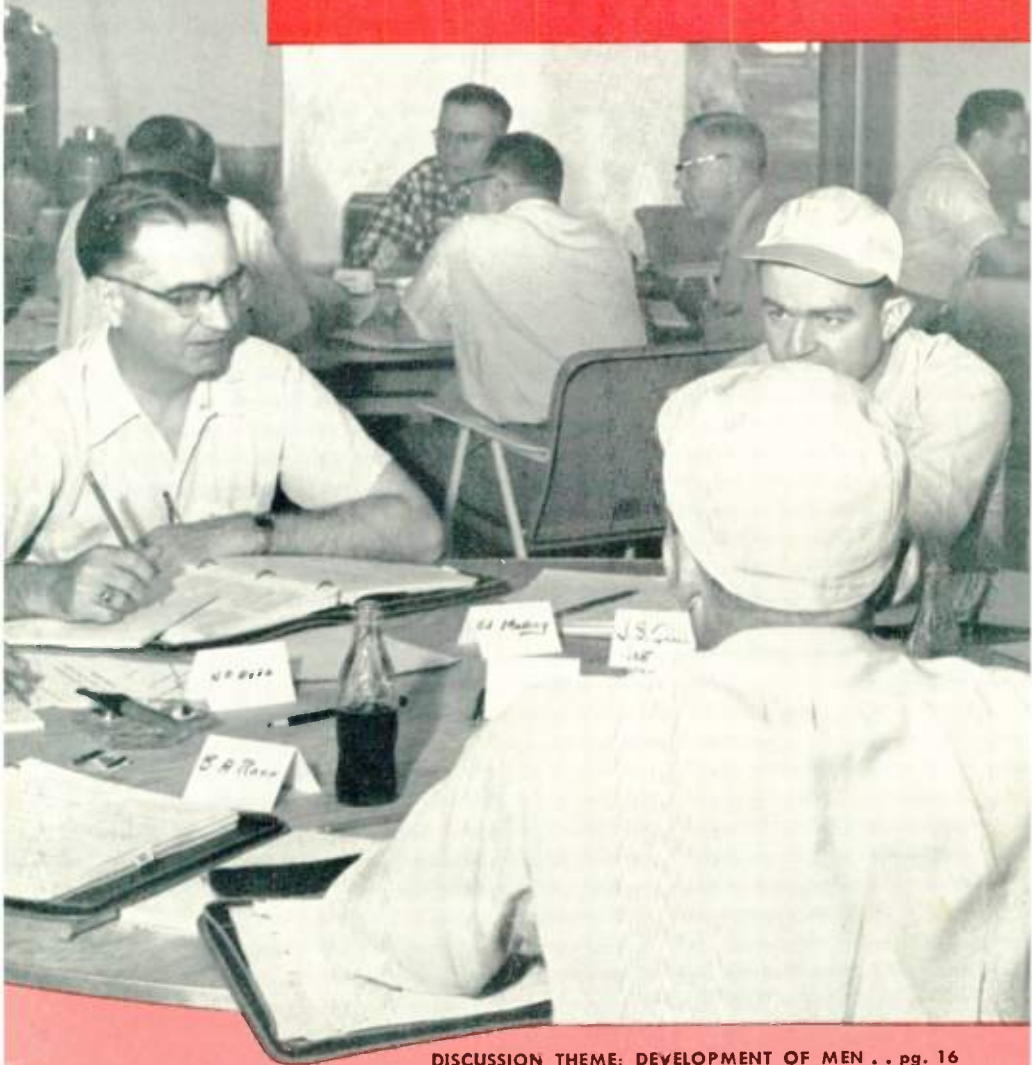


# THE MONOGRAM

JULY  
1954



DISCUSSION THEME: DEVELOPMENT OF MEN . . pg. 16



A Look at Living in 1964 . . pg. 20

## LETTERS

### "Completely Enthralled"

Editor:

This letter [below] was most gratifying to us here on the House of Magic staff. I think *Monogram* readers will find it interesting also.

BILL TROY  
Schenectady

"Thank you very much for giving us the opportunity to see the wonderful General Electric Show. Because of their hearing handicap we questioned how much our pupils would understand. Much to the amazement of our faculty, the children were completely enthralled. They understood the greater part of it. Of course, the main credit for this is due Mr. Hoctor who enunciated so clearly that our children could read his lips with facility. We have never had a show that received such enthusiastic applause and, today, every classroom is buzzing with questions and further explanations on what they witnessed yesterday."

Miss M. C. W.  
Assistant Principal, Jr. High School 47  
(For the Deaf and Hard of Hearing)  
New York, N. Y.

### "Deepest Appreciation"

Editor:

The letter following, which was sent to Philip D. Reed, Chairman of the Board of General Electric, should be especially good reading for most *Monogram* readers, many of whom have, no doubt, received benefits from the work of the Red Cross, made possible in part by corporate gifts, as well as their own contributions.

Dear Mr. Reed:

I wish to convey to you personally our deepest appreciation for the help of the General Electric Company in the 1954 American Red Cross Campaign for Members and Funds.

More than ever this year the support of the General Electric Company was invaluable, especially in view of the requirements

(Continued on page 36)

The object of the *MONOGRAM* is to keep its readers better informed on General Electric activities and policies so that they may more effectively represent the Company in its relations with the public.

## CONTENTS

News.....	1-5
"Electrall" Generating System.....	6-8
News.....	9-15
Island Conferences.....	16-18
House of 1961.....	20-23
New TV Line.....	21, 25
Whale of a Story.....	28, 29
People, Products, etc.....	30-36

Lawrence W. O'Brien, Editor

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## APPOINTMENTS

### Marketing Services

Effective July 9, Fred J. Borch is responsible for the Marketing Services Division with the title of Manager—Marketing Services. Borch had been head of a Business Survey Study in the Lamp Division. His new office is located at headquarters of the Marketing Services Division in the New York Office.

**Also Effective** on July 9, John L. Busey, vice president, will perform special assignments for President Cordiner and act in a consulting capacity to the Manager—Marketing Services.

## TURBINE-GENERATORS

### “Orderly Purchase” Plan

In a move designed to assist the nation's electric utilities in meeting their projected growth, the Company has announced a new policy concerning the purchase of turbine-generating equipment.

**The new policy**, announced by Glenn B. Warren, vice president and general manager of the Turbine Division, is designed to stimulate the orderly purchase of large turbine-generating equipment, ease the financing process, and to maintain optimum employment and use of engineering and manufacturing facilities.

**Aimed at leveling out** the historic

“peaks and valleys” in the ordering of heavy power-generating equipment, the new policy states that General Electric will undertake initial engineering and manufacturing work on large equipment orders with the new provision that such orders can be cancelled up to six months later at only a minimum amount of the contract price.

This “cancellation charge,” according to Mr. Warren, would be much less than the normal customer liability and far less than actual factory costs incurred. However, in the event of early shipment orders, cancellation would be required 12 months in advance of scheduled delivery to qualify for the liberalized terms.

In addition, Mr. Warren said that General Electric would endeavor to work out with the electric utilities a means of financing the charges normally made prior to shipment until financing of new equipment could be handled by the customer.

**Such special financing** of these charges, which are normally made to cover the cost of materials and engineering prior to and during construction, would enable utilities to carry out more orderly and effective long-range expansion and financing programs. At the same time, he said, General Electric's new policy should help avoid sharp drop-offs in orders and permit manufacturing and engineering facilities to be more efficiently and continuously utilized “with mutually profitable results to the manufacturer and the utilities.” (For an important appraisal of this G-E policy see editorial on back cover).

## LEADERSHIP

### Capital Citizens!

The U.S. Treasury Department has honored General Electric Company and its employees for being the nation's leaders in the sale and retention of U.S. Savings Bonds. Earl O. Shreve (at left in photo on this page) national director of the U.S. Savings Bond Division of the Treasury Department, presented the citation to General Electric President Ralph J. Cordiner.

**John D. Lockton**, G-E Treasurer (at center in photo) reports that, at cost price, more than \$100 million worth of U.S.

Savings Bonds purchased by employees through the G.E. Savings and Stock Bonus Plan are now on deposit in the Company.

**The government citation** lauds the Company for "pioneering this means of encouraging employee savings" and for setting "an example of public services and enlightened employee relations for American industry and business."

**More than 85,000** G-E employees are now purchasing the bonds at a cost price of nearly \$30 million annually under a payroll deduction plan whereby bonds left on deposit for five years earn their owners a stock bonus equal to 15 per cent of the purchase price of the bonds.

**TO GENERAL ELECTRIC COMPANY AND ITS EMPLOYEES . . . FOR U.S. BOND LEADERSHIP**





DOWNES OF SIKORSKY, MURRAY OF G.E. AND FIRST LOAD OF CONDUIT

## CONSTRUCTION MATERIALS

### For the Whirlybirds

Thirty-two miles of G-E White rigid conduit will go into a new branch plant being built by Sikorsky Aircraft at Stratford, Conn., for the production of giant, twin-engine, single-rotor helicopters.

Donovan J. Murray, general manager of the Conduit Products Department, Bridgeport, Conn., is pictured above with Nelson H. Downs, assistant to the general manager of Sikorsky Aircraft Division of

United Aircraft Corp. The occasion: delivery of the first load of more than 18 tons containing some five-inch conduit, a large size for this type product.

**The new Sikorsky plant** and office, expected to employ about 4000 people and containing about 860,000 sq. ft. of floor space, will be completed in 1955. The same company has a large plant in nearby Bridgeport. Completion of the new Stratford project will make the Bridgeport-Stratford area the free world's largest helicopter manufacturing center.





**DARLINGTON—HE PROVED HIS CASE**

## SELLING

### Electrified Hop Ranch

In Sacramento, the Wissemann Hop Ranch is believed by its owners to be well on its way to be coming the most automatized hop ranch and harvesting plant in the world. Reason: it will be the most completely electrified, with the aid of motors and controls by General Electric. (Hops are used in making medicines and beverages.)

Plus-service by a General Electric salesman led to the choice of G-E equipment. An unsolicited letter from customer to salesman tells the story:

Gene Darlington  
Apparatus Control Specialist  
General Electric Company  
San Francisco, Calif.

Dear Gene:

"The Sundays and frequent nights you spent with us last harvest proved invaluable in the perfection of the plant's oper-

ation. We are "babes in the woods" when it comes to modern electrical controls and undoubtedly would have remained so had not pure good fortune caused you to visit the ranch.

The plant now uses some 200 motors, a great many being gearheads, and I am pleased to say they now all carry the nameplate of G.E.

Every man on the job marvels at the results you have produced for us. Many sales representatives call on us. They all hand us fancy literature and quote sharp prices. Never, however, have any of them knuckled down to the job and actually worked with us in the experimental installation of equipment. Principally, I feel, because they lacked the know-how. It should be easy, therefore, for you to clearly understand how greatly you impressed us when you went out on that job after the plant finished its day's run and proved by actual operation that your controls had the answers we required."

## LOCOMOTIVE & CAR EQUIPMENT

### Another Customer

Baldwin-Lima-Hamilton will now be a customer of General Electric's Locomotive and Car Equipment Department at Erie.

**A few weeks ago** Baldwin-Lima-Hamilton bought back 515,000 shares of its stock from Westinghouse—thereby terminating a relationship which had existed since 1948. Coinciding with this announcement was one from G. A. Price, Westinghouse president, who said that his company is withdrawing from the manufacture of equipment for large diesel-electric locomotives, and would no longer be able to supply Baldwin-Lima-Hamilton's needs. Westinghouse also announced that it is discontinuing the manufacture of electric and mine locomotives. The result is that General Electric appears to be at this time, the only manufacturer in the

United States of straight electric locomotives (including rectifier-type units) and gas turbine-electric locomotives for railroad use.

Forman H. Craton, L&CE's manager of marketing, stated that during the past few years Baldwin-Lima-Hamilton is estimated to have had approximately six per cent of the available business in the domestic diesel-electric locomotive market.

**L&CE will sell** Baldwin-Lima-Hamilton the same type of thoroughly proved rotating and control apparatus which is being sold to the American Locomotive Company and to Fairbanks, Morse and Company—and which has a high degree of acceptance on the world's railroads.

Together, these three locomotive builders are estimated to account for approximately 30 per cent of the available business in the domestic diesel-electric locomotive market.

R. C. Alley, L&CE's manager of railroad equipment sales, heads a team of sales and application engineers who are working with Baldwin-Lima-Hamilton to develop approaches to this important new business.

**BELOW: 500 MPH  
OVER THE TARGET**

## JET ENGINE PROGRESS

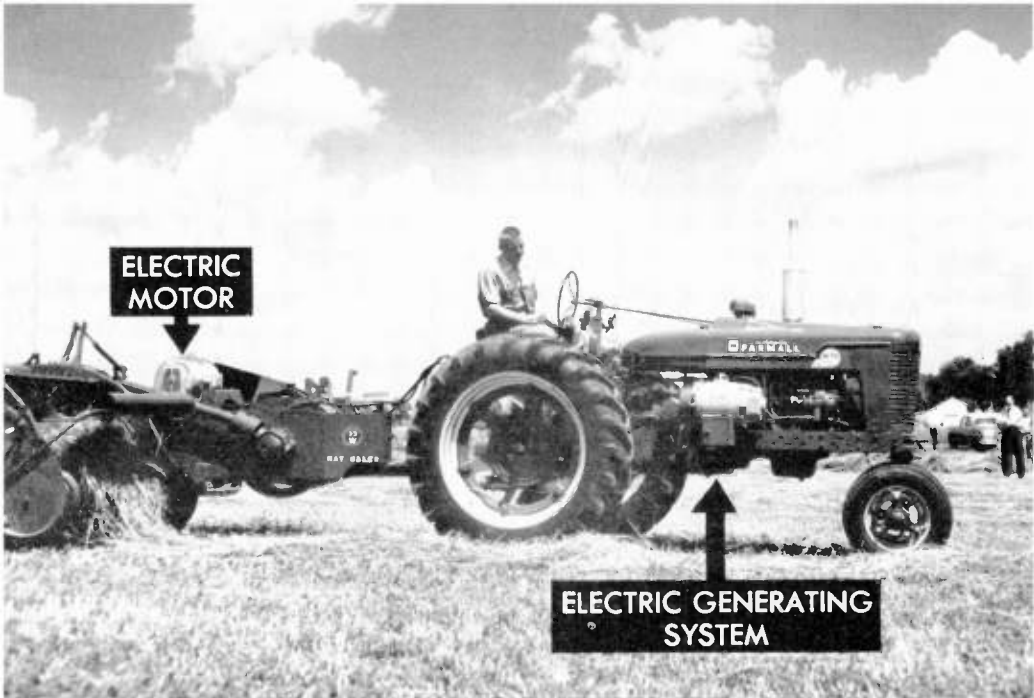
### J47's Score Twice

Not too many years ago, aircraft engines, like horses, were developed either for speed or stamina. G.E.'s jet engine builders, however, have bred into their J47 jet both race-horse speed and workhorse endurance. Added evidence of this versatility came last month when G-E J47 engines powered both speedy fighters and big bombers to Air Force records.

**After winning gunnery** laurels in their various Air Force Commands around the world, twelve of the nation's top jet fighter units met in Las Vegas last month for the finals in the Air Force's first all-jet target-shooting competition. The winners were Air Training Command's marksmen, flying G-E-powered North American F-86F Saberjets.

**Without having to overhaul** or replace an engine, a big swept-wing Boeing B-47 bomber from MacDill Air Force Base, Tampa, Fla., this month completed flights totalling more than 600 hours, setting a jet engine endurance record for this type of plane. The engines were G-E J47's.





BELOW: CLOSE-UP OF ELECTRALL SYSTEM



## MOBILE GENERATORS

### Electrified Harvesting

The "Electrall," an experimental electric generating system designed to make the farm tractor a mobile source of electric power as well as mechanical power for farming operations, has been announced by the International Harvester Company.

The electric power is developed by means of a compact generator specially designed by General Electric engineers.

**The Electrall** is being tested on Harvester's largest current model Farmall tractor. Engineers are also applying the unit experimentally to motor trucks.

John L. McCaffrey, president of International Harvester, said that even though



the Electrall is not yet in production its potential importance to farmers is so great he felt a report on it should be made.

Research work up to now demonstrates many advantages in the use of electric motors, as compared with internal combustion engines, for the operation of farm machines such as combines or automatic hay balers pulled by the tractor.

Electric motors are easily transferred from one piece of farm machinery to another. They offer more silent, smoother performance and reduce maintenance and repair. Added safety and easier control are obvious, since a button switch operates the electric motor on the trailing equipment.

**Greater flexibility** in the design of implements for use with a tractor is another advantage. Engineers feel that the design of larger farm implements which now use belt drives and special gearing could be simplified by the use of several small electric motors.

With the Electrall equipped tractor, electric power is available anywhere on the farm to operate portable tools, temporary lighting, etc., away from the farm's normal sources of electricity, and even there—in cases of emergency.

As applied to a motor truck, the Electrall generator could be located immediately behind the cab, getting its power from the transmission. Then, the truck could perform as a power source the same as the tractor, in industrial as well as farm use.

The unit has many interesting possibilities in the field of crop and insect control. Agricultural colleges have experimented with light traps to control corn borer moths. The moth is attracted by ultraviolet lights, which are surrounded by electric grids. When the moths fly close to the light, they are electrocuted.

**The Electrall could** provide portable field flood lighting for round-the-



**LIGHTING AND INSECT CONTROL**



**POWERS ELECTRIC CHAIN SAW  
ELECTRALL SYSTEM ON TRUCK**





**JOHN L. McCAFFREY**, president of International Harvester and **W. V. O'Brien**, vice president of General Electric witness Electrall system tests.

clock farm operations at peak seasons or for crops that are harvested before sunrise.

The Electrall provides three outlets: one for 220-volt, three-phase, 60-cycle alternating current, another for 120-volt, single-phase current to power ordinary electric tools, lights or other appliances in the field, and a third outlet for 220-volt, single-phase power.

Harvester officials said it was too early to make any cost predictions, but said tentative price estimates were "within a practical range."

## TRAINING

### Advanced Technical Program

For the trainees who have joined G.E. this year on the Physics, ChemMet, and Engineering Programs, the Company's "Development of Men" becomes an immediate reality through such opportunities as those offered in the improved Advanced Technical Program. If they wish to make careers in design and development engineering, they can take optional after-hours study courses in the Creative Engineering, Advanced Engineering, or Process Technology Programs.

**Through these studies** trainees get a grounding in engineering fundamentals and in analytical and creative techniques that lead to logical approaches in the solution of engineering problems. No "snap" refreshers, the three advanced courses require four hours of class work and about 20 hours of homework a week.

The Creative Engineering and Process Technology Programs are two years long; the Advanced Engineering Program, three years long. Beginning this September, however, the first year of each program will be combined into the Advanced Technical Course because most of the first-year material is common to all three programs.

**The Advanced Technical Course** will be offered in eight G-E locations—Schenectady, Pittsfield, Lynn, Erie, Philadelphia, Fort Wayne, Evendale, and Syracuse. After beginning at any one location, trainees can continue without losing ground upon reporting to any new assignment in another of the eight cities.

Trainees interested in signing up for the advanced technical programs can get information from their Training Program Representatives or from their supervisors. Enrollment will close shortly.

## CARBOLOY DEPARTMENT

### Machine-tool Milestone

To Windsor, Vermont, last month, went 17 trade and business magazine editors to see history made in the machine-tool industry. They saw Carboloy Department's carbides being used on an automatic bar machine—the last of the carbide holdouts in the machine-tool field.

**The Cone Automatic Machine Company, Inc.** of Windsor, showed the editors the initial success of their joint work with Carboloy. They demonstrated the job that carbide cutting tools can do

when they are properly used on the "automatic production machine in a circle"—the automatic six-spindle bar machine. In photo below, Carboloy Department's design and application engineer Ed Weller, left, and Cone's vice president J. A. Gerard compare "before" and "after" results. The large equipment behind the men in the picture is the six-spindle bar machine.

**With Carboloy carbides,** bearing-races are produced from 2½-inch steel tubing at the rate of 540 per hour—enough to supply 270 15-horsepower electric motors taking two bearings apiece. Previously, the same type of machine using high-speed steel cutting tools produced 180 bearing-races in one hour.

**NO WONDER EDITORS WERE EXCITED AT WHAT WELLER AND GERARD SHOWED THEM**





"PILOT" IN GONDOLA IS OBSERVED BY MOVIES, X-RAY AND TV

### Research for Pilot Safety

The Naval Air Development Center's Aviation Medical Acceleration Laboratory near Philadelphia has just issued a report on its research with a giant G-E-powered human centrifuge built two years ago. It simulates for study purposes the extreme blackout effects likely to be encountered by pilots of today's high-speed military aircraft (July 1952 *Monogram*).

**G.E.'s contribution**—the world's largest vertical direct-current motor (1000 hp) which the Large Motor and Generator Department designed specially for this important defense application.

The big centrifuge (photo on page opposite) has made it possible for the Navy to study the problems of tumbling and jostling as they will exist in fast aircraft electronically locked on targets. Data pertinent to the performance and safety of pilots under these conditions, heretofore impossible to obtain, have been provided by the new centrifuge.

**Close study** of the "pilot" during the operation of the huge machine is effected with TV and movie cameras, high-speed x-ray equipment and other special physiological recording and measuring devices.

Chimpanzees have survived spins on the fifty-foot beam when it was whirled fast enough to cause forces equal to 10 times the normal pull of gravity to act on their systems. Human pilot-subjects have been exposed to stresses one-third as great.

**The gondola "cockpit,"** the 50-foot arm, and the motor's armature weigh about 125 tons, yet the G-E motor can accelerate this mass from stand-still to 178 mph in less than seven seconds. The

weight is carried on bearings entirely supported by the motor. The machine is so precisely designed that a pull of 25 pounds on the arm will set it in motion.

**One of the most interesting** plans for the centrifuge, the Navy reports, is for it to be used in a program of study, testing anti-G suits that reduce the effect of centrifugal force on pilots of modern planes.

## PRODUCTIVE MAINTENANCE

### A Matter of \$22 Billion

Predicts Apparatus Sales Division's Howard F. McCullough, general manager of the Service Shops Department: "Industry in the next ten years will double its equipment maintenance expenditure to about \$22 billion annually."

**McCullough, speaking** to 150 Cleveland engineering, manufacturing and maintenance executives, stated that future high production demands together with increased automation will result in this pre-

**HOWARD McCULLOUGH**

... a balance between "too much and not enough"





dicted maintenance increase. Industry, he said, must direct to maintenance functions the same degree of management attention now directed to production. To prevent costly delays during peak production demand times, the best answer is thorough and early maintenance planning.

**Occasion of McCullough's** June talk to the Cleveland group was the first of a series of Productive Maintenance Forums to be given in 26 cities outlining G.E.'s answer to machine outages and costly downtime due to hit-or-miss electrical maintenance.

As McCullough told the first Forum, G.E. has worked out a five-step maintenance program that results in more production without unnecessary increases in electrical equipment. Here's how it works:

*First, an inventory* is taken of all plant electrical equipment listing the specifications, location, age, cost, etc.

*Second, the amount of warrantable* routine maintenance is determined.

*Third, routine maintenance* action steps are scheduled, striking a balance between "too often" and "not often enough" . . . thus keeping machines needing routine checks productive without doing a complete and expensive overhaul unnecessarily.

*Fourth, is the evaluation* for critical maintenance—a key step. This is a study of the vital machinery, outages in which

would hold up big sections of production, or make work unsafe, resulting in downtime. There are two phases of Step Four: (1) evaluation of planned overhaul requirements and (2) evaluation of critical parts protection requirements. It may, for example, prove cheaper to stock a complete spare motor, rather than risk a long stoppage while a critical part of a vital motor is rebuilt and replaced.

*Fifth, this critical maintenance* should be established as a continuous, rigidly adhered-to schedule.

**As McCullough** and the Productive Maintenance Forums themselves point out, G-E maintenance specialists are available from the Apparatus Service Shops around the nation. People interested in updating their maintenance through the five-step program offered by McCullough, can write or call for information and advice from their nearest G-E Service Shops, or from the Service Shop Department, Apparatus Sales Division, Schenectady.

A brochure detailing the steps is available from these same sources.

#### BOOKLET AVAILABLE



## STORAGE METHODS

### Rolling Racks

High Voltage Switchgear Department's Tom MacCauley, sales promotional planning manager, was so impressed with space savings resulting from the installation of rolling stock storage racks, that he wrote up a story about their advantages. It was accepted and published by *Management Methods Magazine*.

**MacCauley makes** a hobby of writing and it's a good thing he likes it, for his story brought him numerous letters and requests for more information. To



top this off, MacCauley had a visitor from London, England, one day last month, named Thomas E. Foulkes. This gentleman, whom many call Churchill's double (photo at right), explained that he was the inventor of the rolling storage racks and had been so pleased with the magazine story that he had traveled to Philadelphia, during his visit to the States, to see and thank Tom MacCauley.

**The rolling racks,** mounted on tracks, utilize "wasted" aisle space in stock rooms. According to MacCauley, this has resulted in a 65 per cent gain in storage capacity.

## AIR CONDITIONING

### Waterless Cooling

"Within five years 80% of all home air-conditioning installations will use air-cooled equipment or water-saving devices," predicts S. J. Levine, general manager of the Home Heating and Cooling Department, Air Conditioning Division, at Bloomfield, New Jersey.

**The trend to air-cooled** systems is caused by the increasingly critical water situation in most parts of the country. Water supply facilities have been unable to keep pace with the rising demands for water in homes and industry, he said.

In line with the prediction, Cedar Falls Manor, Cedar Grove, New Jersey, is equipping homes with new G-E air-cooled air conditioners. The builders say the development is the first large building project to offer air-cooled summer air conditioning in the New York metropolitan area.

The homes, designed to sell for \$15,900 to \$17,900, have 3 bedrooms, built-in garage, finished recreation room, 1½ ceramic tiled baths and modern science kitchen with Hotpoint appliances.



FOULKES, MACCAULEY AND ROLLING RACKS

## PAY AND BENEFITS

### 67 Acceptances July 7

The Company offer of pay and benefit increases had been accepted by 67 of the 90 unions with which G.E. deals as of July 7. The latest acceptances included the United Electrical Workers. The offer includes a pay increase which ranges from four to eight cents an hour and averages slightly more than five cents an hour, plus improvements in vacation and holiday pay, and other contract improvements.

The Company continued to negotiate with the other unions, including the International Union of Electrical Workers-CIO. As the *Monogram* went to press another meeting had been scheduled with the latter union.

## ORGANIZATION

### Two for One

Harold E. Strang, vice president and general manager of the Measurements and Industrial Products Division, announced that effective July 1, the Meter and Instrument Department has been discontinued. In its place is formed a Meter Department and an Instrument Department.

**The Meter Department** will make its headquarters in Somersworth, N. H., while the Instrument Department will remain in Lynn. C. Howard Black, formerly general manager of the Meter and Instrument Department, will remain in Lynn as general manager of the Instrument Department. D. E. Craig, formerly manager of the Somersworth meter plant (where these products have been made since 1918) was named by Mr. Strang as general manager of the new Meter Department.

**As in the case** of the Outdoor Lighting Department and the Rectifier Department which were similarly separated in Mr. Strang's organization last month, the moves were in accordance with the Company's decentralization program. In these new departments Mr. Strang pointed out, "the businesses have grown large enough to warrant their being established as individual organizations in their own right." "As such," he said, "they can do a better job with separate managements devoting full time to each product line's development and improvement of designs, manufacturing methods and commercial coverage."

In the Lighting and Rectifier split, William J. Fleming was named general manager of the Rectifier Department; L. Byron Cherry was appointed general manager of the Outdoor Lighting Department.



L. BYRON CHERRY  
New Department Managers  
D. E. CRAIG



## COMPUTERS

### Speed Transformer Design

Helping to design complicated power transformers is a new use the Transformer Division has found for the electronic "brain" called a card programmed calculator.

**This design application** is an important innovation of calculator use. Lynn Wetherill, Power Transformer Department manager of engineering, points out that with the calculator skilled engineers can, in a few hours, produce complex transformer design calculations that formerly required weeks of work. (G.E. employs several other types of "electronic brains" computing such things as payrolls and jet engine calculations —see November 1953 *Monogram*.)

**Large power transformers**, which are used to step up or step down voltages on power systems, are usually individually designed for customers. The preliminary designs now produced with the calculators are used as a basis for specifications in answer to inquiries from prospective customers. (Preliminary designs that for-

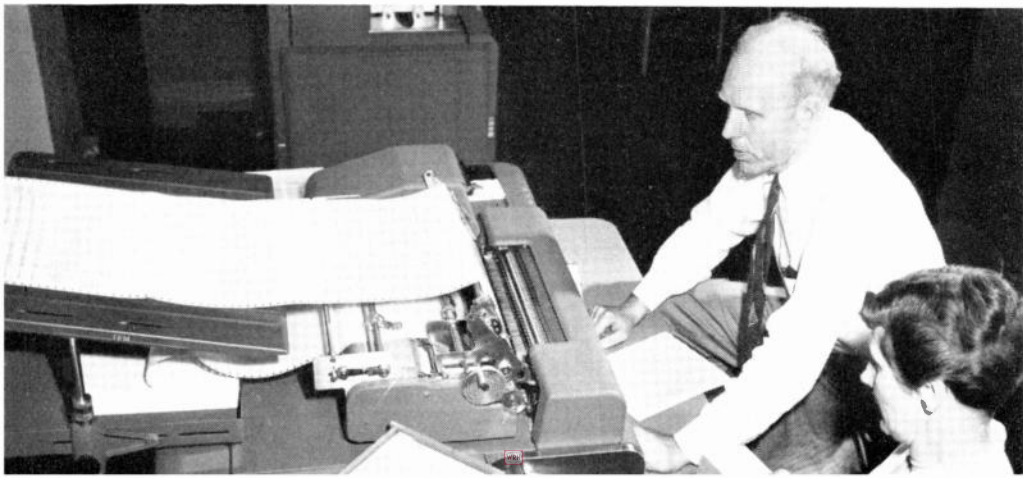
merly required 20 to 40 hours can be cranked out in an hour.) Eventually it is expected that most of the power transformers produced at Pittsfield will be designed with the aid of this calculator. The remainder of the transformers, having extremely unusual specifications that may not justify the expensive programming required for a complete calculator job, will continue to be designed "manually."

In addition to design calculations, the machine is capable of producing speedy answers bearing on transformer operations, such as variations of hot-spot temperatures under specified loading cycles and surrounding air temperatures. Some of these answers formerly required hours of arduous manual calculation. With the electronic calculator, the answer often can be obtained in a matter of minutes.

**Mr. Wetherill said** that the time-savings in these special engineering applications of the calculator makes it possible to produce power transformers in less time at less cost. It also allows engineers to spend more time on development work.

The machine was made by and is leased from International Business Machine Co.

**20 TO 40 HOURS OF TRANSFORMER DESIGN WORK IN ONE HOUR . . . Stanley Williams demonstrates**



# What's Going on at the Island

In a series of conferences at Association Island, G.E.'s managers and specialists are meeting to study and discuss frankly one of the Company's most important objectives—the development of men. There are ten leadership conferences of three days each. Each conference calls for a new complement of 280 men.

**This year's Island meetings** employ a new method: discussion—rather than stage presentations. At the end of the first conference, those in attendance voted unanimously in favor of the discussion method.

Very frank opinions are being openly expressed regarding the Company's areas of strength and areas of weakness in its program of developing men. Some of the conclusions expressed at the conferences will be reported in the *Monogram* in future issues.

**The accelerated program** for the development of men is imperative because of the Company's rapid growth and decentralization. In the years between 1947 and 1953, G-E sales increased two and one half times, the volume rising steadily from \$1.3 billion in 1947 to \$3.1 billions in 1953.

It is anticipated that the trend in electrical industry sales will continue and that by 1964 General Electric will need thousands of additional managers and specialists to keep pace with that growth.

**Commenting on** the Company's future manpower needs, President Ralph J. Cordiner stressed that opportunities for responsible jobs are open to all G-E employees, regardless of academic background. He pointed out that two of the Company's outstanding presidents, Charles A. Coffin and Charles E. Wilson, never went to college. Although some of the present officers have doctor's degrees, 12 out of 41 of them have no college degrees. "We are interested in competence, not diplomas," Mr. Cordiner said.

In anticipation of the conferences, G.E. provided each participant with an advance brief case full of material pertinent to the discussion of manpower development together with suggested source material.

## **The program as a whole has these objectives:**

1. To develop an understanding of General Electric's needs, philosophy, policies and programs in the development of men.
2. To help each man attain a full understanding of his responsibilities in the development of leadership—in himself and others; and to give him fresh incentives, insights, and skills in carrying out his responsibilities.

Each conference is led by a top Company executive, and the 280 men attending are divided into eight sections of 35 each. Each section meets in

its own special discussion tent during the first two mornings, with a general session in "Town Hall" the third morning.

Daily schedules comprise business programs in the morning, recreation in the afternoon, with the evenings given over to informal discussions, planning conferences and other preparations for the following day's business. The library, stocked with books on management and manpower development, is one of the busy spots during the evening. Varied forms of recreation are provided on an informal basis with competent instructors available.

**At the opening** of each conference the executive in charge outlines the objectives and reminds his listeners that General Electric is trying to build "an intimate and urgent awareness of the responsibilities that every man has in developing himself and his colleagues to greater effectiveness."

There are two main paths to development for the men of General Electric. Some will develop into outstanding individual performers such as scientists, engineers, and salesmen whose professional skills are applied directly to the work at hand. Others will develop as managers and supervisors, who achieve their results by directing the work of others. General Electric vitally needs both types of men.

**President Cordiner** has called for every man who aspires to leadership—to determine to undertake a personal program of self-development. General Electric will provide the opportunity, but whether a man lags behind or moves ahead in his specialty is a matter of his own personal application. Mr. Cordiner says. This is something which takes time, work and sacrifice, he points out.

The conference program has been arranged under the direction of J. Stanford Smith, G-E manager of general public relations, as manager of the conferences, and Robert L. Fegley, G-E manager of general public relations programs, as program manager.

**The first** of the leadership conferences opened July 1. They will end August 4. The 60-acre Association Island tract in Lake Ontario is a ten-minute boat trip from Henderson Harbor, New York. The men are housed in the Island's 203 cottages, usually two per cottage. The 32 other buildings are used for assembly, administration, recreation, dining, cooking, boat housing, and miscellaneous facilities such as power and laundry equipment.

## Utility Conference—"Looking Ahead 10 Years"

In summing up the first day's meeting of the Utility Conference at Association Island, Roy W. Johnson, Executive Vice President, Appliance and Electronics Group,

added up the totals representing the growth of electrical energy consumption expected by 1964. Noting that we now have 410 billion kilowatt-hour sales in 1954, he

listed as follows the load growth which will be added to today's going rate between now and 1961:

Residential & Rural	206,000,000,000 (206 billion)
Commercial	120,000,000,000 (120 billion)
Industrial	172,000,000,000 (172 billion)
1951 total	110,000,000,000 (110 billion)

1961 grand  
total 908,000,000,000 (908 billion)

By 1970, the forecast calls for sales of electrical energy totalling ONE TRILLION FORTY BILLION kilowatt-hours!

**During the 1950** Association Island meetings—and afterward—many Utility men were skeptical concerning the predictions of increased electrical consumption by G-E executives. The intervening years, however, proved these estimates to be conservative.

This year, when even greater increases were predicted, Utility representatives accepted them with the conviction that General Electric knows where the industry is heading in the next ten years.

**In his address** to the Utilities' representatives, President Cordiner laid particular emphasis on planning. Proper planning, he said, is one of the essential professional responsibilities of the manager of any business. That planning becomes doubly important in an industry with the explosive growth potential of the electrical industry.

He mentioned that virtually every G-E speaker on the three-day conference program had a written position guide which called for spending a minimum of 75 per cent of his time in forward planning.

In line with forward planning in business, Mr. Cordiner advocated that the Utility executives devote their lives to the selecting, analyzing, appraising and teaching of their men. He urged them not to have just one man, but a "whole host" of them—trained and ready.

**The way to do it,** he said, is by pushing more and more responsibility and authority on them. That is the answer to manpower development. The training must be done in the plants, Mr. Cordiner said, because there is not time to wait for the

#### KITCHEN OF THE FUTURE





colleges and universities to catch up with the new method of training that is going to come along. He said it should be possible for any man, no matter what his background, to progress and transfer and come through with a top job.

Mr. Cordiner said that management is a profession just like engineering, research, marketing, or employee relations—a basic, fundamental science! Management has been ignored too long. Mr. Cordiner averred, and thus when presented with complex problems did not have the answer.

**“We don’t want averages,”** he said. “we want the top ten per cent and only thereby will the electrical industry really come of age.” Only if everyone becomes a selector, teacher, and student will the industry make possible the forecasts for 1964, and the year 2000 he concluded.

## STANDARDS

### Advice and Counsel

Speaking before the 19th Annual Conference of Plant Engineers at Nela Park, recently, Mr. J. B. Levy of the Standards Services Department stressed Standardization as a means of solving recurring problems and providing records of their solution.

He described G.E.’s Standards Services Dept., which covers both Industry and Company standards, as an organization which teaches and counsels on standards matters and serves as an adviser in co-operative standardizing efforts.

**The industry section** assists and advises on “outside” standards, such as the National Electrical Code, Underwriters’ Laboratories and the National Board of Fire Underwriters. The Company Section

develops and issues internal “Company” standards for purchase of raw materials, parts, components, sub-assemblies and expense items. It also counsels on their application. They are responsible too for engineering, factory and drafting practice standards, product nomenclature and identification.

**Nine engineers** and seven specialists are available for counsel and there are 25 different Company standards books covering about 2600 different standards.

In addition, Standards Services can be helpful in: (A) promoting standardization, (B) providing information on available standards, (C) giving advise on standardizing procedures and problems, (D) assisting interdepartmental standardization efforts, (E) publishing results of such efforts, (F) giving help in the application of standards. An example of Standards’ assistance to G-E plant engineers is the co-operative effort which produced a Company standard on Factory and Office Illumination. It suggests minimum levels of illumination essential to personnel comfort and efficiency, for approximately 100 specific kinds of work.

Prior to the issuance of guides for purchasing fluorescent lighting units, cost was the usual basis for comparison and suppliers often obtained business by lowering quality.

**After minimum** quality standards were established, suppliers were required to quote prices on the same quality. As a result, G.E. is now able to select suppliers who can furnish suitable quality at lowest cost.

Mr. Levy advised that further information on standards for the Company and Industry could be secured by contacting: Standards Services Department, Engineering Services Division, Schenectady, N. Y.

# What Will the House of 1964 Be Like?

*... here are some ideas you'll be hearing more about*

A prefabricated, all-electric house built in the shape of a self-supporting porticoed dome has been announced as the General Electric Company's concept of the 1964 American home.

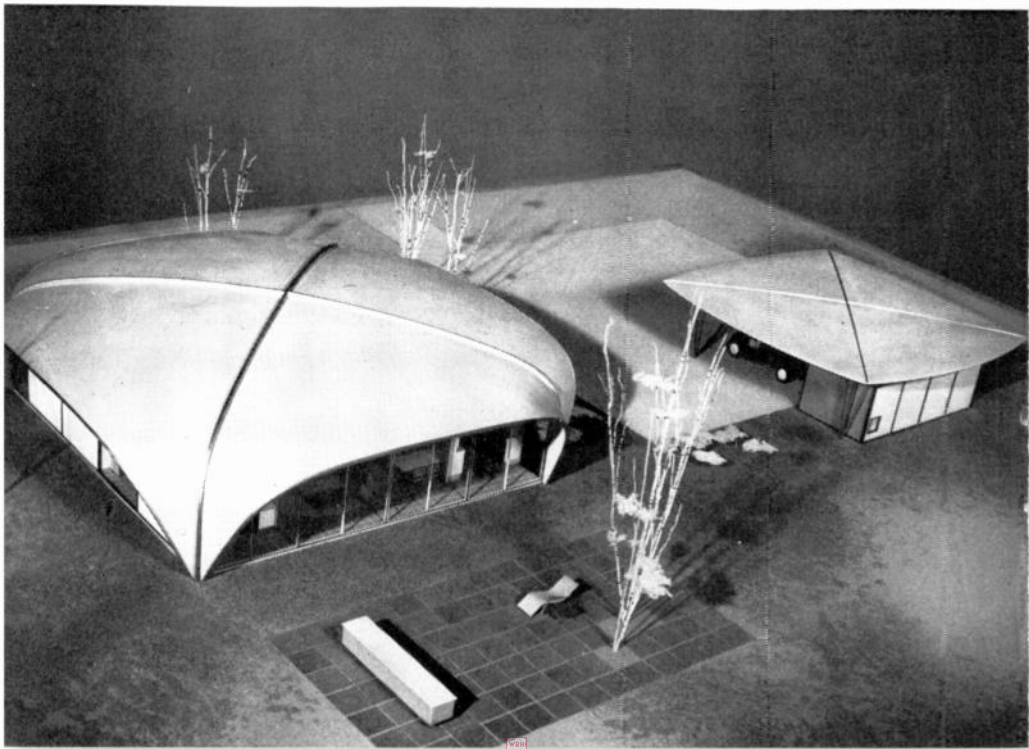
Designed by Eliot Noyes, New Canaan, Conn., architect, and G-E engineers, the house is a large, open structure giving a freedom of movement unattained in present-day homes.

**"Our aim has been** to provide a perfectly integrated, attractive home in

which the family would, with minimum effort, enjoy complete convenience and comfort at all times and no matter what the age of the occupants," Stanley Schuler, home building consultant for General Electric, said.

The design is based on the predictions of economists and sociologists that the average American family ten years from now will be larger and have a higher income. It will live in more distant and open suburbs. It will have more leisure time and will devote this more to family activities.

**SMALL SCALE MODEL OF G.E.'s CONCEPT OF THE HOME OF 1964**



hobbies and entertainment. Consequently, in seeking a home, it will require more living space that can provide for group activities as well as individual privacy.

**The plastic dome roof.** 15 feet high at the peak, requires no supporting partitions. Thus it permits any arrangement of outside walls and room partitions. The roof is also the ceiling and, according to Mr. Noyes, "tends to unify the entire house while giving it a feeling of vast, free space." At night the roof serves as a single lighting fixture, bathing every area—except the bathrooms and bedroom hall—in even, indirect light.

The roof projects far beyond the outside walls to protect them from sun and rain.

**The scale model** represents a house with 1700 square feet of living area, but it can be built in any size. It has a big living-dining room with a dramatic rotating living circle and an adjoining activities room, a kitchen-laundry, four bedrooms, two bathrooms, and a darkroom. In the nearby carport is a large shop, garden tool closet and another closet in which the air conditioning and central cleaning systems are installed. On the terrace in back of the house is an electric center for outdoor cooking and entertainment.

Glass walls on the front and back of the house "bring the grounds indoors" so that they give the effect of being room extensions when the yard is lighted at night.

**Prefabricated plastic panels** are used for most of the house. The roof panels are constructed of two layers of tough plastic sheets bonded together by a foamed phenolic insulation. The panels have structural strength, serve as the thermal insulation and vapor seal, are acoustically treated and permanently finished. They are joined together on the site and held in place between two crossed aluminum ribs.

The same general type of construction is used for the carport roof, which is square and almost flat.

Outside wall panels are made like the roof panels, while inside partitions are of two layers of decorative laminated plastics separated by a light honeycomb structure. The surface can be in an infinite variety of colors, patterns and textures. The wiring is put into the wall panels at the factory.

**Floors are plastic panels** into which are built ducts for the air conditioning and cleaning system, the main wiring circuits and the piping. The floors use new resins which give resilience and freedom from slipping, and are water and chemical resistant.

The kitchen sink and bathroom lavatories are molded into the plastic counters. The tub is plastic. The shower stall has plastic walls.

The ceiling over the bathrooms and bedroom hall is made of translucent plastic containing a luminescent pigment which lights up when electric current is passed through it. The panels are also used as a source of radiant heat.

Silicone rubber is used for the gaskets around the electrically controlled sliding doors and windows to minimize heat loss. Silicone treatment of draperies, upholstery and carpet makes for greater stain resistance and easier cleaning.

**Automatically, heating and cooling** are provided by the G-E Weathertron (heat pump), which is so reduced in size that it fits into a small outside closet off the workshop. The unit not only provides ideal indoor comfort the year round but also heats the water, supplies ice-cold drinking water and removes odors and pollens from the air.

**Kitchen-laundry appliances** are entirely built-in and colored. The refrigera-

tion center consists of a wall-mounted fresh-food compartment with special compartments for dairy products and soft drinks. Under the counter are three electrically operated drawers for frozen food and additional fresh foods. Ice water, ice cubes and crushed ice are dispensed automatically. The entire unit has 14 cubic feet of storage space, but takes up no more space than a 32-inch wall and base cabinet.

**The range** has two wall-mounted ovens, one an electronic unit, cooks foods in a few minutes using high frequencies. The foods are then browned by a resistance type of electric element. The other oven cooks in the conventional manner. Both are controlled electronically.

Under the ovens is a fry-broil griddle that can be pulled out and used on the plastic counter surface. Pot and pan cooking is done in new utensils with built-in heating elements that are automatically and thermostatically controlled. They can be plugged in anywhere because a new vacuum type of insulation prevents damage to the work surface.

**The dishwasher** is also wall mounted for easy loading. No scraping of dishes is required; food is flushed down the garbage disposer integrated in the system. An electric incinerator under the counter takes care of trash.

**The combination washer-dryer** under the counter is fully automatic.

At the sink there are taps to dispense ice water, soda and hot instant coffee. The kitchen storage cabinets have textured plastic panels that can be interchanged when a new color scheme is wanted.

**For home entertainment**, an electronic entertainment center has been designed for one wall of the living room. Here large-size color television pictures are shown on the wall. In the cabinet

underneath is a video tape recorder, audio tape recorder, and high-fidelity music system. The entire center is remotely controlled from the motorized living circle which can be turned to face the entertainment center, the fireplace or the garden.

**TV room monitors** permit remote checking on the front door, garden and play areas, and child's bedroom. Inexpensive cameras placed in these areas transmit to three-inch picture monitors in the living room, kitchen and master bedroom. The monitors also can be tuned to regular television programs.

The domed ceiling of the house is lighted from fixtures on top of the interior partitions. The lights can be controlled together or individually and by rheostats to vary intensity. Through use of colored lamps, the mood is changeable at any time. The dome bathes the entire house in light. A few portable lamps are used.

**Ceilings of the bedrooms** are lowered so that the occupants can have the same feeling of openness apparent in the rest of the house, yet have absolute privacy when the louvers are closed. The louvers, which extend from wall to wall in each room, are electrically controlled and adjustable to any angle. Each louver is lighted from within by fluorescent tubes so that, even when closed, the ceilings of the bedrooms are luminous. The lights can be dimmed.

Another type of lighting fixture is the prefabricated luminous wall panel adjacent to the television screen. This is equipped with fluorescent tubes of different colors to provide mood lighting and to reduce eyestrain when watching television.

**A 200-ampere service** brings electricity into the house, supplying three distribution panels controlling the branch circuits in the three major power-consuming areas. One is in the shop, another in

the closet in the entry, the third in the outdoor electric center.

Lights and outlets are remote-controlled by low-voltage switches. Each of the four master switches—in the carport, master bedroom and at the front and back doors—turns 21 different lights on or off at once.

Many small electrical conveniences are used throughout the house. The central vacuum cleaner located in the carport has a six-month capacity for dirt and dust. Ducts to central points in each room allow the housewife to clean the house with a simple, light-weight flexible hose and attachments.

**Instead of blankets,** the beds have radiant canopies that fold out from small

pockets on the wall above the headboard.

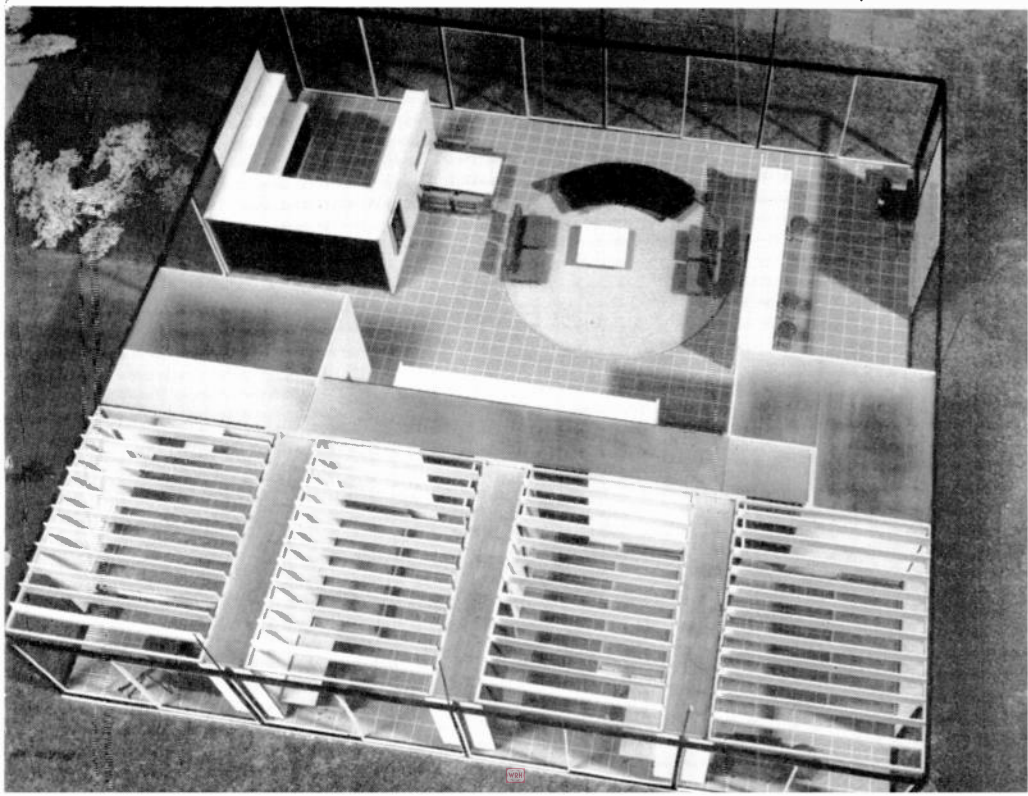
Electric clocks (without electric cords) are small receivers obtaining their energy from the local radio station.

Drapery tracks are motorized.

The activities area has a sewing machine, a kiln and other hobby equipment, and there is a complete darkroom adjoining. The shop in the carport is equipped with power tools for more ambitious projects.

**The outdoor electric center** provides outlets for a portable TV receiver, plug-in cooking utensils of all types and a rotisserie. The entire yard is lighted and has power outlets for garden tools and portable lights.

HOUSE OF 1964 WITH PLASTIC DOME REMOVED (SMALL SCALE MODEL)



## COMPANY-WIDE CONSTRUCTION

### More and Better Facilities

The following are highlights covering the progress of G.E.'s current building program reported since mid-June:

**At Knolls Atomic Power Laboratory** at Niskayuna, New York, the Advance Test Reactor Building has been completed with the office portion now occupied. The Coolant Test Building, Phase II, is well under way. Construction contract for a temporary office building of 20,000 sq. ft. has been awarded.

**Increased capacity** storm sewers are undergoing enlargement at the Schenectady Works. Additional water facilities for factory use are also being installed.

**Work has started** on the machine shop and office building for the Heavy Military Electronics Equipment Department which will be located two miles east of Electronics Park, Syracuse, New York. This plant, when completed, will be leased to G.E. by the Syracuse Industrial Park Corporation.

**At Pittsfield** the project covering the installation of the new 200,000-pound-per-hour boiler is well under way. All building

construction on the Sound Testing Laboratory has been completed, as have the Tank Shop and Motor-Generator Buildings.

**At Appliance Park** in Louisville, Kentucky, construction is continuing on Buildings Four and Five. Recently a firm price contract was awarded for construction of the new warehouse. The new Reception Center is also under way.

**The Lamp Division's** new Laboratory Building and the boiler house at the Chemical Works in Cleveland are about 50% complete.

## TV RECEIVERS

### Here's the New Line

Perhaps the most interesting design change in the new line of G-E television receivers is in the "Lo-Boy" console (see photo next page). Most of the new line, numbering 26 models, is now in production and some have been delivered to distributors.

**The Lo-Boy**, which will retail at \$450, is designed according to a new concept in television viewing. Studies show that a viewer, relaxed in a modern lounge chair, has a natural line of sight downward. Hence, Lo-Boy's picture is near the floor.

TO GIVE CLEVELAND DEALERS THE FULL IMPACT OF THE





A new competitively priced series of television sets called the "Pacer" group is included in the new G-E line. It consists of two 17-inch and two 21-inch models with suggested Eastern list prices starting at \$149.95.

**The "Pacer"** models aren't "stripped" receivers, Paul H. Leslie, monochrome TV sales manager said, but have a specially designed chassis which produces a high degree of sensitivity and picture clarity. This chassis uses 17 tubes and two rectifiers and is equipped with an area selector switch permitting adjustment to the signal strength available.

Three additional groups of models, Black-Daylite, Black-Daylite Deluxe and G-E Ultra Vision, are included in the new line. Engineering improvements in these chassis have permitted a wider use of the aluminized picture tube and dark safety glass, both pioneered by G.E. These features are included in 21 models.

**An Idea** of the completeness of the new line is given in the picture at the bottom of this and the page preceding, taken during a showing to dealers at Cleveland. Men in the photo from left to right: A. F. "Squire" Head, manager, Cleveland District, GESCO; S. Littlejohn, commercial vice president, Cleveland; S. C. Gault,

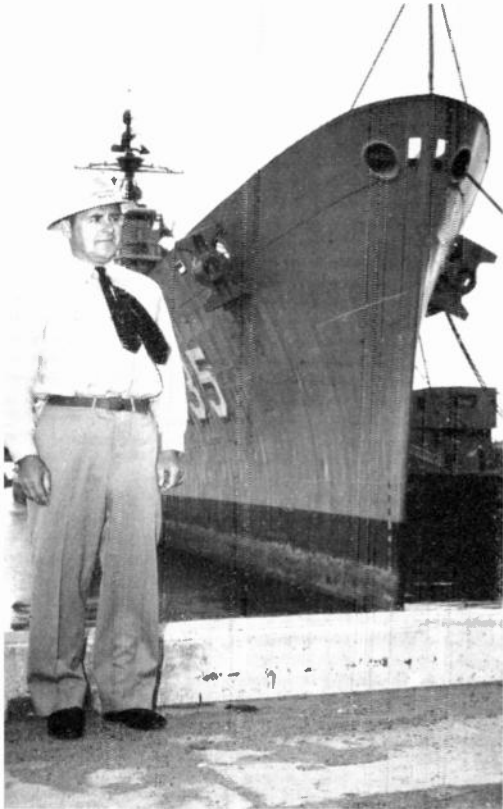


LO-BOY WITH LOW SCREEN

manager, radio and TV sales, Cleveland District, GESCO; and R. P. Van Zile, district manager, Radio and TV Department, Electronics Division, Cleveland.

COMPLETE LINE, THE SETS WERE SHOWN AS PICTURED HERE





ALUMNUS SWIDERSKI

## APPRENTICE TRAINING

### In High Regard

Twenty years ago, Frank E. Swiderski, a young General Electric apprentice machinist at Erie, received an appointment to Annapolis. He had to leave Erie shortly before he was to receive his G-E apprentice diploma.

**During his four years** at Annapolis and in succeeding years he often thought of the G-E apprentice training course as a

valuable step in his training. He regretted having missed his apprentice diploma by such a close margin and was determined that some day he'd make an effort to add it to his collection of records.

Once he drafted a letter on the subject to General Electric's Chairman of the Board (a friend had told him "that's the way to get action in a big company"). For one reason or another Swiderski never mailed the letter. He wasn't sure this channel of correspondence was the right approach.

**A few months ago.** T. W. Burson of General Electric's government sales office in San Francisco happened to be talking with Swiderski (now Commander Frank E. Swiderski, USN, Shop Superintendent, Mare Island Naval Shipyard, Vallejo, California). Commander Swiderski mentioned his high regard for the G-E apprentice training course and declared that he'd still like to get his diploma. "Let me see what I can do," said Burson. Result: an investigation of the records by Marty Grotjohan, one of Swiderski's former instructors at Erie (now supervisor of apprentices and night school at the Locomotive and Car Equipment Department in Erie).

**Grotjohan found** that Apprentice Swiderski had actually completed all of the classroom work, and that his grades had been "very high." As the files showed, Swiderski's marks were mostly "90's." It was obvious that the Navy man's subsequent shop experience exceeded by a wide margin the few weeks of shop experience he had missed at the end of his apprentice course.

When the Commander was visiting his home in Erie last month, he dropped in at the Erie Works to see his old friends. To his surprise and pleasure, they handed him his apprentice diploma.



Sketch for The American Magazin by Bob Peak

## SO WE SAY

Summary of an article by Philip D. Reed, Chairman of the Board of General Electric, in the July issue of *The American Magazine* titled:

### **“We’re Betting You’ll Be Prosperous”**

Despite so-called “recession” talk, American companies are betting billions on the country’s continued growth and prosperity.

General Electric is expanding facilities in 33 cities and in the next ten years expects to produce and sell as much electrical equipment as in the entire 75 years of its existence.

Other great companies are also spending “vast sums” on expansion and moderniza-

tion. This bet, by American companies big and little, on the country’s future is based on very solid ground. Six major reasons for the confidence are:

First, America’s great “social change.” More babies are being born and people are living longer while at the same time there is a competitive labor demand for people in the 15 to 24-year-old bracket because of our low depression birth rate. In addition, more families than ever have leisure time, individual families are growing larger, and there is an expanding movement to the suburbs. All these factors affect countless industries.

Second, the great number of scientists and the enormous amount of dollars being devoted to research will bring new truths, methods and materials for products yet undreamed of.

Third, there are urgent projects—roads, schools and churches—craving for fulfillment because of the depression years and the dollars spent on national defense.

Fourth, there is a potentially great and growing market abroad for U.S. goods.

Fifth, the attitude of the present administration in Washington is stimulating all kinds of business enterprise.

And, sixth, the American make-up of “dynamic restlessness” which is “one of the springs of our great progress.”

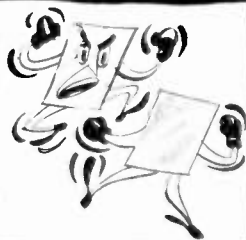


# How a Sperm Whale Loosened

**1** Sometimes lamp bases stick after long hours in the socket — especially when two different metals are used, such as aluminum bases in brass sockets, or brass bases in aluminum sockets.



**2** What to do? About half present sockets are made of aluminum and many bases are, too. Both metals do a dandy job — until they get together under trying conditions.



**5** Here's where the whale swims into the picture!



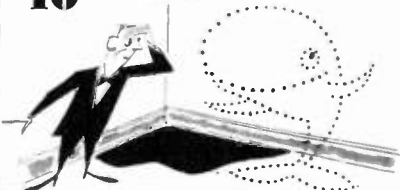
**6** To find a cure for "sticking sockets" and to cut down on corrosion General Electric tried all of the known lubricants, and hundreds of other things.



**9** Besides, it's odorless



**10** . . . invisible



**13**

. . . and can be applied economically at high speed. Wonderful, isn't it?



**14** We think this story points out the lengths General Electric goes to, to provide customers with *trouble-free light at low cost.*

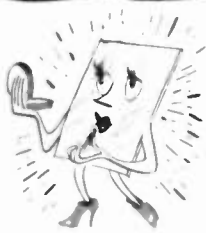


# a Stuck Socket

**3** Then the aluminum is attacked. If the aluminum is in a base that's bad enough, but if it's an aluminum socket it's even worse, because the "doctor" bill is higher.



**4** So how to make use of lovely aluminum and still not suffer the disadvantages?



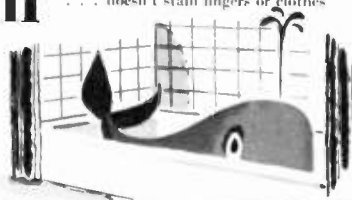
**7** They finally chose *hydrogenated sperm oil* as the best solution for all the problems.



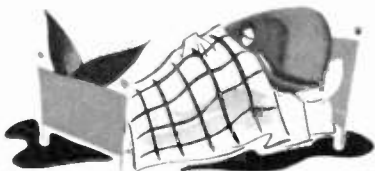
**8** Sperm oil prevents sticking and inhibits corrosion.



**11** . . . doesn't stain fingers or clothes



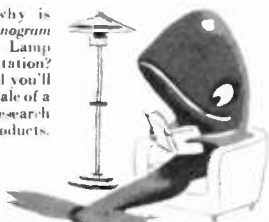
**12** . . . is chemically inert



**15** Naturally, the best way to keep on getting your full money's worth from all your lamp and lighting dollars is to have G-E lamps in your sockets . . . whether they're brass based or aluminum.



**16** And why is the *Monogram* carrying this Lamp Division presentation? Because we feel you'll agree it's a "whale of a story" of G-E research and quality products. —Ed.







LAMP DIVISION PLANE SPOTTERS TAKE THEIR TURN AT THE POST

## WE SALUTE . . .

**The many defense-minded G.E.'ers** throughout the country who donate their time and services to guard America's skies against surprise attack by enemy aircraft.

*Niles, Ohio:* G-E lampmakers keep their eyes on the sky as members of the Ground Observer Corps, a national volunteer organization of plane spotters. Shown above manning the Niles post are (l. to r.) Helen Crofford, Lois Rayle, Post Supervisor Louis Moissant, Louise Molsberger, and Bea Waldron.

*Syracuse, New York:* Employees from Electronics Park volunteer their time each week at the local U.S. Air

Force Filter Center. They're shown working on one of the big plotting boards at the Center which co-ordinates the facts given them by members of the Ground Observer Corps. Shown at the board below are (l. to r.) Edith Passage, Marian Larrabee, Thelma Ferris, Don Cottle, Joyce Buckland, Eileen Burchill, Hope McCully, and Mrs. F. J. Jutras (wife of a G-E employee at the Park). At rear (standing) is Joe Copp. Commenting on the quality of their work, Administrative Supervisor Don Logue of the Filter Center called the proportion of supervisory personnel from G.E. "remarkable" for any one industry. "It must be that G-E employees are instilled with a particular sense of responsibility regarding the security of our country," he concluded.

ELECTRONICS PARK VOLUNTEERS AT THE AIR FORCE FILTER CENTER





## Monogram Personality

**An old hand** at “hot” assignments is R. Hosmer Norris, consulting engineer in the General Engineering Lab. Right now he is co-ordinating the search by Company departments for ways to crack the “thermal barrier”—a major limitation to performance of military aircraft.

When “Hos” Norris entered the Company’s famed Test Course in the winter of 1932, he scarcely guessed his engineering career would lead him on such other “hot” assignments as a “treasure hunt” in Germany, to upper-limit altitudes in a bomber, or behind the scenes of the top-secret “Manhattan District” atomic project.

**The services of** the lanky, mild-mannered Harvard graduate (BS ’29, MS ’31) have, at one time or another, been sought by almost every department in G.E.

It was in 1945, in the wake of the Allied sweep through Germany, that Norris went on a U.S. Government “treasure” hunt for secret Nazi documents about guided missiles. At that time he was in charge of the aerodynamics and heat transfer section of Project Hermes, G.E.’s guided missile project.

Norris’ persistent questioning of a German University professor at Goettingen led to the discovery of two transport-plane loads of secret aerodynamics research reports in an abandoned mine shaft. From the cache the U.S. obtained valuable data on such things as swept-back wing research.

**No stranger** to Germany, Norris had spent three months there studying advanced engineering before joining G.E. in February, 1932. That European junket also gave him a chance for some Alpine climbing (including the Matterhorn), some skiing (still his pet sport), and some traveling in Russia, which he remembers as “drab and regimented.”

In 1941, he spent several weeks in the Pacific Northwest, riding in the sub-zero nose compartment of a B-17 bomber while measuring the red-hot temperatures of turbo-superchargers at high altitudes. In 1941, he worked for five months at Berkeley, Calif., and Oak Ridge, Tenn., on the “Manhattan District” atomic project.

At Harvard, Norris majored in mathematics and was graduated summa cum laude. Then, to find practical use for his math knowledge, he obtained his master’s degree in engineering. Today his son is a sophomore at Harvard, one daughter is at Swarthmore, and another at Rhode Island.

**A Coffin Award winner** (1950), and winner of the annual gold medal of Pi Tau Sigma, honorary engineering fraternity (1941), “Hos” Norris has found time to serve on various engineering committees and to help found the Schenectady Wintersports Club and a local Consumers’ Co-operative.

R. HOSMER NORRIS



## PEOPLE

**Friends in Deed:** conscious of the summer comfort offered by air conditioning and eager to make life more comfortable for a laid-up buddy, employees of the Air Conditioning Division at Bloomfield bought a G-E room conditioner and presented it to Harold J. Bowden, a welder. Confined to his home with multiple sclerosis, Bowden was surprised in a very pleasant way when a delegation of his co-workers called to deliver and set up the room conditioner. Contributions to the room conditioner fund came from employees throughout the Division.

**Ifiginia Aliferis,** chem lab assistant at the General Electric Research Laboratory, sailed for Asti, Italy, on June 29 to become a "Community Ambassador." Miss Aliferis was picked by Schenectady's Community Ambassador Project to live for two months in a typical middle-class home where she will spread national friendship

### "AMBASSADOR" ALIFERIS



and understanding on a person-to-person basis. On the way back to Schenectady and her job next fall, she will stop off in Greece to visit her parents' relatives. Ifiginia holds a BS degree from N.Y. State Teachers College and is working for an advanced degree at Union College as time permits.

**Twenty-three** of the nation's foremost professors of engineering are now on a five-week tour of G-E plants in Schenectady, Lynn and Pittsfield to acquaint themselves with industry's latest developments in their fields. Since the G-E Professors' Conference was started back in 1924, more than 300 educators from the nation's leading engineering colleges have participated.

**All-Out!** The Red Cross Bloodmobile visited Lynn River Works the same day Walter C. O'Connell, general manager of Aircraft Accessory Turbine Department, was having a staff meeting. He simply adjourned the meeting while the group made a donation *en masse*, following a unanimous vote to that effect by D. J. Wait, W. O. Meckley, H. J. Service, C. R. Plum, C. A. Newman, and O'Connell.

**Sobriety Chart:** Schenectady's Arthur Merrill has devised a pocket-sized chart to show a person's reactions to alcohol, consumed during an hour's time. Merrill says the demand for his chart has been prodigious, adding, "I'll have to print up a new supply."

Dr. B. L. Vosburgh, manager, of health services says, "The chart appears to be reasonably accurate and in keeping with present-day medical conclusions on this subject."

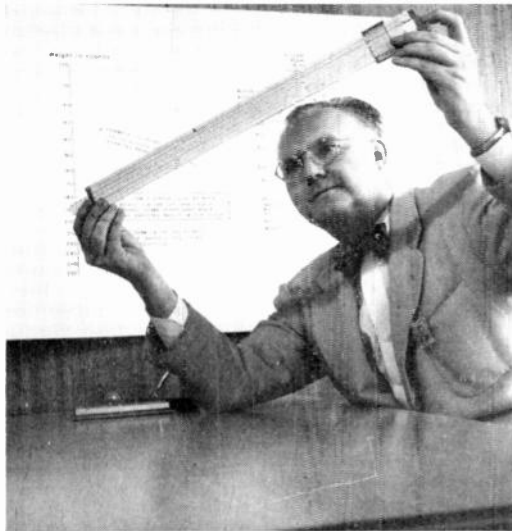
L. E. Newman, manager of health and safety services, says the problem of alcoholism is not one to be taken lightly. If G.E. has the same percentage as industry in general, he continues, it would mean that we have over 8000 to whom

alcohol is a problem. (Four percent of the nation's industrial workers are in this category.)

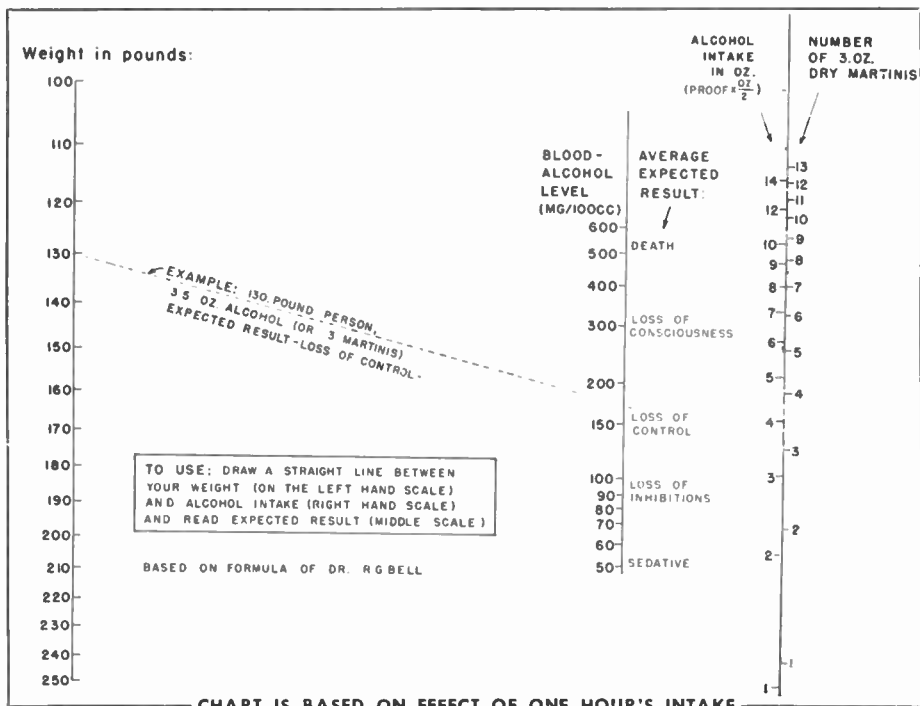
Based on a formula by Dr. R. G. Bell, of Canada, the chart was developed as a contribution to industrial health and safety programs, Merrill said. Most people think they can drink much more than the chart indicates without loss of control.

*Monogram* readers may remember engineer Merrill's perpetual calendar system (*Monogram*, Aug. 1952) which determines the day of the week for any date from 1753 to 2059 (with indefinite extension possible).

Keep in mind that this chart is for measuring the amount of alcohol or martinis, absorbed during *one* hour.



ACE CHART-MAKER MERRILL





KELLY GETS THE POINT



LEND ME YOUR EARS



EASTERN CHAMPION  
HONORARY STARTER



**"Injecting" enthusiasm** into salesmen is a specialty of C. P. Dunning, district manager, Small Appliance Division, New York. Pictured above left is Dunning giving a needle full of "fan sales fluid" to J. H. Kelly, district manager, G.E. Supply Company, Newark, at a recent fan sales meeting.

**When speaking of Rome,** dress as the Romans! At a transformer meeting in Cleveland recently, the subject was the new Rome, Georgia, transformer plant. In photo above are transformer men K. E. Thomas, R. L. Rosenberg, C. A. Neumann, W. B. Gaither, and R. B. Ames.

**13-year-old** John F. Peterson (son of Supervisor John H. Peterson, Lynn River Works) copped the 1954 Eastern Championship in the 17th annual *Boston Traveler-Chevrolet Soap Box Derby*. John's prizes include \$1325 in U.S. Defense Bonds, a plaque, a Schwinn bicycle, and a trip to Akron, Ohio, to compete in the finals. See middle photo at left.

**"A sure winner,"** says Frank J. Hall, president of Cincinnati Raceways, Inc., as he waves the checkered flag, left, for

M.I.T. graduate Eleanor Semple, technical engineer at the Evendale plant. Miss Semple served as honorary starter for "G-E Night at the Races" June 30 at the Cincinnati Race Bowl. Highlight of the AAA midget races was a 50-lap feature event, with Miss Semple presenting a G-E trophy to the winner.

**Three new "Doctors" in the house:**

**At Carroll College** in Waukesha, Wis. — G-E Vice President Lemuel R. Boulware (Employee and Plant Community Relations) received an honorary doctor of laws degree.

**At Union College** in Schenectady— G-E Vice President Chester H. Lang (Public Relations) was presented an honorary doctor of laws degree.

**At Purdue University** in Lafayette, Ind. — Alan Howard, manager of engineering in West Lynn's Medium Steam Turbine, Generator and Gear Department, received an honorary doctor of science degree from his Alma Mater.

**Facing Popularity:** William Brower has won "fame and fortune" in General Electric's Light Military Electronic Equipment plant in Utica, N. Y. In recognition of his \$1700 award-winning suggestion, there are posters displayed prominently in



**MAN OF THE HOUR**

the plant's corridors (see above). Each carries a large photo of Brower and the caption: "William Brower Did It—It Could Have Been You!" The idea is to encourage other employees to make suggestions. Brower's winning tip concerned an inspection jig for castings. It reduces set-up time from five hours to five minutes, and cuts inspection time from 11 hours to four hours. It was Brower's first suggestion attempt.

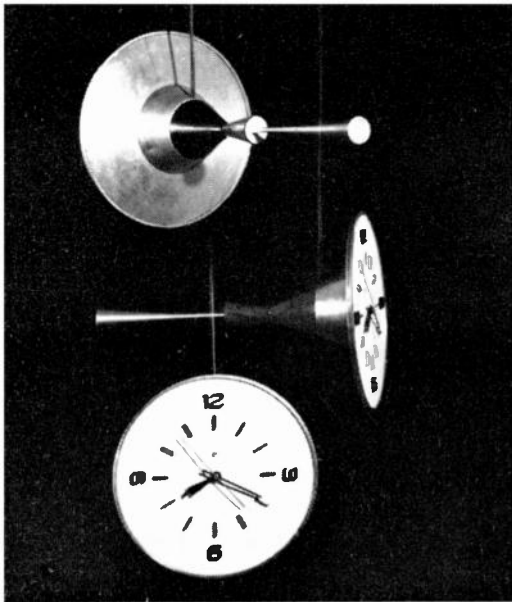
**DOCTOR LANG**

**DOCTOR BOULWARE**

**DOCTOR HOWARD**







## INNOVATION

### PRODUCTS

**Hang That Clock!** "Innovation" is the name given by Telechron Department to its new free-hanging electric clock. There are six "decorator" clocks in this Designer Line. Suspension from the ceiling is by a long cord. The clocks employ spun aluminum, hand-rubbed walnut, gold accents, and black numerals. Face diameter, 10 inches; clock "depth," 14 $\frac{1}{4}$  inches. Retail price: \$50 plus tax.

### WHAT'S NEW

**Improvements** in time and security factors have resulted from the conversion of the records of classified documents to IBM cards at Hanford's Atomic Products Operation. The new system will handle 500,000 documents with ease. Approx-

mately 70,000 classified documents are charged out to Hanford people at one time. The payroll number of the holder of the document is keypunched into the IBM card. Every document transaction taking place during any day is balanced at the end of the day as in a bank.

### LETTERS

*(Continued from inside front cover)*

arising from the Red Cross Blood Program, our expanding services to the Armed Forces and Veterans, and the increased needs of Disaster Relief and Rehabilitation. Our entire organization is profoundly grateful for your co-operation in making the theme "people helping people" a reality.

In recognition of this splendid support we are proud to present to the General Electric Company the 1954 American Red Cross Citation.

Sincerely,  
EDWIN H. POWERS  
American National Red Cross

On December 27, 1953, the Board of Directors of General Electric approved a \$100,000 contribution to the American National Red Cross for 1954. C. H. Lang [Vice President—Public Relations] transmitted this to E. Roland Harriman, Chairman, American National Red Cross, on February 25, 1954. This Company contribution was distributed to some 210 local chapters where G.E. has factory and sales locations.

F. D. CAMPION  
Schenectady

### Operation Homework

Editor:

People here in Schenectady have done such an outstanding job in sparking campaigns for better schools, educational facilities, and in general, better community relations programs that I thought *Monogram* readers would find it of interest.

During June the citizens of Schenectady voted for a new high school to provide modern facilities for the youth of the town. Of the 200 or so citizens on the committee, half were from General Electric. F. Morley Roberts, F. W. McChesney, and J. S. Quill of the Apparatus Sales Division, have been very

active in this civic undertaking. There have been many others too numerous to list.

Also during June, the neighboring central school district of Niskayuna voted for new schools. Three elementary schools were approved by the voters of this district. E. E. Parker and Dr. J. H. Hollomon of the Research Laboratory, Dr. Louis Rader of Specialty Control and Harry R. Mayers of Patent Services worked on various phases of the Niskayuna School Program.

Active in Scotia as chairman of the school board is C. D. Greentree of the General Engineering Laboratory. Previous chairman was J. Stanford Smith, now with the Public Relations Services Division in New York City.

I'm sure there are other communities associated with the General Electric Company that are benefiting having more G-E people working full-time at being "good neighbors."

HAROLD CHESTNUT  
Schenectady

*What modest Mr. Chestnut did not mention was that he was co-chairman of the important Fact Finding Committee for the Schenectady Citizen's Committee's high school study.*—Ed.

## Meaningful Idea

Editor:

Having noted in the June issue the story on page 24 about "A Is for Atom" showings, and the item on page 30 telling of Freedoms Foundation awards for General Electric public relations efforts, I should like to suggest something I believe to be worth while.

D. Lee Chesnut, Supervisor of Educational Sales in Schenectady, is the author of a book and has prepared therefrom a talk with color slides entitled: "The Atom Speaks and Echoes the Word of God."

The atom, as the marvel of the age, incites everyone's interest whether scientist or layman, regardless of race, creed, or age; therefore, Mr. Chesnut's book is a rare combination of two marvels—The Holy Bible plus the Atom, in terms easily understood by all, and it points the way to a better understanding of how to live life in this era of the atom bomb. It is my suggestion that the General Electric Company utilize this excellent material to the maximum as follows:

1. "Let's get the show on the road!" Present it to those who have seen the House of Magic Show, fraternal organizations, etc., with trained personnel, while the atom is still

foremost in catching the public's interest. It will soon publicize itself and its sponsors will benefit materially.

2. Distribute copies of the book to prospective customers and employees.

General Electric would then have some superior advertising, a conversation piece in all circles, and it would be giving the public something that could be retained mentally and materially for its historic value and as a spiritual guide.

It would be far more valuable than a trinket distributed by a merchant. This usually winds up in a drawer and is forgotten until the drawer is opened again. A copy of "The Atom Speaks and Echoes the Word of God" would be a spiritual and scientific seed planted in the minds of all its owners to bear permanent fruit.

MRS. EMILY G. BETAR  
Schenectady

## Birth of a Salesman

Editor:

For a sales presentation to his class recently, Richard E. Forbes, a junior student in Roosevelt College here in Chicago, chose as his subject the G-E steam iron. He wrote to Mr. Cordiner for information about it, and promptly received a reply from Bob Boian, Small Appliance Division's manager of marketing. At that time Ed Carvill, Small Appliance Division district manager, also came into the picture and provided Forbes with display material and sales arguments. When in Public Relations got into the act when Forbes found, at the last moment, he needed information on the kind of metal used in the manufacturing process. We supplied him with a history of the iron, plus latest information on its Calrod® unit, and referred him to the iron factory at Ontario, Calif.

After all this, here's what happened:

1. He stopped in after his presentation to tell us that was a success and to thank us personally for the help.

2. His instructor said he covered, in 20 minutes, ground that usually takes an hour.

3. He covered the ground so well that he sold his instructor, who is now the proud and satisfied owner of a G-E steam iron.

All because some busy G-E people were not too busy to lend assists to an ambitious youngster who wanted to do a thorough job.

H. L. REED  
Chicago

## EDITORIAL

The following appeared as an editorial in the July 9 *N.Y. Herald Tribune*:

### A New Business Stabilizer

The General Electric Company has designed a new equipment-purchasing contract that promises greatly to assist electric utility companies in carrying through orderly expansion programs. In order to level out "peaks and valleys" in the ordering of power-generating equipment, the company will undertake the initial engineering and manufacturing work on large orders subject to the provision that such orders can be canceled up to six months later at only a minimal charge. The effect should be to reduce the tendency of firms in the electric utility field to bunch their orders in times of prosperity and to cut them severely at the onset of a downturn.

Far from meaning that cancellations will now occur more frequently, the new policy provides a margin of financial insurance that will encourage electric utilities to schedule expansions more smoothly. The larger the number that do so, the greater the contribution that the electric utilities industry and the electric manufacturing industry will make to over-all stability. As stability increases, the need for cancellations will diminish. To increase the certainty of this desirable sequence, the General Electric Company plans to work out new methods of financing charges normally made prior to shipment.

Although this constructive policy will help G.E.'s customers and should improve its own sales volume and pattern, it has broader significance. The operating and investment policies of private firms have often been so irregular as to aggravate the economy's tendencies toward instability of employment and income. The extension in recent times of the economic powers of the Federal government has been due in substantial part to public demand for a powerful new stabilizing force. It should be apparent to managers in all industries that it lies within their own power to make major contributions toward national stability. The General Electric innovation is simply one of the many devices that might be employed. No more constructive effort could be made by private business than to give increased attention to this proved possibility.

—*New York Herald Tribune*