has stored up during the years of war. Perhaps he wants to settle down in his home town and raise a family, or maybe he wants to travel around the world. No matter what his ambitions, Joe is just a common everyday person like you and I.

Some day Joe will be able to fulfill his present desires. Maybe he is a flier now in the war, or he may just have an interest in aviation. Somewhere he will get the urge to own an airplane.

What have we to offer Joe if he does want to buy one? Will we give him a fast warplane, a small plane like those in use today, or will it be something new and distinct? To sell Joe this plane which he wants to buy will take something very different from present-day models. He may be just debating whether to buy one of those wonderful new cars instead. The plane should be easy to fly, practical, economical, safe, and good looking before he will buy it.

An airplane must be designed to fly easily, as no one wants to spend many hours and lots of money learning to fly. The plane should be easy on the controls, have as few of them as possible, and have them easily understood. The most complicated part of flying is navigation, which has to be mastered for a person to get from one place to another by air. To make this part of flying easier, several prominent pilots have suggested using well marked airways. The plane which will sell must make flying like driving a car.

A doctor used his plane before the war to go to various towns to make operations. He would take his car from his office to the airport, fly his plane anywhere from thirty to fifty miles, and then take a car which had been sent to meet him, to the hospital. He said that the airplane did not save him any time and in a way was a bother, but that he flew because he liked to and it was his recreation. When someone who uses the plane says it is a bother, how could the average man be expected to buy it? The airplane must become as practical as the automobile to be used popularly. Nobody wants to have to go to an airport to fly his plane to work. The place for the plane, when it comes into its own, will be right in the back yard.

A prerequisite for people anywhere is that a certain commodity must be economical, not only in initial cost, but in up-keep. The mileage from a gallon of gasoline must be high, the use of oil must be low, and repairs should be reasonable. The cost of a new plane must not be over that of the automobile because most people feel the price of a car is all they care to spend. This problem of cost is hard to solve because of the high quality material which has to go into the plane to make it safe and lasting.

Every plane accident in this country today is highly publicized. This has made the public so cautious that the plane not only must be safe, it must be foolproof. Because air travel can be dangerous, the family plane must be proven more reliable than other methods of transportation. Many safety devices will have to be invented and installed before the plane will sell, even though this may mean a higher cost.

Now that we have the qualifications that Joe wants taken care of, we can consider the woman's point of view. Of course we know that she cares about the appearance, so if the plane is going to be the thing, it must be taken before a mirror and primped up a bit. There should be some nice graceful curves, comfortable seats, lots of windows, and plenty of bright, flashy paint.

Most aircraft companies now have plans for postwar private planes which, if they fall in line with prewar planes will not satisfy the public according to the above standards. Something new and radical must be introduced, such as the heliocopter and the roadable airplane. Of course, both of these may have some imperfections that

(turn to page 16)

WOMEN IN

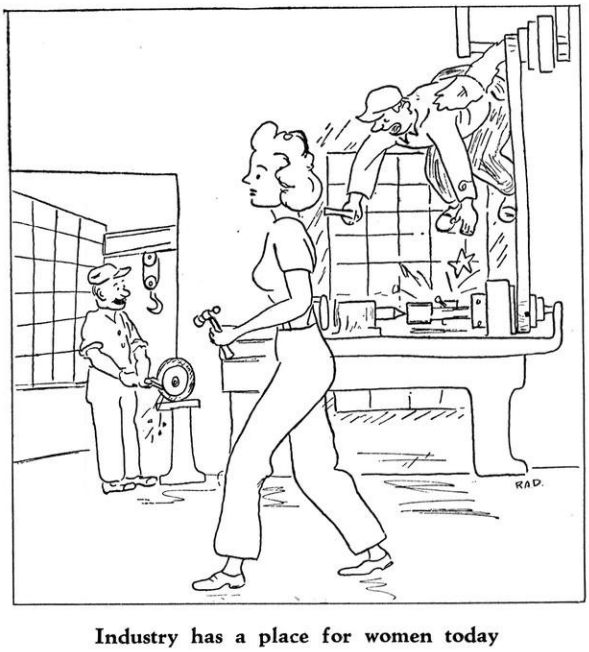
or

"We're Here to Stay,

IN ANSWER to many inquiries as to why women are now taking engineering, we would like to present our side of the question. Really, we're tired of the astonishment produced when our answer to the old question, "and what course are you in?" is "engineering". The civil answer we give to this simple question usually brings forth a number of comments from "Are you trying to take a man's place?" to "That's one way to get a man." We hope this article will be an all-time answer to such questions: we are interested in engineering and have hopes of becoming engineers. Questions have been forming in our minds as to the exact reasons why people are so shocked to find there are such things as lady engineers. It is not impossible for a woman to find a place in the very large field of engineering.

There is always advanced as a last resort (in trying to convince us that we're in the wrong profession) the argument that engineering is after all a field for men and that we are trying to step up the current trend of the present age to slacks, cigarettes and mannish tweeds. Quite the contrary, experiments have shown that women, though inferior to men in physical ability, have a capacity for heavy prolonged thinking, (personally it makes my head ache—maybe I haven't enough training yet), can stand monotonous routines better and have more patience.

There is nothing to explain why they break thirty per cent more glass equipment than men). Perhaps they like the musical clink test tubes make when bounced off the lab sink. A woman likes to invent new things,—in the past this inventive capacity has been restricted to finding a new way to mix a cake, a new pattern for knitting a sweater or a different way to arrange the living room furniture. It is only fair that she be allowed to help advance the course of civilization by scientific research on new methods and processes.



Industry has a place for women today

Social life for us is like it is for most other co-eds except we must put forth a little extra charm to offset the usual reaction that we aren't quite normal because we are taking engineering; whereas girls look upon engineers as good date material. Contrary to popular opinion of outsiders a girl engineer is not literally swamped with dates. The process of a male engineer dating a female engineer requires considerable engineering skill on the part of either party. The girls see quite enough of engineers in the course of a week, the men automatically distrust us and we must prove our femininity is not lacking merely because we are interested in a profession normally chosen by men.

That's the woman in the home—not us

ENGINEERING

Better Make the Most of It"

by Dorothy Miller, che'46

Our class life is interesting for one never knows what will happen. Especially is that statement true of lab instructors who regard us cautiously throughout the period as though any minute we might make the fatal connection or add the wrong solution and blow the place up. It was said by a reliable speech teacher that the function of a girl in an engineering class is purely as a check and balance as to the course of conversation. The objection to this is we come, like the rest of the engineers, to learn or sleep as the case may be, not to check on anyone. Of interest to speculators are the veiled hints one hears as to what the boys would talk about if the women only weren't here. From all inferences men must have some pretty lively classes when the women aren't around.

The feminine influence might some day be found in a new presentation of chemical reactions. Example:

One Explosive

In a clean dry container take three gram atomic weights of nitrogen, add six parts of oxygen to 3 NO_2. Assemble six parts of carbon, some water and potassium. Add these to the mixture. When thoroughly combined, take one match, apply to tinder, then ignite mixture. (This recipe is guaranteed to give you a big bang and will serve any number.)

Cheer up, we hardly think it will come to this.

Some people actually do eat our cooking

We believe in doing things up right.

Many amusing incidents take place in the course of instruction due to the presence of feminine members. A professor will seldom let a month pass without making some allusion to the girls in the class. For instance in a discussion of solutes raising the boiling point of solutions, some reference might be made to the fudge-making ability of the girls. One does not dare look into space during lab periods for the instructor is sure to ask what it is we don't understand. Any unusual performance one might go through is likely to be attributed to that "feminine curiosity". And if one of us should go to a party which one of her professors chaperons — it's soon common class knowledge, what she looked like, who she was with and what they did during intermission. But don't let us fool you, we like attention as well as the next person, we enjoy a good joke even at our expense. We'd like to thank our instructors, professors, advisors and fellow classmates for their kind and helpful attitude, we're going to do our best to uphold the purpose and interests of our chosen profession. We're taking engineering because we want to be engineers.

CAMPUS NOTES

. . . Mae E. Zimmerman
Ch. E. '46

New editor, new staff (it seems the navy has priorities this season), and a new semester. Anything can happen, soooooo don't say we didn't warn you.

Past Editors . . . . .

Bill and Glenn Jacobson, both former editors of the Engineer, are spending their summer vacations at Great Lakes this season where they plan to dabble in Radar if they can find the time.

Things are Tough all over . . . . .

First came the war (Sherman hit it on the head when he borrowed his picturesque phrase from the engineers), then the men's dorms were taken over by the navy, next the frat men moved out, and now the boys of Halburn House will be residing at new locations after August 18th.

And then there is the story . . . . .

of the E. E. who married an E. E. and the little ones were named Einstein, Steinmetz, and Slide Rule.

Big Party . . . . .

The boys in Mr. Myers' Tuesday Advanced Steam and Gas Lab had a coke party. It was a divine affair. Mr. Myers came in an exquisite creation from Sears Roebuck & Co. He had on a pair of sky blue overalls touched off with polkadot grease spots. His oxfords were black and he wore no leg make-up.

The indirect sponsor of the party was that well-known V-12, "Hair Tonic Swede." The latest AP reports state that said "Hair Tonic" miscalculated the dynamometer loads. The error was discovered after 2¼ hours of operation. After refreshments, the experiment was completed and a good time was had by all.

He'd make a wonderful WIFE . . . . .

Ed Fischer (Ch.E. 2) put his foot in it when he stated he could cook, sew, and was neat around the house. It seems by accident that the good word reached the feminine sex and Fischer's phone was humming with requests for application blanks and personal interviews—the girls were not calling for recipes either.

Hitch Hiker . . . . .

Joe (Vagabond Lover) Teskoski (M. E. 4) has been seen on several occasions hitch-hiking to his home town, Wausau. Come on, Joe, what is it? Wine, women or song? . . . and who is she???

In the good (???) old days before women were on the staff. . . . .

Question . . . . .

What well-known instructor laughed, and laughed, and laughed when he saw his chickens miscalculate for an hour and one half????? He was kind enough to tell them their error at the sound of the gong. Beware . . . the vigilantes are out!!!

Patriot Frank Hyland . . . . .

His car is red and white and the color of HER eyes is blue—is having a little trouble dodging the Keystone Cop . . . our sympathy, Frank.

Scene in a quant lab. . . . . .

Gerry Wall trying desperately to extract one drop of water from a florence flask by standing on a table, towering over the flask, and using a 6 foot piece of glass tubing.

Borchardt Leaves . . . . .

Jack Borchardt, instructor in sanitary engineering, left Madison on July 2 for Maryland where he began training for the U. S. Public Health Service as assistant sanitary engineer with rank of 1st lieutenant.

Election Returns from MESW . . . . .

Melvin Diels	Chairman
Ralph Williams	Vice Chairman
Paul Kaesberg	Secretary
John Keating	Treasurer
Bill Wendt	Assistant Treasurer

Polygon . . . . .

In the May meeting of Polygon it was decided that $160 be appropriated for student loan.

TELEVISION

by June Hartnell, ee'46

A NEW ELEMENT in almost any post-war radio set will be television. Television sets have been promised for over half the nation's population soon after the end of the war, if home sets can be produced at such a price as to make it economical for the American pocketbook. Whether such a set can be produced cheap enough depends on the cost involved in bringing a television network to the station, in setting up a studio and equipment, and in the operating costs.

There are two methods for bringing television home to Mr. Average Citizen. The first of these is by rebroadcasting, that is, relaying from station to station. The other is by network television which makes use of the coxial cable.

In 1939, General Electric began a first step in network television with the opening of its Helderberg Mountain Relay Station. Here signals are picked up from New York City and relayed to the main transmitter. At the relay station the program is amplified, then changed to the sight and sound signals as received in your home. The sight signals are transmitted by means of a low power transmitter to the main station from which the picture part is received, the frequency cycle changed and amplified. Sound is relayed by line wires and modulates an ultra-high frequency transmitter which broadcasts it to listeners.

Sending the Picture

The camera at the studio where the television set is, takes the picture. Inside the camera this "light" picture is changed to electricity and sent out to a control board. These impulses are then sent out as electromagnetic waves to the radio broadcast station.

The converting of this "light" picture into electricity is accomplished by a process known as scanning. Inside the camera tube is a photoelectric plate which receives the light and sets up a charge proportional to the light falling on it. A very thin electronic beam propelled by the electron gun in the camera scans the plate and removes the charges from the cells on the surface of the plate. Because the lens of the camera reverses the image on the plate, this beam starts at the lower right of the plate and continues up to the upper left. The plate is scanned about thirty times a second, which means that each individual element has been scanned about thirty times in one second. A picture represents about five hundred thirty horizontal scanning lines, therefore the electronic beam travels approximately three miles per second. As the plate is hit by this beam, it gives up a charge which is proportional to the intensity of light striking it. This charge is then transmitted by means of a cable to the radio transmitter.

In the receiver, the electric impulses are amplified and again an electron beam, synchronized with the one in the camera scans the viewing end. This plate is made of a fluorescent material which glows in proportion to the beam striking it, which of course is varying with the incoming signal. Thus the picture has spots of high and low intensity—the shadows, and corresponding to those of the object back in the studio.

New Conceptions

Besides being a new form of entertainment in the home, television will bring the product of advertisers closer to the public. They will be able to see the actual product, not only as an inanimate object, but in actual use. Television will also bring the newspaper into every home—from the war news and events of significant importance to the funnies. All can be and probably will be enacted with life-like accuracy. Live charts will supplement those used on page four of the graphic section. To present the news, both studio presentation and movie film could be used. Such an experiment was tried out by General Electric in November of 1943.

First the printed page was shown and then certain parts were reenacted and brought visually to the listeners.

As a typical example of what the public will want tomorrow in their television programs, the audience of General Electric's WRGB rated the programs heard. Light operas ranked first, including such ones as Gilbert and Sullivan's "Pirates of Penzance", "A Waltz Dream", and "Iolanthe". Second rating was the news commentaries, and ranking third was the full length play. There was also much favorable reaction to sports events, particularly those of boxing and wrestling. It is certain that such things as cooking lessons, sewing lessons and small children's programs would also prove to be very popular.

Restrictions of Television

The main restriction of television is distance. It is sent out on very short radio waves. This can be overcome by

(turn to page 22)

ALUMNI NOTES

by Melvin Sater, che'44

Mechanicals

DISBROW, FRANK J. '40, formerly junior engineer with the Universal Textile Winding Co., is now employed as a tool designer at the Kenosha, Wisconsin plant of the Nash-Kelvinator Corp.

DUDDLESTON, JAMES '44, is now with the Caterpillar Tractor Co., of Peoria, Ill.

FEIEREISEN, WILLIAM '42, formerly instructor in mechanical engineering, is now in the Cleveland, Ohio laboratories of the N. A. C.

HIRCHERT, WALTER F. June '44, is working as a materials handler with the Janesville plant of the Chevrolet Company.

LOWELL, JOHN C. Feb. '44, is at the N. A. C. A. laboratory at Langley Field, Virginia.

MANN, RICHARD A. '44, is also at the N. A. C. A., Langley Field, Virginia.

NILES, DON '44, former editor of the WISCONSIN ENGINEER, is working at the testing laboratories of N. A. C. A. at Langley Field, Virginia.

RASMUSSEN, DONOVAN E. June '44, is with the Standard Oil Company of California.

SALMI, REINO Feb. '44, works at the N. A. C. A. laboratories, Langley Field, Virginia.

TAUSCHEK, MAX J. '43, is working in the N. A. C. A. research laboratory in Cleveland, Ohio.

WEIDNER, RALPH B. '42, is an ensign in the navy and is stationed at the U. S. Naval Receiving Barracks in Savannah, Georgia.

Civils

BERTLE, FRED A. c '42, was married on June 26 to Barbara Burnett of Elmwood Park, Ill. Fred is a Lt. in the Army Air Corps and will be located at Fort Belvoir, Va., in the Bureau of Publications.

BRUNNER, FRED H. c '37, who enlisted last October in the Seabees as chief carpenter's mate, is at a camp at Norman, Oklahoma. He writes: "I met Lt. Eddie Jankowski the other day. He is in the physical training department at this base and is the only one from Wisconsin that I have met since I have been in the service."

CHRISTENSEN, NEPHI A. c '28, is with the Ordnance Dept. of the USA as chief of the research branch of the Rocket Division, located at the Aberdeen Proving Ground, Md.

CURRY, CAPT. DONALD A. ex c '42, with the 111th Engineers in Italy, is reported to have been in command of a patrol that picked up 27 Nazis near Velletri. His patrol was out to secure information about roads and mines, when a German patrol walked into their arms. Curry's men had the drop and took the enemy prisoners.

DALE, DRAKE P. c '11, writer of the article on "Service Engineering the Airplane," which appeared in recent numbers of the WISCONSIN ENGINEER, is maintenance engineer with Douglas Aircraft at Fort Worth, Texas.

FAULKES, WILLIAM F. c '41, was married on August 19 to Barbara Kendall of Mikado, Michigan. He will be working for the firm of Law, Law and Potter of Madison, after September first.

FELDHAUSEN, GORDON J. ex c '42, started work on July 24 as "product engineer" with the Bell and Howell company of Chicago. He had been with an aircraft company in St. Louis for some months.

GRAFF, CHRISTIAN F. c '04, is with the Naval Supply Depot at Mechanicsburg, Pa. His address is Rt. 1, Camphill, Pa.

JAEHNIG, GORDON H. c '43, is with the National Advisory Committee for Aeronautics at Langley Field, Va. in the construction department.

KLOMAN, EDWARD J. c '44, was married on July 8 to Genevieve Lorraine Little of Wauwatosa.

LEMKE, ARTHUR A. c '34, is with the Chicago Pump Co., in the sewage equipment engineering department.

LEOPOLD, LUNA B. c '36, has been promoted to 1st lieutenant, U. S. A. Air Corps (meteorology) stationed at Los Angeles.

LUECKER, ARTHUR R. c '37, has returned from Panama, where he spent two years, and is with the National Advisory Committee for Aeronautics at Langley Field, Va.

NELSON, JOHN W. c '43, is working at the Badger Ordnance Works.

PRICE, REGINALD C. c '35, was appointed assistant professor of engineering at New York University, beginning November, 1943. He teaches hydrology, drainage, and engineering economics. His residence is 5415 Netherland Ave., New York 63, N. Y.

RESNICK, SOL D. c '42, secured his release from the teaching staff of the Carson-Newman College to apply for a commission in the Navy. Defective vision caused his rejection. Now he is a private in training at Camp Fannin, Texas.

ROHLICK, GERARD A. c '36, announces the arrival of a son, Gerard Addison Junior, on May 21. This is the second child for Dr. Rohlick, who is senior civilian engineer in the office of the Chief of Engineers, War Department at Washington.

SAVAGE, JOHN L. c '03, chief designing engineer for the U. S. Bureau of Reclamation and one of the world's leading designers of high dams, has recently been in India as a consultant on a project to irrigate two million acres. The project involves a 20-million-dollar dam and a 200-mile canal.

SCHNEIBLE, DOUGLAS E. c '38, is an ensign in training at Camp MacDonough, Plattsburgh, N. Y., where he will be until about the end of August.

SCHNEIDER, LT. COL. GEORGE R. c '22, has been appointed acting district engineer for U. S. Engineers at Little Rock, Ark.

SCHUETTE, ERAH c '40, is working in the N. A. C. A. research laboratories at Langley Field, Virginia.

THOMPSON, MYRON O. c '42, an ensign in the USNR, is at the Navy Bomb Disposal School at the American University, Washington, D. C.

TICE, ENS. CLIFFORD J. c '42, is assistant public works officer on a Coral island in the Pacific. He writes: "There are planes coming in at all hours of the day and night from practically every outpost in the Pacific. The place is like a tourist camp."

WOBORIL, ROBERT A. c '43, was married on June 18 to Ila Elnora Wolff of Milwaukee. He is with Consolidated Aircraft at Fort Worth, Texas.

(continued on page 20)

Official U. S. Army Photo.

Long range battering rams, these big mobile guns bombard enemy positions, laying down a creeping barrage in advance of our infantry and tank attacks.

Gun crews keep in close touch by telephone with "fire control." Over quickly laid networks of wires the battery command coordinates these heavy artillery units, effectively focusing their combined fire power.

Peacetime telephones doing a wartime job! That's also the main assignment now of Bell Telephone Laboratories' scientists —for this country, with the world's best telephone service in peace, can give no less to its fighting forces in war.

BELL TELEPHONE SYSTEM

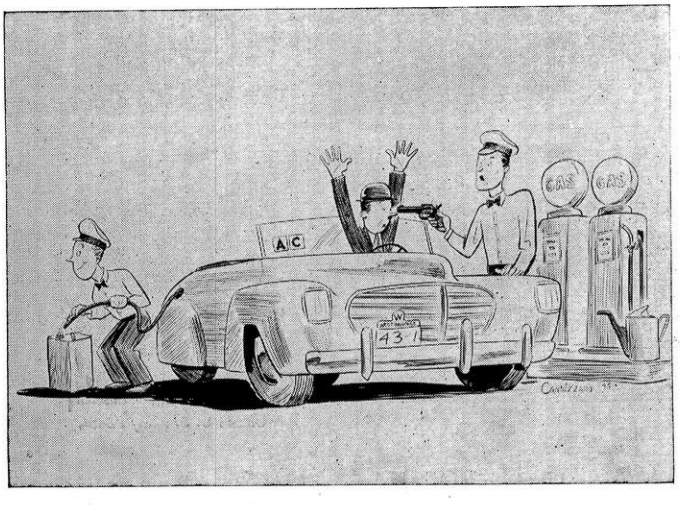
S-T-A-T-I-C

by Fran Tennis, m'46
Bob Clayton, m'46

Engineer—"May I come near you?"
Date—"No, I'm afraid if you do you'll—"
Engineer—"No, honestly I won't."
Date—"What's the use then?"

•

Mother—"Mabel, get off that young man's lap."
Mabel—"Like hell I will; I saw him first."



Things are tough all over

"I never kissed a girl in my life."
"Well, don't come buzzing around me. I'm not running a prep school."

•

We're broom mates;
We sweep together,
Dust we two.

•

I always knew that she
Wasn't the only fish in the sea . . . .
And now it occurs of late
That neither am I the only bait.

•

Devastating Dolly says that many a man's head would never be turned if his wife's back wasn't!

Henry lived in the suburbs, and every night traveled home by motor. One night his car stalled a little way from home. When midnight came and he had not yet put in an appearance, his wife, worried, sent six telegrams to his six closest friends, asking whether they had seen Henry. The next morning she received six answers reading, "Henry is spending the night with me."

•

"And what happened to your leave money?"
"Well, part went for liquor, part for women, and the rest I threw away foolishly on food."

•

Teacher—"Gordon, spell 'straight'."
Gordon—"S-t-r-a-i-g-h-t."
Teacher—"Correct, now what does it mean?"
Gordon—"Without soda."

•

"I hear the faculty is trying to stop necking."
"Is that so? First thing you know they'll be trying to make the students stop too."

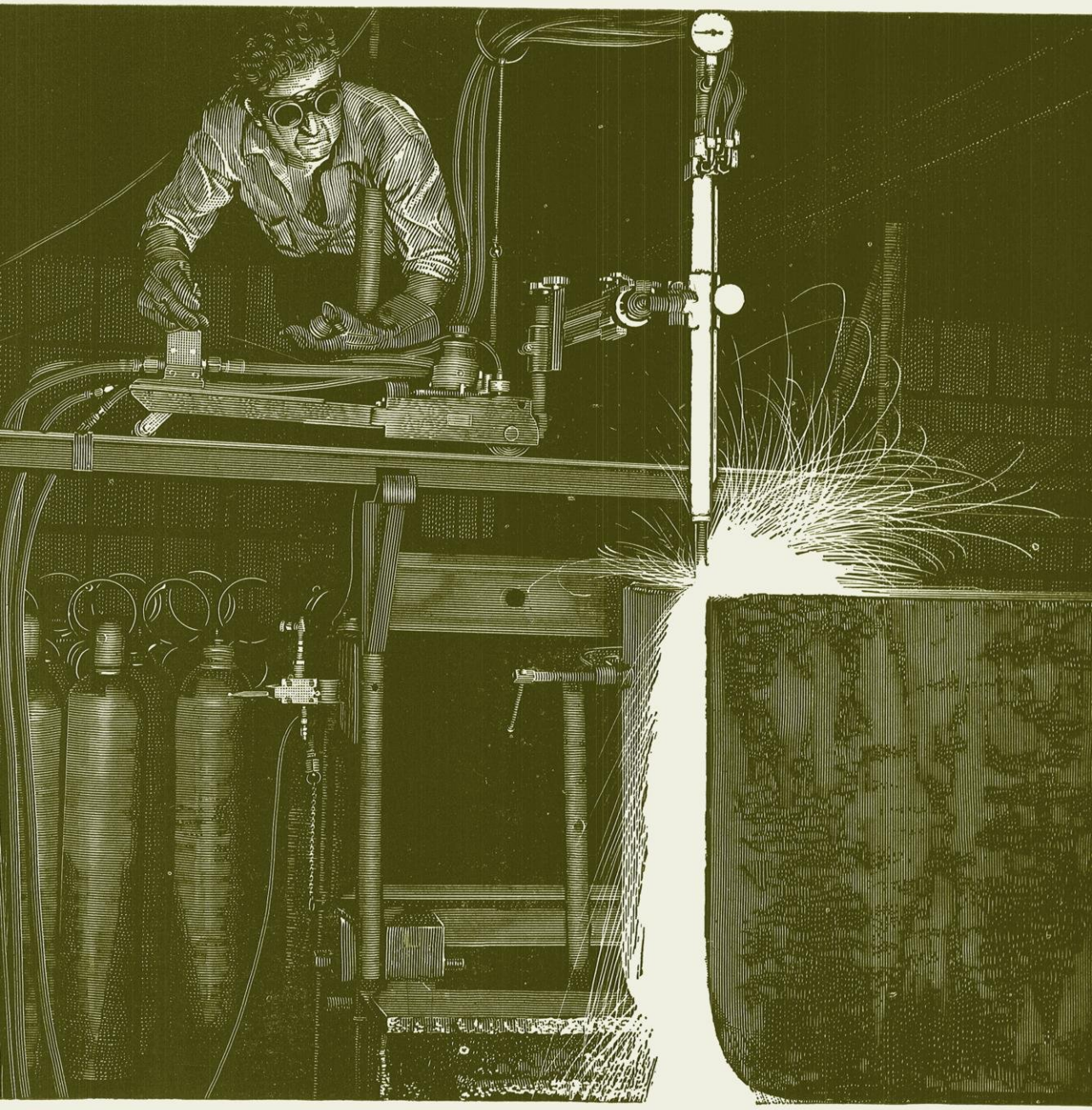
•

It seems that our beloved faculty members happened upon the best torture method for pulling out eyes when they got the bright idea of seating us in alternate seats during an examination.

•

When a fellow gives a girl nothing but soft soap she soon washes her hands of him!

(turn to page 19)



Cutting 1000 Hours Off an Ordnance Schedule

der the piercing heat of the oxy-etylene cutting flame, thick metals this 32" alloy steel block are ped into parts for heavy weapons ter than ever before.

For example, the flame cutting op-tion shown here saves re than 1000 hours ma-ning time in producing one heavy part for ordnance use. Similar valuable savings in time and labor are being achieved on hundreds of other war production schedules by this method . . . cutting steel up to 51" thick on a fast, production basis.

Air Reduction engineers have pioneered in the development of many machine flame-cutting methods t speed operations in war and peace time industry.

If you would like to receive ou informative publication "Airco in th News," we shall be glad to send free copy. Write to Mr. G. Van Al tyne, Dept. C. P., Air Reduction, 6 East 42nd Street, New York 17, N. Y

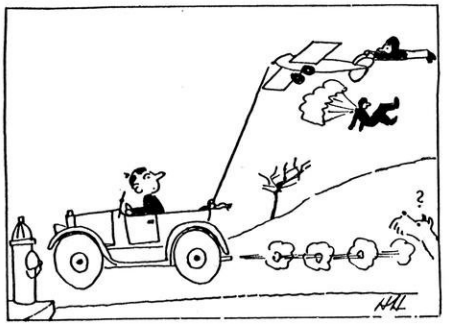
★ BUY UNITED STATES WAR BONDS ★

REDUCTION SALES COMPANY
NOLIA AIRCO GAS PRODUCTS CO.

FUTURE OF AIRPLANES . . .

(continued from page 7)

must be ironed out, but the important thing is that the conventional design is not practical.



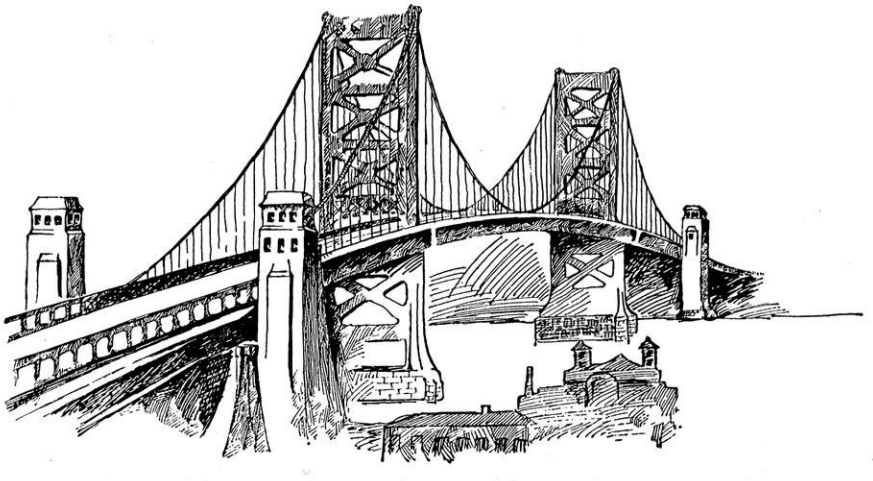
Planes have developed much—will develop more

There is still a long way to go before Joe will be able to take his girl friend up in the clouds nearer the good old moon. A plane must be found, either of the types known, or something new which will be easy to fly, practical, economical, safe, and good looking before it can be sold to Joe.

IN THE LAST ISSUE

Page eight of the June issue was censored by the College of Engineering faculty. There is no mistake in your copy as received. The article was printed without the consent of the faculty and those doing the work, hence all copies of page eight have been inked out. We are sorry that such an incident occurred, but we assure you in the future there won't be such "bewildering" articles.

"I BUILT A BRIDGE—"



I built a bridge,
Whose serried towers 'kist the wind-swept skies.
Span on span,
From shore to shore across the hissing tide.
I built a bridge,
With cable arcs cupping the skies vast blue.
Link on link,
Fading away like purple shadows dipped in far horizons.
I built a bridge,
From earth to sky against the eternal sun.
Truss to truss,
Of deeds my whole life girdled round.
And when the time shall come,
When I must cross that bridge my soul has built,
God grant that it stand firm!
Symbolic of a race that's run, a pathway to the stars.
No greater praise can men then confer:
"He built a bridge!"

—R. D. Jordan '27

—REPRINTED FROM DEC. '29 WISCONSIN ENGINEER

America's NEW Frontier

● IN AMERICA'S EARLY DAYS of growth, opportunities for progress lay in the ever widening frontiers. In the fertile lands of the great plains . . . in the timber of our forests . . . in the metal of our mines.

Today, we have reached the limit of our physical frontiers. But new frontiers lie before us—new opportunities for exploration—in our research laboratories. Here in the multiple world of the electron tube are being born the scientific advances that will make our world immeasurably safer and happier.

Pioneering on this new frontier of research are RCA Laboratories in Princeton, New Jersey. Today RCA Laboratories are devoted to providing the fighting forces of the United Nations with the best radio and electronic equipment available. Tomorrow, this same skill will continue to serve America in creating new and finer peacetime products.

RADIO CORPORATION OF AMERICA

RCA LABORATORIES • PRINCETON • NEW JERSEY

RCA
leads the way in
radio—television—
phonographs—records

RCA

The WISCONSIN ENGINEER

announces

its

SUBSCRIPTION CAMPAIGN

This is the first issue of a new volume of WISCONSIN ENGINEER magazines, published every month except July and October. Subscription prices are only one dollar and twenty-five cents for all ten issues. Single copies are fifteen cents each. Save by buying a year's subscription. SAVE THAT MONEY NOW.

STAFF members are circulating among you on the campus. They will gladly take your order for your subscription. If you don't see them or can't find any of us, send in your order to the

WISCONSIN ENGINEER

356 Mechanical Eng. Bldg.

Your order may also be given by phone to any of the staff. In such a case, contact Toru Iura, business manager, at Fairchild 2500.

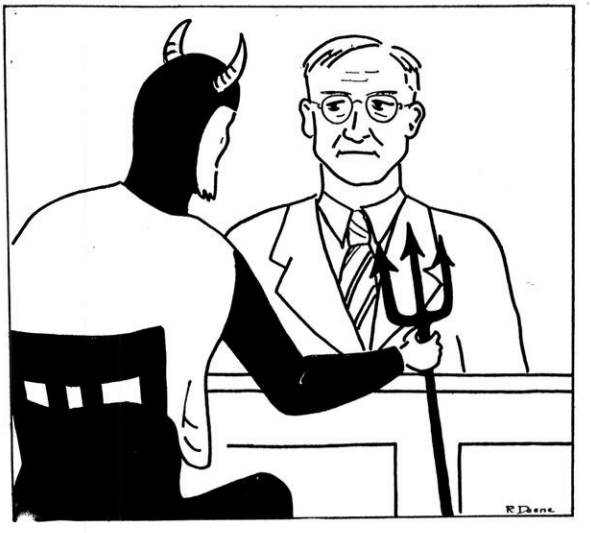
BUY YOURS NOW.

We hope this will be a start for bigger and better magazines, but we need your help. We can put out the magazine, but we need you to read it and offer your suggestions. How about it?

LET'S GO!

The Business staff is launching the campaign. See:

Toru Iura
Ed Daub
James K. Bakken
Kay Nakagiri
Sigurd Lokken
Bob Miller
Walter Thomas



WHERE IDEAS COME FROM—

Where the faculty get their
exams I don't know—
But they sure must come
from the devil himself
down below.

SUPERSONICS . . .

(continued from page 6)

to a standard. By comparison of these patterns, the defect in the specimen can be determined.

After the war, many more practical applications of supersonics will be brought out especially in the field of testing. This type of testing is very desirable because of its reliability, speed, and economy. Also, all parts manufactured can be tested without damage to the part.

M.E. Lobby

STATIC . . .

(continued from page 14)

Pete—"Hey, you guys, cut out the swearing—I've got a woman in my room."

•

He had a fortune of $60,000. He amassed this large sum through courage, enterprise, initiative, and the death of an uncle who left him $59,999.50.

•

Hunter—"How do you detect an elephant?"
Guide—"You smell a faint odor of peanuts on his breath."

He's got a kick coming

"Did you have a good time the other night, June?"
"Naw, I had too much will power."

•

Radio stations should start off the morning broadcast with, "Who the hell left the radio on all night?"

•

"Waiter, there's a fly in my soup."
"Shh! Everybody will want one."

•

"Waiter, there's a fly in my soup."
"What do you expect for a dime, elephants?"

•

"Waiter, there's a fly in my soup."
"Force of habit, sir, our chef used to be a tailor."

•

(Let's hope this doesn't go on forever.)

(next column please)

"You're one in a thousand,"
I said to Bee;
"And so are your chances,"
She replied to me!

(turn to page 22)

TOP FRESHMEN

The following is a list of the highest ranking Freshmen at the close of the 1943-44 school year. earned 2¾ grade points per credit. Honor list students worked at the rate of at least 2¼ points per credit.

Second semester engineers:

HIGH HONOR RATE:

Whitby, Kenneth T.	2.833
Hartnell, V. June	2.805
Zumbach, Walter F.	2.805

HONOR RATE:

Hyzer, Donald V.	2.638
Smythe, Lowell J.	2.611
Martin, Cecil G.	2.555
Holloway, George A.	2.555
Dunton, Stanley W.	2.555
Schroeder, Forrest F.	2.527
Drnek, John L.	2.50
Marquardt, James F.	2.368
Goode, James M.	2.361
Larsen, Stanley S.	2.305
Haas, Donald L.	2.277
Fogt, Thomas H.	2.277

First semester engineers:

HIGH HONOR RATE:

Young, Robert G.	2.867

HONOR RATE:

Martin, Claude F.	2.722
Wethern, James D.	2.722
Allison, Dean M.	2.611
Hyink, Roy	2.611
Michaels, Chas. J.	2.611
Leach, Frank C.	2.50

Although the following did not work at the honor rate, they rank in the highest fifteen per cent of their class:

Gavic, Ralph N.*	2.222
Putterman, Robert	2.138
Guthrie, George W.	2.138
Fox, Thomas N.*	2.111
Nickel, Jack B.*	2.111
Lokken, Sigurd T.	2.083
Smart, Edwin D.*	2.056
Grothman, Harold W.	2.055
Gregory, J. Russell	2.

* First semester

ALUMNI NOTES . . .

(continued from page 12)

Electricals

HELFRECHT, DONALD J. ee Feb. '44, has been promoted to second lieutenant in the signal corps and is now stationed at Fort Monmouth, New Jersey. He will specialize in radio. At present he is here on leave.

HORNBERG, KENNETH O. ee '42, is now in the Naval Research Laboratory in Washington, D. C., in the "Measurements and Direction Finder" department, on mathematical problems. He was married to Louise Napp in December, 1942.

SCHREIBER, OTTO W. ee June '44, has applied for a commission in the U. S. Navy. At the present time he is working in the U. W. Electrical Standards Laboratory.

Chemicals

ABIG, ALBERT A. ex '44, is now on the Pacific ocean as a cadet in the Merchant Marine officers training program.

BERSTEIN, VICTOR S. '40, is employed at the Institute of Paper Chemistry in Appleton, Wis.

DODGE, FRED W. '39, who was formerly with the Freeport Sulfur Co., of Freeport, Texas for two years, is now with the Nicaro Nickel Co., a subsidiary in Cuba. His work has to do with the manufacturing of nickel oxide from iron-nickel ore.

GILBERT, ENSIGN JULES Feb. '42, has completed midshipman's training.

GRANGE, R. A. '35, delivered an address lately on his findings of the importance of boron as a steel hardening agent. This work is still of a "restricted" nature.

HOENIG, RICHARD '43, was married at Janesville, Wis. on June 3, to Dareen Goetsch, who was formerly secretary to L. C. Larson of the Electrical Engineering Standards laboratory. Hoenig resides in Berkeley, California and works in the manufacturing engineering department of the Richmond Refinery of California.

HOERIG, H. F. ChE '34, M.S. '37, PhD '42, former instructor, is now with the E. I. du Pont de Nemours Co. of Buffalo, N. Y.

KERNJACH, ANTHONY '42, is now priorities manager for the Trane Co. of La Crosse, Wisconsin, stationed in Washington, D. C.

MEEK, ENSIGN ROBERT ex '43, was married March 13 in Milwaukee to Barbara Cubela. Bob recently completed the Navy aerology course at M. I. T. and is to be assigned to a new post shortly.

PETERSEN, E. S. '25, is now the vice president of the Tilo Roofing Corporation of Stratford, Conn.

RAEUBER, ARTHUR '37, who was formerly with the Remington Arms Co. in Bridgeport, has returned to the Tilo Roofing Corporation of Stratford, Conn.

SCHMALZ, HENRY H. S 1/c, '42, is stationed at Great Lakes, Ill.

ZODTNER, LISLE '27, stopped here for a visit May 31. Since January, 1940, he has been with the Dow Chemical Co. at Midland, Michigan. Prior to this he was with the Pennsylvania Salt Till, working with chlorine and caustic soda and doing sales service for pulp and paper and also working in the plant.

Mining and Metallurgists

ERSPAMER, GORDON met '43, is an ensign in the navy and recently completed his Annapolis assignment.

GIBBEUS, ROBERT min '42, is in basic training at Great Lakes, Illinois.

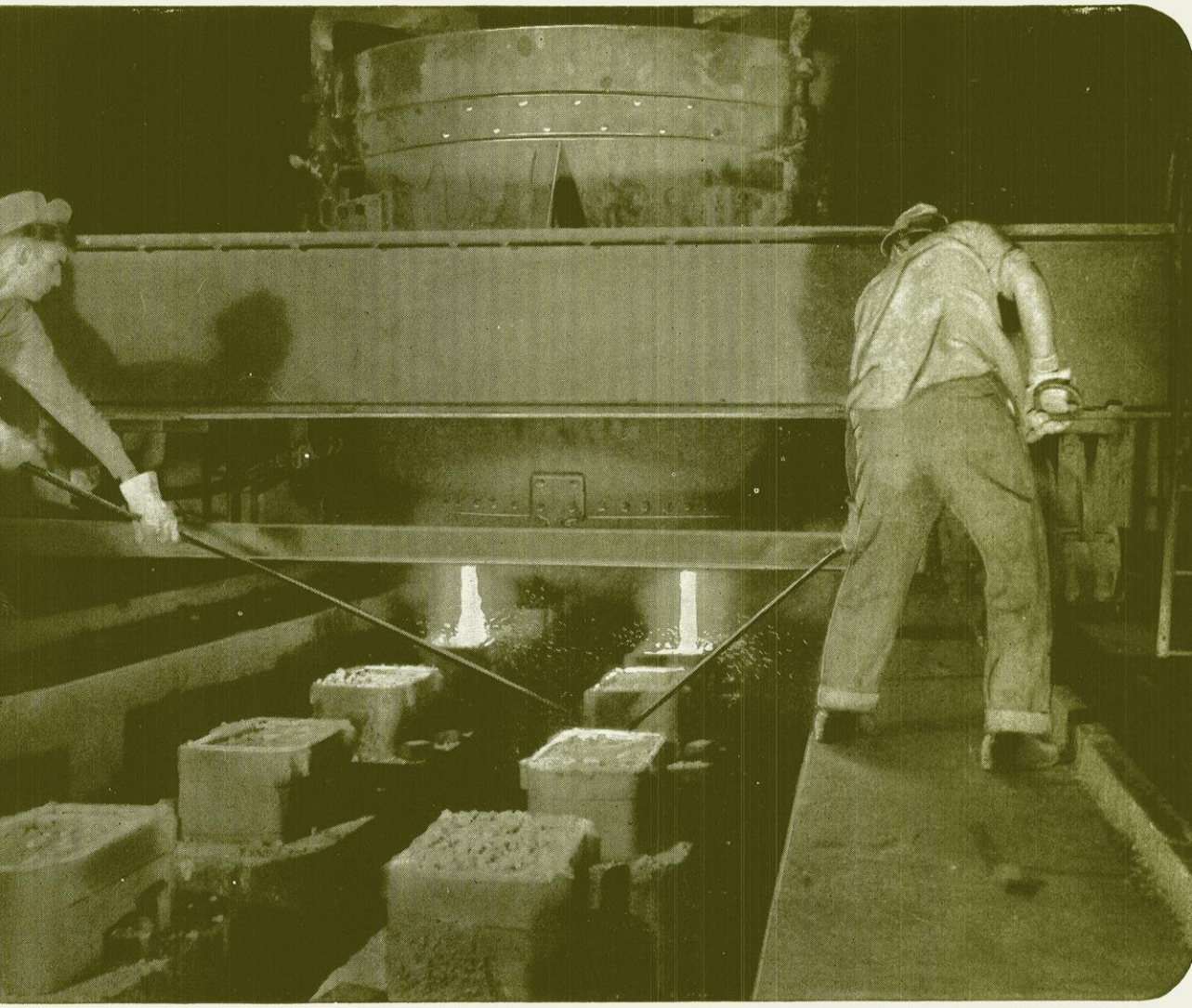
MEVES, DONALD ex met '44, is a second lieutenant in the Army Air Corps. He visited Madison August 2 and is now waiting for his overseas orders.

SHOREY, CAPT. EDWIN R., JR. '35, is Cannon Officer with the 442nd Combat Team (Infantry) in active service with the 5th Army in Italy.

WICEN, ROBERT met '44, is in basic training at Great Lakes, Ill.

WOLLERING, W. O. met '44, is attending the U. S. Naval Academy at Annapolis, Maryland.

WRIGHT, LT. RICHARD E. ex '44, has been reported as missing in action. Lt. Wright was a bombardier. He was married on November 13, 1943 to Rosalie Herbst. While attending school here he became a member of Phi Eta Sigma and Pi Mu Epsilon.



O.W.I. Photo by Palmer, in an Allegheny Ludlum plant

STEEL IS FLOWING TODAY THAT WILL BE FLYING NEXT MONTH

ALLOY steel, conceived in the mighty heat
e electric furnace, is just being
when it teems into ingot
ds. From here it rapidly multi-
s into countless forms and
es, reaching maturity within a
er of days as parts in finished
planes, tanks, guns, ships or
itions.

any of those products will be
er, and will perform their war
without fail—thanks to the
ity control exercised by Alle-

rigid control, true, but very necessary to give our fighting men the decisive edge in battle that better equipment assures. And the same close control, coupled with Allegheny Ludlum's research activities —now developing still better fighting steels for our armed forces— will continue after victory is won, to help create better peacetime products for you.

But before there can be peace, we at home must exert every effort to win the war. Collection of scrap metal, salvage of waste fats, con-

your contributions from the home front. Only thus can you give the men behind the guns the tools to assure victory.

AL
STEEL FOR THE NATION'S WELFARE

Allegheny Ludlum

TELEVISION . . .

(continued from page 11)

relay stations which will enable the broadcasts to cover a larger distance and area. This nation would be welded into a vast television network joining all the important cities. Plans for such networks are already being made by American Telephone and Telegraph, R. C. A., and General Electric. Some cables are already up, joining such points as Washington and New York. Some lines have been in operation—others still are.

Another restriction will be the cost. Can a set be put on the market at such a price that the people can afford to buy it? Some have estimated the cost for a post-war set at around 700 dollars. Few would or could afford to pay this. Others, however, have set the price at anywhere from 200 to 700 dollars. This would bring the price down somewhat.

However, despite the restrictions that television seems to have at the present time, good engineering can overcome most of these. You can look forward to having your own post-war television set. There will be television.

Time out for muscle work

STATIC . . .

(continued from page 19)

"Shay, lishen, lady, you're the homliest woman I ever saw."

"Well, you're the drunkest man I ever saw."

"I know, lady, but I'll get over it in the morning."

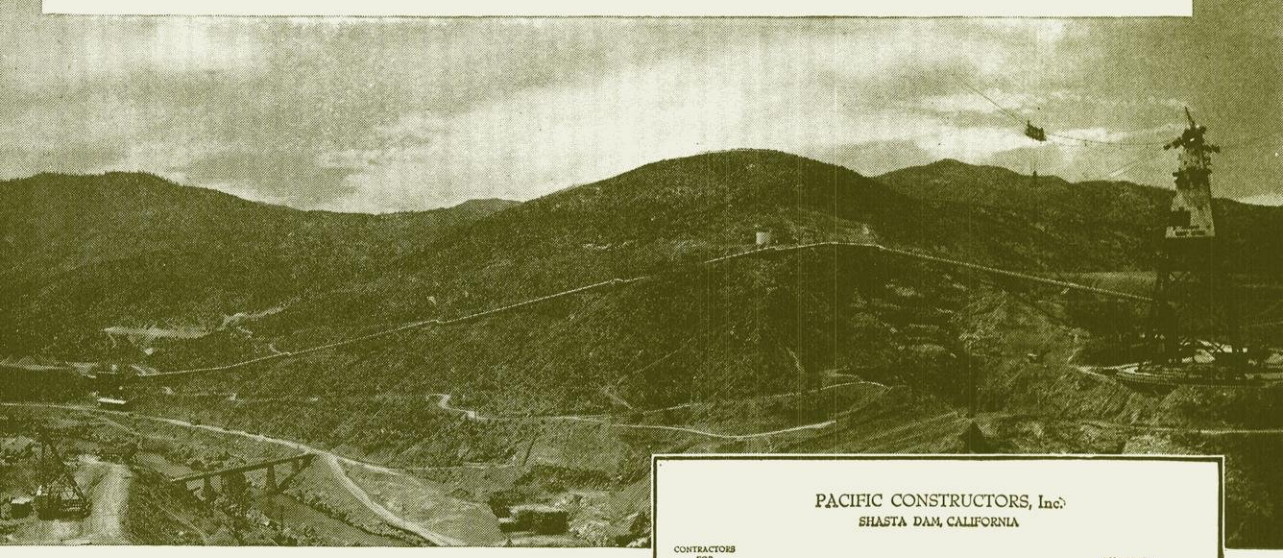
•

Wee Willie: "Mom, how loud does money talk?"

Mamma: "Usually it talks so loud you can't hear the whisper of your conscience!"

"Greatest saving... no lubricating or cleaning up."

— says Shasta's Mr. Crowe



E last link in the 10-mile Shasta Dam convey- system is a mile and a half unit made by the veyor Company of Los Angeles, using 17,500 New arture Self-Sealed Ball Bearings of two types.

or nearly four years this system has handled 13 ion tons of rock as big as 6 inches in diameter.

ne satisfactory service obtained is proof that these sealed "Lubricated-for-life" ball bearings are not equal to the job but effect great savings in time lubricant.

ew Departure engineers will be glad to suggest you may use these ball bearings to your own ntage, when they are again available. Ask Booklet C.

ew Departure, Division of General Motors poration, Bristol, Connecticut. Los Angeles, ago and Detroit.

3281

PACIFIC CONSTRUCTORS, Inc.
SHASTA DAM, CALIFORNIA

CONTRACTORS FOR SHASTA DAM

Address Reply to
Shasta Dam, California
January 18, 1944

The Conveyor Co.
3260 E. Slauson Avenue
Los Angeles, California

Gentlemen:- Attention: Mr. W.E.Saxe, President.

As you know, our use of the troughing conveyor system at Shasta Dam using New Departure Conveyor Roll bearings and installed by your company, is about completed.

When this job was being discussed at the start, we questioned the use of New Departure Sealed Conveyor bearings in service on 36 inch belts carrying six inch rock at 450 feet per minute.

Considering that even in the building of Boulder Dam we had not had as large a conveyor problem, we were reluctant to experiment any more than we had to in designing equipment for Shasta Dam.

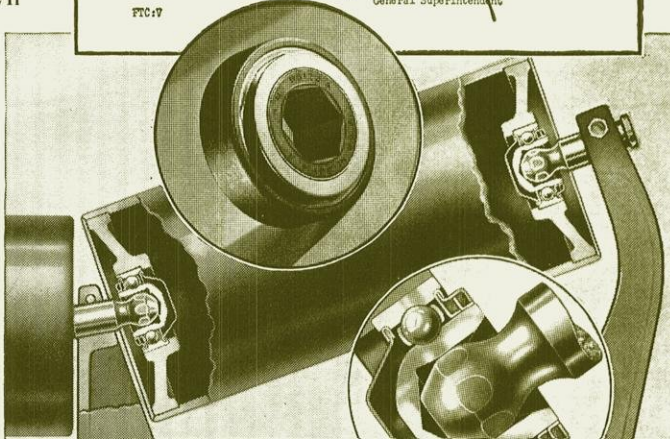
Now, after nearly four years with extremely low and satisfactory maintenance costs, approximately 13,000,000 tons have been handled with this equipment.

We know that the greatest saving in the use of this design was in the elimination of lubricating and of cleaning up after lubricating, made possible by the use of sealed bearings.

It is a pleasure to advise you that your troughing idlers using New Departure Sealed bearings have been very satisfactory.

Yours very truly
PACIFIC CONSTRUCTORS, INC.
By
General Superintendent

FTC:V



NEW DEPARTURE

BALL BEARINGS

LOOKING BACK—

In Old WISCONSIN ENGINEERS

TESTS BEING MADE ON MODEL OF FIELD HOUSE

Wisconsin's new field house will be comfortable for spectators. Determined to profit by the experience of other universities with their field houses, the designers of the Wisconsin edifice are conducting a series of experiments in heating the building on a model built to a scale of one in twenty. The tests are being made at the Capitol heating plant under the general supervision of Prof. Gus L. Larson of the department of steam and gas engineering and under the immediate charge of Mr. Henry Zantow of the staff of the state power plant engineer.

Observations have shown that at some of the big field houses the range of temperatures between the lower seats of a balcony and the higher ones is as much as twenty degrees. While the spectators on the lower seats are uncomfortably cold, those on the upper seats are uncomfortably warm. In the present tests heat is applied at various points on the model and the circulation is under careful control. The heating system finally adopted will represent the most advanced practice in this field.

—from May, 1929

•

ENGINEERING PROFESSORS TO ATTEND WORLD CONGRESS

Four university men have been named to cooperate with the American committee of the World Engineering congress, of which President-elect Herbert Hoover is honorary chairman. The four who will endeavor to stimulate interest of local engineers in the Tokio convention of the organization next fall are Profs. G. L. Larson, D. W. Mead, E. F. Bean and J. T. Rood.

—February, 1929

•

DRAWING CONTEST IS GAINING MOMENTUM

The fourth annual Wisconsin Engineer drawing contest, sponsored by Alpha Tau Sigma, is rapidly getting under way, with all indications pointing to a record number of entries from the freshman drawing classes. This year's contest represents a departure from those of previous years in several ways. The first is that the drawing for the contest is one of the regularly scheduled drawings in the freshman course. Thus very little outside work must be done by those wishing to enter. Another point is that the problem is quite a bit more difficult than its predecessors. The aim of the department is to include as many of the standard conventions as possible, such as sections, threads, etc. Another proposed change, which is not definite as yet, is to delay the announcement of the winning drawings until the first issue of the Engineer in the fall. This would give the entrants more time to work, and also give the judges a better chance to make their choice.

—March, 1937

•

THE GROWTH OF ENGINEERING AT WISCONSIN

The first mention of an engineering course at Wisconsin was made in a letter of Edwin Coe to his parents written August 19, 1860, published in the Wisconsin Alumni Magazine of April, 1929. Mr. Coe writes:

"We are settled now and everything is in running order. I have not had to study very hard yet to keep up with my classes, and have had time to get ready to enter the Practical Surveying Class, which begins very soon. The Institution owns a fine set of instruments and I mean to learn all I can about surveying as it may come in very handy to me some time. Mr. Cargell has charge of this and we go out into the field two or three times a week and practice."

At that time the surveying was given by the department of mathematics. In 1865, a course in Military Tactics and Engineering was incorporated into the curriculum. The course covered military tactics very thoroughly with less attention to the civil engineering.

In 1875, according to President-Emeritus Birge, a course in engineering was made a part of the general science course. The freshman and sophomore years were devoted to regular "Hill" subjects, while the last two years covered briefly the field engineering. Prof. Nicodemus and one assistant taught all the subjects.

The College of Engineering was organized by Dean Johnson in 1890. Today it has five four-year courses with the possibility of a student specializing in work under a particular department.

—May, 1929

•

ENGINEERING EXPOSITION GAINING MOMENTUM

According to George Smithwick, Chairman of the Program Committee of the 1940 Engineering Exposition, the date and tentative program are now arranged. The Exposition is to be held in the Mechanical Engineering Building on April 4, 5 and 6. As a part of the Exposition activities, the committee is planning an Engineering Dance in the Great Hall of the Memorial Union for April 6.

Lawrence Burton, Chairman of the Student Exhibits Committee, reports that nine student exhibits have already been arranged. Robert Bennewitz, Chairman of the Industrial Exhibits Committee, states five industrial exhibits have been promised by important companies.

Francis Albers, General Chairman, invites interested students and faculty members to attend the Saturday afternoon meetings of the General Committee, to help plan this new activity.

—April, 1940