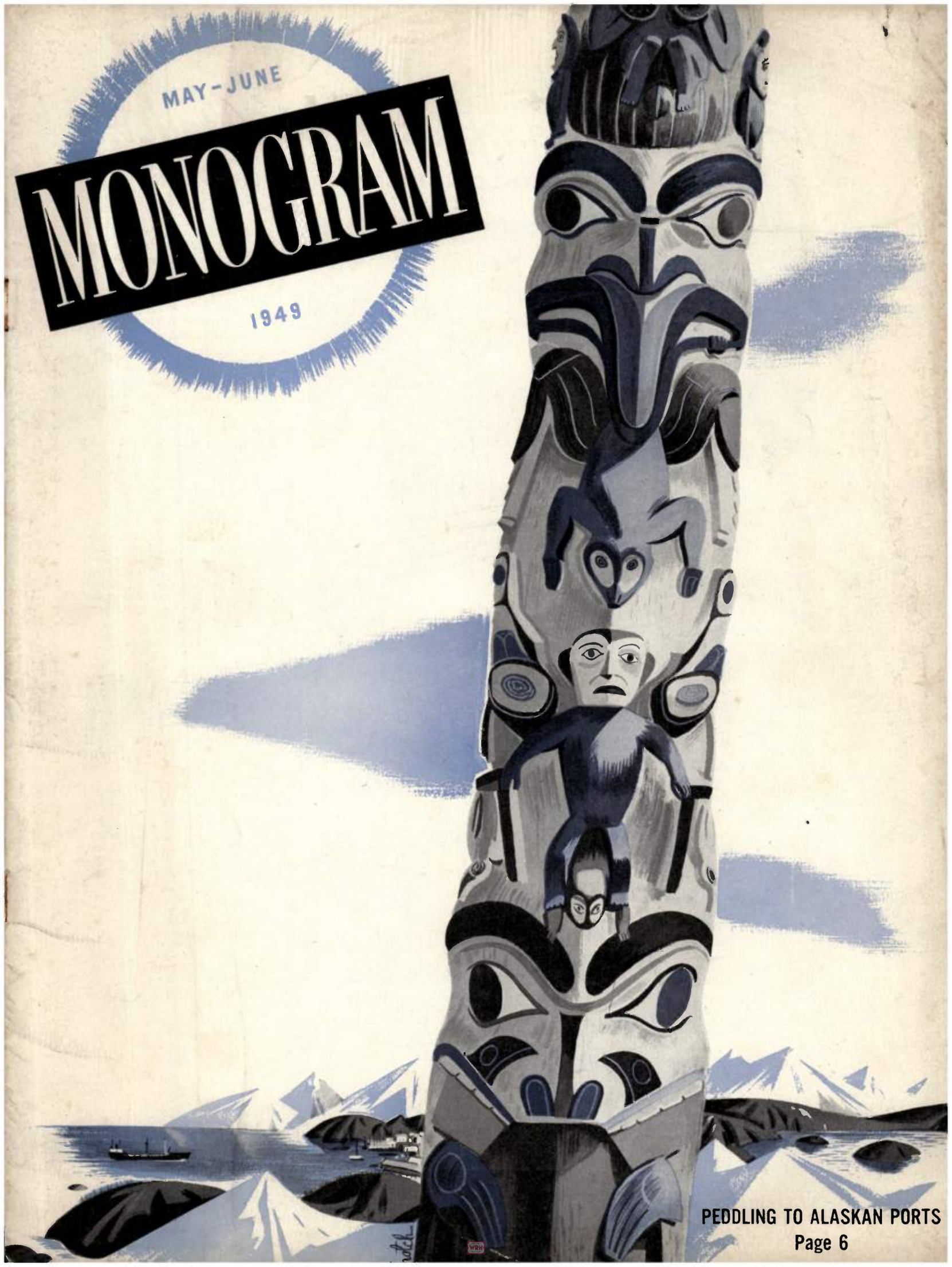
MAY–JUNE

MONOGRAM

1949



PEDDLING TO ALASKAN PORTS
Page 6

Iron with ease...press like a tailor...

WITH THE GENERAL ELECTRIC COMBINATION DRY AND STEAM IRON

This remarkable iron is two irons in one. It is a *dry* iron. It is a *steam* iron!

With it you can whizz through your ironing. You can iron light cottons, crepes, silks and synthetics without first sprinkling.

Furthermore, with this General Electric Combination Dry and Steam Iron you can press like a tailor. You can iron suits, trousers, skirts to perfection. You need no pressing cloth.

Your General Electric retailer will gladly show you this timesaving iron. See him today. General Electric Company, Bridgeport 2, Connecticut.

Eliminates much of your sprinkling. Wrinkles simply *disappear* as the General Electric Combination Dry and Steam Iron glides over light fabrics. It *dampens* as you iron, and you can control the amount of steam.

No pressing cloth needed for woolen suits. You can iron them to perfection—just like a tailor—with the General Electric Combination Dry and Steam Iron. And best of all, there will be no shine.

Flannel skirts and jackets can be quickly and easily renewed to band-box freshness with the General Electric Steam Iron. No sprinkling necessary. The fabric is simply steam-ironed at low temperature.

Cotton suits are ironed best with a *dry* iron after dampening. This iron becomes a dry iron when the steam control knob is turned off. *You can switch from steam to dry ironing and back again without removing the water!*

Turn this knob—and it's a dry iron! You simply turn off the steam. (You don't have to remove the water first.) And, you can turn back to steam ironing just as quickly!

It's so light in weight (only 4 lbs!) you can sit down while ironing. You iron faster with every broad stroke, too, for this iron has an extra-large ironing surface —27½ sq inches.

New, special reservoir is convenient—it takes just a few seconds to fill! In every way, this streamlined beauty is just as easy to use as it is handsome. See this Iron at your G-E retailer's.

GENERAL ELECTRIC

MONOGRAM

VOL. 26 NO. 3

BARRINGTON S. HAVENS, Editor
RUTH E. DWYER, Assistant Editor

The General Electric MONOGRAM is an intracompany magazine published for all office employees of the Company and its affiliates. Circulation is restricted to General Electric personnel. It is distributed without charge to those on its circulation list. The object of the MONOGRAM is to circulate news of the Company and its people. It does not state policies, preferences, opinions, or recommendations for the Company. It is published bimonthly at Schenectady, New York, by the General Electric Company and printed in the U.S.A. by The Maqua Company.

WEENR STICK: Inventors develop young in Chicago, at least Richard Parker did. For Richard is an inventor, and he's only six. Not long ago, while in the hospital recovering from an operation, Richard drew up a sketch of an electric wiener roaster, which he labeled a "weenr stick" and which he insisted his father send to "the boss of G.E. Co."

Our amazement at Richard's accomplishment is no greater than our admiration for the letter acknowledging his "invention," written by J. W. Bremer of the Patent Department in Schenectady. The letter:

"Your father's recent letter, enclosing your drawing of a wiener roaster, which you wanted him to send to the boss of the General Electric Company, has been referred to me. I am not the boss, but my boss has given me the job of reading and answering letters which people like you and your dad send to our Company suggesting new things to make and sell or ways of making old things better.

"Your roaster, I am sure, would make wieners that taste good, but so many people think that the only good way to cook them is over an open fire outdoors where there is no electricity that I am afraid we could not sell enough electric ones like yours. Big electric machines for cooking hotdogs are in use, though. You will see them around, I am sure.

"You are getting an earlier start than most inventors get. I do not remember ever before in the many years I have been getting letters like yours, getting one from an inventor only six years old. We are very pleased that you thought of the General Electric Company.

"Maybe you will enjoy the comic books I am sending. Good luck to you, Richard: and think of us again when you make other inventions."

Says a later letter from Richard: "I am going to work with you in 16 years."

CALENDAR USES: There's no use talking, the G-E calendar gets around, and some of its uses are interesting. From Los Angeles, for example, comes an account of how the movie studios remove the pictures from the calendars and use them—or portions of them—as background material in shooting movies.

On the other side of the continent the Borough of Vineland, N. J., requested so many calendars that a G-E man, curious, investigated. It seems that the merchants there developed such intense rivalry over whose calendars would be hung in the offices of the city hall and the municipal power plant, that an official ruling put a stop to it by allowing only General Electric calendars to be hung in those places.

PIPKIN'S CLASSMATE: That story about Marvin Pipkin in this issue reminds us of a letter the Company received not long ago from a woman who was one of his high-school classmates in Bartow, Florida, back in 1909. She remembers him as a "shy, gawky, sandy-haired, freckle-faced boy who knew more chemistry than all the rest of the class put together." After that she forgot all about him until, years later, she read in a newspaper "he had done something about frosting an electric bulb."

She now teaches home economics in the same high school. "One day last week," she writes, "hurriedly opening my mail—among other envelopes a photo-news poster from General Electric. . . So I unfolded the poster, and there: Marvin Pipkin!

"I'm still gasping with surprise over the coincidence that, after 40 years, the story of his success should come back to . . . my hands, for I do not believe there are more than half a dozen people left in Bartow who would have remembered him."

Talent Scout for INDUSTRY

Bob Canning, the man who recruits college graduates for the Business Training Course, is a familiar figure on American campuses.

Photos by George Burns

BOB CANNING never went to Harvard, or Notre Dame, or Nebraska U. Or, for that matter, to the scores of other colleges across the nation that each year welcome him back like an old grad. The University of Michigan is Bob's alma mater, but recruiting college men for General Electric's Business Training Course has made him a campus cosmopolite.

This course takes an average of 200 students each year. But the Company doesn't expect that the best qualified men will, upon graduation, promptly beat tracks to General Electric. Someone must go out to the schools and interview some 3000 men from whom to handpick the required number. That means that someone has to reconcile himself to spending nearly half the year on the road—everlastingly hopping on and off trains, living out of a suitcase, going without sleep, and talking himself hoarse for days on end.

A train compartment is Bob's home-away-from home. Well accustomed to the scenery along his route, he spends his traveling time studying records of the boys he has interviewed.

Recruited from colleges last year, these boys go back to school at G.E. Lecturing to the BTC class is G. L. Phillippe, Apparatus Dept. auditor.

Canning likes to keep in touch with the men he has hired. Here he lunches in Schenectady with Ralph Veals, Russell Clark, and Jim MacDonald. Below, he makes the most of a week-end reunion with his wife and children.

Bob Canning, manager of the Business Training Course, is the fellow who does the legwork. He covers the college circuit with a task force of one man full-time and one man part-time. Sometimes he is assisted by a BTC graduate, an alumnus of the college in question, who plays a liaison role between the school and the Company. Ninety schools must be visited; Bob personally calls on more than half of them. In five months of concentrated traveling he chalks up an exhausting 40,000 miles.

Those who know him are amazed at his tirelessness, his ability to take this on-the-jump existence for weeks at a time. He's up at 6 a.m., beginning his day with a group meeting at 8, followed by individual interviews until 7 or 8 in the evening. After a day or two at each school, Bob is on his way to the next one.

It's a job to make a strong man flinch—but to slim, 31-year-old Bob Canning it's one in a million.

The mainspring of his energy is his wholehearted enthusiasm for what he's doing. It boils down to the simple fact that he likes people. Meeting new people, as he does constantly, never fails to stimulate him. More than that, he has the self-satisfaction of being in a position to lend them a helping hand.

It comes natural to his friendly, extroverted personality to take a genuine interest in the students he interviews—and there are 30 or 40 of them a day. He knows how to put himself in their shoes. Ten years ago, as a senior at Michigan, he was interviewed by A. B. Crouch (now assistant comptroller), and he remembers the value of advice from a business man representing a well-known firm.

A Helping Hand

The boys find it easy to talk to Bob. He looks almost young enough to be one of them, and his big smile is full of friendliness. The interview quickly becomes something more than a business proposition. Each student has his particular problems that he's eager to discuss with someone. First of all, he has to make up his mind just what kind of work he wants to get into. If General Electric isn't the answer, Canning will try to

Bob knows his way around college fraternity houses all over the country. A good mixer, he is often invited to join an evening bull session with the boys.

suggest some other organization. Some boys have to make the decision of remaining in their home towns or going to a distant city where opportunities are better. War veterans with wives and children are worried about the long delay in starting their careers. And housing is the common worry of all the married men and the single ones thinking about marriage.

While Bob is offering advice and encouragement, he is busy analyzing the boy he is talking to. In a brief meeting he must size him up and make a swift decision which he hopes won't prove to be wrong in the years to come. He must be psychologist and prophet as well. Although he has the student's scholastic records to go on, and the opinions of professors and placement directors, Canning leans heavily on his own personal judgment, on his own measurement of the student's character and potentialities. He tries to see him not only as he is now but as he will be ten, twenty, even thirty years from now. As a student enters the room, Canning is automatically noting how he carries himself, how he shakes hands, how he talks. The brilliant student who sits like a bump on a log with little to say won't get by on his high grades. Accounting majors aren't the only ones hired; many of the recruits are graduates of liberal arts courses and some are engineers.

Jack-of-all-trades

Seven years of recruiting experience have added to Bob's intuitive understanding of character. He was a BTC representative at the Appliance and Merchandise Department in Bridgeport from 1942 to 1945, when he took his present job. Before going to Bridgeport he had assisted the supervisor of business training in Schenectady for two years.

The job of recruiting is more complex than meets the eye. At times Bob feels like a jack-of-all-trades, and some of them he never learned in school. He doesn't consider himself an after-dinner speaker, but he sometimes wears that hat too. With no forewarning a professor may ask him to talk to a group of five or six hundred people on personnel policies. Willy-nilly, Bob steps on the platform and ad libs.

He has a flair for salesmanship and public relations—he needs it. Other organizations are bidding for new graduates, particularly the good ones. At the larger schools a senior may be interviewed every day during the final term by representatives of different companies. But Canning finds that most of the students are already predisposed towards a well-known organization whose future is secure, and they are also in favor of the company that offers a training program.

Thus General Electric is in a good spot to start with. The Business Training Course is one of industry's oldest non-technical training programs. It was started 30 years ago by the late I. D. LeFevre and S. L. Whitestone (former comptrollers) for the purpose of developing men well versed in accounting and similar studies. So successful has it been that most of the management positions in the accounting and financial field in General Electric and its affiliates are held by BTC graduates. As the Company expanded, the positions open to these men became more diverse and today they are in sales promotion, publicity, market research, production, sales, and general management. With headquarters in Schenectady, the course is also given in Syracuse, Pittsfield, Lynn, and Bridgeport. Classes are held in the evening, twice a week, for a period of three years. During this time the recruit has a variety of practical daytime assignments.

Bob doesn't blandly say that his job is all beer and skittles. Naturally he'd like to spend more time at home with his wife and three children. But balancing the drawbacks is the real pleasure he finds in seeing the boys he has hired move up the ladder. He feels something akin to fatherly pride in their success.

PEDDLING TO ALASKAN PORTS

General Electric propulsion equipment drives a sourdough Standard Oil tanker which brings fuel and other supplies to isolated communities.

TOO MANY of the inhabitants of the 586,000 square miles which are Alaska—one of America's last frontiers—a homely, 210-foot tanker, the *Alaska Standard*, is the only link with the outside world. Powered by General Electric propulsion equipment, this sturdy vessel is one of a fleet operated by Standard Oil Company of California. It plies the coastal waters of southeastern and southwestern Alaska in a peddler's trade, bringing fuel and other vitally needed supplies to many isolated communities.

Alaska is a land of paradox and strange contrasts. Temperatures range from 60 below to 90 above within the space of a few months. Strawberries may grow to the size of a small orange in the short summer season. Modern communities lie next door to vast, unexplored wastelands. The sun shines for 20 hours a day in summer and for only 4 hours, six months later.

Shut off from the remainder of North America by high mountain ranges and thousands of miles of uninhabited muskeg and forests, Alaska has been slow to grow. Only 85,000 persons, half of them natives, inhabit its great expanse of land. Except for air travel, most communities are virtually isolated; transportation is a real problem. Little more than 2000 miles of roadway—almost entirely unpaved—connect its major centers of population. Steamer calls to some coastal ports are infrequent, and the Alaska Railroad's 600 miles of track connect only three towns of any size.

Because of these conditions, Alaskans face a situation similar to that which existed during the early growth of America. As the pioneers of those days depended on wagon trains and traveling peddlers, so Alaskans today are dependent on the water-borne vessels which, aside from airplanes, are their only link with the "outside."

Fuel Is Essential

Fuel is an essential commodity. The great seafood canneries which dot the coastline from the Bering Sea to Ketchikan use large quantities and many types of petroleum products for day and night operations during the fishing seasons. Trucks pushing northward over the Alaska and Richardson highways to Fairbanks need gasoline and diesel fuel. Fishing boats keep their engines turning over almost without stop when the salmon are running. Stove oil heats many homes during the long Arctic winter.

But fuel is not the only commodity carried by the *Alaska Standard*. She and her sister ships carry a variety of supplies for the fishermen, fur trappers, missionaries, and storekeepers at the various ports of call. There are cases of special fuel for pressure lanterns, whose metal containers may later roof a cabin. There are fly sprays and spray guns, starting fluids developed for Alaskan use, and asbestos roof coatings to keep buildings secure against snow and rain. There are greases specially prepared to be effective at low temperatures, and rust preventives to safeguard expensive cannery equipment in the off-season.

All these products must be brought in from the "outside," from refineries near the source of crude oil in California. It's a big job—and it falls to tankers like the *Alaska Standard*. Because Standard Oil of California has built large storage depots at central points throughout the territory, these ships can haul bulk loads to be held for use on Bristol Bay in the north, in the Aleutians, and in both southwestern and southeastern Alaska as well as in the interior. Largest supply points, easily reached by the tankers, are at Ketchikan, Juneau, Seward, and Dutch Harbor.

When the *Alaska Standard* was built in 1923, it was equipped with diesel-

electric drive. This consists of two diesel engines each driving a 245-kilowatt General Electric generator. The generators supply direct current to two 300-horsepower General Electric propulsion motors on one shaft to turn the single propeller. A smaller G-E generator supplies electricity for lights and deck auxiliaries such as capstans, anchor windlass, and pumps.

First Major Overhaul

This equipment served the vessel well for nearly a quarter of a century. But last year she was brought in for her first major overhaul in 24 years. During that time she had logged nearly a million miles, the majority of which were in the difficult waters of Alaska.

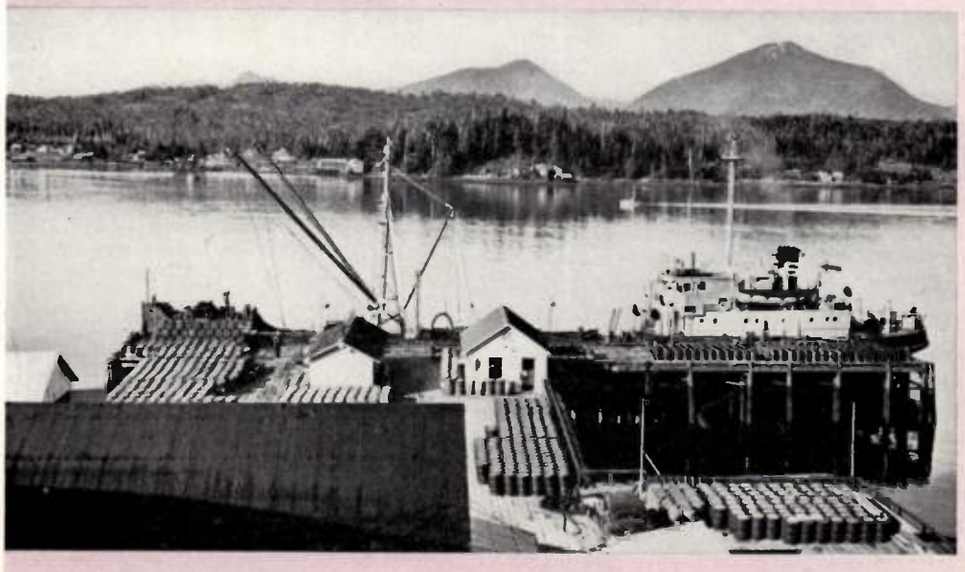
When the ship arrived at the Moore Shipbuilding and Drydock Company at Oakland, California, Apparatus Department marine service engineers went aboard to supervise the reconditioning of the General Electric equipment. Motors and generators were removed and sent to the Company's San Francisco service shop, where they underwent a complete reconditioning. Propulsion armatures were cleaned, rewound, rebanded with additional turns for added horsepower and increased speed, then dipped, baked, pressed on new shafts, and finally dynamically balanced. Coils were stripped, cleaned, rewound, and reinsulated with mica-glass. Copper bars were cleaned and retaped. Commutators were turned and polished and the slots undercut. Brush-holders were reinsulated and chemically cleaned. New collars were installed on both field and commutating coils. On board ship, marine service engineers cleaned and completely overhauled the propulsion switchboard and field rheostats. When the motors and generators were once again as good as new, they were delivered to the shipyard and lowered into place through the engine-room hatch.

First dock trials, then sea trials under full power, were passed with flying colors. And now, once again, the little tanker is a familiar and welcome sight in the Alaskan waters that have been her home for so many years. Once again her General Electric motors and generators are singing a steady song of power and rhythm, her propeller is biting through the cold waters of strange and fascinating ports and inlets to deliver supplies at wharves and landings you won't find on the map. For the *Alaska Standard* is home again, ready for another 24 years of faithful service.

To many of the inhabitants of Alaska this 210-foot tanker, the "Alaska Standard," is the only link with the outside world. She is one of a fleet operated by the Standard Oil Company of California.

The "Alaska Standard" discharges fuel at one of her many ports. Fuel is an essential.

The Port Oceanic cannery tender's six-year-old daughter Phyllis and her dog Blondie.



Tankers like the "Alaska Standard" bring supplies to and from large Standard Oil storage depots at Ketchikan, Juneau, Seward, and Dutch Harbor. This is the dock at the Ketchikan supply depot.

it's Cricket in Philly

The Switchgear Divisions boast one of the best cricket teams in America

TWO young seamen from the British cruiser *Exeter* stood watching a familiar contest in Philadelphia's Fairmount Park. It was a balmy Memorial Day afternoon in 1939, a few months before the start of the second World War.

On the playing field the *Exeter's* team, champion of the British West Indies Fleet, was pitted against an American club representing General Electric's Philadelphia Works.

The two sailors watched silently for a long time. Then the shorter one turned to his lanky buddy.

"I say, matey—these Yanks play a blasted good game of cricket."

And so they do. The Apparatus Department's Switchgear Divisions cricket team is one of the best in America. During the war it competed against a number of English, Canadian, and Australian service teams. Royal Navy ships which tied up at Philadelphia piers welcomed the chance to engage the General Electric cricketers. The *Exeter's* crew had steamed 70,000 miles in the two and one-half years since they had left England. A few months after they left Philadelphia they made history in a battle off the coast of South America with the Nazi pocket battleship, *Graf Spee*.

Cricket, although traditionally England's national pastime, is played regularly in the United States too. The Switchgear Divisions team is looking forward to another season of 30 to 40 games with teams in this country and Canada. The General Electric aggregation has been champion of the New York and Metropolitan District Cricket Association eight times in the eleven years the team has been a member. Other clubs in the league are Brooklyn; Staten Island; Paterson, N. J.; the British War Veterans of Oyster Bay, N. Y.; and Fairmount, of Philadelphia.

The General Electric team was organized December 7, 1929; six of the founders are still active. They are Clifford Steele, William Bryant, A. M. Broadhurst, C. N. Carlin, W. D. Smith, and G. (for Godfrey) B. (for Basil) Lacey, who has been secretary of the club since its organization. (In cricket, the secretary is the same as the manager of a baseball team.)

The sports writers call Lacey the "Mr. Cricket" of Philadelphia. He's the man to see if you want the inside story of cricket at General Electric—or cricket in general, for that matter. Go up to Fairmount Park some Saturday afternoon and sit down with him over a "spot of tea" between innings. (It seems that tea is to cricket what hot dogs and soda pop are to baseball.)

Lacey is a cricketer from away back. He played it in school in his native England before coming to America in 1909. Shortly after arriving he played for a Utica, N. Y. team in Schenectady one day. That fall he went to work for General Electric. Lacey played cricket in Schenectady until he was transferred to Philadelphia in 1927. Two years later he was one of the leaders in organizing a team there.

Before the war the General Electric cricketers and their families took vacation trips into Canada, northern New York, and New England together. In 1938, for instance, the sportsmen drove to Boston, played a game there, boarded a boat to Nova Scotia, and then played against cricket clubs in Halifax and other cities. Other trips have been by way of Rochester and Buffalo, where games were played, and on to Montreal, Toronto, and Ottawa. The General Electric team is strictly amateur, although some equipment is provided by the General Electric Athletic Association.

In explaining cricket to the average American, Lacey draws analogies to baseball. The English game is played on

an oval or round field as large as or preferably larger than the most expansive of American baseball parks. The center of action is in the center of the field, where there are two sets of wickets, 66 feet apart. The wickets are really three upright stakes, side by side and a few inches apart. They stand 27 inches high, and are topped by two pieces of wood, called bails. Before each wicket is a "popping crease," or batting box.

A cricket ball looks more like an apple than a baseball does; it's red. It's a little smaller than a baseball, and is harder, because it was cured longer. The cricket bat is four inches wide.

Each team is composed of eleven players. As in baseball, one team fields while the other bats. The fielding team has a "bowler" (pitcher) at one wicket and a "wicket keeper" (catcher) at the other wicket. The nine remaining players may be stationed anywhere on the field. There is no such thing as a foul ball in cricket.

The team that's "up," to use baseball parlance, has two batters on the field, one at each wicket. The bowler throws a hard leather ball so that it bounces in front of the batsman on a flat, level strip which runs between the wickets. The bowler must throw the ball with a continuous overarm motion; he may, however, and usually does, put various types of English, like a baseball pitcher's curve, on the ball so that it bounds erratically as it gets to the batter. The bowler's object is to hit the wicket and knock the bails from their perch, thus scoring one "out"; the batter's job is to guard the wicket and to attempt to hit the ball far enough to allow him and his batting partner to change places, which counts as one "run."

They Don't Have to Run

The batters may change places as many times as they desire, each change counting a run. Unlike baseball, however, they are not compelled to run every time the ball is hit, but only when they think they can make it safely.

The bowler pitches either six or eight times to one wicket, and then another bowler pitches the same number of times to the other wicket, thus giving both batters a chance to hit the ball.

Ten men must be put out before a side is retired. There are a number of different ways of getting them out. The most common are: (1) having the bowler knock the bails off by hitting the wicket on the pitch; (2) by knocking the bails to the ground by having a fielder throw and hit the wicket while the batters are running; (3) by knocking the bails off with the ball in hand while the batters are running; (4) by catching a batted ball on the fly; (5) by having a pitched ball hit the batter's body when it would have hit the wicket if the batter had not been in the way; (6) by having the batter hit the wicket with the bat; and (7) by knocking the bails down when the batter has stepped out of the batter's box. There are a few other ways of scoring "outs," just as there are other ways of making "runs" because of some infraction or misplay by the pitcher.

When one batter is put out, he is replaced by a teammate; his partner plays on. When ten batters have been put out, the teams call a halt for that very necessary cup of tea. Then the teams change sides, with the fielding team doing the batting.

In England's big cricket matches, games consist of two such innings and may last for three days. Here in America, cricketers usually play one-inning games, which last five or six or seven hours. A time limit is set before the contest, and the game is a "draw" if both teams haven't completed batting. However, the captain of the lead-off team may call for an end to his team's batting before all his men are out and attempt to win with the number of runs scored until then if he thinks the time limit will end the game in a draw.

"Don't let anybody tell you cricket isn't exciting," says Old Maestro Lacey, "because it is. We have our DiMaggios, who can knock that old apple out of the park for an automatic six runs."

It's not too uncommon for a good batter to make more than 100 runs in a single inning, and a few men have scored more than 200. The General Electric team normally makes between 100 and 200 runs per game.

No Gloves

The fielding in cricket holds spectator interest, too, since more balls are hit and they can be hit in any direction. The cricket fielder tends to make more misplays than his baseball brother, because, except for the wicket keeper, the former wears no gloves.

Lacey likes to tell how the Philadelphia Works baseball team of 1930 chided the cricketers with boasts of what they could do with a four-inch bat; they'd "murder the ball."

"So," says Lacey, "we played them in cricket, allowing their pitcher to throw the ball as he does in baseball. The cricket team won, 198 to 18. Not only that—the baseball team lost two of its players. They took up cricket."

Youth is not the big factor in cricket that it is in baseball. Proof of this is Lacey himself. Though past the half-century mark, he's still a fine bowler. In England a professional cricketer doesn't usually reach his prime until he's 35 to 40, according to Lacey. Many a younger team has bowed to the older players of the General Electric club. Skill and experience count a lot, as much as speed and youth.

The Philadelphia team plays most of its games on Saturday and Sunday afternoons, between the hours of 2 and 7:30 p.m. Time-out is taken between innings for tea and refreshments, and if a road game should start in the morning, the teams stop for lunch. Players of the batting team sometimes play cards or rest in the clubhouse while their two teammates are "up," especially if the game happens to be one-sided. At first, Lacey said, there was some ridicule from baseball-minded Americans, but that ceased years ago when spectators realized they were really enjoying the English sport.

Cricket differs radically from baseball in one respect: There is no heckling the players or jeering at the two umpires.

"That wouldn't be cricket."

OFFICIALS OF THE GENERAL ELECTRIC COMPANY

H. F. Smiddy

TWO-HAT EXECUTIVE

THERE comes a time in the life of almost every man when he has to make a decision which affects his future career. To some men it comes more than once; to Harold F. Smiddy it has come a number of times. And usually, when it came, he sensed its importance and decided accordingly.

Smiddy was encouraged to think independently from childhood. His father was a self-made man who started as a water boy in a construction gang, became a civil engineer, and ended up as general foreman of the Metropolitan Water Supply System, which supplies Greater Boston with water. He had made his own way in life, and it was only natural that he should encourage his children to make their own decisions.

There were three children, and Harold Francis was the oldest; he was born in Southborough, Mass. on June 3, 1900. It was a typical middle-class family in a small town.

Young Harold did so well in school that he finished the eight years of grade school in six years, entering high school at the age of 12. This threw him in with students who were older and bigger than he was, a situation which had some drawbacks. He was, for example, very fond of sports—but being physically behind his classmates, his participation in athletics was limited. So he usually wound up as manager or treasurer of the team instead of playing on it.

In his spare time and during summer vacations he worked at the usual odd jobs available to a youngster in a small community. He picked potato bugs at

so much per hundred bugs—his first experience with piece work. He also picked berries, pitched hay, and did other farm work. And in the summer of 1916, after he was graduated from high school, he earned $6 a week as a ticket auditing clerk for the Boston & Worcester Street Railway Co. He was one of four who checked the conductors' tickets against the fare registers, and it taught him a great deal about human nature. He had a pass to ride on the streetcars, and he got so much fun out of it that it meant almost as much to him as his salary. He can still repeat, in the right order, the names of the top ten conductors on the seniority list.

Planning for College

Smiddy took the question of college for granted—not only that he was going to go, but that he was going to M.I.T. His father had had to compete with college graduates; they did so easily the things he had learned the hard way that he developed a great admiration for college education. So Harold's high school courses were chosen with technical college in mind. This was not too easy to do in a small school, but with the aid of a friendly principal it was done.*

So Smiddy took the M.I.T. entrance exams in 1916 and passed them satisfactorily. He was, however, a year under the normal entrance age, and it was suggested that he wait a year—and get some meat on his bones. Smiddy and his father argued, quite reasonably, that since the youngster had, after all, passed the exams, there was no reason why he should wait for his education. They won their case—but the elder Smiddy had to write the college a letter assuming responsibility for his son's health. (If there were any doubts about the wisdom of the final decision, they were dispelled when Smiddy won a gymnasium medal for making outstanding physical progress during the freshman year.)

In two classes he was one of but two students; he took solid geometry all alone for one term.

At first he didn't know whether he wanted to be an electrical or a chemical engineer, looking upon them both as coming professions. But no matter which one he selected, he would take virtually the same subjects during his first year, so he signed up for electrical engineering when he entered. In the middle of his freshman term he switched to mining engineering, not intending to enter the mining field, but because the mining course provided all the subjects required later for either electrical or chemical engineering. At the end of his freshman year he switched back to electrical engineering—to the great disappointment of his mining professor, who had relatively few students and cherished them all.

His remaining three years in college were comparatively uneventful. He was a good student—he won a scholarship each year, which helped pay his tuition. He was active in the AIEE student chapter. He worked summers and part-time during the school year in order to help pay his other expenses. The summer of 1917 he helped survey a transmission-line right of way; the summer of 1918 he was assistant operator of a small hydroelectric station; the final summer he worked as a house painter. In his final year he also served as an assistant instructor in an M.I.T. laboratory.

Military Service

The United States entered World War I while Smiddy was in college; he volunteered and was assigned to the Student Army Training Corps. And, although he lived in barracks at the time and was a charter member of his home-town American Legion post, he insists he qualifies as a veteran merely by a technicality.

Like all students in their final year, he had a number of offers from electric manufacturing and utility companies. One of these, from the Public Service Electric Co. of Newark, New Jersey, involved a two-year training course. Smiddy turned that down. He reasoned that, having already had four years of schooling—and having a brother and sister he wanted to help get *their* schooling—he might better go right to work than take any more courses. He managed to convey some of this idea in his letter to the utility, and the novelty of this reaction appealed to one division superintendent so much that he wrote Smiddy again, offering him a job of the type he wanted. Smiddy accepted.

After a month's vacation—which he spent working in a consulting engineering office—Smiddy went to Newark and reported for work. The job gave him plenty of practical experience. He had two months of night work. He worked six months in a line gang, climbing poles and driving a truck. He was one of a crew which helped improve the efficiency of one of the old power stations; he worked in overalls, in the boiler room, the turbine room, and the condenser pit.

To West Penn Power

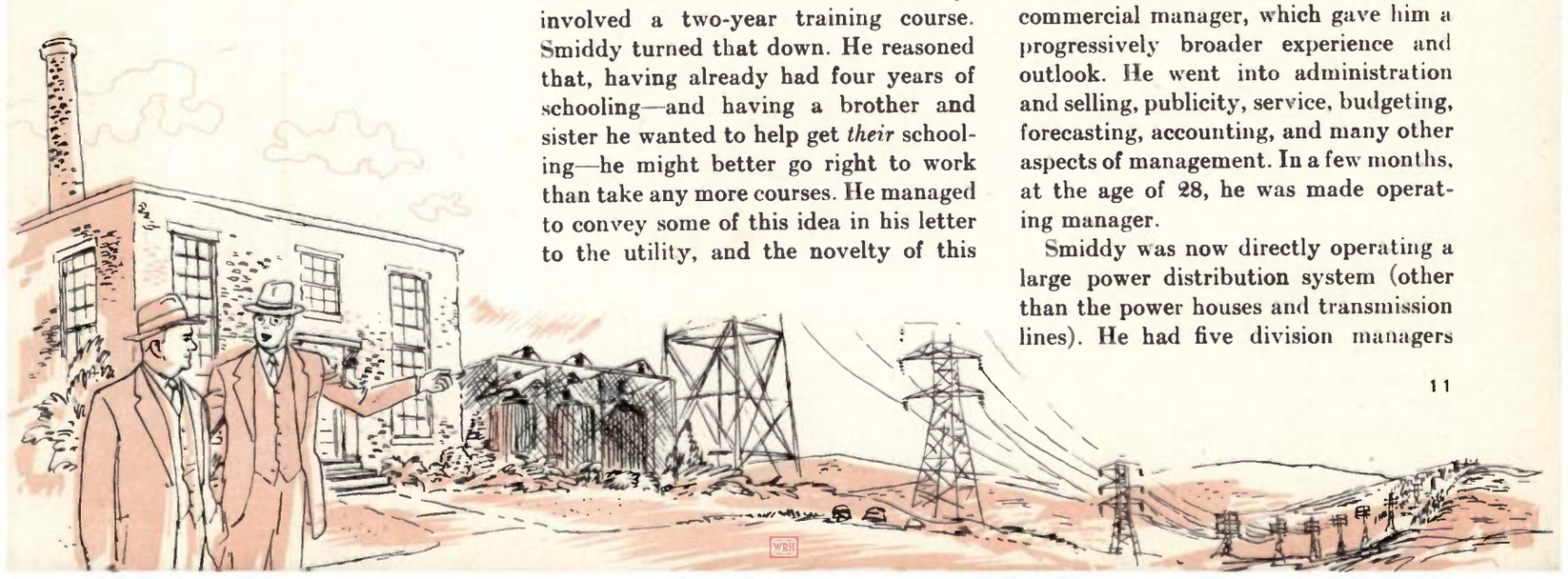
Then Smiddy had to make another of his periodic decisions. The West Penn Power Co. in Pittsburgh was looking for some young men with utility distribution experience to take part in an expansion and improvement program. Although he knew he had a safe berth with his present employer, he felt that the opportunity for growth was more important than security, so he went to work for West Penn Power in November, 1921. It turned out to be a smart decision, for it was with his new employer that he demonstrated his latent talents for management.

After about a year in service work on meters and field engineering, Smiddy was asked to help a new man organize a distribution department. He did so well on this assignment that he was made assistant to the commercial manager.

He held this position for over four years, during which time he learned to be more than just an engineer; he became a salesman and a manager, also. From his boss he learned that the important thing in organizing and managing is dealing with people—studying them, finding out what they do well and finding a place where they can do it; learning to size them up quickly and well.

Early in 1928 he was made assistant commercial manager, which gave him a progressively broader experience and outlook. He went into administration and selling, publicity, service, budgeting, forecasting, accounting, and many other aspects of management. In a few months, at the age of 28, he was made operating manager.

Smiddy was now directly operating a large power distribution system (other than the power houses and transmission lines). He had five division managers



working for him, every one of whom was about his father's age, and he learned how to get along with older men.

Early in 1930, however, not being in full sympathy with a proposed reorganization, he determined to make another move. A phone call from one of his old bosses, then with Electric Bond & Share Co., helped Smiddy to make an appointment with one of the Electric Bond & Share vice presidents. At the interview the executive questioned Smiddy exhaustively, to find out what he knew about the utility business—but Smiddy meanwhile was sizing *him* up. Smiddy decided he could learn a lot from this man, and when, at the close of the interview, he was offered a job, he accepted on the spot. It was another one of his important decisions, and once it was made he wasted no further time. He reported for work the following Tuesday.

He stayed with Electric Bond & Share until 1942, during which time he became a chief operating executive of what was then the most farflung utility system in the world.

Utility Executive

He started as assistant to the vice president, who shortly became executive vice president and later president. In 1933 Smiddy was made head of the commercial department. Then he was made head of the sales department of Ebasco Services, Inc., the service and consulting organization of the Electric Bond & Share system, on its incorporation as a separate company. The following year he became operating sponsor for a group of subsidiary properties in the lower Mississippi Valley. He served foreign as well as domestic utilities, and he visited all the Latin-American companies.

Then, in 1939, he became chief operating sponsor, supervising services to all client companies throughout the United States. The following year he was made head of the Ebasco Services operating section; he was made a director of that company and became one of Electric Bond & Share's top management men. For about a year and a half he was involved in every aspect of corporate management, and he became well acquainted with the economic aspects of the entire country. His circle of acquaintances grew to include management men in other utilities and in the manufacturing companies, such as General Electric, of which the utilities were important customers.

By the end of 1942, however, Smiddy felt it was time to make another change. He had been in operating work for a number of years, now, and he felt a desire to get into an industry less under the control and regulation of the government and more under the control of the people in it. It was a restlessness characteristic of him; although his future was secure in the position he had won, he felt it was time to try a new field and a new challenge.

So he resigned his position. He wanted to get into private industry, and a good way to do it seemed to be through a firm of management engineers. Booz Allen & Hamilton of Chicago was such a concern, and they wanted to open up the New York market. Smiddy took over the job of organizing such a branch, becoming a general partner and member of the executive committee. In the five years he was with the firm, despite the man-power problems of the war years, he built up a staff which developed the New York business to a magnitude substantially comparable to that of the Chicago main office. It gave him a very wide experience in management organization work with both small and large companies from coast to coast.

General Electric Start

By the end of 1947 he began to feel an urge to get out of consulting work and back into operating again. From several interesting offers he chose one from General Electric because he liked the challenge of its diversified business and the expansion plans and organization ideas of its executives—whom he had known since his utility days.

So in March, 1948 he went on the Executive Department staff in New York. Among his assignments was a survey of the Chemical Department; some of his recommendations appealed so much to Dr. Zay Jeffries, vice president in charge of that department, that Smiddy was given the job of general manager of the operation in July, 1948.

Then, just as he was about to buy a home in Pittsfield, he was asked to take over the responsibility of running the Air Conditioning Department to succeed G. R. Prout, who had transferred to the Nucleonics Department. Inasmuch as he was in the midst of setting up a new program for the Chemical Department at the time, the problem was met by asking him to divide his time between the two operations. Thus, at the present time, Smiddy has the two-hat job of being general manager of both departments. He was elected a vice president in December, 1948.

Smiddy's love for challenging assignments makes him happy with his present work. He realizes his two departments are young ones in the history of General Electric, and he considers the fields involved have tremendous potential possibilities. And those possibilities will be developed if Smiddy has anything to say about it.

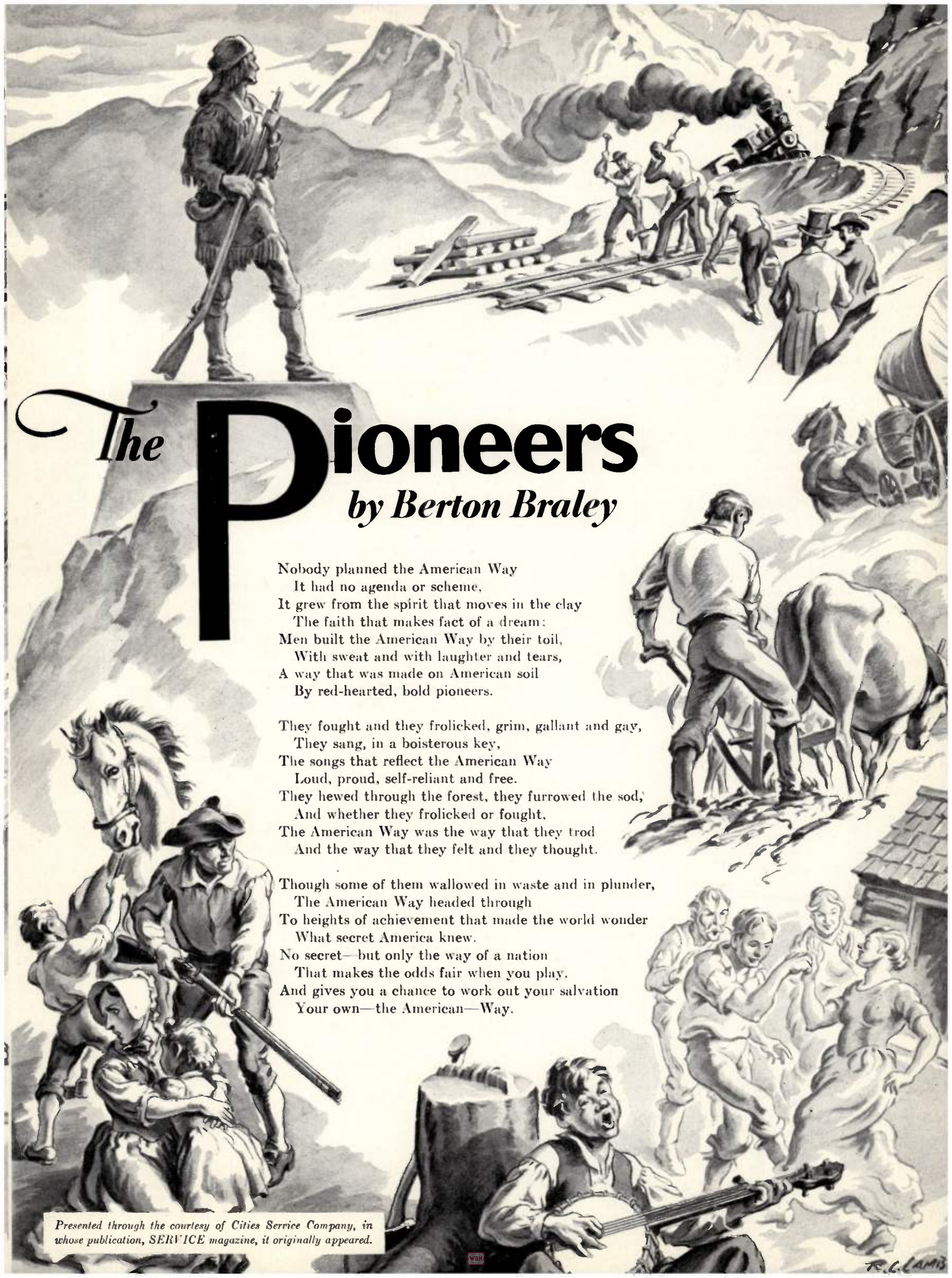
Reorganizing

At Pittsfield he regrouped operations into two principal divisions, one covering all the chemical materials and the other, all the plastics or mechanically fabricated products. At Bloomfield operations have been consolidated into two businesses: a heating business and a cooling business. In each case the objective was a streamlined staff and line type of organization which would make it possible to enter the highly competitive period ahead with the simplest and strongest organization.

Smiddy is so wrapped up in his work that he has little outside recreation except voluminous and diversified reading, plus a brisk walk whenever he can find time for it. In the long run, his hobby is people—he likes them, and he likes to study them to see what makes them tick. He is very much concerned over the need for large companies to improve their practical planning to select, train, and have available on time a requisite supply of executive talent, able to face and handle the increasingly complex management tasks of such organizations. He feels deeply that preservation of our American type of enterprise and progress are tightly wrapped up in doing a much better future job in this respect.

In 1940 he married Lois E. Mixer, a native of Frankfort, New York. They live at 340 Riverside Drive, New York City. Thus, when he's making his business headquarters in Bloomfield, he's a New York commuter in reverse.

A number of his intimates call him Harold, but his last name is so much like a nickname that many of his friends call him Smiddy and let it go at that.



The Pioneers

by Berton Braley

Nobody planned the American Way
It had no agenda or scheme,
It grew from the spirit that moves in the clay
The faith that makes fact of a dream:
Men built the American Way by their toil,
With sweat and with laughter and tears,
A way that was made on American soil
By red-hearted, bold pioneers.

They fought and they frolicked, grim, gallant and gay,
They sang, in a boisterous key,
The songs that reflect the American Way
Loud, proud, self-reliant and free.
They hewed through the forest, they furrowed the sod,
And whether they frolicked or fought,
The American Way was the way that they trod
And the way that they felt and they thought.

Though some of them wallowed in waste and in plunder,
The American Way headed through
To heights of achievement that made the world wonder
What secret America knew.
No secret—but only the way of a nation
That makes the odds fair when you play,
And gives you a chance to work out your salvation
Your own—the American—Way.

Presented through the courtesy of Cities Service Company, in whose publication, SERVICE magazine, it originally appeared.

WRH

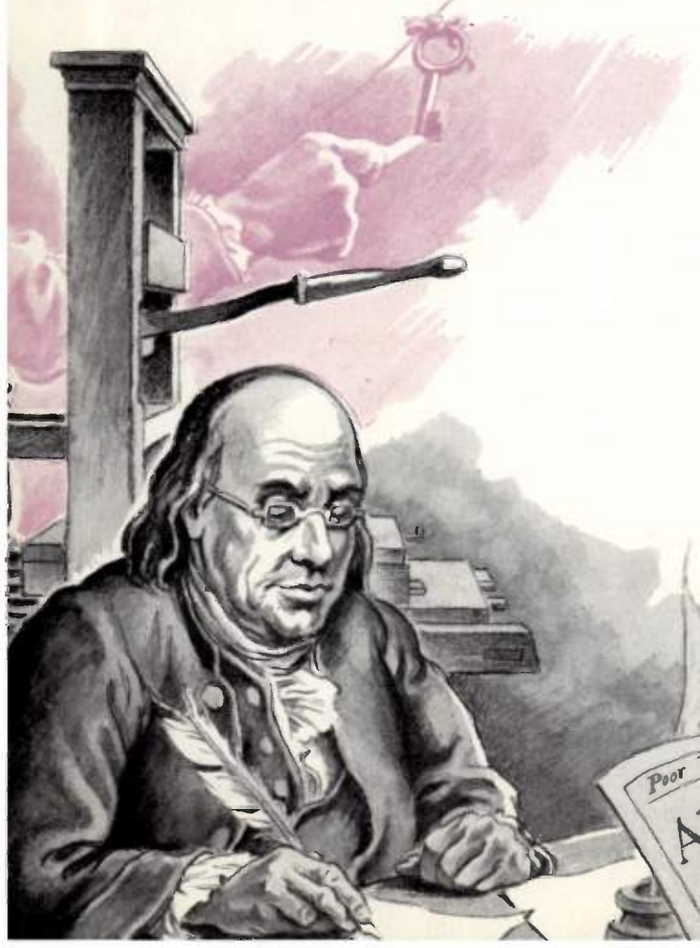
R.G. LAMB

POOR RICHARD

Poor Richard believed the American Way
  Was something worth stubbornly fighting a King for;
That freedom was precious as light of the day,
  A right that Poor Richard was willing to swing for.
Poor Richard was rich in his wisdom and sense,
  His words stimulated men's innermost powers,
As guide and as counsel through mighty events,
  He helped to establish this country of ours.
He thought free men's spirit could win in the fight,
And Benjamin Franklin (Poor Richard) was right.

Poor Richard was poor, but he made himself rich,
  And his fellow men richer by words and by deeds,
By many inventions of implements which
  Were practical gadgets for practical needs.
He thought private enterprise something to praise
  A beacon of freedom, a guide to the light,
And following Richard's American ways
  His country proved Franklin (Poor Richard) was right.
And spite of glib Planners and Prophets, somehow
We know Richard never was righter than NOW.

Poor Richard believed the American Way
  Was giving men chances at getting a living
And that, if a man wasn't earning his pay
  He didn't rate doles of the government's giving;
Poor Richard preached industry, prudence and thrift,
  And using your head to accumulate pelf,
He said that Security wasn't a gift
  But something a fellow should manage himself.
And, keeping his adages always in sight,
His countrymen proved that Poor Richard was right.



THE WIZARD

Tommy was a newsboy and Tommy polished shoes,
  He peddled gum and candy on the train,
Tommy had to struggle, but he somehow didn't choose
  To get up on a soap box and complain;
For busy-minded Tommy had no time to be a Commie
  Or to study what Collectivism means,
Since his youthful brain was teeming and his eyes were always gleaming
  With his visions of miraculous machines.

Tommy was dissatisfied and not at all content,
  But Tommy didn't think himself oppressed.
He used his brains and gumption to their uttermost extent
  And—the patent-office records tell the rest.
The fruit of Tommy's seeking was machines and pictures speaking
  And a world ablaze with incandescent lights,
On account of Tommy's notion of an unalloyed devotion
  To his duties, with no fuss about his "Rights!"

Tommy was a genius, a wonder and a wiz
  (Tommy—Thomas Alva Edison)
And this was Tommy's genius—to use each chance there is,
  And *make* your chance when Fortune gives you none.
The things that Tom invented are unique, unprecedented,
  But his system is an old one—if inside you
There's the Will to strive undaunted, you will get the things you've wanted
  And you won't need any Commissar to guide you!

FLYING FOOLS

Two bicycle tinkers of Dayton, Ohio,
Were hit with a hunch they could fly;
When other folks doubted, they made this reply, "Oh,
Perhaps it won't work, but we'll try."
With stovewire and haywire and carpenter's twine,
With wood and with canvas and glue,
They made them a crate of peculiar design
And tinkered around till it flew.

There wasn't a federal Fund or Directive
To help, or to hamper, this pair
They sweated it out to their simple objective
Of putting a plane in the air;
The Wrights tinkered doggedly, day after day,
Until their contraption had flown
—A triumph achieved the American Way
Of playing your hunch on your own.

The drone of propellers, the whooshing of jets
Fill all of the skyways—and why?
Because these two tinkerers parlayed their bets
And gambled the roll they could fly.
Two rugged exponents of Profit and Loss
And straight Private Enterprise, who
Had a Personal Hunch and who put it across,
They thought they could fly—and they flew.

TRADER JOHN

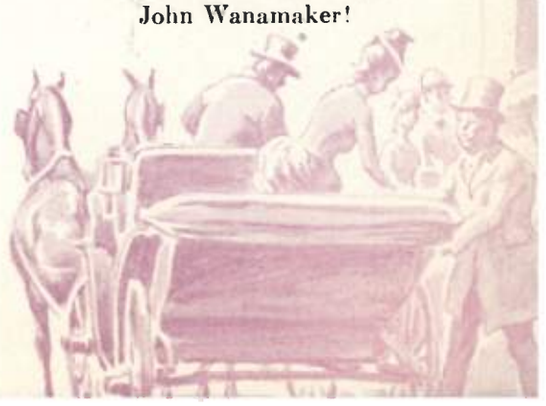
John started business
In a novel way
He shortened hours
And he lengthened pay
And he said, "One price!
With no haws or gees,
And your money back
If the goods don't please."

Wise guys muttered
"Young John's a fool,
You can't be a merchant
By the golden rule,"
But John kept on
With his course defined
By a profit-minded
Prophet's mind.

"Independent
As a hog on ice,"
He sold better mousetraps
At a lower price,
Others followed
Where John had led,
But John kept leaping
One jump ahead.

He held to Service
As a guiding star,
Till the whole world came
To his vast bazaar.
And John went on
In his practical way
Making "impractical"
Ethics pay.

Bold adventurer,
Advertiser,
Rugged personal
Enterpriser,
Master trader
Tradition breaker,
And Prince of Merchants—
John Wanamaker!



TITUSVILLE, PA. 1859

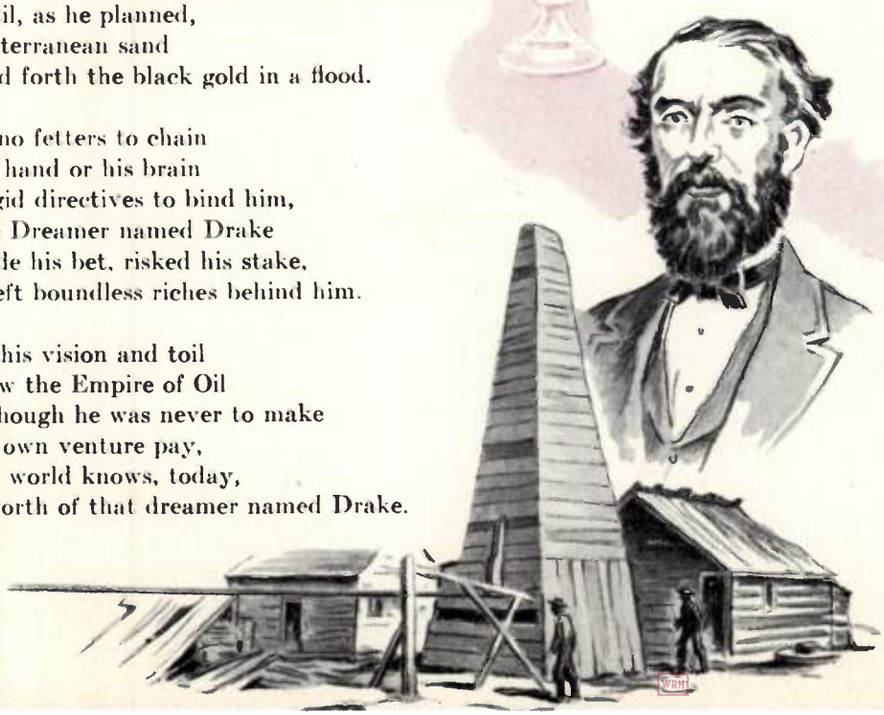
A dreamer name Drake
Had a faith naught could shake
That under the Titusville soil
Hidden deep in the mould
Was a flood of Black Gold
A vast buried treasure of Oil.

Doubters jeered him, but Drake
Begged and borrowed a stake
Then, 'spite of the wiseacres' mirth
At a "lunatic dream,"
—Bet his all on his scheme
To drill the first oil-well on earth.

Dawn to dark, dark to dawn
His drill thudded on
Through rock and through quicksand and mud
Until, as he planned,
Subterranean sand
Poured forth the black gold in a flood.

With no fetters to chain
His hand or his brain
No rigid directives to bind him,
The Dreamer named Drake
Made his bet, risked his stake,
And left boundless riches behind him.

From his vision and toil
Grew the Empire of Oil
And though he was never to make
His own venture pay,
The world knows, today,
The worth of that dreamer named Drake.



ABE OF ILLINOIS

Tall Abe Lincoln
Long Boy of Illinois
Broad Abe Lincoln
Strong Boy of Illinois.

None was mightier, none was bolder
He could toss a big man over his shoulder,
He could split a rail with a single swing
Down among the rivermen Abe was king.
Strong in his body, strong in his mind,
Abe was mighty but Abe was kind;
Slow to anger—but a nation's call
Found him hard as a granite wall.

Strong Boy of Illinois
Built to lead
With a strong man's power
In his country's need.

Wise Abe Lincoln
Strong Boy of Illinois
Stout Abe Lincoln
Illinois Strong Boy.

He could laugh when his heart was breaking
Stand, unmoved, when the earth was shaking.
Abe was patient and Abe could wait
Or fling defiance in the face of Fate;
Soft of heart, with a spirit made
Of cold grim purpose that was unafraid.
Tall Abe Lincoln with the strength sublime
To glow in glory till the end of time.

Strong Boy of Illinois
Guide us still
With a strong man's vision
And a strong man's will.

SHOWMAN

"Folks like to be humbugged," said P. T. Barnum
"And every minute a sucker is born.
Folks like tall stories—so I will yarn 'em
They like a noise, so I'll blow my horn;
I'll give 'em white elephants, neatly painted,
I'll give 'em midgets and giants, too
I'll furnish 'em fakes—and I'll make 'em acquainted
With honest and genyuine wonders, too."

So P. T. Barnum filled his stages
And rings with riders, tumblers and clowns,
And put strange animals in their cages
And toured the country's cities and towns;
With barkers shouting, and brass bands blaring
He gave the suckers their money's worth
As ballyhooed on the boards, declaring
"COMING, THE GREATEST SHOW ON EARTH."

With vast gargantuan gusty clamor
He gave 'em beauty and song and art
He brought a tinseled and gilded glamor
To brighten many a leaden heart.
He brought them thrills and he brought them laughter
He did his job with a showman's pride,
He gave the "suckers" what they were after
The magic something their lives denied.

And so, in the summing up, let no man
Give P. T. Barnum the sniff of scorn,
He lived and died as a mighty showman
And the world still thrills as he blows his horn;
He's part of the boisterous, chesty nation
The lusty country that gave him birth,
Part of this *GLITTERING AGGREGATION*
Part of *THE GREATEST SHOW ON EARTH.*

EPILOGUE

The names are legion, the list is long
Of those who made the American Way;
Freemen, valiant and bold and strong
Who took their chances and made their play.

For fame and fortune—or for the sheer
Joy of the job that they planned to do.
A thousand names might be written here
For these are only a typical few;

A typical few of the optimists
The dogged, dauntless and daring clan
Of "rugged individualists"
Who made this country—American Plan.

Experiments with **ULTRASONICS** *reveal that . . .*

SOUND PLAYS TRICKS

The fingerprint pattern in talcum powder is made by sound waves from a whistle on the end of the tube. The sound is reflected onto the table by the disk, held by R. W. Samsel. Ridges in the powder are caused by "standing waves"—points where waves headed for the table meet those bouncing back. Here there is no activity, and the powder remains at rest.

Photos by George Burns

George Ledges shows how bits of cork can be held aloft ladder-fashion by sound waves from a whistle located two feet above the tweezers. The waves are focused to a point just below the bottom piece of cork. Standing waves keep the bits of cork in air.

CERTAIN sounds—those above the frequency of 15,000 beats per second—can't be heard by the average human ear. But these unheard sounds (ultrasonics) can do some startling things, as engineers of the General Engineering & Consulting Laboratory can tell you.

The high-pitched sounds are created by a one-inch-long whistle. The waves are brought to a point the same way that light is focused by a concave mirror. Besides the cork and talcum powder demonstrations pictured here, the engineers have other seemingly magic tricks that the whistle performs.

For example, a glass beaker is filled with smoke and sealed with a thin rubber cap. Placed under the whistle the smoke disappears almost instantly. The experimenters hasten to explain, however, that in its present stage of development the whistle technique for smoke dissipation is not suitable for large-scale application, such as clearing up the smoke in homes, night clubs, factories, or public places. It's merely an interesting laboratory experiment that may some day have commercial possibilities.

Then there's the trick with cotton. Placed at the focal point, cotton smolders as its particles are agitated by the waves.

But ultrasonic sound waves have practical aspects, too. They can be used, along with high-powered X rays, to detect flaws in metal castings, for instance. It is also possible to check the flow of liquids through pipes by means of ultrasonics.

the Bulletin Board

ORGANIZATION CHANGES

GENERAL

A. T. CHANDONNET: assistant to vice president in charge of manufacturing policy.

R. K. FAIRLEY: engineer, Development Mfg. Div., General Eng'g & Consulting Lab.

JOHN HOLMES: member of Board of Directors.

D. W. MCLENEGAN: staff of the general manager, Nucleonics Dept.

A. J. TACY: assistant manager, Market Research Div., Executive Dept.

Research Laboratory—L. L. FERGUSON: assistant executive engineer. P. A. SCHLANSKER: plant manager.

AIR CONDITIONING

P. E. MILLS: comptroller.

F. J. VAN POPPELEN: manager of manufacturing.

A. W. WENNERSTROM: manufacturing consultant.

APPARATUS

W. E. BIRCHARD: engineer, Induction Voltage Regulator Eng'g Div., Transformer & Allied Product Divs.

D. G. CAMERON: executive assistant to manager, Control Divs.

F. T. CLARKE: supervisor of safety.

T. C. GLENN: manager, Engineering Div., Michigan District.

F. A. HOEKE: manager, Knoxville Office.

ALAN HOWARD: engineering consultant to Aircraft Gas Turbine Divs.

J. S. MACDONALD: assistant manager, Schenectady Works.

Central District—W. E. LYNCH: manager, Transportation Div.

H. R. MCCANNEL: manager, Sioux Falls, S.D. sales office.

Industrial Divs.—S. W. CORBIN: assistant manager. H. D. BEALE: in charge, Renewal Parts Div.

Locomotive & Car Equipment Divs.—W. J. WALKER: staff of the manager of sales. J. U. NEILL: manager of the Parts Div.

Welding Divs.—P. D. MORGAN: manager, Houston Welding Div. F. C. NEAL, Jr.: manager, Distributor Sales Div.

APPLIANCE & MERCHANDISE

E. E. FOLSOM, Jr.: assistant manager, Trenton Works, Home Laundry Equipment Div.

L. R. MELLEM: acting commercial engineer, Range & Water Heater Divs.

W. J. PFEIF: assistant to general sales manager.

CHEMICAL

S. L. BROUS: marketing manager.

J. A. GROVE: manager, marketing research.

A. T. WOLCOTT: manager, Advertising & Sales Promotion.

Chemicals Div.—P. F. PRESTON: manufacturing manager. J. W. RAYNOLDS: sales manager; R. G. BAUMANN: assistant sales manager, silicone products.

CONSTRUCTION MATERIALS

ANDREW DOREMUS: manager, Advertising & Sales Promotion Div.

O. A. KIRKLAND: manager, New York District.

J. O. WETHERBIE: special representative.

Accessory Equipment Div.—R. A. BROWN: supervisor of commercial scheduling. W. W. MARDEN: supervisor of order service. F. C. RALPH: commercial engineer. J. J. CURTIN: manager, magnet wire sales. W. J. DELEHANTY: sales manager, Oakland Section. J. F. FARNAM: sales manager, industrial and contractor sales. W. S. HAY: manager, transportation, federal, state and municipal sales. L. E. HOWARD: sales manager, electric utility sales. R. B. MCKINLEY: manager, commercial engineering—industrial and transportation. G. B. SHANKLIN: manager, commercial engineering—electric utilities.

ELECTRONICS

R. E. NOTH: sales training manager, Receiver Div.

G. L. ROARK: manager, New York District.

Government Div.—C. P. GADE: sales manager, Navy Equipment. J. W. NEL-

P. E. Mills
Air Conditioning

F. J. Van Poppelen
Air Conditioning

J. S. MacDonald
Apparatus

S. W. Corbin
Apparatus

William Pfeif
A. & M.

J. A. Grove
Chemical

A. T. Wolcott
Chemical

S. L. Brous
Chemical

O. A. Kirkland
Construction Materials

R. H. Humbert
Lamp

son, Jr.: sales manager, Air Forces Equipment. S. W. Upham: sales manager, Army Equipment.

Tube Divs.—G. W. DeSousa: staff assistant to manager. R. T. Pennoyer: manager, Buffalo Tube Works.

LAMP

M. J. Hamner: manager of engineering.

R. H. Humbert: manager of marketing.

K. G. Reider: manager of manufacturing.

J. P. Roger: manager, Virginia Sales District.

P. M. Wood: manager, Chesapeake Sales District.

AFFILIATES

Canadian G.E. Co.—William Barnacal: assistant manager, Montreal plant. W. C. English: general superintendent, Peterborough Works. L. I. Playfair: manager, Montreal District Office.

International G.E. Co.—T. W. Poole: sales engineer, G.E.S.A. Mexico.

G.E. Credit Corp.—T. F. Atkinson: manager, Baltimore Office. H. J. Collins: manager, New Orleans Office. A. C. Eversole: manager, Kansas City Office. E. S. Rockett: assistant manager, Southwestern District. W. D. Stauffer: manager, Washington Office.

Hotpoint, Inc.—J. E. Bogan: merchandising manager. E. R. Taylor: manager, market development.

Monowatt, Inc.—G. F. Ferriter: manager, Employee & Community Relations. Arthur Rundle: Central sales manager.

Telechron, Inc.—R. D. Tyler: manager, Merchandising Div.

RETIREMENTS

A. B. Cox: manager, Knoxville Sales Office, Apparatus Dept.; 42 years.

C. E. Doerr: field engineer, Chicago Apparatus Office; 42 years.

C. H. Kline: Personnel Div., Pittsfield Works, Apparatus Dept.; 37 years.

A. L. Lewthwaite: assistant to engineer, High Voltage Eng. Div., Pittsfield Works; 33 years.

Thomas Mahon: Motor Drafting Div., Lynn River Works; 27 years.

W. S. Miller: Lightning Arrester & Distribution Cutout Eng'g Div., Pittsfield Works; 43 years.

H. C. Most: Air Circuit Breaker & Contributing Divs., Philadelphia Works; 27 years.

F. W. Peters: manager, Transportation Div., Central Apparatus District; 36 years.

J. M. Whittle: assistant to president, I.G.E.; 31 years.

DEATHS

W. J. Stock: Industrial Divs., Schenectady; February 14.

NEW PRODUCTS

A simplified washer automatically washes, rinses and damp-dries up to nine pounds of clothes, then empties and shuts off. Because clothes are spun in the wash basket at a speed of 1140 revolutions per minute during the drying cycle, some pieces are dry enough to iron immediately. (A. & M. Dept.)

Four new clocks—an alarm, occasional, kitchen, and mantel-chime—have been added to the General Electric line. The mantel-chime clock has a mahogany case. Full Westminster chimes strike on the quarter hour, and each hour is struck separately. (A. & M. Dept.)

A General Electric kitchen that fits into a space only 60 inches wide, yet has complete cooking, refrigeration, storage and clean-up facilities, is now being made for homes and apartments. It has a range with three cooking units, a four-cubic-foot refrigerator, a stainless steel sink with space in the cabinet beneath for a Disposall, and two wall storage cabinets. The kitchen is designed primarily for small homes but it is also useful as an extra cooking center in large homes. (A. & M. Dept.)

An 88-page catalog describing General Electric products for the farm and farm-home is available at 10 cents a copy. A special section is devoted to the G-E Home Bureau and tells how that organization assists farmers and their wives in planning complete electric kitchens and laundries. There is also a table showing the estimated cost of operating the various pieces of electric equipment used on the farm and in the home. (A. & M. Dept.)

Crystal-clear paper cup holders for kitchens and bathrooms, as well as doctors' offices and hospital rooms, are being made by the Plastics Division for the Dixie Cup Co. of Easton, Pa. According to that company, the use of paper cups is an economical convenience, safeguards health, promotes sanitation, and does away with unnecessary dishwashing. (Chemical Dept.)

With the latest clock-radio you can go to sleep with music without having to worry about turning the set off. It is turned on and off automatically with tiny switches which are set to operate at predetermined hours. The clock works continuously. (Electronics Dept.)

A new line of low-priced television receivers, with only 17 tubes and three rectifiers in addition to the 10-inch picture tube, is being produced. The simplified circuit design makes low prices possible. (Electronics Dept.)

COMPANY NEWS

Benefits amounting to $9185, covering an aggregate of 1636 days of hospital care, had been received by a total of 126 pensioned employees since inception last September of the G-E Pensioners Hospitalization Plan, it was announced March 4 by Secretary W. W. Trench, chairman of the Pension Board.


M. J. Hamner
Lamp


K. G. Reider
Lamp


R. E. Noth
Electronics

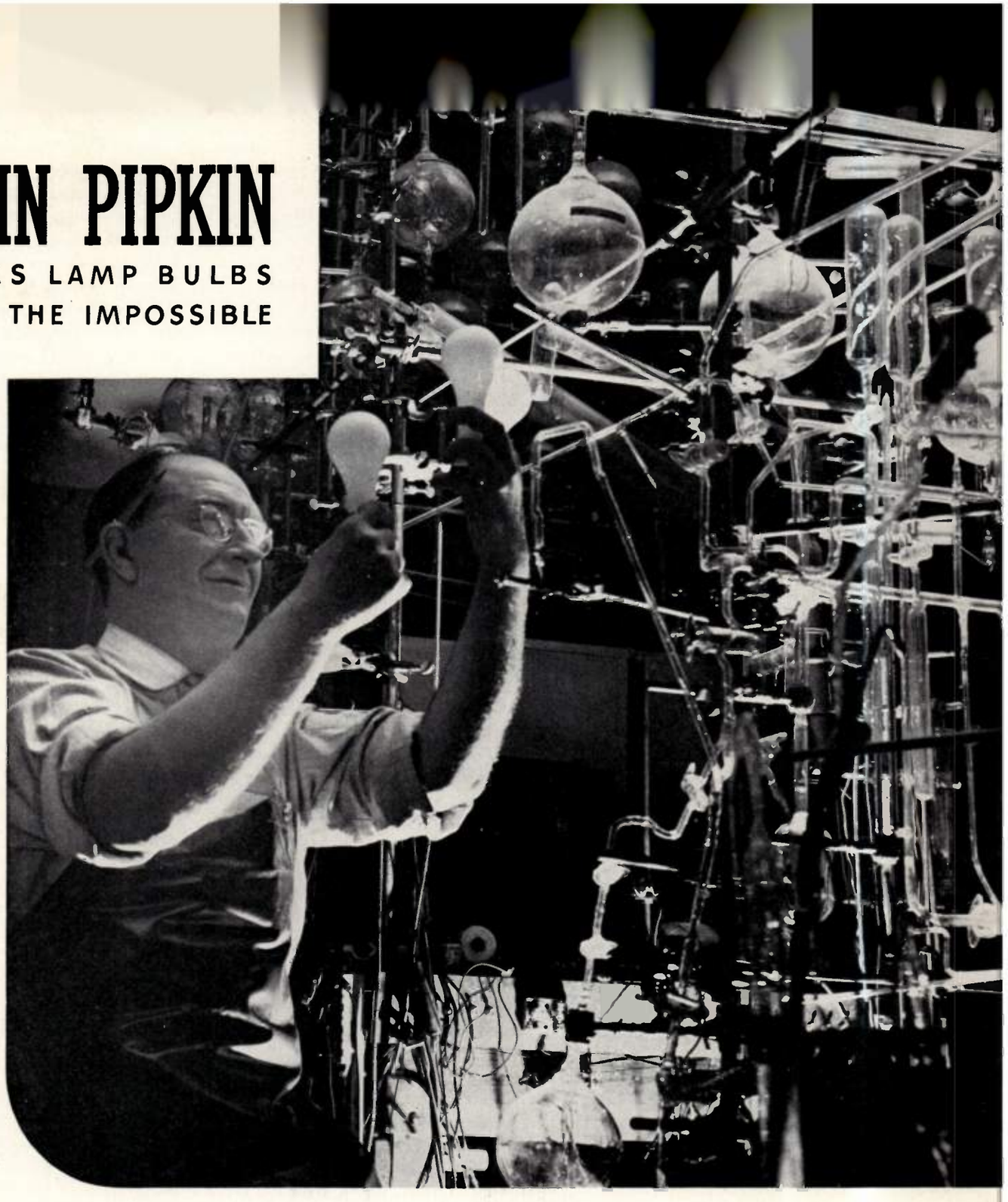

G. W. DeSousa
Electronics


R. D. Tyler
Affiliates

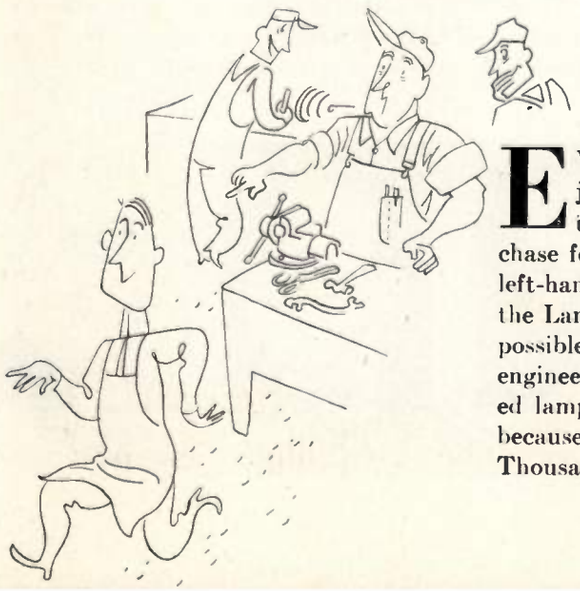

Arthur Rundle
Affiliates

MARVIN PIPKIN

IMPROVES LAMP BULBS BY DOING THE IMPOSSIBLE



The Lamp Department's talented inventor works alone in a small laboratory at Nela Park. He holds 16 patents for lamp development.



EVERY trade has its time-honored jokes to play on the new apprentice. He is sent on a wild-goose chase for a skyhook, striped paint, or a left-handed monkey wrench. Years ago, the Lamp Department had its own "impossible" assignment. The new lighting engineer was told to invent an inside-frosted lamp bulb. Such a bulb was sought because it promised diffusion of light. Thousands of attempts had been made, but in each case the lamp turned out brittle as an egg shell. The trick was to etch it on the inside and make it strong as well.

Marvin Pipkin was unaware of the joke—and had the last laugh. He invented an inside-frosted lamp that could be dropped on the floor without breaking. And it was cheaper to make, besides. It earned Pipkin a Coffin Award and instant fame in the lighting world.

That was back in 1924. Now, a quarter of a century later, lightning has struck twice in the same place. Pipkin is the first to perform another, almost equally difficult feat. He has invented an inside coating for a lamp that is almost pure white and gives almost perfect diffusion. Yet it gives as much light as the conventional inside-frosted lamp. The Lamp Department describes it as the most outstanding improvement in filament lamps since the introduction of the first successful inside-frosted lamp.

30 Years Ago

Pipkin's association with Nela Park dates back to World War I, when the development division of Chemical Warfare Service was operating a laboratory in co-operation with National Lamp Works scientists. Pipkin, a chemical engineering graduate from Alabama Polytechnic Institute, was assigned to this laboratory to develop gas-absorbing filters for gas masks.

While in Cleveland he met the girl who was to become his wife—and it was because of her that the Lamp Department eventually gained an inventive genius. After the war Pipkin wanted to return to his native Southland (he was born in Florida), but his wife was loath to leave her hometown. So—he went to work for General Electric at Nela Park. Since then, as one of that select group of research scientists in the Lamp Development Laboratory, he has been using his talent to give people better light. His work has covered all types of lamps, but his most sensational achievements have been with the ordinary incandescent bulb, the kind most commonly used in the home.

Pipkin is a natural born inventor. He is blessed with that intangible quality called innate ability. His working formula for success, however, isn't concerned with subtleties. It is remarkably simple: he merely goes on the theory that he can't be licked. "And I never have been," he says; "I just keep trying and trying, and sooner or later I hit on a solution that works."

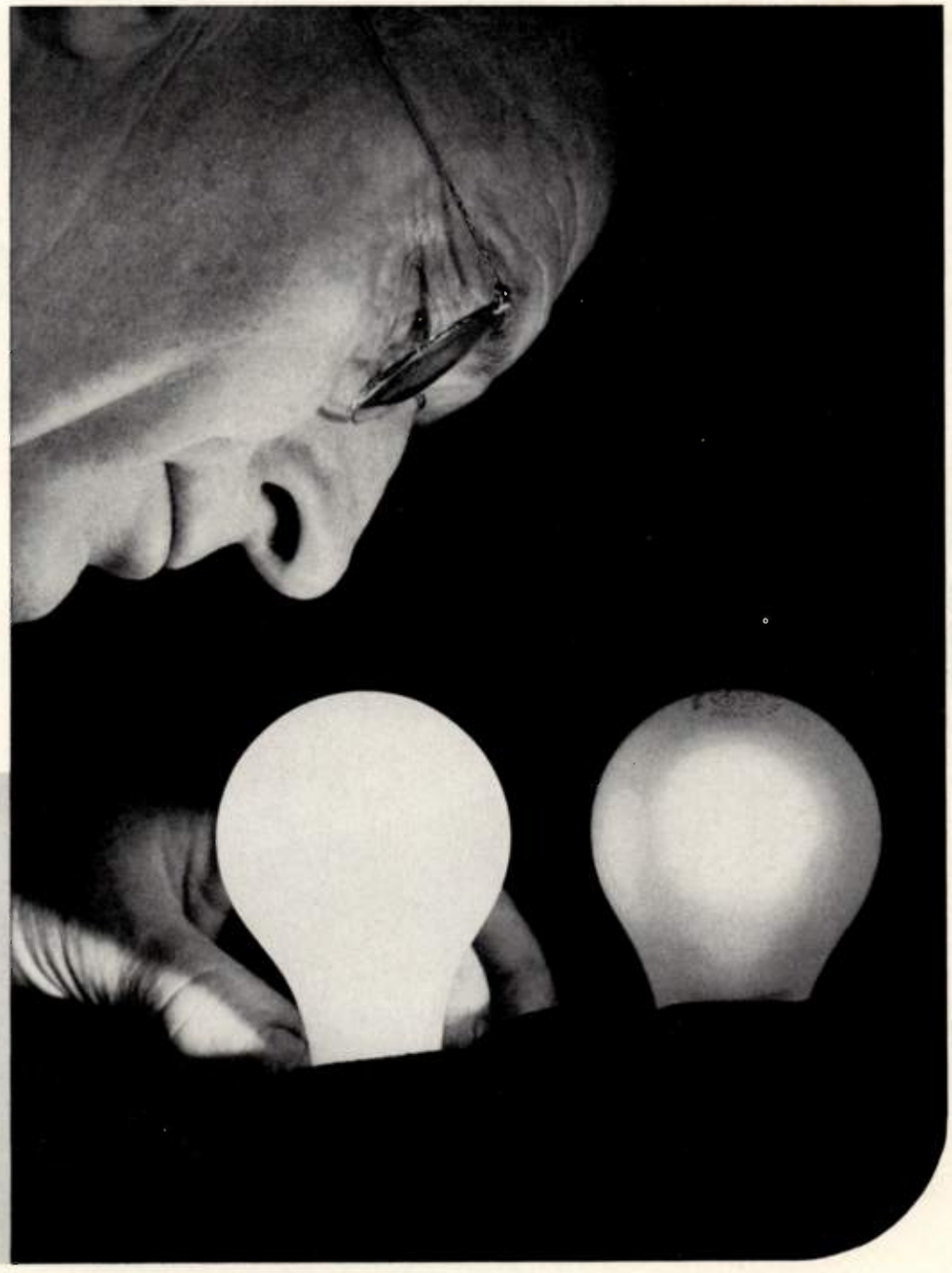
His nonchalance is based on complete confidence. Although his first attempts may be utter failures, he never expects anything except final success. "Most people worry about the defects in something new; you've got to concentrate on the possibilities. You just can't get discouraged in development work." That, he claims, is how he accomplished the "impossible" feat of frosting a bulb on the inside.

After Pipkin had dispensed with that problem, he turned his attention to others. He spent a lot of time developing flashbulbs. Photographers can thank him for the midget flashlamp—the most popular one on the market today.

A short time ago he went to work again on inside-frosted lamps. There was a need for a white bulb, one that would give even greater diffusion than the standard pearl-like lamp. White glass and white coatings had been tried many times, but all attempts resulted in less light.

Pipkin's formula worked again. It wasn't long before he came up with a snow-white bulb that answered all the qualifications. What's more, it won't turn black with use.*

** At present the new finish is being applied to two types of bulbs: a 100-watt and a 150-watt indirect-lite lamp. But it is possible to apply the coating to any lamp bulb.*



Marvin Pipkin is responsible for two important milestones in the development of the incandescent lamp. The first inside-frosted bulb, which was developed 25 years ago, is still the one most commonly used. The bulb on the left contains the new inside white finish—a fine silica substance that gives almost perfect diffusion with a minimum of light absorption.

ON November 2, 1947 the brigantine *Yankee* sailed out of Gloucester Harbor on an 18 months' trip around the world. Aboard was a man having one of life's rarest experiences—that of turning a daydream into a reality.

Ray Moeller, aircraft instrument specialist at the West Lynn Works, was in his thirties; he had been an engineer at General Electric for 12 years. Then, with that singular gumption it takes to disrupt an established way of life, he decided that his longing to visit the faraway corners of our globe had to be satisfied before he grew any older.

His plan of attack wasn't an easy one, but it was direct. He signed up as a member of the crew of the *Yankee**, a ship scheduled to make 150 stops during its 18-months' cruise. Most of these stops would be out-of-the-way places

** A 96-foot, two-masted ship with 7775 square feet of sail. It depends almost entirely on the wind for motive power, carrying two diesel engines for emergency use.*

seldom visited by white men. The *Yankee* carried no passengers, only 22 crew members who shared the work and the expenses. Except for the skipper and his wife, most of them were like Ray—strictly landlubbers. But the skipper, Commander Irving Johnson (USNR), had already made three round-the-world trips under similar conditions and he knew how to pick a capable crew from among amateurs. He chose people who were young (about 20), robust, and easy to get along with. He relaxed the age rule in Ray's case because of the latter's work as leader of a Junior Achievement group in Lynn.

Ray soon learned that a cruise on a sailing vessel was something to make a travel agent's hair stand on end. It was anything but a pleasure trip as such. He found himself standing watch in rain-beaten darkness on a rocking deck, climbing to dizzy heights in the rigging during a 60-mile gale, everlastingly heaving on lines to raise or lower the sails. But he wasn't looking for ease and comfort. He was out for adventure, and he found it according to the skipper's own definition: "Adventure is merely being scared in different ways."

In a series of long and lively letters Ray gave his friends in West Lynn a running account of his experiences. As far as he was concerned, Dana's "Two Years Before the Mast" was anything but a dead issue.

His first and hardest lesson was to learn the proper terms for the thousand and one parts of a ship. One member of the crew was duly punished during crossing-the-equator ceremonies for having referred to the "kitchen windows."

The *Yankee* sailed south to the Caribbean, through the Panama Canal, across the Pacific to the South Seas, and around the Cape of Good Hope into the Atlantic. Often they sailed for weeks without sighting another ship. Stops lasted anywhere from a few hours to a few weeks.

On a Cannibal Island

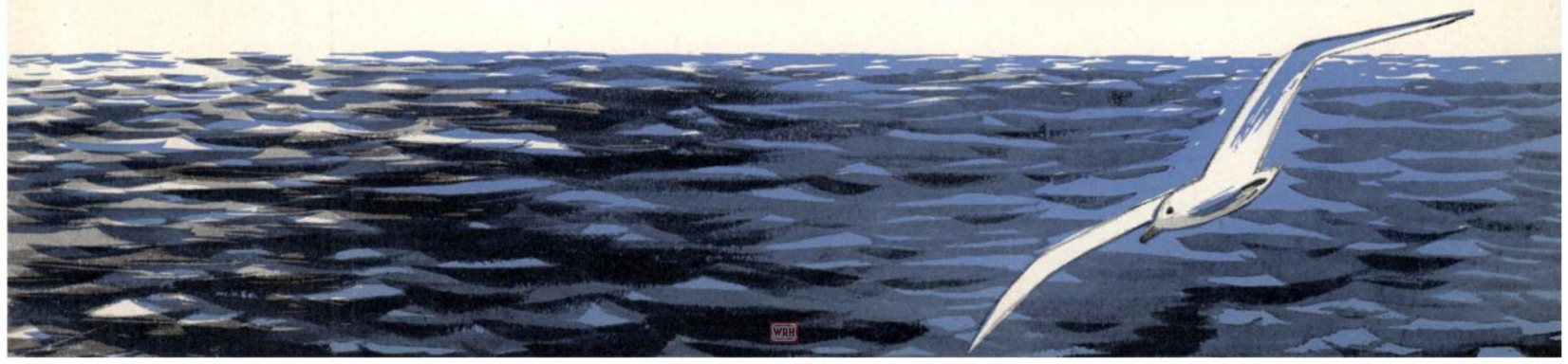
Ray had a chance to see at first hand the fantastic customs of some of the world's strangest places. A Tomman Island native pointed to a still figure in the rear of his hut and said to Ray, "Him fellow belong brother. Him fellow finished long long time." He wasn't fooling. These Melanesians don't bury their dead; they dry their bodies over the fire, coat them with mud and stand them up in the corner.

On Rapa Island the women make the advances and literally chase the men. Two of them leaped out of the bushes and tackled one of the *Yankee's* crew. In Siam it's taboo to lose your temper, a custom which probably makes the Siamese the best-natured people on earth.

In Tilopea Ray saw men wearing flowers stuck through holes in their ears; in Madang, New Guinea he heard the Lord's Prayer recited in pidgin English.

He had quite a bit of excitement on an island in the New Hebrides: "At Oleman Bay," he wrote, ". . . we ran across a Frenchman who had spent the greater part of his life in this part of the world. . . . He told us that the following day was to mark the beginning of a very unusual ceremony in the Big Nambas country." It seems that only the chief of the village can own the pigs and the women. But if he kills one of his pigs he must also give a pig to every male member of his tribe. So a pig isn't killed until there are enough pigs to go around and this might take four or five years. The time had now arrived when they were going to kill the pigs.

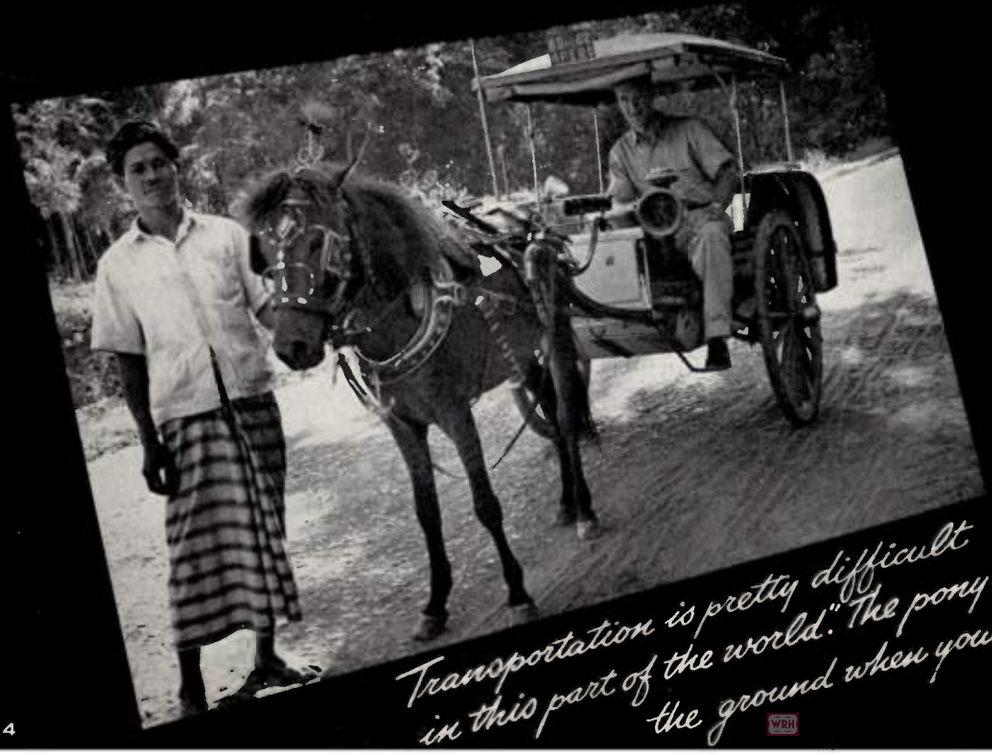
The Big Nambas people practice cannibalism and have eaten a great many of their own people as well as white men. Amok, where the ceremonies were to be held, is understood to be one of the only two cannibal villages remaining in the world. It has such a bad reputation that the resident British agent is forbidden by government orders to go there. "We asked the Frenchman to go with us to Amok but he refused. He said that the natives tried to finish him off three different times and he wasn't going back." They finally rounded up some native guides, and after three and a half hours of climbing through steam-



"There is so much to tell that I don't know where to begin"—from somewhere in the South Seas Ray Moeller writes a letter home.

This is Pollok, at one time Bali's most famous dancer. But at 32 she's considered too old to dance.

Crossing the equator Ray learned to wear a pareu.



Transportation is pretty difficult in this part of the world. The pony nearly leaves the ground when you step into the cart."

ing hot jungle, reached the village. There they learned that they were going to witness a ceremony no white man had ever seen.

The high chief had just died. "He had 100 wives and they had just finished strangling the first wife in order to bury her with him! The real custom is to bury the first wife alive with the husband, and I don't know why they strangled this one. At any rate . . . it was necessary to initiate or install a new chief . . ."

Elaborate preparations were going on, and Ray and his companions watched as the men were being painted for the dance. The faces and upper part of the bodies were painted a sooty black, put on with great care. Each man examined the results carefully in bits of broken mirrors and let out a howl if he found a flaw. Then they grabbed headdresses and dashed off into the woods. Here they painted the arms and the body from the belt to the toes a vivid orange. An attendant would pull a large leaf from the ground, chew the stalk end to make a brush and then paint his particular charge. The headdresses were put in place with wooden hatpins stuck into their long hair. The men would then prance about to check the rigidity of their headgear.

The dance lasted nearly three hours without a halt. It consisted of many formations, much stamping and savage yelling, and some singing. A man dashed out of the woods wearing a design of 40 or 50 white dots; each dot represented a man he had killed. The women came creeping out of the jungle (whence they had been ordered when the white men arrived), and watched. They were a sorry-looking sight with their long dirty headdresses and their two front teeth knocked out.

As the ceremonies continued late into the night, Ray and his friends decided to try to get some sleep—if such a thing were possible with cannibals yelling like mad outside their hut.

"The drums were beating, the yelling and chanting . . . became pretty bloodthirsty . . . We were just plain scared;

we didn't know when the natives might go crazy and come after us." During a lull Ray fell asleep. Then "I awoke with a start about 12:30. A torch was burning in our hut—a Big Nambas was inside in the act of examining each of the bodies in the hut! If you would like a thrill some time, I suggest that you try this set-up. Pete was so scared that he tried to reach for his knife lying near his head, but he found that his hands just wouldn't budge." Then the cannibal turned and left.

"At long last daylight finally arrived, and never in my life was I so happy to see the light. . . The cannibals were still at it. The scene gave you the creeps as they sat there, beating those drums and yelling horrible sounding yells. Smoke had settled over the large drums and the scene was utterly fantastic." Although the pig-killing ritual hadn't yet taken place, Ray and his party lost no time in getting out of there and heading back to their ship.

They may have owed their lives to the fact that they were Americans. Just being an American, they learned, was magic as far as the savage tribe of Big Nambas was concerned. These people believe that they are related to us and that some day the Americans will come to liberate them. At one village high in the mountains the natives maintain an airstrip (very bumpy) for the plane from America to land on. Ray found that Americans are well-liked the world over but only here do they approach a position akin to deity.

The Spice of Life

No two stops were alike. At the next port the weird or gruesome aspects of the South Seas would be replaced by their famous lure, and there would be flowers and music and hula dancers. Among his friends back home Ray will have a unique boast: he danced with the most beautiful girl in Tahiti.

At times during those long months at sea Ray wished briefly for a hot bath, an ice-cold drink or a date with a girl back home. But on the whole he considered himself the luckiest man alive: "I am leading the sort of life many millions of people think they want to lead and yet they will never *make* the necessary opportunity for themselves to do so." And he was acquiring, along with steel muscles and unforgettable memories, a new perspective. This he describes in a letter written a year after he left home:

"Without hesitation I would say that the major benefit has been one of appreciation . . . I wish that every American could make a trip around the world. If they did, I am certain that our country, great as it is now, would be ever so much greater, since everyone of us would be so downright pleased with his position in life and his environment that he would hesitate a long time before criticizing anything . . ."

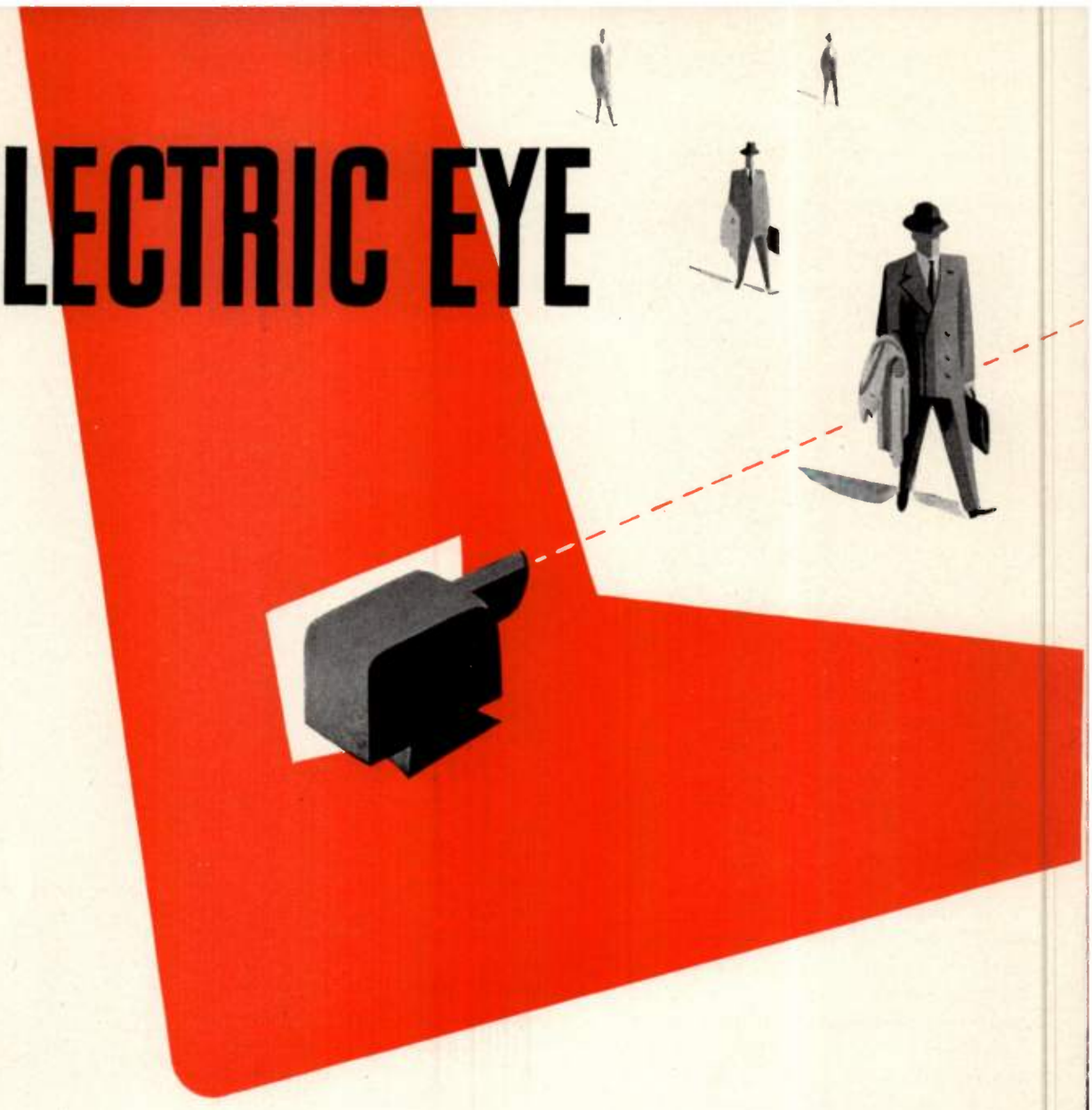
"I have a new appreciation of the General Electric Company. I always thought the company large and having far-reaching effects, but the full extent never struck home until this trip. I saw General Electric equipment in the most unexpected places. . . Even the wide spread use of West Lynn instruments has become more apparent. In the faraway Galapagos Islands I found West Lynn instruments used exclusively on the switchboards of tuna-fishing boats. On Palmyra Island I wandered into a little powerhouse and discovered West Lynn instruments on the panel. I also noted that the generators bore General Electric nameplates."

"I have a new appreciation of electricity, and what it means in this world of ours . . . You should see the attempts throughout the world to get a few watts of electricity. All sorts of contraptions are devised to generate enough to light a few bulbs and run a refrigerator."

As the only tie with his old job, Ray took with him a G-E exposure meter. He planned to test it under various climatic conditions as he made a pictorial record of his trip. The photographs on page 24 are part of that record.

As the MONOGRAM *goes to press the* Yankee *is nearing home. She is due to dock in Gloucester May 1.*

THE ELECTRIC EYE



THE next time you look at a beautifully illustrated magazine or Sunday supplement, notice the pages printed in full color. The illustrations have been printed from many separate color plates, one after the other. Each color has to be printed exactly on top of the other within thousandths of an inch, otherwise the picture would be blurred.*

General Electric put the electric eye to work on this problem back in 1937. The electric eyes scan the printing paper as it moves rapidly from one press roll to the other, making corrections if one color plate is going to print out of register.

In its manifold applications, the electric eye has made possible the control of industrial tasks that but a few decades ago were undreamed of. Today, in steel mills, print shops, bakeries, textile mills—in fact in nearly all industry where mass production plays a leading role—the electric eye has gone to work at jobs too swift for the human eye to observe, too complex for the hand to control.

Whether it is counting livestock in a stockyard or sorting 80,000 pounds of beans according to color, it is all in a day's work for the versatile electric eye. And yet, in principle at least, it's still the same electric eye that daily opens doors for millions of people throughout the world. Its future will be shaped by the needs of industry and the ingenuity of those who employ it. For from what was a laboratory curiosity only a few years ago, the electric eye has evolved into one of the most useful tools of this century.

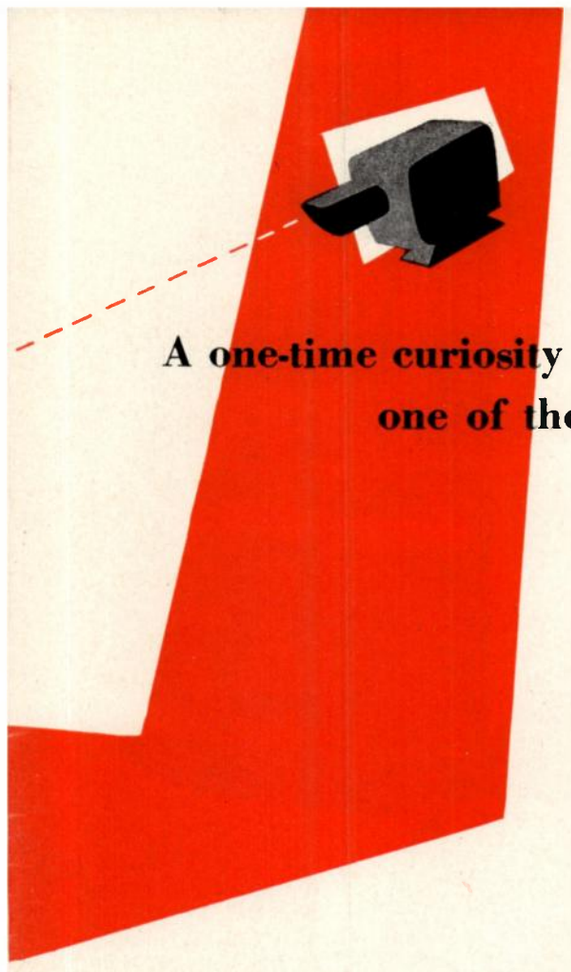
Technically this modern version of Aladdin's Lamp is known as the photoelectric tube, or phototube for short. To most of us it will always be the electric eye, the device that does mighty interesting things. Let's see how it works.

Suppose, for instance, we want to ring an electric door bell by shining a flashlight at an electric eye. We need the beam of light, a phototube, an amplifier tube, and a relay. The phototube is the key to the entire operation. Its important characteristic is its sensitivity to light rays. Whenever light rays strike it, a feeble current is generated. But this current itself is too small to do any useful work; it must be strengthened or amplified by another tube. The current is now strong enough to operate a relay, which closes another electric circuit and rings the bell. Now let's see what else the electric eye will do.

The Old Lamp Lighter

One of the more recent applications is its use in turning street lights on and off. Instead of using artificial light, as we did to ring the door bell, the light source here is merely daylight. Whenever the natural light falls below a certain level, the phototube operates a relay and the street light comes on. When

* *This is particularly difficult when high-speed rotogravure presses are used, as the tension of the printing paper may vary because of changes in temperature and humidity.*



A one-time curiosity of the laboratory has become one of the most versatile tools of the present age

morning comes, the street light is automatically turned off through a reversal of the process.

Being entirely automatic, an equipment of this kind offers the advantage of providing light only when it is needed. On a stormy, cloudy day, when visibility is poor, the device goes to work early. And all that is needed to start it working is the change in natural illumination.

Similar in operation is the indoor lighting control. Designed for schools, offices, factories and other lighting installations, it protects students and workers against eye fatigue by maintaining correct levels of illumination.

Watch My Smoke

In recent years the problem of controlling smoke from industry has been a serious one. Not only does the smoke damage property, but, by polluting the air, it may injure the health of people in the community. As a result many cities have municipal ordinances regulating the amount of smoke coming from factory chimneys.

Here was a problem that could best be solved automatically. Could the electric eye do it? It could, by means of the smoke density indicator.

A beam of light is projected through the smoke across the chimney or stack system. Whenever the smoke thickens beyond the allowed density the light beam is weakened or blocked out completely. An alarm may ring or a light may flash, warning the fireman that he must change combustion conditions in order to cut down on the amount of smoke. At the time the alarm is sounded, a relay can operate a blower that forces air to the firebox until the smoke is considerably reduced.

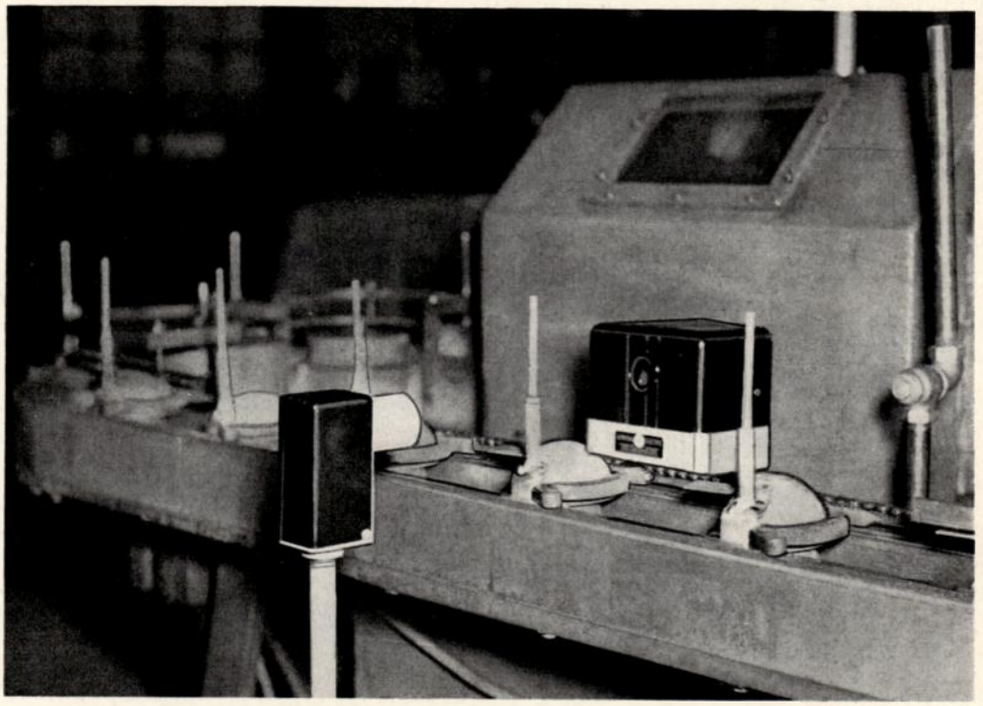
The Persistent Sentry

Serving sentry duty against burglary is old stuff to the electric eye. It has been standing guard at factories, banks, and offices a good many years now. A beam of light shining across the guarded area falls on the phototube. Whenever the light beam is broken by someone walking through it, an alarm rings or some other warning device operates. With the use of mirrors the light beam can be directed around corners; a practical way to cover large areas.

But smart criminals quickly caught on and learned to outwit the system. By merely shining a flashlight at the phototube, it was a simple matter to pass through the light beam without sounding an alarm. Then the forces of law and order turned the tables on the criminal by placing an infrared filter over the light source. This made the light beam virtually invisible; if the burglar couldn't spot it in the first place, he couldn't outwit it with his flashlight.

The problem was solved—unless the intruder caught on to the fact that the photoelectric alarm system was sensitive to visible light as well as infrared.

Recent installations are equipped with a small motor which drives a disk having a series of slots or holes on its



One of the many applications of the electric eye is its use in counting parts on a conveyor or an assembly line system. Here the photoelectric relay is counting float-valves in a refrigerator factory.

outer edge. As the disk spins it "chops" the light beam in a definite pattern. The electric eye circuit, "tuned" to the same light pattern, can't be fooled by the flashlight of the uninvited guest.

The Pin-hole Detector

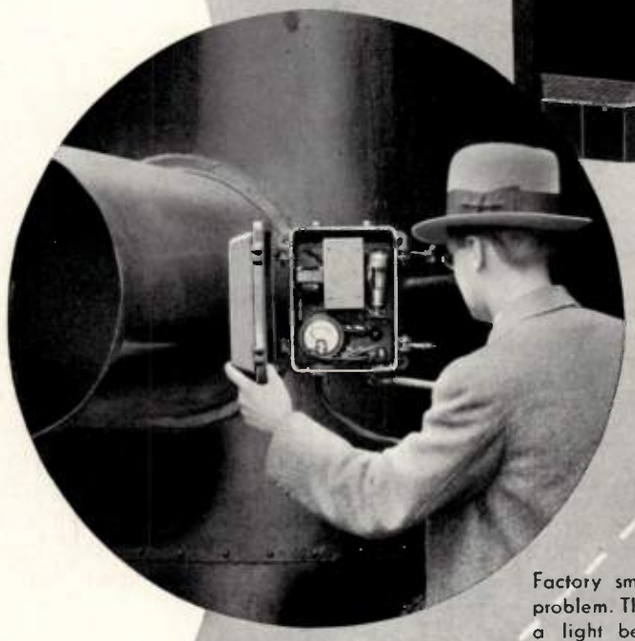
The next time you have an empty tin can handy, hold it up to the light. If you find a hole in it, it's a cinch the tin sheet from which it was made wasn't inspected by the General Electric Pin-hole Detector. If it had been, that sheet would have been rejected, or the hole would have been marked—or both.

The photoelectric pinhole detector can be used to detect holes almost as small as five thousandths of an inch in diameter. The equipment consists of a light source placed above the metal strip, as it comes from the mill, and a number of phototubes placed below. Any light passing through a hole in the strip will strike a phototube, causing electric equipment to reject the piece or the hole to be marked by a mechanical marking device.

Don't be surprised if you find the electric eye at your favorite bowling alley soon. When you do, you'll find it tirelessly watching the foul line, ready to sound off the instant your foot slips over the line. If that happens, a bell will ring and a foul light will flash over your alley.

In case you are wondering, the system is designed so that the ball has time to pass through the beam without operating the bell and light signal. But you'll never get your foot on and off the foul line that fast without getting caught in the act.

It's an easy matter to get a drink of water from the photoelectric drinking fountain even when your hands are full. Whenever the vertical light beam is interrupted, the electric eye turns on the water jet.



Factory smoke poses a serious problem. The electric eye watches a light beam thrown across a stack system. As smoke thickens, light is shut out and the fireman is warned to correct combustion.

In a Utah highway tunnel, single-lane traffic is automatically controlled by General Electric photoelectric relays. Whenever cars enter the one-lane tunnel, the electric eyes take note and turn on a traffic light to warn drivers approaching the opposite end.

New G-E Wiring System Offers Unlimited Possibilities In Modern Lighting Control

Multiple Switching from Many Locations Available at Low Installation Cost With G-E Remote Control

Switch your garage lights ON or OFF from any room in your home—in hospitals, give every patient a light switch next to his bed—in industrial plants and commercial buildings, let every night watchman have a centralized bank of switches for all lights in his area. These are just a few of the many possibilities that can be brought about by the new remote control system, recently announced by the General Electric Company.

Easy to Install

Using existing methods for wiring all power circuits, the General Electric remote control system requires no new materials or techniques except in the switching circuit itself. In this circuit a small, low-voltage relay does the actual switching. Control of this relay can be placed practically anywhere in a building, simply by installing lightweight wires from the relay to conveniently located wall switches, specially developed for this purpose. "Easy as wiring a doorbell," is the way one observer described this circuit.

Because this new system cuts the cost of materials used in multi-switch applications, because it makes possible a large number of controls on any individual circuit, General Electric remote control clears the way for wide use of multi-switch control in structures of all types.

Keeps Costs Down

In residential wiring, this new system means real "dream-home" electrical control even in residences where costs must be cut to the bone. Simple applications include the example of garage lights given above—also attic fan and cellar light controls in various parts of the house. In the completely modern house, all lights and outlets can be controlled from various locations.

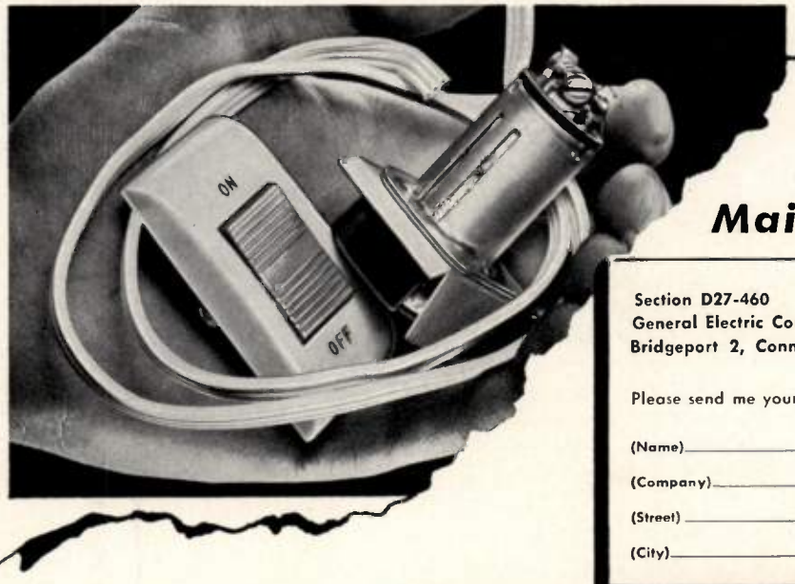
In dormitories, institutions, and commercial buildings, General Electric remote control can provide an effective centralized system for lighting control. Wherever "lights-out" regulations are in effect, a master panel of remote control switches can be used to enforce these regulations for an entire building or a whole floor. In commercial structures or plants, a similar system can be used to turn out lights left on after hours. Commercial and industrial operations can profit by the over-all multi-switch control offered by this system.

Offers New Ideas

To everyone concerned with building and remodeling, this new system offers a completely new range of ideas on flexibility in the use of electricity. To the architect, it means a new era in electrical convenience in structures of all sizes and types. To the buyer and the investor, it means increased workability and extra value, now and in the years to come. To the electrical contractor, General Electric remote control offers a vast, new field for his services.

To answer questions on the applications of General Electric remote control—to explain the procedure and the materials required—the General Electric Company has prepared an informative booklet on the subject. This booklet is a valuable guide for everyone interested in this new system. To get your copy early, simply fill out the coupon and mail it today.

Here are the essential components of the new General Electric remote control system: the switch, the small transformer (not shown), the relay, and the lightweight No. 18 wire. All accessories necessary for the system are manufactured by General Electric and sold through your General Electric Construction Materials distributor.



Get Ready to Get Your Share
OF THIS BIG NEW MARKET
Mail Coupon Now

Section D27-460
General Electric Company
Bridgeport 2, Connecticut

Please send me your new booklet on General Electric remote control.

(Name)_____ (Title)_____

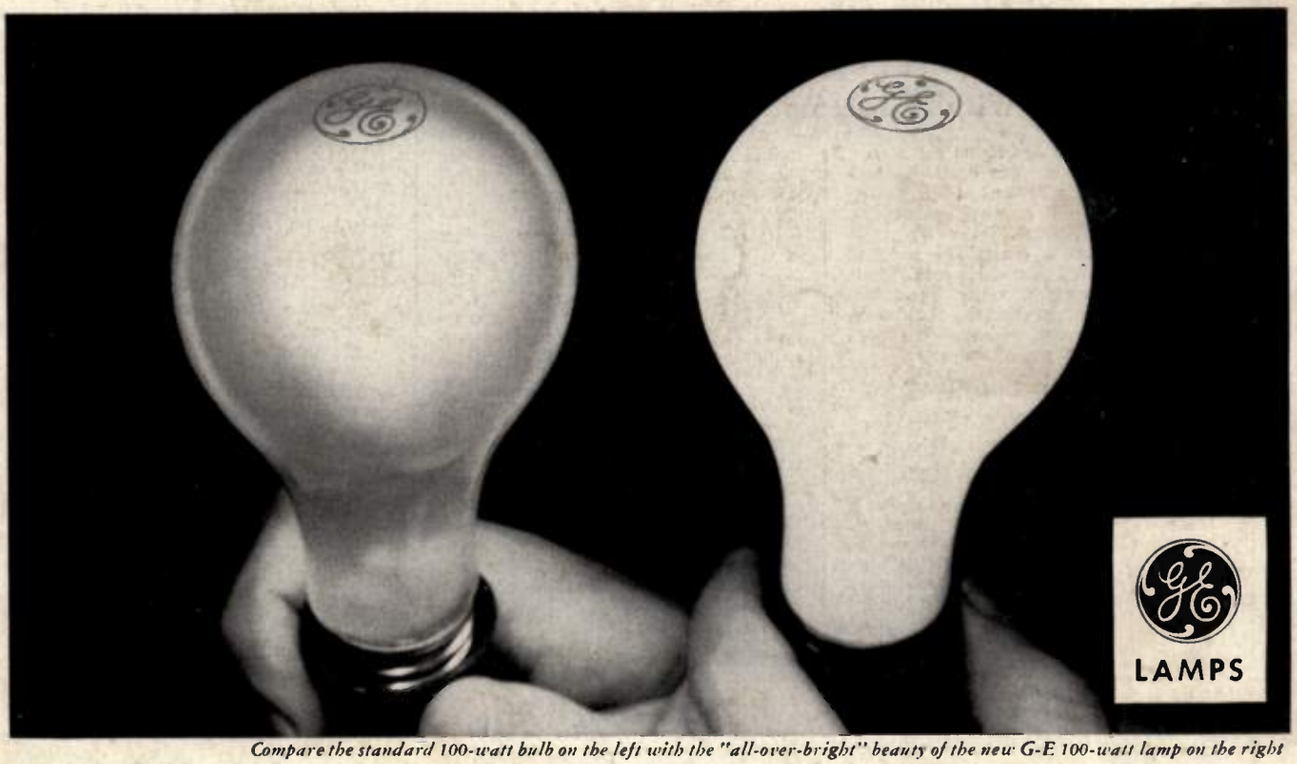
(Company)_____

(Street)_____

(City)_____ (Zone)_____ (State)_____

GENERAL ELECTRIC

General Electric announces a new kind of lamp bulb!



Compare the standard 100-watt bulb on the left with the "all-over-bright" beauty of the new G-E 100-watt lamp on the right

General Electric lamp research has developed a new kind of lamp bulb that provides nearly perfect light diffusion. It's the greatest improvement in the quality of incandescent lighting since General Electric introduced the inside frosted lamp in 1925!

SOFTER LIGHT

The photograph above shows the difference between the new G-E Deluxe-White lamp and the standard inside frosted bulb. The new lamp spreads the light over the entire surface of the bulb. Its light is much softer and better diffused. Annoying reflections from glossy surfaces are greatly reduced.

GREATER BEAUTY

Both lighted and unlighted, this General Electric lamp has a clean-white beauty that lasts for the life of the bulb. Its softer shadows add new charm to house furnishings and interiors.

The Deluxe-White lamp is particularly recommended where any portion of the bulb is exposed. It will soon be available in limited quantity in the 100-watt size at your General Electric lamp dealer's for only 20c, plus tax.

General Electric lamp research is always at work to develop new and better G-E lamps—and to make them *Stay Brighter Longer.*

LATEST STEP IN G.E.'s NEVER-ENDING RESEARCH TO BRING YOU BETTER LIGHT

Marvin Pipkin, General Electric lamp research scientist at Nela Park, Cleveland, who developed the new 100-watt Deluxe-White lamp also developed the Inside Frosted lamp of 1925, another major lighting improvement.

You can put your confidence in—

GENERAL ELECTRIC