

HD  
9705  
454  
A38

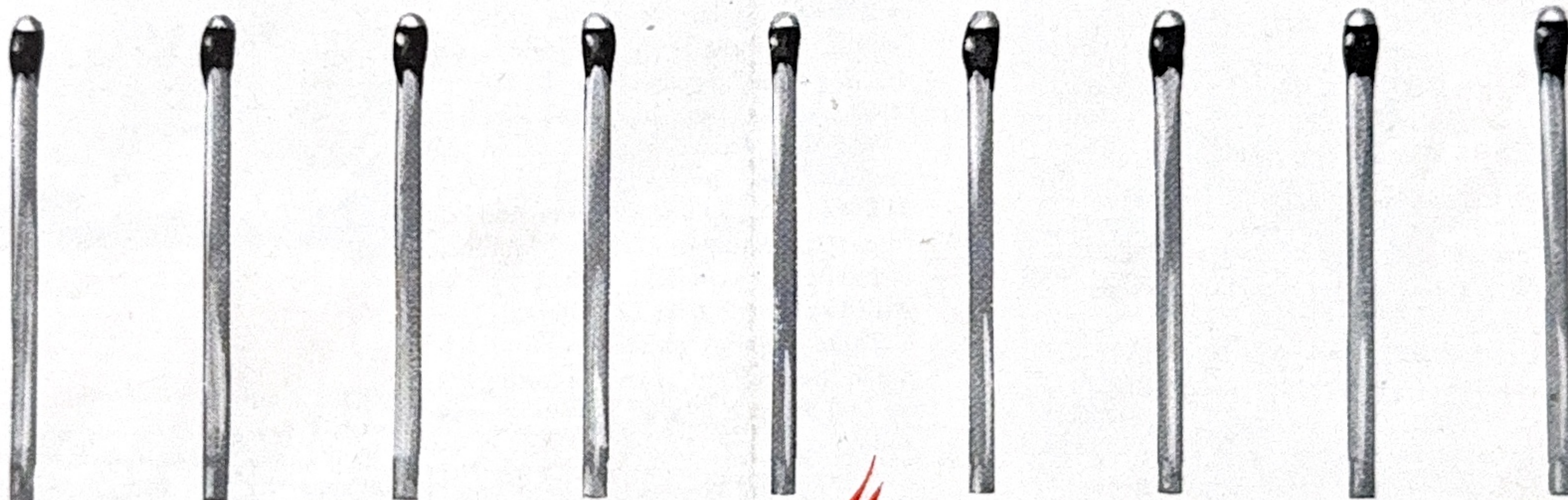
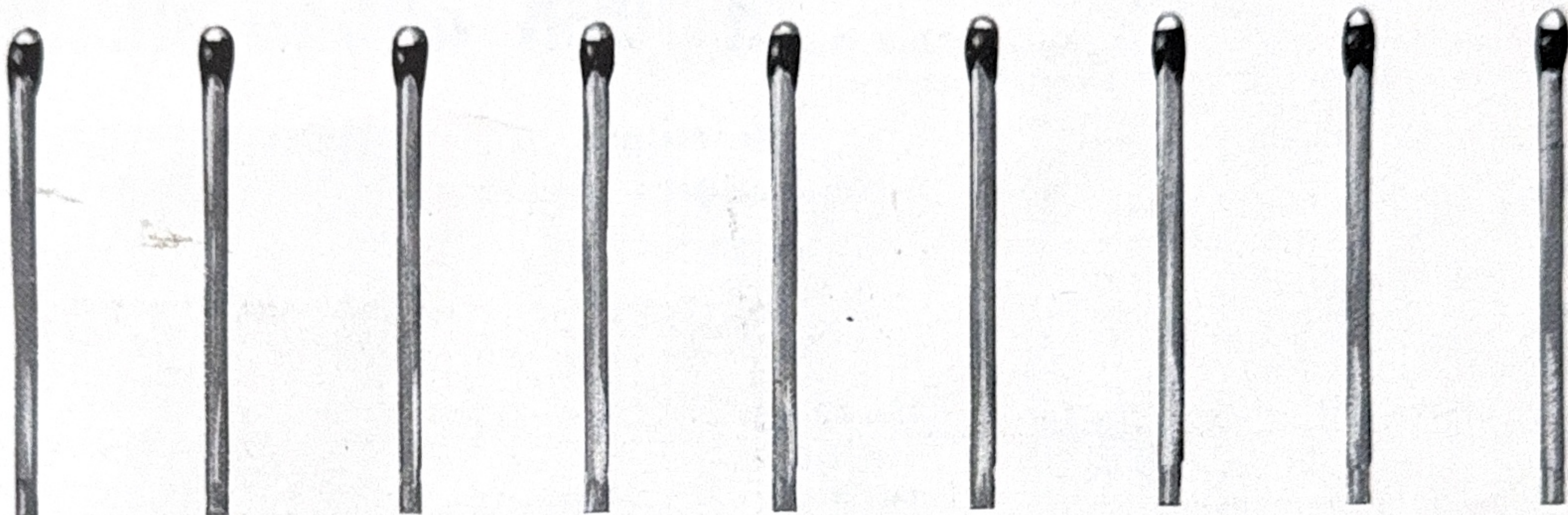
6617  
53

# a-c scope

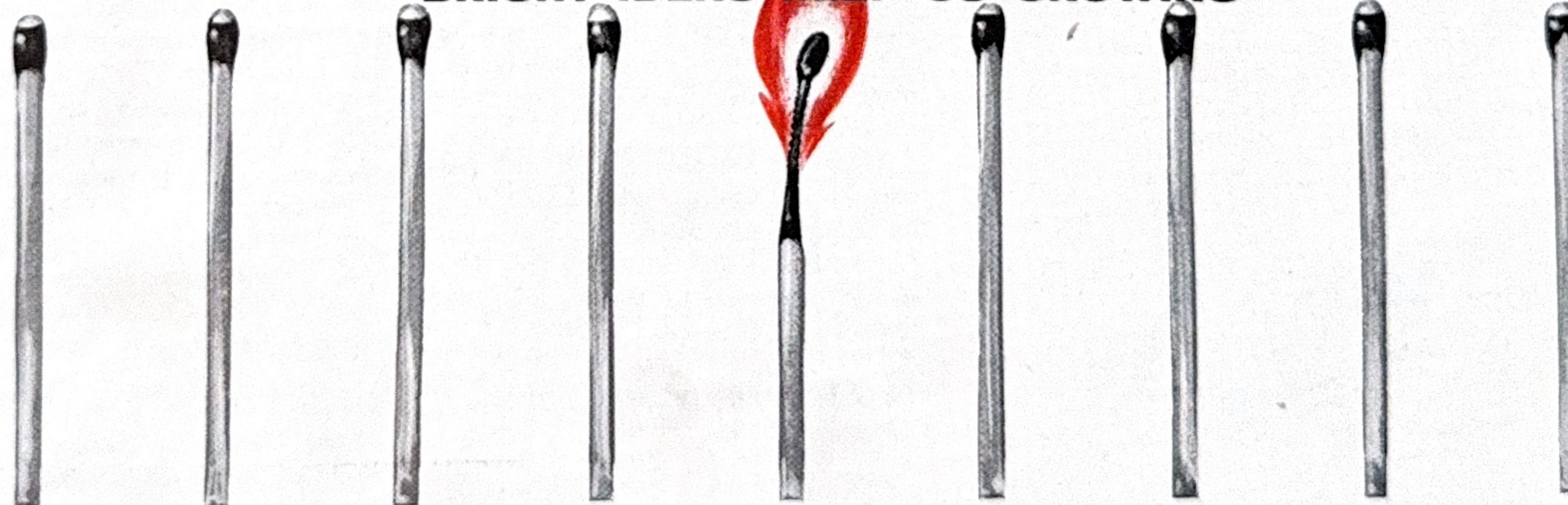
magazine of allis-chalmers people



spring issue



**BRIGHT IDEAS KEEP US GROWING**



**SPECIAL REPORT -**

Our Achievements in '62  
A Look at '63





## COVER PHOTO

Fresh, imaginative, eye-stopping advertisements — like the one on our cover — began appearing in the nation's leading business publications in January. These ads emphasize to their influential readers that Allis-Chalmers is on the move.

This introductory phase of ads sells no specific product. It sells the talent of Allis-Chalmers people — our ability to design, engineer, manufacture and deliver quality equipment and services. It sells our facilities, and the ability of our employes to make the most of them.

Through the use of modern graphic design, the ads portray Allis-Chalmers as a dynamic, diversified, resourceful, progressive company with which it is good business to do business.

The ads are appearing in *The Wall Street Journal*, *Fortune*, *Business Week*, *Scientific American*, *Life International* and *Life en Espanol*.

The readers of these publications, and they number in the millions, include the decision-makers of business and industry — the men and women who must analyze and evaluate the abilities of their suppliers.

The publications were carefully chosen. Moreover, steps have been taken so that Allis-Chalmers can measure the effectiveness of the program, to see that the awareness we seek is achieved. Every dollar spent for advertising must, like all other costs, stand on its own.

These same ads also will appear side-by-side with certain of our normal product and industry advertisements in trade magazines. Our advertising in trade magazines will continue its very important role of featuring our products — supplying proof of progress and customer benefits.

## CONTENTS

	Page
New Advertising Program.....	2
President's Message .....	2
Reports from Our Divisions .....	5
Land of Power .....	12
Road Show .....	13
Sell Allis-Chalmers .....	15
Pittsburgh Fellowship .....	16
Deerfield World of Power .....	16
Our Top Salesmen .....	16

## A-C SCOPE

MAGAZINE of ALLIS-CHALMERS PEOPLE

Jack Bartness ..... Editor  
I. J. LaBarbera... Art Director

Published by Information and Community Services, Industrial and Community Relations Division, Allis-Chalmers Mfg. Co., Milwaukee 1, Wisconsin.

# Our achievements in '62 ... a look ahead at '63

## President Stevenson's report to employes

### *How did we do in 1962, Mr. Stevenson?*

To answer this question fairly, we must look at 1962 in two ways. First, we must consider our financial success — the sales and earnings we generated as a result of our year-long efforts. Second, we must weigh the things we did to prepare ourselves for the opportunities of 1963 and the years ahead.

We sold \$516.1 million worth of products and services last year, about \$13.9 million more than in the year before. Our earnings were \$6.5 million, including \$0.8 million earned by the Allis-Chalmers Credit Corporation.

These earnings meant that for each dollar we received from our customers we had about 1.1c after operating costs and taxes.

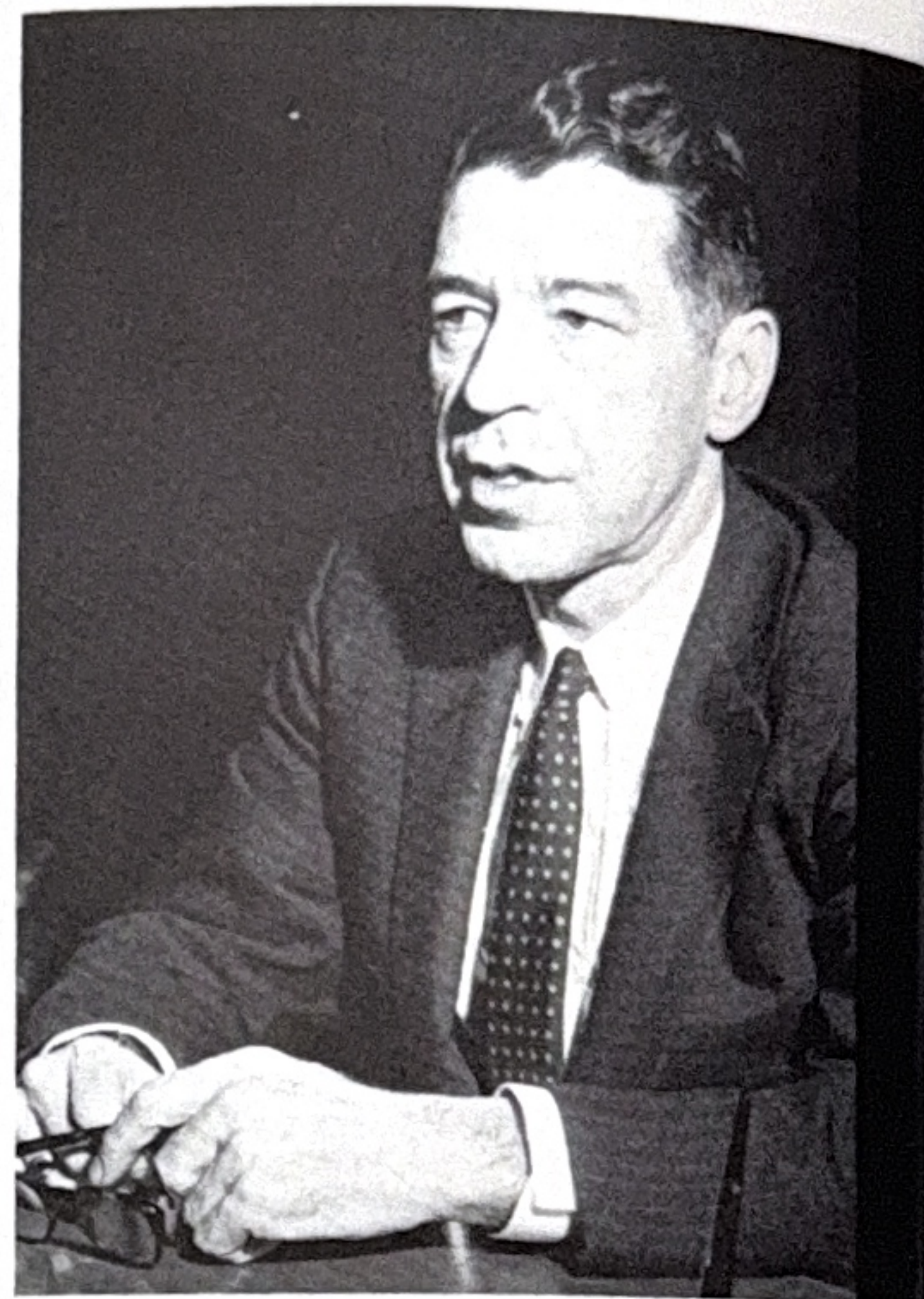
A penny on the dollar falls short of the amount needed to pay our shareholders for their financial investment in us. Nor is this amount of earnings enough to re-invest in the business — to keep our programs, facilities and equipment competitive. Each year should pay its own way.

While we are not satisfied with last year's final results, I am pleased with the many things we have done to improve our sales and earnings — the only sound foundation for good job opportunities for our people.

### *Then, as they say in baseball, 1962 was a building year.*

Every year must be a building year. In this respect, 1962 was no different than any other. The degree of success we had is what impresses me. But we should remember that we had a solid base on which to build.

We were, in 1962, and are now, a financially strong company. We have



more than \$500 million in assets and are among the top 100 largest American corporations. Our net working capital is almost four times our current liabilities. Our net sales have exceeded one-half billion dollars in all but one of the last 11 years.

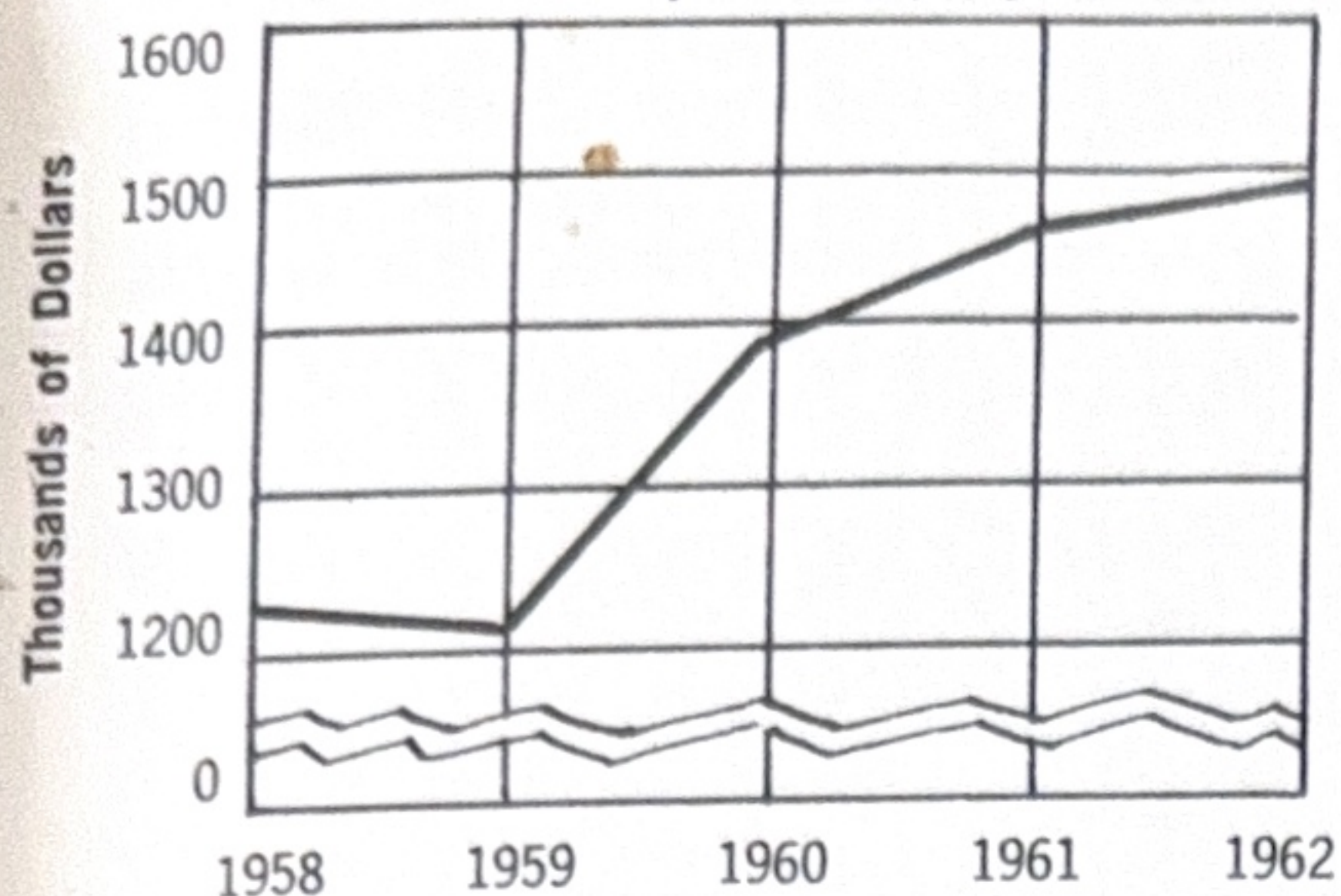
This is to say that we are a great company with great resources. With these resources we can promote any new idea, or underwrite any program that seems wise. We have an organization of craftsmen, engineers and salesmen capable of putting Allis-Chalmers anywhere it wants to be put.

### *Speaking of sales, what was the effect of the "Sell Allis-Chalmers" program in which employes participated?*

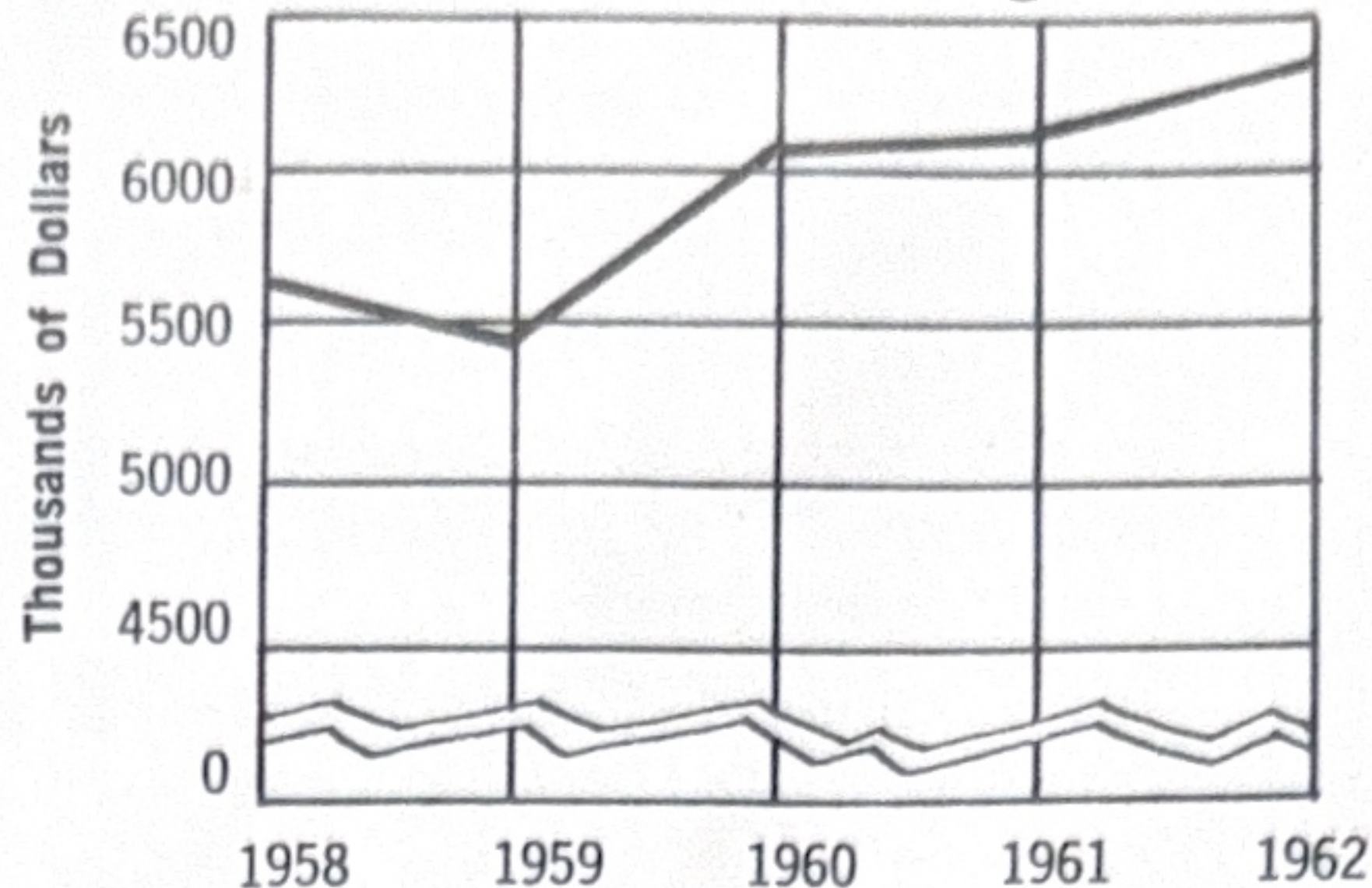
The way our people pitched in to promote the Company and the sale of Company products was gratifying. I can only hope that this is just the beginning. Employes, through the use of "Sell Allis-Chalmers" sales referral cards, led us to sales that otherwise we might



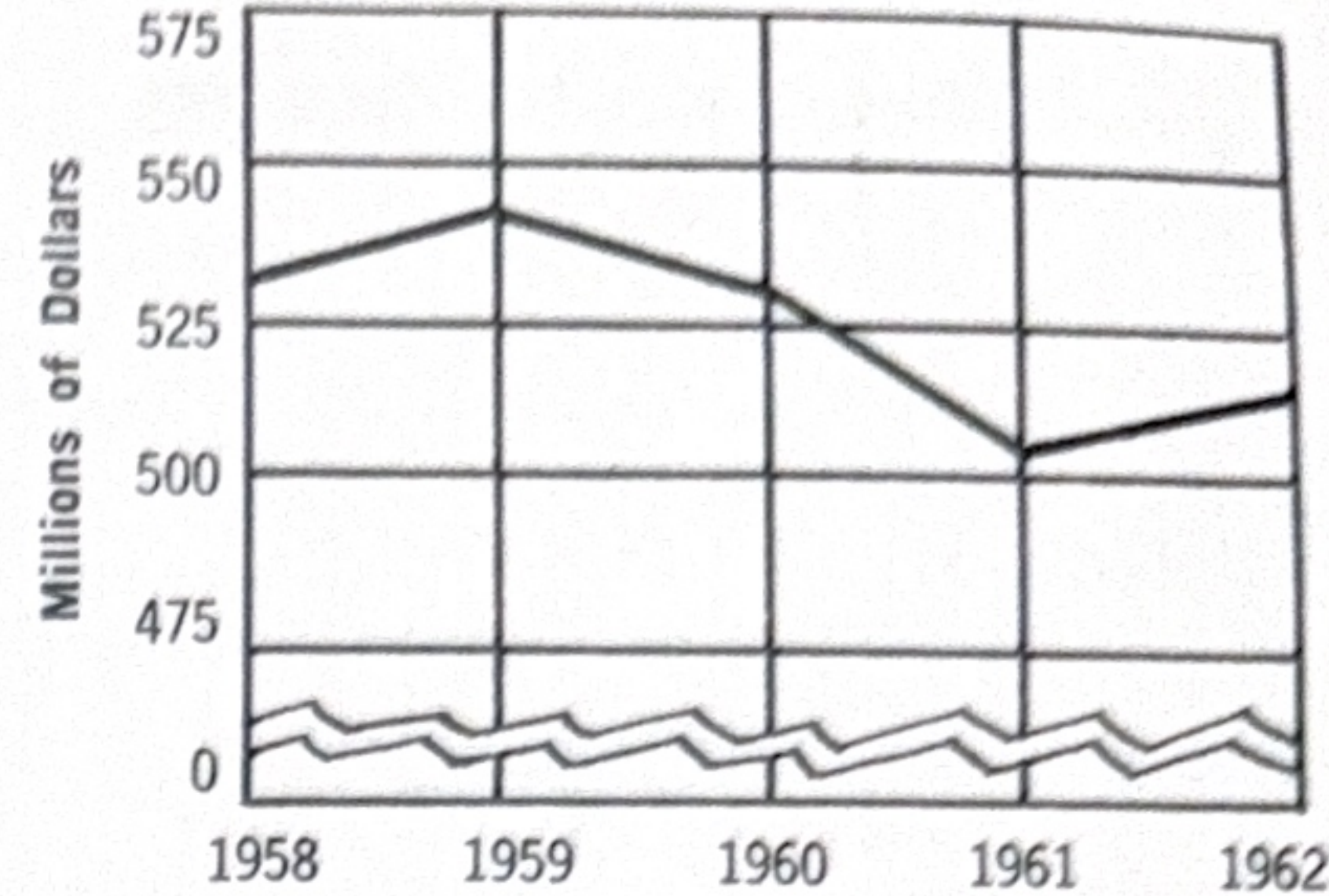
**Employee Benefit Plan  
Cost per Employee**



**Employee Average  
Annual Earnings**



**Allis-Chalmers Sales**



**Note:** All charts cover U.S., Canadian operations only. Employee earnings chart excludes branches, executives, directors of the Company.

## ON THE RECORD

	1962	1961
Sales .....	\$516,093,357	\$502,243,651
Earnings .....	6,478,027	6,384,584
All Taxes .....	18,291,929	18,790,334
Employees		
Number of Employees.....	32,897	30,216
Payrolls .....	\$195,824,859	\$182,676,457
Shareowners of Common Stock		
Number of Shareowners.....	65,977	67,977
Earnings per Share .....	68¢	66¢
Dividends per Share.....	75¢	\$1.25

have lost. I am sure the program made salesmen out of employees who never realized they could be of help in securing an order. As a salesman myself, I know the value of good leads. Our people are to be warmly complimented.

### *How well were our employees paid for their work in 1962?*

The best in our history. Our payroll of \$195.8 million reflects both a larger number of employees than the year before and higher rates of pay. This payroll amounted to about 38 per cent of the sales dollar, slightly more than the year before.

We had 32,897 employees at the end of 1962, 2,681 more than at the beginning of the year.

### *To what extent did our employees participate in Allis-Chalmers benefits programs?*

To the greatest extent in our history. You know, we used to refer to these programs as "fringe benefits." But when employees share in benefits amounting to \$45.8 million, as they did in 1962, they

are no longer "fringe."

These benefit programs, averaging out to about \$1,493 for each employee, amount to a substantial bank account for each person on our payroll.

With this \$45.8 million we are able to provide many services that would be difficult or impossible for employees to duplicate on their own at anywhere near the same price.

Some of these programs cannot be adequately measured on their face value. For example, the cost of our health and accident program was about \$5.4 million for premiums alone. If employees tried to match this program on their own, the total cost would be considerably more.

Our group life insurance program alone provided the families of our U. S. and Canadian people with more than \$270 million worth of coverage.

4,181 employees were on retirement in 1962, 458 more than in 1961. These people benefit not only from our pension programs but from the social security fund to which both they and the Company contributed during their working days.

(Continued on next page)

Materials,  
Services  
**54.5¢**

Payrolls  
**37.6¢**

Depreciation  
on Equipment  
**3.3¢**

All Taxes  
**3.5¢**

Net  
Earnings  
**1.1¢**



Allis-Chalmers sales and other income amounted to \$520,565,830 for 1962. This chart, which shows what happened to each dollar of this money, does not include earnings of the Allis-Chalmers Credit Corporation.



## President's report

Employees, in 1962, enjoyed nearly 700,000 days paid vacation and holiday time. Since vacation time is based on length of employment, this figure is a good indication of the number of people who come to Allis-Chalmers and stay at Allis-Chalmers.

More than two out of every three people in our shops and offices have 10 or more years of service. One out of three has been with us 20 years or more. This is a remarkable record.

### *How did we do in safety?*

We had the best safety year in our history. In number of accidents experienced per number of manhours worked, we were only slightly above our record year, 1960. And our severity rate, which tells us how serious our accidents were, was by far our best.

### *I'm told our employee suggestion award program also produced some good results?*

Yes. The quality of suggestions was better than ever before. In all, we received 3,413 ideas from employees on ways to improve our operations. For these ideas we paid out \$28,576. Such programs are fundamental to a company striving to be competitive. We cannot do without them. Employees who come up with ideas to improve our operations are the most valuable we have.

### *What was the labor union situation in 1962?*

As you know, strikes lasting from four to 19 days at seven of our plants plus strikes at suppliers' plants, contributed to a slow start in 1962. All but two contracts between the Company and the 27 labor unions with which we have collective bargaining agreements were negotiated during the year. At the beginning of 1963, agreements had been reached in all but one instance. In that case, the agreement has been indefinitely extended.

### *How did our share owners fare?*

Our 66,000 owners of common stock received 75c for each share of stock, 40 per cent less than in 1961. This followed a 17 per cent decrease from 1960 to 1961. The reduced return per share reflects on our earnings level, of course.

### *Mr. Stevenson, you referred to improvements that took place in '62. What were some of the things done to make 1963 a better year?*

1962 brought changes on many fronts — products, cost reduction, facilities, sales promotion, organization. More de-

tails are given in the summaries by divisions that follow on pages 5-11. But even here we must remember that the reports touch only some of the highlights.

### *In the way of sales promotion programs, the "Land of Power" probably is best remembered.*

I am sure it is. "Land of Power" was a well publicized and highly successful Farm Equipment Division program. It brought us a significant year end increase in tractor sales, and consequent word-of-mouth advertising is proving to be very valuable for 1963. This is the type of aggressive, imaginative sales vigor we count on to keep our shops and offices humming.

Another program that I am sure will do us a lot of good is our new corporate advertising campaign (see page 2 cover story). I am confident that it will whet customers' interest in Allis-Chalmers. The series presents us as the type of company we must continue to be — a company on the move.

In every way, we intend to beat a broader path to our customers' door.

### *What effect did our new Allis-Chalmers Leasing Corporation have?*

As you know, customer demand for leased rather than purchased machinery has shown rapid growth in the past several years. Leasing has already been a big factor in winning several large customers heretofore unobtainable.

### *Did our strong emphasis on research continue last year?*

Total research, development and engineering programs during 1962 required an investment of \$25 million. It can be no other way. We best meet our obligation to our employees and to our share owners when we protect their future in Allis-Chalmers by placing as much emphasis on research and development as we are able. Our research is preparing us for even greater diversity in the years ahead.

### *What did we do to keep our plants competitive?*

We spent \$8.5 million to provide better plants and equipment. We must provide our people with the best if we expect them to do their best.

### *Will you elaborate on our earnings report and the outlook for improvement?*

Our earnings problems have been with our capital goods products, primarily. But this has been a good business for us in the past. And we remain today a top-notch, high efficiency producer. Many of our people have forgotten that as

recently as 1959 our capital goods businesses turned in records. In fact, that year we had our largest single quarter. It was also the last "normal" capital goods year we have seen.

Our electrical equipment suffered an average 15 per cent price collapse between 1959 and 1961. The drop was so severe it almost eliminated our ability to make a profit in fields in which profit margins were already slim.

All this has forced everyone to become even more cost and expense conscious — from product redesign to finding the best and most economical way to ship and invoice the item.

In this area we are receiving the help of every employee. Over the long haul, efficiency provides the best job protection we can get.

I am happy to report that today our efficiency is up and costs are coming down. In capital goods operations as large as ours, these gains show up slowly, but with 1962 achievements, the outlook is for solid progress.

### *How did we do in the world market?*

Overseas sales of products produced in the United States and Canada were \$56.9 million, an increase of about 4 per cent over 1961.

Our overseas manufacturing plants help us maintain a strong world-wide sales organization and allow us to further capitalize on our expanded domestic sales and research efforts.

### *What about our future?*

If we continue the progress made in 1962, our future will be sound. We ended the year on an optimistic note with volume gains backed by a rising trend of new orders. These good results continued into the new year.

Our farm equipment, construction machinery and material handling business is keyed to present trends. Also on the plus side, we have seen some evidence of a more promising capital goods business climate, perhaps because of more favorable depreciation rules and the recent seven per cent investment tax credit.

Specifically, the outlook for new orders in electrical transmission equipment and paper machinery lines looks particularly bright. Also, we expect growth from our defense products business.

Today's price structures in many capital goods product areas, however, still tend to be weak. Under these circumstances, 1963 appears to offer both challenges and opportunities.

We have the people, the products and the financial strength to make the most of them.



## research

Research Division uncovered new ways to improve our existing product lines and effectively contributed to national defense and the conquest of space under several government-sponsored research programs.

Fuel cell systems research is continuing under government sponsorship directed toward space applications. Hydrogen-oxygen units for this purpose have shown increasing capabilities, both as to output and reliability.

Fundamental research on catalysts, electrodes, fuels and construction materials has been stepped up.

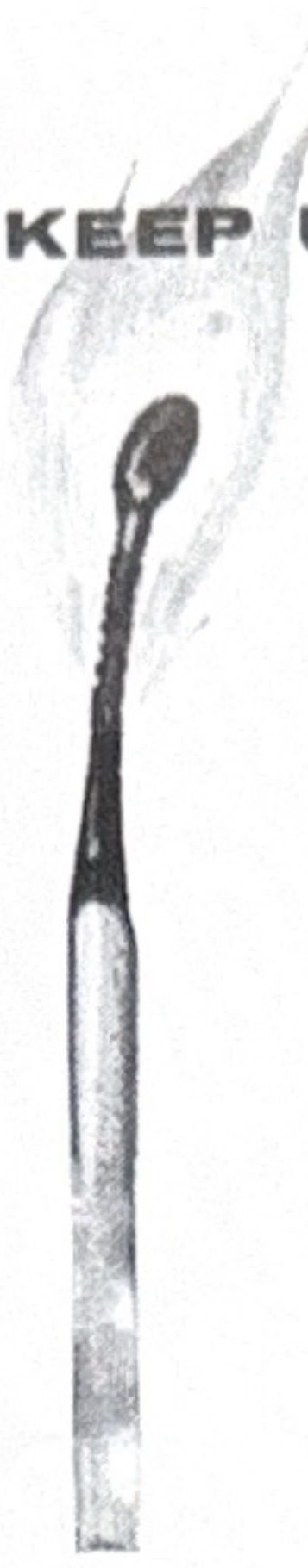
A new heat stable transformer insulating paper — Cello-Flex — was perfected and is currently being used in production transformers. Other work in electric insulations has resulted in several new epoxy resin formulations which have passed all laboratory tests and are currently being evaluated in production facilities.

Advanced engineering development and mathematical research services to the product departments are becoming increasingly productive.

Additional areas of research that show great promise include work on arc suppressants, semi-conductor materials and devices to convert a.c. to d.c. current, heat engines, alloy metallurgy and thermoelectric materials used in devices that produce electricity directly from heat.

Government research and development support of projects in these and other areas is actively being sought.

Fuel cell development is in full swing. Here a unit powers a golf cart in an experimental application. Ellen Braun, Research, is the driver.



Twenty-three tons of rugged power for construction machinery projects is available in the Deere-made TL-40 tractor loader, one of a number of new A-C models.

## construction machinery

*(Includes products made at Cedar Rapids, Deere and Springfield Works.)*

Allis-Chalmers added to its reputation as manufacturer of the broadest line of construction machinery with the introduction of a number of new models during the year.

Sales to dealers and retail sales were up over 1961 and good growth is expected from the Construction Machinery Division in 1963.

Increased sales of our tractor loaders, along with the addition of new and larger models, brought about an expansion program at the Deere Works. Production facilities there are being increased by more than 50 per cent, with additions totaling more than 66,000 square feet.

More than half of the Deere addition will be devoted to space for building and assembling the loaders. Other areas are for the plant's experimental

department, and for storing, shipping and receiving materials and equipment.

Allis-Chalmers expanded its tractor loader line to seven with the introduction of the TL-40. The 23-ton four wheel drive unit becomes the largest in the line.

Designed for big production jobs, the unit can load eight tons of material at a time — enough to fill the average size dump truck.

A new large motor scraper — the 460 — has a 32 cubic yard heaped capacity and is powered by a 435 hp turbo-charged engine. The unit's power shift transmission and torque converter provide top speeds of more than 31 miles per hour.

Also designed for big jobs and heavy-duty work is our M-100 motor grader. The 25,700 pound unit has a 127 hp A-C diesel engine. The unit has six forward speeds to 20.3 mph and three reverse speeds.



BRIGHT IDEAS KEEP US GROWING



## atomic energy

*(Includes equipment made at West Allis Works, plus products made by other Allis-Chalmers Works.)*

The Atomic Energy Division last year sent engineers to the bottom of the world while others were at work on a nuclear power plant to be located about 200 miles from the home office.

In November, three A-C engineers traveled to the Antarctic to study firsthand the conditions in which it would be necessary to install and operate a portable nuclear power plant there.

The installation would substantially reduce the airlift program needed to service the Antarctic's Byrd Station.

The Atomic Energy Commission has awarded Allis-Chalmers a contract to study the feasibility of designing such a plant. The study amounts to a re-evaluation of a previous proposal of the AEC to install this facility in the Antarctic.

The Engineers—Charles Klotz, Walter Enright and Ernest Wallner—encountered "summer" temperatures ranging from 20 to 40 below zero.

Much closer to home, the AEC selected Allis-Chalmers as the prime contractor for a 50,000 kilowatt nuclear power plant to be built near Genoa, Wis., on the Dairyland Power Cooperative's system.

A research and test reactor, designed and built by Allis-Chalmers for Reactor Centrum Nederland, near Petten, the Netherlands, was brought to its full

20,000 kilowatt operating level and completed its full power acceptance run.

Earlier in the year, the AEC awarded the Company a research and development contract for work involving nuclear superheat in the boiling water reactor cycle.

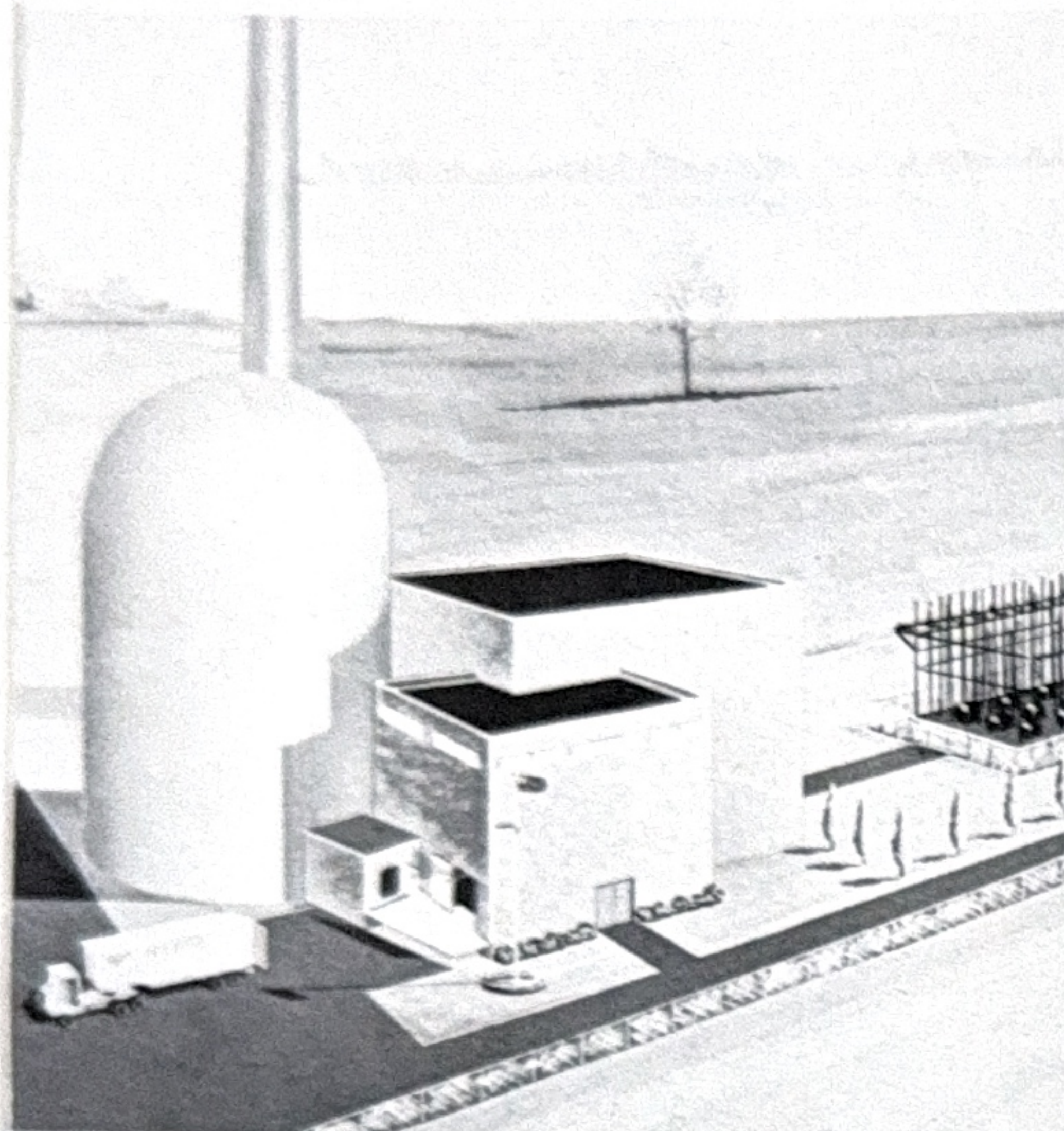
We also contracted for a computer study on Canada's first full-scale nuclear power reactor. It was the second computer study contract for A-C on this project.

Extensive research into various aspects of internal steam separation in boiling water reactor systems is called for in a contract awarded as part of a joint U. S. Atomic Energy Commission—European Atomic Energy Community (Euratom) research and development program.

The Elk River (Minn.) Reactor, designed and built by Allis-Chalmers, achieved its initial sustained chain reaction on Nov. 19. The event marked the beginning of a series of steps which will lead to commercial operation of the atomic portion of the Rural Cooperative Power Association's power plant in 1963.

The Pathfinder Atomic Power plant being built near Sioux Falls, S.D. is about 95 per cent completed. All major nuclear components have been manufactured and shipped to the site.

Allis-Chalmers is prime contractor for the plant, owned and to be operated by Northern States Power Co.



Allis-Chalmers has the contract to build this nuclear power plant near Genoa, Wis. The contract includes building the reactor and supplying all equipment for the plant.

## a-c international

*(Includes products made at all Allis-Chalmers Works.)*

Overseas sales of equipment produced in Allis-Chalmers U.S. and Canadian plants improved in 1962.

In Europe, where sales gains were particularly noteworthy, the Company took steps to pursue even more actively our growing business within the Common market countries and elsewhere on the continent by establishing Allis-Chalmers Belgium S.A.

This Belgium company will sell the products of our U.S. and Canadian plants as well as those of our subsidiaries and licensees.

Among the sales highlights of A-C International's year was a contract for more than \$10-million to construct a 300,000 kilowatt hydroelectric power plant in southern India.

Our equipment for the project includes hydraulic turbines, generators, switchgear, transformers, valves and auxiliary equipment.

Another order, totaling about \$3 million, was for four hydraulic turbines for a Greek government-owned hydroelectric power plant.

These orders aided substantially in the very large increase in power equipment bookings for 1962 over 1961.

An important segment of our Construction Machinery Division's orders were for overseas destinations. One significant order was for 30 crawler tractors to the Department of Public Works of South Vietnam.

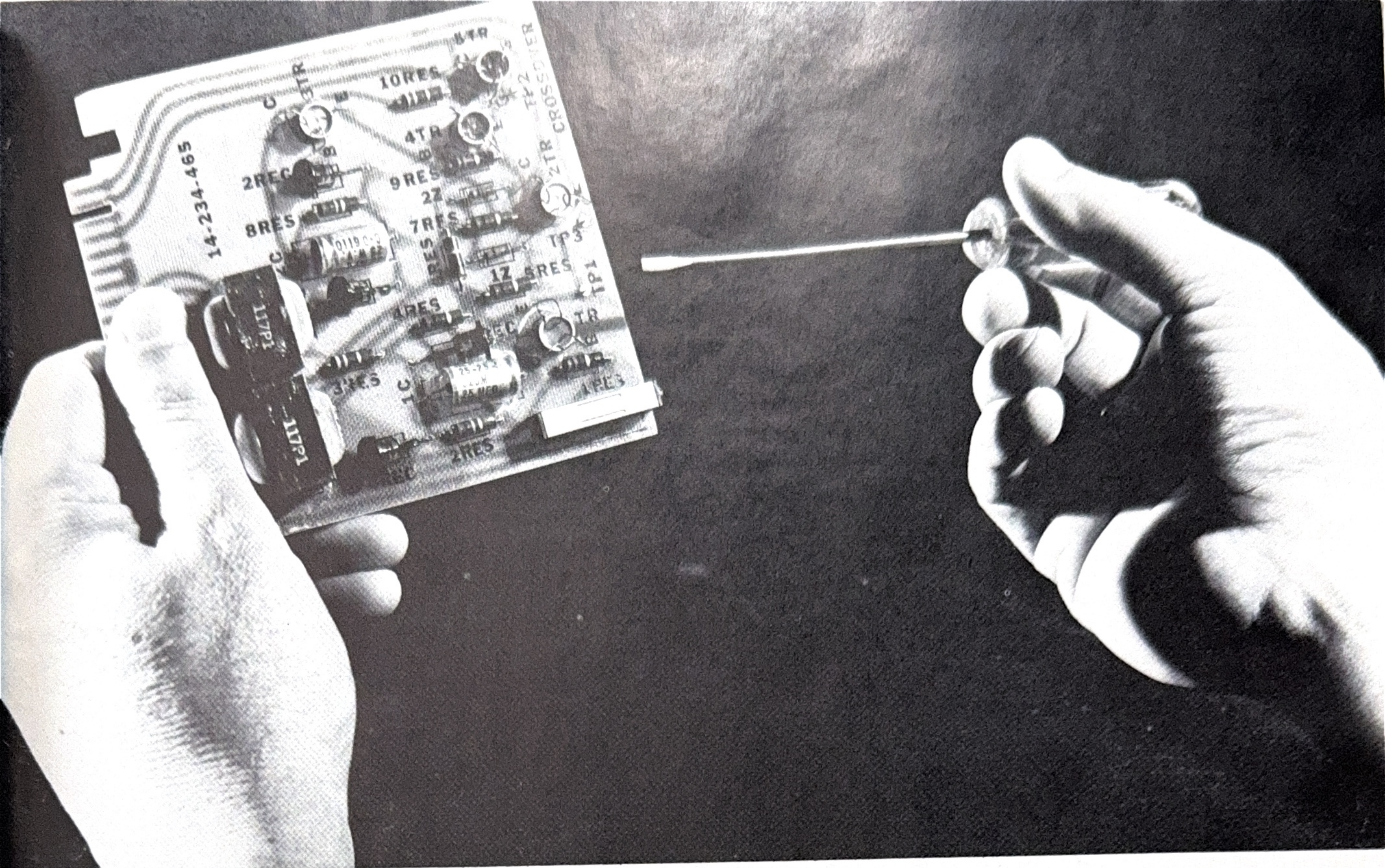
The units will be used for roadbuilding as well as earthmoving in the government's strategic hamlet program. Under this program, scattered farm families and numerous hamlets are being regrouped into larger villages for more security against communist aggression.

The variety of customers for our construction machinery is seen in the sale of 55 tractor shovels to the Swedish Army, 10 motor graders to Turkey's Forestry department, and eight motor scrapers to South West Africa's Consolidated Diamond Mines.



From the Springfield Works to Sweden is the story of this crawler tractor showing off its muscles. Overseas sales of equipment from U.S. and Canadian plants improved.





Electronic circuits similar to this are made by Industrial Equipment's Control department for use in such A-C products as adjustable speed drives, lift trucks, rectifiers and diesel-electric sets.

## industrial equipment

(Includes products made at Norwood, West Allis Works.)

Steel mills and universities, sewage disposal plants and coin-operated laundries. These are a few of the many types of customers served in 1962 by our Industrial Equipment Division.

Because of its great diversification of products, the division qualifies as an "Allis-Chalmers within Allis-Chalmers." New ideas during the year led to still more diversification as the division sought to more deeply entrench itself in markets of long standing and to penetrate promising new markets.

Among new developments is a line of low-cost pumps designed for the price-conscious, highly competitive, building industry. Also developed was a canned motor pump capable of handling liquids at temperatures up to 750 degrees Fahrenheit.

In 1962, Allis-Chalmers acquired the right to build lines of multi-stage pumps of European design, which put us into a business with a domestic potential of \$20 to \$30 million a year in new units alone.

A new packaged brushless synchronous generator represents a major breakthrough in generator design. Space re-

quirements have been reduced nearly 50 per cent and weight by as much as 40 per cent in certain ratings.

Industrial Equipment has supplied a 200-hp motor to the Sinclair Oil and Gas company for use in the first application of an electric drive to a gas pipeline booster compressor. This is a revolutionary concept and offers a large market for future sales.

A new speed changer market has our units — in conjunction with our paper stock pumps — handling waste and reactivated sludge in various municipal waste treatment plants in North Carolina and Georgia.

Our motors assisted in revolutionizing the dry-docking lifts used in the marine industry. The lifts hoist freighters and similar ships out of water and dry-dock them for repairs.

Another first for Allis-Chalmers — we introduced the successful commercial production of self-fluxing iron ore pellets using the *Grate-Kiln* system.

So significant are the potential benefits in cost reduction and increased blast furnace capacities that Empire Mining Company ordered a *Grate-Kiln* system which will be the world's largest single line pelletizing plant.

In 1962, the Company installed the first unit of a new line of small grinding mills intended mainly for the aggregates, chemical and mining industries.

Allis-Chalmers protected its future in the mining industry by developing three types of autogenous (rock ground by rock) grinding mills. Thirteen of these mills have been sold to the copper industry.

The world's largest cement kilns went into operation in 1962 at Atlantic Cement company's Ravena, N.Y. plant. A-C equipment there included two rotary kilns — each 20 feet in diameter and 580 feet long — and five huge grinding mills, each driven by 3300-hp *Twinducer* drives.

Ordered from our accelerator department was a complete cyclotron for the production of radioactive isotopes at Washington University.

U.S. Steel's Gary Sheet and Tin will install on their hot strip mill the latest in gauge control from Allis-Chalmers. The controls assure a product of uniform thickness.

The Argonne National Laboratory purchased a motor generator flywheel set as the power supply for an atom smasher.



BRIGHT IDEAS KEEP US GROWING

## farm equipment

*(Includes products made at  
Independence, La Crosse, La Porte,  
Oxnard and West Allis Works.)*

1962 was a good farm equipment year and the prospects for 1963 are even better, the division reports.

Retail sales of farm equipment showed a gain of more than 25 per cent and sales to dealers improved about 20 per cent over the previous year. Optimism for the current year is partially based on an expected gross farm income of \$41 billion and a net income of \$13 billion — highest in 10 years.

Many product innovations placed the division in a good position to make the

most of improved markets. Unit sales of *Gleaner* combines increased 46 per cent with the entry of an 8'-12' model.

The mower line was also broadened, and we began producing our own line of rotary mowers and power feed boxes for feeding animals and hauling.

Two additions to the self-propelled combine line were tested and approved for production this year. This gives us machines for the hillsides of the Northwest and rice fields of the nation.

Domestic production of a square baler begins in 1963, making Allis-Chalmers the only company offering both round and square balers.

Increased acceptance for new corn and cotton planters was experienced. A beet planter was released for production in 1963, the farm chemical sprayer line was broadened, and preparations were made to manufacture selected units of our line of hydraulic farm loaders, previously purchased from suppliers.

During the year we successfully introduced our D-19, a 70-75 hp 5-plow tractor, and brought out new models in the

2-plow and 4-plow tractor sizes. The Company also made an impressive entrance into the small riding tractor market with the new 7 1/4 hp B-1 lawn and garden tractor.

The industrial tractor and equipment market line enjoyed a strong sales increase. New products introduced to make these tractors even more salable were a mobile drop hammer, a new snow plow line and a new line of low-priced loaders.

Highlighting the quality of A-C farm equipment was the success of a Model A *Gleaner* combine equipped with a 2-row corn picking attachment in the National Corn Picking Contest, combine division.

Driven and owned by Lawrence Fisher of Palmyra, Mich., the unit won the contest with the highest efficiency score ever recorded in any national corn picking contest.

A square baler, made at La Porte, has been added to Allis-Chalmers widening line of farm equipment. Sales of farm equipment improved in 1962 and the prospects for 1963 look good.





# power equipment

(Includes products made at West Allis and York Works.)

A shift in the pattern of electric power generation purchases by utilities brought about important changes within our Power Equipment Division.

The Company announced in December that it was discontinuing its steam turbo-generator and related steam condenser business because they have "become extremely unprofitable and the outlook for the future indicates no improvement."

But, while the steam turbine generator market continued on the downswing, one of the phenomena continued to be the development of large hydraulic-generating installations and hydro-pump-storage facilities.

While the movement of utilities into massive interconnected power pools helped reduce the demand for steam turbine-generators, it increased the potential for pump-turbines for storage installations, a field in which we are the leader.

Such hydro installations are ideal to provide peaking power for large, interconnected power pools. It means added

opportunity to sell the hydraulic turbines made by Power Equipment Division at our York Works and the generators made at West Allis by our Industrial Equipment Division.

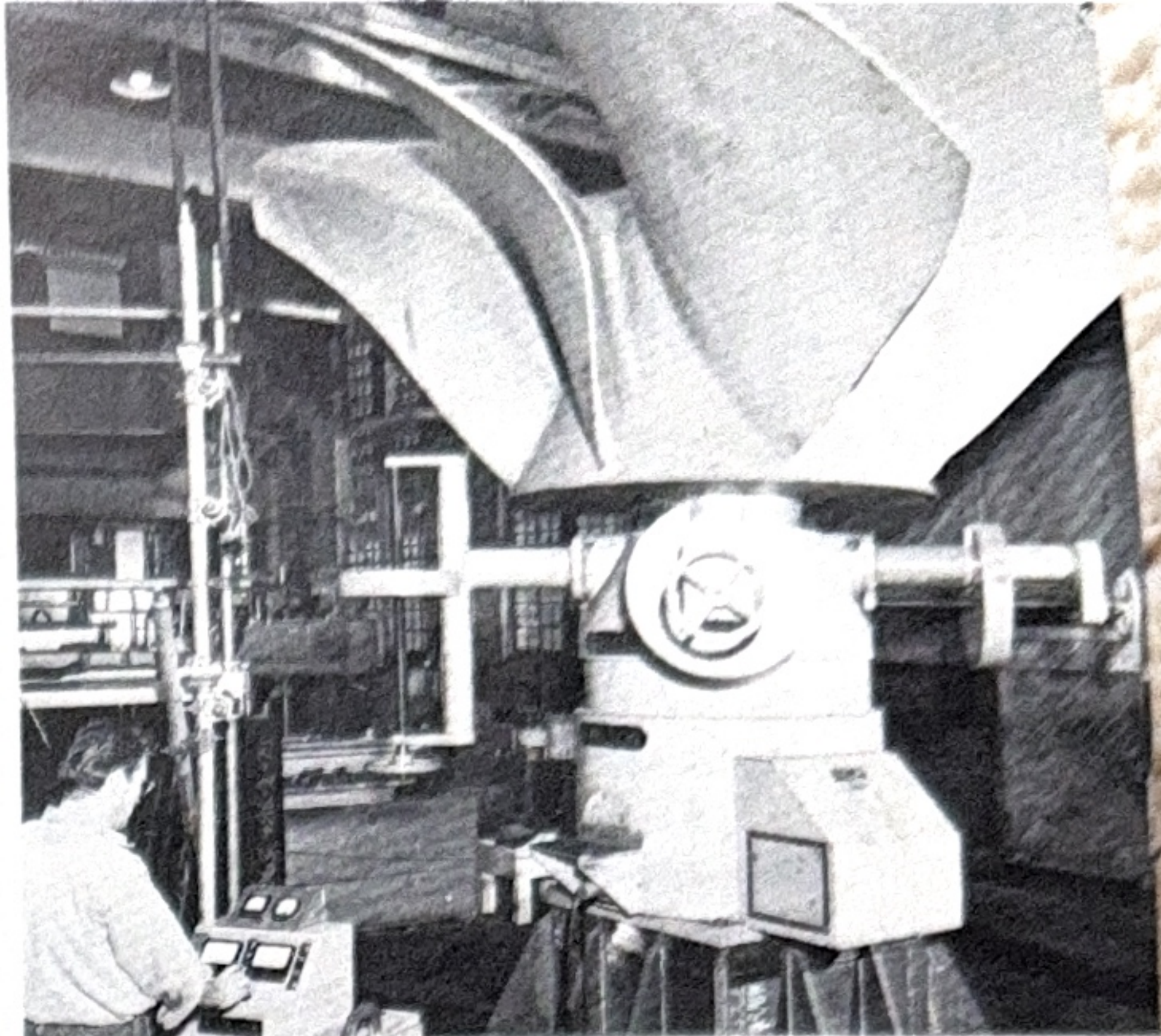
Although the Company will take no new orders for steam turbine-generators or related condensers, it will complete the design and manufacture of the units now on the books. It will also continue to furnish repair parts, engineered modifications and maintenance service for the many units in our customers systems. This, annually, is a multi-million dollar business.

During 1962, Power Equipment obtained through York Works seven turbine contracts consisting of 22 hydraulic turbine units. The combined capacity of these units will exceed 1,500,000 hp.

Sales of other hydraulic accessories (trash rakes, gates, hoists) also exceeded 1961 sales levels. Repair and sub-contract orders were received in quantity.

Keen competition, particularly from abroad, gave added impetus to improve existing products and develop new ones.

The first horizontal tube type turbine was sold in 1962. It is hoped this new development will open many new low



Undergoing tests at York Works is this hydraulic turbine component. Power Equipment Division received orders for 22 hydraulic units in 1962.

head hydraulic sites that were previously uneconomical to develop.

Installed was a new type hydraulic turbine runner that incorporates the horse-power efficiency of the Francis runner with the higher speed of the propeller type runner.

The *Streamseal* butterfly type valve was introduced late in the year, but has already met with excellent customer acceptance. It offers advanced design features combined with low cost resulting from mass production techniques.

# electrical transmission & distribution

(Includes products made at Boston, Gadsden, Pittsburgh and West Allis Works.)

The newest of Allis-Chalmers divisions—Electrical Transmission and Distribution—completed its first year of operation in 1962 with a number of significant accomplishments to its credit.

Formation of the division was particularly timely in view of the current trend of electric utilities to interconnect into massive power pools and grids.

The division's apparatus includes transformers, circuit breakers, regulators, capacitors and switchgear. It is all essential to the interconnections, which are expected to multiply rapidly. The market for this equipment is already larger than that of the electric generation business.

A high point of the year was the award of an equipment contract for an experimental five-mile power line to be installed by the Bonneville Power Administration, Oregon.

The special line will be designed to test and experiment with power transmissions with direct current which may have some economic advantages over today's alternating current systems.

Allis-Chalmers has contracted also to

supply the Tennessee Valley Authority's Bull Run Steam Plant with record size outdoor power circuit breakers.

There are 15 oil circuit breakers in all for this new 900,000 kilowatt facility scheduled for completion in 1965. In addition, we will supply eight other circuit breakers of a smaller size.

Introduced was a new distribution transformer design that is superior to all other manufacturers'. A-C engineers designed and built a machine that automatically winds the aluminum foil that is used in building the coils for this transformer.

This machine enables A-C to make claims not possible in competitive units.

Work began on three generators for producing the signal for the National Emergency Alarm Repeater System (NEAR). Designed for substations, they have a transmission rather than an electrical generation application. The generators are comprised of solid state devices (silicon diodes).

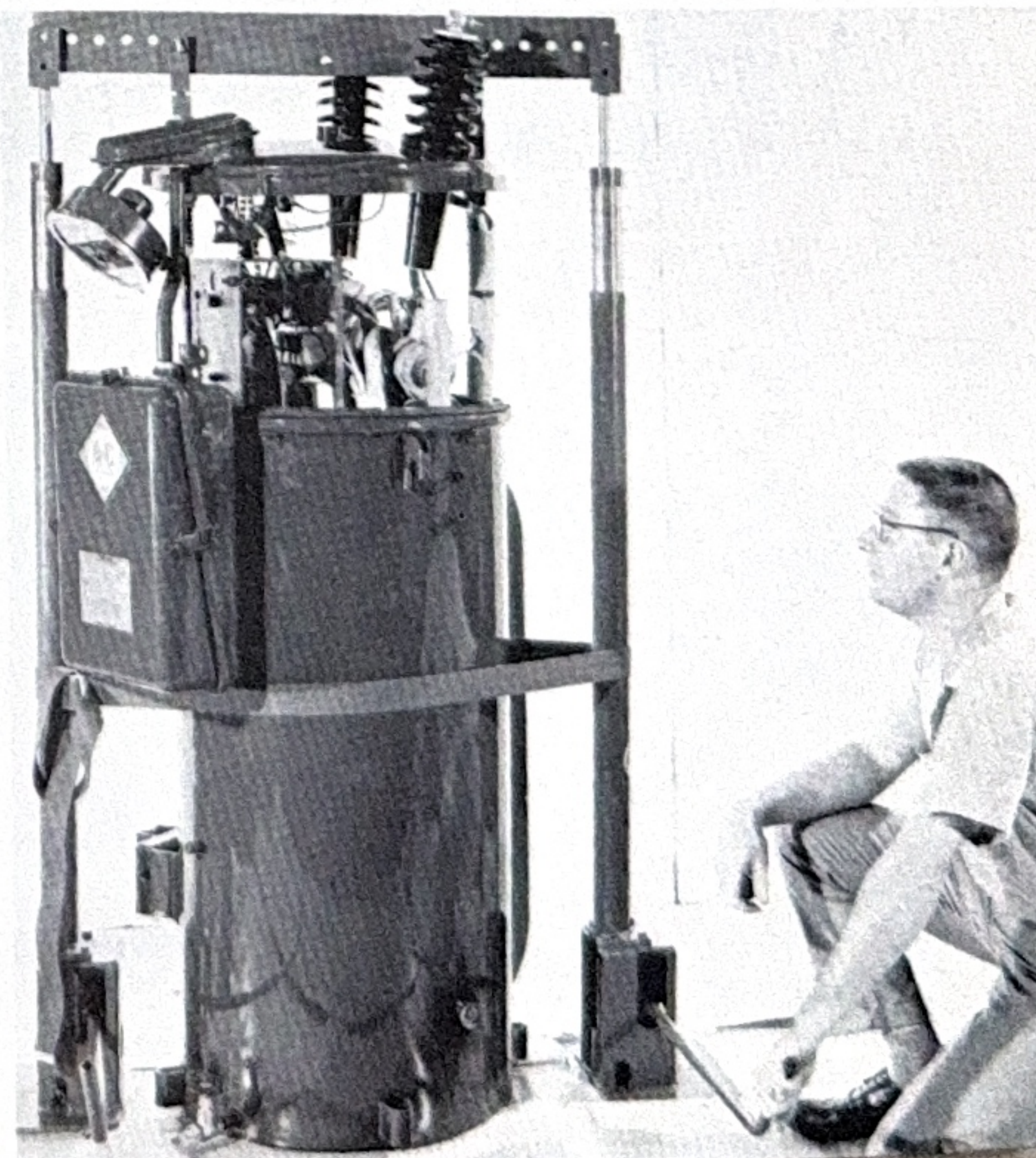
These are prototype units for the Department of Defense which total a little over \$1 million. Units are trailer mounted for mobility.

Being untanked is our all new JFR regulator, manufactured at the Gadsden Works. Such products mean better service for all users of electricity. Regulators keep voltages constant.

The Allis-Chalmers design concept has been accepted without reservation by those electric power utilities who have been selected as test sites for this Civil Defense development.

A redesign of the 600 volt metal-enclosed switchgear features an exclusive in the industry, the first switchgear with solid state (no moving) parts.

The device is made up of diodes, transistors, resistors and capacitors and protects against excessive electrical current.





## products for defense

(Includes products made at all Allis-Chalmers Works.)

The pace of our participation in defense and space opportunities increased during the past year as the Defense Products Division and other divisions of the Company intensified their efforts to obtain national defense business.

Orders received from the United States Government for national defense purposes totaled \$17.3 million in 1962, a 38 per cent increase over the prior year.

As a result of negotiations last year, Allis-Chalmers was awarded in January of '63 two contracts totaling \$4,793,000 to make 1,270 fork lift trucks for the services.

Two additional engine-generator orders for the Minuteman ICBM bases raise our total to 552 sets. Twenty-six HD-6 crawler tractors for air lift to forward construction zones were ordered by the Corps of Engineers.

Research, engineering, development and feasibility study contracts increased considerably. They include development of fuel cell systems for space use for both the Air Force and the National

Aeronautics and Space Administration. Also in the fuel cell area, the government extended the current Mobile Energy Depot System contract — a study to determine the feasibility of producing chemical fuel from an atomic energy source. This fuel would then be used by fuel cell-powered military vehicles.

With such a mobile energy depot, overseas armies could operate independently of vulnerable supply lines required to bring vast quantities of fuel for tanks, trucks and personnel carriers.

Orders for the Navy-Maritime ship-building program included nine pulse generators with switchboards and related controls for minesweepers.

Our Accelerator department installed the first direct read-out system for solid rocket inspection at the Redstone Arsenal, Huntsville, Ala. In the system, which uses a 25-million volt A-C betatron, a strip chart replaces film for instantaneous inspection for possible missile flaws.

Installation of the Program Evaluation Review Technique (PERT) system has been instrumental in successfully obtaining several defense contracts for motors during the year.

Allis-Chalmers has supplied, or has on order, 552 diesel-electric sets for three Minuteman ICBM bases in the West.

These orders required development, prototype testing and initial shipment of production units on short delivery dates. Using the PERT computer program as a scheduling tool, the Company has been able to comply with these rigid requirements.

### Science Materials Center, Inc.

*Science Materials Center, Inc.*, a manufacturer and merchandizer of science materials for classroom and home use, joined Canadian Allis-Chalmers and the Valley Iron Works Corp. as North American manufacturing subsidiaries of Allis-Chalmers.

SMC produces a line of books, raw materials and experimental and study equipment to help teachers and parents

advance and enrich young people's minds. Manufacturing quarters are in Fort Atkinson, Wis., and sales offices are in New York City.

### Canadian Allis-Chalmers, Ltd.

*Canadian Allis-Chalmers* continued to serve the Canadian and world economies with vital machinery made at Lachine, Quebec.

A highlight was an order for the \$200 million Carol Lake ore processing project. Eight ball mills and 16 balling drums were shipped to deep in the forests of Labrador for one of the world's most modern and highly automated iron concentration projects.

Intense effort and close cooperation over a four-month period resulted in the

development of a new rubber-lined pump at the Lachine Works. The design completes an up-to-date range of competitively priced pumps.

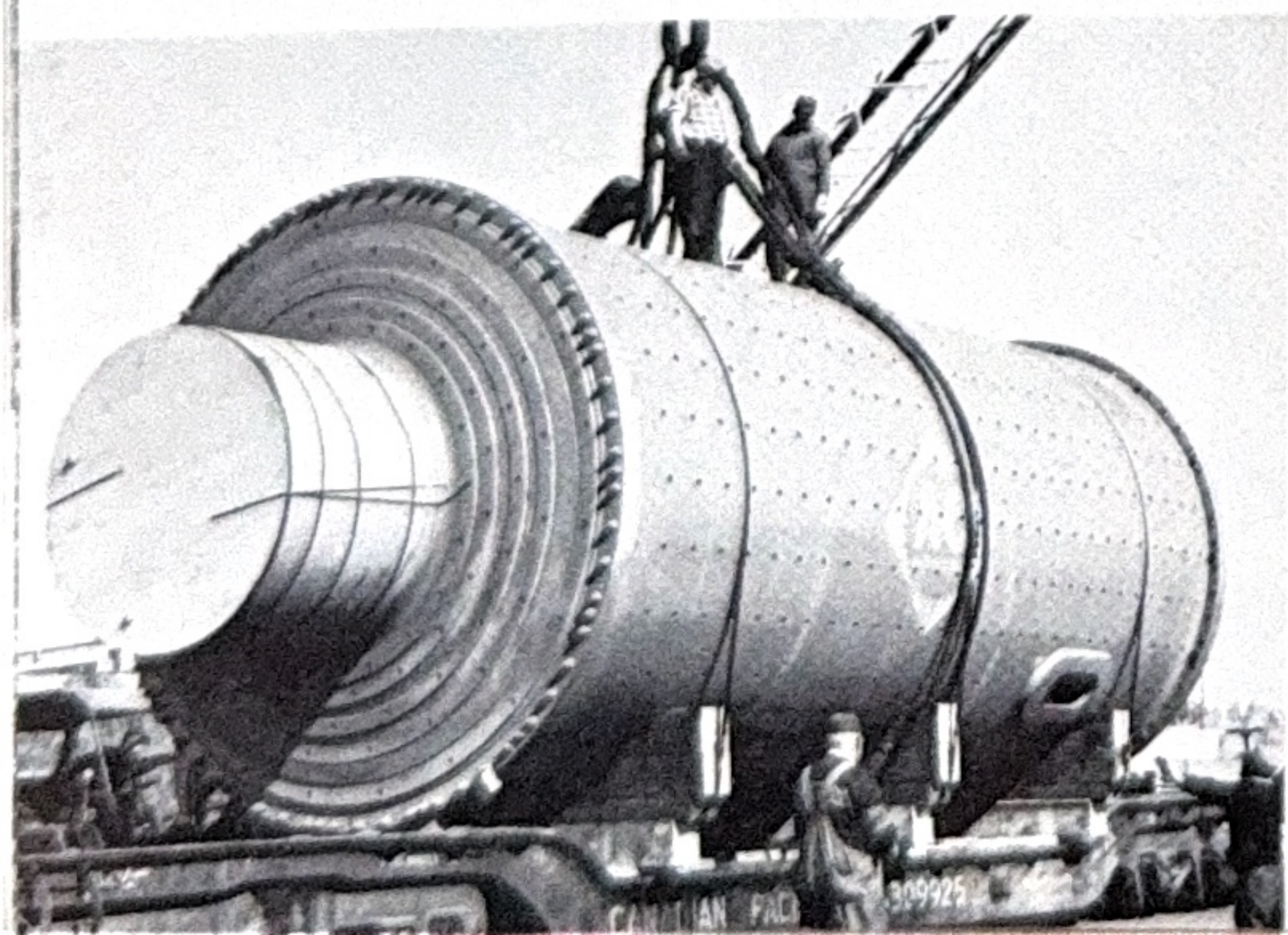
Three giant crushers were ordered for use in limestone and iron ore industries. They are the second largest in Canada.

Big orders for switchgear were a feature of the year. Ontario Hydro, for example, ordered 120 units, including 40 for Douglas Point, Canada's first commercial nuclear power plant.

### Valley Iron Works Corporation

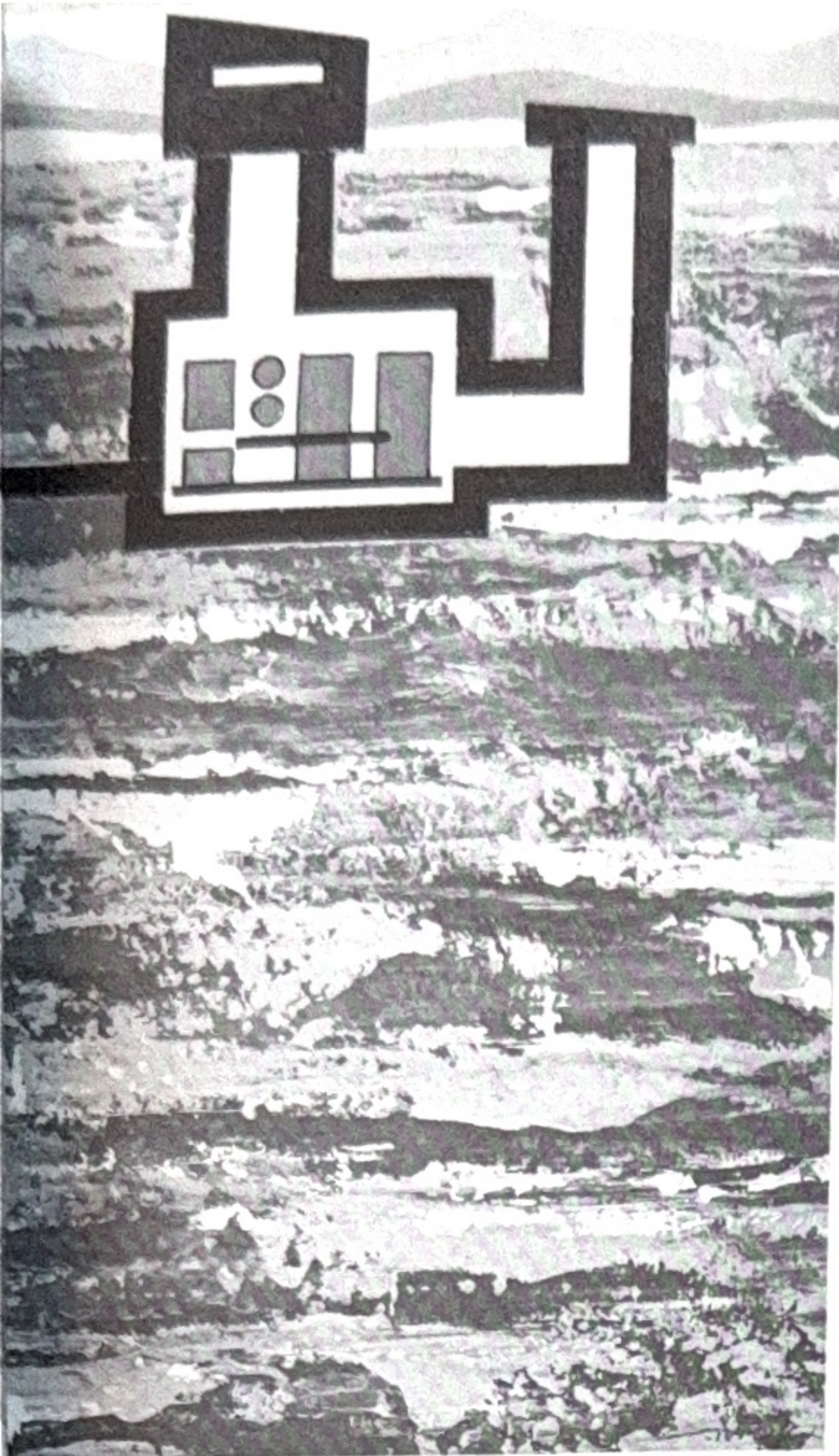
*Valley Iron*, located at Appleton, Wis., recorded orders for two paper machines, each at well over \$1 million.

D. M. Bare Paper Company, Roaring Spring, Penna., ordered one machine for producing bleached kraft grades, and the Nicolet Paper Company, DePere, Wis., ordered the second for the production of glassine (thin, transparent) grades.



Leaving the Lachine Works is one of eight grinding mills for a Labrador project.





## engine-material handling

*(Includes products made at Harvey Works.)*

Growth.

New products and realignment of the sales organization to generate still more growth.

These, in 1962, were the trademarks of the Engine-Material Handling Division, which boasted the best year in its history in both lift truck orders received and in shipments.

Lift truck orders received increased 63 per cent and shipments went up 54 per cent over the previous best years. With more products to sell and a streamlined sales organization to do the selling, facilities for lift truck production at Harvey Works will be expanded.

Allis-Chalmers entered the electric lift truck field with a dramatic splash. Our three electric units have an electronic drive control — the first of its kind in the industrial truck electrical systems. The control makes possible the long-sought characteristic of current draw in direct proportion to truck speed and load.

The control was developed by the Industrial Equipment Division's Control department and has other commercial applications.

Already these electric units have met lively acceptance and the line will be enlarged.

Also introduced was a rough terrain lift truck, ideally suited for the building

construction industry, industrial markets, for various agricultural applications; in logging, sawmills, lumber yards, building supply firms and in other areas where conventional lift trucks cannot be used.

Still another development — five new pneumatic lift trucks round out models in the 2,000 to 8,000-lb. capacity ranges.

A new version of the 21000 engine went on the market. It has a maximum 435 hp and will be featured in power units, diesel-electric generator sets and as marine propulsion units.

Our engines were used in such diverse applications as the Canadian Gap-Filler program and for Peru and Chile fishing fleets. The Gap-Filler program supplements such early-warning systems as the DEW and Pine Tree lines in Canada.

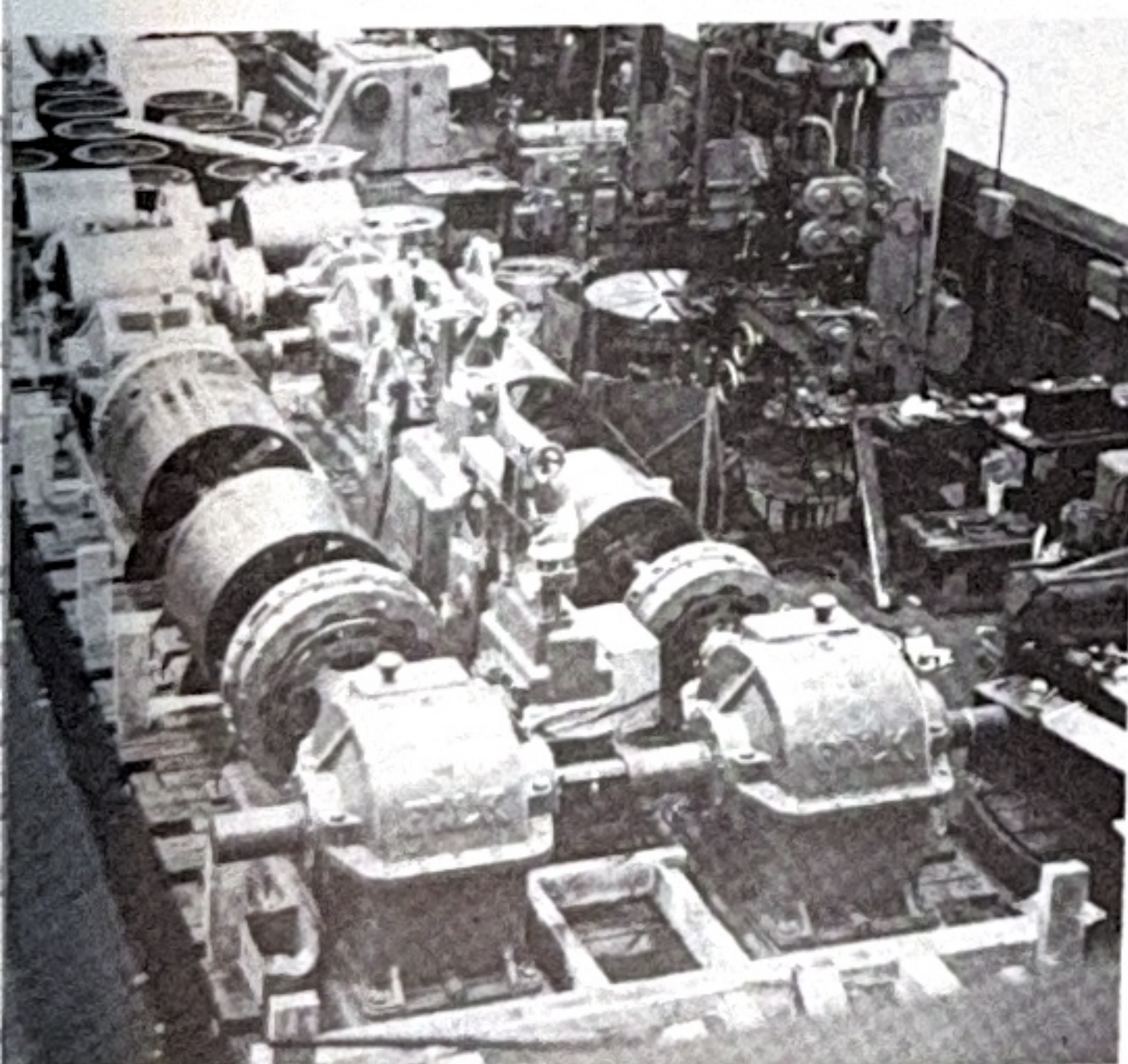
The U. S. and Canadian Sales and Service organizations were realigned with the establishment of 10 Material Handling and 12 Engine Districts, each with a sales manager.

Previously, sales and service functions were handled at six Tractor Group branches in the U. S. and three in Canada.

The division set up a new sales and service training center at the Harvey Works. It will be available to sales and service personnel, dealers and customers.

Allis-Chalmers has now supplied, or has on order, over 100 high frequency motor-generator sets and control equipment for the Polaris submarine program. Some of these sets supply power for the ships Inertial Navigation System, while others are in the missile guidance system.

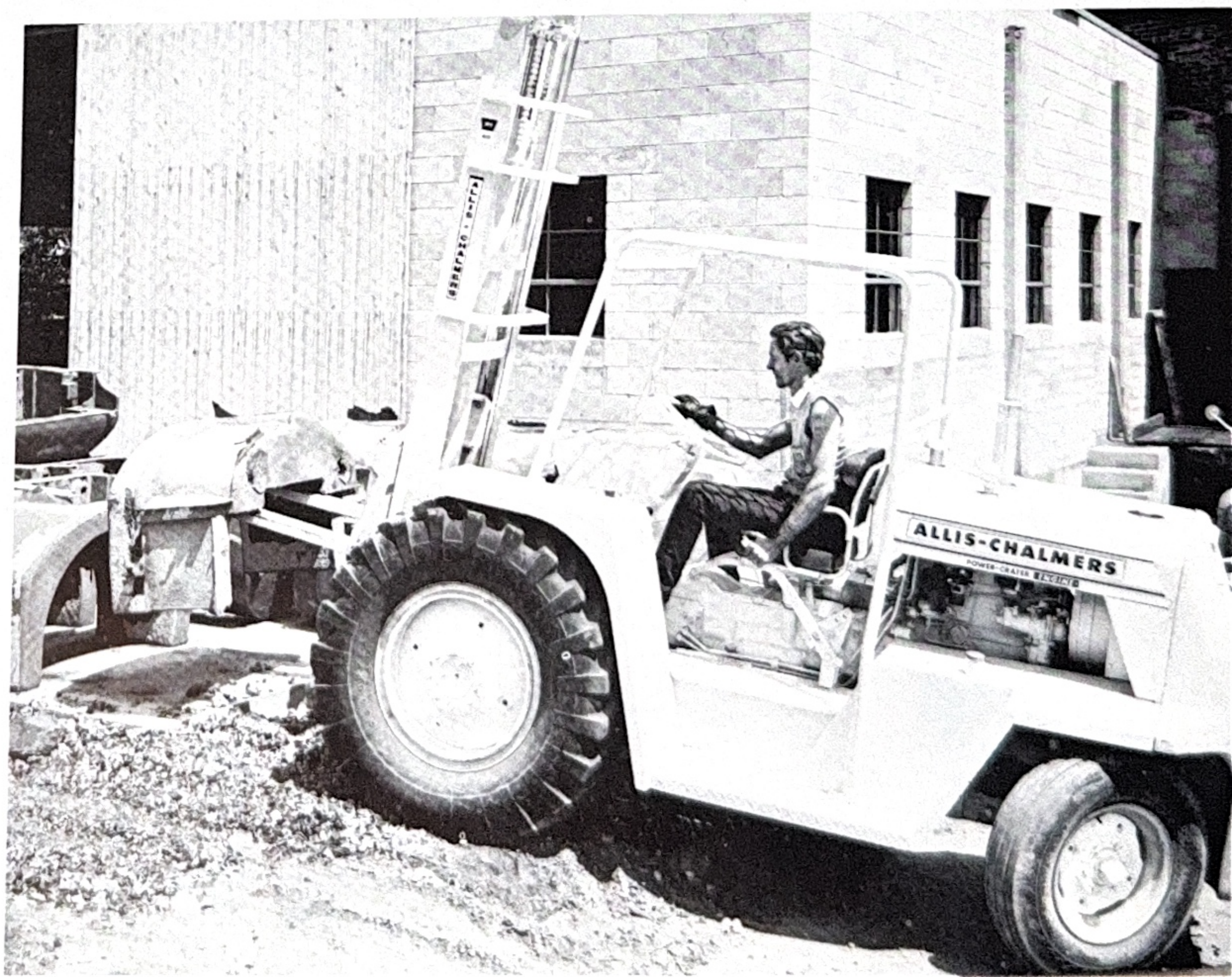
These Valley Iron drive units are part of an order for a complete paper machine.



Products from Science Materials Center helps build an interest in science among youth.



A rough terrain lift truck joined Engine-Material Handling Division's family of products during 1962. An electric line is also new.





# Our eye-opening power shows

**'land of power'  
captivates  
7,000 farm  
customers, dealers**

Allis-Chalmers "Land of Power" took the world of agriculture by its shoulders and shook it up a bit. The reaction was all we could hope for.

"I'll be an A-C customer for the rest of my life and will sell your name every chance I get."

"Of the many employes in your factories, not one of them left me wanting for more information to my query. You



Cotton farmer Ted F. Smith, Parkton, N. C. got a first hand account of West Allis tractor production from Jerome Jungbluth. Visitors were generous in their praise of men like Jungbluth, at both the West Allis and Harvey Works.

should be intensely proud of your people."

The first comment was made by a Texas farmer who had traded a competitive tractor in on his first Allis-Chalmers unit. The second was made by a man from Tennessee.

Both men voiced their impressions after three-day expense-paid trips to the West Allis and Harvey Works for Allis-Chalmers "Land of Power" program—one of the most rewarding sales promotion programs in the Company's long history.

How rewarding?

The immediate sales results can be measured to the dime.

For the three month sales period during which farmers could qualify for the trip through the purchase of a tractor, Allis-Chalmers more than doubled its farm tractor sales, according to L. W. Davis, general manager of our Farm Equipment Division and a vice president of the Company.

So, a normal off-selling season was turned into one that brought an unusually high level of employment and production into our tractor shops.

But immediate sales only begin to tell the story. How do you measure the good will evident in these comments?

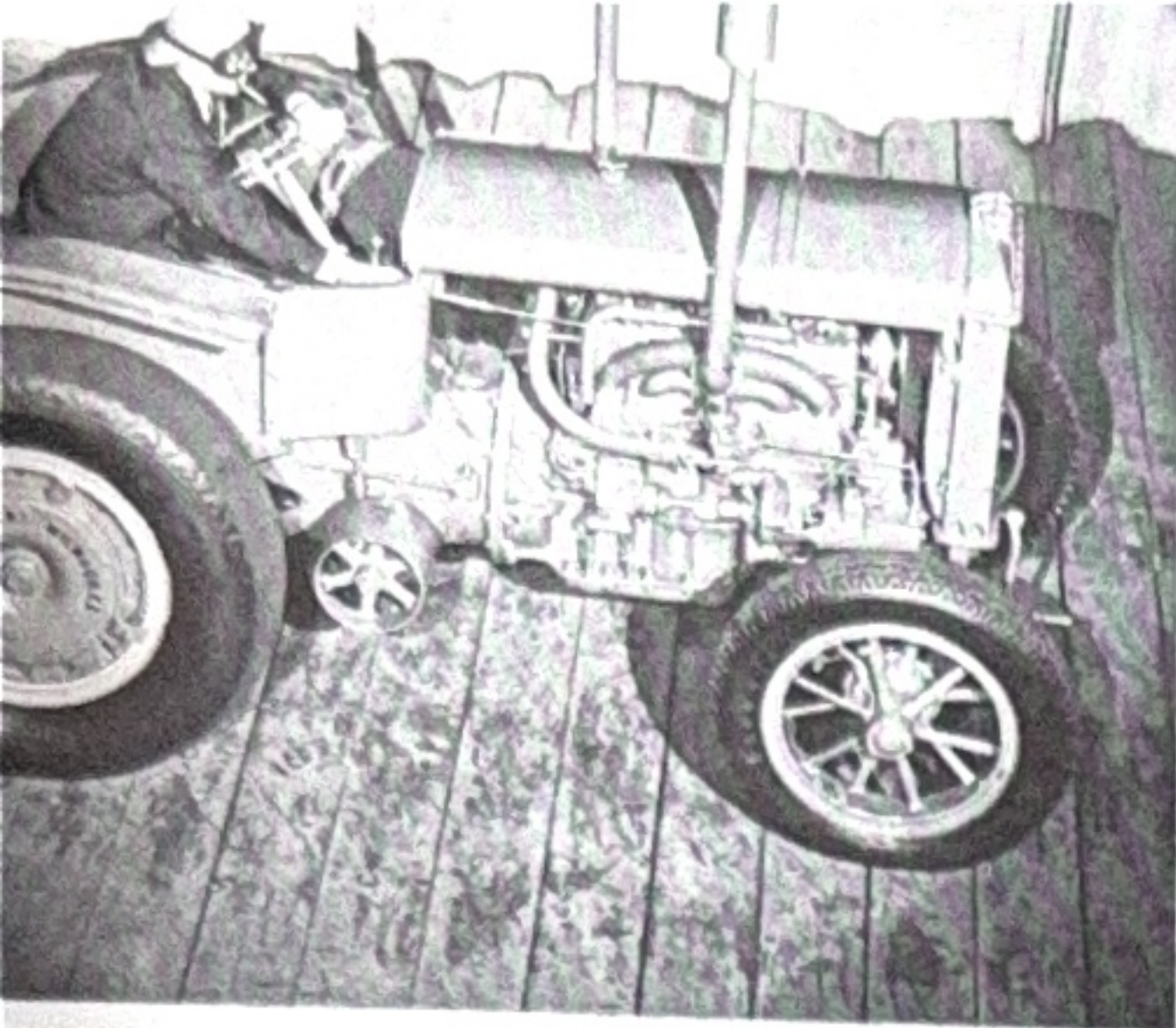
An Arizona dealer — "We had one farmer who had never been on a plane. We almost had to push him on when we departed from Phoenix. But since arriving home, all he can talk about when he is able to collar a listener is all about what a wonderful trip he had. In fact, all your guests from our dealership are walking ambassadors for Allis-Chalmers equipment. This was the best advertising I have ever seen."

A Montana farmer — "I assure you I will confidently recommend Allis-Chalmers to anyone interested in purchasing a new tractor of any size. They

They came by the thousands to Allis-Chalmers "Land of Power" — cotton growers, cattlemen, grain farmers — and what they saw greatly impressed them. They are broadcasting their impressions to friends and neighbors back home.



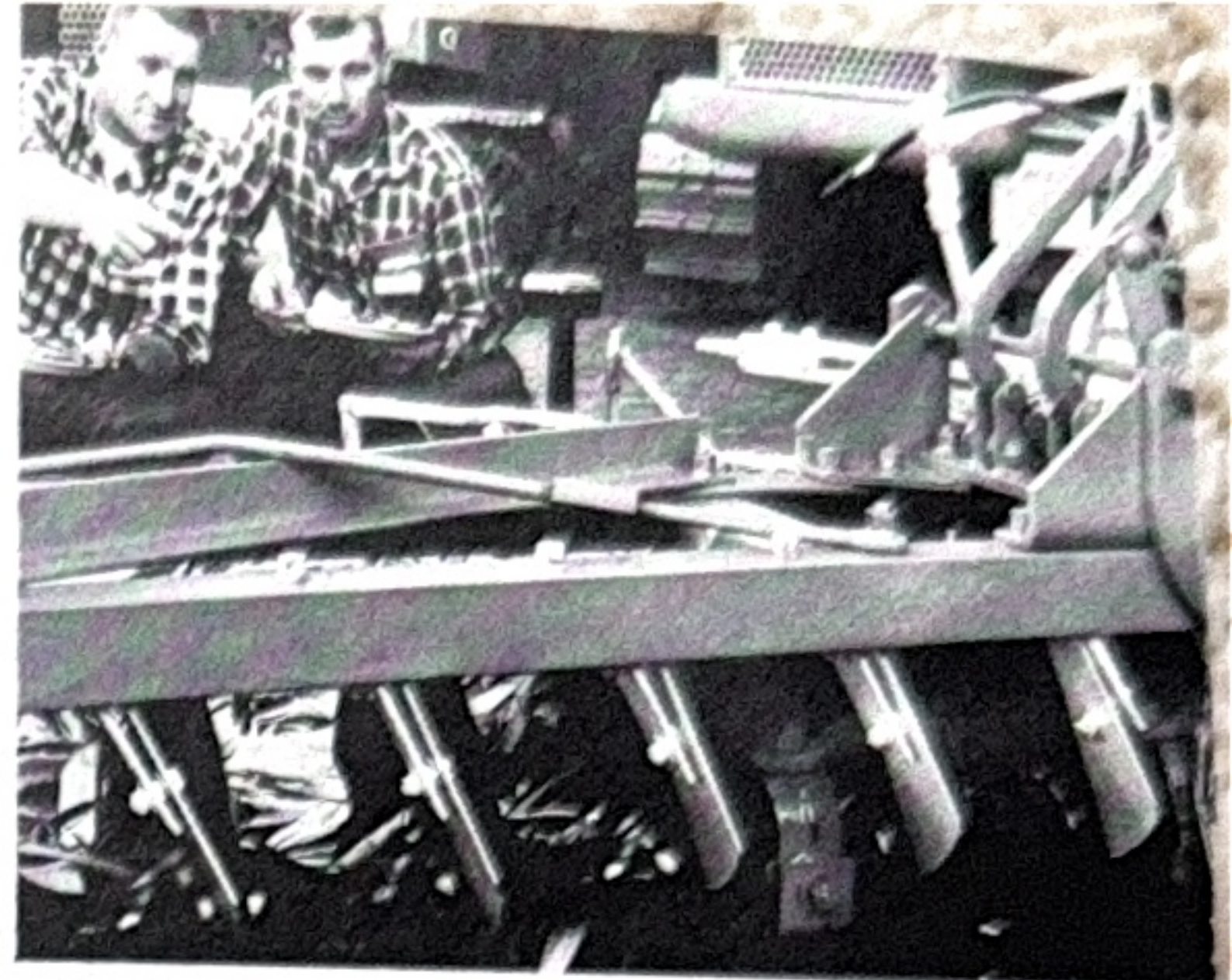




Bert Eldien, Farm Equipment Division, portrayed the famous race driver, Barney Oldfield, during a farm industry pageant which the audience thoroughly enjoyed. Oldfield, in the '30s, helped popularize our rubber-tired tractors.



Three Missouri farm boys are shown how engines are tested at the Harvey Works. Listening to Owen J. Higgins, general manager, are (from left) Dwight Thornton, 18, Fisk, Mo.; his brother, Glen, 16, and Paul Varner, 15, Broseley, Mo.



Leonard (left) and Donald Cassens from Anthon, Iowa, enjoy a meal as they look at a disc harrow made at our LaCrosse Works. The 7,000 ranchers, farmers and dealers toured both the Tractor and Industries Group Shops at West Allis.

can't go wrong with Allis-Chalmers. I feel they have an excellent future."

An Ontario, Canada, farmer — "This is an experience of a lifetime. We are not only learning how industry functions, but are having a good time in the process."

An Ohio farmer — "Thank you again for the tour of your plants, but most of all for the fine, dependable, low cost equipment that we can continue to expect from Allis-Chalmers."

An Illinois farmer — "I hope you have us as your guests again in about five years. I might buy two tractors so I could take my wife."

A North Carolina farmer — "After

that tour I realize and appreciate now what I've got."

Through the "Land of Power," Allis-Chalmers gained thousands of enthusiastic new salesmen. Because of the general impression of Allis-Chalmers people and their capabilities, the same men who bought tractors last fall may be customers for our farm implements this spring and harvesting equipment this summer.

Gigantic was the word for "Land of Power." The matter of transporting the guests to Milwaukee and Harvey, Ill. was a major exercise in logistics itself.

One hundred and one United Airlines planes picked up approximately

7000 guests from 62 cities serving as staging areas — the biggest airlift in civilian aviation history.

Said Davis: "The promotion has more than lived up to its profit expectations."

Additional dollars and cents benefits became apparent even before the program came to an end. One farm equipment salesman reported that a customer, after returning from the trip, almost immediately gave his dealer an order for \$26,000 worth of equipment.

Another dealer reported — "One of our customers brought his brother in a couple of days ago from 30 miles away and now we just about have a deal closed with him."

## 'world of power' is hit of road show

The Road Show's doors had barely closed when the telephone call came in to West Allis from an Allis-Chalmers construction machinery dealer in Missouri.

Three of the dealer's customers who attended the show had ordered 11 motor scrapers. More than a half-million dollars in sales.

For Allis-Chalmers, the Road Show — a world's fair of construction equipment — was already paying dividends.

Held in Chicago's immense International amphitheater, the Road Show was the first since 1957. Exhibits by more than 200 manufacturers attracted some 80,000 visitors — contractors, engineers, public works officials, dealers and other interested people who came to see the best these manufacturers had to offer.

Many made this comment: "The Allis-Chalmers exhibit took the show."

We had the equipment to exhibit! It



80,000 people from all parts of the world visited the Road Show in Chicago's amphitheater Feb. 23-March 1. The hit of the show was Allis-Chalmers "World of Power" exhibit. Thousands came "to the fountain," which was surrounded by 29 pieces of our construction machinery and engines.

outdrew everything else in the place.

Spread over more than a half acre were 29 pieces of the latest Allis-Chalmers construction machinery and engines, plus *Hydrocone* crusher, *Ripl-Flo* screen and several other industrial equipment exhibits. They gave our guests an eyeful, and our salesmen gave them an earful.

"We got them to come to the show, we got them to our exhibit, we got them to listen, and we got them to remember," said Arthur Thode, construction machinery advertising manager.

Thode could have added, "We got them to buy," for sales began materializing in the amphitheater itself.

Some dealers organized visiting groups



## 'world of power'

of 100 or more. One brought along 200 customers. Our dealers were able to show their customers such industry-leading equipment as the new HD-41, the world's largest and most powerful crawler tractor.

It is estimated that more than 200 visitors, each hour of the week-long exhibition, climbed the staircase over this 770-hp 54-ton giant, inspecting it and asking questions.

In fact, the customer response to the entire Allis-Chalmers exhibit was so good that our sales people often abandoned their schedules and worked straight through.

The HD-41 is a prototype, non-production unit as yet. Despite its size, it is almost as easy to drive as the family car.

Another "world's largest" was the "555," a 150,000-pound rubber-tired bulldozer powered by 870 horses. Its four tires make those on the family car look like doughnuts.

Nearly 2,000 visitors took special tours to one of three Allis-Chalmers plants. Most went to nearby Harvey Works to see how we build the engines which power the construction equipment, and also to learn how we build lift trucks. Others toured the Springfield plant, home of the HD-41 and other crawler tractors and motor graders on display, or visited our rubber-tired tractor loader and dozer plant at Deerfield.

Here they saw the care and quality workmanship similar to that observed by our farm customers a few months before at West Allis and Harvey during the "Land of Power."

Said Boyd S. Oberlink, senior vice president who heads our Tractor Group, "We were well pleased with the 'Land of Power' last December. We are hopeful our 'World of Power' show in Chi-



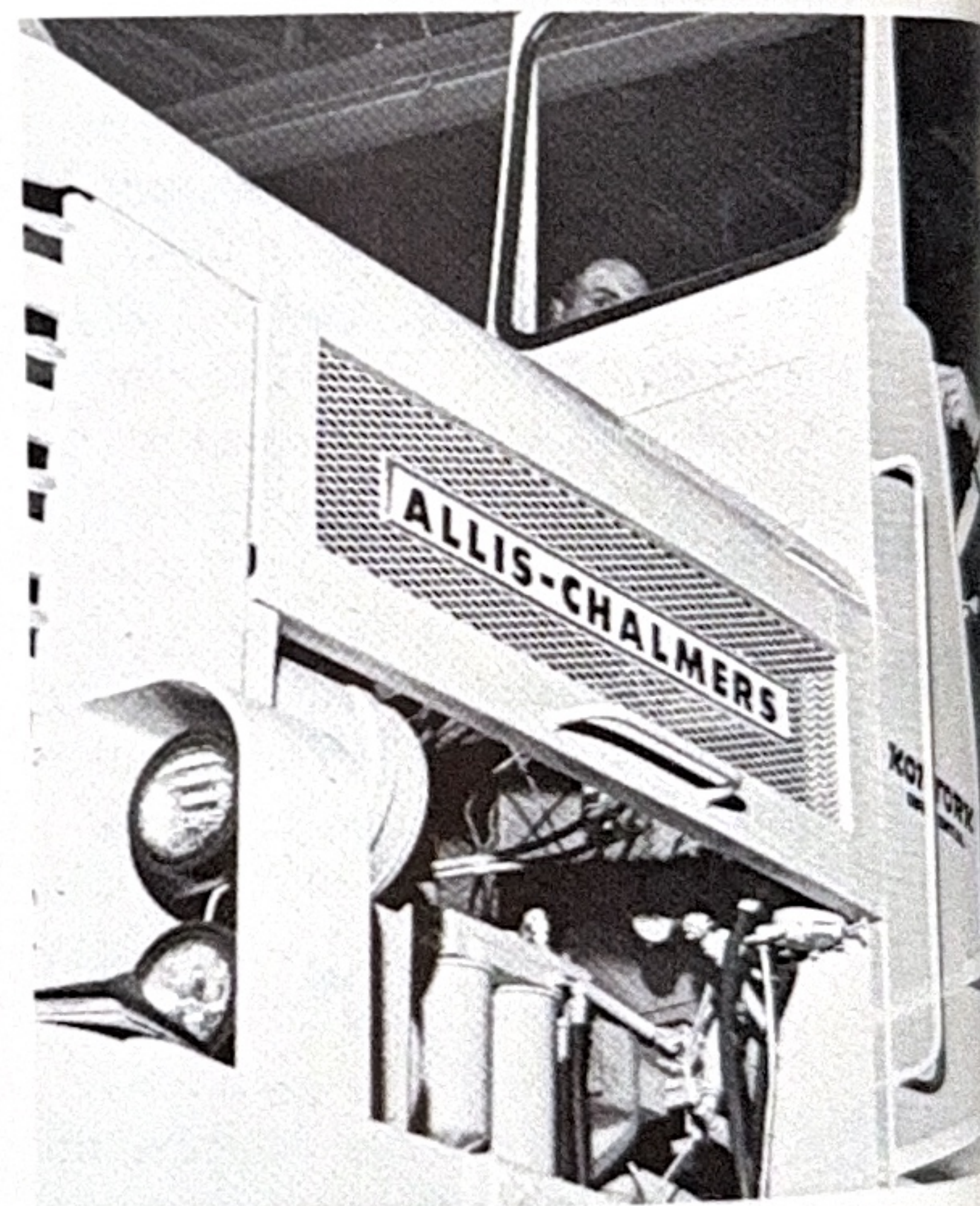
More than 200 visitors an hour inspected the HD-41, world's largest, most powerful crawler tractor. The machine has a 300-gallon fuel tank — bigger than the average home furnace fuel tank.

cago will produce the same fine results.

"The Road Show gave us the opportunity to display our equipment right alongside that of our toughest competitors. Our customers and prospective customers had the chance to compare right on the spot, and they learned our equipment thrives on comparison.

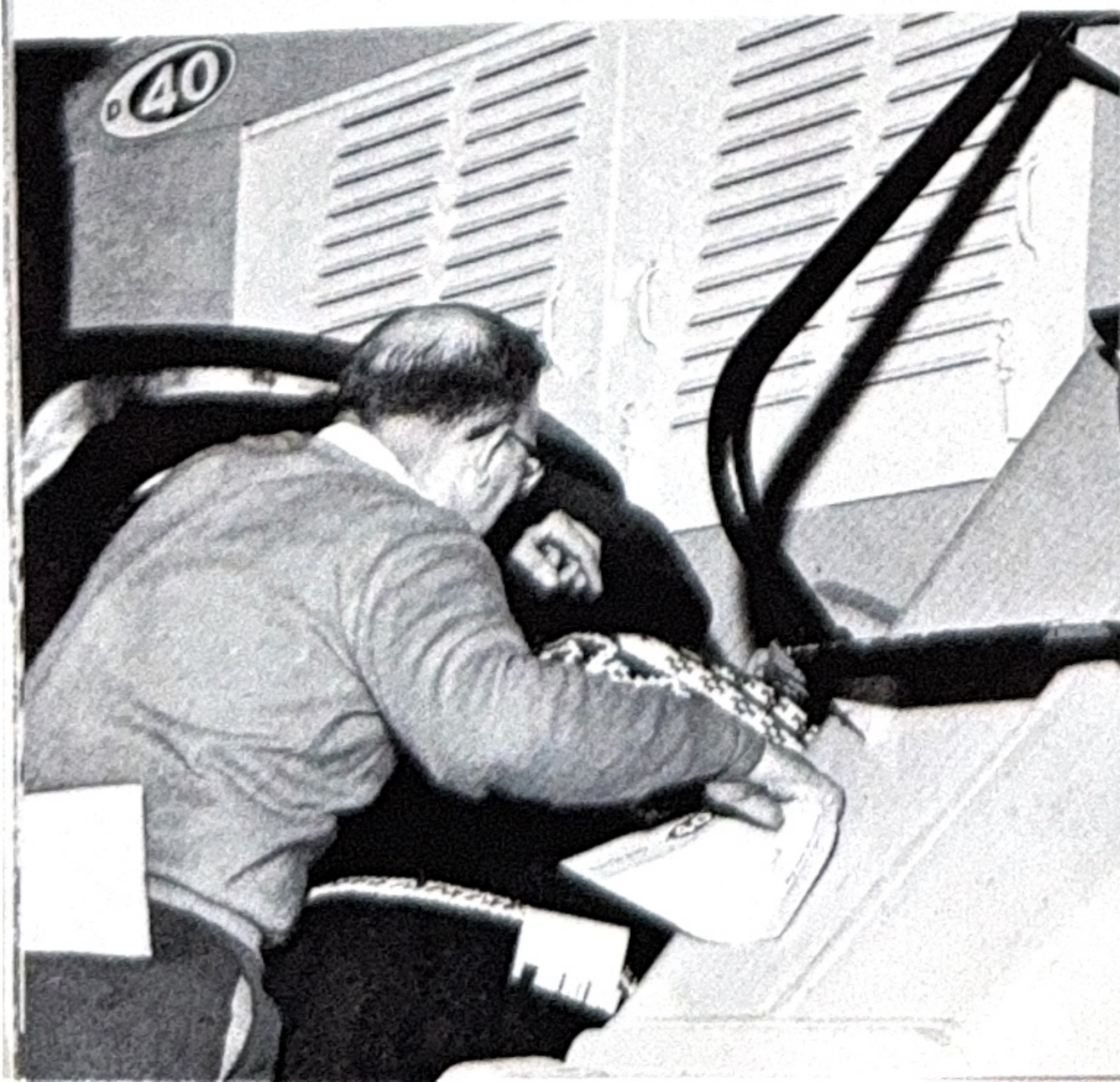
"From all reports, our exhibit made a tremendous impression on these people, the kind of impression we intend to continue to make on them.

"The Road Show is only a start. To really benefit Allis-Chalmers people, this show must have a long-term effect on our customers. It will if we continue to give them the best that's in us — as manufacturers, as salesmen."



Getting the feel of the 562 motor scraper is John Kolinchak Jr., Brookfield Center, Conn.

Visitors looked at every nut and bolt. Giving a TL-40 tractor loader a close look are Clyde McKichan, Pat Henningson, Waunakee, Wis.



Orv Olson of the Construction Machinery sales force discusses crawler tractors with a Road Show visitor. The visitors came to learn.



Another favorite was Allis-Chalmers "555" rubber-tired bulldozer. This giant boasts 870 horsepower. This unit is 38 feet long.





## "Sell" sales show zip!

Employees who make the "Sell Allis-Chalmers" program click play no favorites.

The latest batch of reports reveals the sale of motors, controls, tractors, implements and lift trucks. In each case, the employe works at a plant making products other than those he helped sell.

But this is the way it has been throughout the first year of the "Sell" program. A Springfield Works (construction machinery plant) purchasing agent helps sell motors, switchgear, transformers. A LaPorte (farm equipment) lab mechanic triggers an order for a lift truck. A Boston Works (circuit breakers) engineer sparks the sale of motors and starters.

The program has caught the fancy of our professional sales people and stockholders, as well as employes at our works.

Programs with a "Sell Allis-Chalmers" theme have been presented in the field to Industries Group distributors and Tractor Group dealers. The "Sell" emblem appears on company inter-office stationery and in its publications.

Actual sales during the abbreviated first year (the program got underway last spring) have been far outnumbered, of course, by the volume of referral cards submitted, a better indicator of employe participation.

For 1963, hopes are high for an even greater degree of participation.

Here are details on the sales that wound up the past year:



ELMER GIZNIK

*Elmer Giznik, cost accounting, Deerfield Works* — Three lift trucks were purchased by a Chicago company after a casual conversation between Elmer and his brother, a purchasing agent for the firm.

The brother mentioned that he was about to place an order for three lift trucks and already had a competitor's product in mind. He expressed surprise when Elmer told him about Allis-Chalmers lift trucks.

He promised to give the Allis-Chalmers dealer a chance to submit a bid and did so the next day. Result: a \$21,000 order for Allis-Chalmers equipment — all because one employe said a few words about his Company and one of its products!



W. I. HAMILTON

*W. I. Hamilton, assistant manager, engine engineering, Harvey Works* — \$10,535 worth of Norwood motors and West Allis controls were sold to a New York firm after Hamilton encouraged his brother, an engineer with the firm, to consider A-C products.

The New York District Office salesman who handled the order said he was very grateful for Hamilton's assistance.



JIM MARTIN

*Jim Martin, production scheduling clerk, Norwood Works* — Due primarily to Jim, the Northbrook Civic Association purchased a utility tractor for maintenance of the community's diamonds and recreation area. He has been active in the association for four years.

Whenever the subject of purchasing maintenance equipment arose, Jim never let the association forget that Allis-Chalmers made a fine tractor.



LEORA CLOUSE

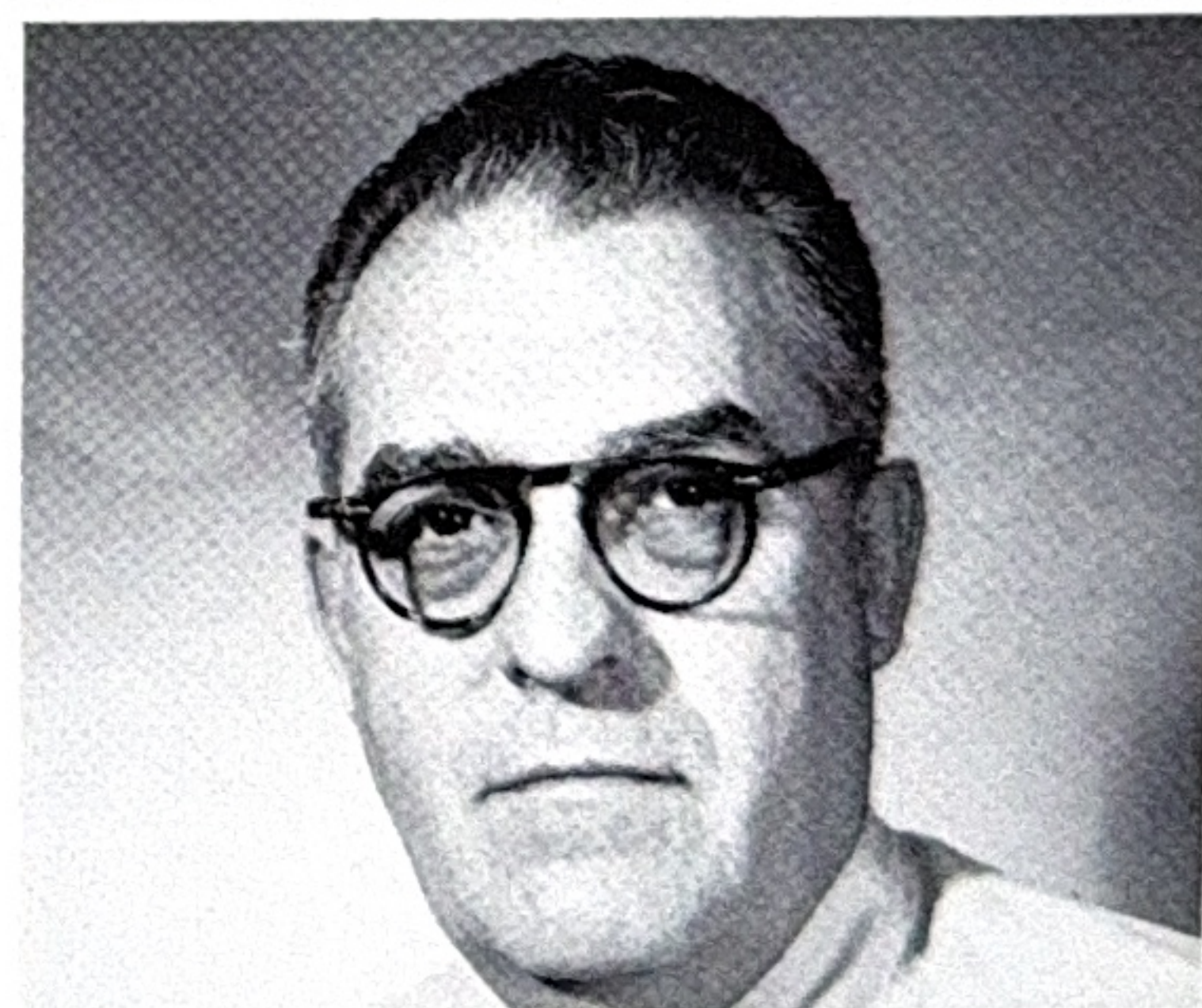
*Mrs. Leora Clouse, material control, Cedar Rapids Works* — Leora got "two for two" when the two employe sales referral cards she turned in resulted in the sale of two B-1 lawn and garden tractors. One was sold in Urbana, Iowa, and the other in Springfield, Iowa.



HAROLD FISHER

*Harold Fisher, crane operator, Cedar Rapids Works* — Harold's brother, Virgil, is a farmer. When Harold learned that Virgil was thinking about buying a new tractor he sent in an employe referral card. He also urged his brother to buy A-C right away so Virgil could get in on the air-lift to Milwaukee.

Virgil purchased a D-17 and a cultivator, made the Land of Power trip, and had a "wonderful time."



EDWARD BEARD

*Edward L. Beard, accounting coordinator, Norwood Works* — A friend of Ed's is a terminal manager for a Cincinnati carloading and distributing firm. When the friend mentioned that his firm was in the market for a new lift truck, Ed asked his permission to turn him in as a prospect. He said "fine," but thought we only sold motors and pumps.

A-C got the order — approximately \$5,700.



# a-c scope

ALLIS-CHALMERS MFG. CO.

Box 512  
Milwaukee, Wis.

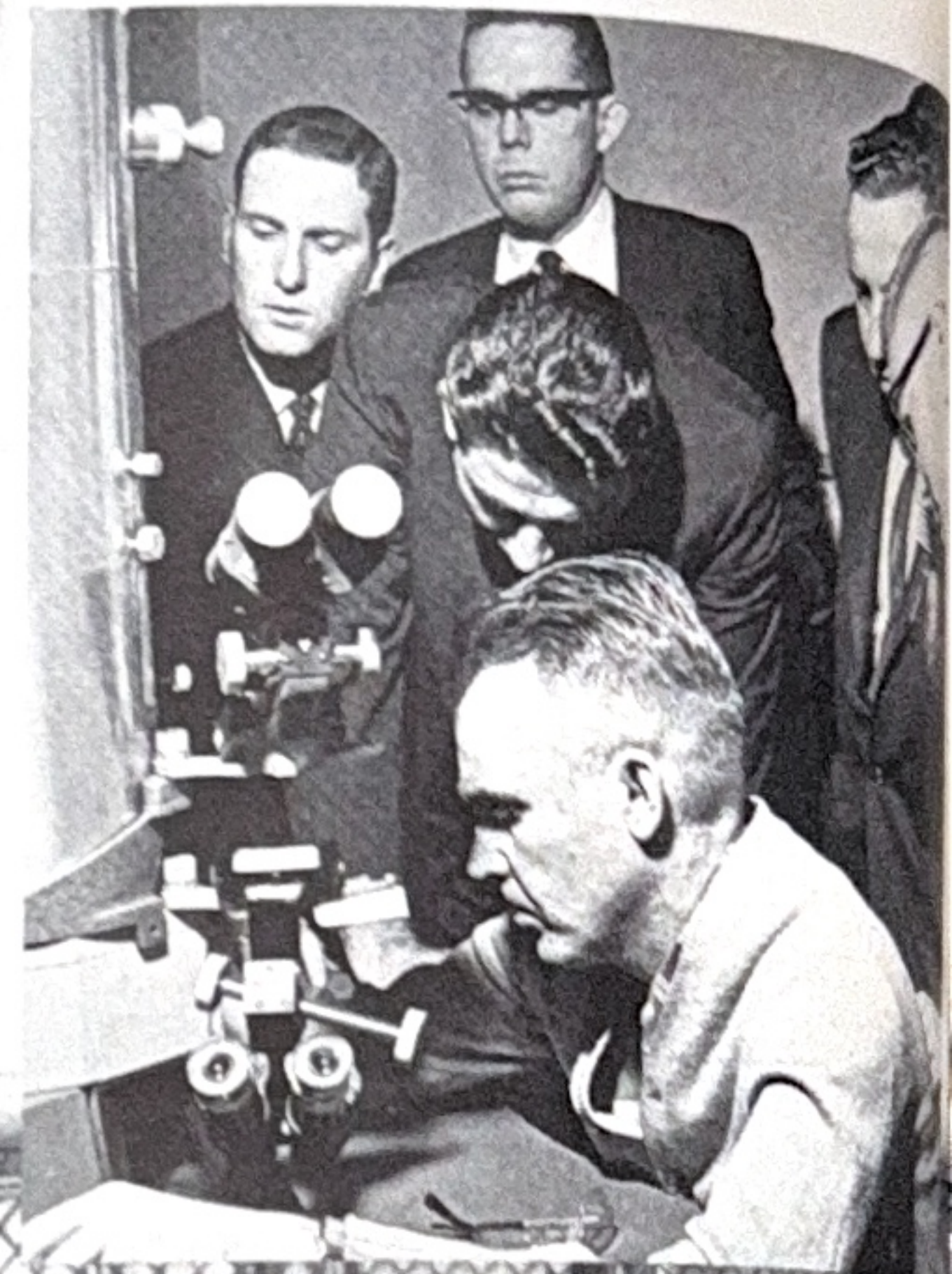
State Historical Society  
Newspaper Section  
816 State Street  
Madison 6, Wisconsin

Their sales excellence during 1962 brought honors recently to 20 "Master Salesmen" of the Industries Group and the "Top Twenty" blockmen (salesmen) of the Farm Equipment Division.

Blockmen (below) and Industries Group salesmen (right) toured the West Allis Works and offices during their visit to the home office.

The Farm Equipment blockmen honored are: Charles R. Farmer, Kenneth Mattson, Paul Gehrke, Peoria; R. M. Thrush, Rockford; Joseph Faino, Des Moines; R. R. Needham, Charlotte; Halford Swearingen, Columbus; M. W. Gardner, Richmond; C. W. Tredinnick, Lansing; J. P. Martin, Harrisburg; G. W. Long, Willis; Cordell, Indianapolis; Richard E. Cherry, Nashville; Oren Dahl, James Hannah, Memphis; Pleasant R. Smith, D. H. Tully, St. Louis; W. K. Morrison, F. E. Carlton, Los Angeles; Roy L. Belair, Calgary.

Master Salesmen: D. C. Aker, J. A. Cantelmo, New York; A. C. Christen, Newark; G. E. Argo, A. L. Morningstar, Youngstown; H. J. Hervey, Cincinnati; P. P. Kimball, Oklahoma City; J. R. Mills, Beaumont; E. R. Glazier, Denver; R. E. Russell, Atlanta; A. I. Richardson, Charlotte; B. F. Campbell, Baltimore; A. G. Wetzal, Philadelphia; J. P. Curtis, Indianapolis; J. D. Vincent, Memphis; W. G. Honsaker, Los Angeles; D. S. Clasen, San Francisco; H. L. Gruehn, J. L. Wenning, Appleton; D. P. Daniels, Milwaukee.



**LEFT** — Deerfield Works employees got better acquainted with the latest models of tractor loaders they are making, and with the markets they serve, at an "introductory party" held Feb. 1 at the plant. Speakers included John Carlson, general manager, Construction Machinery Division, and a vice president, and division sales representatives. Stressed was product quality, reliability, saleability, profitability.

**RIGHT** — For his contributions to the art of manufacturing and testing of transformers, a Pittsburgh Works engineer has been made a Fellow in the Institute of Electrical and Electronic Engineers. He is Milan Peter Getting, Jr. Of 127,000 IEEE members world-wide, 99 have received this honor.

