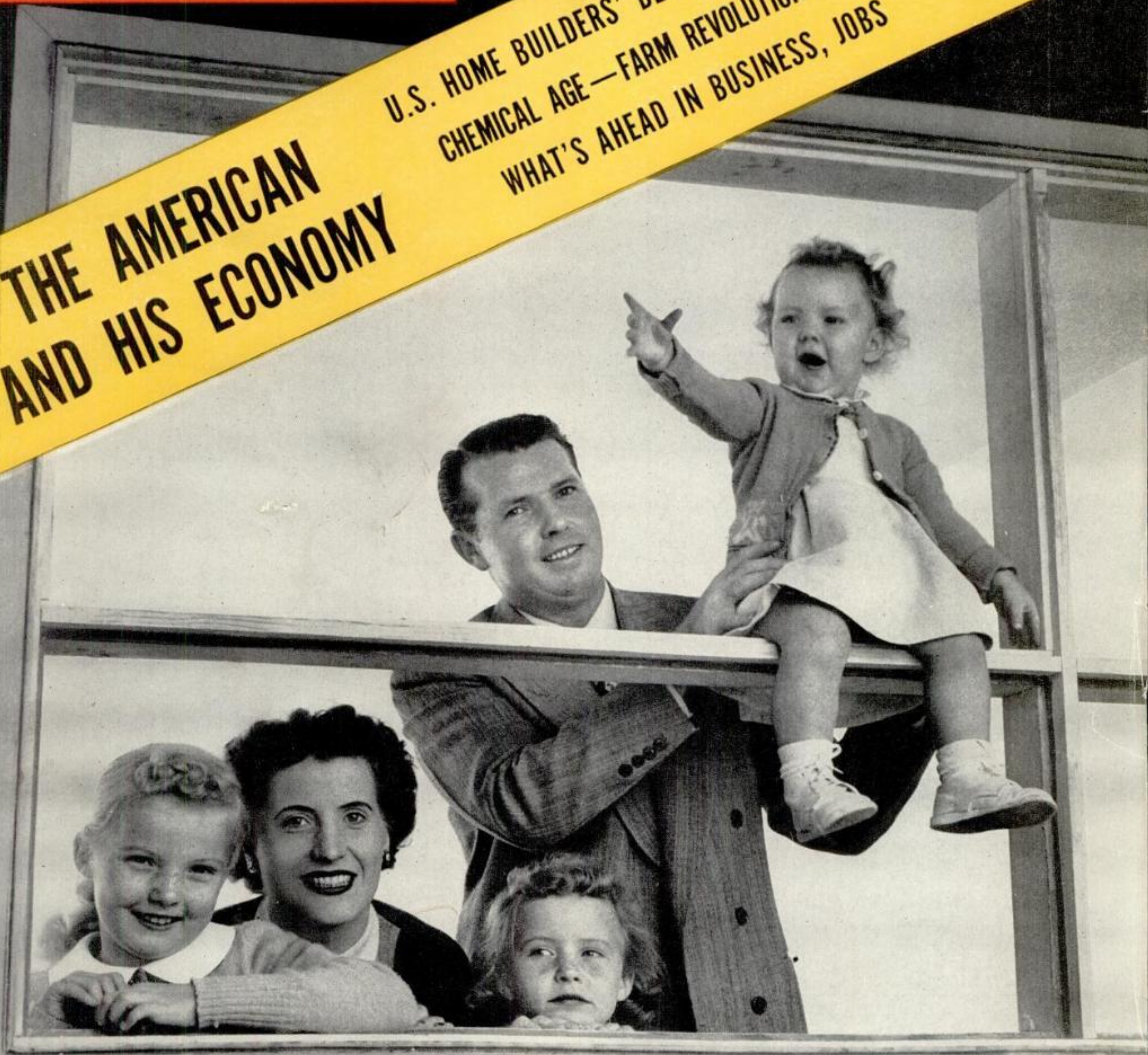


LIFE

**SPECIAL
ISSUE**

THE AMERICAN AND HIS ECONOMY

U.S. HOME BUILDERS' BEST BUY—
CHEMICAL AGE—FARM REVOLUTION—
WHAT'S AHEAD IN BUSINESS, JOBS



FAMILY BUYS 'BEST \$15,000 HOUSE'

20 CENTS

JANUARY 5, 1953



Beautifully clean-cut modern chest in blond oak; large drawer in the base. Model #2852. Also in White Fawn mahogany, model #2853; in Cordovan mahogany, model #2856. (Modern table, #145, also by Lane.) Chest price. **\$79⁹⁵***

What a thrifty way to start the New Year!

Invest your Christmas money in a beautiful Lane Cedar Chest!

Now, when your heart is full of hopes and plans for the bright new year ahead . . . what a perfect time to get your Lane Cedar Chest!

Can you imagine happier planning than the kind that goes with a Lane . . . as you gather lovely things for your home or your trousseau, knowing that they'll stay tissue-paper fresh, sparkling new.

Can you think of a more *practical* way to invest

a Christmas check than to buy the gift that offers such wonderful protection for all your nicest things! For a Lane guards your precious woolen suits, dresses, sweaters, keeps them sweet-smelling and new—safe from moths and dust—as no other storage method can.

ALSO MAKERS OF LANE TABLES

Lane is the **ONLY** pressure-tested, aroma-tight cedar chest. Made of $\frac{3}{4}$ -inch red cedar in accordance with U. S. Government recommendations, with a moth-protection guarantee underwritten by one of the world's largest insurance companies, upon proper application. The Lane Company, Inc., Dept. L., Alta Vista, Va. In Canada: Knechtels, Ltd., Hanover, Ont.

Many Lane Chests at...

\$49⁹⁵*

Easy terms

LANE CEDAR CHESTS

© 1953, The Lane Company, Inc.

*\$5.00 higher in the West due to higher freight costs—slightly higher in Canada.



LIVING ROOM

18th Century Drawer Chest in rich mahogany. Drawer in base, simulated drawers above. Model #2221—\$79.95.*



BEDROOM

Decorative modern in figured Avodire, a honey-blond wood of unusual beauty. Automatic tray. Model #2700—\$69.95.*



LIVING ROOM

Adaptable modern in blond oak. Self-lifting tray. Model #2857. In White Fawn mahogany, #2862; walnut, #2873. \$49.95.*



BEDROOM

Unusual modern chest in handsomely grained walnut. Lane's patented self-lifting tray. Model #2877—\$59.95.*



FOYER

Stunning modern in blond oak. Automatic self-lifting tray. Model #2782—\$59.95.* In White Fawn mahogany, #2863.



BEDROOM

Smart modern in walnut, superbly streamlined. Lane's patented self-lifting tray. Model #2875—\$49.95.*



LIVING ROOM

Handsome 18th Century Chest in rich mahogany. Patented self-lifting tray. Model #2601—\$59.95.*



FOYER

Attractive modern in rich walnut. Self-lifting tray. Model #2874. Same design in gray walnut. #2869. Each, \$59.95.*

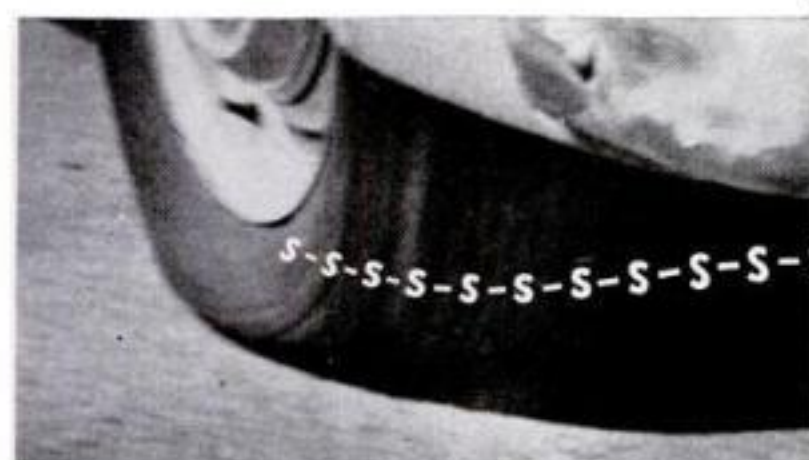
B.F. Goodrich Tubeless Tire

**gives blowout and puncture safety so revolutionary
it's patented; DEFIES SKIDS TOO!**

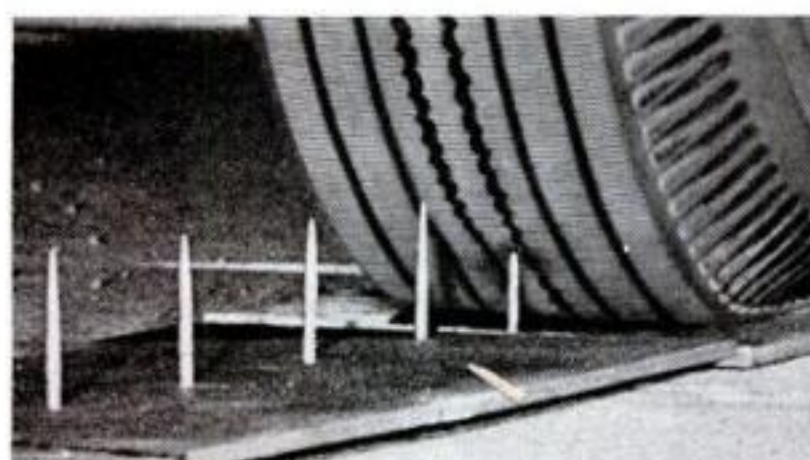


WITH BRAKES APPLIED AT THE SAME INSTANT, dark car on right, equipped with BFG "Life-Saver" Tubeless Tire, stops a car length sooner than light car (left) on regular tires, in demonstration at 30 MPH on wet road. The "Life-Saver" has a new kind of tread with over 10,000 flexible grip-blocks—16 to the inch—that grip like a caterpillar tread to

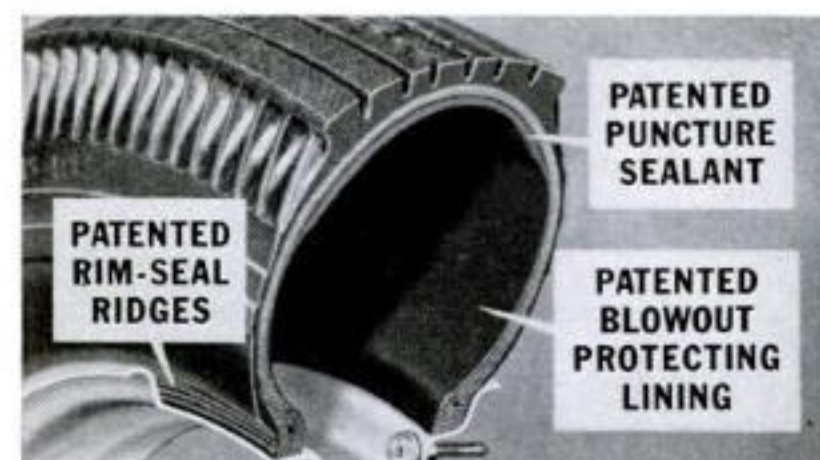
stop you quick, start you fast. It stops up to 20% quicker in rain than regular tires, up to 15% quicker on snow and up to 30% quicker on ice. Pulling power is up to 40% greater in rain, up to 25% greater on snow, up to 114% greater on ice. Because the grip-blocks have a "walking" action that reduces scuffing, average mileage is 10% to 15% greater.



BECAUSE THERE'S NO TUBE to be pinched by a bruise-break in the tire wall, the "Life-Saver" changes blowouts to safe *s-s-s-slowouts*! In case of damage, air is squeezed out slowly, instead of all at once, through a special lining that takes the place of an inner tube. You have time to stop safely.



EVEN WHEN DRIVEN OVER SPIKES like these, the BFG "Life-Saver" Tubeless Tire loses no air. A gummy compound under the tread seals around puncturing objects, permanently plugs the hole when object is removed. You can pick up nails and drive on as if nothing had happened.



PATENTS COVERING BASIC features of Tubeless Tires have been issued to B. F. Goodrich by the U. S. Patent Office. See your BFG retailer *now* for the tire that *may save your life, can save you trouble, will save you money*. Look for his address in the phone book Yellow Pages. The B. F. Goodrich Company, Akron, Ohio.

The tire that earned its name LIFE-SAVER®





TOP MODELS, shown with the artists and photographers who have done most to make them famous, fall into three categories labeled by the trade: "pin-up," "hard goods" and "paper doll." Annlee Danels at top, left, is a pin-up who poses for items like underwear. The next four are hard-goods girls who sell almost anything but underwear and fashions and who must be pretty and wholesome and not too obtrusive. They are Jane Cartwright (with broom), who appeared on LIFE's cover (Jan. 12, 1948) when she was working as a paper doll,

Leila Hyers (in swing), Connie Joannes (in wrapper) and Alice Wallace (with pan). The paper-doll group, which sticks to high fashion and glamour and is more apt to show up on magazine covers, is represented by Jean Patchett (peeping through fingers). The artists are Jon Whitcomb (left, with brush), and Steve Dohanos (right, at easel), famous both as magazine and advertisement illustrators—Dohanos has done 100 *Saturday Evening Post* covers. The photographers are Victor Keppler (left, with camera) and (right, at camera) Ruzzie Green.



PAT BURRAGE, WELL-KNOWN AS MISS RHEINGOLD 1950, WAS TOP MODEL OF 1952

SPEAKING OF PICTURES . . .

In a single year these faces and figures help to sell \$90 billion worth of goods

Back in the days when sex was spoken of behind cupped hands, American businessmen used pictures of a bull to sell tobacco, of horses to sell beer. But last year, when U.S. companies shelled out a record \$7 billion for advertising, they had lost most of their inhibitions and come to rely more and more heavily on the feminine face and figure. Whether selling cigarets or autos, businessmen have found that sex appeal is sales appeal.

The models shown here have the best selling faces and figures in the world. They are also the world's best paid models. They have been used more consistently than any others by the top 50 U.S. advertisers who in a single year have sold nearly \$90 billion in products with their help. What constitutes these girls' sales appeal is not just glamour or bosoms but the identification that housewives feel with them when deciding whether to buy a new broom or a new refrigerator. "Paper dolls," who do high fashion, and "pin-ups," who pose for underwear ads, make the most money, up to \$70 an hour. But the others, who are called "hard-goods girls" because they pose with merchandise like brooms and frying pans, sell the most products. Pat Burrage (*above*) who was 1952's top "hard-goods girl," proved her versatile appeal last year by posing with beer, soap, TV sets, mattresses, paints, china and gingersnaps.

This One



R3F9-SKP-ZYSL

The handiest thing in cotton

Red Cross* Cotton Balls



The ideal size for
applying baby lotion



... and for cleansing the diaper area

Dozens of other uses, too

- ★ applying liquid make-up
- ★ removing nail polish
- ★ applying antiseptics to cuts

Red Cross* Cotton Balls are the softest, whitest, most absorbent surgical cotton available.

100% Sterile! Made of famous Red Cross* Cotton—the cotton used in more homes than all other brands combined. Insist on Red Cross* Cotton Balls.



The most trusted name in surgical dressings...

Johnson & Johnson

*No connection whatever with American National Red Cross

FACES AND FIGURES CONTINUED



TOP AUTO MODELS who appear on television as well as in magazines are Detroiters Margaret Girardin (left) and Ardis Kenealy. Behind them are the cars they publicize: Lincoln, Plymouth, Chevrolet, Ford, Buick and Chrysler.



A **TOP CHICAGO MODEL** is Joyce Thoresen who sits a lot for Sunbeam appliances like toaster shown above. She also presides over Sunbeam equipment at events like National Housewares Show, gives away presents on TV.

BAD BREATH?



10¢

for a big roll at your candy counter

COUGH MISERY?



at your candy counter 10¢

F & F Cough Lozenges give quick relief from coughs due to colds. Really medicated. Soothes throat. Reduces irritation. Try the delicious New **CHERRY** flavor

SLEEP...



without Heartburn, Acid Indigestion

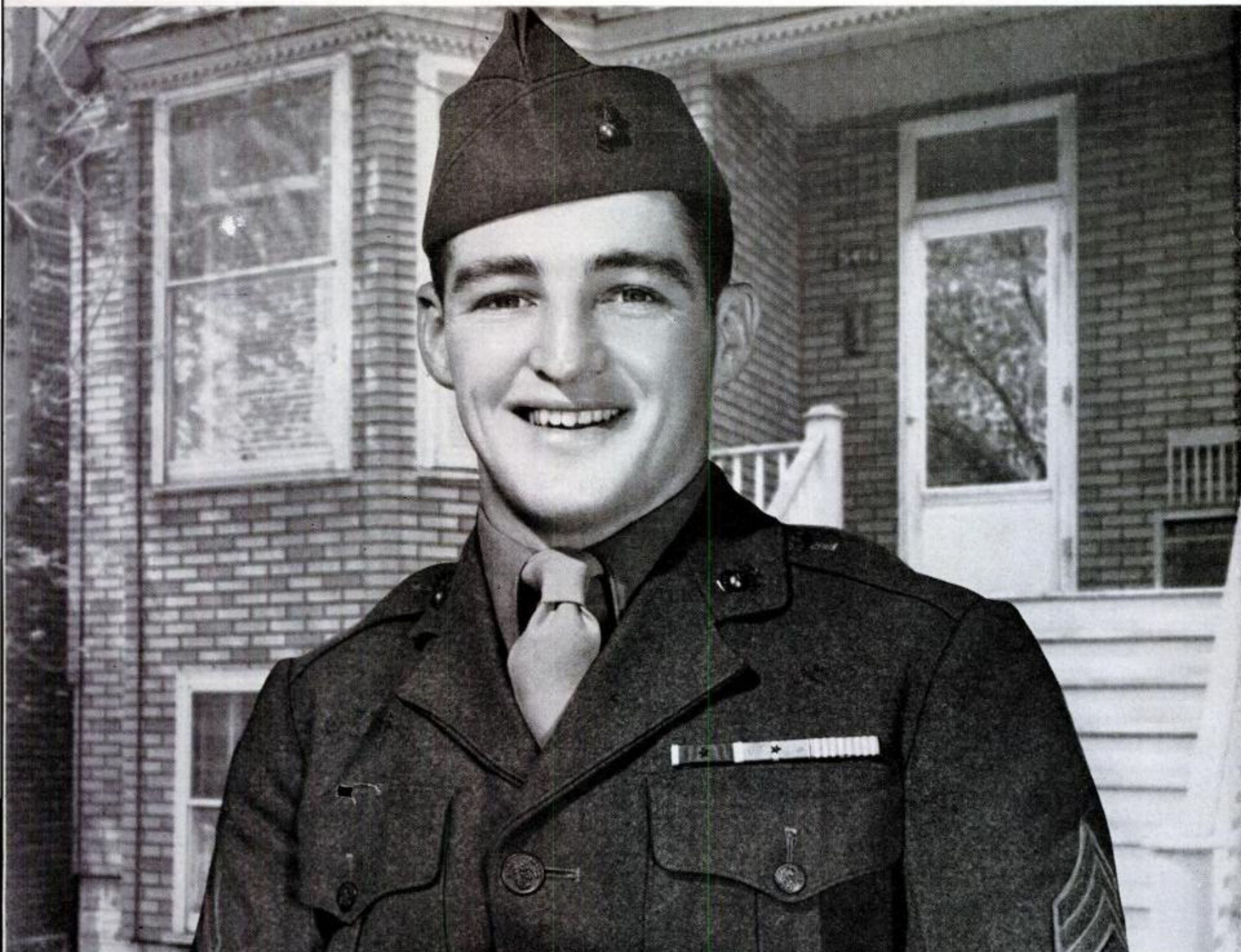
If acid indigestion keeps you awake, take TUMS. Almost instantly TUMS neutralize excess acids; soothe and sweeten your stomach. Then you'll sleep the sound, natural, restful sleep that follows TUMS. There's no acid rebound from TUMS to awaken you later.

• still only 10¢ a roll



**FOR THE
TUMMY**

GUARANTEED TO CONTAIN NO SODA



WELCOME HOME, SERGEANT!



A Telephone Family in Chicago. Sergeant Donald McIntyre got a real family welcome from his sister, Mary, a Service Representative; his mother, who was an Operator for seven years; and his brother, Angus, a Plant Assigner. Sergeant McIntyre's father was also a telephone man.

Sergeant Donald McIntyre, former telephone installer, returned home from Korea a few months ago. He served with the 1st Marine Division and was twice awarded the Purple Heart.

He was welcomed back to his telephone job, of course. But in a certain sense he had never been away. For his new pay check reflected the increases he would have received on his old job if he had not joined the Marines.

There are some 16,000 other Bell Telephone men and women now in the service who will receive a similar warm welcome on their return home.

BELL TELEPHONE SYSTEM . . . "A GOOD PLACE TO WORK"



LOVE that
RED HEART
 3 times more tempting
 because
 it comes in 3 flavors!



Give your dog variety in his food, just as you enjoy it in yours! Instead of a dog food with the same old flavor day after day, treat him to the variety of Red Heart's 3 delicious flavors: beef one day, fish the next, cheese the next. All the same fine food — just temptingly flavored 3 ways. A complete food — you need add nothing.

WITH CHLOROPHYLLIN OF COURSE
 to end doggy odors! Start now to let your dog enjoy Red Heart's EXTRA benefits every day. John Morrell & Co., Ottumwa, Iowa.

DON'T DELAY! GET IT TODAY!

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 OF HEADACHE
 NEURALGIA
 NEURITIS

FAST

The way
 thousands of
 physicians
 and dentists
 recommend



Here's Why...

Anacin® is like a doctor's prescription. That is, Anacin contains not one but a combination of medically proved active ingredients. Anacin is specially compounded to give FAST, LONG LASTING relief. Don't wait. Buy Anacin today.

INGROWN NAIL
 Hurting You?
 Immediate Relief!

A few drops of OUTGRO® bring blessed relief from tormenting pain of ingrown nail. OUTGRO toughens the skin underneath the nail, allows the nail to be cut and thus prevents further pain and discomfort. OUTGRO is available at all drug counters.



MISERABLE FEELING OF
STUFFY



Just a WHIFF does it!
NOSE

... anywhere ... any time this handy Vicks Inhaler makes cold-stuffed nose feel clearer in seconds. By makers of Vicks VapoRub.



Use as often as needed!

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HOUSE-BUYER, CHEMICAL MAGICIAN, BUSINESS STUDENT, TEACHING MOTHER, JOYFUL PAPERWORKER, HAIR-CREAM PITCHMAN ARE ALL VITAL TO ECONOMY

ABOUT OUR \$1,300,000,000,000 ECONOMY

All the zeros strung across this page add up to one trillion three hundred billion dollars. This, in January 1953, is what the U.S. is worth according to Raymond Goldsmith, a Washington economist. It means that the U.S. economy has reached a new high-water mark—more people are employed, more things are being made, more families are living better than before. This made a special issue almost inevitable.

Dr. Goldsmith accounts for his trillion dollars as follows:

Houses, factories and other structures—\$585 billion; producer durables (machine tools, railroads, other instruments of production)—\$150 billion; consumer durables (automobiles, appliances)—\$135 billion; nonfarm land (land in towns, national parks)—\$120 billion; inventories (things waiting around to be sold)—\$110 billion; military and naval supplies—\$90 billion; farmland—\$70 billion; our hoards of gold and silver—\$30 billion; our foreign investments—\$20 billion.

As this list shows, the economy takes in about everything you can think of—everything that ordinary Americans do in the way of work, having fun or just existing. Obviously one issue of Life cannot take in all of this so we didn't try. We have tried, though, to tell something about how the economy got so big and powerful (pp. 46 through 57) and also about where it is headed and how it's going to affect different people (pp. 86 through 92). And then we have tried to do something else: pick out a few of the newer trends which seem to be under way right now and look as if they are going to get bigger in the future. For instance, there seems to be a trend toward people getting more and more on a level with each other in what they earn. This is noticeable in another way, too: the greater spirit of give and take between

people who work and people who are bosses (pp. 84, 85). Of course the biggest thing that keeps growing and growing in the U.S. is our capacity to produce things, whether it is cows or celery (pp. 62 through 73) or more chemicals (pp. 29 through 39) or wads of cash (pp. 94 through 97). We are also producing a lot of houses (most of them way out in what used to be the country), so we are showing a new design, which seems to be the best buy in the new year.

Of course the real basis of the economy is all the people like those at the top of this page who do the day-to-day work and buy most of the products. There is a growing trend here, too, a trend toward a new kind of professional worker whose job is to manage the economy. Some of these people are in the government, more are working for corporations, and a lot of both kinds go to special professional schools like Harvard Business (pp. 43 through 45) to learn about their jobs.

All the boom spirit around the country does not mean that we have no problems. We've got a lot. The editors of FORTUNE even say that we may soon have something that looks almost like a mild recession and we've still got the problem which hits all of us (and puts a lot of our wives to work—pp. 74 through 76), the high cost of living. But the one thing we can all count on is that we seem to have a good system for making hard work worthwhile for anybody who wants to try it. The best thing we have to report about our economy is that every kid who starts to work is pretty sure to be making a lot more money five years after he first punches the time clock. This is pretty amazing and most of us don't realize that there is no other country in the world where so many people can be so sure of that simple fact.

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LIFE

Vol. 34, No. 1

January 5, 1953



IN MIDWEST CITY, OKLA., W. P. ATKINSON HOUSE, WORKMAN SWINGS HIMSELF TO CENTER OF PRECUT, PREBOLTED ROOF TRUSSES TO NAIL PEAK IN PLACE

\$15,000 'TRADE SECRETS' HOUSE

What the country needed right after the last war was houses—millions of them. In the world's biggest building splurge, American builders provided homes at the rate—since 1948—of a million a year. Today the country still needs houses. But the desperate urgency has gone and with it the willingness of buyers to take anything they can get. They no longer will accept inconveniently designed houses, cramped in bedroom, kitchen, storage space.

Now what most home-seekers want is a reasonably priced house combining features that come only in houses they have not been able

to afford. This is the kind of house LIFE shows for the first time in this special issue. It is the product of a series of extraordinary conferences in which leaders of the highly competitive building industry pooled their trade secrets and, as a major result, planned the best housing buy in the U.S. today—a good-looking, skillfully engineered \$15,000 house.

The creators of the house are members of the National Association of Home Builders. Two things made their project possible. One was the willingness to share jealously held secrets. The other was the enormous change

in housebuilding in the past seven years—the change from a craft, which worked inefficiently, to an industrialized business in which mass builders can apply the techniques of the assembly line. The "trade secrets" house has 1,340 square feet of living space, 3 bedrooms, 1½ baths, a big fireplace, a flexible, open-floor plan. It can be put up by any mass builder almost anywhere in the country for \$15,000, exclusive of land. Already it is being constructed by 23 builders in 14 states and before long may be built in more places in the U.S. than any house in history, including the wigwam.



MAIN LIVING SECTIONS of the house, behind a bank of windows, face away from the street onto a terrace and backyard which is screened by a redwood fence. Two sections of the window slide open to provide access to terrace. Red

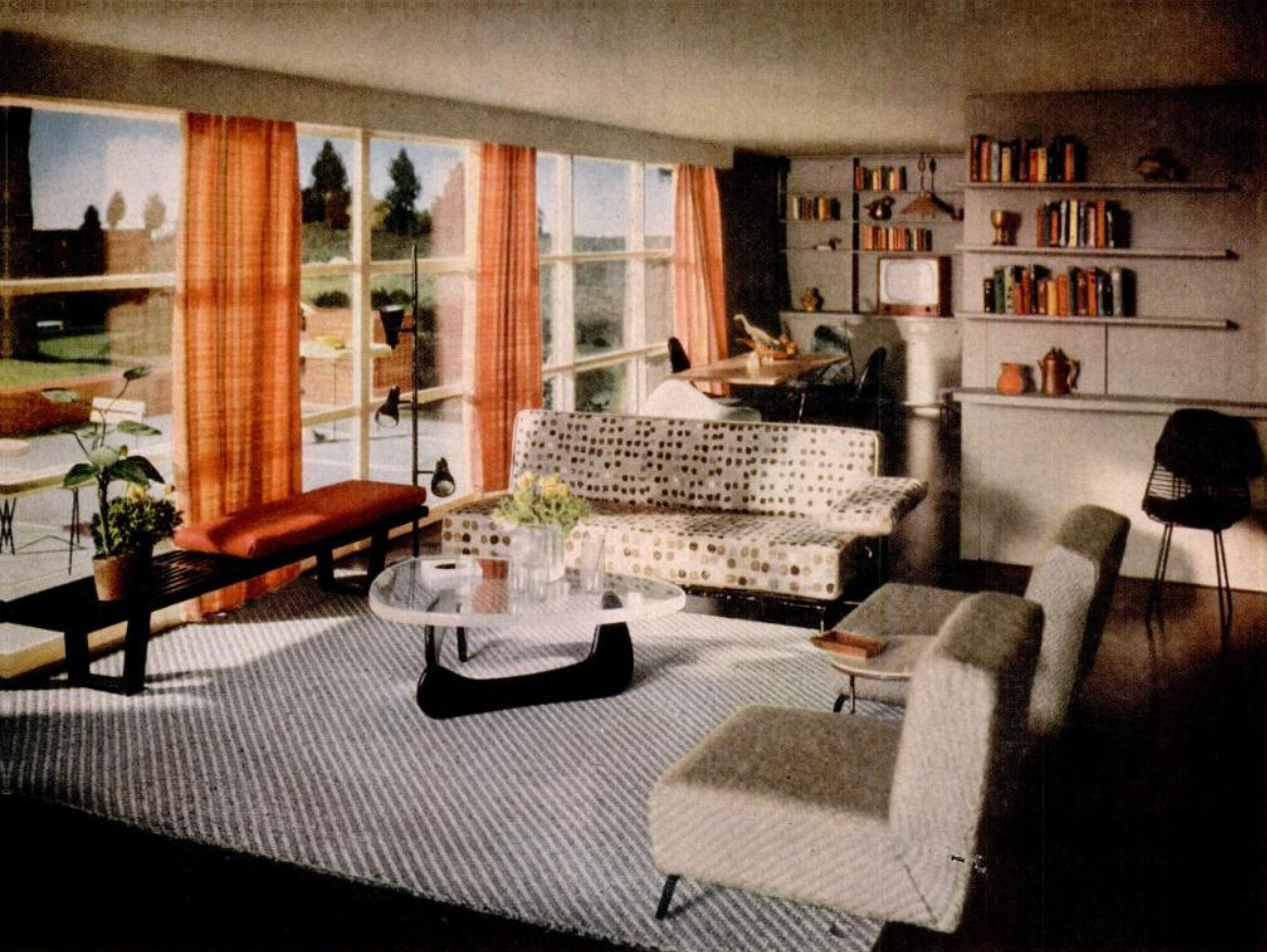
brick outdoor fireplace and low red brick wall match the brick chimney. Roof overhang and the chimney wall which extends past the house shade the windows. These color pictures are photographs of a real model of the house 9½ inches high.



ENTRANCE VIEW shows side of house facing street. Siding is redwood; roof is white marble chips. Roof overhang makes sheltered path to front door, which opens on entrance hall. Family entrance leads from carport to kitchen; just

inside is mud closet for wet and muddy clothes. A small garden covered by an open roof and enclosed by a louvered redwood fence shields master bedroom and children's room from street. Both rooms have glass doors leading to garden.

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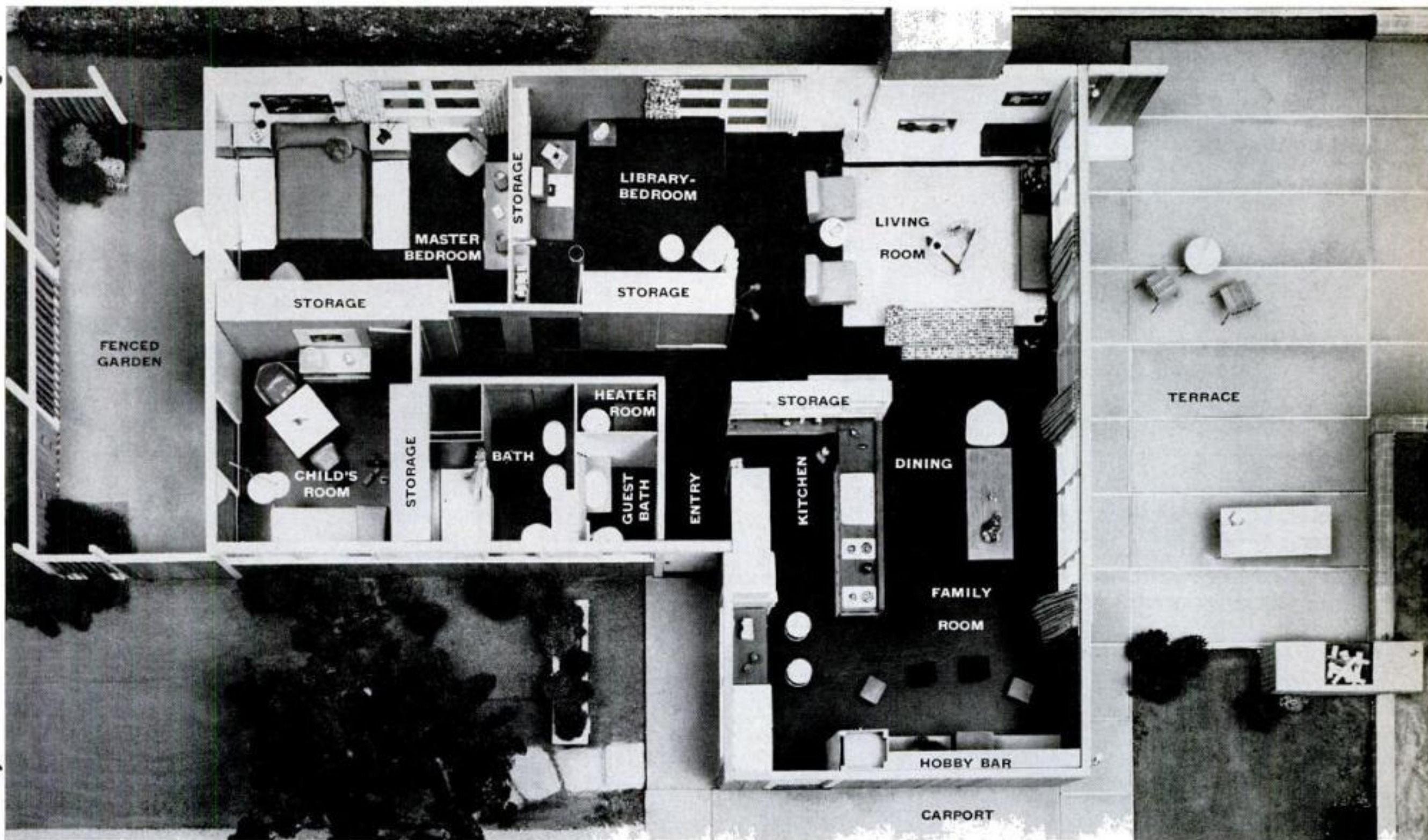
LIVING ROOM, seen from the brick fireplace, shows sweep of the open floor plan through into family room used for dining, viewing television, children's play. The length of room in actual house from fireplace to hobby-storage bar is

34 feet. All floors throughout the house are black terrazzo. Most of the interior walls are preassembled storage units. Interior decorator for model house was Oscar O. Widmann, who used Herman Miller furniture and fabrics, Waite carpet,



NIGHT VIEW from terrace looking into the living room shows brick fireplace (right), dining area (left) and kitchen behind the serving bar. In back at right is library with a folding door which makes it possible to open the library wide into

the living room for greater space or close it off and use it as a private third bedroom. Center hall leads to master bedroom and to the children's room at front of house. Special lighting effects were devised for the house by Thomas S. Kelly.



THE FLOOR PLAN of the Trade Secrets house shows how space has been organized for easy family living. Storage walls provide far more storage space than average house. There is additional storage space in carport for bicycles, gardening

tools. The open kitchen keeps the housewife in easier touch with her family than the enclosed kitchens most builders provide. The family room for television, games, sewing or ironing keeps the living room clean and uncluttered.

THE HOUSE IS ENGINEERED FOR QUICK, COST-SAVING CONSTRUCTION

The Trade Secrets house is not a house of tomorrow. It is today's practical easy-to-build house. Though no single feature is new, no builder's house has ever before incorporated so many advanced methods and principles that have been tried and proved utterly sound.

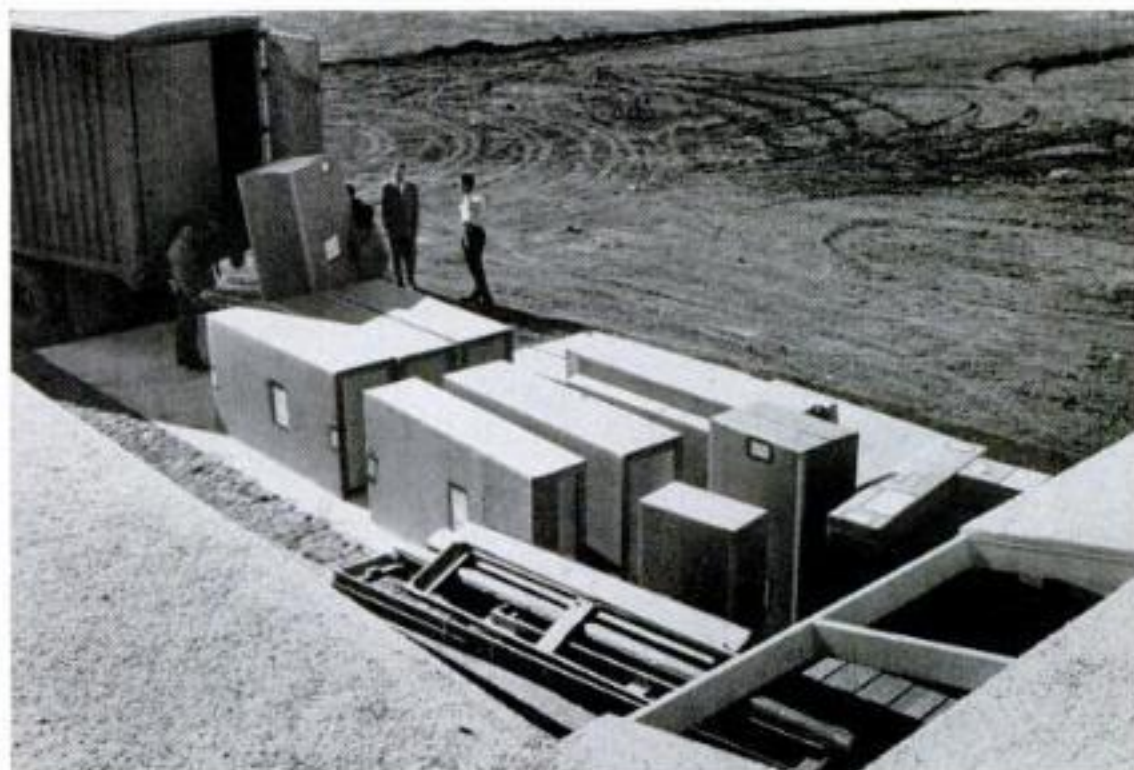
Because the house is engineered for efficient production, it is possible to make it larger, give it more storage space, better outdoor living areas, a better design and a more attractive

exterior. Almost all of its parts fit a uniform unit of measure so that windows, doors, walls may be precut and quickly slipped into place like pieces of a puzzle. Roof trusses are assembled on the ground, quickly hoisted up. A concrete slab foundation is generally the cheapest and best for a basementless house on a level site. Because builders save money and time (this house goes up in eight weeks or less) they can give buyers many extras usually reserved

for high-priced houses. The Trade Secrets house has a valance over the window wall with concealed lighting behind it, outdoor lights on terrace entrance walk, many book shelves, a hobby bar for television, radio and sewing machine, a double sink in one bath. These are the things that make the house attractive to Dale and Gladys Welling—shown on cover—who bought Builder Thomas Riskas' house in Phoenix, Ariz. and hope to move in this month.



PLANNING COMMITTEE of builders chosen by NAHB works on plan for the Trade Secrets house. From the left are: Leonard Haeger; Martin L. Bartling Jr.; Alan Brockbank, president of NAHB; Ned A. Cole; Andrew Place; David Slipper.



STORAGE WALLS arrive on a truck at the Trade Secrets house being built in Dallas. These walls are fabricated in a factory to save time and labor at the site. Occupying less floor space than average closets, they hold more things.

BUILDERS SPEED CONSTRUCTION OF HOUSE ALL OVER THE COUNTRY



DAYTON, OHIO Simplest way to install water pipes, waste pipes and heating pipes that can carry air conditioning (large ones above) is to arrange them on

graded surface for the house. Concrete slab is poured right around them. Workman is tying flexible copper water pipes so they will rise above concrete. (Builder: Alex Simms)



SHREVEPORT, LA. Workman is smoothing terrazzo with mechanical trowel. Use of terrazzo gives entire house uniform, unbroken, durable flooring—easy to put in and to keep clean. (Builder: Frank Zuzak)



DENVER, COLO. Workmen tilt wall into place. Sections are assembled on "deck" of house before they are pushed up. Windows slip into exact place in walls so that no extra fitting is needed above them. (Builder: Franklin Burns)



LIMA, PA. Workmen swarm over house. They are setting in windows, tossing up and nailing down roof sheathing, all simultaneously. With so many pre-cut and

preassembled parts the Trade Secrets house can be completely walled in and put under cover in a day. This means bad weather causes few costly delays. (Builder: Wallace Arters)



WICHITA, KANS. After roof trusses are quickly lifted and secured in place, plywood is spread over them. Above: workmen are shown putting

down layers of felt roofing paper. More asphalt is applied and then white marble chips. The roofing is cheap because the layers can be spread so quickly. (Builder: Ken Stowell)



DALLAS, TEXAS Finished house was sold for \$16,750, with land, to Bonnie and Warren Leslie III, shown with young Warren after paying a visit to see how their new house looks when lighted. (Builder: Leslie Hill)



SOUTH BEND, IND. Built in six weeks by Place and Co., this was the first trade secrets house finished. Nancy Lee and Lawrence Cramer bought it for \$15,000, including the land, the lowest price yet put on a finished trade secrets house. Above, with young Nancy Lee and young Dakin,

the Cramers come to look over their new home. While standard features of the NAHB house were eliminated, such as the bedroom garden, the builder added a Bendix washer-dryer in a separate laundry, a permanently heated bathtub (a duct from the slab runs up under it), a combination refrigerator-freezer,

WHAT MAKES THE ECONOMY TICK?

'CAPITALISM MODIFIED BY DEMOCRACY' HAS ROOM FOR LOTS OF INCENTIVES—INCLUDING MONEY

The subject of this issue, the U.S. economy, is a remarkable thing in at least two respects. First, the statistics are staggering. Dr. Goldsmith's estimates (p. 7) indicate that its aggregate asset value is now well over a trillion dollars. We could of course make this any figure we want by giving the dollar a different value, but the fact remains that a trillion U.S. 1952 dollars represents a lot of assets—enough in fact to enable 6% of the world's population to produce about half the world's manufactured goods.

Our economy is remarkable for another reason. Although it has been thoroughly studied, statisticalized and publicized, its real nature is enigmatic. According to Frederick L. Allen (p. 46), it can no longer be called "capitalism"; it has "evolved past socialism"; it certainly is not Communism, anarchism, syndicalism, nor yet *laissez-faire*. Perhaps, as Allen says, "its strength lies in the very fact that you can't put a label to it."

But this lack of a name is also a practical disadvantage. For if you don't know what you've got, how can you explain, improve, defend or share it? Surely the secret of American wealth, if we could name it, is more precious than the wealth, as the golden goose was worth more than her eggs.

American wealth can in part be explained as a series of happy accidents. Our continent was greatly endowed by nature and has been exploited at a favorable time by favored men. One view holds that we can thank "the Protestant way of life," of which (says Economist Kenneth Boulding) "the technical and economic progress of the past 300 years is to an extraordinary extent a by-product." The Protestant felt a duty to battle the visible evil of poverty. He used the godly weapons of honesty, hard work, thrift and temperance, testing and proving the axiom that "God sells all things to industry." These practical Protestant virtues, says Boulding, have made the U.S. a strange paradox: "the religious society which sets out to be a communion of saints and ends up by being an association of suburbanites."

A strictly economic account of U.S. prosperity, however, would ignore this religious motivation. "It is not from the benevolence of the butcher, the brewer or the baker that we expect our dinner, but from their regard to their own interest," said Adam Smith. J. S. Mill held that only "the prospect of bettering their own condition" would conquer the natural sloth of most men. In America that prospect has been nearly boundless. If economic man is indeed a donkey, here he has been kept jumping by an unprecedented profusion of carrots and sticks. Given so much freedom and opportunity, pecuniary

self-interest—the engine of classical economics—may well explain the whole miracle.

There can be no serious doubt that action and enterprise have been and still are the driving force of the U.S. economy. But what causes the enterprise? Do the fear of poverty or Hell (stick) and the hope of gain or Heaven (carrot) suffice to explain the extraordinary production records of the past decade? Or did we, while whizzing "past socialism," drop these for some new set of incentives, socialist or other?

Socialists have made two chief criticisms of U.S. capitalism. One was that it is inherently unstable and countenances some unemployment as good for progress. However, prolonged mass unemployment (such as we had in 1930-40) can neither be theoretically justified nor politically tolerated; it is extremely unlikely to recur here and hence is lost to the socialists as a practical issue.

Their other issue is that the "powerful and ubiquitous force of self-interest," which still underpins orthodox economic theory, is a debased and ignoble motive which is unjust to human nature and results in an "acquisitive society" instead of a Christian democracy. The real nature of man is different, they say; if permitted, his instinct for workmanship, cooperation and "mutual aid" would get the world's work done as well or better. This is the heart of Socialism: an optimistic view of the nature of man. Its danger is that when particular men fail to justify this confidence, particular socialists are tempted to use coercion. Thus Shaw, who favored absolutely equal incomes, frankly made forced labor their corollary.

American socialists, however, have mostly been vague about incentives. Strongly anti-Communist, watchdogs of civil liberties, they have attacked the more glaring injustices of capitalism without caring much about theory. Their word for human nature is "multimotivational"; instead of ideal equality, they espouse things like "mutually helpful group planning in almost any institutional form." Such words are a fair description of what has been happening in the U.S. (see pp. 84, 85). In pioneering corporations such as those with a "Scanlon Plan" (LIFE, Dec. 22), the "group planning" gives everyone a sense of participation and status. That was a socialist promise, but there is no reason to call the result socialism. The right name for the American economic system is capitalism modified by democracy.

At the heart of this U.S. system are indeed many motives—as many, perhaps, as in democracy itself. Yet one motive remains fundamental, in theory and in fact. This is the old selfish hope of self-betterment, also known (forgive the expression) as money.

Despite the inflation, the dollar is still a

desirable and desired currency; there has been no flight from it, as from the French franc. It is noteworthy that the increases in U.S. output of the past decade have been accompanied, war or no war, by a real increase in money incentives for most producers. Farmers and labor in particular have increased their share of the national take.

Thus the classical motives are still activating the U.S. economy except in one crucial place. This is among corporate managers, the men who make the final business decisions and are mainly responsible for the key question of productivity, that "rising tide that floats all the boats in the harbor" as one New England businessman calls it. Although managers' salaries have risen, they have risen less than those of other major producing groups, and their take-home pay, because of confiscatory tax rates in their brackets, is far less than it used to be. In a classic but not unrepresentative case, the former head of Du Pont, Walter Carpenter, earned \$78,570 in 1923 and \$175,000 in 1947. But his net after taxes in the same period shrank from \$60,843 to \$48,251. In another big company, cited by Prof. T. H. Sanders in his *Effects of Taxation on Executives*, the lowest wage group doubled its net income from 1940 to 1948 while the chief executive's was halved. The democratic redistribution of income via the income tax has been accomplished only by placing a virtual ceiling on the financial incentives of management.

Like the rest of us, the manager has other incentives; and these have kept him setting a performance example to the whole world. But, says Sanders, "the business world believes, almost to a man, that the [income] equalizing process has gone far beyond the point which would be socially and psychologically justifiable." Thus, while this generation of managers has found the reasons to do a good job, the next may show a loss of vigor if present tax rates are not changed.

Since 75% of American families still earn less than \$5,000, the plight of these five- and six-figure managers is not likely to get much political sympathy. Yet the fact is that taxes have almost destroyed what was once the leafiest carrot in the whole American bundle of opportunities: the hope of getting rich. Probably managers retain more of the old Protestant drives and virtues than other people; that's why they are managers. But orthodox economic theory can't measure that.

Otherwise, the American economy seems also to be proving that the classical economists were right, even in some of their pessimistic assumptions about human nature. On human nature, it is always wise policy to hope for the best, but to hedge one's bet.



A BUSINESSMAN LEAVES FOR GOVERNMENT SERVICE

In the marble main office of New York City's Chase National Bank, a distinguished white-haired man of 67 last week took formal leave of the world of business to enter the world of government. After 23 years, Chairman of the Board Winthrop Aldrich was attending his

last Christmas concert of the Chase employees' choral society before heading for London as the U.S. ambassador to Britain. The choir sang traditional carols and Aldrich himself joined in *Hark! the Herald Angels Sing*. Then, with the solemn-faced choir as background, Aldrich

spoke for himself and many other of President-elect Eisenhower's businessman-appointees, including the new Secretaries of Army, Navy and Air Force, when he said, "It is a sad thing to leave after 23 years, and I would not do it if I did not feel I could serve my country."



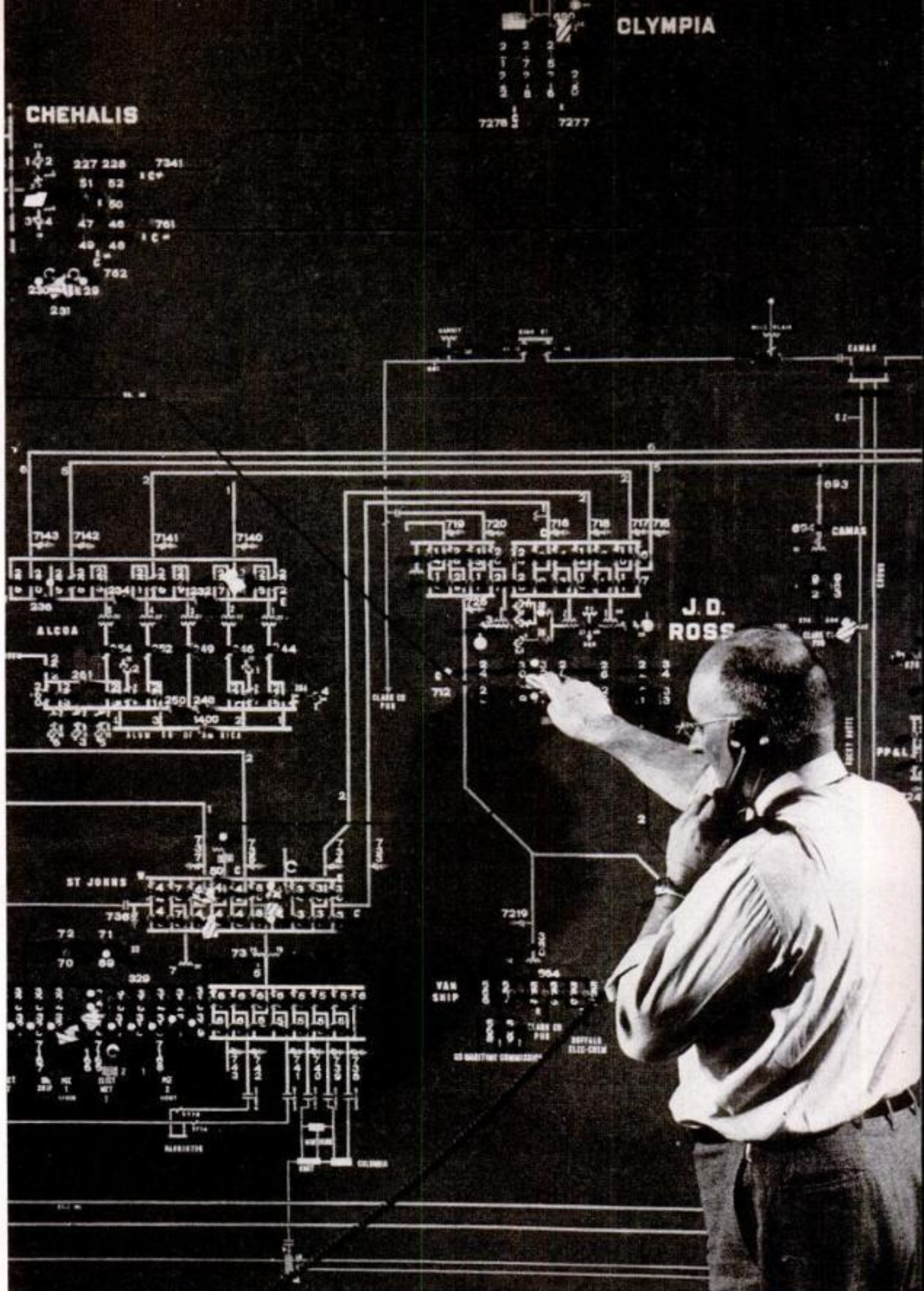
DAYLIGHT ONLY from windows at rear illuminates corridor of Spokane's Sacred Heart Hospital.



IDLE WORKERS from power-short plants crowd the federal employment office in search of new jobs.



IDLE POT LINE at Kaiser Aluminum Co.'s Spokane plant will cost \$100,000 to heat up again.



LIKE AN OPERATOR AT A SUPERCHARGED SWITCHBOARD, BONNEVILLE POWER DISPATCHER REROUTES

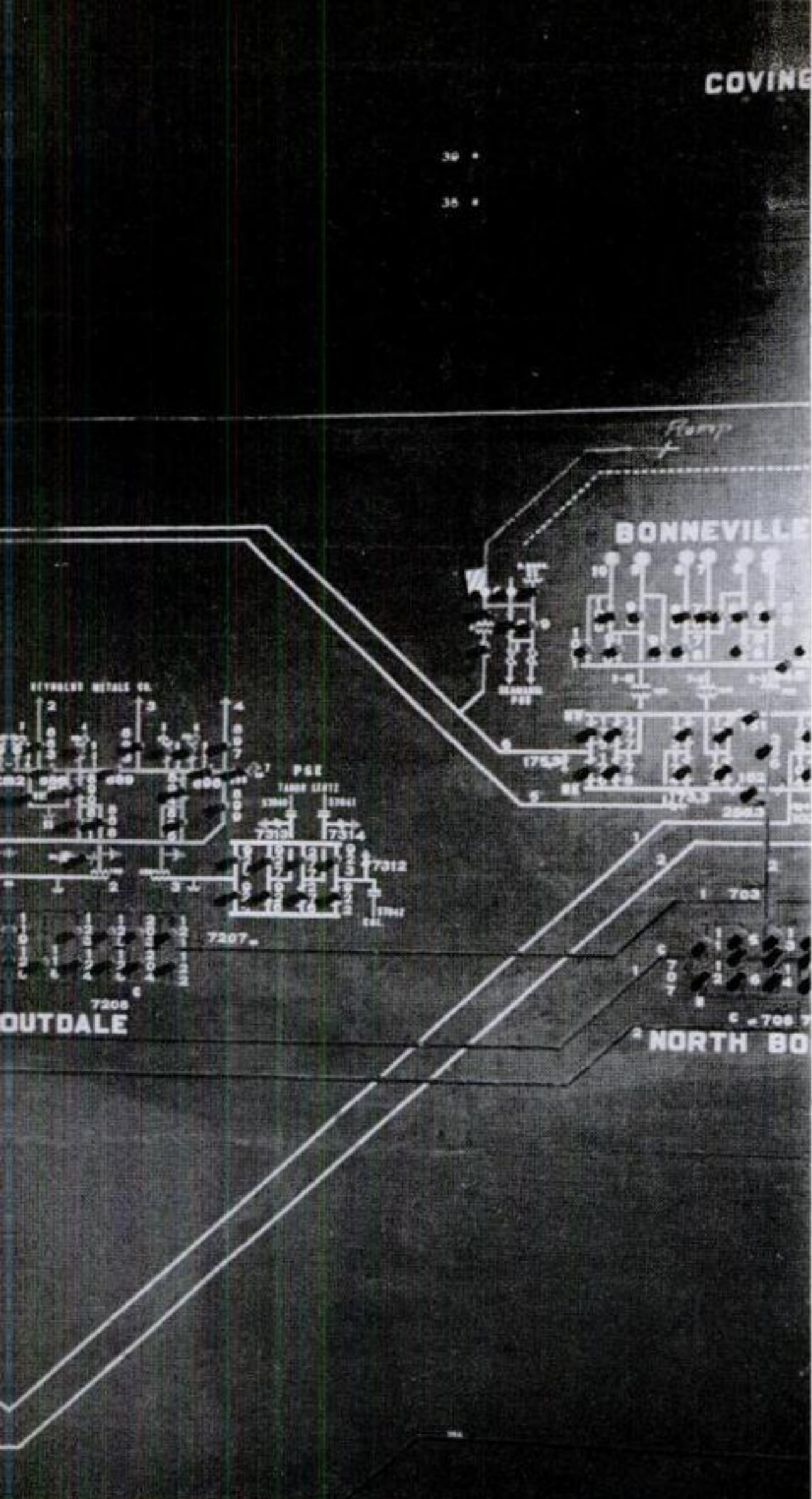
BROWNOUT IN THE NORTHWEST

A power shortage there emphasizes a problem of expanding industry

In the nation's expanding economy, electrical capacity is more than twice as great as a decade ago, but the facilities for producing that power have become seriously strained. A prime example is in the Pacific northwest where, 13 years ago, the federal government turned on the current at Bonneville Dam, first of a network of dams built at a cost of \$450 million to irrigate the soil and convert the rushing Columbia River system into electrical power for industry. Under the pressures of war and boom, however, more industry than ever was dreamed of has crowded into the nation's northwest corner, its needs outpacing the power supply. Each winter, as a result, when nights are longer, the area has had to resort to the brownout to save precious power. This winter, with the

shortage aggravated by the worst drought in 75 years, the lights went down in town after town and engineers manning the master control board of the Northwest Power Pool (above) were kept busy shunting power from one area to another to keep vital plants from closing altogether. Every day the nation was losing a million pounds of aluminum needed in defense plants, and thousands of men, representing a weekly payroll of more than \$1,250,000, already had been made idle.

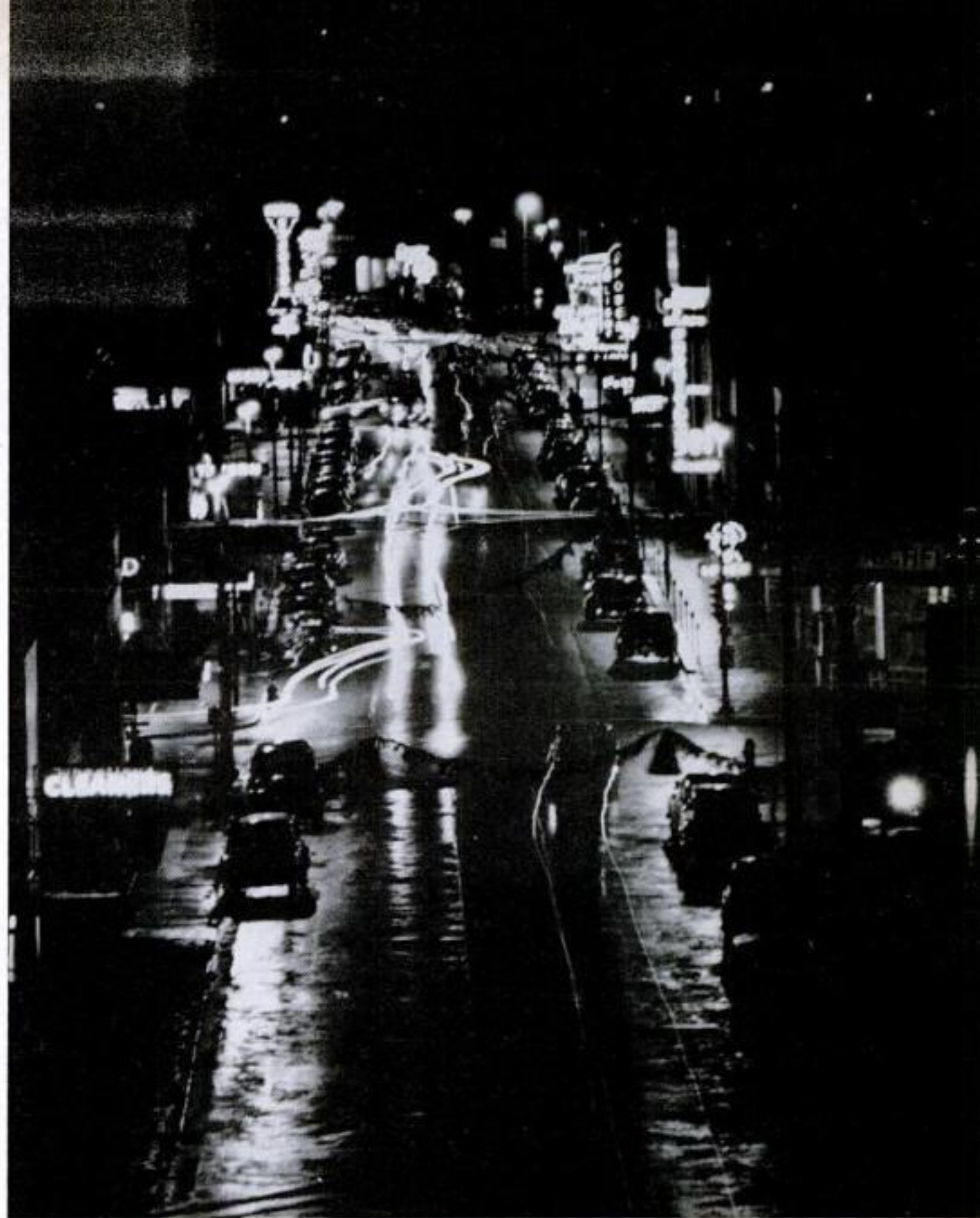
In face of the kilowatt crisis came an unorthodox proposal from Paul Raver, who administers Bonneville for the U.S. government. The federal government, he said, should get completely out of the power business in the northwest and turn it over to an interstate agency.



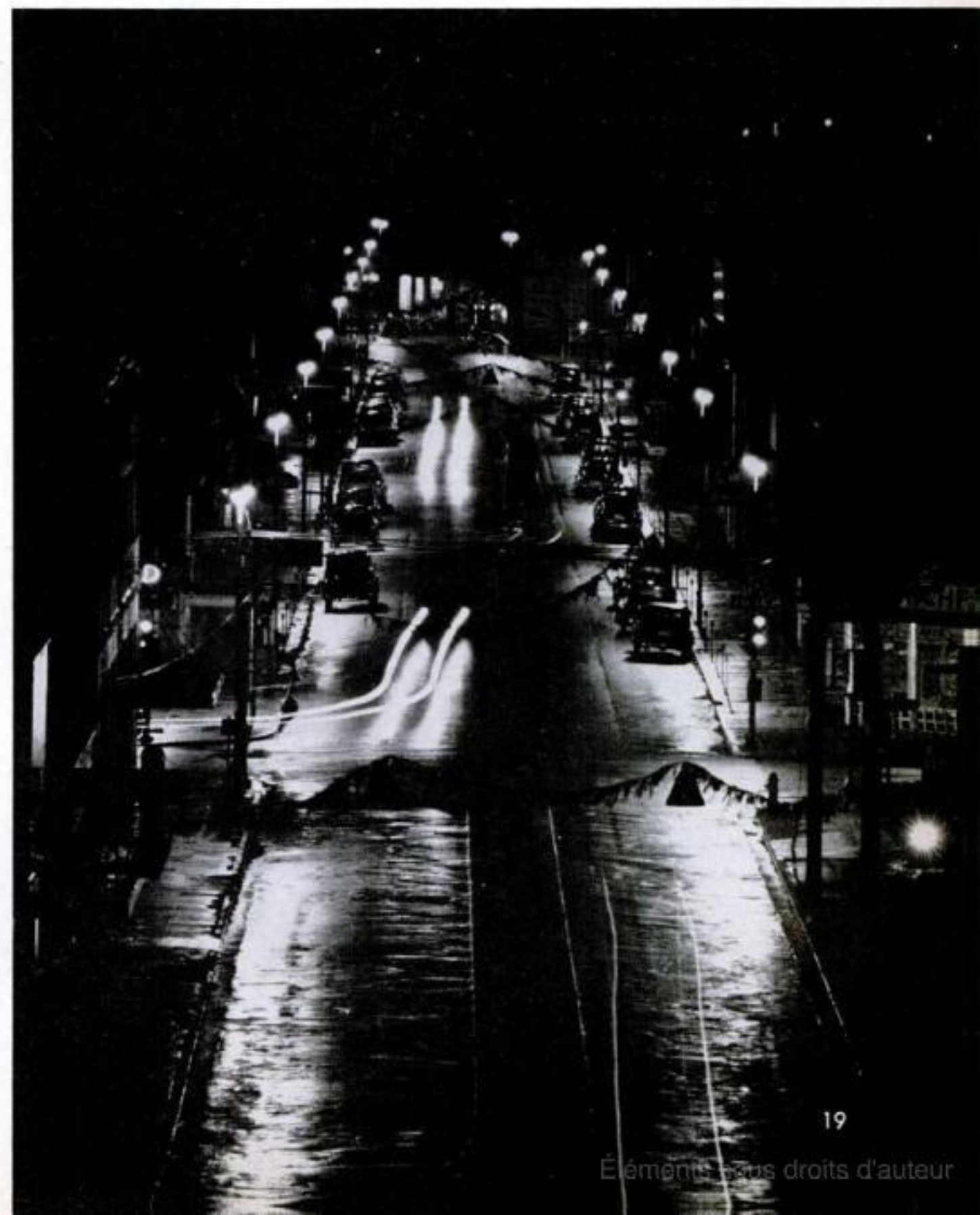
FLOW OF CURRENT TO GET MOST OUT OF THE LIMITED SUPPLY AVAILABLE



BLEAK BED of Yakima River lies muddy and exposed except for a narrow trickle. This condition prevails in most streams in the Columbia River basin.



DARKENED DIFFERENCE resulting from brownout is apparent in the lumbering town of Hoquiam, Wash. where Simpson Avenue, the main street, is shown above as it would normally appear after nightfall and, below, as it appeared last week, with store and theater signs and window displays doused.





HIDING HIS FACE, Tony Mike leaves the crime hearing after giving detailed, accusatory testimony.

A WITNESS'S ORDEAL

Enemy of pier racket is guarded

After laboring 20 years on the waterfront Anthony ("Tony Mike") DeVincenzo got fed up. Tall and husky, he had worked up on the Hoboken docks from longshoreman to hiring boss for Jarka, biggest U.S. stevedore company. But being honest, a rare trait in hiring bosses along the Port of New York's racket-ridden waterfronts, Tony Mike was fired for refusing to cooperate with Ed Florio, racket boss of the Hoboken piers who was jailed last week for perjury. For 18 months Tony Mike, father of four children, went jobless. Then he got a part-time job running a newsstand in New York. When the New York State Crime Commission opened an investigation into waterfront rackets, Tony Mike decided to testify.

It was an epochal decision. For one thing it brought to microcosmic focus a major problem in the U.S. economy, crime's intertwined relationships with business, for it is no secret that shipping companies using New York piers have condoned criminal practices in order to maintain peace and profits. For another, it made Tony Mike the first full-fledged longshoreman ever to break the waterfront code of silence in public testimony. He told how other hiring bosses "short-ganged" jobs (turned in pay slips for nonexistent workers and split up the wages) and employed smuggled aliens. He even accused his cousin, Michael Borelli, Hoboken's Commissioner of Public Safety but, according to Tony Mike, an ex-bootlegger and friend of Racketeer Florio. Tony got threats against his life. He didn't care, and when Borelli insisted on assigning him the embarrassment of a uniformed police guard he invaded Borelli's office to demand plainclothesmen. Borelli refused; so did his police chief. The crime commission hopes DeVincenzo, if he lives, will become an example for exploited dockmen and thus commence the cure of a malignant growth in the body of U.S. business.



TRIP TO THE DOCTOR for treatment of a neuralgic arm is, like every other activity, made with

police escort. Tony Mike's son, Vito, is at wheel. Cops stood by even while doctor gave him shots.



AS A PRECAUTION against snipers from the street, Tony Mike keeps the window blinds shut.

CONTEMPTUOUS TONY walks to lunch after bursting in on Borelli to complain about the guard.





24-HOUR GUARD stands its watch outside the Hoboken bakery over which Tony Mike lives. The presence of

the uniformed guards has led to a falling off of the bakery business, which is operated by Tony Mike's father-in-law.



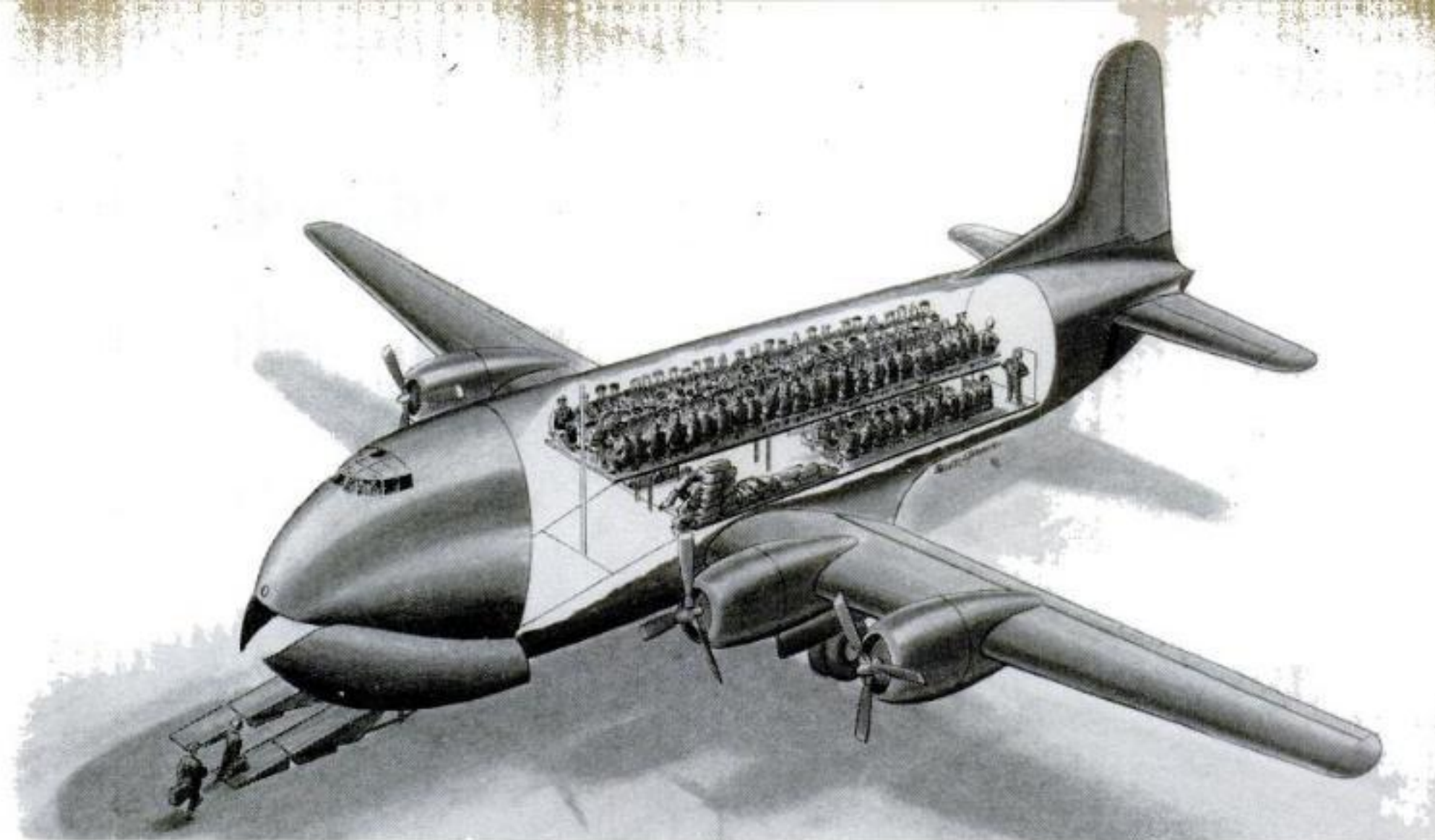
NEW YORK DETECTIVE assumes safeguarding as Tony goes to work.



HIS WIFE, eating dinner with Tony, is apprehensive but encourages him.



TWO SONS, Buddy (rear) and Anthony, listen as he phones police chief.



THE C-124 GLOBEMASTER, now used widely by the Air Force in the north and in the airlift to Japan, can carry a heavy Army tank or two big buses or 200 fully armed troops who sit in parallel

rows facing each other on its two spacious decks. It is entered by nose ramp. Made by Douglas, it has four 3,500 hp engines, weighs more than two C-54s together and costs about \$1.8 million.



RIGHT AFTER CRASH all that remains of the Globemaster dwarfs a rescue truck in snowstorm. Cause may have been power loss or locked controls.

DISASTER ON THE SLEIGH RIDE

87 homeward-bound servicemen perish in world's worst air disaster

Through a light dawn snowfall just before Christmas a huge C-124 Globemaster, the Air Force's biggest operational transport, trundled down a runway at Larson Air Force Base, near Moses Lake, in Washington. Visibility was fair—two miles—and the plane was traveling light; though it could seat 200 troops there were only 116 aboard. The big ship lumbered reluctantly aloft. Then it climbed to about 100 feet, made as if to turn left and plunged to earth, disintegrating in scraps of metal and searing flame. The crash was the world's worst air

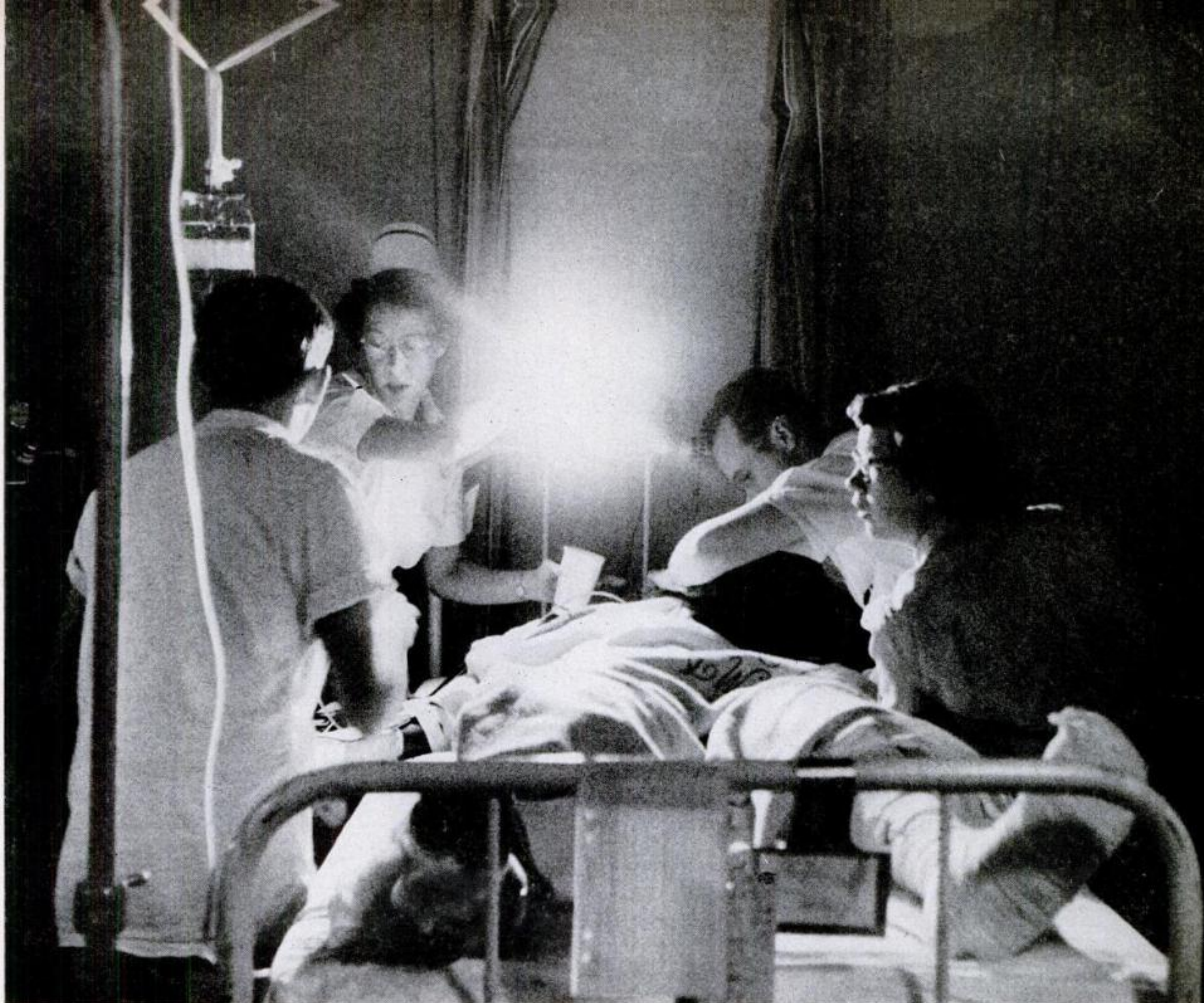
disaster, and in it 87 men lost their lives.

The plane, ironically, was on a mission of kindness. Though it was ostensibly embarking on "a routine crew training flight," it was an extension of Air Force's "Operation Sleigh Ride" which brought servicemen home for the holidays. This flight was scheduled for Texas and points east. As news of its crash ticked out and teams worked to identify the dead, servicemen's families along its route could only wait to see if "Sleigh Ride" had brought a jolting tragedy or a shaken reunion (*next page*).



CIVILIAN VOLUNTEERS, hearing an emergency appeal for blood for crash victims, crowded into Red Cross regional blood center at Yakima. The first volunteer appeared in center 12 minutes after the broadcast and picture above

was taken 15 minutes after the emergency was announced. Within a space of two hours some 81 donors gave blood, and from this one center 48 pints of whole blood and 100 units of plasma were rushed to the Larson Air Force Base.



IN THE BASE HOSPITAL doctors and nurses hover over badly burned survivor of crash. Plane struck about 3½ miles from the hospital and victims were quickly brought in by ambulance and jeep. Accident took place at 6:27 a.m. At

first work was done by post doctors and nurses and airmen's wives, many of whom were ex-nurses. By noon more doctors and nurses had been flown in, and one doctor was assigned to each patient. Some of injured needed up to 12 pints of blood.



WAITING FOR NEWS, wife of plane's engineer sits in hospital. He came to, calling her and saying, "I checked the power!" but next day he died.



SENDING BAD NEWS telegraphers at base paste up file copies of wires to next of kin. Phones were jammed and took only "emergency" calls.

FLAG AT HALF-MAST is symbol of sadness at Larson Field. In field's simple chapel, post members gathered two days after accident for service for dead.



CONTINUED ON NEXT PAGE



IN HOSPITAL at Larson base, Lieutenant Riggensbach gets new uniform ready. Old one was burned.

A MAN QUILTS FLYING, THEN HE FLIES HOME

One of the few men who tumbled alive from the shattered wreckage was Lieut. Frank Riggensbach, who had been sitting near the tail. A navigator, Riggensbach had flown in India and Burma in World War II and had just finished 50 B-26 combat missions in Korea. The crash made his mind up. "I'm done with flying for the rest of my life," he said. "I've pushed my luck far enough." He was suffering from burns, shock and a dislocated shoulder, and his uniform was destroyed.

But next morning he got an offer that put a new light on the matter. The Air Force said it would fly him to San Antonio in a hospital plane with other victims. A quick trip down to his wife and two children in Houston was almost too much to resist. Pinning insignia on a new uniform, Riggensbach thought it over. Then, gazing at the plane on the dark ramp (left), he made his decision. "What the hell," he said. "I've made it once. I'll try it again."



HOME SAFE, Riggensbach meets wife who said, "I guess you don't want to talk about it." He agreed.

← RIGGENSBACH GETS SET FOR PLANE RIDE HOME



I love my pretty new green dress,
I love my parasol,
But Campbell's Chicken Gumbo Soup
I love the best of all!



EXCITING ...

IT'S A TRADITION IN NEW ORLEANS

DELICIOUS ...

IT'S A CHICKEN AND VEGETABLE TREAT



Campbell's
CHICKEN GUMBO SOUP

Inspired by famous Old Creole cooking—
now welcomed and enjoyed everywhere

What an excitingly different chicken soup this is! As Campbell's make it, the stock is rich with the taste of chicken. And then—you'll discover such delicious things as green okra, luscious tomatoes, rice, and tender pieces of chicken. The final touch is a delicate seasoning of savory herbs.

Yes, here in this wonderful chicken-and-vegetable soup an adventure in good eating awaits you. It's a dish to make an occasion of any lunch or supper, and it goes so well with just about everything. Have it soon, and you'll want to keep it always on your soup shelf—ready to delight the family.



New! G.E. brings you



The marvelous speed of General Electric's Extra-Hi-Speed Calrod® Unit is proved by United States Testing Co., Test Report E4991A. It's the fastest cooking unit on any leading home electric range.*

General Electric cooking is clean. Pots don't get black on the bottoms. Calrod cooking units are hinged so drip pans can lift out. A damp cloth cleans enameled surfaces. Electric cooking is safe, too.

It costs very little to cook electrically. Based on a national average of 2¢ a kilowatt hour and figuring normal use by a family of 4, you can use a General Electric Range for about \$2 a month. And you can buy a G-E . . . for about \$2.15 a week (after small down payment). See your dealer for details.

*Test Report E4991A, 6-12-52 . . . made with utility-size units, using one each of 5 leading electric ranges.



AUTOMATIC ELECTRIC
"SPEED COOKING"
RANGES



NEW! Fastest Home Electric Unit. Beats "speed units" on other leading ranges. Saves electricity and time. Food tastes better. Vitamins don't boil away. Calrod unit is self-cleaning—spilled liquids evaporate, foods disappear.

NEW! Beautiful Stratoliner. A joy to use. It brings you . . . the new Extra-Hi-Speed Calrod Unit. Mammoth 3-Way Oven. Deep-Well Fryer that changes to Thrift Cooker or surface unit. Tel-A-Cook Lights. Minute-Timer. Au-

tomatic oven control to "watch" your baking. Warming drawer . . . and many other features. \$449.95** at your General Electric dealer. (See classified phone book.) General Electric Company, Louisville 2, Ky.



NEW! Deep-Well Fryer. Another General Electric first. Automatically controls fat at frying temperature. Same type used by top chefs for perfect French-fried potatoes, onion rings, doughnuts, chicken, sea food, etc. Extra-large capacity.



AMAZING! Tel-A-Cook Lights. Push a button—for the heat you want, from warm to speed high. Tel-A-Cook Lights—a different color for each button—tell you from across the room which unit is on—and at what cooking heat. Perfect results are easy.



NEW! Mammoth-size, 3-Way Oven. Bakes and browns evenly—in any oven position. Master oven holds meal for 18. For power-saving one-shelf cooking, shift bake unit and get smaller Speed Oven. Super Broiler gives meats delicious "charcoal broiled" flavor.

**Manufacturer's recommended retail prices.

GENERAL  **ELECTRIC**

Super-Speed Cooking

with the fastest home electric unit*



Choose your favorite General Electric Range now. Each has special features. 5 have the wonderful, new Extra-Hi-Speed cooking unit.



THE CONSTELLATION

Two complete Ovens! The convenience of two-oven cooking at a single-oven range price. Both ovens completely equipped for baking, roasting and broiling. Bake rolls while you broil or roast. Easy-to-use Oven Timer controls Master Oven; New Extra-Hi-Speed Calrod Unit for fastest cooking. White pushbutton surface unit switches—one for each heat, from warm to speed-high. Minute Timer. Two Appliance outlets. 2 storage drawers. Fluorescent lamp. Price, **\$359.95****



THE AIRLINER

Pushbuttons. New Oven Timer. Has the same pushbutton controls and same size Mammoth Master Oven as the Constellation! Simplified Oven Timer. New Extra-Hi-Speed Unit for fastest surface cooking. Deep-Well Cooker for thrift cookery. Deep-Well Calrod unit raises for fourth surface unit. Minute Timer buzzes for cooking up to 60 minutes. Two appliance outlets—1 automatically timed. 3 big storage drawers. High back-splasher, full-length fluorescent lamp. Price, **\$309.95****



THE LIBERATOR

De Luxe All-Calrod Two-Oven Companion of the G-E Stratoliner. Has new Deep-Well Fryer and Tel-A-Cook Lights. New Extra-Hi-Speed Calrod Unit. Minute Timer, long fluorescent light. Automatic Oven Timer controls both ovens. Condiment set, heated Salt Conditioner. Price, **\$499.95****



THE SPEEDSTER

3-Way Oven. Tel-A-Cook Lights. Has Mammoth 3-Way Oven and lighted pushbuttons shown on opposite page. New Extra-Hi-Speed Cooking Unit. Deep-Well Cooker with fourth raisable surface unit. Minute Timer to "watch" your cooking. Also has an Automatic Oven Timer. Price, **\$369.95****



THE STEWARDESS

Deep-Well Cooker. Master-Size Oven. Low-priced, yet with same size, automatically controlled Master Oven as General Electric De Luxe Ranges! Deep-Well Cooker. Extra-Hi-Speed Calrod Surface Unit. 3 large storage drawers. Fluorescent lamp. Easy-to-use rotary switches. Price, **\$259.95****



THE BEACON

Economy Price—Luxury Features. So inexpensive, yet Mammoth Master Oven holds meal for 18 . . . largest turkey and trimmings. "Charcoal-type" Super Broiler. Oven temperature control. Appliance outlet. Storage compartment. Extra-Hi-Speed Calrod surface units. Price, **\$189.95****



Deliciously yours!

*P.S. Hunt-for the best. See your grocer's ads
and look in his store for the low price!*



MONSANTO INSPECTOR GROPE HIS WAY INTO RECESSES OF CALCINER, A CAVERNOUS FURNACE WHICH, WHEN ROTATING AND RED HOT, MAKES PHOSPHATES

THE REIGN OF CHEMISTRY

Monsanto company's vast operations show how the country's fastest growing big industry has become a dominant factor in the U.S. economy and changed every American's daily life

PHOTOGRAPHED FOR LIFE BY W. EUGENE SMITH

In this century's rapid growth of U.S. industry nothing can compare in speed and scale with the rise of the chemical industry. Relatively obscure 25 years ago, it has expanded three times faster than the rest of industry, and has become a new keystone of the U.S. economy. It is also chief heir to the nation's atomic energy program, which was conceived by physicists but is being largely executed through the vast facilities of companies like Du Pont, Union Carbon and Carbide, Dow, and Monsanto.

In its forward rush the \$9 billion-a-year chemical industry has transformed American life. It has scrubbed the modern world with detergents, doctored it with synthetic drugs, dressed it in synthetic textiles, cushioned it with synthetic rubber and adorned it from head to toe with gaudy plastics. It has penetrated industry as deeply as daily life. With its flood

of discoveries, it has injected new life into some industries like textiles which it has reconstructed with synthetics and strengthened with new chemicals that make natural textiles water-resistant, better wearing, better looking. It has absorbed whole industries, like paint and varnish, and has spawned entire new ones like plastics fabricating and synthetic rubber. The plants from which chemistry's products come are tangled nests of crooked pipes, squat vats and giant revolving ovens (*above*) whose shapes are often as complicated as the chemicals they produce.

One of the largest and liveliest of U.S. chemical companies is Monsanto, whose plants and processes are pictured on these pages. With a flood of products and aggressive salesmanship Monsanto has doubled in size every five years since 1926—growing faster than the industry itself.

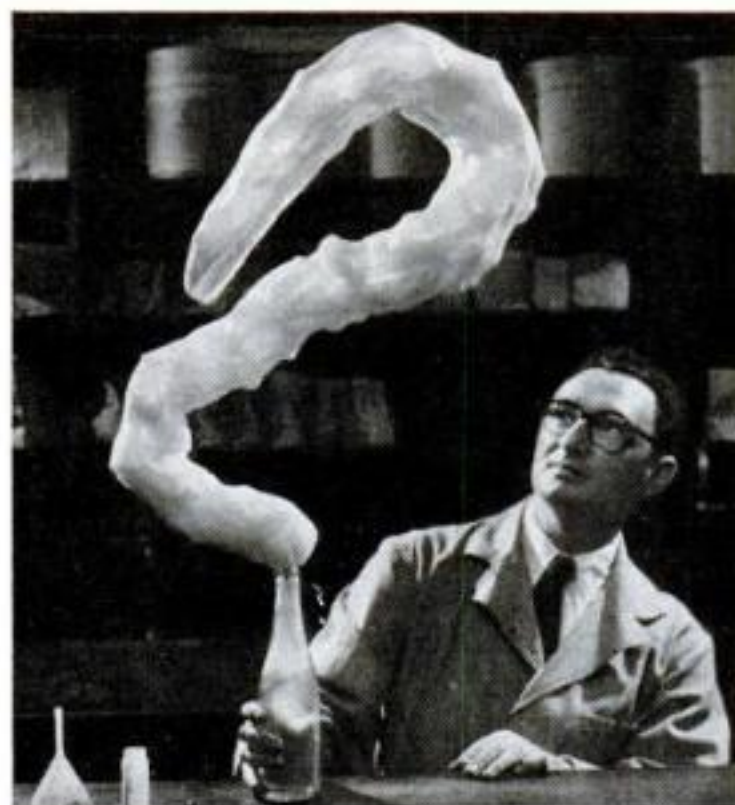


RISING TOWERS of Texas City plant on Gulf Coast make styrene, used in rubber, paint, plastics. Silhouetted chemist tests samples in control room.



FALLING PLASTIC pours from overhead kettles onto floor of Springfield, Mass. plant. Power hammers break it up for packaging after it has hardened.

CHEMISTRY CONTINUED



LEAPING RUBBER explosively created from butadiene gas in bottle is discovery of M.I.T.'s Dr. A. Morton, and exemplifies the kind of chemical magic which Monsanto and others put to commercial use.

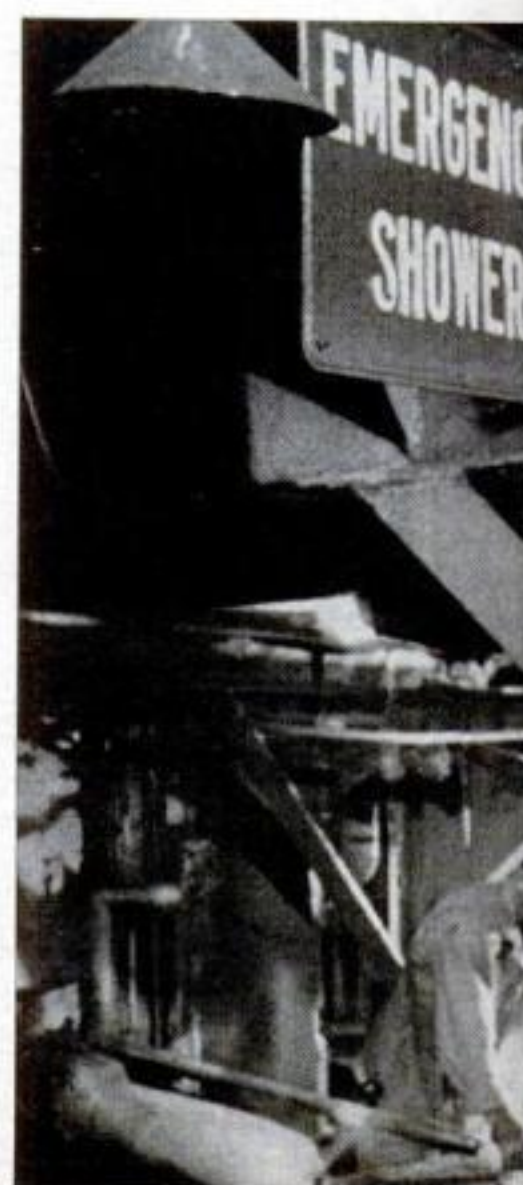
CHEMICAL LANDSCAPE HAS STRANGE SHAPES

The Monsanto Chemical Company began 52 years ago in St. Louis as a collection of wooden tubs which produced one chemical, saccharin. Today it is a \$390 million enterprise with 17 manufacturing plants scattered across the U.S. Saccharin has been overshadowed by 402 other products with names like para-acetylamino benzenesulfonyl chloride (used in sulfa drugs) and "Pip-pip" (used in synthetic rubber). They include abrasives, acids, alcohols, alkalis, detergents, synthetic fibers, food flavorings, fungicides, gas additives, herbicides, insecticides, leather chemicals, oil additives, paints, paper chemicals, petrochemicals, pharmaceuticals, plastics, rubber chemicals, textile chemicals, wood preservatives.

Practically none of these products are sold directly to the public, but are shipped to over 50 industries which use them to make familiar commodities. Often the same chemical is used by different industries for different purposes. A phosphate which Monsanto sells to baking powder companies is also used to soften oil well mud. A Monsanto jelly used in Napalm incendiary bombs has proved ideal for use in screw worm salve for sheep.

Monsanto's varied industrial scenery includes the vistas of the Muscle Shoals chlorine plant (*top right*) and the clutter of the St. Louis phthalic anhydride plant (*bottom right*). In the mechanization of its processes, Monsanto has come to depend less and less on human control of its plants. A giant new unit in Texas City, Texas (*top left*) produces enough styrene to satisfy a third of the nation's needs. Yet it is operated by only three men who take hourly chemical samples and keep a routine eye on the instrument panel of their air-conditioned control room.

Still expanding, Monsanto keeps its eyes fixed on a goal which still lies distantly on the horizon. The AEC is considering a joint plan of Monsanto and Union Electric Co. of Missouri for an atomic power plant. Monsanto's atom scientist-president Dr. Charles A. Thomas hopes the power plant will make Monsanto the first private enterprise in the world to harness atomic energy for industrial production.





WORLD'S BIGGEST SINGLE CHLORINE PLANT IS OPERATED BY MONSANTO FOR U.S. AT MUSCLE SHOALS, ALA. ELECTRODES EXTRACT CHLORINE FROM BRINE

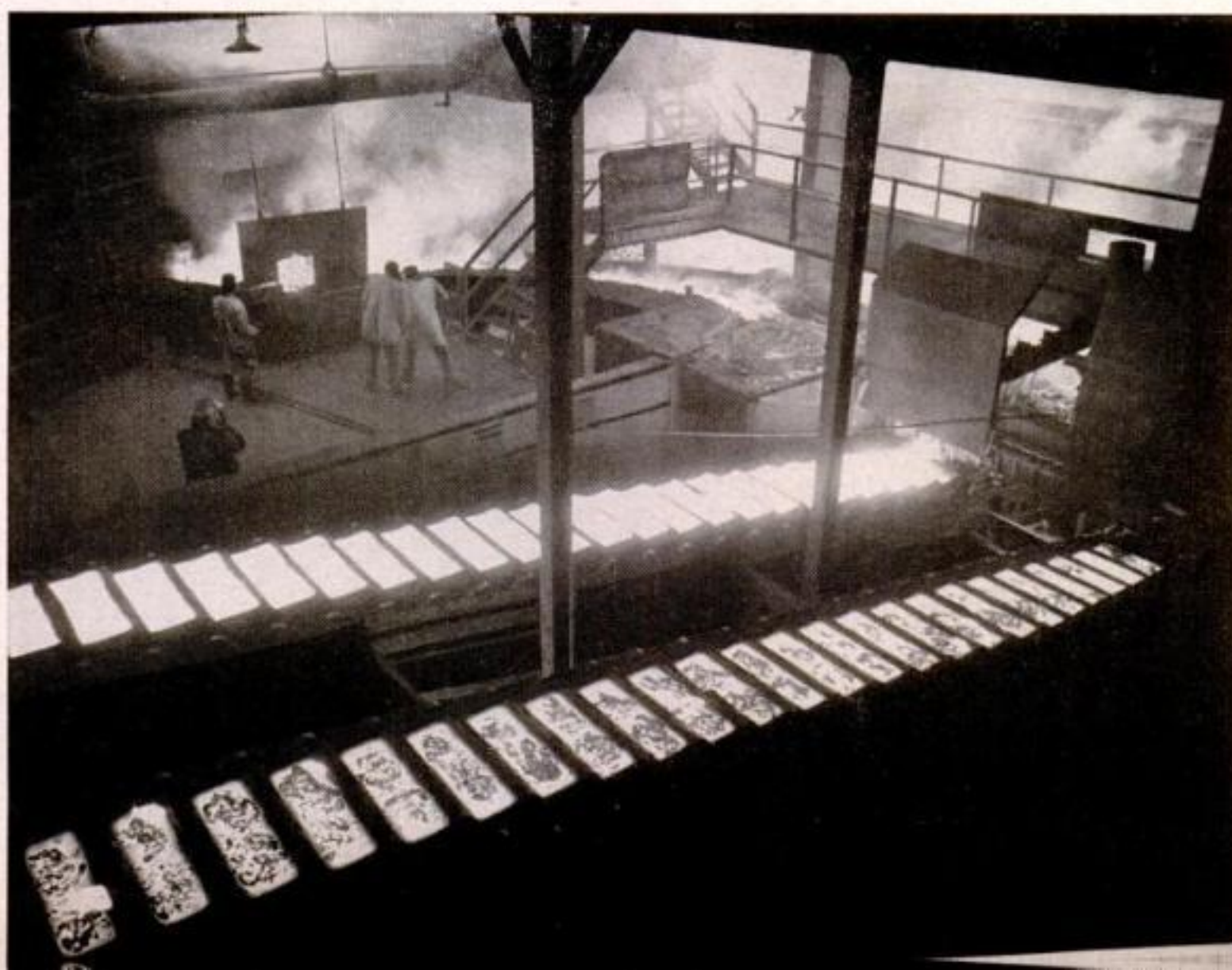


SULPHUR is unloaded from a freighter at Monsanto's Everett, Mass. plant for conversion into sulphuric acid.

TOXIC WASTES drain from bottom of a purification still in a plant at St. Louis. Emergency showers are precaution against any spattering chemicals.

ASPIRIN plant in St. Louis makes 17,000 tablets' worth of aspirin powder per minute. Bags collect aspirin dust which would otherwise be lost.





PHOSPHORUS IS MADE

Despite the diversity of its products, Monsanto has specialized in one chemical—the fiery element phosphorus, a waxy yellow substance which bursts into flame when it comes in contact with air. This substance plays such an important role in the company's operations that an entire manufacturing division, one of the company's six, is devoted to phosphorus and its many derivatives.

Monsanto mines its own phosphorus ore at Columbia, Tenn. and extracts the pure element in a row of six giant electrical furnaces (*above*) which consume more power than the whole city of nearby Knoxville. After its processing, the phosphorus is carefully stored in tanks under a layer of water to protect it from

GLOWING FERROPHOSPHORUS, a by-product, is tapped from furnace, cools in "chill buckets."



← **FIERY POOLS** of slag from the tapped furnaces send up columns of steam as they strike the hosed-down slag heap outside the plant. Power shovel loads glowing slag into trucks to be hauled away.

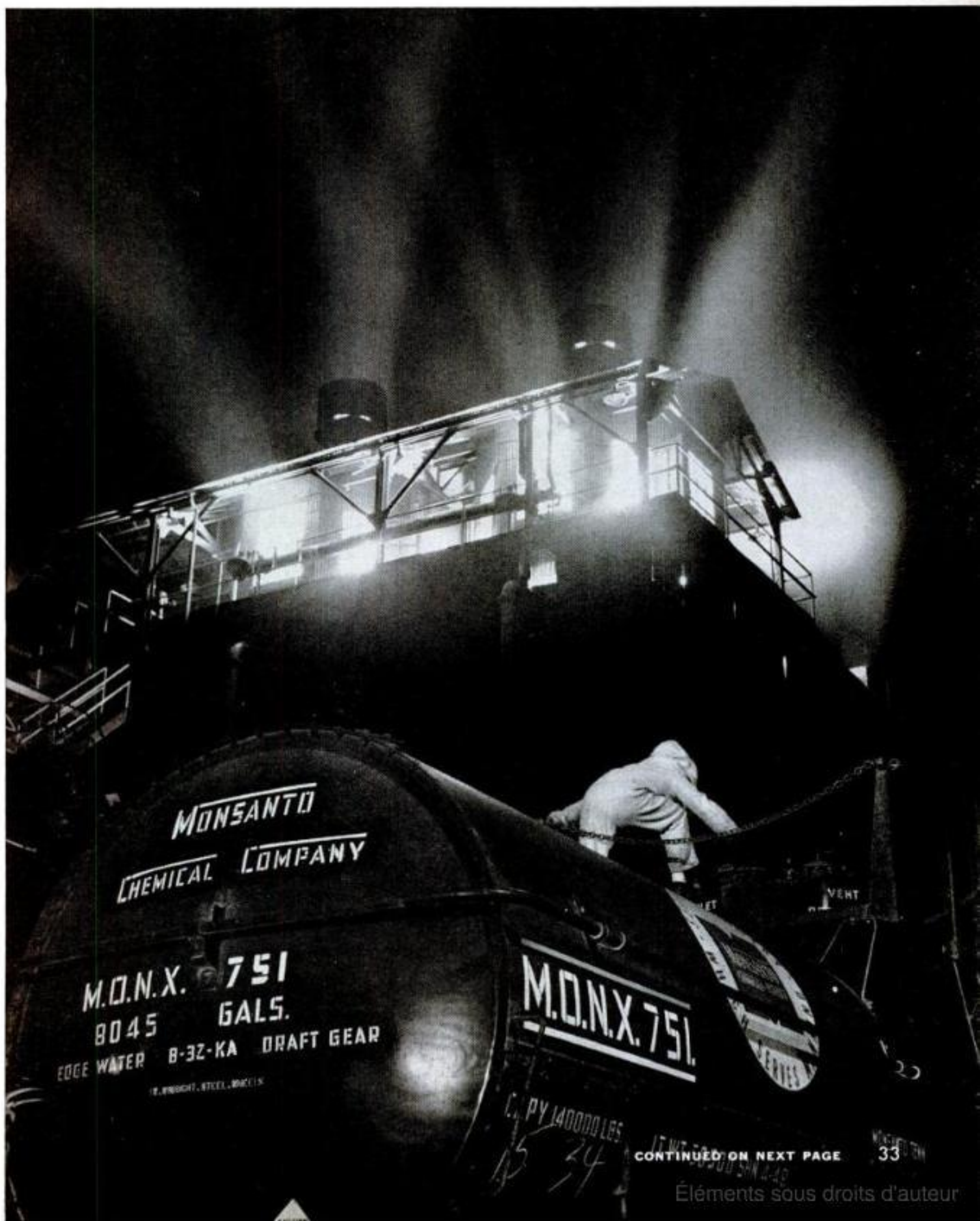
MASKED TAPPER hammers heavy chains over opening in steel plate at the foot of freshly tapped furnace. Plate shields tapper from extreme heat of furnace, chains keep slag from splashing on floor.

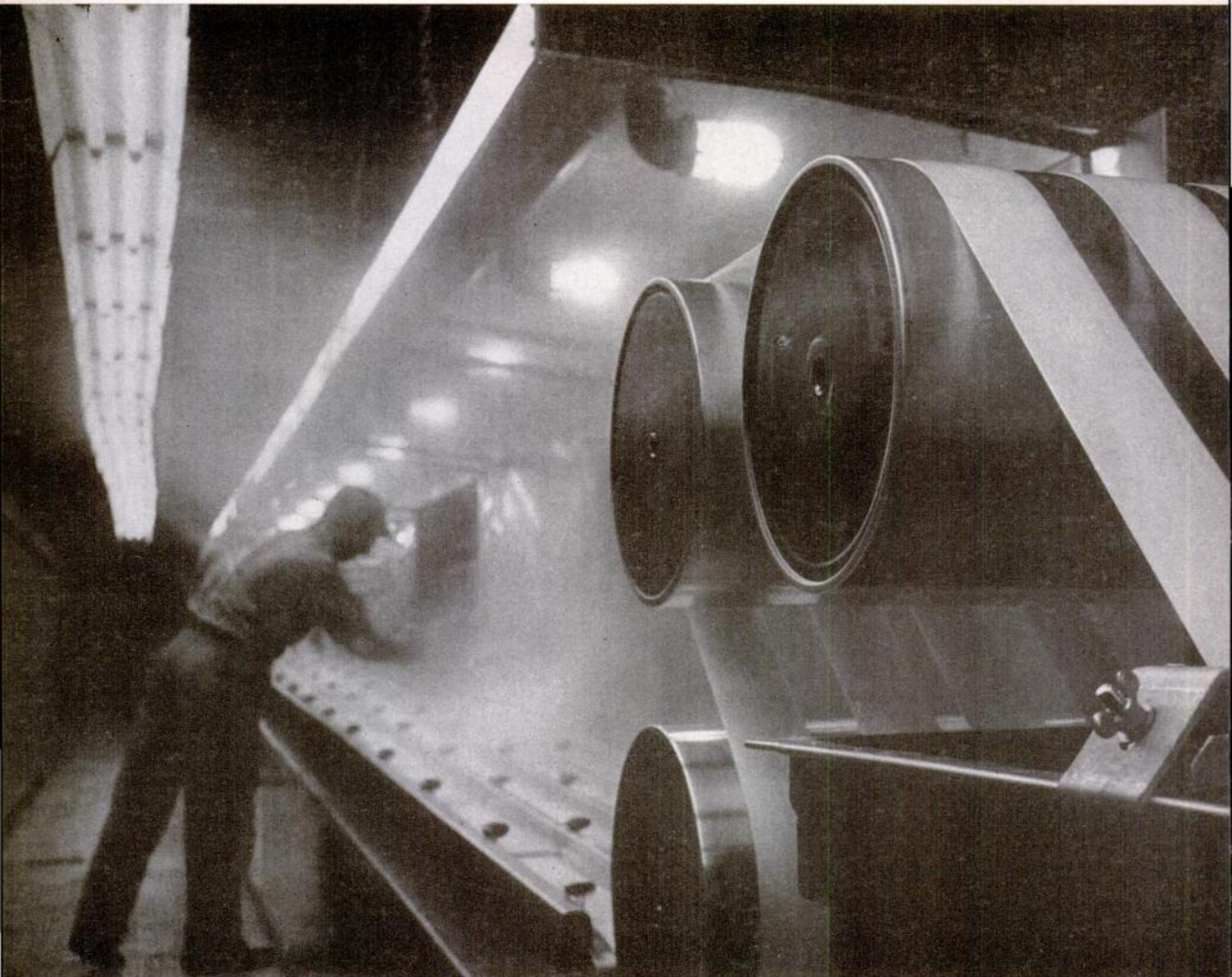
AMID FIRE AND SMOKE

contact with air. Then it is shipped to other plants, in sealed tank cars, where it is first burned (*right*), then drenched with water to produce phosphoric acid. This is later converted into a whole family of powdery phosphates by being boiled in vats, fused in long ovens and baked to red heat in huge revolving calciners (*p. 29*).

Phosphorus compounds are among the most useful chemicals known. They dissolve grease (in synthetic detergents), soften water, dye and bleach textiles, leaven baking powders, make metals rustproof, preserve food, soften cheeses, fireproof wood, refine sugar, scrub teeth (in toothpastes) and constitute the active ingredient of dozens of pharmaceuticals.

BLAZING TOWERS at Trenton, Mich. produce phosphoric acid by burning Tennessee phosphorus.





FRESHLY SPUN ACRILAN, from spinnerettes submerged in tank at right, rises over rollers in rib-

INDUSTRY'S BIGGEST MONEY-MAKER IS TEXTILES

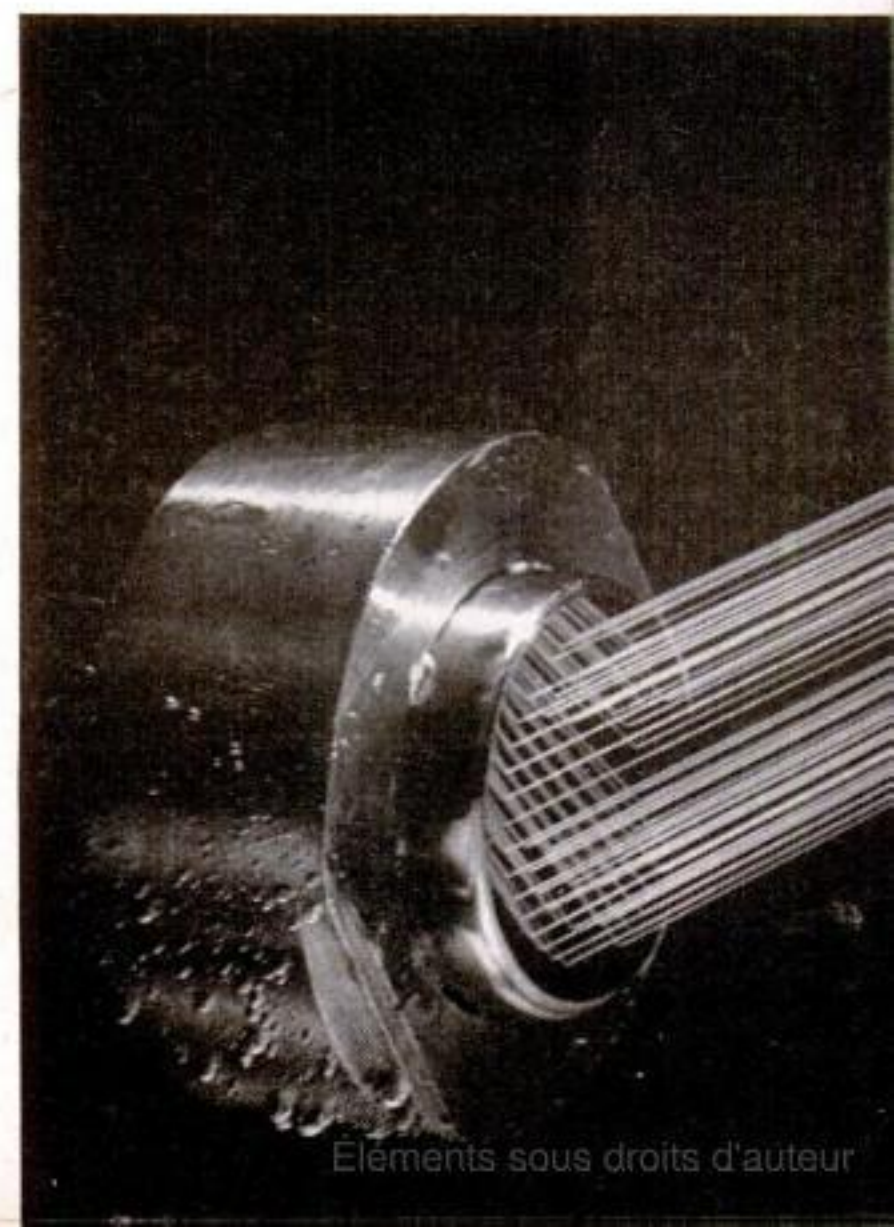
Ever since Du Pont launched nylon in 1939, rival chemical companies have been scrambling to produce synthetic fibers of their own. Du Pont itself has produced two additional synthetics, Orlon and Dacron; Union Carbide and Carbide has Dynel, and Dow has Saran. Synthetic fibers have become the biggest money-makers in the chemical industry, accounting altogether for more than a quarter of the industry's total 1952 sales. Last summer Monsanto added to this family of fibers by unveiling Acrilan, its most glamorous product.

Acrilan is manufactured in a brand-new \$30 million plant at Decatur, Ala. by the Chemstrand Corp., a joint venture of Monsanto and

American Viscose Corp., the company which introduced rayon into the U.S. Like Orlon (LIFE, Sept. 1), Acrilan is warm, washable, nonshrinking, moth- and mildew-proof, and will hold permanent pleats. Its creators claim it takes dyes more readily than Orlon.

To get Acrilan up to the point shown on these pages—the spinning and the radiant product—Monsanto marshals all the tools with which the industry converts simple components into final products. The whole ingenuity of the industry is focused in the Acrilan process which transforms three common gases into tangible fiber. How this transformation takes place is shown in detail on pages 36, 37.

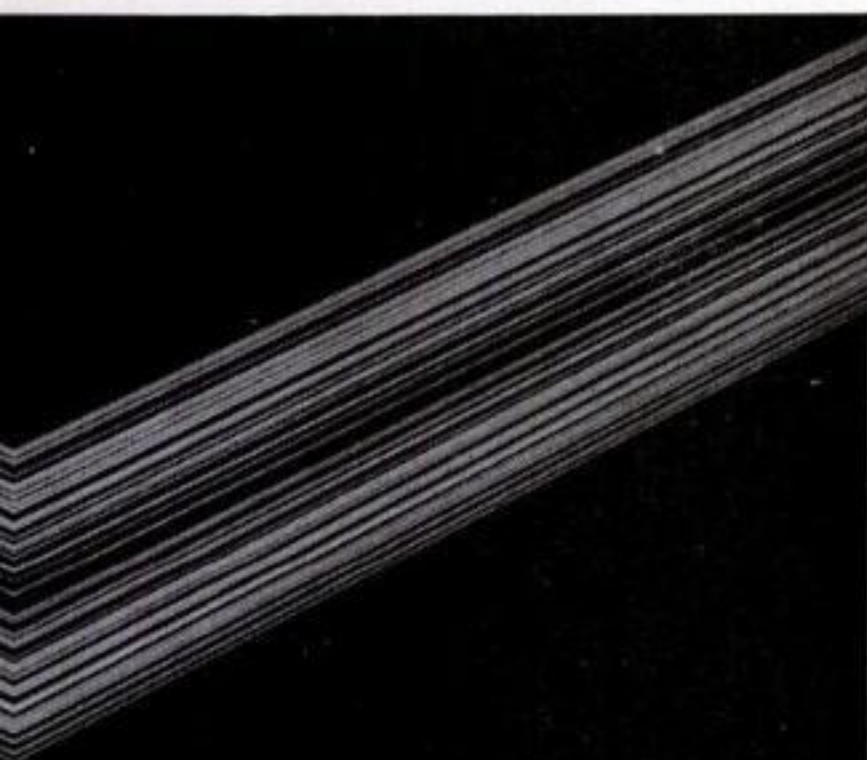
SUBMERGED SPINNERETTE rests in tank filled with solution. Syrupy Acrilan "dope" squeezed through spinnerette's tiny holes hardens into fibers. →



Éléments sous droits d'auteur

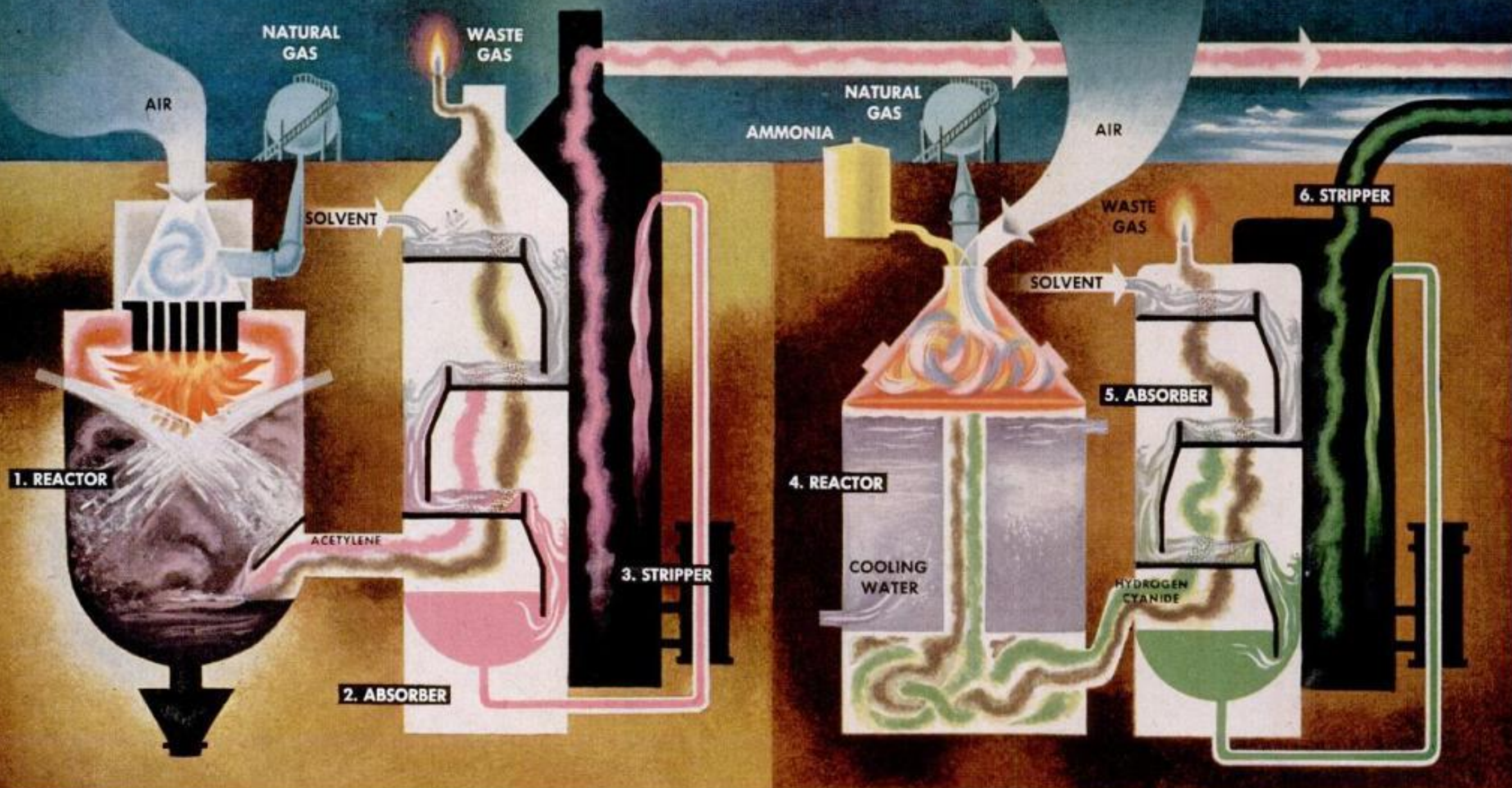


bons of thousands of fibers each. Beyond are steaming troughs where fibers are washed for processing.



FASHION FANTASY takes place at Monsanto's unfinished Texas City plant which will turn out ingredients for bolt of Acrilan in which model is draped.

CONTINUED ON NEXT PAGE



TEXAS CITY PROCESS, MAINLY CHEMICAL, TRANSFORMS AIR, AMMONIA AND NATURAL GAS INTO LIQUID ACRYLONITRILE BY MEANS OF THREE BASIC TOOLS

HOW AIR AND GAS ARE COMBINED, PURIFIED,

Acrilan fiber is made in two stages: at Monsanto's Texas City plant (*above*) and at Chemstrand Corp's plant in Decatur, Ala. (*below*). The paintings on these pages trace in 20 basic steps how air, natural gas and ammonia are transformed into bales of Acrilan staple.

Texas City makes acrylonitrile, Acrilan's chief component, which is formed by the union of two dangerous chemicals: explosive acetylene and poisonous hydrogen cyanide.

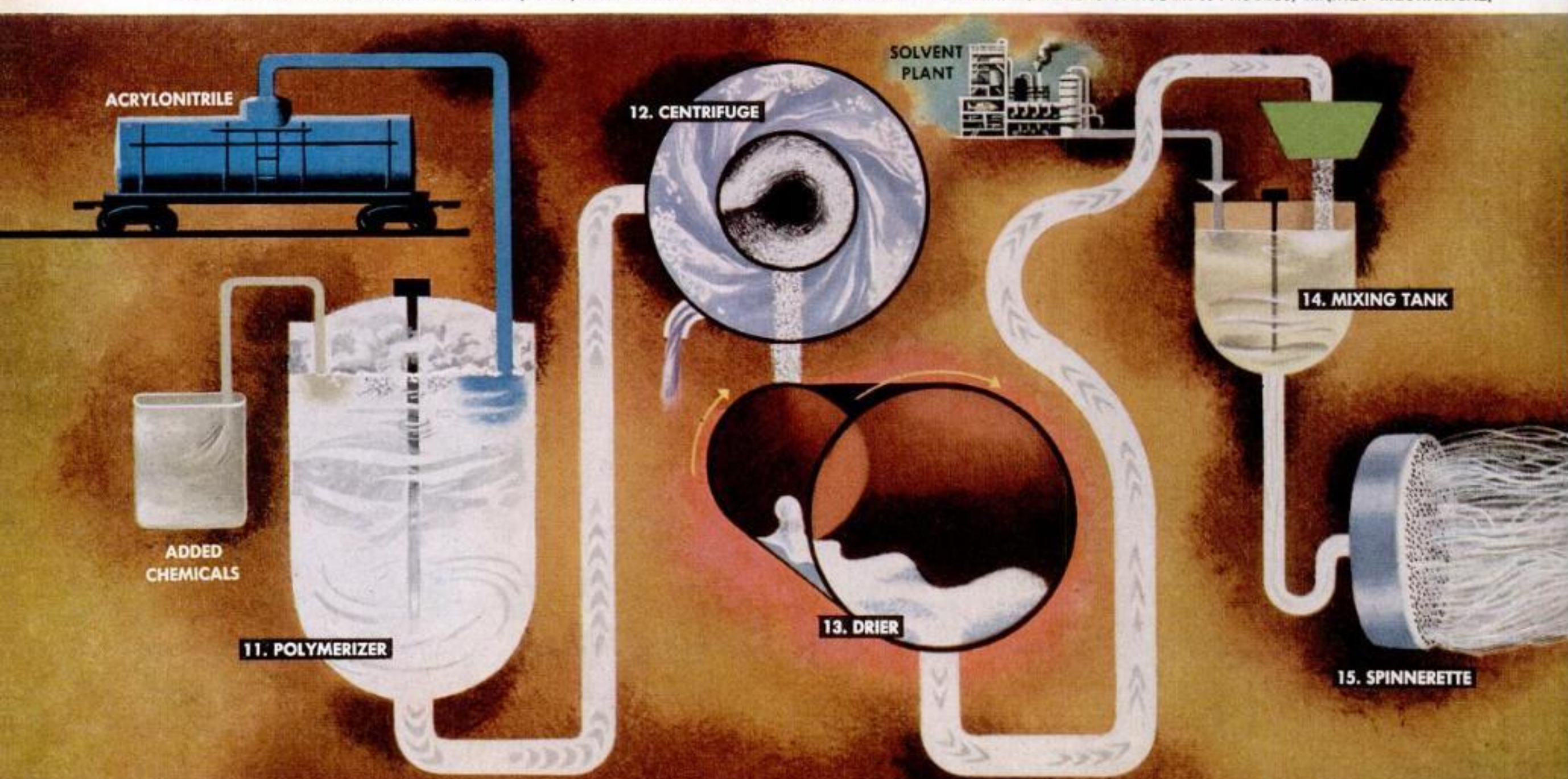
The process begins (*above*) when air and natural gas are pumped into a reactor (1), an

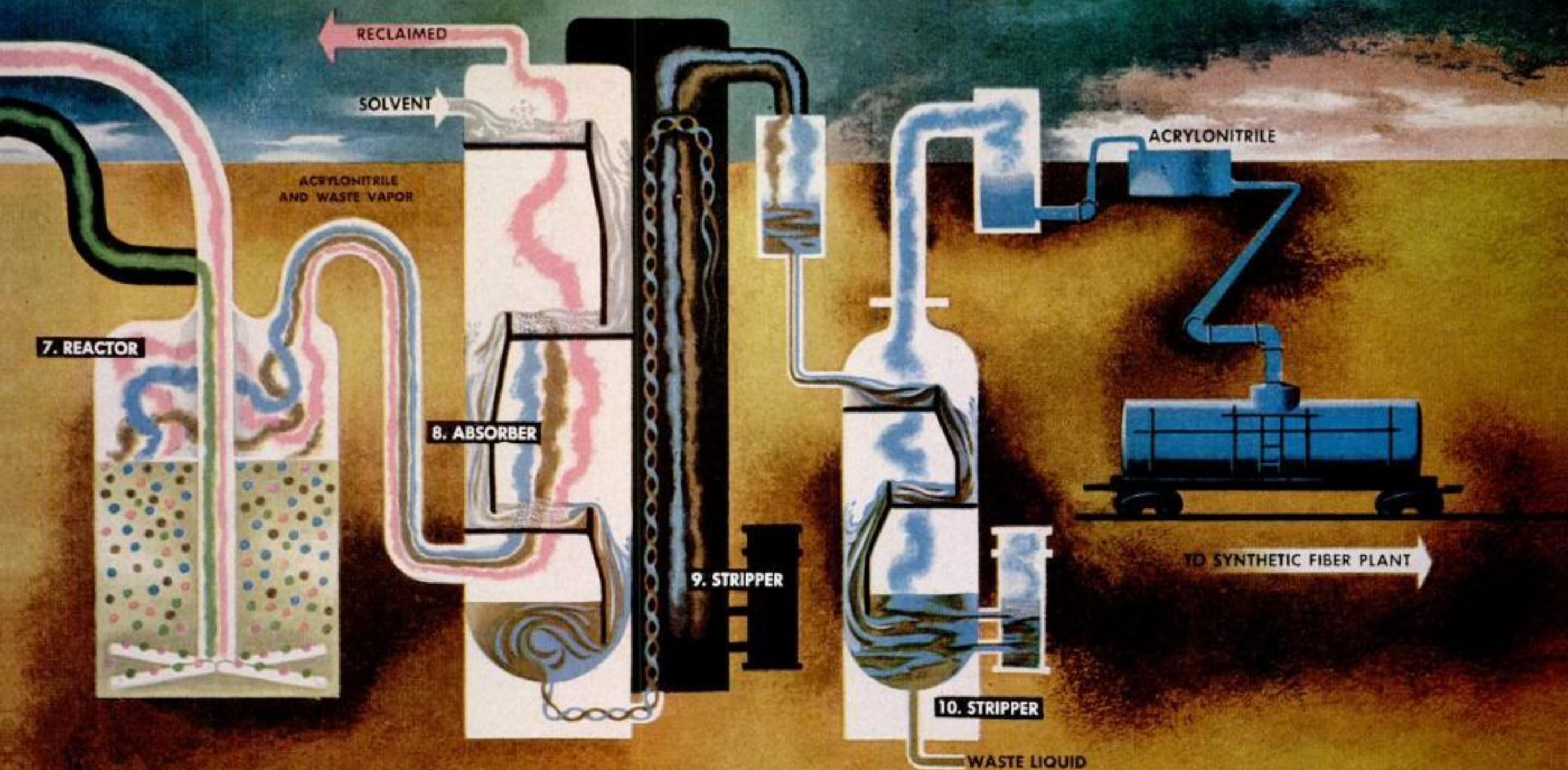
engineering term for any vessel where new substances are produced by chemical reactions, and burned to form acetylene (indicated in pink) and waste gas (brown). A water spray prevents the unstable acetylene from decomposing. The newly formed gases then pass into an absorber (2), where they rise up through perforated trays overflowing with solvent. The waste gas rises to the top and is burned off. But the acetylene is absorbed by the solvent and carried to the bottom. The solvent, now "fat," or saturated, with absorbed acetylene,

is pumped into a stripper (3) and heated to boil off pure acetylene gas.

At the same time, air, ammonia and natural gas are converted in a reactor (4) into hydrogen cyanide (green) and waste gas by passing through a bed of white-hot platinum catalyst. After flowing down through water-cooled pipes, the gases cross over into an absorber (5) where a solvent absorbs hydrogen cyanide and carries it to the bottom while waste gas rises to the top. The solvent, "fat" with hydrogen cyanide, is pumped to a stripper (6)

AT THE CHEMSTRAND PLANT IN DECATUR, ALA., ACRYLONITRILE SHIPPED FROM THE TEXAS CITY PLANT GOES THROUGH A PROCESS, MAINLY MECHANICAL,





OF CHEMICAL ENGINEERING: REACTORS, WHERE NEW CHEMICALS ARE CREATED, AND ABSORBERS AND STRIPPERS, WHERE NEW CHEMICALS ARE PURIFIED

SPUN, CRIMPED, CHOPPED TO MAKE ACRILAN

where pure hydrogen cyanide gas is boiled off.

In a third and final reaction, acetylene and hydrogen cyanide are brought into a reactor (7) where they bubble up through a liquid catalyst. This produces acrylonitrile (blue) along with excess acetylene and waste vapor. This three-fold mixture now flows into an absorber (8) where the excess acetylene rises to the top and is reclaimed.

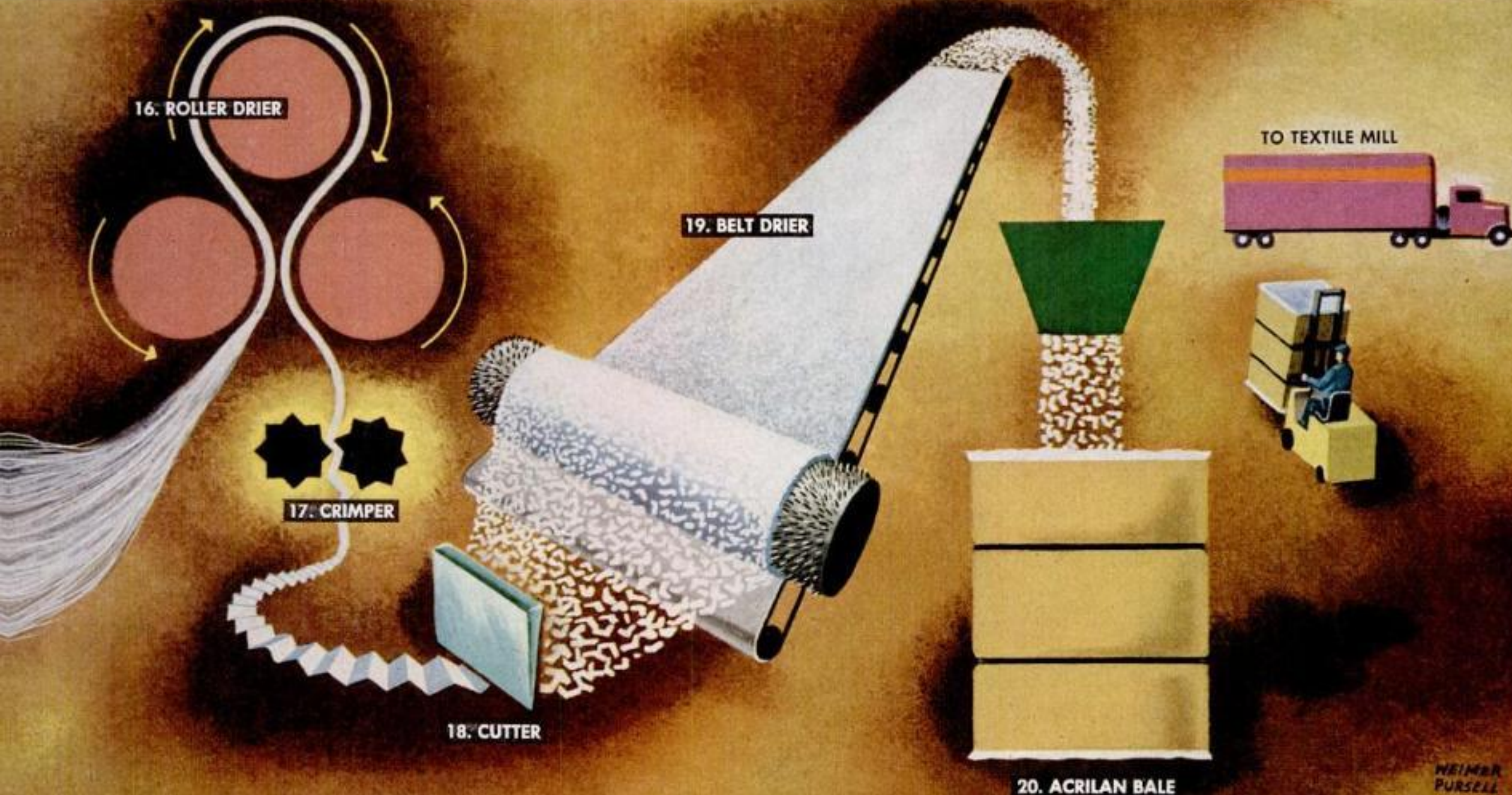
The two remaining vapors, acrylonitrile and waste, are absorbed in a solvent which is pumped into a stripper (9) and heated to boil

off a mixture of acrylonitrile and waste vapors. After being cooled to liquid in a condenser, the mixture is heated once again in a second stripper (10) to boil off acrylonitrile. Rising as a vapor out of the stripper, pure acrylonitrile is cooled back to liquid in another condenser and shipped to Decatur by tank car.

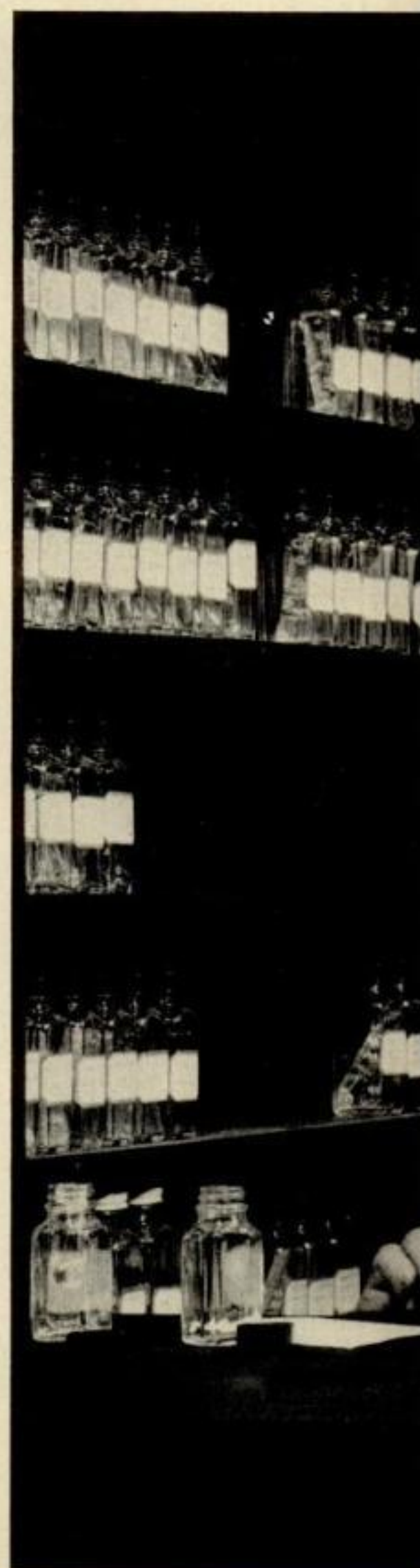
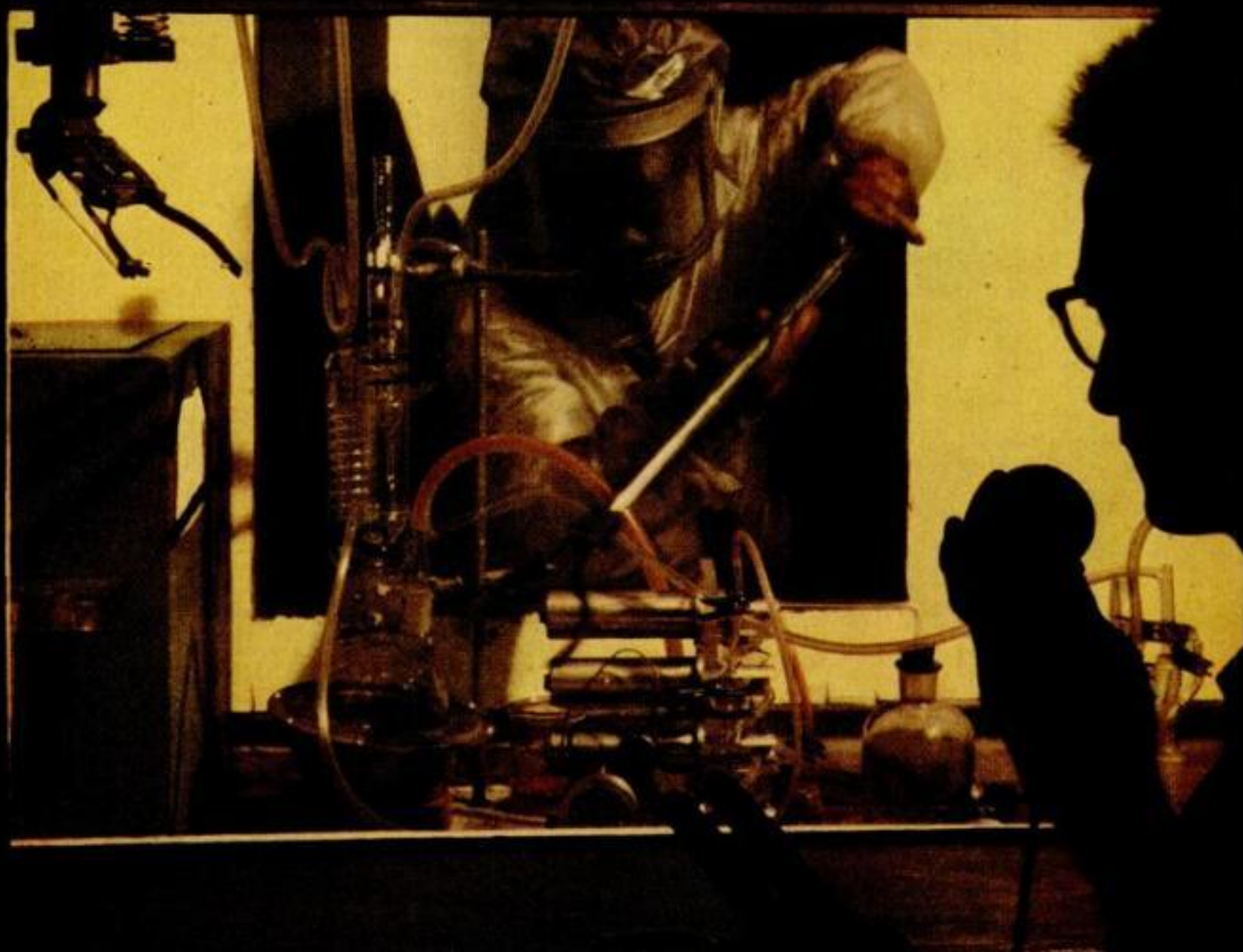
At Decatur (*below*) acrylonitrile is pumped into a polymerizer kettle (11) and activated with secret chemicals. Soon it bubbles, clouds up with white powder—acrylonitrile polymer—a new chemical formed by the linking of

hundreds of acrylonitrile molecules into long chains. Wrung out in a whirling centrifuge (12) and dried to dust in a revolving heated drum (13), the polymer is conveyed to a mixing tank (14) and there dissolved into syrup in a special liquid solvent. From here the syrup is pumped into the spinnerette (15) and extruded into continuous fibers which are dried on rollers (16), crimped for greater bulk (17), cut into shreds (18), dried again on a continuous belt drier (19) and packed into 400-pound bales (20) for the trip to the textile mill.

WHICH TURNS THE LIQUID FIRST INTO A WHITE POWDER, THEN INTO A SYRUP, THEN A FIBER AND FINALLY INTO THE FLUFFY STAPLE WHICH IS ACRILAN



RADIOACTIVE CHAMBER
is readied for experiment by a hooded technician at Monsanto-operated AEC Mound Laboratory, Miamisburg, Ohio. Chemist directs set-up through two-foot-thick radiation-proof window.



RESEARCHERS RUN A RACE FOR NEW PRODUCTS

Although all U.S. industry leans more and more heavily on research, none spends so much on it or relies so fundamentally on it as the chemical industry. Of the \$1.1 billion spent annually on U.S. industrial research, the chemical companies spend a full fifth.

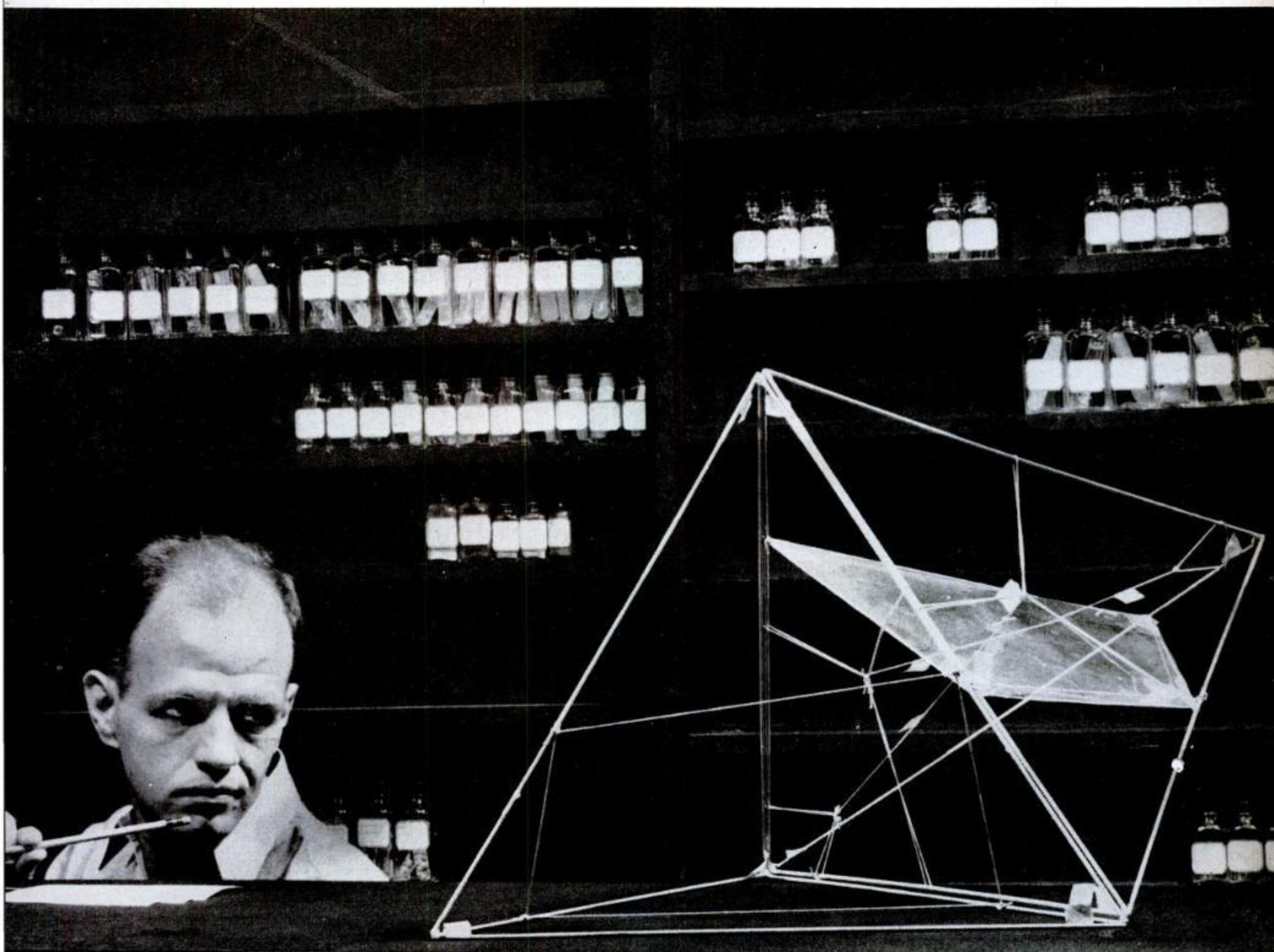
Like all the other companies, Monsanto knows it could not long survive the intense competition without a continual stream of new chemicals for its customers. The chemists who provide Monsanto with 42 new products a year work with tools ranging from vacuum cleaners to the radioactive chambers of Mound Laboratory, Miamisburg, Ohio. Most of their discoveries come about by deliberate planning. Monsanto's President Thomas, an amateur gardener, puts his research chemists to work to

find a chemical that would keep soil loose and crumbly for better plant growth. The result, Krilium, has become Monsanto's best-known product. Some new developments are almost pure accident. A Monsanto chemist was once looking for a chemical to make textiles water repellent. One chemical was no good as a water repeller, but it seemed promising for a completely different use—as a detergent. He tried it; it worked. Monsanto now manufactures this chemical by the ton, which is marketed as "All", a household washing powder.

Although only one out of 10 chemicals developed in the lab reaches commercial production, more than two fifths of Monsanto's total profit in the past decade has come from new products developed during those years.



VACUUM CLEANER tests detergent to see if it will be affected when blown through factory pipes.



IN SCIENTIFIC SEARCH for new products, Robert Slocombe studies a wire pyramid, using it as three-dimensional graph to analyze plastics with several chemical components. The location of each plastic in graph is determined by the

relative amounts of components it contains. Slocombe finds that certain similar plastics lie on points in same plane (flat sheet) and, armed with this knowledge, he is setting out to predict plastics whose make-up and uses are still unknown.

Fight-Tested Grumman Panthers Blast Reds Close to Siberia

There's a big difference between "flight-tested" and "fight-tested!" In the fight-tested there's seldom a second chance. It is too late to go back to the drawing board.

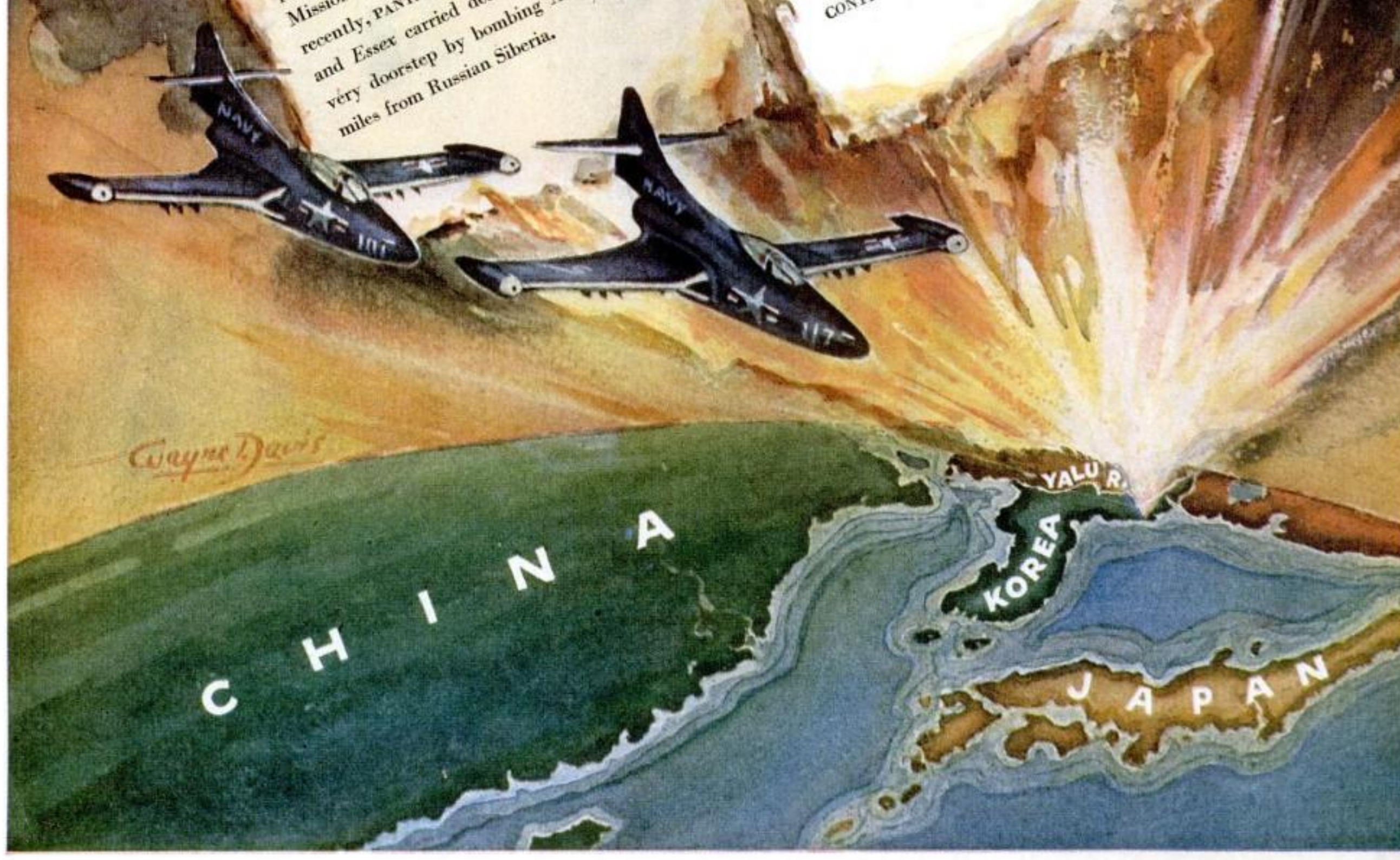
Ready when the Korean War began in June, 1950, the GRUMMAN PANTHER was the only Navy jet to see immediate action. Since then, over two years of constant combat has proved its ruggedness and dependability. Missions have been many and varied. Only recently, PANTHERS from the Boxer, Princeton and Essex carried destruction to the Reds' very doorstep by bombing Aoji just twelve miles from Russian Siberia.

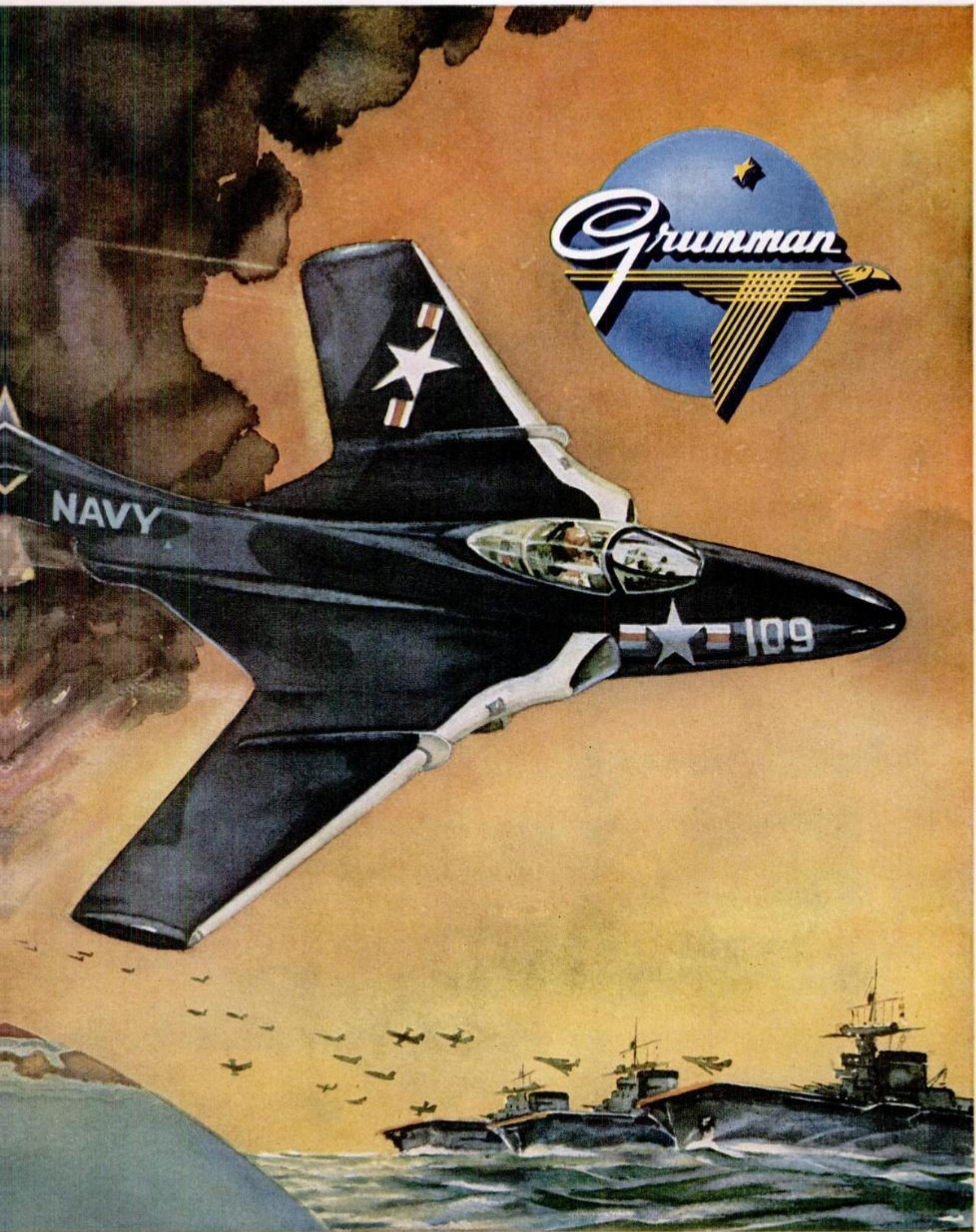
NEW GRUMMAN COUGAR IS NOW COMBAT-READY

In the Grumman tradition of being "ready when needed," a spanking new turbo-jet is now in fleet operation. It is the COUGAR, an even faster, swept-wing successor to the famous PANTHER. With Navy and Marine pilots at the controls, this sleek, up-to-the-minute fighter can meet the enemy on his own terms and talk in a language he will understand.

A full-color reproduction of this advertisement without text and suitable for framing will be sent to you for the asking. Just address:

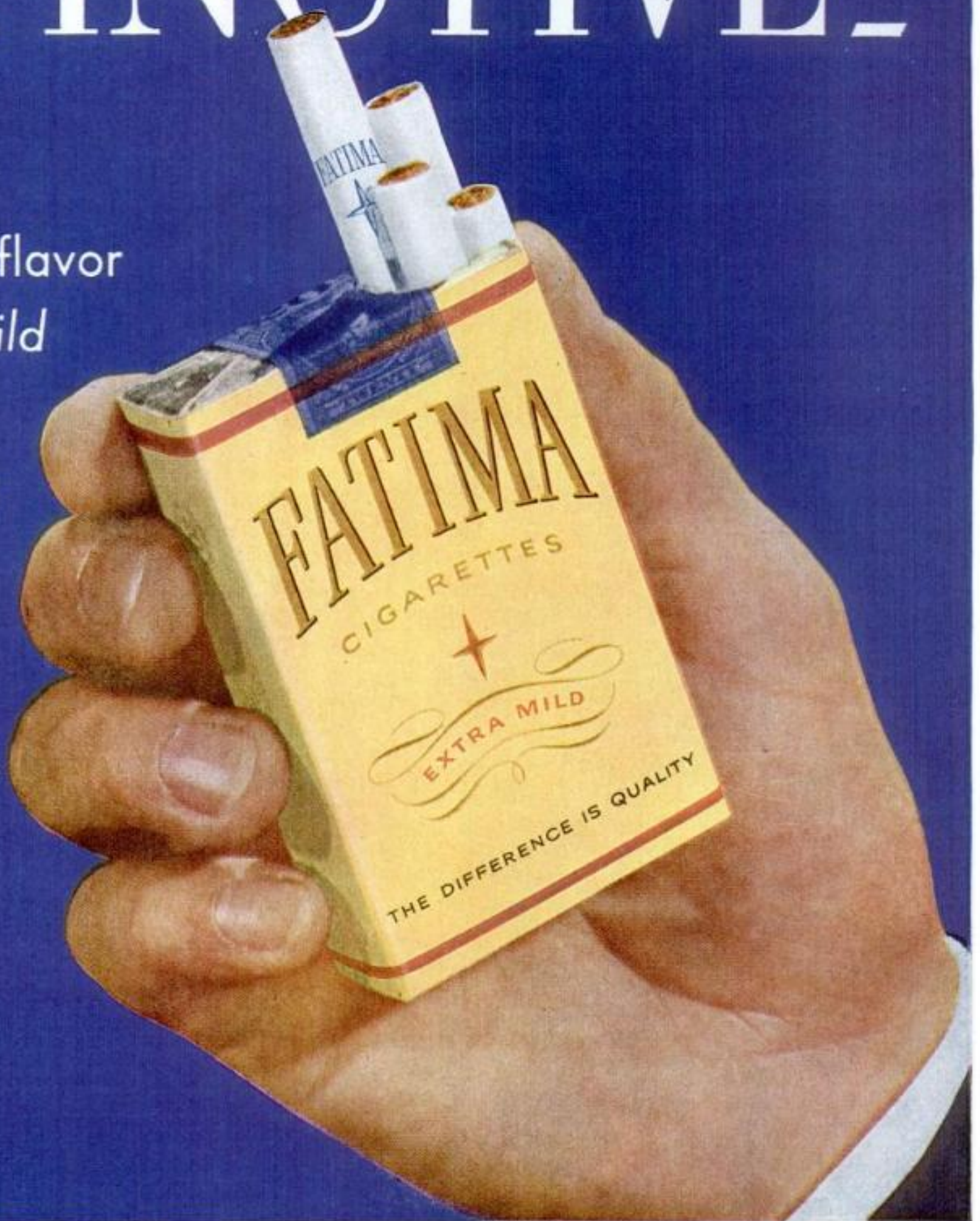
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BETHPAGE, LONG ISLAND, NEW YORK
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with a truly different flavor
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grow in favor among
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smokers everywhere



YOU GET an extra-mild and soothing smoke
—*plus* the added protection of

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WEARING HIS "H" even though he went to Penn State as undergraduate, Paul Shollar of Koppers Co. takes relaxing drink in dormitory room. Trainees often meet for cocktails before dinner.

pers Co. takes relaxing drink in dormitory room. Trainees often meet for cocktails before dinner.



PROFESSOR (FOREGROUND) LEADS DISCUSSION

'THE PBE'S'

Executives get special course at U.S. business brain center

Once satisfied with leaders who had a minimum of formal education, U.S. industry today demands executives who have received professional training in the complexities of business. It turns increasingly to the professional business schools and most notably to Harvard's Graduate School of Business Administration, the closest thing to an intellectual capital for U.S. business. The school, which follows present-day industrial problems through its "case study" system, has recently set up special courses for key executives.

These men, sent by their companies to the school's Advance Management Program, discuss actual business situations and apply the knowledge of their own experience to other management problems brought up in class. Though they sometimes seem out of place among younger men, most are proud to be chosen for the course and have given themselves a name—"PBE's" or "Pot Bellied Executives."



AT COFFEE BREAK Johan Luymes of KLM airlines (*left*) chats with George Duffield, Joe Waitkus.



HAPPY SHAVING! Thousands of Lectric Shave users are already getting faster, finer shaves than they ever thought possible. Try it yourself and see why 9 out of 10 men who try Lectric Shave continue to use it!

Here's how you can get top-notch performance from that Christmas gift shaver!

Try this new *before-shave* beard conditioner with the shaver you received for Christmas. *Before you shave*, apply cool, refreshing Lectric Shave to your face—then plug in your razor, shave. Note how Lectric Shave improves your razor's performance! Speeds up shaving! Cuts drag and discomfort!

Tests by thousands of men have proved that using Lectric Shave regularly gives closer, faster, more comfortable shaves with every type of electric shaver!

You get top-notch performance from your razor because Lectric Shave prepares your face for shaving with a remarkable three-way "setting up" action:

1. Sticky, razor-clogging perspiration is evaporated.
2. Your skin is lubricated to eliminate "shaver drag" and to allow faster,

cooler, more comfortable shaving.

3. Your whiskers are softened so your shaver can cut them off quickly, cleanly and closely.

And Lectric Shave is good for your shaver, too! It lubricates the shaver's cutting head for faster, easier action. It gives your shaver longer life.

Try Lectric Shave tomorrow. It's available at your nearest drugstore or toilet-goods counter—and it costs less than a penny a shave! Only 49 cents, no U. S. tax, for the 3-oz. bottle—enough for 80 shaves.

FREE! Use Lectric Shave with any make of shaver. Simply spread it on before shaving and get set to enjoy faster, closer shaves.

We'll send you a generous sample bottle—enough for a full month of shaving—*absolutely free*.

Send your name and address to The J. B. Williams Company, Dept. LL-9, Glastonbury, Conn.



"With Lectric Shave, I shave much closer and faster—and get a cooler, more comfortable shave in the bargain," reports F. Ensminger, Jr., Newark, N. J.



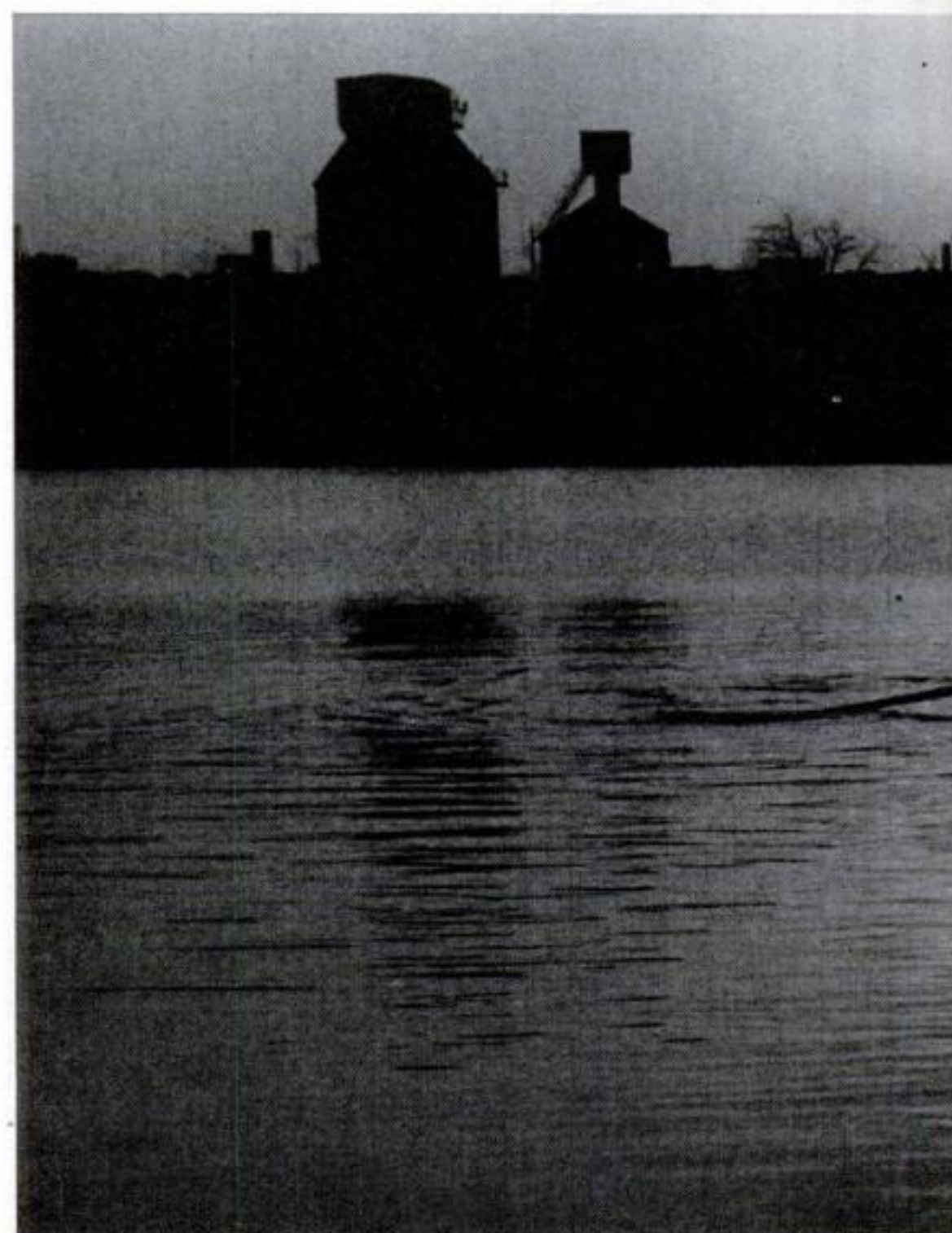
"Gave me wonderful results," says L. W. Meyers, Philadelphia, Pa. "With the first application of Lectric Shave, I got a faster, smoother shave and my face felt refreshed."



The 'PBE's' CONTINUED



INFORMAL CONFERENCE in office of the school's dean, Donald K. David, copies actual business practice, which school always tries to follow. Before becoming dean in 1942, David was president of American Maize Products Co. and today, like many members of his faculty, he serves on several



SOLITARY EXERCISE is taken by Arthur Smith, assistant comptroller of General Mills, Inc. in Minneapolis, who takes out a single scull on the Charles River. Other class members play squash or ping-pong for exercise. Although the prospect of being near Boston's good restaurants, museums



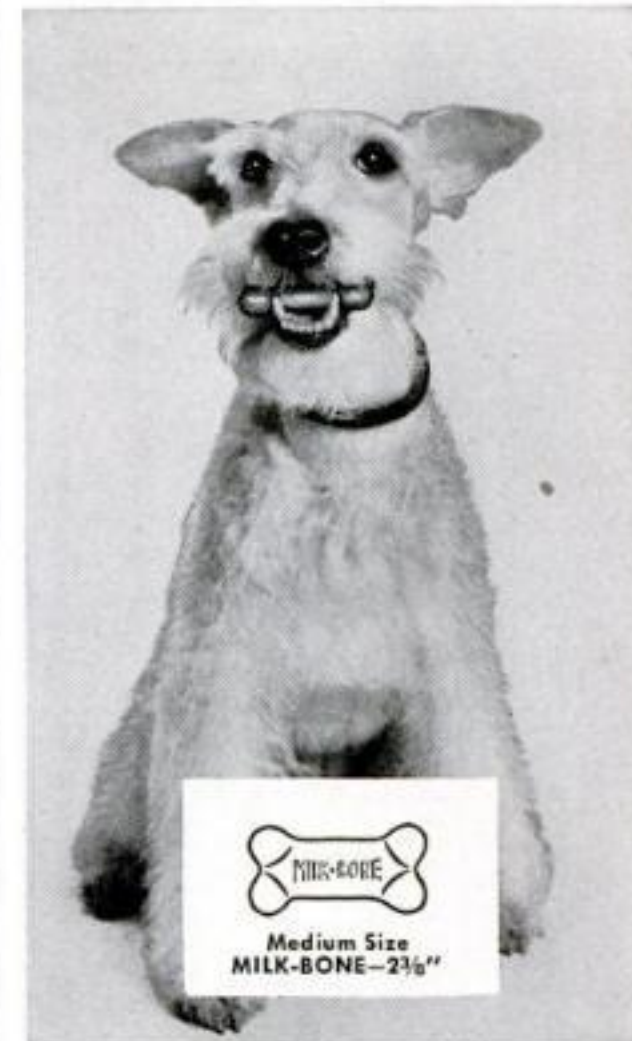
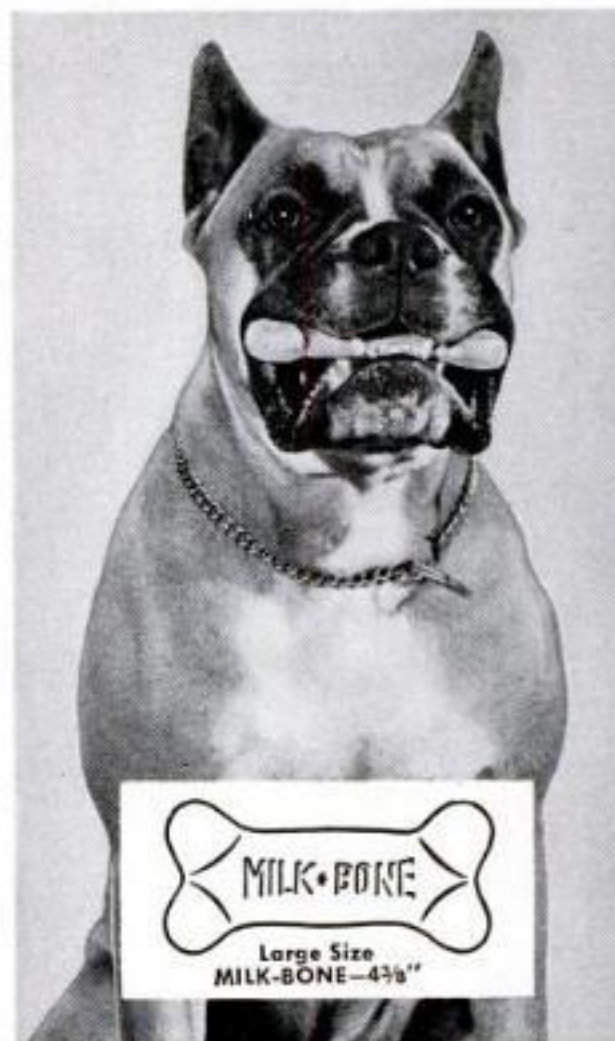
boards of directors and acts as consultant to corporations. The school continually sends out researchers to industrial plants both to update the school on business problems and to add to the school's huge file of case studies. Some cases are ones that were solved 25 years ago; others are current ones.



and other cultural opportunities is an enticement to some of the A.M.P. students, many of them spend spare time writing letters home, studying or holding serious bull sessions with other students. Most companies pay trainees' expenses to the school and keep men on full salary while they are there.

MILK-BONE

is made to match your dog in size!



MILK-BONE Dog Biscuits come in 3 sizes... to suit each dog's chewing need!

You can give your dog the RIGHT size MILK-BONE to chew. Puppies and grown-up dogs of all breeds need the chewing exercise they can get from crunchy MILK-BONE Dog Biscuits to help keep teeth and gums

healthy. Besides, these handy biscuits are extremely nourishing... rich in the vitamins and minerals dogs need most. Buy a package of the small, medium or large size biscuits today.

**WHATEVER YOUR DOG EATS,
HE NEEDS MILK-BONE BISCUIT, TOO!**

MILK-BONE products contain nutrients your dog needs: Vitamins A, B₁, B₂, D and E... Meat Meal... Milk... Fish Liver Oil... Wheat Germ... Whole Wheat Flour... Minerals... Chlorophyllin.

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National Biscuit Company, Dept. L-1 **FREE**
Milk-Bone Bakery **SAMPLE**
446 E. 10th St., New York 9, N. Y.
Send me free MILK-BONE DOG BISCUITS. Also
booklet: "How to Care for and Feed Your
Dog." (Paste coupon on postcard if you wish.)

Name

Address

City and State

This offer good in United States only



BAD OLD DAYS produced scenes like this, in which the police in 1938 restrain 5,000 men battling for 100 jobs as porters.

WHAT HAVE WE GOT HERE?

Anyone who studies the recent course of the nation's economy, as LIFE has done for this special issue, is struck by the immense changes which have occurred in the U.S. in the last few decades. How did they come about? And what do they reveal about the nature of our present economic structure? These questions are answered in the following article by Frederick Lewis Allen, social historian and popular writer on the changing American scene (Only Yesterday, Since Yesterday and, more recently, The Big Change). Mr. Allen's analysis of the new system that has been created in the U.S. raises another and a somewhat more difficult question: "Where do we go from here?" An answer to that question, as seen by the editors of LIFE's sister publication, FORTUNE, is contained in an article elsewhere in this issue.

DURING the past dozen years or so we have been watching, in the U.S., something close to a miracle. A nation which had been plagued with disastrous chronic unemployment, a nation whose productive abilities had had to be held in leash because the demand for its goods was so weak and uncertain, a nation in which many of the brightest economists were calling the American economy "mature," meaning that it had at best a sedate rather than an exciting

future, has become—incredibly—a nation with full employment, sensationally booming production and the widest distribution of plenty ever known anywhere. The once sick American economy has become the wonder of the modern world.

Few of us have been fully aware of the exciting magnitude of this transformation. So worried have we been over inflation, taxes and the strain of the unending international crisis; so prone have many of us been to dismiss what has been happening to our national income and national production as simply a prolongation of an artificial war boom; and so hard is it, anyhow, to see the events of our own day in perspective, that our eyes have been half-blinded to two imposing facts. One is that during these dozen years Americans have been taking part in what has been aptly described by the director of research of the National Bureau of Economic Research as "one of the great social revolutions of history." And the other fact is that this social revolution has been accompanied, and indeed made effective, by what might equally aptly be called a new industrial revolution—a headlong advance in the efficiency, productivity and exploratory progress of American industry.

The resulting prosperity has been something to make one rub one's eyes. A Chicago

taxi driver hit it off when he said, "Sure, what used to cost a nickel costs a dime now. But you see, I have the dime, and I didn't have the nickel." And so did the steelworker who remarked, "In the 1930s I worried about how I could eat. Now I'm worrying about where to park."

But 1929 was never like this

THE year 1929 is still remembered by graying citizens as a time when things were really high, wide and handsome. Well, the total per capita income of the people of the U.S. was 40% larger in 1950 than in 1929, even making full allowance for the rise in the price level. What a lift like that means to millions of Americans, in increased well-being, is difficult to express without exclamation marks.

The American system that has produced this extraordinary change is something new. It certainly isn't capitalism in the old-fashioned sense. And even more certainly it isn't socialism. There isn't any word for it in the language, because it is an outgrowth and mixture of many things. One might possibly venture to call it a revised and democratized capitalism supplemented by government action; but even as cautious a definition as that is sure to start an argument.

If You Don't See What You Want Inquire at Desk



GOOD NEW DAYS find jobs outnumbering job hunters, who show scant interest in New York agency board offering 340 jobs.

by FREDERICK LEWIS ALLEN

Answer: A dynamic new economic system which has safely by-passed socialism

Yet if we can't define it, at least we know something about how it works. And we can see that a major factor in our new prosperity is that we are constantly redistributing the national income into the pockets of the less prosperous. Just as the ably managed business concern plows part of its earnings back into improvements to the property, so our economic system plows back part of its earnings into making potential consumers out of people who formerly couldn't afford to buy much.

This is not something dreamed up by all-wise planners. It has come about as the result of a long series of pragmatic reforms, innovations and inventions over a stormy half-century, and also as a result of the prolonged military emergency of the past dozen years. It has come about through the operations of the graduated income tax, a potent redistributor; through the passage of minimum wage laws and other legislation to protect labor; through government subsidies and guarantees to people who, rightly or wrongly, are supposed to need a break; through the upward pressure on wages exerted by labor unions; through the fact that our need for war material has given us 10 straight years of full employment, and a seller's market for labor; through new management attitudes, which include an increasing

realization that the well-paid worker, who does his job under healthy and agreeable conditions, is a valuable worker; and also, of course, through an enormous gain in the efficiency of American industry and business. Without this gain in efficiency, the other changes would not have contributed much of anything toward prosperity. They would simply have robbed Peter to pay Paul—taken money away from the successful to give it to the unsuccessful. *With* the gain in efficiency, they have helped to bring about an extraordinary spreading of the growing national wealth.

For by lifting millions of Americans out of poverty into what in earlier days would have been called a "middle-class" way of life, this spreading of the wealth has provided, for American business, markets of a size undreamed of even in the humming 1920s.

People in a jam

NOT that we have abolished poverty. We certainly haven't. In recent years, at least 10% of American families have been trying to live on incomes of less than \$1,000 a year, and another 15% on incomes of between \$1,000 and \$2,000. But who are these people? They are not "the masses." They are not a proletariat. They are a lot of

widely separated people who happen to be in a jam—stranded old people, stranded widows, deserted families, migrant workers, sharecroppers, ineffective workers and physically or mentally disabled people. Some of them are business men or farmers who have simply had a bad year and will catch up again later. And for those whose plight is really bad we now have all manner of relief measures and free services which simply did not exist a generation ago.

It is quite true too that among those with somewhat larger earnings, there are many whose intake of money has not kept up with rising prices—people who live on meager invested savings, for instance, and groups like our teachers, who constitute today possibly the most undeservedly underpaid element in the land.

Furthermore, to some extent the change has come about at the expense of those who formerly were really prosperous. The top 5% of the population, income-wise, used to pull down a wildly disproportionate share of the total national income. In the period between the two world wars this 5% got about 28% of the total take, even after taxes. In recent years they have been getting only 17% of it after taxes—a big relative drop. The signs of this relative decline are manifest. To realize the extent of it, one has only to think

WHAT HAVE WE GOT? CONTINUED

of the great houses of the rich in the early years of this century—massive palaces, splendid chateaux—which have now been transformed into schools, convents or business establishments; or to ask the proprietor of a lavish restaurant or nightclub how many of his patrons are spending their own money, and how many are spending the company's money by way of an expense account. You will discover that much of what passes for personal wealth these days is corporate spending.

But most of the formerly rich, despite their fierce lamentations, are still very well off indeed. For they are getting a smaller slice of a much bigger pie.

And meanwhile great numbers of the American people—factory workers, farmers, some office workers, and members of various professional groups such as the engineers and the doctors—are actually getting a much fatter slice of this bigger pie. Their earnings have not only kept up with the cost of living but have outstripped it with room to spare. These are the chief beneficiaries of the social revolution. And it is because there are so many of them that millions of families have been able to buy a new car, a refrigerator, a washing machine, a television set; to take out insurance; to give their children a better education than they got themselves; to travel more widely; and to enrich their lives in many ways. According to a recent article on "The American Explosion" in the *Scientific Monthly*, in 1950, even allowing for the rise in prices, Americans spent 96% more money on books than in 1940; 140% more for toys and sports equipment; 219% more for photo developing and printing; 129% more for flowers and seeds; and 263% more for phonographs and records, musical instruments, radios and television sets.

Indeed, this social revolution has changed our whole national pattern of acceptance of expensive gadgets. If the television boom had begun in 1907 instead of 1947, it would have begun among the rich, for whom the automobile was then an expensive plaything. But it began after the big rise in the income of the majority—and now the television antennas sprout from the rooftops in every part of town.

Stockings tell the story

THERE is one statistic which sticks in my mind as an illustration of what this social revolution (along with the industrial revolution) has done to reduce class differences. In the year 1900, when silk stockings were a mark of luxury, 155 thousand pairs of them were manufactured in the U.S. But in the year 1949, when the technological advance of industry had produced nylons—generally considered at least as good as silk—the number of pairs of nylons sold in the U.S. was nothing like 155 thousand, it was 543 million—enough to provide every female in the country, from the age of 14 up, with between nine and ten pairs!

And there sticks in my mind, too, what a friend of mine told me about a Japanese visitor to the U.S. who wanted to see our representative American institutions and was taken to look at a supermarket. "And what do you suppose was the thing that really knocked that Japanese for a loop?" asked my friend. "It was some shelves on which were a lot of different kinds of canned dog food. To him it was remarkable enough that Americans could afford to feed their dogs something better than scraps from the table, and that tin and paper should be available for packaging dog food. But what he couldn't get over was that such a great variety of provender should be supplied for dogs, and bought in such quantity that you'd find it in a supermarket!"

Note that this great social revolution, which has spread prosperity far and wide, did not come about through redistributing a static amount of income. The redistribution has been *dynamic*—a matter of so changing our productive system that its fruits are much more widely scattered, and that every leap in efficiency immediately benefits a lot of people. What we have done has been to open up for American industry a new frontier—the purchasing power of the formerly poor.

The new industrial revolution which we have been witnessing can be summed up in one word: machines. We have been using vastly more machines, devising better ones and inventing altogether unprecedented ones.

Look about you at the machines which are changing our everyday life—automobiles, tractors, truck-trailers, refrigerators, washing machines, air conditioners, motor lawnmowers, electric milking machines, television sets and a host of others. In 1940 there were 32 million automobiles, buses and trucks in the U.S.; by 1950 the figure had shot up to about 49 million. The number of tractors on American farms increased nearly two and a half times



**When your bathroom
is CLOROX-clean
it's *safer* for
your family's health!**

That's because Clorox is more than an extra-gentle bleach... it's the most efficient germ-killer of its kind... a type of disinfectant recommended by public health authorities. Give your family the added health protection of a Clorox-clean home!

Millions of women include Clorox in routine cleaning of germ centers such as wash basins, toilet bowls, tubs, drainboards, sinks, floors. Clorox also removes stains, deodorizes... leaves surfaces clean looking, fresh smelling, sanitary!

CLOROX safeguards health in laundering, too!



White and color-fast linens are more than snowy-white and color-bright when they're Clorox-clean, they're sanitary, too. And Clorox conserves linens. It's free from caustic—extra gentle—made by an exclusive, patented formula. See directions on the label.



**When it's CLOROX-clean...
it's SAFER for Family Health!**

**FIRST AID
for
COLDS
take
Alka-Seltzer**

BRAND Reg. U.S. Pat. Off.

**Relieves The
GENERAL ACHES
FEVERISH FEELING
HEADACHE
Soothing Gargle Too!**

**Get
Alka-Seltzer
for
ACID INDIGESTION
HEADACHE
MUSCULAR ACHES**

DISPLAYED AT
DRUG STORES EVERYWHERE
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MILES
LABORATORIES, INC.
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Very first use of soothing cooling, liquid D.D.D. Prescription positively relieves raw red itch—caused by eczema, rashes, scalp irritation, chafing—other itch troubles. Greaseless, stainless. 43¢ trial bottle must satisfy or money back. Ask your druggist for **D.D.D. PRESCRIPTION**.



Ask Your Grocer For The
SUN-MAID THRIFT-1-PAK—
Six Handy Pocket Packs At Today's New Low Price!

Get aboard the Gravy Boat

**GRAVY
MASTER** sign of
good
gravy



LABOR RELATIONS, circa 1937, often became violent, as at left, with a deputy and a Detroit striker. In 1950 (right) U.A.W.'s Walter Reuther joins hands with GM representatives after peacefully negotiating a new contract.

WHAT HAVE WE GOT? CONTINUED

in the decade between 1940 and 1950. A generation ago only a small proportion of American farms were electrified; now 78% of them are. So fast is mechanization changing our farm life that the American farmer has been translated from the "hayseed" of old into a technologically alert businessman (see pp. 62-73). Visit a really up-to-date factory and your first question will be likely to be, "But where are the men?" And consider the magical petrochemical plants which are so intricately mechanized that they are run by a group of men sitting in a control room watching dials; many of these factories can run for a whole eight-hour shift without any manual operation at all.

Not only has the new industrial revolution brought machinery into the home, the farm and the factory as never before; it has also seen an incredible succession of innovations, inventions and discoveries.

I mentioned nylon a little way back. Nylon stockings were first put on public sale late in 1939. Let us begin at that point in time and remind ourselves of some of the new things that have appeared on the scene.

There has been the arrival of penicillin, aureomycin, streptomycin and the other disease-killing antibiotics. There has been the creation of synthetic rubber; the multiplication of electronic devices, some of them virtually miraculous; the coming of the jet plane; the practical development of the helicopter; and the success of the chemists in making all manner of improbable products out of oil. There has been the great advance in the making of synthetic or partly synthetic textiles; the discovery of the mysteriously merciful properties of cortisone and ACTH; the invention of the transistor, a tiny rival of the vacuum tube; and the production, within the past year, of Krilium and the other soil-conditioners. And, of course, there has been the most spectacular discovery of them all, that of atomic power—if only, at first, for destructive purposes. And still the flood of new things continues. Those which I have listed may be only the harbingers of a still more inventive future.

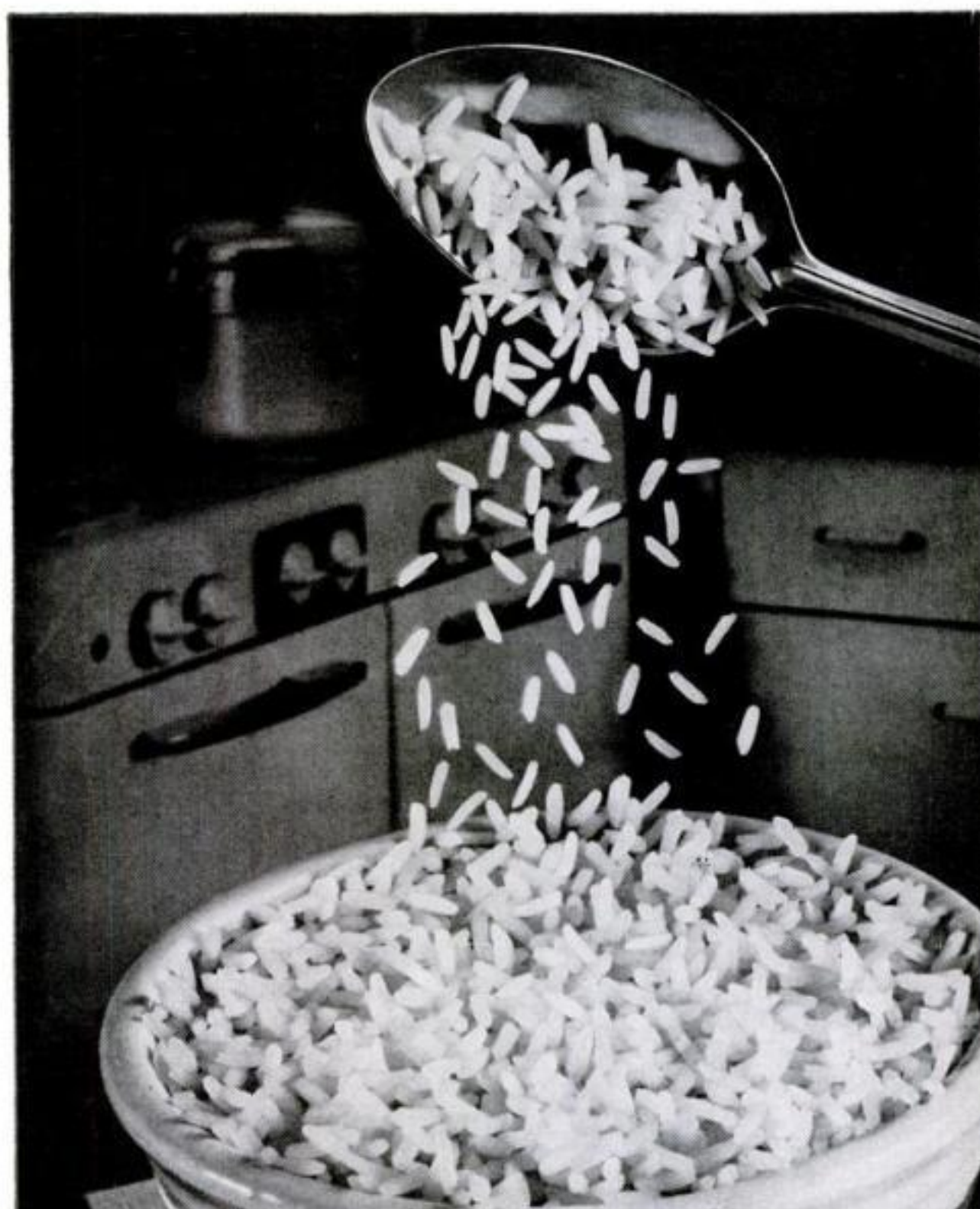
The friendly machine

WE used to hear a lot of wailing about the dreadful things the machine was going to do to mankind. It was going to turn people into robots, mechanical men, enslaved by the deadly monotony of a bolt-tightening job. But in fact the net effect of the new industrial revolution has been quite the opposite. Most of the new machines have not been mechanizing men, but have been releasing them from the formerly exhausting and deadly monotonous jobs. For now that labor is expensive, the principle which has been at work has been this: that if a task is unduly heavy or repetitious, that's a good sign that you ought to be able to get a machine to do it. Look, for instance, at what has happened to the sweaty, back-breaking job of lifting and toting cartons about a factory. In an up-to-date plant a fork-lift truck does the heaving and hauling, while the workman sits comfortably at the ingenious controls of the truck. The machine is not his master, any more than a dishwashing machine is the housewife's master. It's his obedient and husky servant.

Fewer Americans work for themselves than formerly; more work for somebody else. Or perhaps one should say "something else"—for it is likely to be a corporation that commands their labors. Nearly half of all gainfully employed Americans are on the payroll

CONTINUED ON NEXT PAGE

At last!
Rice that stays *fluffy*
even when you cook it
hours before serving!



This is the nutritious rice you've been reading about

Available now in big, economy size package.

Now you can serve your family light, fluffy rice every time with amazing new ease. Uncle Ben's Rice is specially processed before milling to cook fluffy and stay fluffy (even cold or reheated) and no special care needed. Gives you far more nourishment*—far more for your money. One cup of Uncle Ben's makes four cups of nourishing, fluffy rice. *Guaranteed fluffy.*

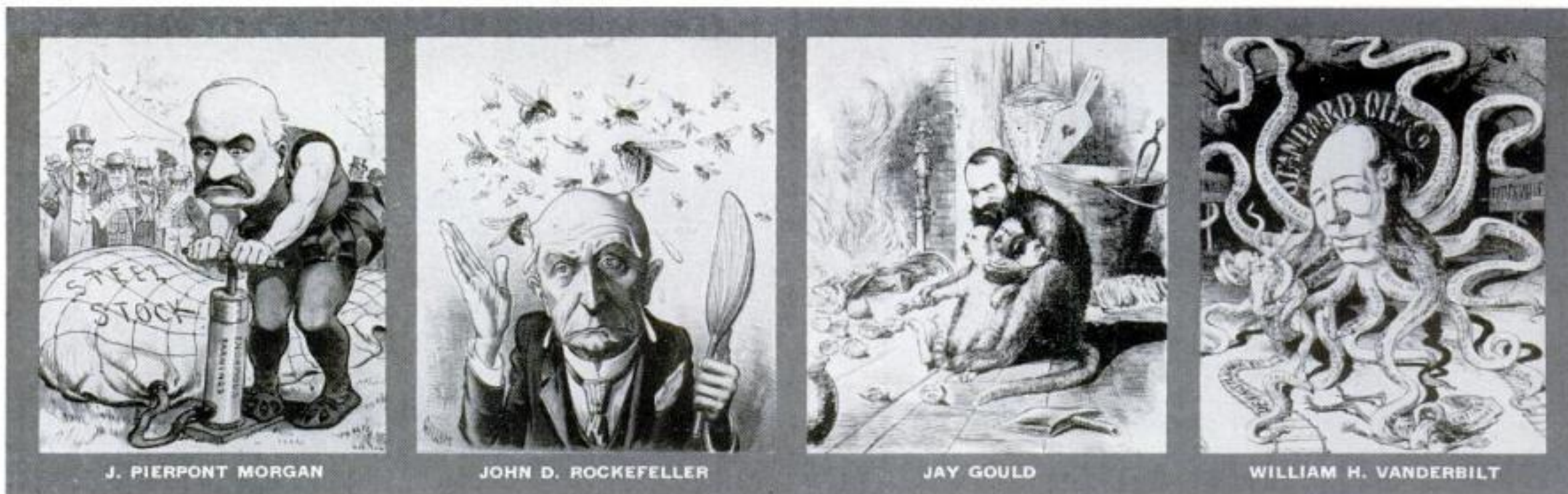
*Uncle Ben's Rice is made by the exclusive vacuum-pressure process that drives natural B-vitamins and minerals (lost in ordinary milling) deep into the grain. More nourishing. Easier cooking. Fluffy every time.

"Uncle Ben's" and "Converted" are trademarks of Converted Rice, Inc.

CONVERTED RICE, INC.
Houston, Texas



Uncle Ben's CONVERTED **LONG GRAIN RICE**



THE LOW REPUTE in which business was held by much of the American public in the late 19th Century is indicated by these scurrilous cartoons of the tycoons of the period. From left to right: *Puck* wryly invites Banker Morgan to put some of his profits back into the steel industry; Rockefeller fights off

governmental "hornets" before the dissolution of the Standard Oil holding company; Jay Gould is portrayed as a monkey using a three-headed feline associate to pluck his chestnuts from the fire; and Railroader Vanderbilt, who is supposed to have said, "The public be damned!" as the head and brains of an evil octopus.

WHAT HAVE WE GOT? CONTINUED

of a corporation, and if we leave farmers out of our reckoning, the proportion is **even** larger. But this doesn't mean what it would have meant a generation ago; for the very nature of the corporation itself is changing.

We speak of our system as "capitalist" because in the old days the people who had the money to start corporations and to provide them with the cash they needed for their operations—in short, the owners, and the bankers who stood behind them—were the top dogs of business. This is still true today of most small, young businesses; but it is scarcely true of the mature, large corporations which set the pace for American business. Some of them have so many owners that none can be a power by reason of his ownership; to take an extreme example, American Telephone & Telegraph has over a million owners, and no individual holds more than 1/20 of one per cent of the stock. As for the bankers, they are so circumscribed by regulations that they can no longer exercise arbitrary power; Wall Street is not the word to conjure with that it was a generation ago. Most successful corporations roll their own capital: build most of their new plants and finance most of their operations out of their own accumulated earnings. Furthermore, the modern corporation is so complex, and its management involves the coordination of so many special skills, that only a professional manager can cope with the task of running it. So today, generally speaking, it is management that is in the saddle.

And management of a new type. The hard-shelled, table-thumping tycoon, the supersalesman, the merciless bargainer, the money-minded tough guy, is on the way out—though he is still to be found here and there. He is on the way out because he hasn't the equipment to meet the requirements of these times.

For the corporation manager of today has to be adept in dealing with the government, with labor, with his consumers, and with the power that lies behind all of these—public opinion. And besides, he must be

able to work with professional men, for business is becoming increasingly professionalized. When I say professional men I am thinking of the statisticians, quality-control experts, market analysts, public-relations men, personnel men, tax experts, foreign-trade consultants, and so on indefinitely, whose functions are by nature professional in the sense that the lawyer's functions are. And there are also the engineers, of numerous species, and the research scientists; in 1947 the Steelman Report disclosed that of the 137,000 scientists and research engineers in the country, 50,000 were working for colleges or universities, 30,000 were working for the government, and as many as 57,000—the largest group of the three—were working for business concerns.

The flexible executive

THE corporation executive of today must be the captain of a smooth-working team of people who can decide whether the time has come to build a new polymerization plant, what the answer is to the unsatisfactory employee relations in a given unit of the business, how to cope with a new government regulation, how to achieve a mutually respectful understanding with union representatives, and what position to take on price increases in order to maintain the goodwill of the public. In short, he is confronted with so many questions which require knowledge, intellectual subtlety, political insight and human flexibility that he desperately needs a mental and temperamental equipment of the sort that the oldtime tycoon could do without. The tycoon would have snorted at the idea of sending his junior executives to a university to get a grounding in the general principles of executive management; today, scores of companies send their promising men—at the average age of about 40—to the Harvard Graduate School of Business Administration for its Advanced Management Program (see pp. 43-45). For it has become generally understood that the running of a big business requires what is essentially a professional equipment.

CONTINUED ON PAGE 55



THE HIGH REPUTE in which business is held today is the result of forward-looking leadership by expert managers who direct corporations in behalf of thousands of stockholder-owners. A 50-year-old chemical engineer, Crawford Hallock Greenewalt, runs the great Du Pont empire. David Sarnoff, an electrical engineer,

not only heads up RCA but supports many public service foundations. Henry Ford II has completely altered his grandfather's violent antiunion policies. Engineer Clifford F. Hood, who becomes president of U.S. Steel on Jan. 1, is expected to continue the progressive policies of his predecessor, Benjamin Fairless.



WORK BETTER! . . . Rehearsal is a busy time for George Burns and Gracie Allen, stars of the *Burns and Allen Show* on CBS Television. But they always "take five" for a "Coffee-break"! Coffee's pleasant lift makes hard work seem lighter, helps to ease the strain. The best break in anybody's working day . . . is a "Coffee-break"!

—give
yourself
a
"Coffee-break"!



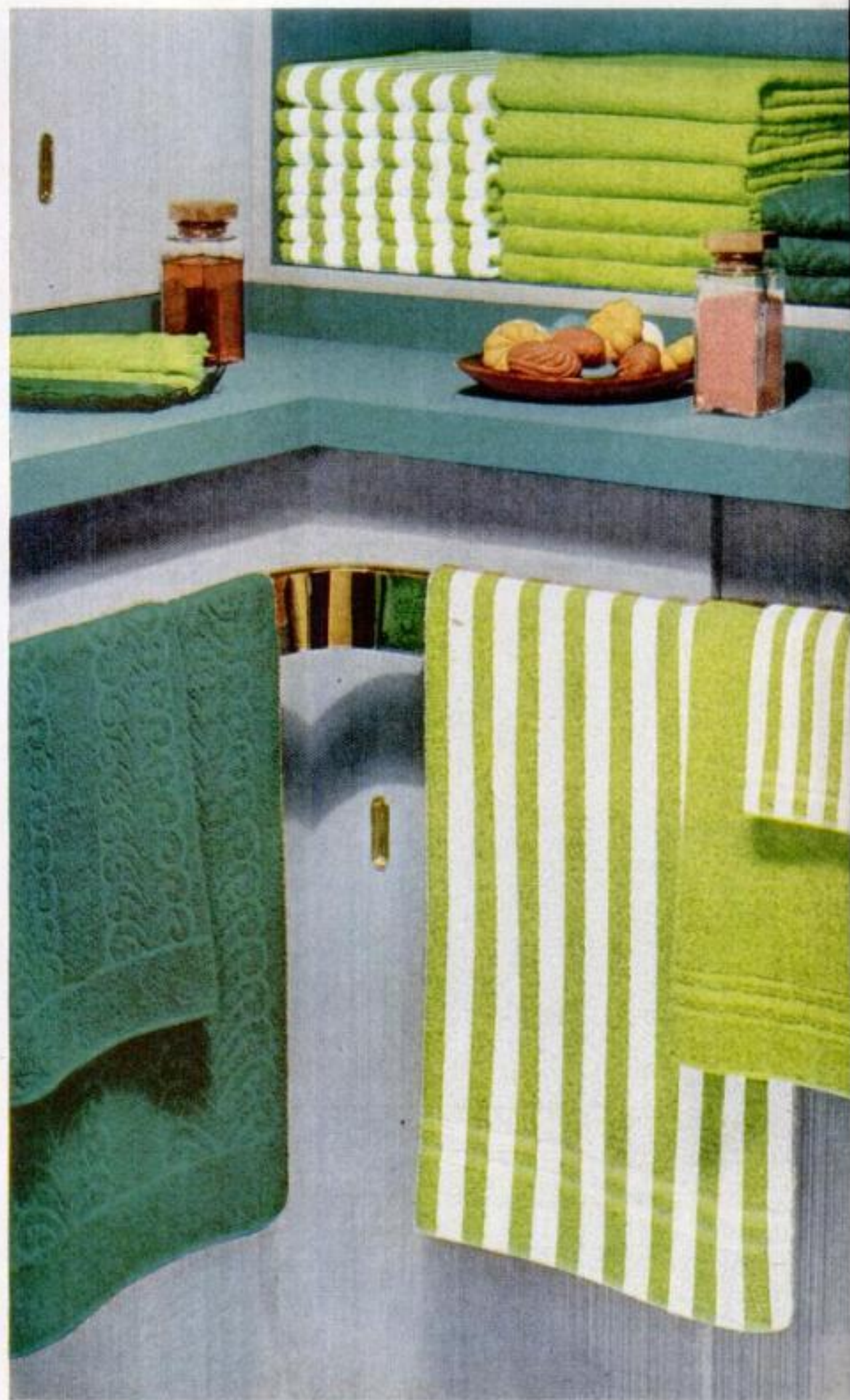
THINK BETTER! . . . TV cameramen have problems on the *Burns and Allen Show*. And they solve them over coffee! Coffee gently stimulates your mind, helps you stay alert. A delicious aid to clear thinking . . . is a "Coffee-break"!



FEEL BETTER! . . . The whole family enjoys *Burns and Allen* . . . with a cheerful cup of full-strength coffee! At mealtimes or in-between — at home, at work, or in your favorite restaurant — give yourself a "Coffee-break"! ©1953

Coffee always gives you a break!

Over 20,000,000 wonderful Cannon towels—all



These sparkling Cannon towels (and many others, too) wear VERY special price tags! You'll simply sing at the savings . . . if you buy a closetful of lovely, long-lasting ensembles now!

Choose from a variety of designs! Rich solids, smart stripes, plaids, charming florals, modern sculptured effects! Each will lift any bathroom from doldrums to *delight*!



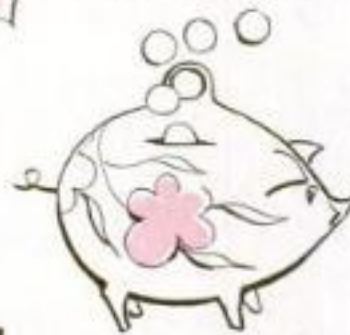
FOR ABSORBENCY—Cannon wins! These thick, thirsty, long-looped lovelies *actually absorb 5 times their weight in water!* That's an interesting fact you can prove for yourself!



FOR LONG-LASTING DURABILITY—Cannon wins! They keep their glowing colors, their divine feel, their handsome shapes (AND their hems!) through countless washings, through years and years of full-house hard use!



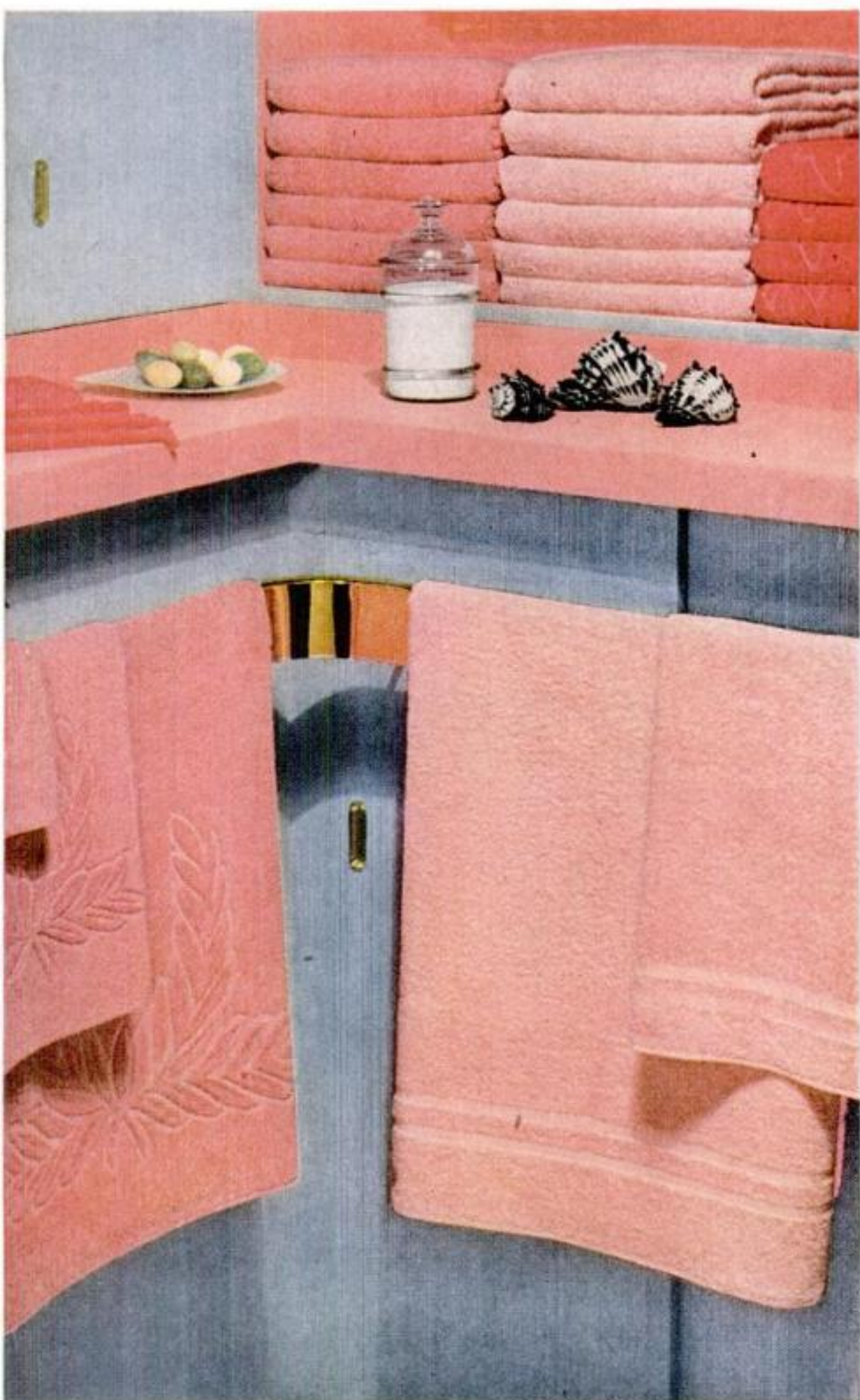
FOR HEAVENLY TEXTURE—Cannon wins! Measure a dozen fine new Cannons with a stack of 12 ordinary towels of the same price. Yessir! Those Cannon towels will measure higher every time! "Beauti-Fluff," Cannon's exclusive finish, makes towels softer, deeper, fluffier—more *luxurious*!



FOR PURSE-PAMPERING VALUE—Cannon wins! On every count, 8 out of 10 of America's wisest shoppers prefer Cannon—**BUY Cannon!** No matter what you pay, penny for penny, you get **MORE** for your money in Cannon towels.

More women buy Cannon towels

specialy priced at the January Sales—39¢ to 2⁹⁸



Cannon towels come in 22 magic colors that you can blend, mix or match to suit your mood. And, deep tones or pretty pastels, these colors stay fresh as paint!



Long looped, thickly looped, *every* Cannon towel is as blissful to feel as it is to see. Better grab your hat and *scat* . . . to your favorite store today. Ask for Cannon's January specials. They're *wonderful*!

CANNONS ARE FOR KITCHENS, TOO! They'll brighten your view and lighten your work. Choose from a rainbow of colors . . . scads of designs. And see how little they cost!



Cannon Mills, Inc., 79 Worth Street, New York City 13
Towels • Sheets • Stockings • Blankets • Bedspreads



than all other brands combined!



Meeting last too long?

No need to worry, ma'am, with Minute Rice on the agenda! You can have supper on the table in a *flash*—with quick, quick Minute Rice! It's luxury-quality, long-grained rice *pre-cooked* to save you time and trouble.

Just bring to a boil, turn off the heat. In 13 minutes you have *perfect* rice—plump, snowy, and full of flavor. So fool-proof every time, so good in so many dishes, you'll move to serve Minute Rice *often*! Everyone votes "aye" for Minute Rice!

Fix a 1-dish wonder with Minute Rice



Quick and Delicious!

Minute Rice gives you perfect rice *every* time! Fluffy, long-grained, delicious!

Quick and Handy!

Keep Minute Rice on hand always! Get the large, economical *Family Size*!

**MINUTE
RICE**
PRE-COOKED

New
ECONOMY
SIZE

For Quick-Quick Meals

LONG-GRAIN WHITE RICE

Quick and Easy!

No washing! No rinsing! No draining! No steaming! It's pre-cooked!

Just 20 minutes with Minute Rice!

TURKEY SUPPER SUPERB

S-t-r-e-t-c-h those holiday leftovers into an exciting one-dish supper. Prepare $1\frac{1}{3}$ cups Minute Rice as directed on package, adding $\frac{1}{8}$ teaspoon savory. Cook 1 package Birds Eye Broccoli Spears or Cuts as directed; add 2 tablespoons butter. Mix 2 cans condensed cream of chicken soup, $\frac{1}{2}$ cup milk, 2 diced pimentos, a little chopped parsley, and $1\frac{1}{2}$ cups diced leftover turkey, chicken, or other fowl. Mix well, season, simmer 3 minutes to heat and blend flavors. Arrange on platter, and serve 4 or 5. Golly, how *good*! Remember—only Minute Rice can absorb the savory flavor, make such a scrumptious one-dish wonder so *fast*!

Another Quick Delight—*Almond Rice*! Out of this world with roast or cold sliced chicken or turkey. Prepare $1\frac{1}{3}$ cups Minute Rice as directed on package. Sauté $\frac{1}{4}$ cup slivered blanched almonds in 2 tablespoons butter until golden brown; add to rice before serving.

For perfect rice
the quick and easy way
*** pre-cooked

MINUTE BRAND **RICE**



A Product of General Foods

WHAT HAVE WE GOT? CONTINUED

It is therefore scarcely an accident that a great many of the leading businessmen of America either have had professional training or have enlarged their business perspective by serving with the government: that, for instance, the chief executive officer of General Motors began as an electrical engineer, the president of Chrysler is a lawyer who specialized in labor law, the two top officers of Standard Oil (New Jersey) are an ex-engineer and an ex-geologist, and the head of American Telephone is an electrical engineer; that the chairman of the Mutual Life Insurance Company is an ex-congressman, ex-university vice chancellor and ex-ambassador; that the president of New York Life is an ex-foundation head, and its chairman is an ex-deputy governor of the Federal Reserve Bank of New York; that the president of the New York Stock Exchange is an ex-college president, and the president of the Curb Exchange is an ex-official of the Securities and Exchange Commission.

If the managers have to be a new species, this is also because the corporation of today is a social institution which plays a much more comprehensive part in its employees' lives than it used to. Join the staff of John Doe & Co. and you will find it withholding your taxes, tapping your salary for medical insurance, your future pension and the like; you will eat in its lunchroom, get your sore finger attended to in its dispensary, learn about your fellow employees through its house organ (the urban-age equivalent of the oldtime country weekly), be pressed to join both the union and the bowling team and to go to its company parties; and you will find, too, that a large part of your social life is absorbed in companionship with your department mates. As you move up into the higher echelons you will find yourself traveling and entertaining lavishly on a company expense account. So attentive are some corporations to the social amenities among their staffs, and so convinced that a man with a discordant personality—or a disputatious wife—may disrupt company morale, that they choose their executives with as much grave attention to their social comportment as if they were holding a club election. The company raises money for the Community Chest, likes to see its young men active in the Chamber of Commerce and the trade association, and in general thinks of itself not merely as a money-making enterprise—though it must of course make money—but as a social institution too.

To say that the corporations of today are more virtuous than those of old would be to make a dubious generalization. But at least it may be said that the important ones have to *act* more virtuously than they used to—or at least to act with a fuller sense of the value of a good reputation with their employees, their stockholders, their consumers, their governmental investigators (if such should start prying into their affairs) and the general public. For they have found that good business depends at least partly upon goodwill, which in turn is likely to depend at least partly upon good deeds. Most of their executives—especially the younger ones—are acutely conscious that business lost the favor of the public during the 1930s largely because of the mulishness of the business moguls of that time, and are resolved to behave quite differently now. The result is that they are deeply conscious of their public responsibility.

The old socialist idea was that corporations were *ipso facto* soulless, and government officials were *ipso facto* public servants. Nowadays our corporations are showing that they too can act like public servants. For they live in such a goldfish bowl that they have to.

That this is an era of big government—of almost irresistibly expanding government—is obvious to all. Even before Korea, the federal government was spending almost 80 times as much money, per year, as in 1900. It was actually spending, in a single year, an amount of money bigger than the whole national debt during the 1930s—that national debt whose size caused so much head-shaking in those days. Most of the colossal increase is of course due to military spending; but even the nonmilitary spending has been going up by leaps and bounds.

The umpire state

AND the government intervenes in the workings of the American economy in many ways. It imposes all manner of regulations on business—including some pretty arbitrary ones. It provides many subsidies and guarantees, as when it props up farm prices. It serves as a court of last resort in labor disputes. It determines the basic conditions of credit; and, in an emergency, it imposes controls upon prices and wages. Through its placing of orders for military and other goods, it provides a terrific stimulant for business. And all the while it accepts a responsibility—which it never recognized until the 1930s—for the over-all working of the economic machinery of the U.S. Practically everybody in the country, regardless of political party, now assumes that if a depression threatens us, the



TECHNOLOGICAL ADVANCES, such as this fork lift for handling lumber and cargo, have made work easier and faster without causing unemployment.

government *must* step in to try to prevent it; and furthermore, that the government *must* see that people do not suffer inordinately as a result of hard times.

Little wonder, then, that there are innumerable people who, watching this expansion of federal powers and aids and interventions, say that the government is on its way to swallowing up everything.

But before we jump to this conclusion it would be well to look at some other facts. One of these facts is that while our government is getting more active and more fully organized, so too are our private institutions. What is often forgotten in the heated arguments over the "socialization" of the country is that as our American life becomes more industrialized, more urbanized and more complex, we citizens become much more *interdependent* than in earlier days. Our fortunes become much more interlocked. What a rancher does in Texas affects a transit worker in Cleveland as never before, and vice versa. Hence the need for frequent intervention by the government, serving as an umpire state if not as a welfare state. But hence, too, the lively growth in the number, energy and variety of private institutions in the U.S.

These private institutions include not only businesses of all sorts but also universities, colleges, libraries, hospitals, charitable organizations, chambers of commerce, labor unions, farm organizations, lobbies, community chests, service clubs, fraternities, alumni and alumnae associations, foundations and organizations to promote this or that cause; and, in addition, trade associations by the thousands, and a great proliferation of professional and specialists' associations of many kinds. Did you know that since 1930 the number of trade associations in the U.S. has tripled, and that there is now even a trade association of executives of trade associations? And did you know that in the textile, apparel and leather industries *alone* there are 270 trade associations?

A prominent characteristic of these organizations is the amount of information they collect and make available to everybody in the industry. One thing that almost every foreign businessman exclaims at in America is how few secrets there are. Half a century ago—even, perhaps, a quarter of a century ago—a manufacturer would probably have regarded the safety record of his firm as nobody else's business. Today the directors of the Manufacturing Chemists Association examine, every month, the detailed safety record for the whole industry, company by company. Half a century ago, many magazine publishers kept to themselves their precise circulation figures; today the members of their national association take pride in the fact that



*How lovely
can you be?*

**ACCENT YOUR EYES
AND SEE!**

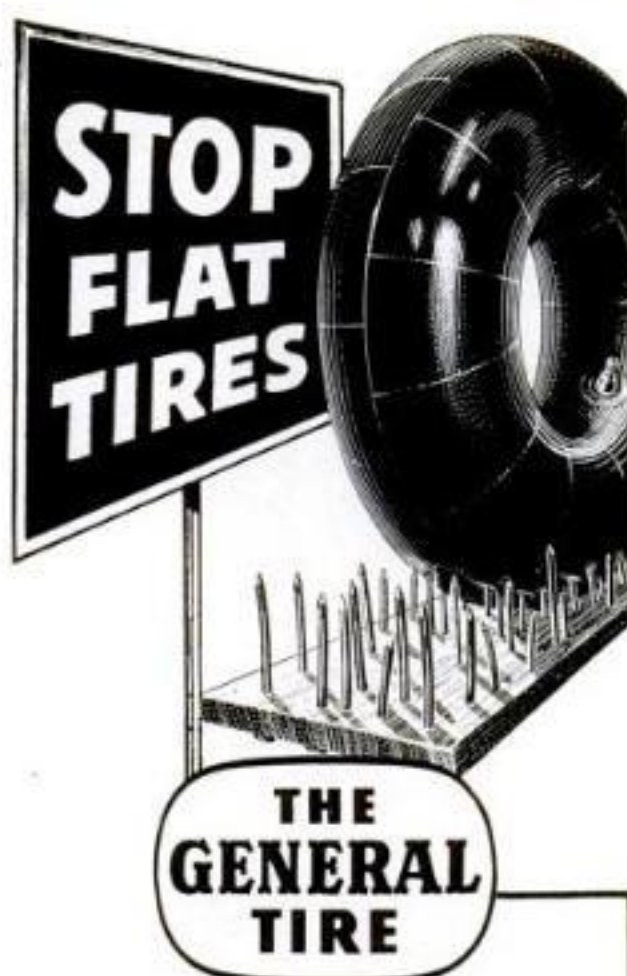
It takes just a few accents of Maybelline Mascara, Eyebrow Pencil and Shadow to make your eyes more beautiful. Instantly they give your face more life and expression. So of course, when your eyes look lovelier, you look lovelier, too. Try it—you'll see!

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Now change streaked, gray, graying or drab hair to a new lustrous youthful-looking color, try Tintz Creme Shampoo-Tint today. It's a new hair coloring that re-colors hair at home as it shampoos. Takes only 17 minutes. No waiting for results. It's so easy to use — just shampoo. Won't wash or rub out. **MONEY BACK Guarantee.** Get your choice of 13 beautiful shades today.



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POPCORN**

Outpops any corn... in any pan
(or money back!)

WHAT HAVE WE GOT? CONTINUED

examiners from the Audit Bureau of Circulations go through every magazine's records and publish their exact findings.

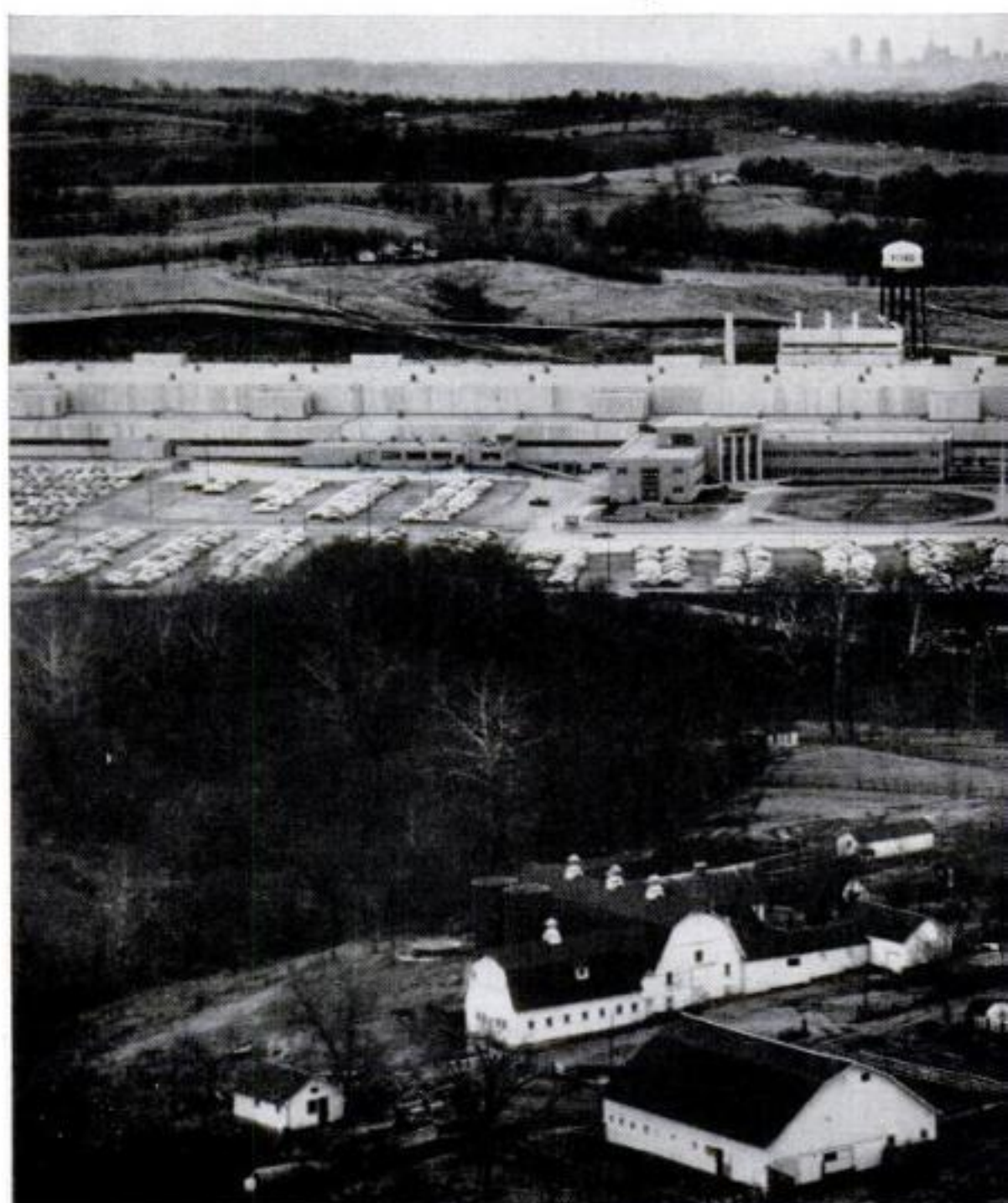
Another characteristic of our times is the way in which organizations of various kinds—business, educational, governmental and so forth—play ball together. Anybody who imagines that businessmen and government officials are always at swords' points should go to a meeting of a scientific or professional association and see the man from Monsanto Chemical and the man from the Department of Agriculture hobnobbing about their joint specialty. Anybody who thinks that university professors are all cloistered creatures remote from business should ask a member of the National Retail Dry Goods Association about the reports on his industry assembled at the Harvard Business School, or look into the close tie-up between the Textile Research Institute and the Princeton University faculty. In dozens of fields of activity this sort of collaboration on the job between people who supposedly represent contrasting elements in our society is taken as a matter of course.

The truth is that we Americans are great joiners, organizers, cooperators, coordinators and conference-goers; whenever one of us has a bright idea he wants to form an association to promote it. And while our interdependence causes the government to grow hugely, so it also brings forth a lively abundance of private organizations—the characteristic mark of an unregimented and unregimentable people.

The missing pitfall

H EAVEN knows we cannot afford to be complacent about this system of ours. There are plenty of pitfalls ahead. We have not entirely plumbed the mystery of inflation; we have not made a full transition from a war to a peace economy; and there are serious questions concerning the effect of continued high taxes. Some Americans may prefer to seek financial help from the government rather than put in a solid day's work, and a helpful government could take on too much—so much that its credit might be endangered. To avoid all these pitfalls we shall have to exercise that eternal vigilance which is the price of liberty.

But there is one danger that I think a good many people are unduly worried about. This is the danger that the U.S. will move, step by step, toward socialism—toward a state of affairs in which the government will do everything and we shall all be its minions,



LIKE THE LION AND THE LAMB, agriculture and industry in the developing American system have learned to live side by side in cooperative

and the energetic enterprise which has sparked our new industrial revolution will be dead. The men and women who fear this are the victims, I am convinced, of a profound delusion.

Because the general political trend of the past half century has been toward giving the underdog a better chance, and socialism and communism were both devised as radical plans for helping the underdog, these people have got the idea fixed in their heads that the trend of the times is toward socialism, or even communism, and that if they don't dig their heels in and hold fast against any sort of change, that's where we'll end up. What they have forgotten is that socialism and communism—I mean the original communism of Karl Marx, not the imperialist tyranny which is now trying to conquer the world in communism's name—were devised as answers to the vices of 19th Century capitalism, vices which we have long since done away with in the U.S. The viewers-with-alarm ought to wake up to the facts of 1952: That the problems which socialism and communism were invented to cope with have already been surmounted here. That the social revolution to which I referred earlier in this article has been our orderly and bloodless and successful substitute for them. And that we have built up in the U.S., through experiment, good sense and good luck too, a system which not only helps the underdog, and brings about a dynamic redistribution of income in his favor, but also maintains the freedom of business enterprises and other private institutions, in all their fruitful diversity, to compete, invent, experiment and create, without the stultification that bureaucratic management might cause, or the threat of tyranny that government control might bring. In short, that for society like ours, socialism is as outdated as the goggles that automobilists had to wear in the days before windshields and closed cars; that—as I put it in a recent book—we in the U.S. are moving, not toward socialism, but past socialism.

I have just been looking at a pamphlet issued by an English organization called the Socialist Union, composed of members of the Labor party. In the course of their argument they said: "The difficulty with which socialists contend today is that their programs, their ways of thought, their very language, have all grown out of the discontents of the past, and were designed to meet the injustices of a past age."

Precisely. And it is our fortune, in the U.S., to have somehow got going a system which is showing itself to be adapted, not to the past, but to the present and future.



productiveness. Here a prosperous Hereford cattle farm shares the valley landscape near Kansas City with the huge new aircraft plant of the Ford Motor Co.

"I drink all the coffee I want..."



"I get all the sleep I need!"



**DON'T STOP DRINKING COFFEE...
JUST STOP DRINKING CAFFEIN!**

YOU LOVE coffee. You need restful sleep. Get *both* with New Extra-Rich Sanka Coffee! It's 97% caffeine-free—simply can't keep you awake!

Today's Sanka Coffee will be the flavor surprise of your life! You'll find it's every bit as good, or *better*, coffee than you've been drinking. It gives you *all* the coffee goodness of the 100% choice coffee it is, because only the tasteless, odorless caffeine is removed.

Be a wise coffee-lover. Drink New Extra-Rich Sanka... and sleep!

Products of General Foods



DELICIOUS IN EITHER
INSTANT OR REGULAR FORM

**New
Extra-Rich SANKA COFFEE**

It's delicious! It's 97% caffeine-free! It lets you sleep!



1. Ooma Goo Goo, Man from Mars, was short and strangely knobby. He set his flying saucer down in Statler's startled lobby. "I've come to look at Earth," he said. "I'd like to see the best, And I'd like to stay at Statler, where I'll really be a guest."



2. When Ooma Goo Goo saw his room, he shivered with sheer pleasure. "Is *this* for me? Oh, happy day! This Statler room's a treasure! So *that's* a bed—it's like a cloud! And everything's so clean! I wish my wife and kids were here—why, this is peachy-keen!"



3. They showed him how to draw his bath and what the soap was for. And once he understood, he wasn't frightened any more. He liked the way the whole room gleamed in spotless white array. In fact, he liked the bath so well, he stayed there half the day!



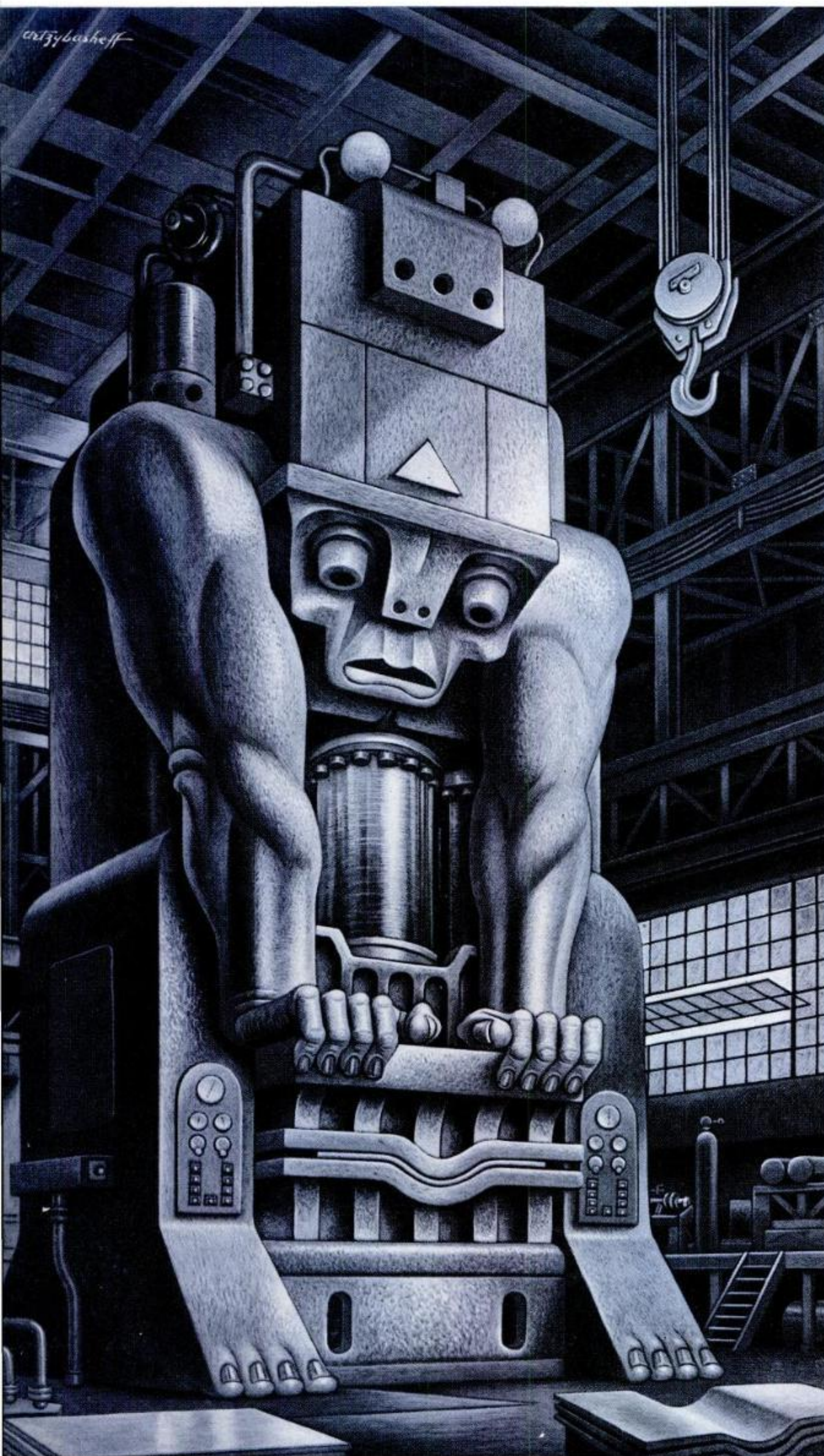
4. He went into the dining room and ordered up a meal. And when he tasted Statler food, he gave a happy squeal. "This Statler's quite a place," he cried. "They sure know how to cook! Why, Earth is *fun*, once one gets used to how the *people* look!"



5. And Ooma Goo Goo liked the fact that Statler was close by To shops and shows and all the things he wanted so to try. But then, alas, his time was up. With teardrops in his eye, "I'm coming back!" he promised—and he vanished in the sky.

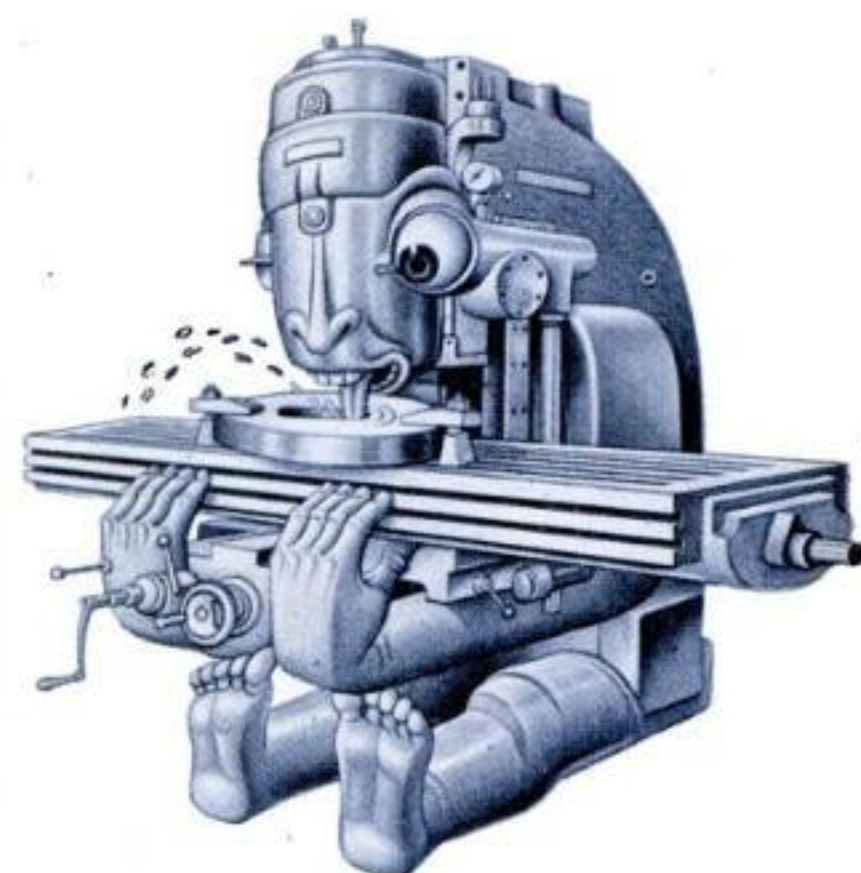


STATLER HOTELS: NEW YORK • BOSTON • BUFFALO • DETROIT
CLEVELAND • ST. LOUIS • WASHINGTON • LOS ANGELES



HYDRAULIC PRESS, a gigantic successor to the blacksmith, stamps sheet metal into shape by squeezing it under great pressure between upper and lower dies. A

forging press now being built for the Air Force will be the largest in the world, exerting a pressure of 50,000 tons, enough to crush a car to lead-pencil thickness.



MILLING MACHINE chips metal into shape with multi-edged "teeth."

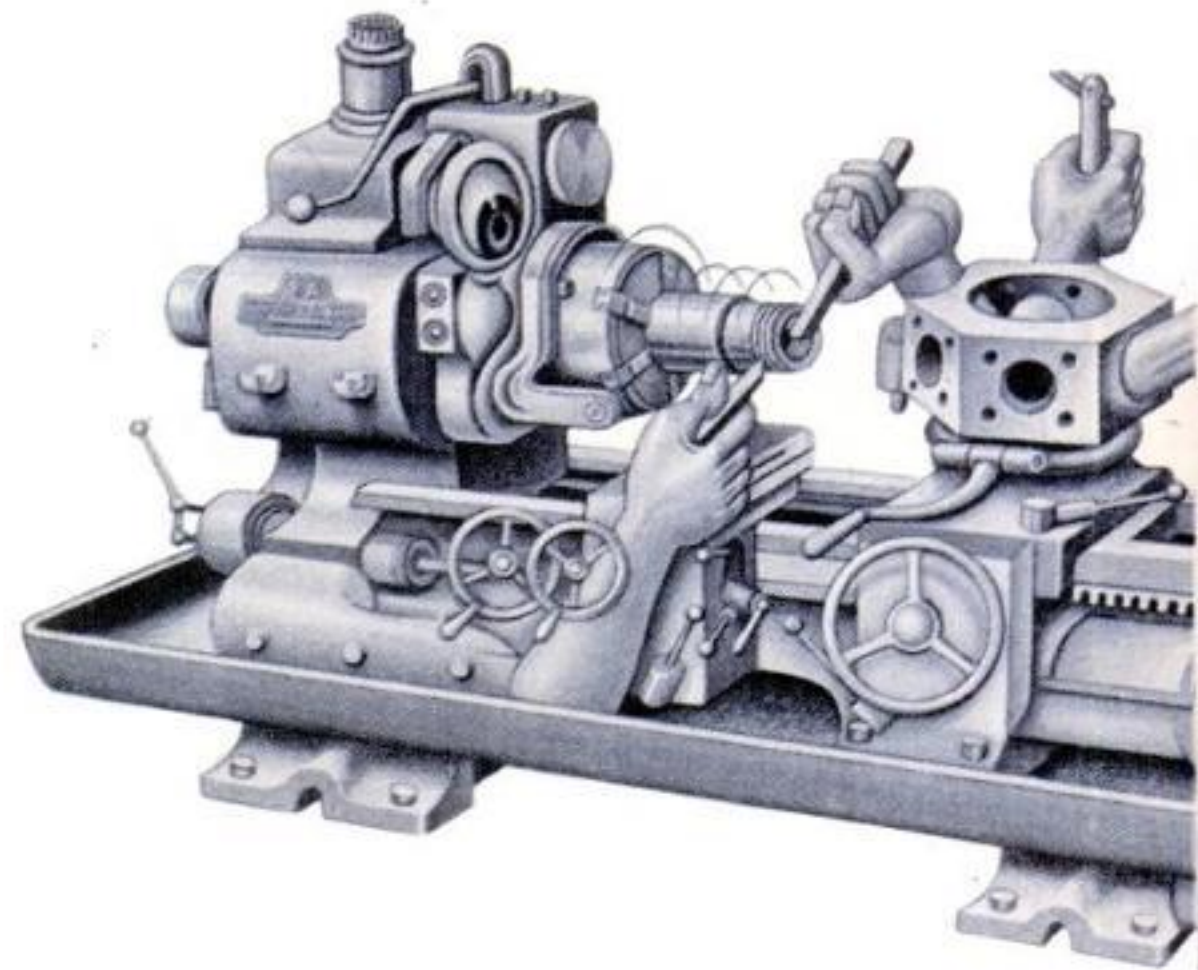
PORTRAITS OF BASIC TOOLS

An artist humanizes and explains machines that make production roll

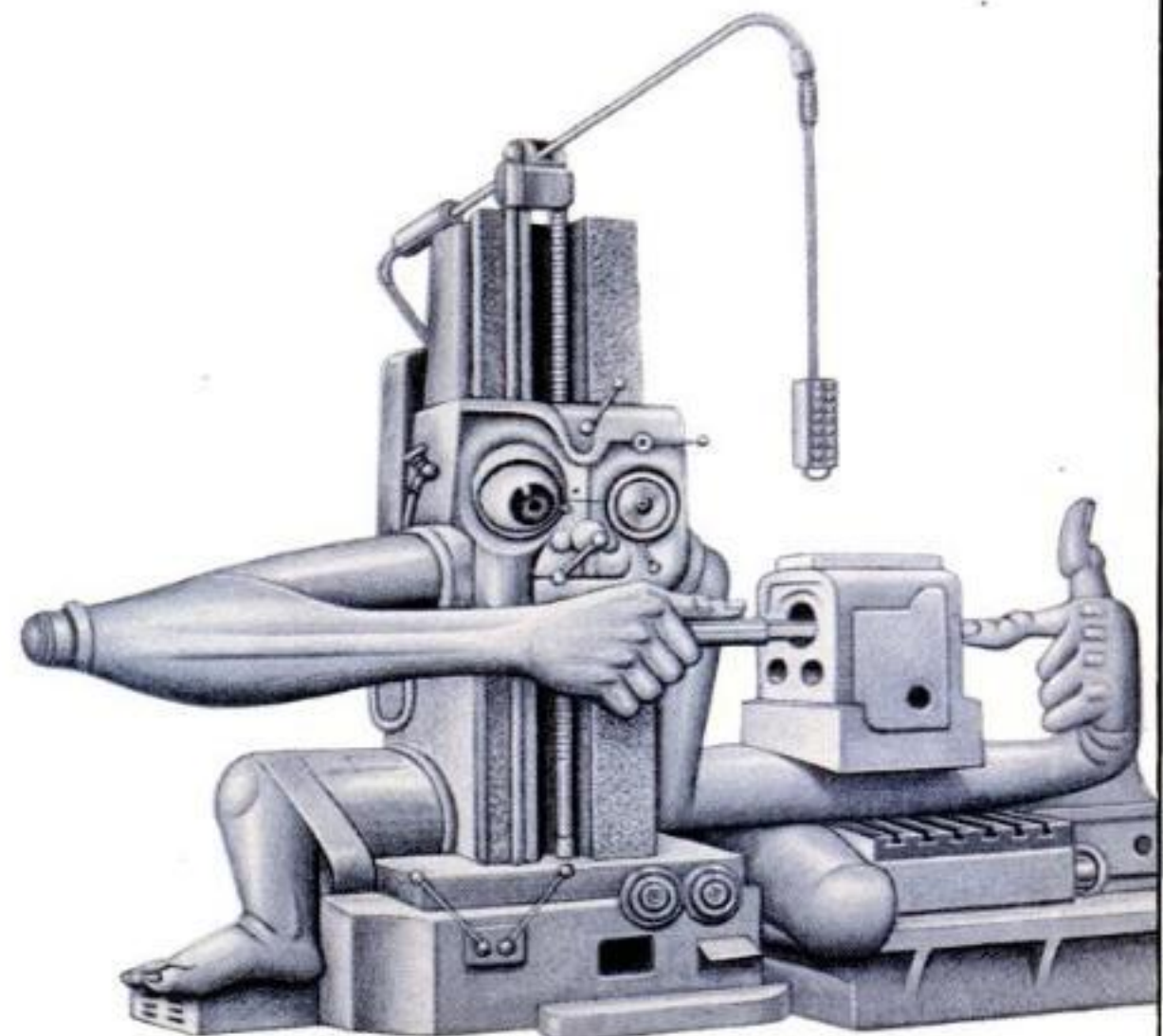
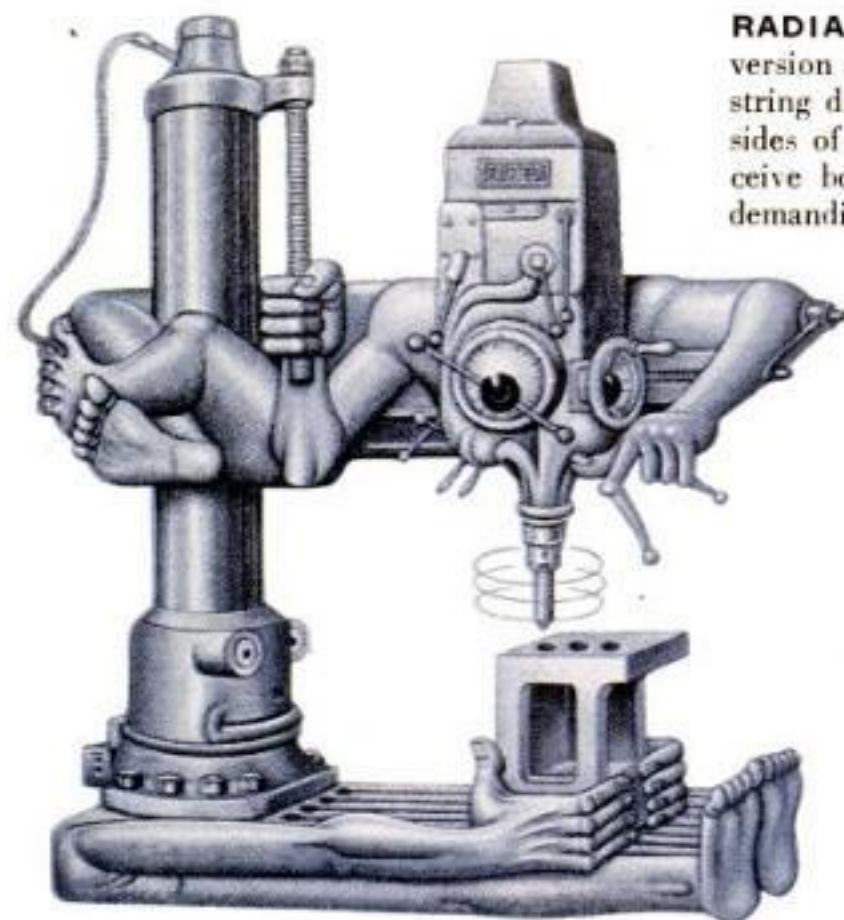
U.S. production lines are kept moving by an assortment of basic but little-known mechanical monsters called machine tools. These are the tools which cut and shape metal into new tools and dies which in turn cut out and shape the metal that goes into everything from ashtrays to automobiles, from refrigerators to radar, from pipe joints to jet engines. In combination they are the tools which are capable of reproducing themselves and thus the essential link in the endless mechanical mutation which first made possible the techniques of mass production and which today constantly reinvigorate American productivity and give to the U.S. its world leadership in the manufacturing arts.

For these pages Boris Artzybasheff, an artist who understands machinery, has portrayed members of the machine-tool family, giving them humanlike arms, legs and features to explain—simply and emphatically—each tool's main function.

When industrial production is rolling evenly, the need for machine tools falls off. But in immense change-over periods, such as a war, the industry cannot keep up with its orders. A bottleneck in 1952 delayed the manufacture of jet engines, but by year's end the jam-up was being broken and the industry's output allotted to civilian use was raised from 30% to 40%.



RADIAL DRILL, modern version of ancient bow-and-string drill, pierces holes in sides of metal object to receive bolts and other parts demanding close tolerance.



What a SCOTCH!



White Horse...
of course!

BLENDED SCOTCH WHISKY 86.8 PROOF
Browne-Vintners Co., Inc., N. Y., Sole Distributors

Take Tabcin
TO EASE COLD MISERY
AT ALL DRUG STORES • 45c and 75c SIZES

GYRO
SKID-CONTROL
Don't Skid! Forty-five pounds of skid prevention worth a ton of cure. Test Gyro Skid-Control on your car for safer driving, regardless of road or weather.
GYRO SKID-CONTROL CO., INC., BEVERLY HILLS, CALIF.

Don't Get Left... GET RY-KRISP!

Make Your Bread RY-KRISP!



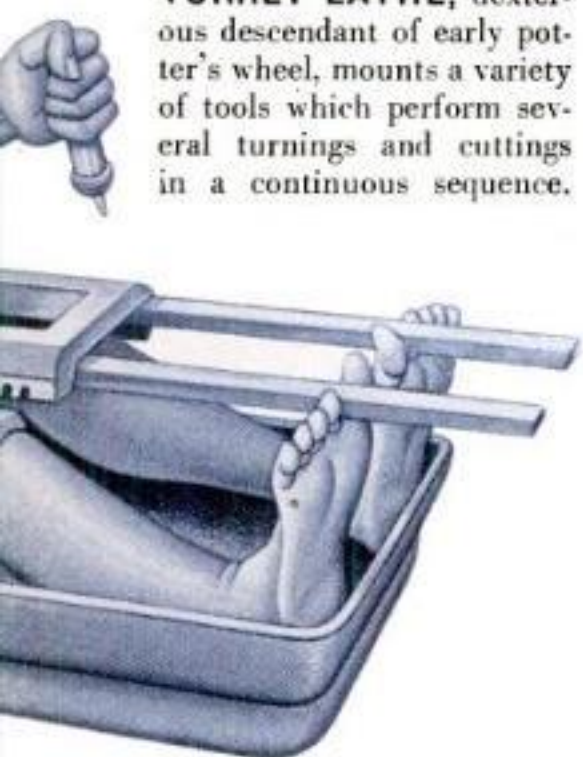
Famous Reducing Plan on every package

Filling, far more hunger-satisfying than soft, quickly eaten breads. Whole-grain-rich in proteins, minerals and B-vitamins. Delicious!

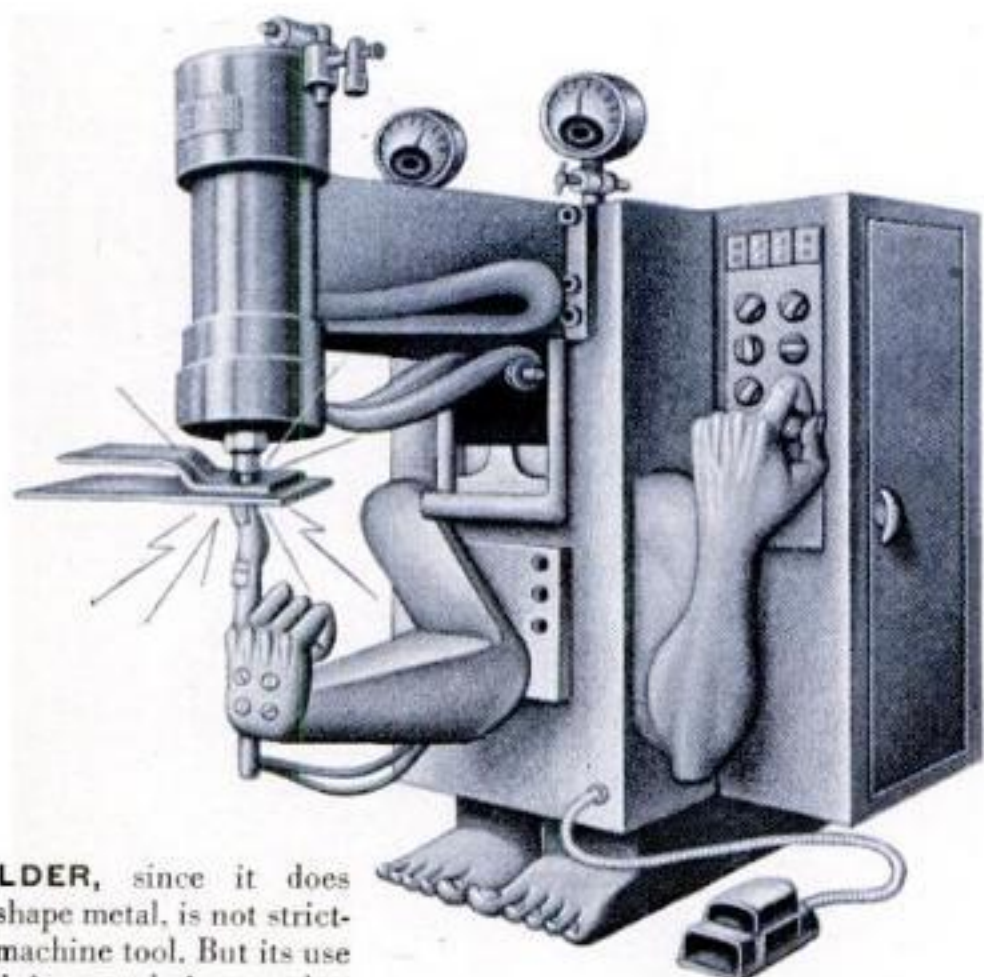
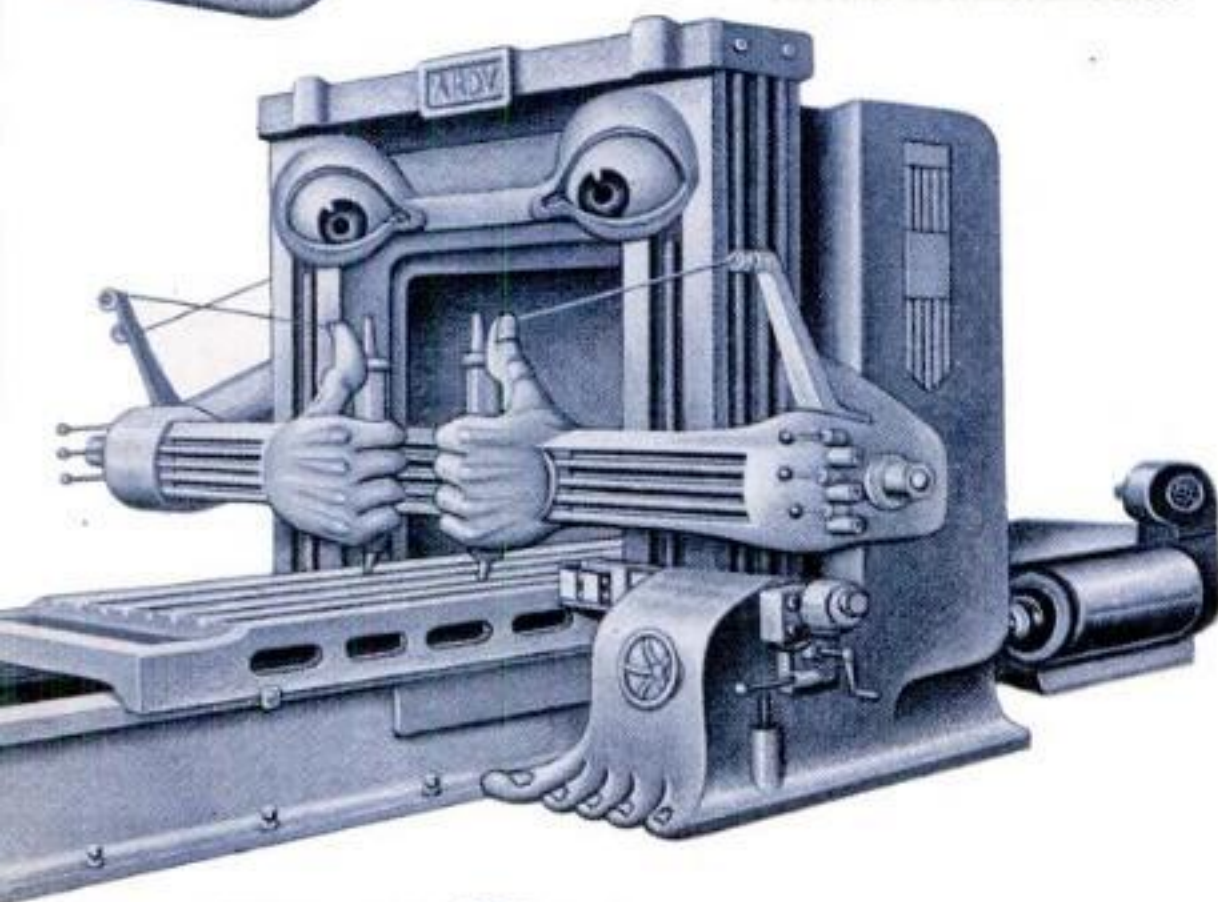
COMPARE THE CALORIES:

Ry-Krisp, 1 double-square wafer....	21
Bread, 1 slice.....	63
Plain roll or bun.....	118
Biscuit or muffin.....	129

TURRET LATHE, dexterous descendant of early potter's wheel, mounts a variety of tools which perform several turnings and cuttings in a continuous sequence.



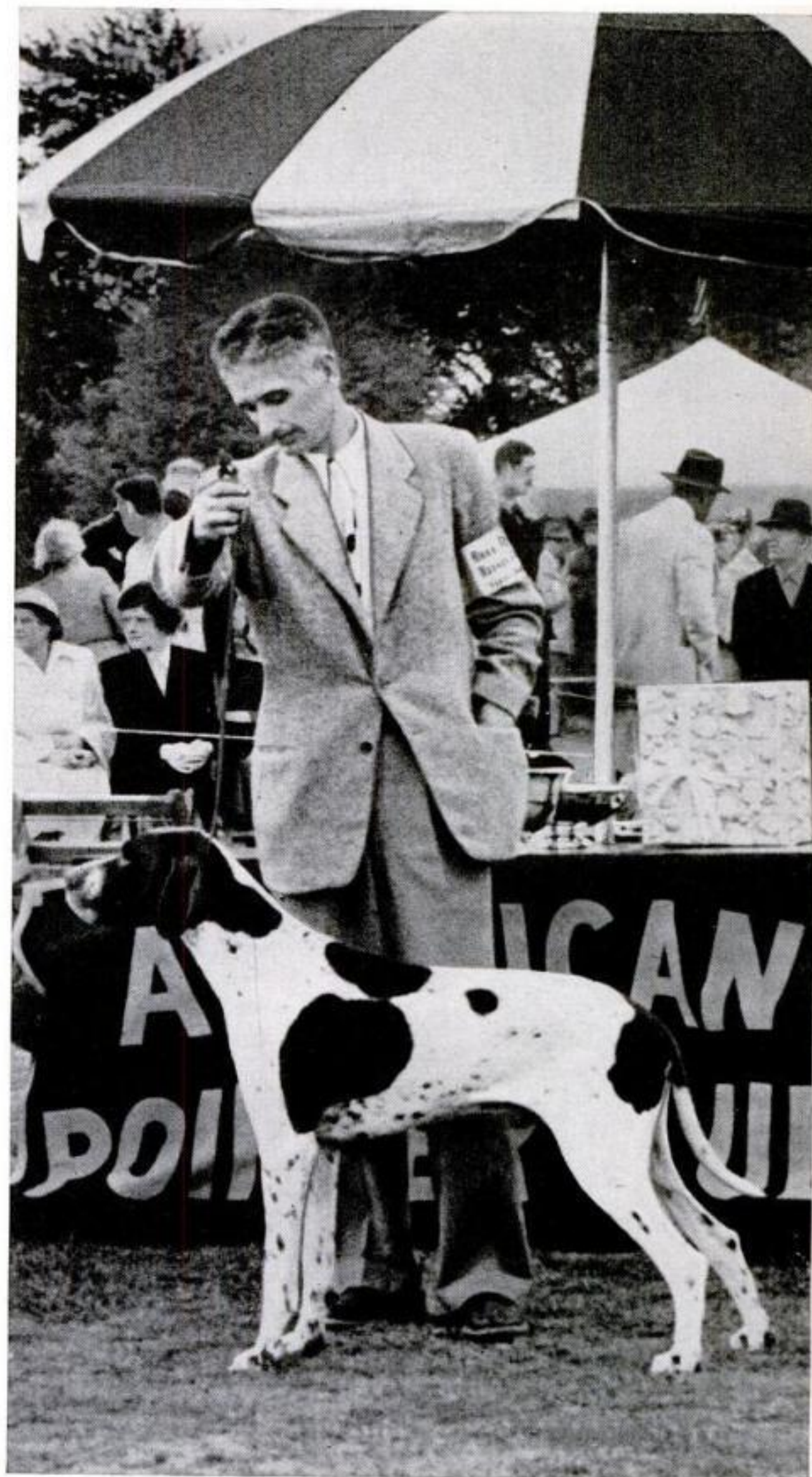
PLANER, an oversized version of wood plane, moves metal back and forth beneath overhead blades which shave it smooth. It is used before the other machines take over.



WELDER, since it does not shape metal, is not strictly a machine tool. But its use in joining metal pieces makes it an important accessory to the machine-tool family.



MULTI-PURPOSED horizontal boring, drilling and milling machine performs three functions in finishing large pieces like the housings for other machine tools.



Feed your dog like this Dash-fed champion!

Champion Trueluck's Challenge and his handler, Charles Crane, have had a good day. They've just received the judges' decision at the American Pointer Club's Specialty Show, which adds another best-of-breed award to this Pointer's fine record. Whether you're feeding a prized champion like this one—or your children's No. 1 playmate—you've got an important job. The diet you choose can make or break your dog's chances for robust health, steady nerves and a happy disposition. That's why your dog deserves Dash. It's fortified with *liver*—the richest of all meats in the proteins, vitamins and minerals dogs need every day. Why not see how much Dash will do for *your* dog?

Dash is fortified with LIVER!

A PRODUCT OF ARMOUR AND COMPANY



FLORIDA CELERY is harvested by giant machine. The pickers place celery on conveyor belts which carry it to cutting, washing, binding and crating mechanism at rate of 2,200 crates a day.

MORE FOOD FOR LESS WORK

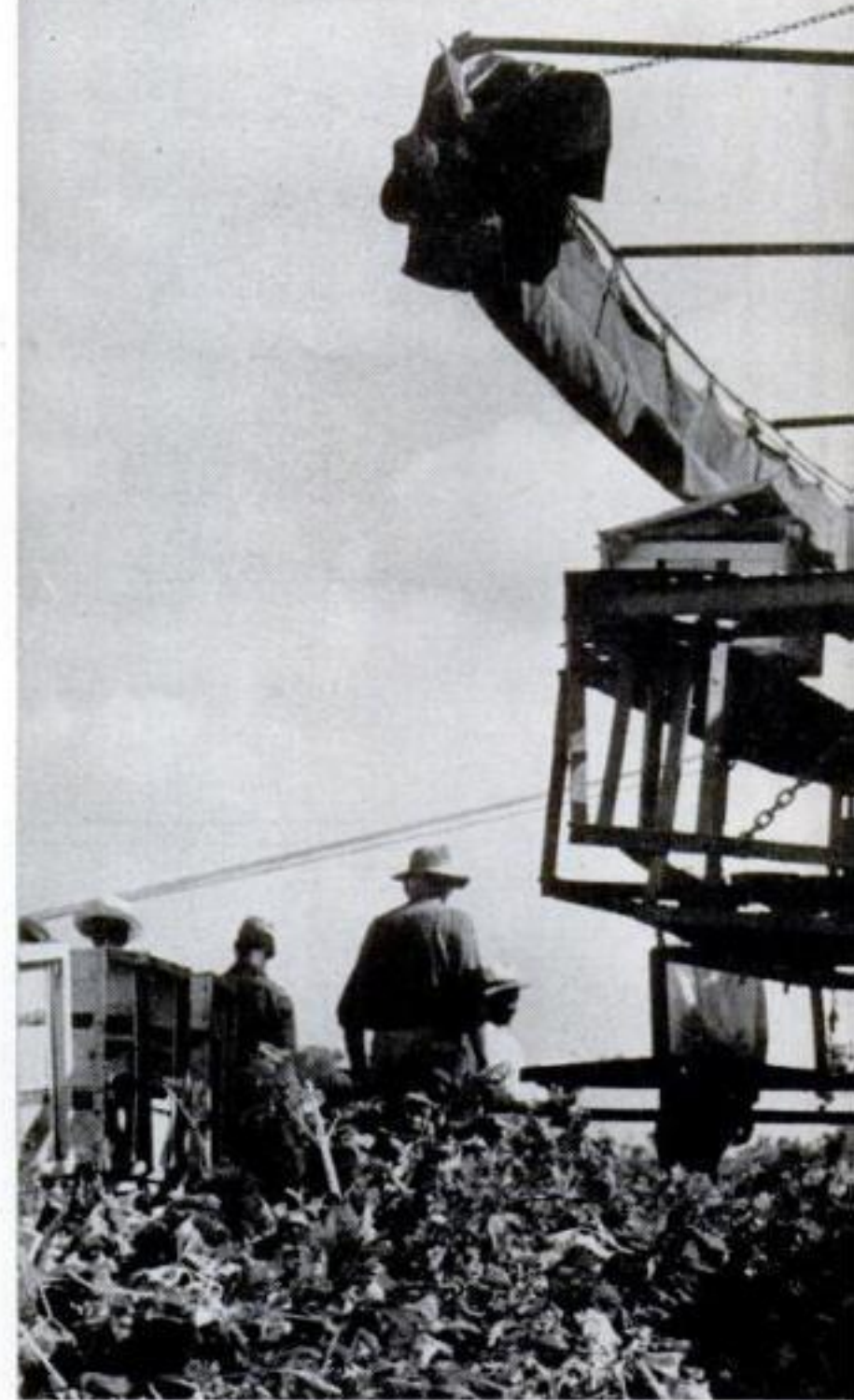
In 75 years U.S. has fought and won an agricultural revolution

In what was once the almost worthless swamp-land of Florida monstrous machines now move ponderously across broad green acres, harvesting a \$4 million celery crop at a time of year when most of the rest of the U.S. is wintered in. And diagonally across the country the sagebrush deserts of Washington have been transformed by canals and sprinkler systems into fertile farmland. These new acres, ripped out of wasteland and made to bear rich harvests, are only a part of the enormous change that has come over American farming in the past few decades—a change so far-reaching that it amounts to an agricultural revolution. The revolution has brought with it new machines, new crops, new methods, and today U.S. farmers—even though they grow fewer in number every year—do a better and better job of feeding the country's growing population.

This triumph began in the last century when the Department of Agriculture and the various states began searching for ways to improve both production and quality of food. Later, as good land grew scarce, private industry joined in the search. The result has been more farming progress in the last 75 years than all the

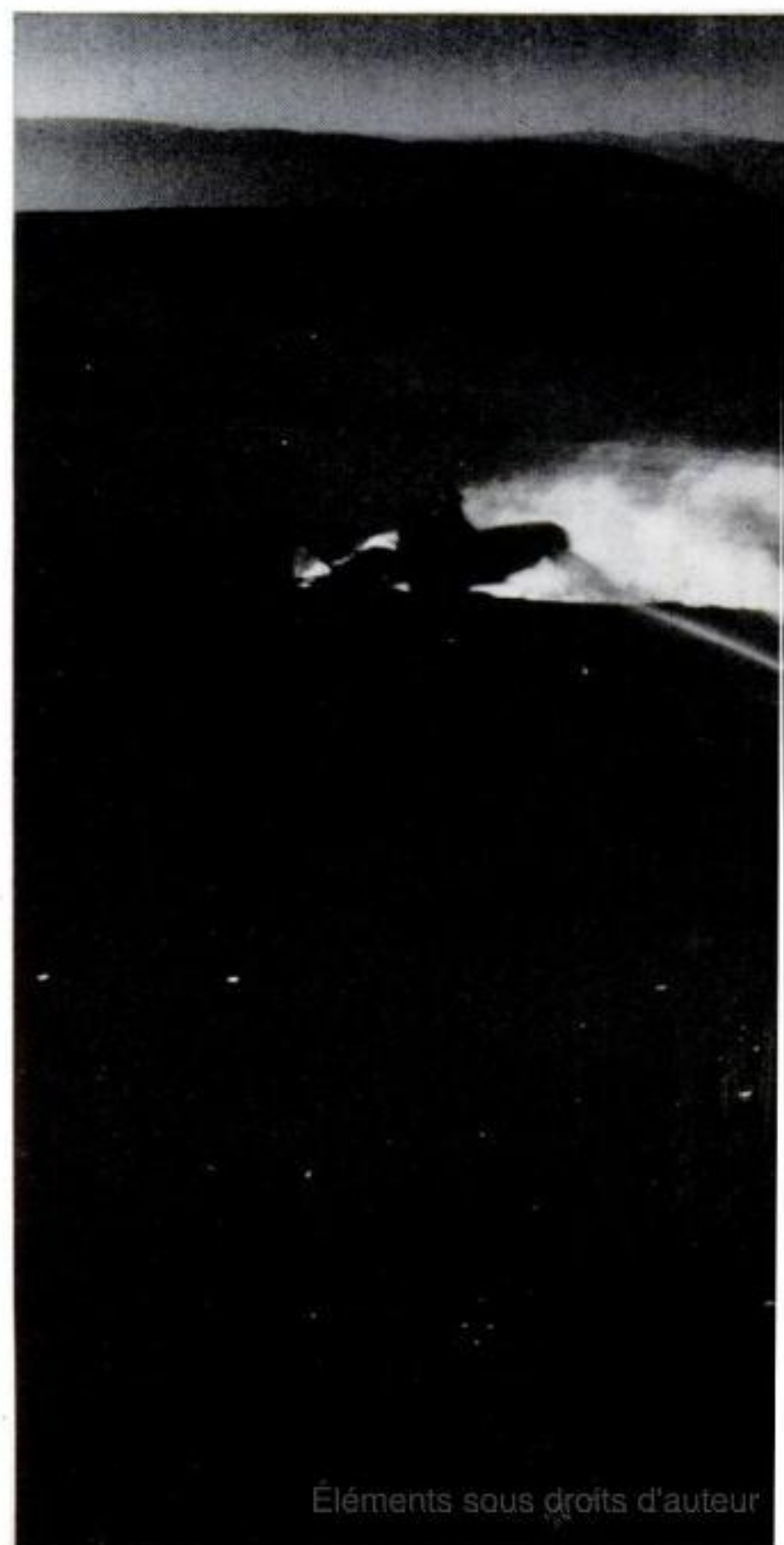
world's farmers were able to achieve in the previous 75 centuries. The federal government has spent one billion dollars since 1900 to finance this search, but the investment has been profitable. Each year a single development, hybrid corn, brings farmers enough extra income to pay for the entire federal research program for the last 52 years.

The revolution's many facets—machinery, new livestock, fertilizers, crop rotation, insecticides, irrigation—have begun to pay off only in the last decade when laboratory achievements reached the average farm. Nowhere is the pay-off more evident than in the South, once a two-crop land worn out by cotton and tobacco but now a flourishing food belt for poultry, cattle, fruits and vegetables. Southern farmland has tripled in value since the late '30s, and the value of the South's food production has more than tripled in the past 10 years. In a similar way, through the improvements shown on these pages, the nation's food production has become a modernized, mechanized business that is still making advances that will supply America's growing multitudes with still more food for still less work.

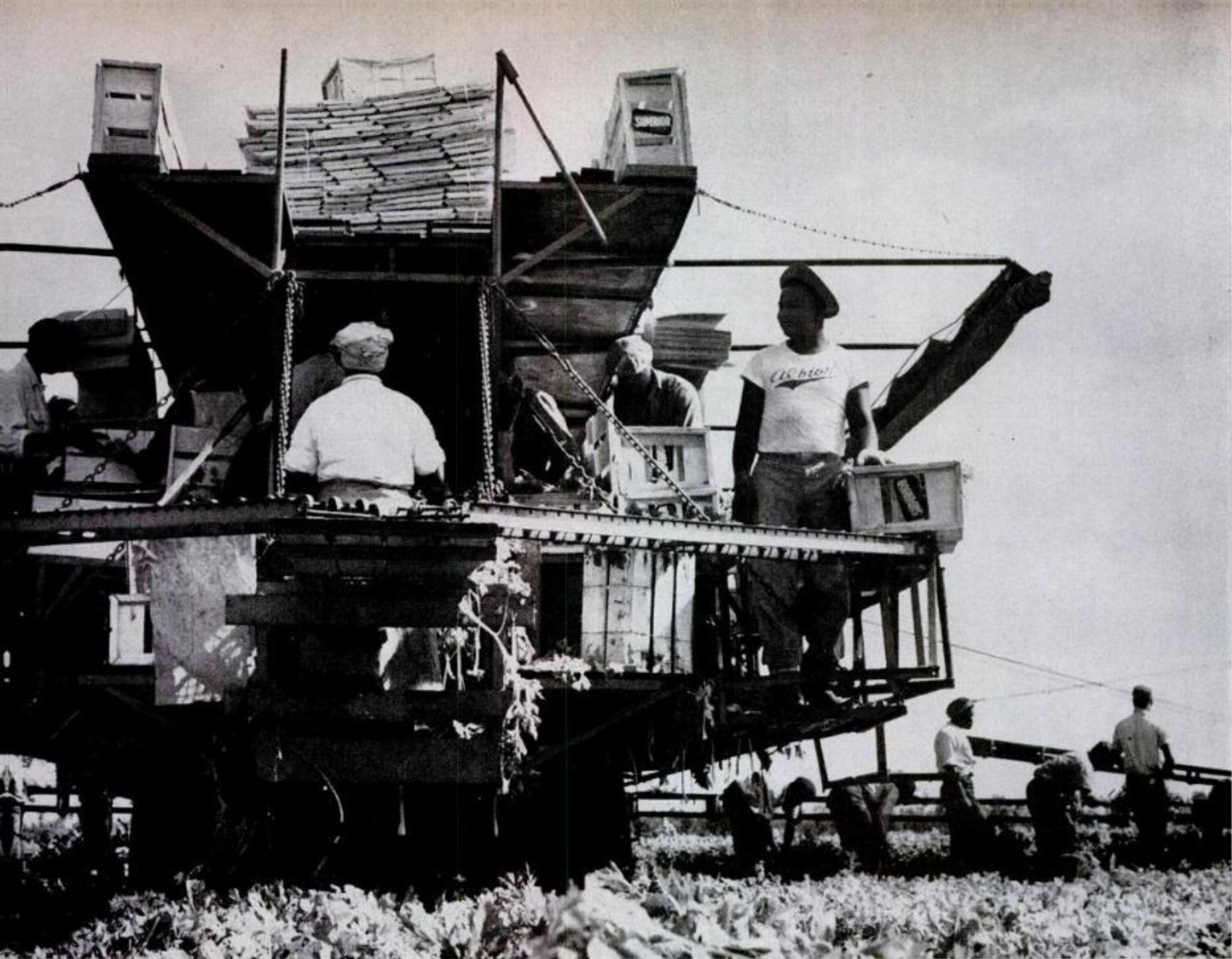


LOUISIANA SUGAR CANE is cut down by three men driving mechanical harvesters. The horse, made all but obsolete by machinery, is still used by foreman to direct gathering of the crop.

WASHINGTON FIELDS are irrigated by sprinkler as mechanical bean picker (left) harvests crop. Brought into area by canals, water is distributed where needed by portable sprinkler system.

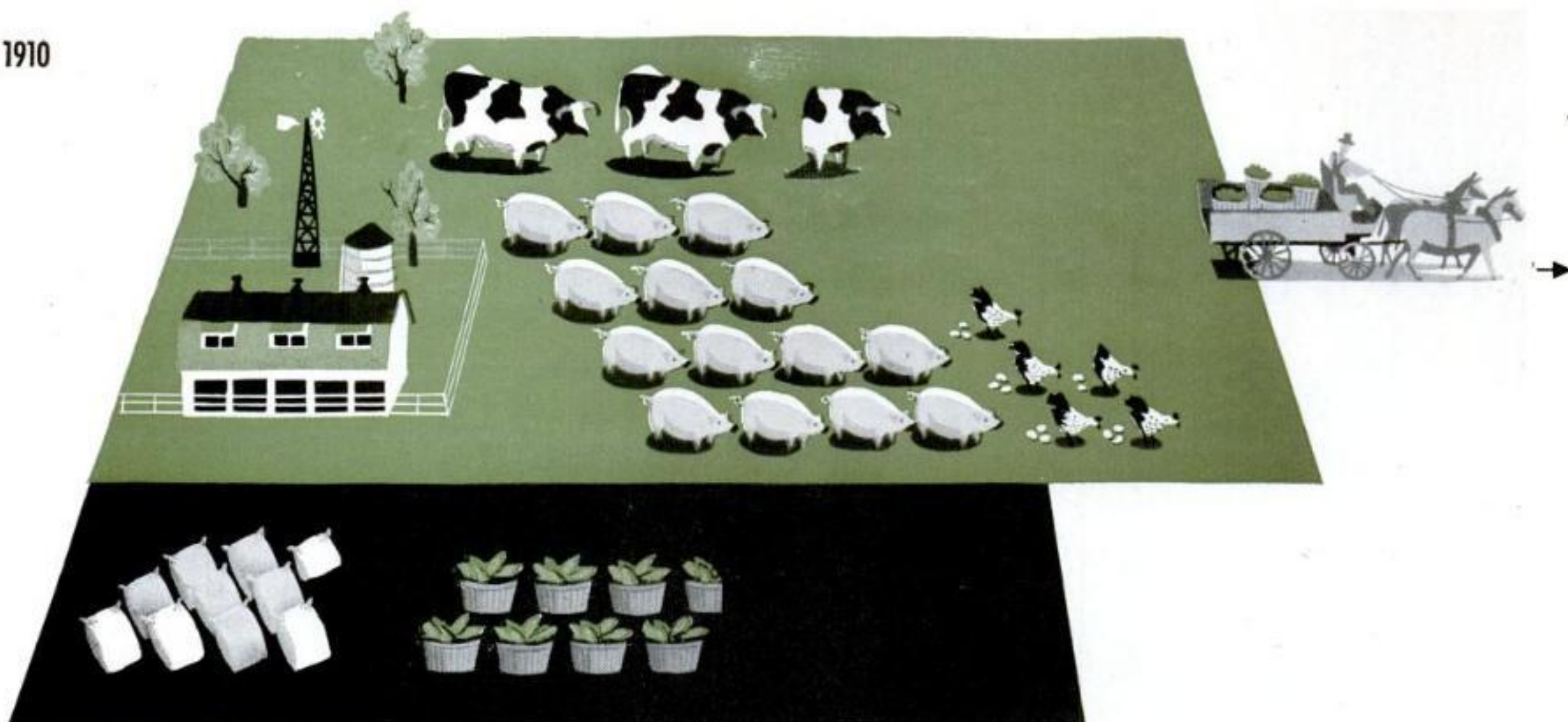


Éléments sous droits d'auteur

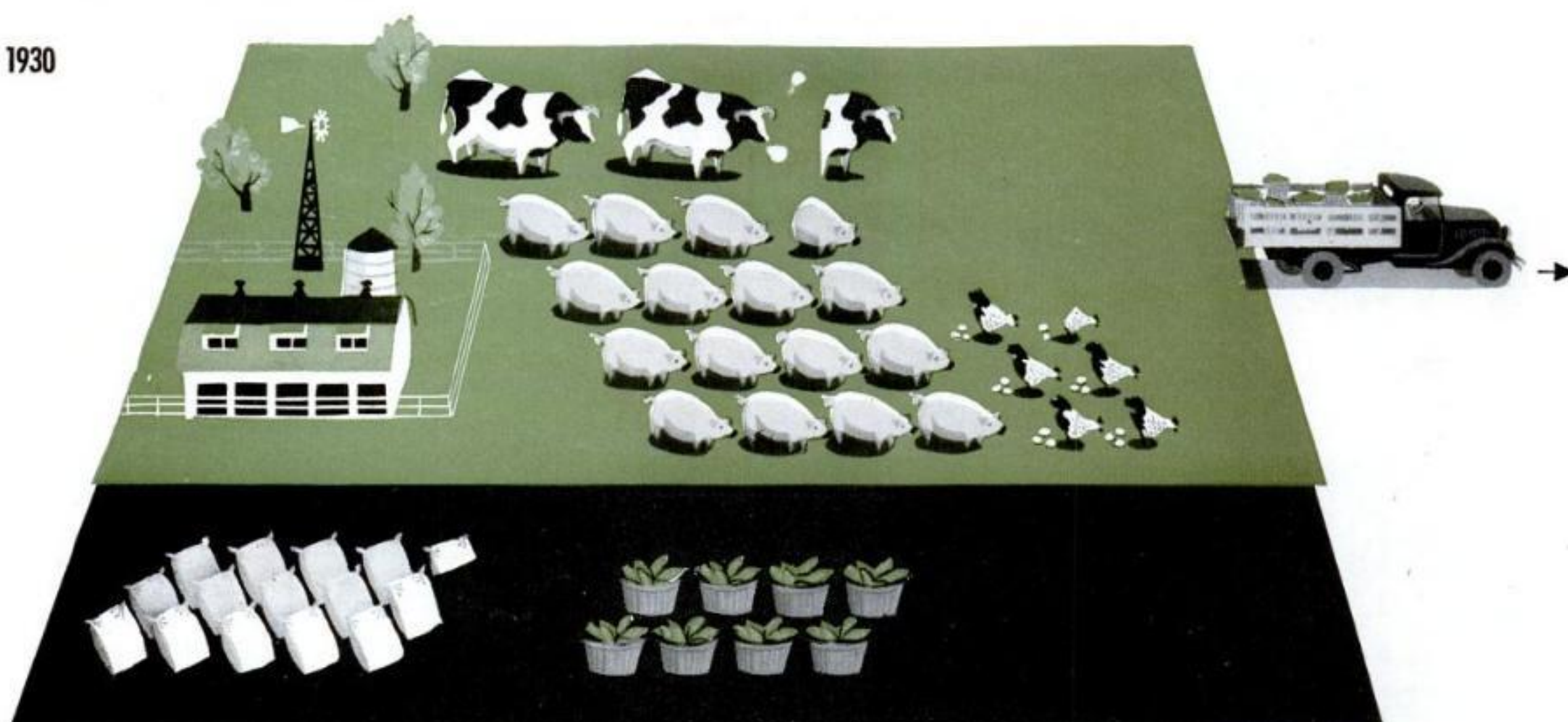


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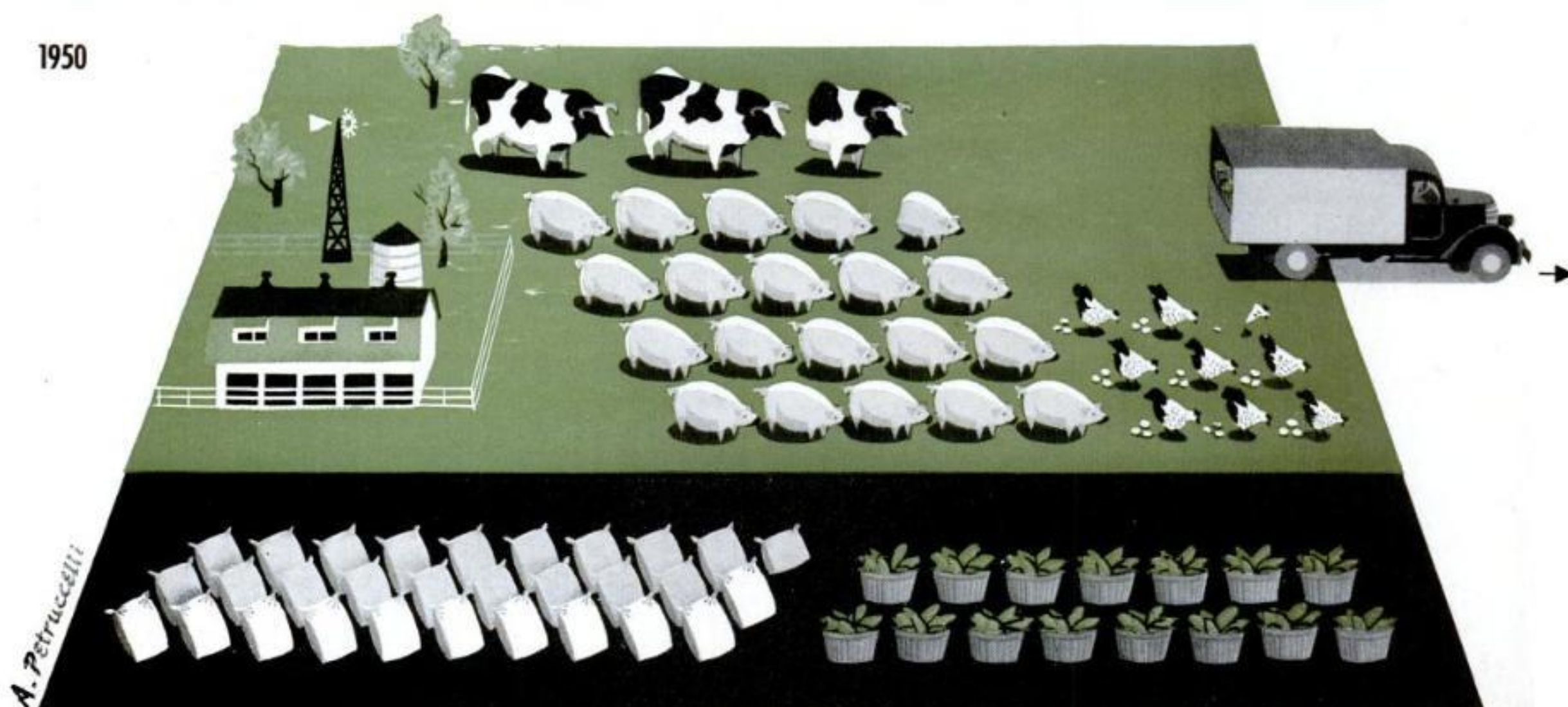
1910



1930



1950



A. Petrucci

PAST AND FUTURE GAINS

Each farmer today feeds 15 people; by 1975 he must be able to feed 20



1910 FARMER operated a farm (left) averaging 92 acres of pasture and grazing land (green area) and 29 acres of crop land (black area). By devoting 100 hours of work to each product he could raise 94 bushels of wheat (each sack is 10 bushels), 74 bushels of corn, $2\frac{1}{4}$ 900-pound steers, 14 200-pound hogs and 4,926 eggs. With the produce of his land the farmer was able to feed eight people (above) three meals every day throughout the year.



1930 FARMER with the help of some machinery and improved techniques was able to handle an additional acre of pasture and grazing land and eight additional acres of crop land. With 100 hours of work put into each product, he raised 143 bushels of wheat, 79 bushels of corn, $2\frac{1}{4}$ steers, $15\frac{1}{2}$ hogs and 5,405 eggs. His year's production, now driven to market by truck instead of by horse and wagon, was enough to provide food for 11 people.



1950 FARMER, far more mechanized, operates 99 acres of pasture and grazing land, 40 acres of crop land. His 100-hour work periods account for 294 bushels of wheat, 149 bushels of corn, more than $2\frac{1}{4}$ steers, $19\frac{1}{2}$ hogs, 8,264 eggs, and he now feeds 15 people. Efficiency of beef production has increased slowly because it is difficult to adapt technical gains to the open range, but cattle are now being market-fattened at an earlier age.

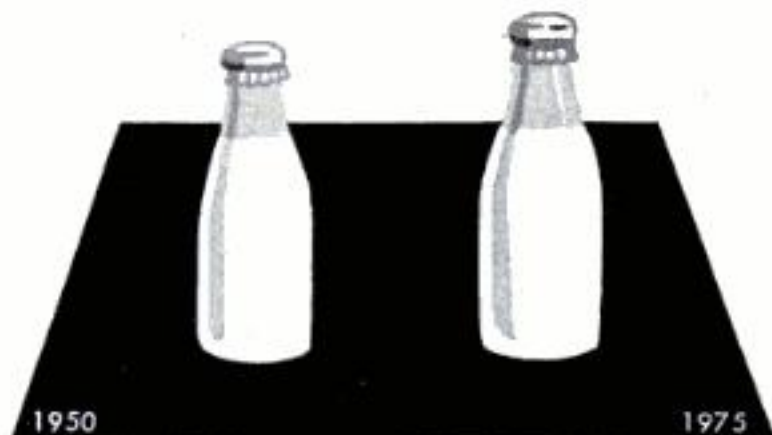
In 1800, when 10 out of every 11 people lived on farms, the farmer was concerned mostly with feeding himself and his family. Today every one of the nation's 10 million farm workers must produce every year enough food for 15 other people—a \$33 billion job. How successfully the farmer has accomplished this is shown in these drawings for 1910, 1930 and 1950 (left). What he has done is to get more output from every unit on his farm—more wheat and corn from every acre, more eggs and meat from his livestock. Fertilizers and cover crops help make richer soil, improved plants give bigger yields, insecticides and serums let more plants and animals live to maturity, and machines (pp. 68, 69) enable the farmer to do the same amount of work in a shorter period of time. As a result the farmer now gets 34% more crops per acre, 53% more production per animal unit

and an incredible 126% more output per hour of work than he did at the end of World War I.

Great as this progress has been, U.S. farming problems are by no means solved. The Department of Agriculture estimates that by 1975 the farmer who now feeds 15 people will have to feed 20, and there is not enough new land available to supply this extra food (below). Measures to prevent erosion must go on and the decline of soil fertility in large areas must be stopped if the land is to produce big crops. There probably will be even fewer farmers in 1975 and labor will be still more scarce, so farming must become still more mechanized. Old plant and animal diseases must be conquered and new ones, constantly threatening, must be blocked. On the following pages are some of the triumphs—and some of the problems—that will shape the future of farming.



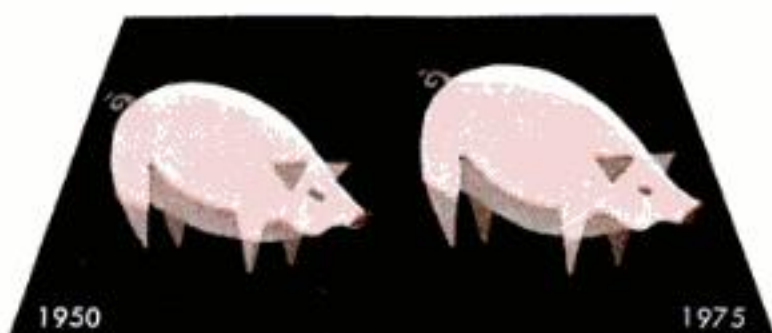
POPULATION WILL RISE FROM 152 TO 192 MILLION



QUARTS OF MILK MUST RISE FROM 54 TO 68 BILLION



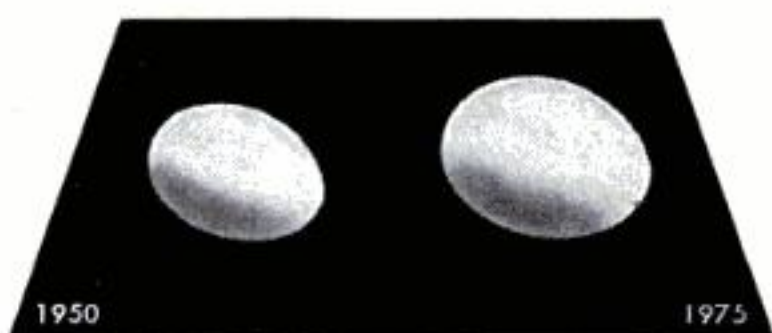
CATTLE NUMBERS MUST RISE FROM 80 TO 100 MILLION



NUMBER OF PIGS MUST RISE FROM 99 TO 121 MILLION



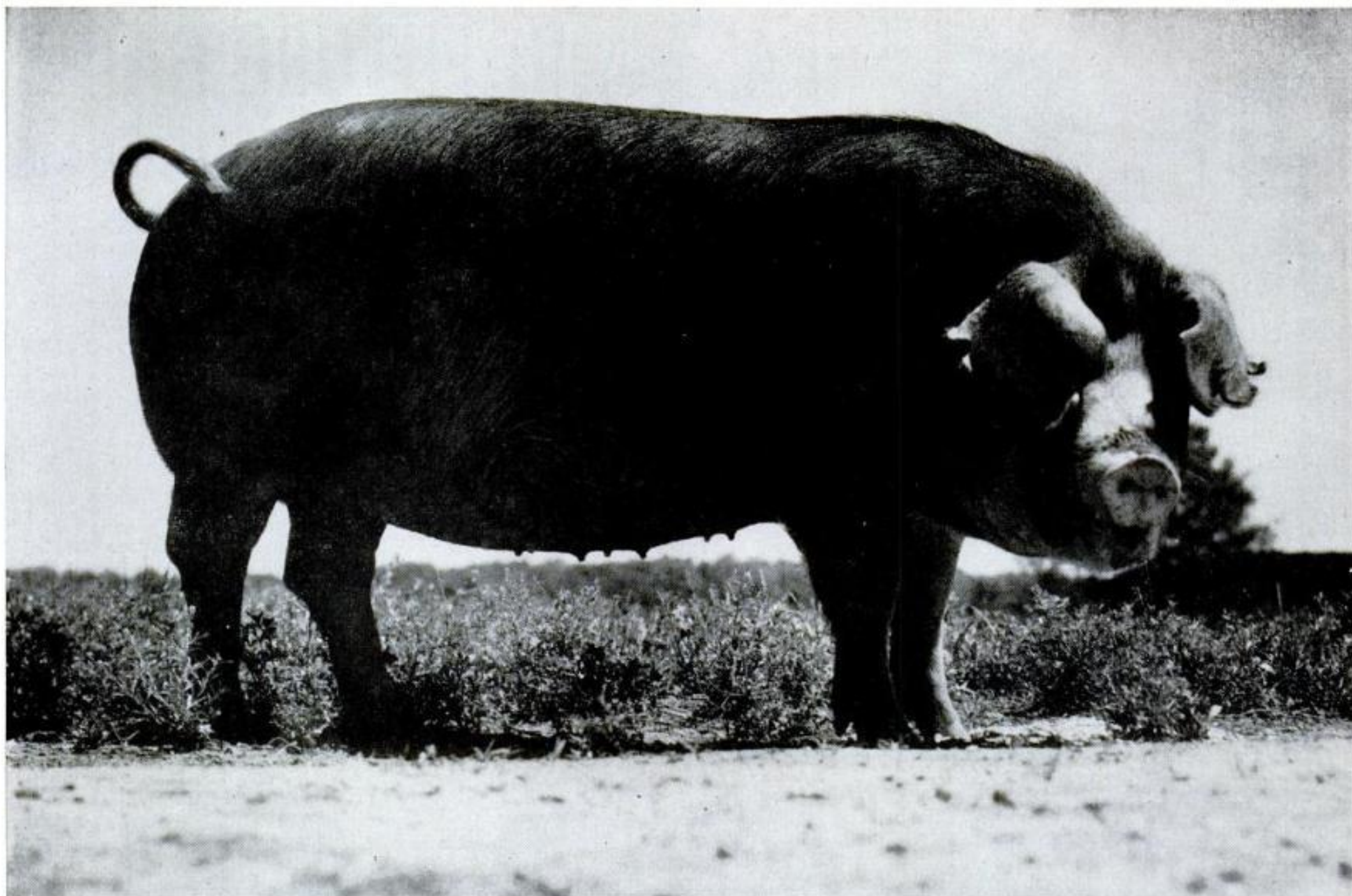
NUMBER OF SHEEP MUST RISE FROM 30 TO 38 MILLION



NUMBER OF EGGS MUST RISE FROM 65 TO 81 BILLION



1975 FARMER will have to step up production (above) in order to keep pace with our fast-growing population. To feed our 1975 population by present diet standards farmers would need, at the present rate of production, 100 million new acres—the equivalent of all the crop land in the vital farm area shown in red on map at left. There is not the slightest hope of finding that much new crop land, for by 1975 the U.S. will be lucky to get 30 million acres from reclamation and irrigation projects, mostly in the West and South. Another 15 million acres might conceivably be released from other uses, but the 1975 increased production must come more from new methods than from new acres.



PIG NAMED THE "BELTSVILLE NO. 1 HOG," A CROSS BETWEEN FAT POLAND CHINA AND LEAN DANISH LANDRACE, YIELDS HIGH PERCENTAGE OF MEAT, LOW PERCENTAGE OF LARD

NEW ANIMALS, NEW BIRDS

Through crossing and selective breeding they are carefully 'designed' to meet the customer's needs

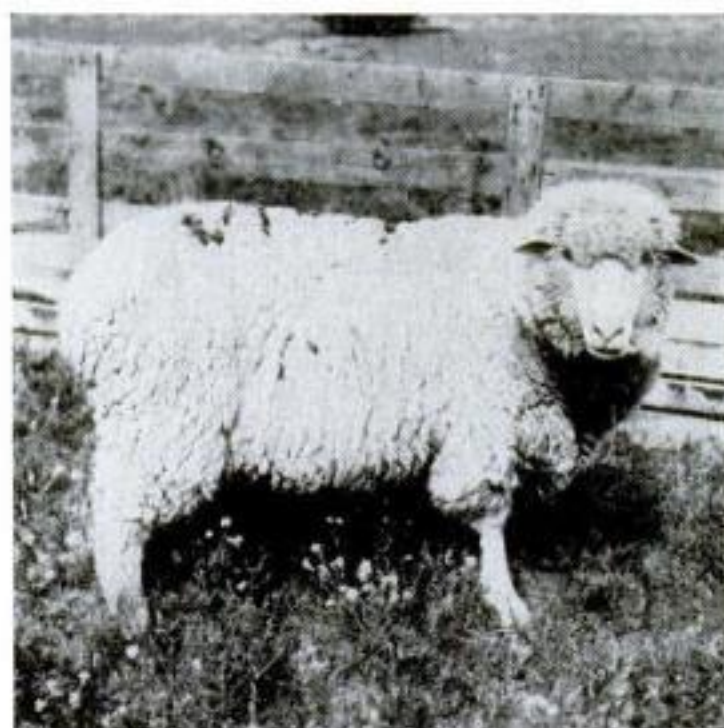
Big gains in livestock and poultry production have been made with new vaccines and chemicals, which prevent brucellosis in cows and parasites in sheep, and with new kinds of feed, which speed the growth of hogs and chickens as much as 25%. But the most exciting progress has been the development of entirely new breeds designed to meet the specific needs of farmers and housewives. The new breeds shown on these pages, as well as many other new hog and chicken breeds, are different from and far superior to simple one-generation crosses. Made-to-order animals take years to perfect because scientists must start by crossing established strains, then work through generation after generation to develop the right

qualities and weed out the bad ones. At the Department of Agriculture's Bureau of Animal Industry at Beltsville, Md., it took 17 years to produce the hog above, which has the proper characteristics for the U.S.

Once a breed has been established, it can transform a market or even an entire area. The Beltsville white turkey (*below, right*) was scarcely in commercial production six years ago, but today it makes up 25% of the market and is still increasing in popularity. The South, already a growing livestock area, is getting a tremendous boost from the introduction of heat-resistant cattle and may become a major dairy area when such special hot-weather cows as the crossbred Sindhi (*opposite*) are finally perfected.



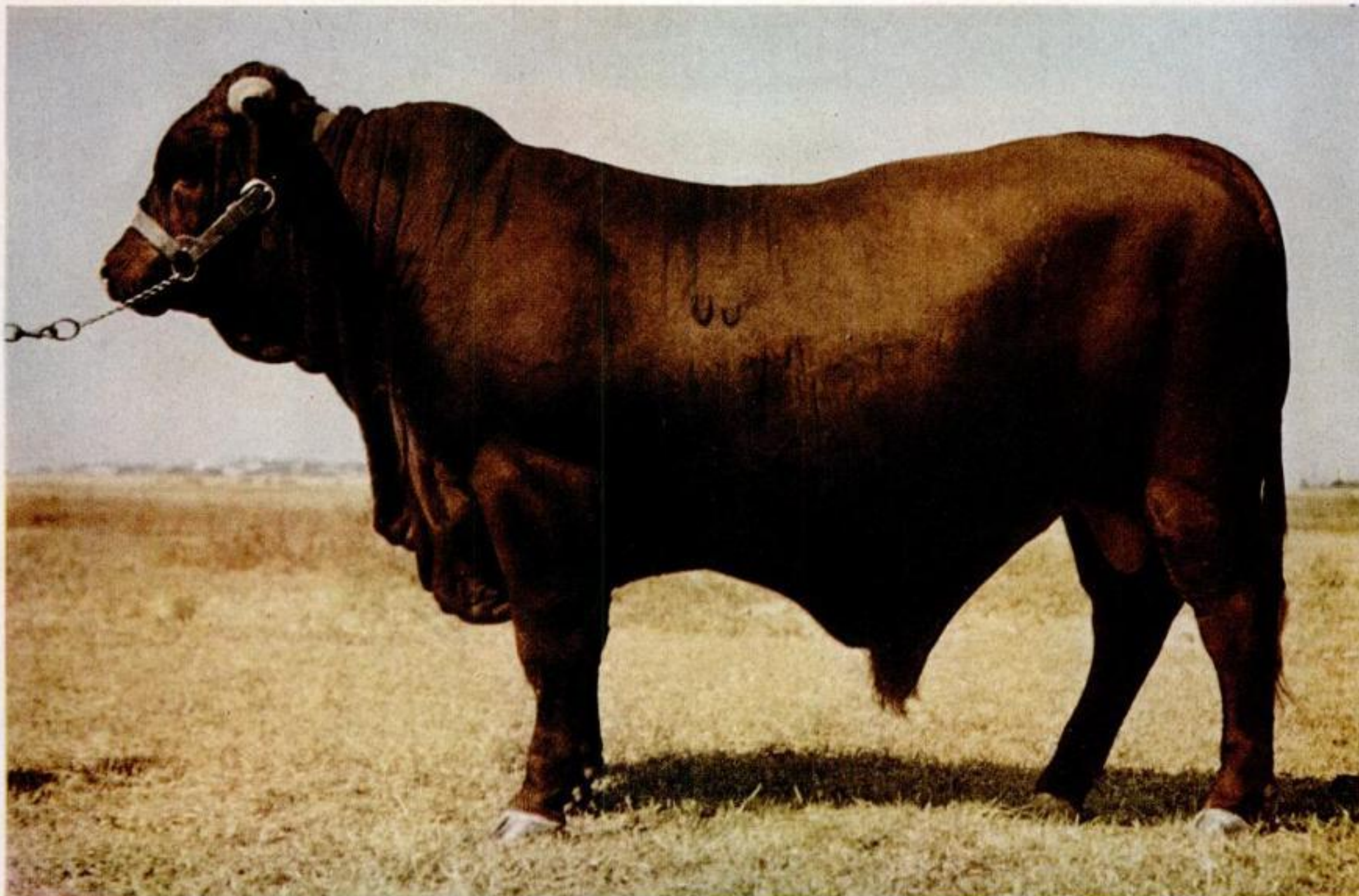
SILVER CORNISH CHICKEN, bred for broiling, has wide breast, heavy drumsticks, fast rate of growth.



TARGHEE SHEEP, designed to produce both meat and wool, is especially hardy for life on U.S. ranges.

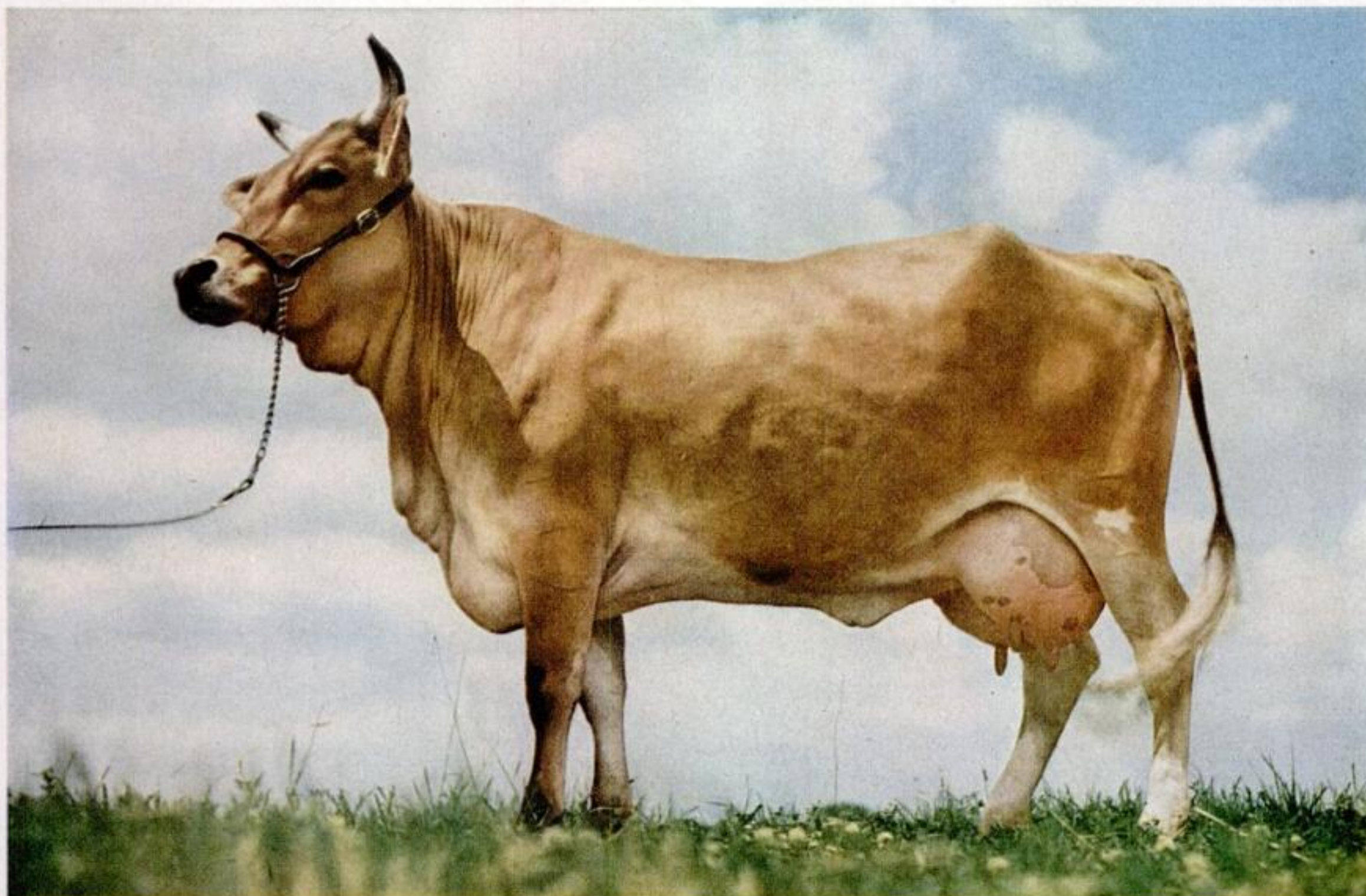


BELTSVILLE TURKEY, marketed at weight of 5-12 pounds, is ideal for small families and small ovens.



NEW KIND OF BULL, the Santa Gertrudis, was developed on King Ranch in Texas by crossing Shorthorns and Brahman. Recognized as an original American breed,

it has heat-resistant hardiness of the Brahman together with beef-producing qualities of the Shorthorns, is therefore ideal beef breed for southwestern ranges.



NEW KIND OF COW is cross between a Jersey and a Red Sindhi. The Jersey is most heat-resistant of great milk-producing European breeds, and Red Sindhi is best

milk-producer of the heat-resistant Indian cattle. The Department of Agriculture hopes that Sindhi crossbreds will be good milk cows for southern U.S. states.

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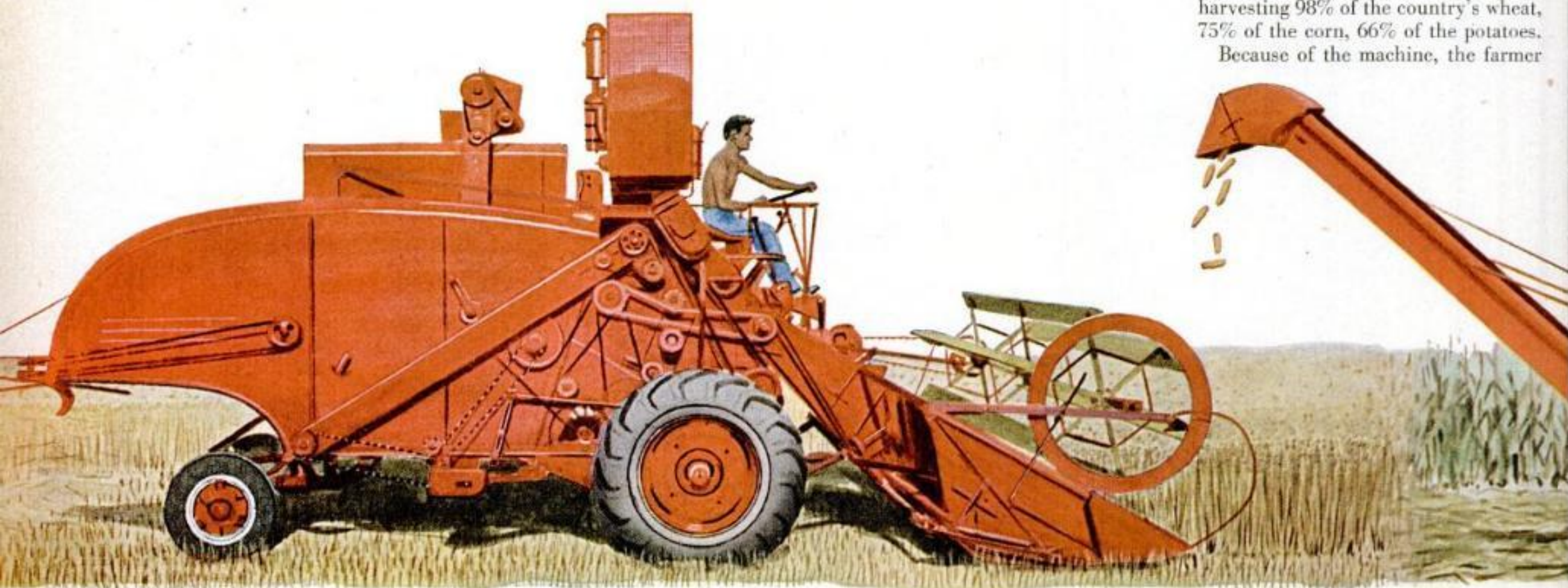


TRACTOR is basic farm machine, not only for harvesting, where it pulls other machines, but for all operations. Oliver Corporation's \$2,700 Row Crop model has high clearance and carefully spaced wheels for working between rows without crushing them.

FORAGE HARVESTER, which is tractor-drawn, scoops up dry hay from field, chops it up and shoots it through blower (left) into truck. Fox River Tractor Co.'s \$1,625 harvester processes about five tons of hay an hour, also processes grass and corn silage.



BALER, like forage harvester (above right), scoops up hay, but instead of chopping for silage it packs hay into bales, wraps them with twine or wire and drops them on ground or into wagon. New Holland baler costs \$2,299, turns out over five bales a minute.



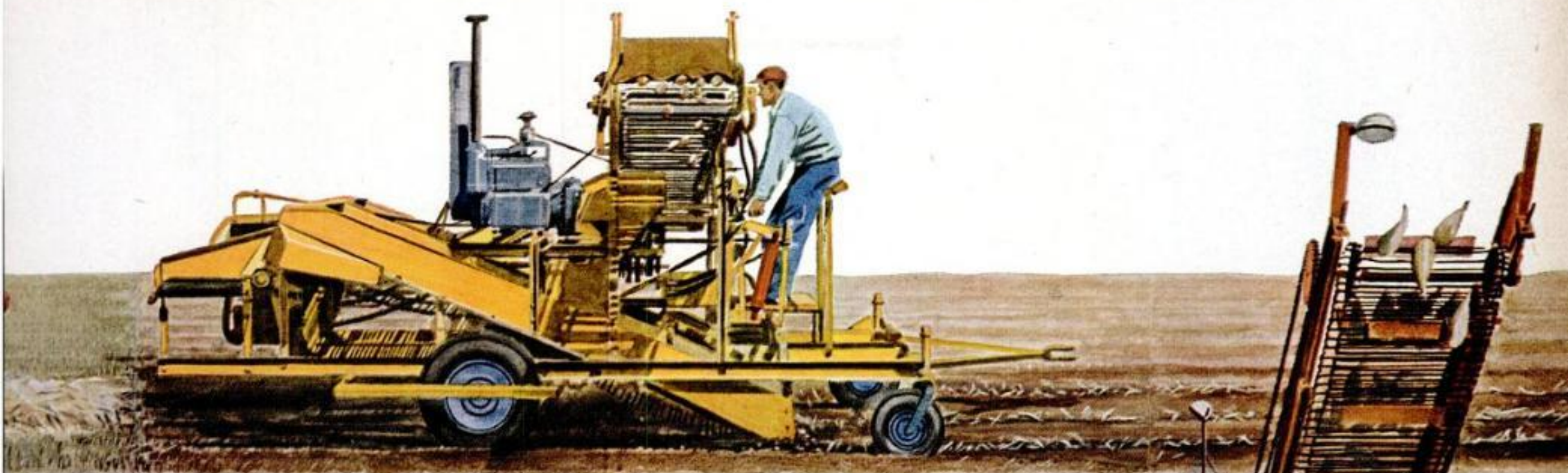
GRAIN COMBINE cuts grain and threshes it, discarding chaff and carrying wheat in huge tank. In some parts of U.S. grain is windrowed, allowed to dry, then scooped up and threshed. McCormick's newest \$5,075 combine harvests up to 40 acres a day.

HARVEST

Ingenious giants cut, pick

Harvesttime in the U.S., once a romantic scene of creaking wagons and plodding workhorses, now has a new industrial look. Today most crops are cut, picked or baled by nonbucolic but highly efficient machines like the ones on these pages. Thanks to machines, the number of horses and mules has declined steadily since World War I, releasing 65 million badly needed acres for the growing of food crops. Where he owned 25 million work animals in 1920, the U.S. farmer now owns \$15 billion worth of ingenious machinery, furnishing 377 million horsepower, harvesting 98% of the country's wheat, 75% of the corn, 66% of the potatoes.

Because of the machine, the farmer



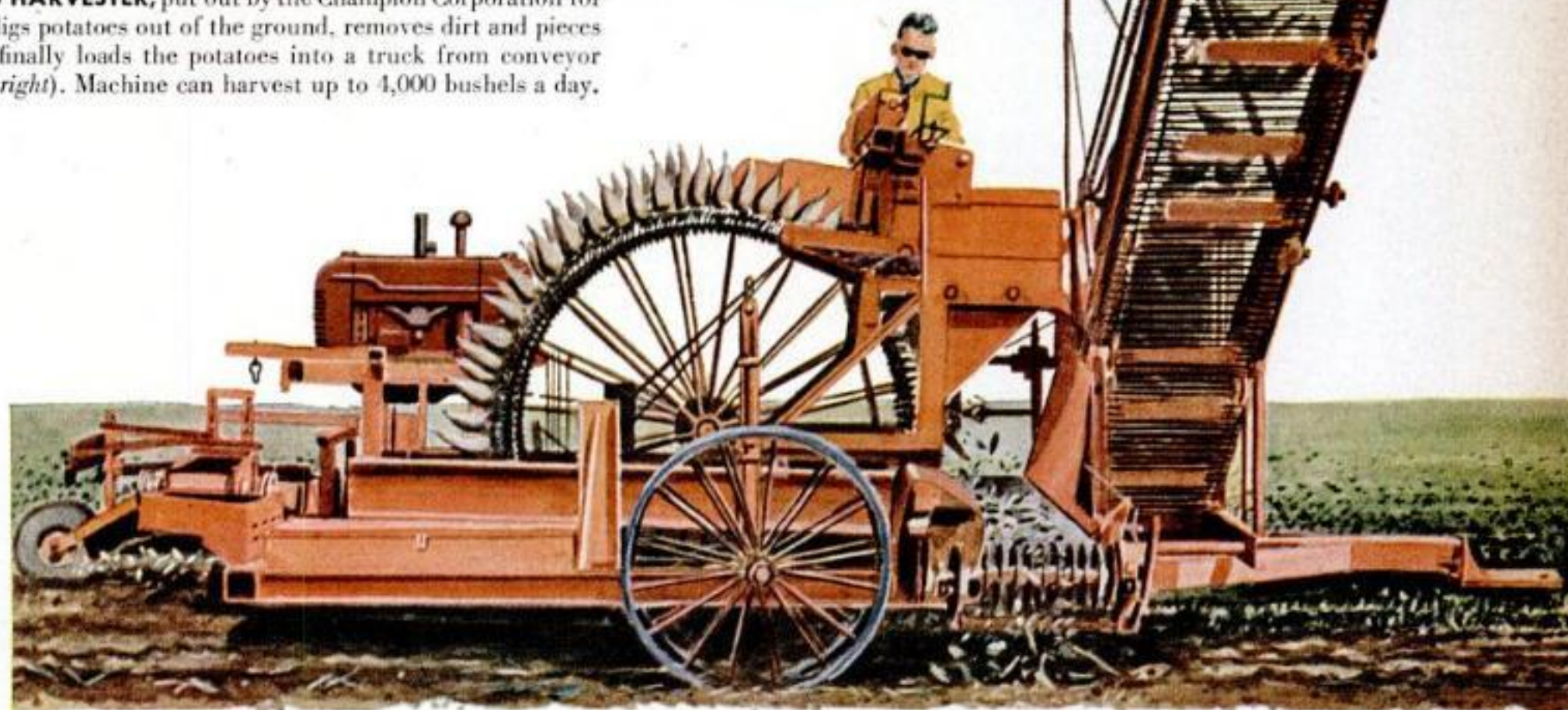
POTATO HARVESTER, put out by the Champion Corporation for \$4,865, digs potatoes out of the ground, removes dirt and pieces of vine, finally loads the potatoes into a truck from conveyor belt (top right). Machine can harvest up to 4,000 bushels a day.

MACHINES

and package nation's crops

of today is not only a landowner but also an industrialist and a mechanic. An average Illinois corn-grower with his 240-acre farm has invested \$8,000 in machinery, and almost half of his farm expenses go for maintenance and replacement. Big farms have their own machine shops and even small farmers must know how to repair a tractor.

All this is only a beginning. Already machines are being designed to harvest such traditional hand-labor crops as tomatoes and tobacco. At the same time intricate machines like the cotton picker are being simplified and reduced in cost. Even the small farmer can now look forward to the day when all U.S. harvesting will be done by machine.



SUGAR BEET HARVESTER, made by Blackwelder Manufacturing Co. for \$5,700, has two spiked wheels which stab beets out of ground and carry them clockwise to topping mechanism. Tops are discarded (bottom right) while beets go up conveyor to truck.

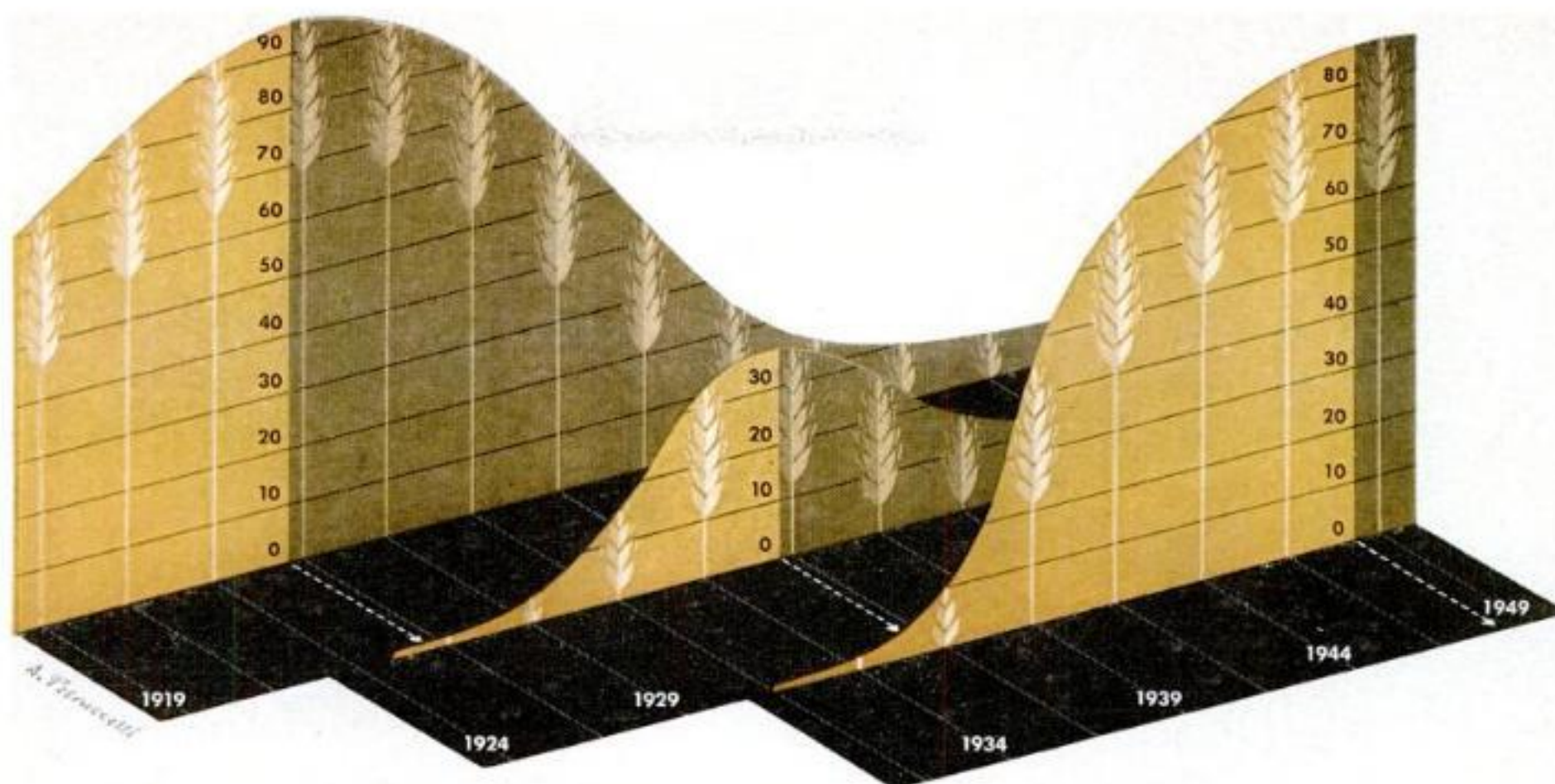


CORN PICKER, made by Allis-Chalmers for \$840, is a shell which fits over a regular tractor. Ears are snapped from stalks, husked and dropped from feeder (left). Present pickers are used on feed corn only, but new machines are being developed for sweet corn.

COTTON PICKER is a development of past few years, but already 17% of the national crop is machine-picked. McCormick's picker costs \$8,876 (including tractor), plucks cotton from stalks with barbed spindles, cleans it and feeds it into a huge wire basket.

CONTINUED ON NEXT PAGE





WHEAT VARIETIES grown in Northern Great Plains in last 30 years are shown in chart. Marquis wheat (*left*) was not rust-resistant but matured early and was grown on more than 90% of acres at its 1927 peak. As it declined,

Ceres (*center*), which resisted some rusts, climbed to 35% of acreage, dropped sharply after 1935 epidemic. Varieties resistant to stem rust (*right*) have since climbed to 85% of acreage but now face attack from new 15B rust.

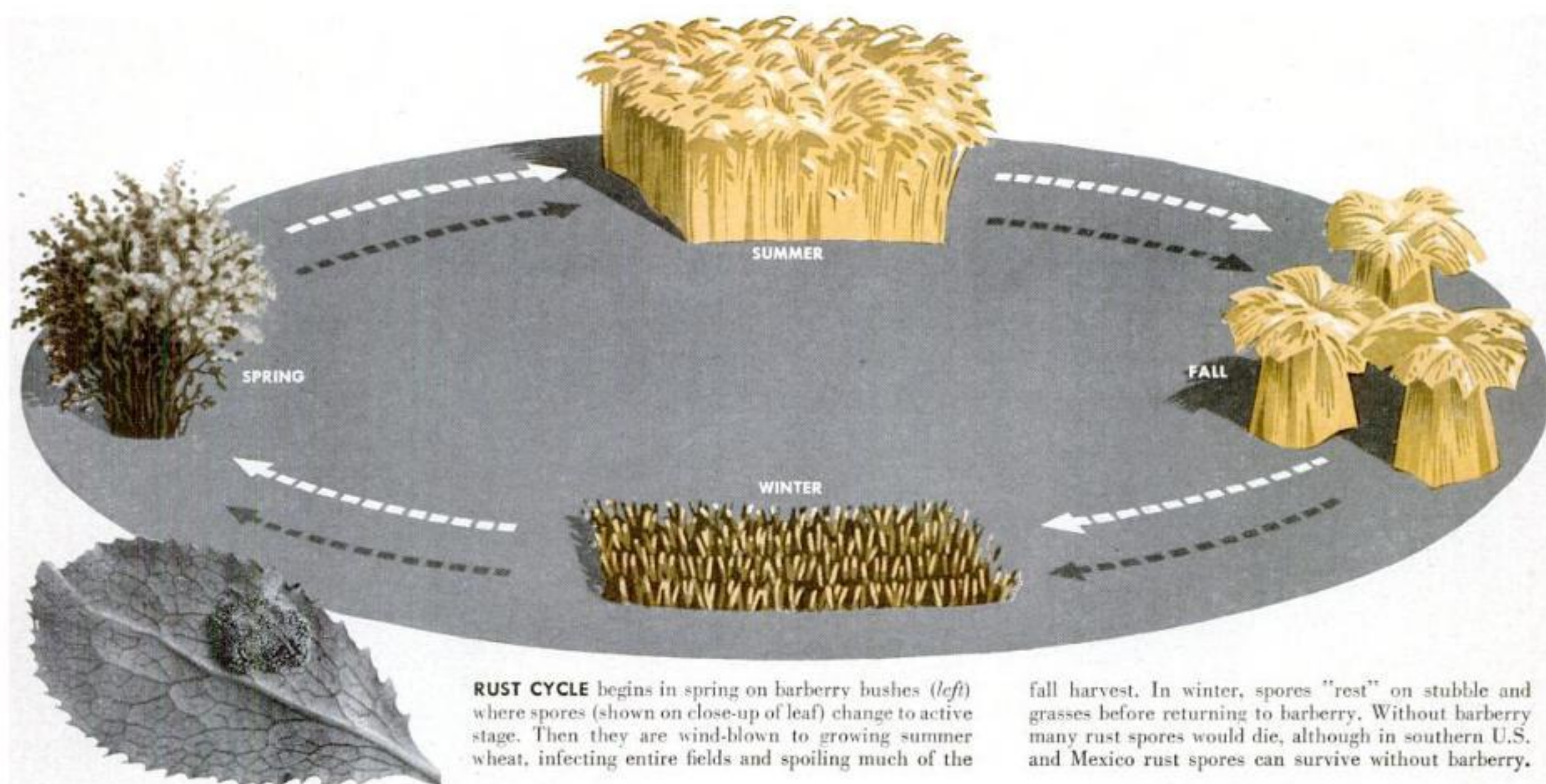
WAR AGAINST WHEAT RUST

Scientists develop new grains to combat destructive fungus, but enemy is always one step ahead

In the continuous struggle for high food production, some problems must be solved not just once but many times. Again and again farmers and scientists have had to defend the wheat crop—one of the country's biggest—against a persistent enemy, rust. A fungus, rust attacks the stems and leaves of the growing wheat and destroys the ripening grain (*opposite*). Since the early 1900s the U.S. has lost hundreds of millions of dollars to the virulent spores which, borne on the wind, spread like fire through the prairie wheatfields. The disease can be combatted by developing rust-resistant strains of wheat (*above*) and by eradicating the common barberry bushes which play host to the spores during the spring

months (*below*). But the rust keeps developing its own new varieties which destroy previously resistant grain, and the barberry is widespread and sturdy, making eradication a long and difficult job.

In 1950 a new rust called 15B broke out in the vital spring-wheat region of Minnesota and the Dakotas and destroyed \$19 million worth of grain. Last year there was another epidemic of 15B in the same area. Scientists have been experimenting with 13,000 wheat varieties and have come up with several that are highly resistant (*center, opposite*). If these new wheats meet other requirements, 15B may be licked—but other new rusts are certain to appear, and there is no end to the struggle to save the wheat.



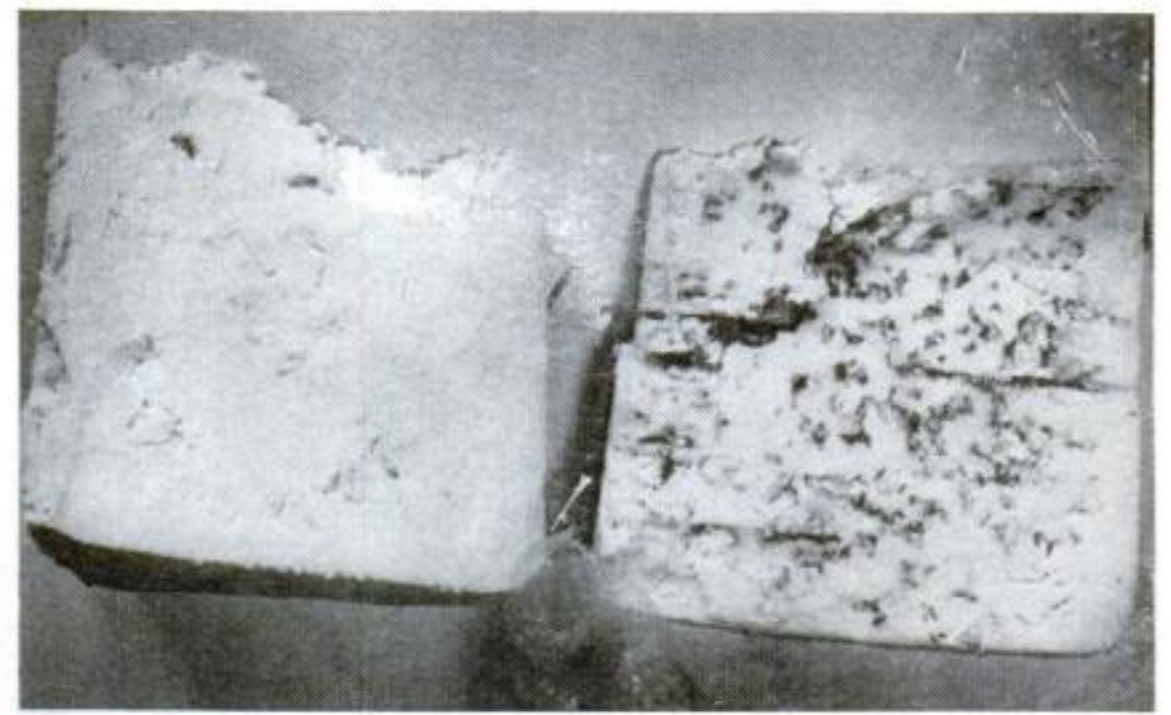
RUST CYCLE begins in spring on barberry bushes (*left*) where spores (shown on close-up of leaf) change to active stage. Then they are wind-blown to growing summer wheat, infecting entire fields and spoiling much of the

fall harvest. In winter, spores "rest" on stubble and grasses before returning to barberry. Without barberry many rust spores would die, although in southern U.S. and Mexico rust spores can survive without barberry.

← NEW 15B RUST KILLS COMMON DURUM, DOES NOT HARM NEW BREAD WHEAT (CENTER)



WEATHER EFFECTS on corn are measured by instruments to find out how the soil's absorption of varying amounts of sunshine and moisture influences growth.



NEW WHITE CHEESE (LEFT) HAS FLAVOR BUT NOT BLUE 'MOLD' OF ROQUEFORT

THINGS TO COME

In 725 experiment stations the scientists of today are preparing the way for farmers of tomorrow

Research, the starting point of farm progress, is carried on across the country at 725 experiment stations, ranging in size from the Department of Agriculture's 2,300-man operation at Beltsville, Md. down to one-man field laboratories. Out of the bewildering variety of tests and studies which these stations are conducting will come the farm techniques of the future. At the Wisconsin state station with headquarters at Madison, some of whose work is shown on this page, scientists are testing ultrasonic wave treatments that ripen cheese in half the normal time, trying to control fruit-tree diseases with fertilizer and developing a white Roquefortlike cheese (*above*), which is expected to appeal to people who like Roquefort flavor but don't like the appearance of the "mold." At Alabama Polytechnic Institute in Auburn, poultry experts are experimenting with assembly-line egg production (*opposite*), with chickens penned in sloping, wire cages so that every egg rolls down to a convenient wire rack.

Studies like these, as well as private industry's experiments which have brought forth cotton pickers and Aldrin (an insecticide), constitute the greatest hope for ever-increasing, ever-improving farm production. But even when a new plant or process is perfected, there remains the problem of putting these advances into common practice on farms. In spite of field stations, farm literature, county agents and demonstrations workers, it is sometimes 10 years before a scientific achievement becomes widely used on the farm. If, by some magic, all the research gains of today could be completely translated to all farms tomorrow, the 1953 food output would be half again as much as the 1952 output, and the problems of the immediate future (p. 65) would be largely solved.



POTATO BLIGHT is combatted by crossing an ordinary plant with unproductive but blight-proof plant (*left*).



HORMONE PELLETS, injected into the back of chicken's head, improve the carcass quality.



ANTIBIOTICS in feed make hog weigh 190 pounds at 150 days. Hog on normal feed (*right*) weighs only 155.



WORKING WIVES

There are millions, growing in number; most of them are trying to improve living conditions

Very early one morning last week Mr. and Mrs. Stanley Pianko awakened in their Cliffwood Beach, N.J. home, gulped breakfast, packed a suitcase, bundled up their 11-month-old daughter, stepped into the family car (below) and drove off in the half-light of dawn. In the morning darkness, 2,000 miles away, Mrs. Daniel Condrón of Phoenix, Ariz. slipped quietly out of bed, careful not to disturb her sleeping husband, dressed by lamp-light (right, below) and, after a few more chores, just as cautiously slipped away from the house. There was nothing furtive about these gumshoe operations and nothing to hide from the neighbors. It was by now a daily ritual—the wives of the Pianko and Condrón families simply were going



LEAVING FOR WORK, THE PIANKOS GET INTO CAR FOR DAILY DRIVE TO LEAVE DAUGHTER DEBORAH IN THE CARE OF MRS. PIANKO'S MOTHER, 17 MILES AWAY



IN THE FACTORY Pauline, a machine operator, checks endless rows of jars filled with cold cream.

SHE BEGRUDGES LEAVING BABY

The three members of the Pianko family spend most of their days in three different places—Stanley at the Carteret, N.J. ordnance plant where he is a mechanic; Pauline at the new Johnson & Johnson's baby products plant at Cranford (left); and Debbie at her grandmother's house in Rahway. What Pauline dislikes most about holding down her factory job is having to leave her baby "even for a minute." But without her \$46.46 a week to add to Stanley's \$58.50 a week, the Piankos figure they would have to reduce their unpretentious standard of living—and there is almost no place to cut it. Stanley joshes Pauline for "having dollar signs instead of eyes," but Pauline says she hopes "someday soon they will be erased."



AT HOME the Piankos spend as much time as they can take from household chores to play with Debbie.

to work. The performance, in fact, is being increasingly repeated around the clock and around the country, for Pauline Pianko and Ruby Condon are typical members of what in a few short years has become the nation's largest sorority; married women who combine the responsibility of housekeeping and motherhood with working for wages.

In this sorority "Rosie the Riveter," who swelled the World War II labor force for patriotism and pay, has lost her standing. Despite this there are 19 million working women in the U.S. today—almost half again as many as in 1940 and only 800,000 less than at the 1945 peak. This means one of every three U.S. workers is a woman, and, more startling, married

women in the labor force outnumber single girls, widows and divorcees combined. Half of the married women who work have young children.

Unlike the strident suffragettes who once were eager to prove their equality with men, the typical working wife of 1953 works for the double pay check that makes it possible to buy a TV set, a car—or in many cases simply to make ends meet. The problems created by her efforts to solve this are what happens to the children and what happens to her marriage. But most working wives, who have no intention of working indefinitely, feel it necessary to risk these dangers and cope with the problems in order to maintain a good standard of living for their families.



LITTLE MORE THAN TWO HOURS AFTER HUSBAND HAS RETURNED FROM HIS NIGHT JOB, RUBY CONDRON IS UP AND DRESSING FOR HER OWN DAY'S WORK AHEAD



IN THE BANK, Ruby discusses stock certificate with Cashier G. C. Williams with whom she works.

THEY WORK DIFFERENT HOURS

Getting up early each day is no problem for Ruby Condon. Almost every evening she retires about 9, two hours after Dan has left for his job as a night supervisor of the city-owned Phoenix bus system and after she has finished the ironing and mending, which she cannot do at any other time. In the morning, before she leaves for the Bank of Douglas, where she is a secretary, Ruby dusts, cooks breakfast and gets Sharon Ann, 12, and Dannie, 7, ready for school. While she is gone Dan pitches in on the rest of the chores. He is, more than most husbands, a partner and a helper around the house who, from personal experience, knows why food bills run so high. But, except for Sundays, he doesn't get to see much of Ruby.



HOME ALONE, Dan takes the family wash to self-service laundry, hangs it up when he gets it home.



AT HOME, GRACE IS SURROUNDED BY ARTICLES BOUGHT WITH OWN MONEY

Working Wives CONTINUED



IN SCHOOL, GRACE SULLIVAN IS SURROUNDED BY FOURTH GRADE PUPILS

A TEACHER FEELS SHE IS 'A BETTER MOTHER'

As a teacher at Twin Lakes school in Tampa, Fla., Mrs. Grace Sullivan spends her days with other people's children—41 of them. Her own sons, 7 and 5, attend another school, but Mrs. Sullivan is convinced "I am a better mother because I work—and anyway I am gone only while they are away." Grace's husband, an Air Force captain stationed at MacDill Air Force Base, agrees. Out of her own earnings Grace has been able since 1947 to buy \$850 worth of things (left) for their home, \$650 worth of clothing, and also help buy a second house in Tampa as an investment.

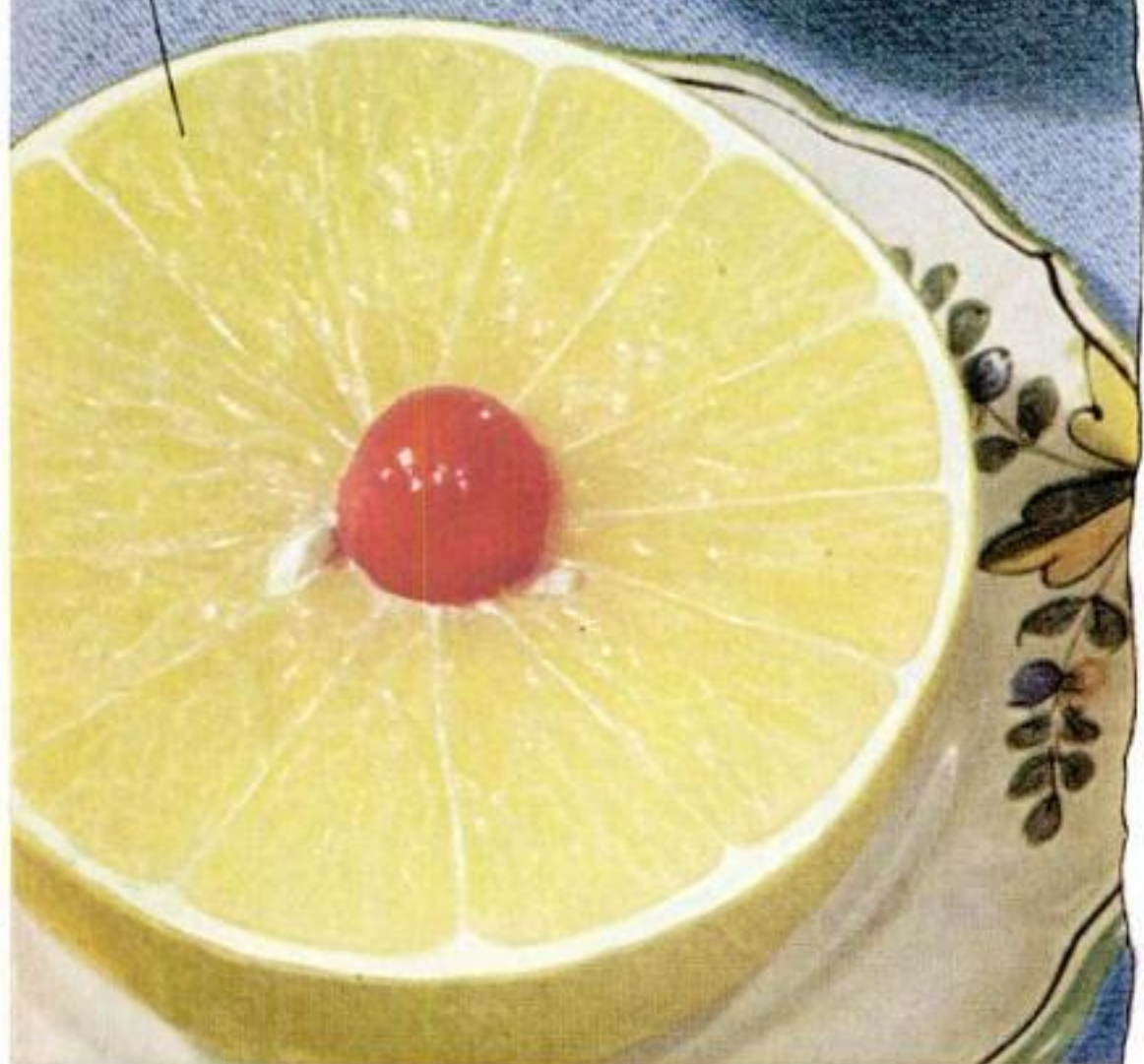
MARGUERITE McCAIN MODELS DRESS FOR A BUYER AND STORE EXECUTIVE



MARGUERITE JOINS HUSBAND, SON IN FAMILY HOUSEBUILDING PROJECT

A PART-TIME MODEL HAS FUTURE STAKED OUT

Mrs. Derrill McCain, of El Paso used to be active in the P.T.A. But four years ago she went to work at the Popular Dry Goods Co. and, like many other working mothers who have to drop community work, she hasn't had time for P.T.A. since. She took the job of putting on style shows and modeling to bolster the family income. With her husband, an air route traffic controller, Marguerite has set goals. One of them is a home, which they are building with their own hands. There Marguerite someday may be able to be a housewife again and pick up her community work.



Five delicious ways to make winter menus

Fresh as Spring

It's a long time till the first crocus, but the fresh-as-spring flavor of sunshiny Florida grapefruit will put May on your menu all winter long.

Florida's Bracer Fruit, grapefruit, is one of the world's richest sources of Vitamin C, the vitamin that helps build resistance to colds, keep energy high. ("C" is one vitamin your body can't store up—that's why you need a fresh supply every day.)

Florida grapefruit are low in calories, too—add flavor to meals without adding inches to waist-lines! So forget those rich desserts!

- 1 Sparkling Combination: Florida orange and grapefruit sections, in a nest of raspberry gelatin.
- 2 Harlequin Salad: Florida orange and grapefruit sections paired on salad greens.
- 3 Tropic Delight: Florida grapefruit sections garnished with sliced olives and diced avocado.
- 4 Bracer Fruit Favorite: Half a fresh Florida, topped with a cheerful cherry.
- 5 Bright Eye Opener (and a wholesome after-school treat): Ice-cold Florida grapefruit juice.

Enjoy it all these ways!



Serve *fresh* Florida grapefruit, halved, or in other delicious ways—at breakfast, lunch or dinner.



Serve *canned* Florida grapefruit sections—or Citrus Salad (grapefruit and orange sections mixed).



Serve *canned* Florida grapefruit juice, and grapefruit and orange juice blended. Handy, economical.



Serve *fresh-frozen* Florida grapefruit juice—in concentrate form. Keep in freezing compartment.

Florida Grapefruit

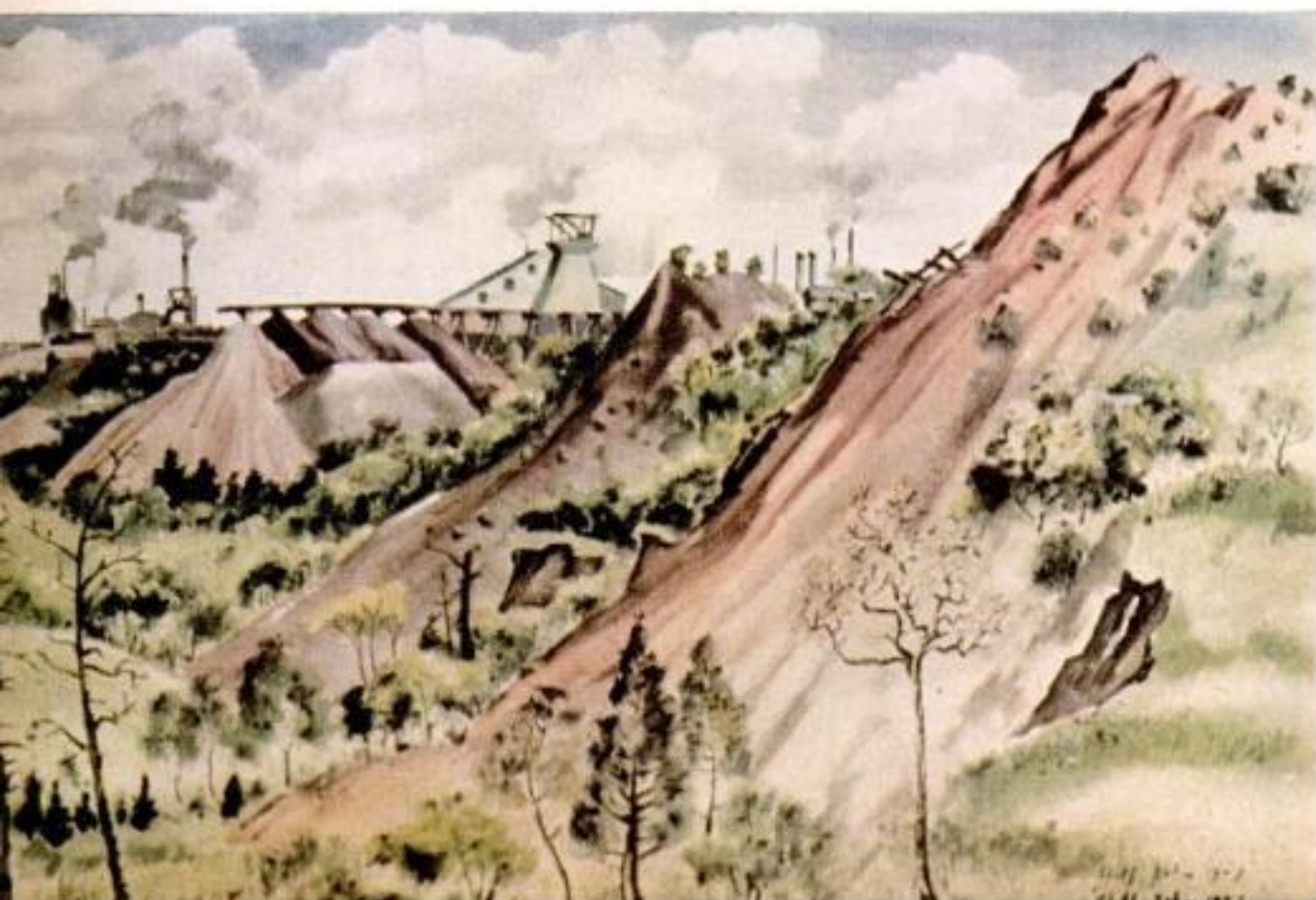
The Bracer Fruit

FLORIDA CITRUS COMMISSION, LAKE LAND, FLORIDA





IRON MINES at Ironwood, Mich. (below) were painted by Adolf Dehn for J. L. Hudson Co., a Detroit department store. Since their discovery in 1885, the mines have produced more than 100 million tons of ore and covered countryside with slag.



J. L. HUDSON CO.

The Artists Look

AMERICAN BUSINESS HAS BECOME

From its customary quarters in factories, stores and office buildings, American business has been expanding into new territory—the museums, art galleries and studios of the U.S. Companies of all kinds have assumed the unexpected role of art patron, commissioning artists to do paintings, reproducing their work in magazines and exhibiting it in huge shows.

A pioneer in this merger of business and art was Standard Oil Company of New Jersey which in 1938 sent an artist to paint the oil industry in Venezuela. Other companies soon caught on to the idea and began to vie with one another to promote themselves



INDUSTRIAL RIVER, the Schuylkill, flows past Philadelphia's sprawling industries and railways. The leaden scene, hung with smoke from trains and factories, is by Paul Sample, one of 14 artists commissioned by Gimbel's store to paint Pennsylvania.

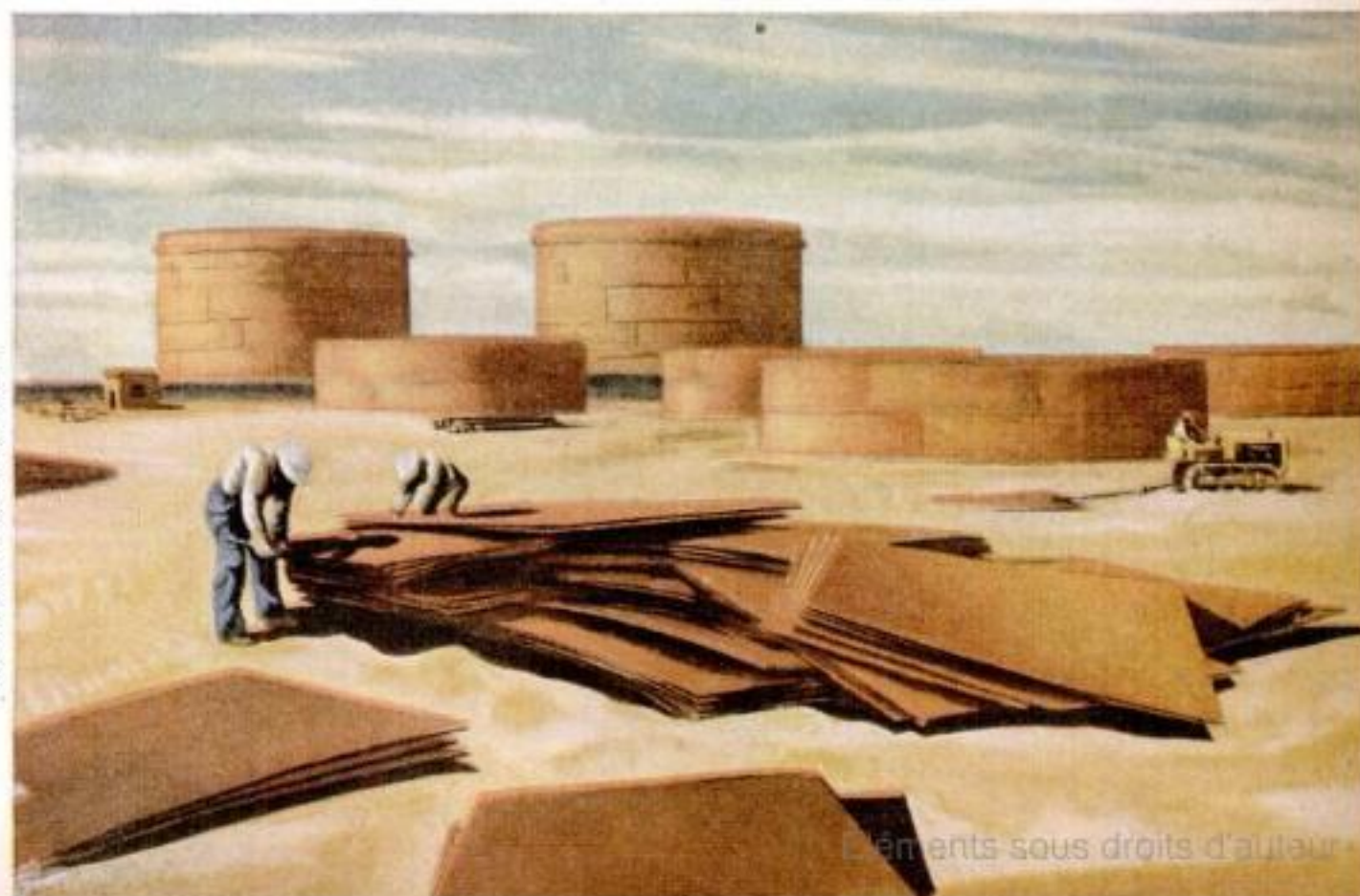
OIL STORAGE TANKS at Wilmington, N.C. were sketched by Wittich Holloway, who did illustrations for Standard Oil of New Jersey's magazine, *The Lamp*. Men in foreground are assembling pickled steel plates to be used in construction of tanks.

at U.S. Industry

PAINTERS' PATRON AND SUBJECT

through art. A drug firm commissioned paintings for its house organ. A machine manufacturer made vast purchases of art which it exhibited around the country. Several businesses launched nationwide art contests, while on a smaller scale, department stores sponsored projects in which painters were invited to depict scenes in particular states. In most cases, artists have been given free rein to paint what they wanted. Some went off on tangents, but as the pictures on these pages indicate, the majority of artists have chosen to portray the vast and complex shape of business itself, producing a vivid pictorial expression of America's industrial culture.

STANDARD OIL COMPANY (N.J.)



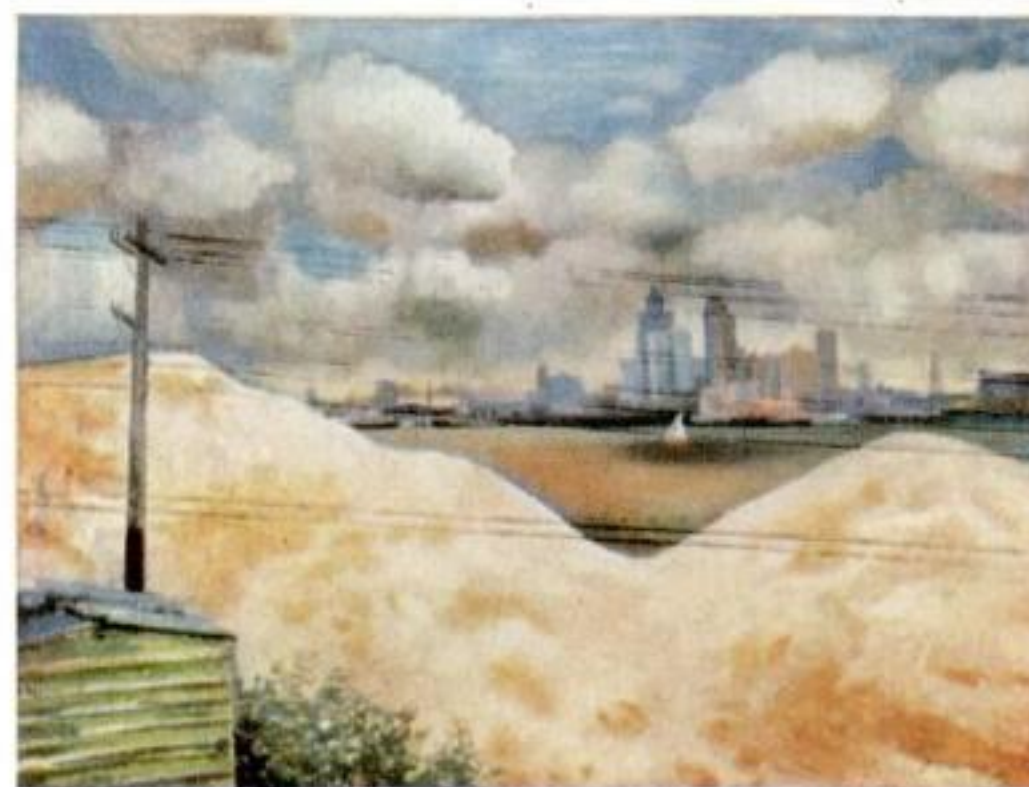
Éléments sous droits d'auteur



PHILBROOK ART CENTER

OIL REFINERY at Baton Rouge, La. was sketched by John McCrady during a lashing rainstorm. One of a group painted for Standard Oil of New Jersey, this picture was donated to Philbrook Art Center in Tulsa, Okla.

J. L. HUDSON CO.



DETROIT SKYLINE, seen from Canadian shore, was painted for the Hudson Co. by John de Martelly, who felt that dreamy effects of towers against quilted clouds presented contrast to realities of the industrial city.

J. L. HUDSON CO.



FOUNDRY WORKER pouring metal into mold in a Detroit automobile factory prompted bright-faceted picture by David Fredenthal. A native of Detroit, Fredenthal once worked in foundry, painted this for Hudson Co.



LOS FAMOSOS TITERES DE SALZBURGO

BOLIVIA 40 BOLIVIANOS
CHILE 40 PESOS
COLOMBIA 50 CENTAVOS
COSTA RICA 1 COLON 50 CENTAVOS
CUBA 3 DOLARES
ECUADOR 50 CENTAVOS
EL SALVADOR 10 PESETAS
GUATEMALA 50 CENTAVOS
HONDURAS 40 CENTAVOS

MEXICO 1 PESO 50 CENTAVOS
NICARAGUA 3 CORDOBAS 50 CENTAVOS
PANAMA 20 LINTENOS
PARAGUAY 1 DOLAR
PORTUGAL Y POSSESIONES 7 ESCUDOS
PUERTO RICO 20 CENTAVOS
REPUBLICA DOMINICANA 50 CENTAVOS
REPUBLICA FILIPINA 40 CENTAVOS
URUGUAY 100 PESOS
VENEZUELA 1 BOLIVAR

A fines del siglo VIII reinaron dos de los más grandes emperadores de la historia: Carlomagno, rey de los francos, y Harun al-Rashid, califa de Bagdad. Ambos reinaron en épocas de grandes aventuras y descubrimientos. En la época de Carlomagno, los europeos estaban separados entre sí por miles de kilómetros. En la época de Harun al-Rashid, los europeos y los árabes comenzaron a tener contacto directo. Harun al-Rashid fue el primero que se convirtió en Persia. El shah, compadecido por su fe, le otorgó el título de "Gran Señor de la Tierra Santa". Harun al-Rashid fue el primero que se convirtió en Persia. El shah, compadecido por su fe, le otorgó el título de "Gran Señor de la Tierra Santa".

CONTINUA EN LA PAGINA SIGUIENTE

¡ Año Nuevo ... Vida Nueva !

"A New Year... A New Life!" This Spanish New Year's saying has double meaning this new year for Latin Americans. Now on the way to them are 150,000 copies of the first issue of LIFE EN ESPAÑOL—the new Spanish-language edition of LIFE published fortnightly.

When the expected million or more readers open this first issue, they will find a magazine with a distinct personality of its own—thanks to

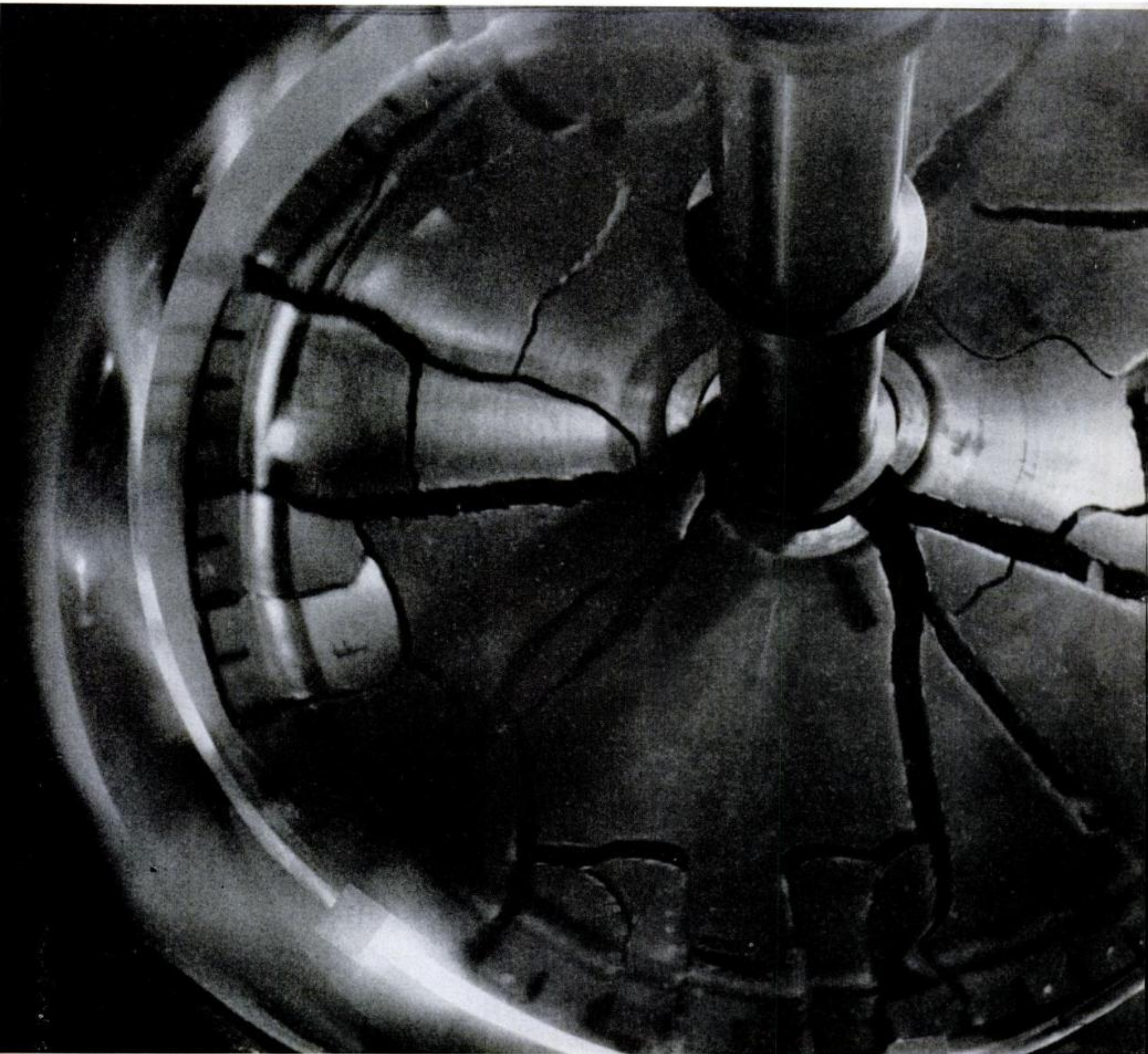
creative editing by outstanding Latin American journalists. But they will also find a magazine that strongly resembles LIFE in more than just printing, color reproduction and page size.

For LIFE EN ESPAÑOL extends to Latin America LIFE's mission of making it possible "to see life; to see the world; to eyewitness great events ... to see things thousands of miles away ... to see and to take pleasure in seeing."

LIFE
INTERNATIONAL

SPANISH AND ENGLISH EDITIONS

THIS PICTURE WAS TAKEN AT TWO MILLIONTHS



It shows the explosive climax in a speed-shattering test of a jet wheel made of titanium alloy, a new,

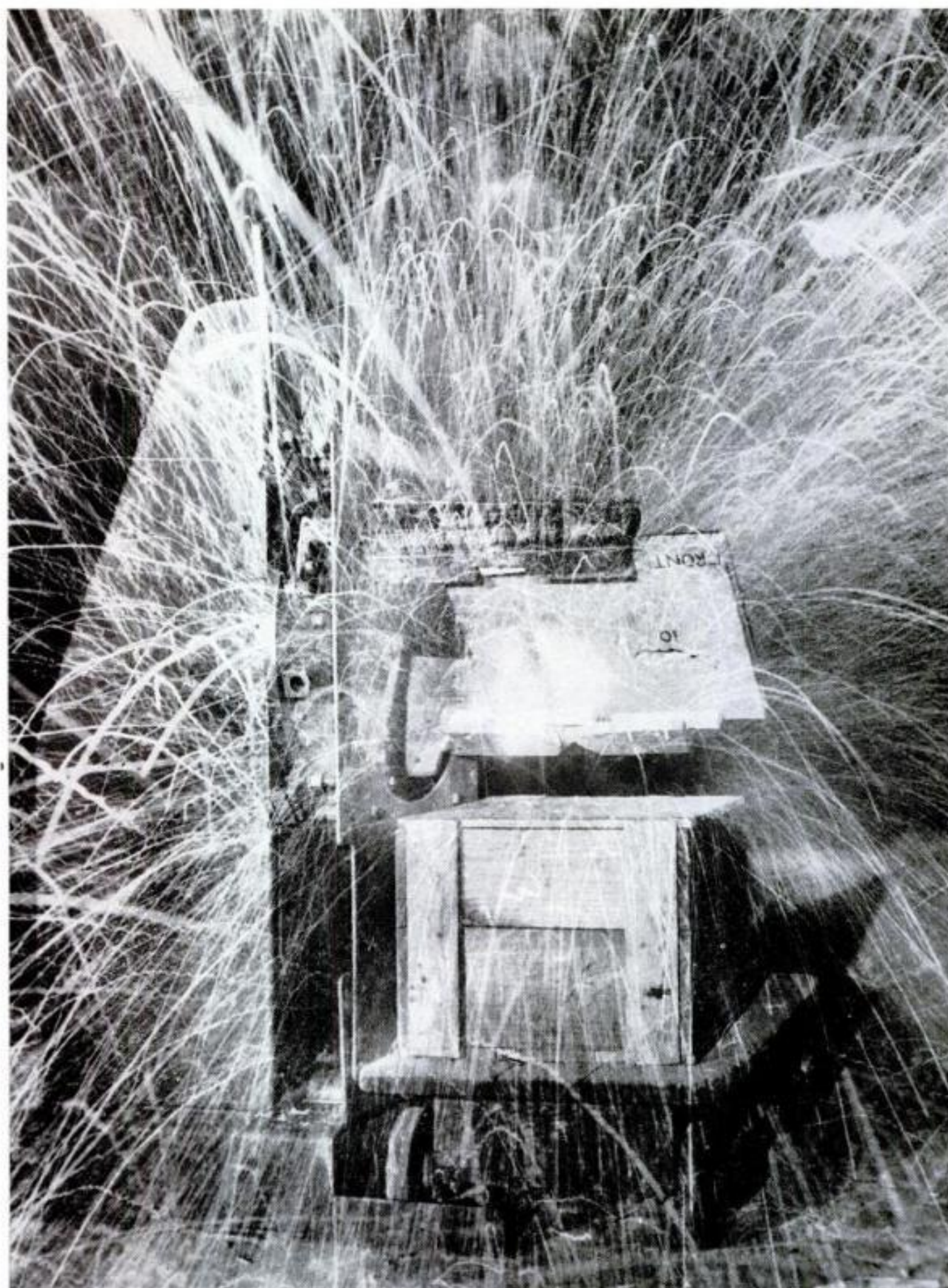


The unusual picture above shows the strongest jet compressor wheel ever built disintegrating in a test at 22,000 rpm—5,000 rpm more than the toughest steel could stand. Yet this wheel, made of a new titanium alloy, could withstand even greater speeds. In earlier trials it spun unscathed at the highest rpm the test machine could produce. Aircraft engineers, anxious to see just how the wheel would shatter, had to notch its hub before it would break

at all. This demonstration of titanium's remarkable properties shows why America's metallurgists are engaged in frantic search for efficient ways to produce and use the metal. Its strength, lightness (*left*) and resistance to corrosion promise revolutionary changes in future machines. Designers are already experimenting with titanium tank armor, airframes for fighter planes and base plates for mortars. But like other new materials titanium poses

← IN TEETER-TOTTER TEST STEEL ENGINE PARTS BALANCE IDENTICAL TITANIUM PARTS PLUS A PILOT

OF ONE SECOND



EXPERIMENTAL ARMOR of titanium alloy, about half as heavy as steel, withstands exploding

37-mm armor-piercing shell in test at Watertown Arsenal, Mass. as shell fragments and sparks fill air.

nearly indestructible material

new production problems. These are so complex that in a peacetime economy the metal might never have been developed to a useful state. Titanium was first isolated in 1791 but was a useless wonder until a few years ago. A titanium compressor still costs more than would one of solid silver. But metallurgists are undismayed. "After all," said one, "it took us 100 years to develop the metallurgy of steel. In a couple of years we'll lick titanium too."



PUNCTURED STEEL has this gaping hole after 37-mm shell tears through it. Plate is $\frac{3}{4}$ -inch thick.



UNPUNCTURED TITANIUM stopped shell. The plate, $\frac{1}{4}$ -inch thick, weighed same as steel (left).



WORKER AND UNION OFFICIAL both wear Crown Zellerbach smiles. Employee K. E. Locke (left) talks to Key Man Charlie Dodge, who is also union officer. Key man himself is shown as he got 25-year pin at a company banquet.

THE COMPANY OF SMILING EMPLOYEES

Crown Zellerbach succeeds with 'human relations'

As they keep getting bigger and their machines lessen the responsibility of individual workers, U.S. corporations are taking up "human relations programs"—a vague-sounding name for a hardheaded recognition that employees work better if they feel useful and happy instead of lost and unwanted. One of the best programs is that of the \$237 million Crown Zellerbach Corporation, a West Coast paper manufacturer whose Camas, Wash. plant is one of America's largest pulp and paper mills, and which hates even to call its method a "program" lest it sound company-imposed.

Most remarkably Crown Zellerbach has erased the hard line between management and labor. Instead of the usual foremen it has "key men," who punch the time clock and belong to the A.F. of L. but are given heavy responsibilities in such things as hiring and firing. Employees are encouraged to learn about the company—everyone knows how much the president makes—and to participate in company business. Camas is known as "the meetingest mill in America," and Key Man Charlie Dodge, now a 26-year Camas veteran who makes \$5,200 a year, goes to 12 scheduled company and community meetings a week. Management never starts any employee activity without consulting the union and does not like to stay in anything it can turn over to the employees. Grievances are invariably caught before they erupt. Absenteeism is astonishingly low, some workers having been away only two or three days in 20 years.

In 18 years since the plant was first unionized, not one day has been lost from labor-management disputes. "If you stay with this company five years you're hooked," says one employee. "You like it so well you decide you might as well make it your lifetime job—and most of us do."



PLANT MEETING is held by Dodge (background) and paint crew, of which he is key man. Crew is voting on a motion to require all employees to wear goggles "where there is a hazard from dust and particles." Motion was carried.



TEN-YEAR PIN, for a decade of employment, is given to napkin wrapper Rufina Hughes by executive vice president, Harold Zellerbach, at banquet held in Crown Zellerbach Inn in Camas. Corsages were given to all women receiving pins.





LABOR-MANAGEMENT MEETING consists of executives, workers. Dodge is fourth from right. In background is former union official now executive.



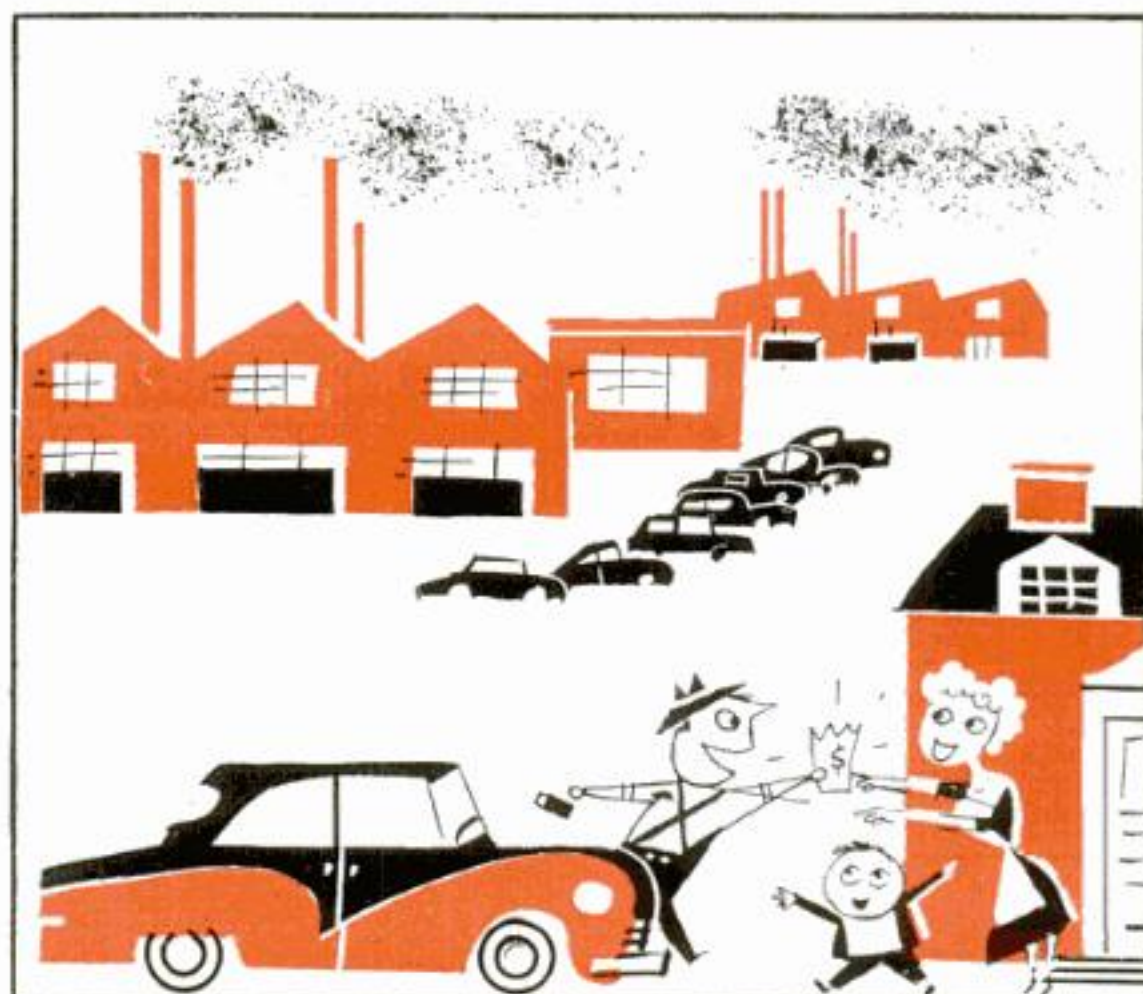
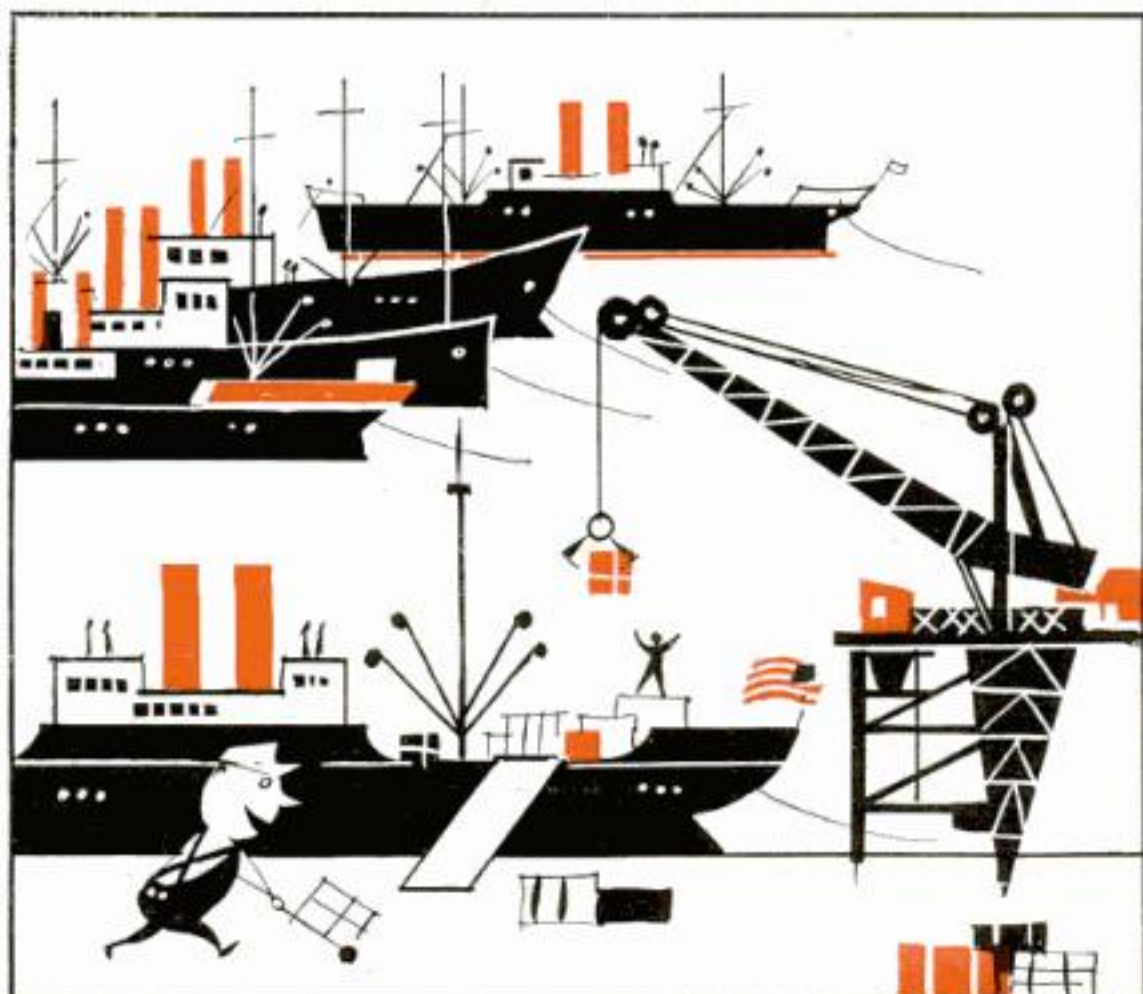
OVERLOOKING THE CAMAS PLANT, Dodge stands on Columbia River bluff, facing Mt. Hood, 45 miles off. Plant takes logs from river, makes news-

print and napkins. Said an executive when asked about odor from plant, "What you smell is prosperity. When you don't smell that, we're in trouble."



GOING ON A PICNIC, Charlie Dodge (in rear, seated) and family sit with Vera Berney (left, background) and family. Vera is a personnel director at

Camas and so part of management. "How could I get mad at Vera?" says Charlie. "She's no management stooge from San Francisco. She's a friend."



FOUR STABILIZING INFLUENCES THAT WILL HELP BOLSTER THE AMERICAN ECONOMY WHEN DEFENSE SPENDING LEVELS OFF ARE SHOWN IN THESE DRAWINGS

WHERE DO WE

A CAREFUL ANALYSIS PROVIDES THIS ANSWER: WE MAY HAVE A MILD RECESSION

by the Editors of FORTUNE

Elsewhere in this issue, on pages 46 through 57, Frederick Lewis Allen analyzes the economic "miracle" of the last two decades and shows how the U.S. has evolved a system that is brand-new under the sun. There remains the vital question: where is this new system going from here, and what does it portend for the nation and for everyone—from executive to laborer, economist to housewife? To get the answer LIFE turned to its companion publication FORTUNE, pre-eminent magazine of business and reporter on the nation's long-range economic prospects. The following article by FORTUNE's editors is based on a detailed survey of all the important industries and markets in today's economy.

WHAT, now, is ahead of us? A new golden age of ever more rewarding employment for all who want to work? Or the black days of another deep depression, mass unemployment and the complete federalization of the economy?

Prophecy is as precarious a business today as it was for ancient oracles, but we do have before us more revealing facts than the entrails of animals. These allow us to make a reasoned estimate of how our economy is likely to behave under foreseeable stresses.

The answer—it seems to us—is largely good and encouraging. The U.S. economy, 1953 model, is better balanced and vastly more depression-resistant than the 1929 model. Only a dogmatic pessimist could claim to see the beginnings of the kind of collapse that demoralized and distorted the nation in the 1930s.

The present and immediate future, by and large, seem astonishingly good. The country has just lived through what was economically the greatest year so far in its history. Total national expenditures or "gross national product" in 1952 were about \$345 billion, or (discounting inflation) \$16 billion more than the wartime peak in 1944. Unemployment, last October, declined to 1.3 million or 2% of the labor force, a peacetime low that economists consider almost miraculous. And 1953, taken as a whole, promises to be even better than 1952.

In this bright picture is one dark spot. Even if the over-all statistics will show a better 1953, the chances are that it will not be *uniformly* better. There probably will be a record-breaking period of economic activity early in the year. But it may give way, perhaps by summer, to a mild recession.

This fact poses the sharp question: is this the best we can expect of our "well-balanced, depression-resistant" economy?

The answer lies in the very nature of a free society. Ideally, a free

economy is one in which the buyer, either as consumer or businessman, spends his money as he likes. Such an economy can easily become unbalanced. Industry, to oversimplify somewhat, may produce more of one thing than people want to buy, or it may charge more than people can or want to pay. The unending process of adjusting supply to demand—or "correcting" the economy's relationships—retards its growth a little.

A good example of such a "correction" is the now almost forgotten "recession" of 1949. Stocked up with goods and fed up with prices, consumers eased up on buying. Businesses of all kinds, retail and manufacturing, faced declining sales. High-cost textile mills in New England and the South, some of which had made a killing by combining high prices and low quality, were forced to close down. Appliance, rug and furniture makers suddenly found their markets "saturated," and proceeded to lay off people. Steel production fell to about 75% of capacity. Unemployment rose to 4 million in the summer of 1949 and to more than 4.5 million early in 1950.

This recession was fairly sharp, but it was short lived. For business did exactly what it should have done: it reduced prices, improved quality and, for the first time since 1939, began to sell hard. Prices came down on household goods and furnishings, on men's shirts, on refrigerators, washers and other appliances. Inventories melted away. By the spring of 1950, the correction was over. It was, by common consent, just about the pleasantest recession the country had ever suffered.

While a similar correction now seems in the offing, the repetition will be an imperfect one, for no two recessions are identical. Today's economy faces something more than rising inventories. It must meet the beginning of a decline in arms spending.

The inventory situation itself forecasts some recession. When the steel strike ended late in July, business needed about \$3 billion worth of goods to wipe out its shortages—and they are now being wiped fast. Dealers' stocks of autos, for example, are already close to pre-strike levels. TV sets, in late 1952, were being made at the rate of 10 million a year, slightly ahead of their sales rate even during the Christmas season. Meanwhile, as some foreign agricultural shortages disappeared in a succession of good crops, exports of farm products have been running 20% below the year before, and domestic prices have dropped by about 10%.

All this is accentuated by the coming decline in defense spending. This outlay will reach its peak rate of about \$54 billion a year probably



FROM LEFT: EXPORTS WHICH PROBABLY WILL INCREASE, CONTRACTS WHICH KEEP UP WAGES, SUPPORTS WHICH MAINTAIN FARM PRICES AND PUBLIC WORKS

GO FROM HERE?

BUT THERE IS LITTLE CHANCE WE WILL AGAIN SUFFER A 1929-STYLE DEPRESSION

late in 1953; and it will then probably begin to taper off. Partly because industry is anticipating this decline, partly because it has been stocking up on machinery and other capital goods at a high rate, industry's expenditures on plant and equipment may ease 5% during 1953.

The 1953-1954 "recession," in short, will probably last longer than that of 1949, but won't be felt as much.

Here is how various groups in the nation may be affected:

- Farmers, with a little less to spend, will be more cautious about buying everything that comes along. Farm equipment dealers are already having to hustle for business.
- Labor will probably suffer little. The textile and clothing industries already went through their own little recession in 1951-52 and their employment should hold up well. If peak production of aircraft and tanks is hit soon, mild unemployment may occur—in late 1953 or early 1954—in airplane factories in Los Angeles, Seattle and Wichita and in various Eastern tank plants.
- Most vulnerable industry is probably steel, which has added considerably to its capacity. A few workers in steel mills around Pittsburgh, Youngstown, Birmingham and Gary may find themselves out of jobs. So accordingly may some iron miners on the Mesabi Range.
- The machine tool industry, largely concentrated in Ohio and New England, may have to lay off a few of its 245,000 employees.
- Sales of autos, by next fall, may possibly slide enough to create a little unemployment in Detroit.

None of these soft spots is likely to result in much real unemployment. Labor probably will suffer from the correction mainly by earning less overtime or even by not working a full week. The mass of people on salaries and fixed incomes will find the correction easy to take, and be thankful for the small but noticeable price declines.

And what then? Things may get a little worse in 1954, and then they may pick up again. But shortly after that, perhaps late in 1955, defense spending (granted no significant change in the military outlook) will probably level off to a rate of about \$40 billion a year. If the economy wobbles when defense spending is at a peak of \$54 billion, one may well ask, what will it do after that spending declines by \$14 billion?

This is one of the most portentous questions of our time.

To try to answer it accurately, we have examined its implications for all the important industries and markets in the economy. We have estimated the "hardness" or "softness" of each, gauged the possible and probable future levels of each.

We reach three related conclusions:

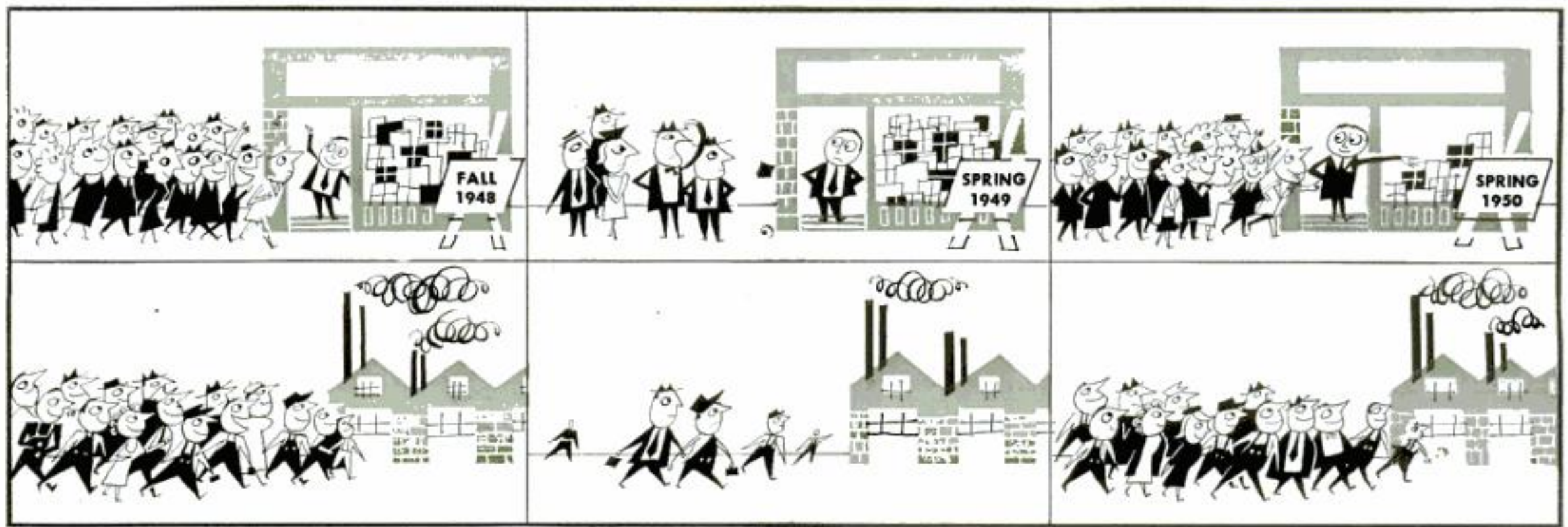
- 1) The chances are very small that business will continue to soar at capacity. The present so-called "full" employment is quite unlikely to continue indefinitely.
- 2) The chances are equally as small that business will fall off to the point where as many as 10 million would be unemployed. (This is actually a purely theoretical figure. Once unemployment rises to anything like such a level, it surely would become a political issue, an object of government intervention.)
- 3) The chances are excellent that the gross national output of 1955 (or whenever, precisely, arms spending levels off) will be about as "big" as that of 1952.

A number of factors combine to dictate the estimate of future unemployment. Individual productivity—the amount the average worker produces in an hour—is rising by about 2% a year, which means that a 1955 economy as large as that of 1952 needs fewer people to do the work. At the same time, population is increasing, which means that 600,000 or 700,000 more people will be employable each year. Thanks to these facts, some 5 million people might be out of work.

This statistic in itself would hardly constitute a national crisis. Unemployment rose to more than 4.5 million early in 1950. The real meaning of such figures depends on *who* is unemployed, and *where*. It is impossible, of course, to say now exactly how and where unemployment might occur in 1955. But it will not and cannot be evenly dis-



A THREE-YEAR VIEW, looking ahead to 1955, shows the U.S. economy (car) rolling forward on a level "bridge," unharmed by our dipping military production (tank). The four bridge supports are "stabilizers" depicted at top of page.



THE 1949 "RECESSION" is illustrated here. When consumer and business needs were still unsatisfied (top, left) employment was high (bottom, left). But early in '49 consumer buying slowed up (partly because prices, though down

slightly, were still high) and employment dropped (middle) as merchants became overstocked. By bumping prices down, merchants lured customers back (top, right), and as their inventories decreased manufacturers rehired workers.

WHERE DO WE GO? CONTINUED

tributed. Much of it will probably occur exactly where the milder unemployment of 1953-54 will occur. This means those areas where arms and capital goods production are now going full blast, and where labor is scarce. In other words: if jobs are going begging where you work now, watch out for the day when defense spending declines.

But why shouldn't everybody watch out? Won't everything start collapsing when defense spending declines substantially?

The answer is no. The reason is: our economy has been equipped with a number of stabilizers.

Of these stabilizers, some are even now at work, others would come into play as the economy shows signs of weakening. They have not been—probably can never be—harmonized and integrated to make a perfectly crashproof machine. But they add up to an impressive array of safety devices never before employed to make a free economy enduringly strong.

Those safety devices already operating are these:

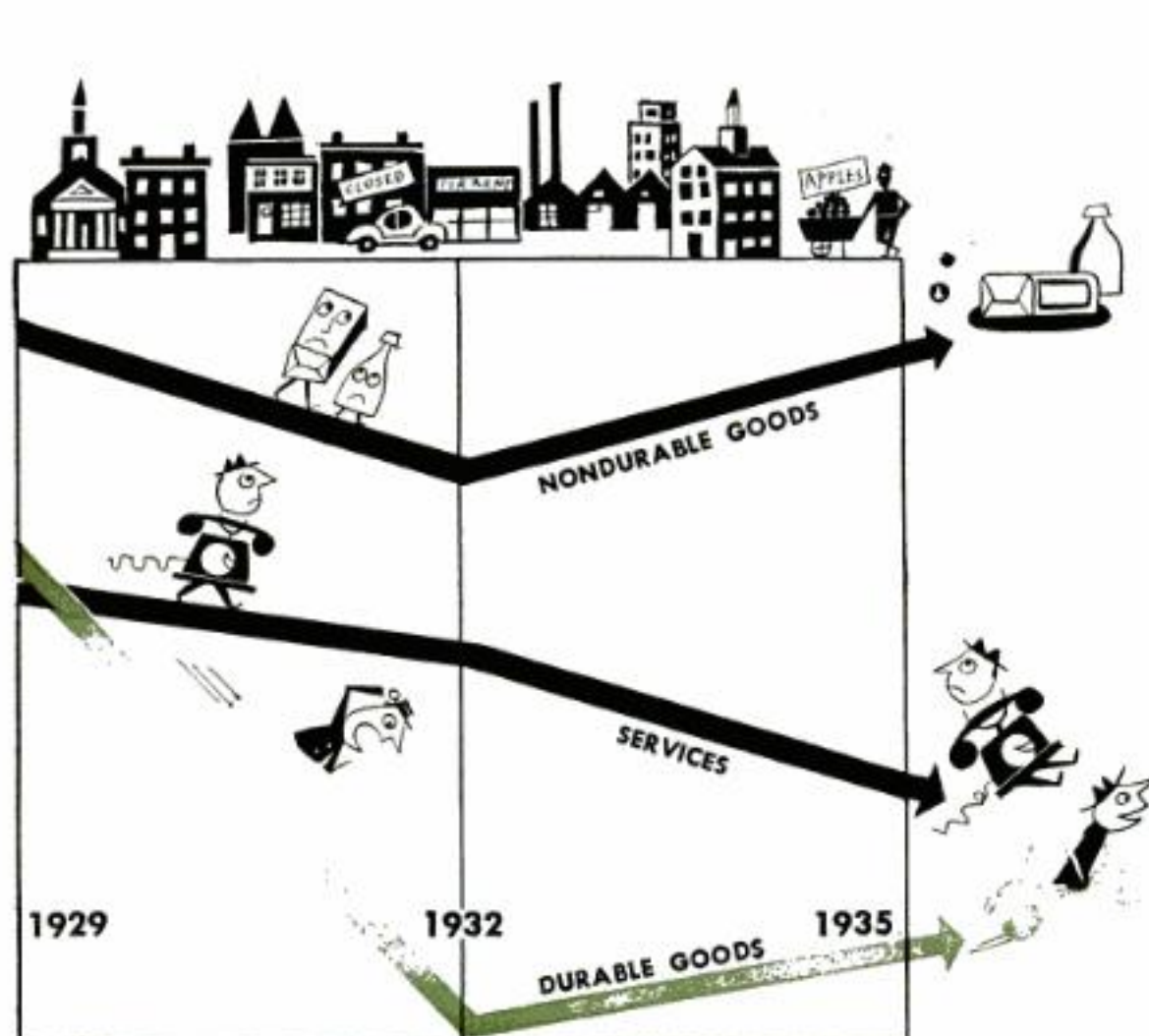
First and most important, by all odds, is defense spending itself. Continuing at an estimated \$40 billion, it is a colossal balancer. Of that sum about half will be spent on military hardware—guns, tanks, engines, planes and so on—manufactured by heavy industry. That annual \$20 billion worth of orders will equal the value of the whole annual output of the automobile industry. It inflates the grand total

of expenditures by government—including state and local as well as federal—until they account for 25% of all the national expenditures, compared to 8% in 1929. They also account for one out of every nine people employed, compared to one in 16 in 1929. To put it another way, a quarter of the economy is thus practically insulated from the uncertainties—and incentives—of the marketplace.

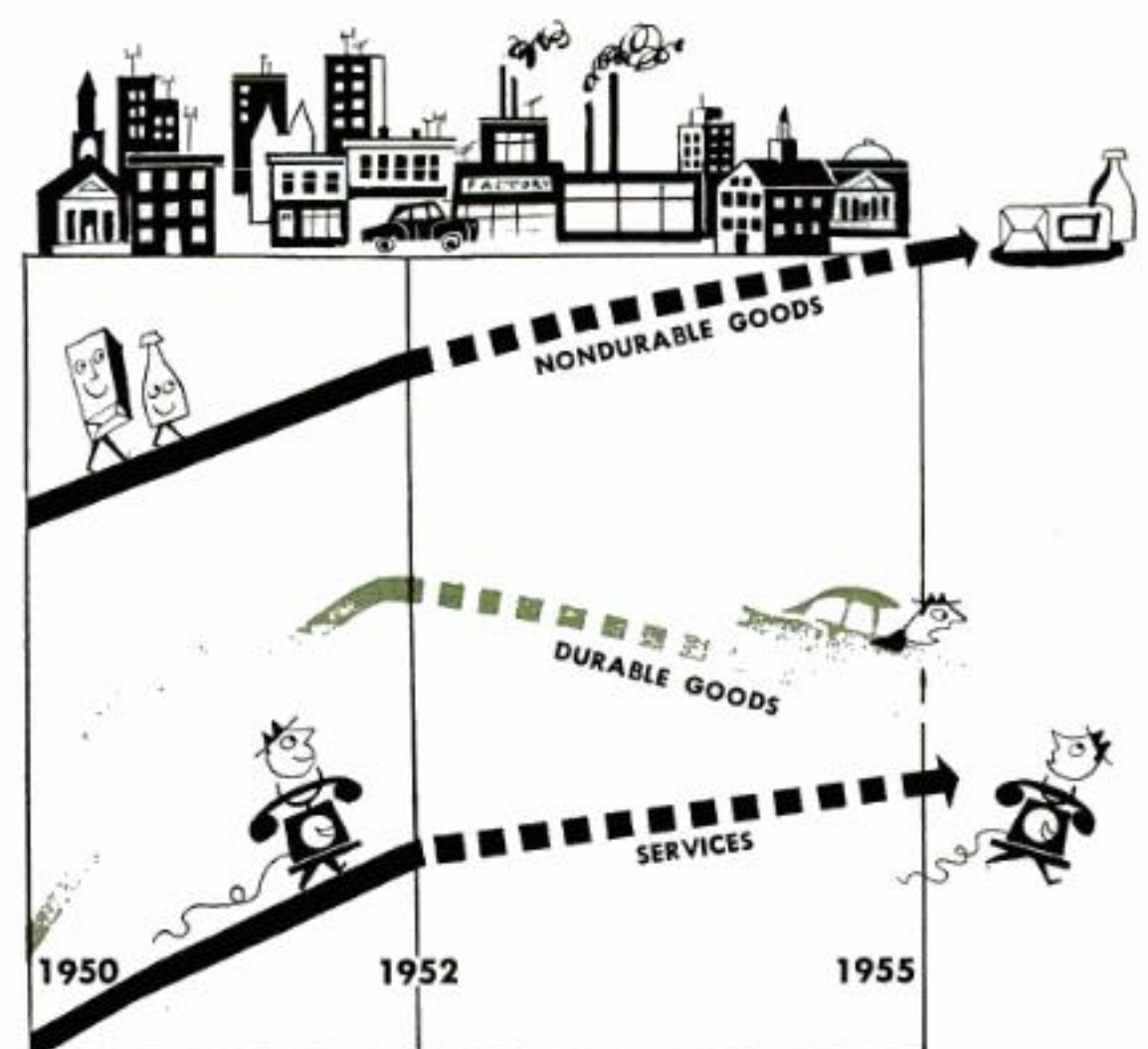
Second, there is a huge backlog of long-needed public works—anywhere from \$30 to \$60 billion worth of highways, schools, public buildings whose construction was postponed by the war. An increase of \$3 to \$5 billion in annual public construction will be necessary to make good that loss. To the extent that the construction is financed by bonds and not by taxes (which, of course, take the money away from spending), such a program will work powerfully against decline.

Third, the U.S. is committed to encouraging foreign economic development and is sure to encourage the export of private U.S. capital, even by partly guaranteeing it. Since almost every dollar exported returns as an order for U.S. goods, mostly machinery and equipment, exports of civilian durables are likely to increase by anywhere from \$1 to \$3 billion a year.

Fourth, both farmers and labor are protected by what amounts to a floor under their earnings. These floors are plausibly criticized for making costs rigid and for promoting inflation, but they also make for stability. Farm prices of course are supported by the government. The demonstrated ability of organized labor to maintain and increase wage



A TEST OF STRENGTH for any economy is the behavior of durables, whose sales normally fluctuate much more than those of nondurables and services. Chart at left shows how durables plunged, and services and nondurables dipped,

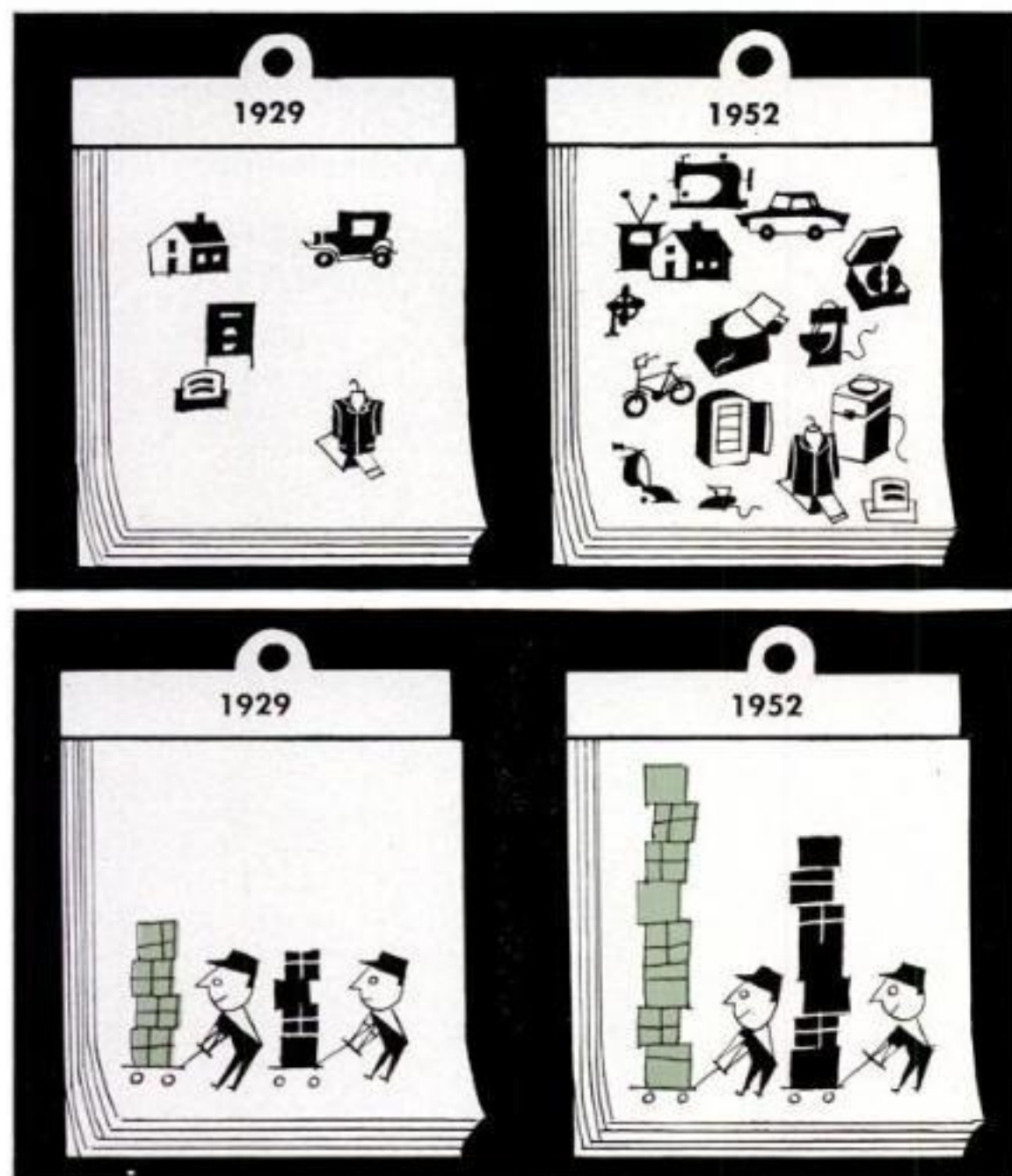


between 1929 and 1932. Chart at right reflects best economic thought on how these essentials will behave in next three years. Nondurables and services will continue slow but steady rise, mainly because durables will dip only slightly.

rates also keeps up purchasing power. Such stable high wages furthermore tend to maintain capital investment. For if wages cannot fall much, business knows that prices will not fall much, and it therefore is less inclined to postpone spending in the hope of lower prices later.

All these stabilizers are measurably fortifying the economy today. In reserve is another set of safety devices for emergency use. They are the following:

First, high federal taxes are a potent "stand-by" weapon. They carry great dangers with them, of course—they threaten the middle class's extinction, and they stimulate inflation by forcing industry to pass its taxes on to the consumer by higher prices. But these same taxes provide the government with positive ways to steady a shaky economy. When business and mass purchasing power decline, the government can, for example, stimulate the nation's buying power by reducing taxes. What is more important, high taxes function as a kind of automatic compensator no matter what the government does. To explain, suppose the government intends to balance the



A POINT OF DANGER is seen by some pessimists in future overproduction. Consumer who had relatively few things in 1929 (top, left) now has a lot (top, right). Meanwhile plant capacity, which about equaled production in '29 (lower left: capacity green, production black), has increased (lower right). High consumer demand and new products will be needed to meet production potential.

budget in fiscal 1954, but business falls off and the national income declines by \$40 billion. The government's tax revenues, two thirds of which are derived from income taxes, will then fall off by as much as \$12 billion. But the government's expenses will go right on (and may increase). They will thus offset, by at least \$12 billion, the decline in business and consumer spending. Simply because any defense expenditures demand high taxes for a long time, the "compensating budget," as it is called, will be with us a long time.

Second, unemployment insurance, which applies to 35 million people, will become a stronger force if unemployment increases. It might offset as much as a third of the resultant loss in personal income. A similar, if smaller, cushioning effect is provided by old-age pensions, both government and private.

Third, as a last resort, there is the Employment Act of 1946, which confers on the federal government responsibility for "promoting maximum production" and "maintenance of employment opportunities for those able, willing and seeking to work." The act set up the president's Council of Economic Advisers to analyze economic trends and recommend policies, but it gave the government no specific power to do anything about a slump. As the omens read now, the government will need none. But the very existence of the act manifestly provides a kind of psychological stabilizer.

HOW FUTURE LOOKS TO FIVE ECONOMISTS

To supplement FORTUNE's analysis of where the U.S. economy will go from here, LIFE asked some of the nation's most eminent professional economists to give their own capsule prognostications for the next few years.

Imrie de Vegh, Manhattan economic consultant: "Depressions are not acts of God. In 1930 we curtailed our capital exports and increased the tariff to keep out imports. The resultant dollar shortage abroad caused a collapse in world commodity prices and produced the economic crisis of the century. Unless we pull the rug once more, we cannot have a depression as long as the Kremlin forces our key industries to operate close to capacity."



Paul A. Samuelson, Professor of Economics, M.I.T.: "Congress and the new administration have the power to alleviate any recession that might be brought on by reduced defense and investment expenditures. Tax reductions, credit easing and needed fiscal programs make this problem a politically easier one than the curbing of inflation. It seems to me that with reasonable luck and wise policies the administration can maintain employment at a relatively high level."



John K. Galbraith, Professor of Economics, Director of Agricultural and Marketing Research, Harvard: "Present support price legislation will expire in 1954, and is likely to have a full dress review in the interim. But the principle that farmers should have some form of minimum price guarantee is pretty well accepted. On the balance I regard the policy as contributing both to the security of farm operations and to the stability of the economy. It is hard to imagine we will ever again have another farm price collapse like that of the early '30s."



Howard B. Myers, Director of Research for the Committee for Economic Development: "The decline in defense spending will be spread out over three years and will actually represent only 3 or 4% of our national production. This will bring some problems, but not as serious ones as after the end of World War II, when defense spending dropped from 42% to 6% of our national output in two years. Given reasonable and responsible action by government and business, the coming adjustment can be made without depression."



A. W. Zelomek, President of the International Statistical Bureau: "There will be some downward readjustment in business, possibly starting late next year. But it will be from high levels, and it won't bring us back even to 1951 levels. During this period I doubt if unemployment will reach any higher than three million or a maximum of five million which is low in relation to the total number of workers. It is doubtful whether we will experience a major depression in our lifetime comparable to that of 1929-32."



CONTINUED ON NEXT PAGE



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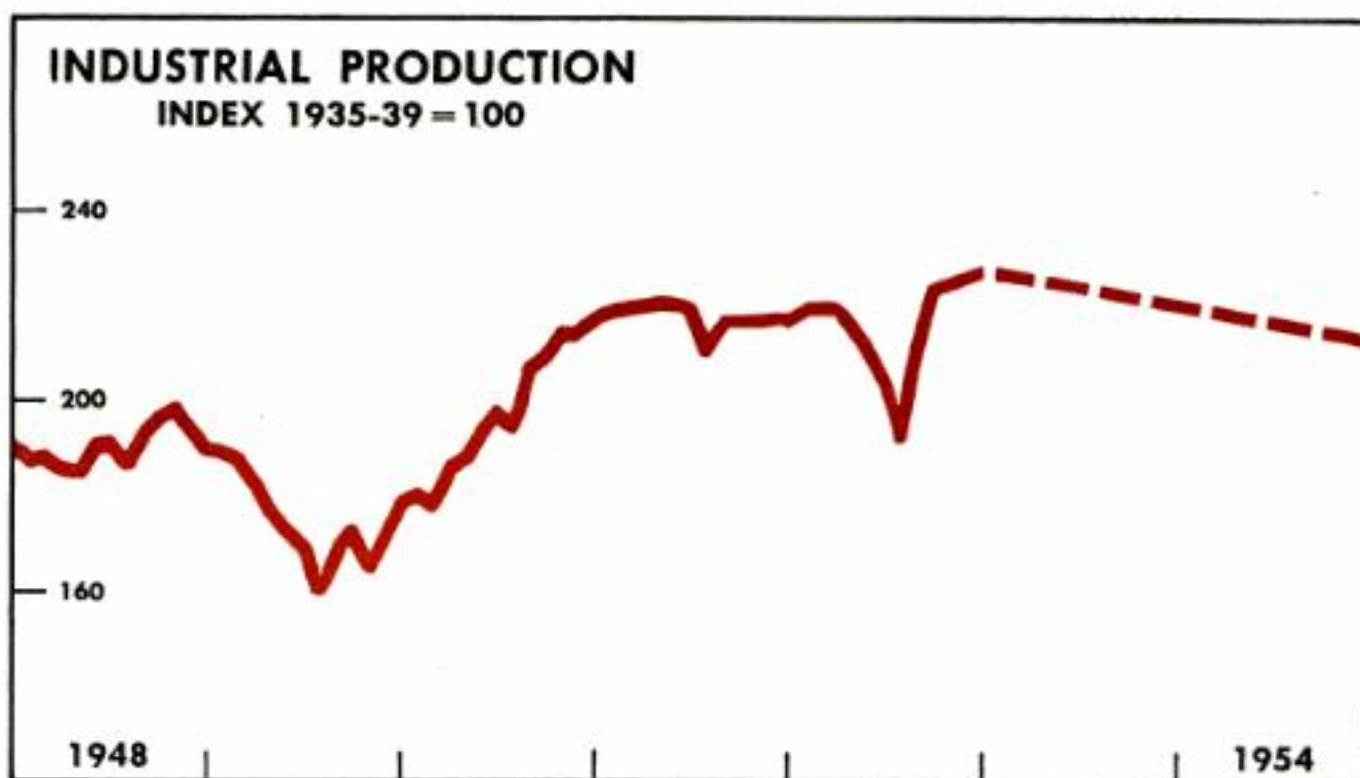
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GOODS made by industries of the U.S. have increased steadily in quantity, in spite of temporary setbacks, as shown on this chart. Measure is the index of the Federal Reserve Board. Major dip on the graph in 1952 was caused by the steel strike. FORTUNE projection (dotted line) is for only slight decrease in production.



WHERE DO WE GO? CONTINUED

All these balancers, active and passive, will help prevent another 1929-32. But they are by no means the whole story. The great safety factor—probably the most important of all—is the very character of our economy itself.

This economic machine is much stronger and better balanced than it was in the 1920s. Consumer buying power is not only relatively greater; it is also more widely and equally distributed. Consumer and corporate savings are equal to 89% of the gross national output, against 63% in 1929. There has been a lot of talk about credit abuse and excessive debt, and the sharp current rise in private debt has provoked Chairman William Martin of the Federal Reserve to remark that it "cannot be viewed with equanimity." It should not be. But the fact remains that private debt is still only 85% as large as the gross national product, against 156% in 1929.

Today there is nothing like the stock market speculation of 1929. By the standards of that hyperthyroid year, today's stocks are fantastically underpriced. Bank deposits today are invested not in short-term loans to speculators but in long-term loans to business and in loans to government, and deposits are guaranteed by the government's Federal Deposit Insurance Corp. Business and people not only have more cash; their credit is good.

Nothing demonstrates this healthy balance in our economy better than our analysis of the goods on which money today is spent. The \$345 billion that business, government and consumers spent last year falls into three major groups:

1) \$101 billion worth of services (phones, transport, power, garages, filling stations, etc.)

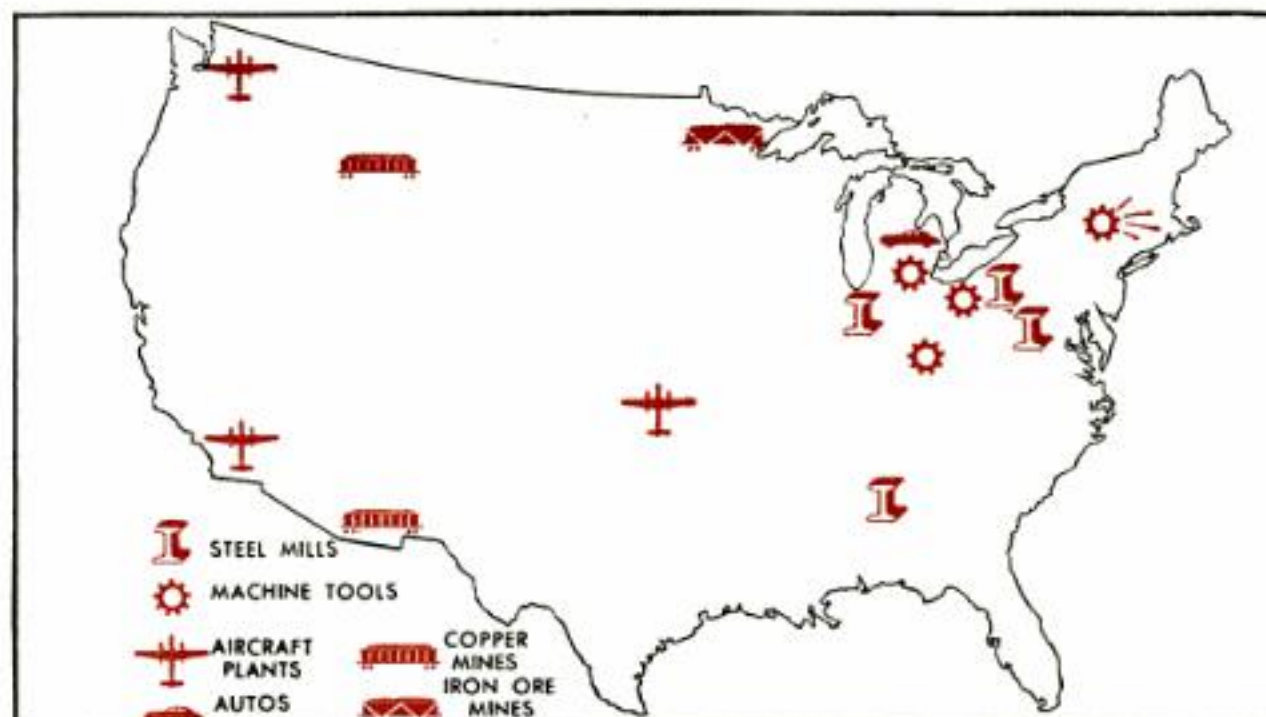
2) \$128 billion worth of nondurables (food, clothing, paper, oil, etc.)

3) \$116 billion worth of durables (autos, appliances, housing, machinery, planes, guns, etc.)

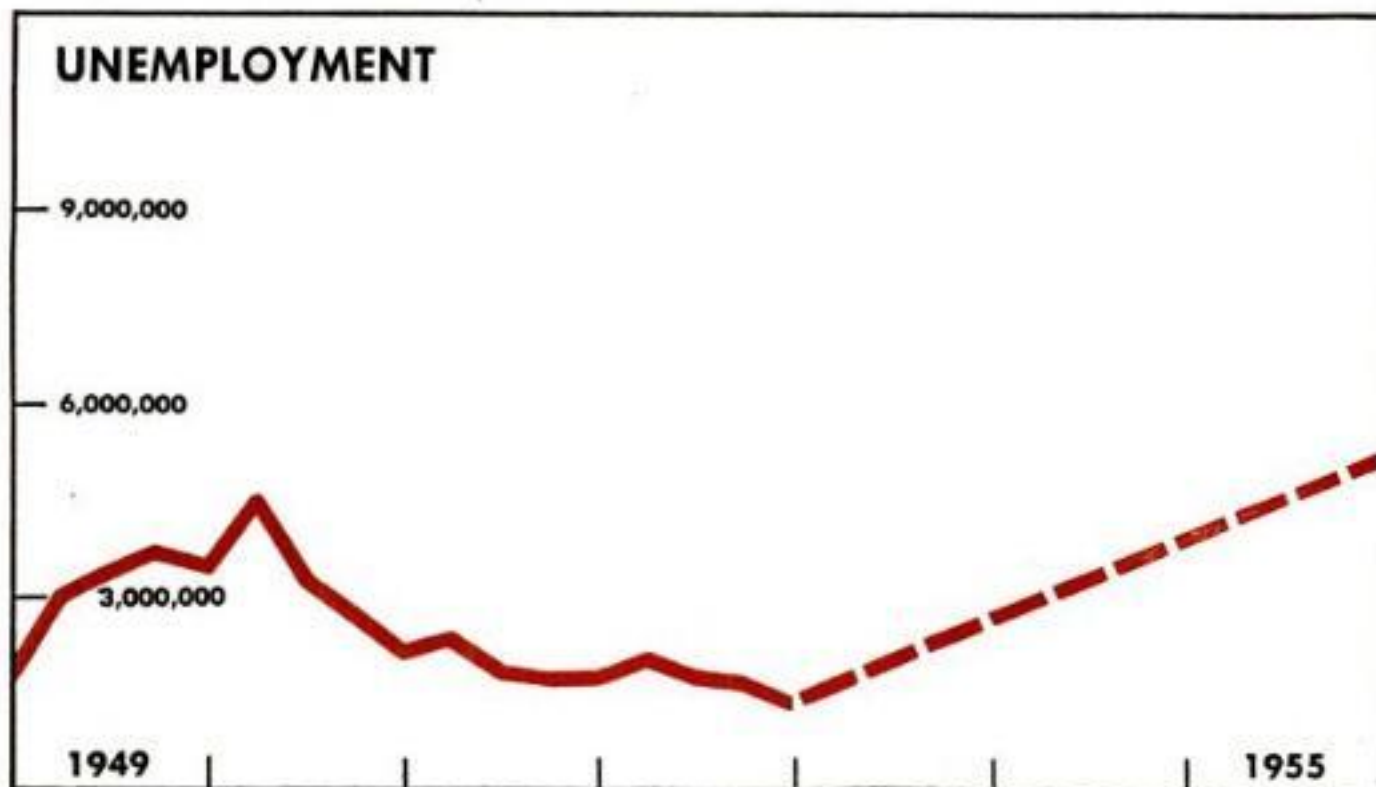
The most important of these is durables. The other two categories have grown steadily and evenly, declining relatively little even during the depression: in 1932, for example, the U.S. purchased only 10% less food than in 1929. But civilian purchases of durables have always fluctuated enormously. This is natural: when a consumer's income drops, he does not stop eating, nor turn off the lights—but he does postpone purchase of a new car or refrigerator. Similarly the businessman does not close down his office or plant, but he does stop buying new equipment for them. Durables are thus the great dynamic variable—the key to national prosperity.

The great bulk of durables are normally sold to 1) business, which buys them as plant and equipment, and to 2) consumers, who buy them as houses, cars, household goods and a host of miscellaneous items like tires and tools. Whether buyers as businessmen or consumers are the more erratic and undependable is hard to say. But until recently the palm probably deserved to go to business. It used to be an industrial cliché that capital goods was a feast or famine business. In the 1920s, for example, the American Locomotive Co. got orders for 600 or more locomotives a year, but in 1932 it got an order for only one. The heat of trade was chilled to absolute zero.

The memory of such things is probably one reason why many people are very pessimistic about the outlook for capital goods during the next few years. Manufacturing capacity, they say, has been overbuilt. It is somewhat larger in relation to



THE SOFT SPOTS are shown on this map, which locates the areas where there may be unemployment in some industries as a result of forthcoming cuts in military production.



JOBS are plotted on a graph to show how unemployment follows in reverse the pattern of industrial production (on chart opposite page). The projection (dotted line) indicates a rise in unemployment, partly because of slight decrease in production, partly because of unabsorbed increases in productivity and population.

industrial production than it was in the 1920s and is still growing. Industry, they reason, is bound to cut back its investment.

It is true that some of industry's capital investment has nearly reached a peak, but it is not true that capital investment is doomed to decline catastrophically. For one thing, corporations have an extraordinary amount of cash to spend on new plant and equipment. For another, industry and government are today spending no less than \$3 billion a year—three and a half times their outlay 10 years ago—on industrial research and development. Although this immense outlay has not yet generated the volume of innovations industry needs to insure full employment, more innovations should be forthcoming as competition grows tougher. And to put innovations into production will require a lot of new capital investment.

What is more, investment trends today vary widely with industries and tend to offset one another. Railroads and agriculture, for example, have probably passed their investment peaks for the time being, but chemical and electric utility companies are definitely on the way up. In short, the chances are good as a whole that business will spend at least \$34 billion a year on capital goods or only \$5 billion less than it did in 1952 when defense spending leaves off.

Saturation or uncertainty?

WHAT then about the consumers' purchases of durable goods? Their prospects seem even better than for business's investment. Sales of consumer durables amounted to \$32 billion in 1952. They were down \$6 billion from their 1950 peak and should be no lower in 1955. The chief reason

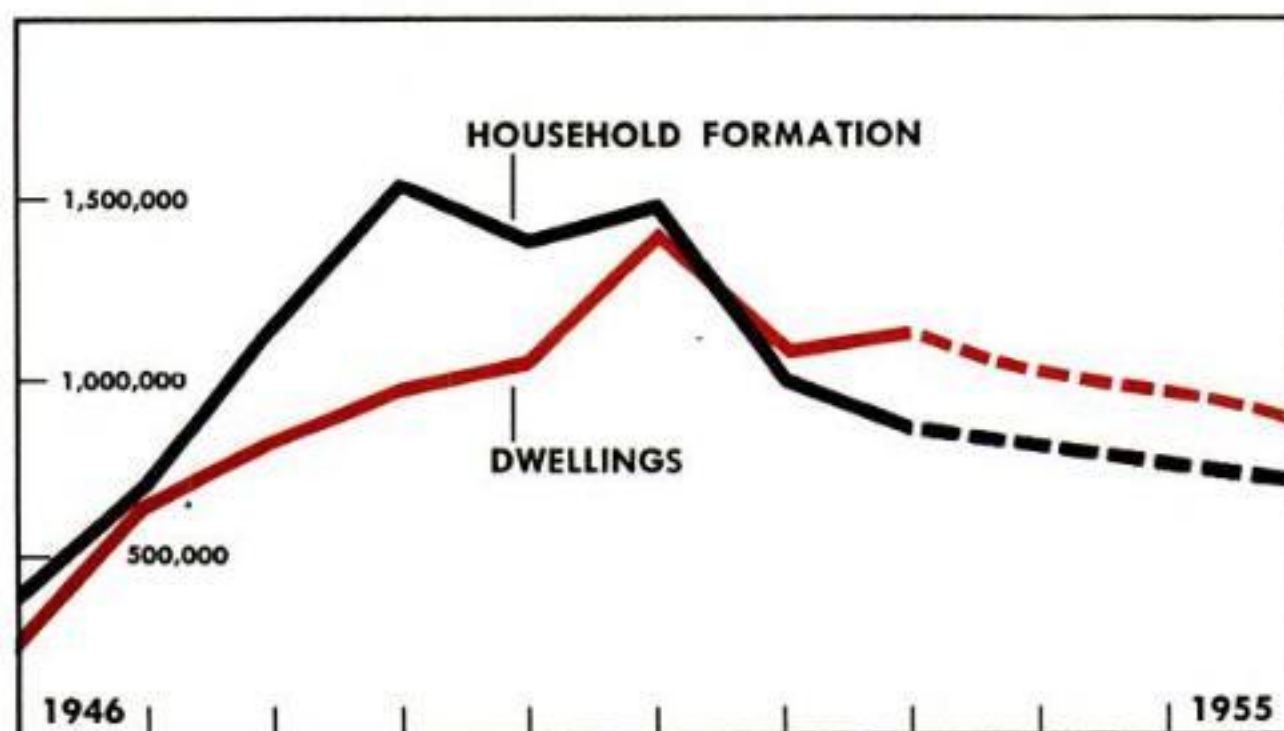
for their future steadiness is that their sales are closely in line with the country's real needs and ability to buy.

Typical is the case of autos, which today account for about 20% of consumer durable purchases. Back in 1929 nearly all cars were sold to new customers, and when all the new customers who could possibly buy were rounded up, no one was left to buy. Today half the cars are replacements—meaning that for every two cars purchased, one is scrapped. As a result it appears there will be a sound, steady market for around five million cars.

The prospect for new houses, which account for a third of all consumer durables, is also in line with demand. A lot of commentators and experts are worried because the birth rate was low in the depression, and therefore "household formation" (the economists' phrase for what happens when people get married or otherwise set up new households) seems bound to slide from a recent rate of 900,000 to around 720,000. The fact is, however, that so many people are flocking to the suburbs and building new houses there that house construction is exceeding family growth. This migration shows no sign of letting up and would seem to justify 900,000 or possibly a million new houses annually for several years.

In this whole bright prospect the one big "if" is the consumer himself. He is showing an interesting, at times alarming, willingness and ability to postpone buying when he doesn't feel like buying. In 1951 the experts told him over and over again that inflation would slash the value of his money if he hung on to it. He nevertheless hung on to it and saved at a rate never equaled in peacetime. Ironically he saved enough to spike the inflation that the experts told him was sure to come.

CONTINUED ON NEXT PAGE



MORE HOMES help keep economy healthy. Move to suburbs has helped new dwellings outnumber "household formations" (marriages, children leaving their parents' homes).



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WHERE DO WE GO? CONTINUED

But what if this unpredictable consumer postpones buying at some future date when his purchases are really needed to sustain the economy?

The most common explanation of why the consumer saved that way in 1951 was that his needs for goods were "saturated." But it is well enough known that human beings, particularly Americans, always seem to yearn for at least 10% more than they have.

That "saturation" is not the right explanation is suggested more scientifically by the work of the Survey Research Center at the University of Michigan, under Professor George Katona. The center's surveys have indicated that what really inhibits consumers' buying is their uncertainty about the future. Uncertain people, like pessimists, just hate to buy. But obviously, the argument goes, they cannot be more uncertain in 1955 than they were in 1951, and may be less so. If prices do not rise and taxes come down, as is probable, they should be in a comparatively good mood for buying.

In any event the reluctant consumer presents a challenge to American salesmanship unmatched in the history of selling. He also presents a challenge to the ingenuity and resourcefulness of business research and development, which must stimulate the urge to buy.

If both salesmanship and development stay hard at work, they might inspire and sustain an economy conspicuously better than our estimates.

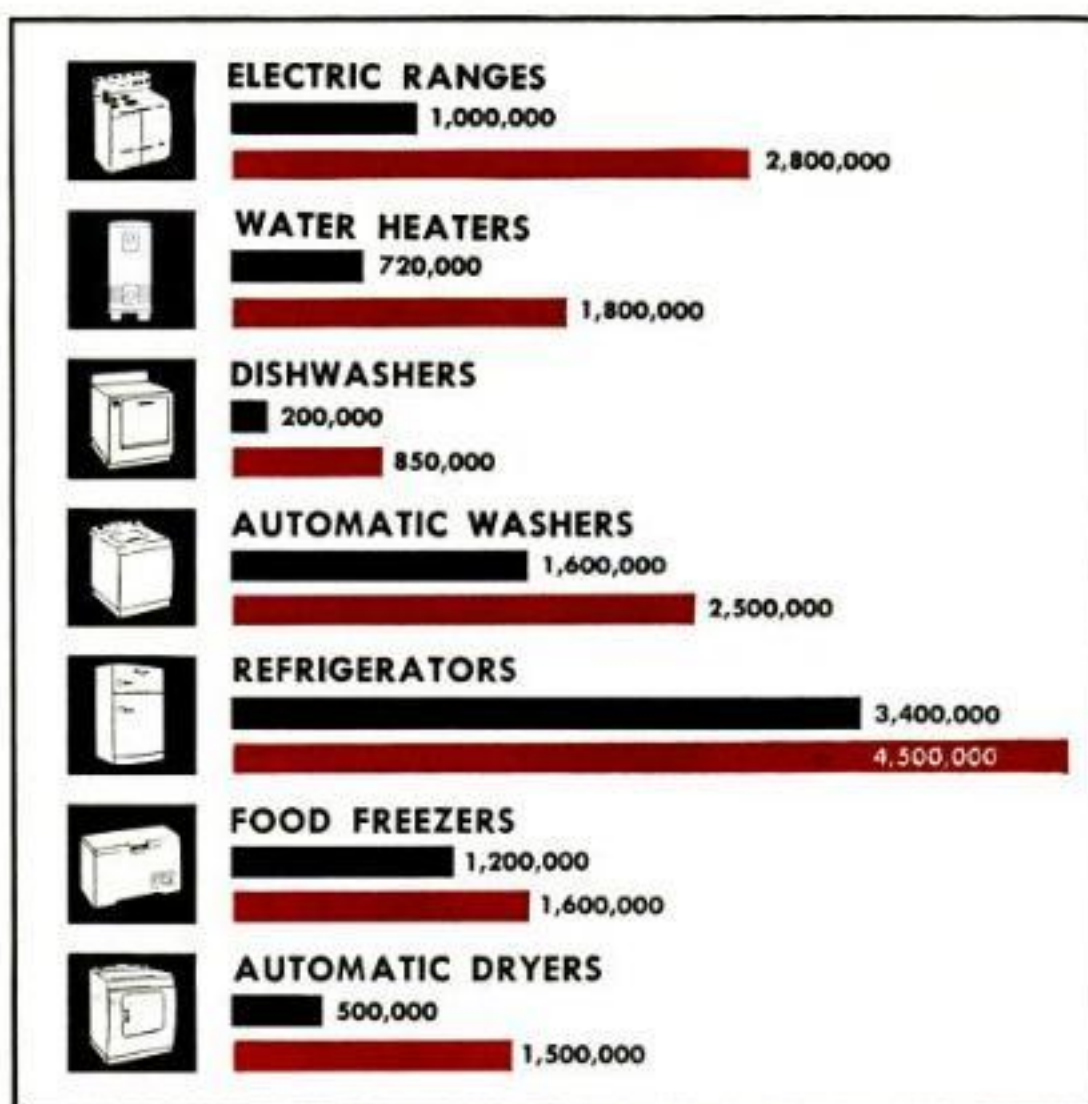
As the cautious observer always warns: anything, of course, can happen. A protracted consumer "saving spree" might induce a steep decline in capital goods, which would in turn cut income and buying power drastically. Or some other coincidence of unforeseeable events could plunge us into depression.

But this is sheer speculation, unsupported by the facts. Just as the weaknesses of the 1929 economy were detected by a few professionals who took the trouble to examine it coolly (the trouble was that not enough people listened to them), so the facts are pretty clear to cool analysts today.

These facts all point toward the conclusion that the economy of 1955 should be as big as that of 1952.

They forecast an economy incomparably tougher and safer than that of 1929.

They say, in short, that the chances are almost overwhelming that "it" won't happen again.



JOHN C. SHARP

OPTIMISTIC BUSINESSMAN John C. Sharp (left), president of Hotpoint Company, makes his prediction (chart) in terms of what the appliance industry sold last year (black bars) and what he believes it will sell in 1960 (red bars). This year he expects his company to sell 25% more appliances than in 1952. Many other manufacturers and merchants have reason for such optimism. At year's end, U.S. manufacturers had \$75.4 billion in unfilled orders, some \$10 billion more than a year ago.

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"I'm frankly proud of the stables — and keeping them painted up spic and span is all part of my job. That's another reason I'm so grateful for Jergens Lotion — it soothes my hands so completely and so *fast*. Try this and see *why*: Smooth one hand with quickly absorbed Jergens...



"Apply any ordinary lotion or cream to the other. Then wet them. Water won't 'bead' on the hand you've smoothed with wonderful Jergens Lotion as it will with oily lotions or creams that just coat the skin.



"When evening comes my hands are smooth . . . ready for close-ups with my favorite leading man, Mike." No wonder Jergens is preferred by screen stars 7 to 1. So quick and easy—a *must* for busy people.



Keep *your* hands lovely, too. You'll find Jergens Lotion *effective*—because it doesn't just coat the skin. Jergens really *penetrates* the upper layer and gives it softening moisture. 10¢ to \$1, plus tax.

Remember JERGENS LOTION...because you care for your hands!



FLOWER FABRICATOR Aleene Hershman, at work in the synthetic garden setting of her studio at Temple City, Calif., fashions the petals of an artificial

President Hoover rose from Formosan wood fiber. Aleene's firm sells all the parts, perfume and instructions for making more than 65 different kinds of flowers.

MONEY-MAKERS OF A NEW ERA

**Despite taxes, they take risks
and profit from own businesses**

Year after year a growing number of Americans have traded off the almost universal daydream of striking it rich in a business of their own for the more immediate reality of job security and the luxury of letting someone else worry about meeting the payroll. Many are discouraged from stepping out on their own by high taxes which take so much out of profits that it becomes difficult to plow enough back into the business as capital for expansion. But bucking this trend, there is always a band of adventure-some folk who take the risks of self-employment for the potentially richer rewards it holds. Even with all the spirit they can muster, however, the going is rough. In 1951 three out of five of all U.S. businesses which failed were less than five years old.

Some who have lasted and become modern money-makers have, like the young engineers (right, top) and the ex-schoolteacher (right, below), capitalized on technology. Others, like those on pages 96 and 97, are quick to cash in on new merchandise and merchandising methods. Some, like 28-year-old Aleene Hershman (opposite page), pyramid hobbies into profits.

As a youngster in Los Angeles, Aleene used to slip out to florists' trash cans, pick up old posies and peddle corsages on Wilshire Boulevard. Four years ago Aleene lost \$1,200 in a mail order business set up to sell corsage supplies, but a year later she came across some Formosan wood fiber, found it ideal for making artificial flowers and bought \$12 worth. In 1952, selling the materials from which housewives and hobbyists can make artificial flowers, Aleene's Fibre and Floral Supply Co. grossed almost \$1 million and took care of the employment problems of most of her family (below).



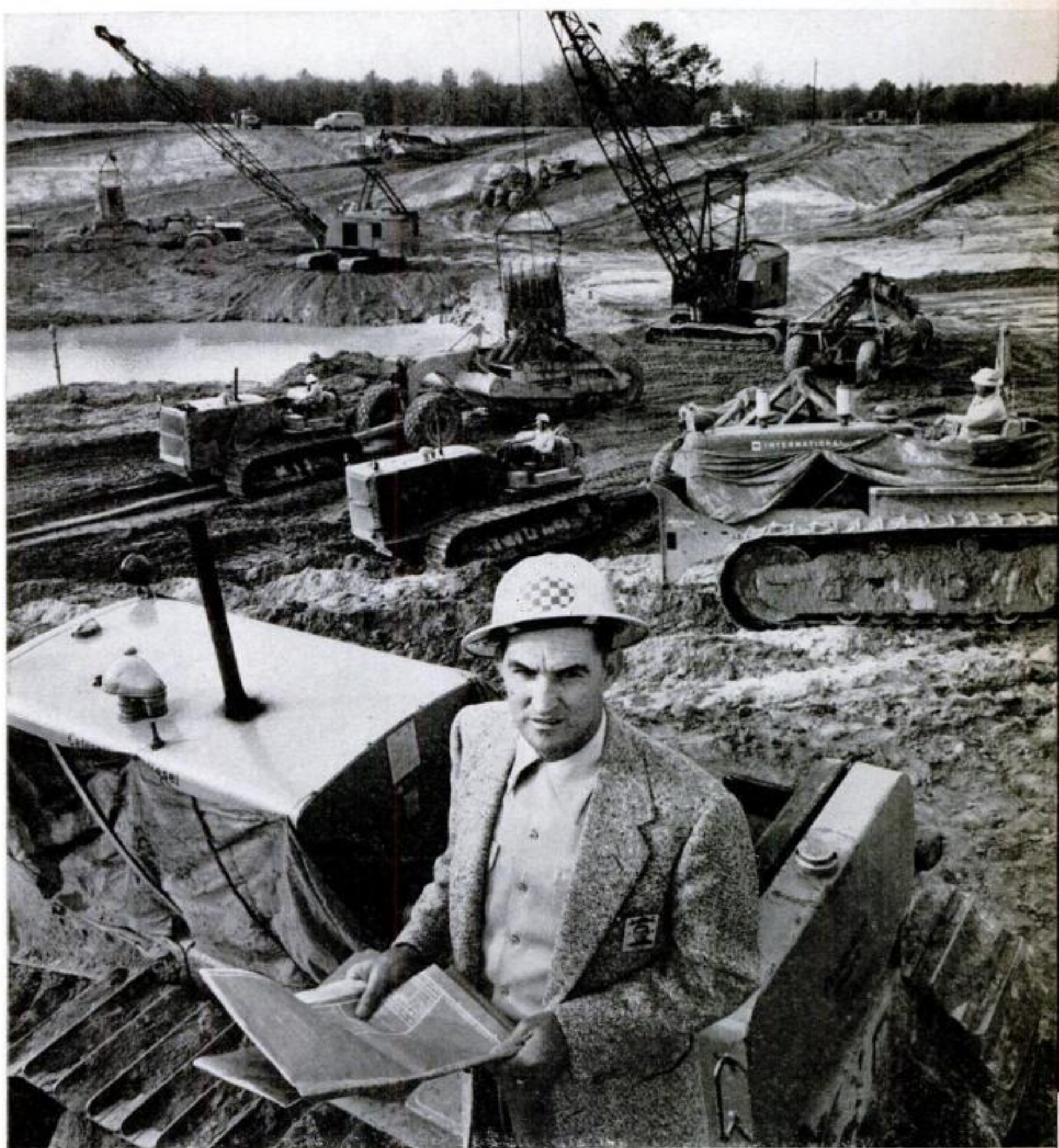
FAMILY PARTNERS include Aleene's husband, mother, father, grandmother, aunt, uncle, cousin.



YOUNG ENGINEERS HIT RADIOACTIVE JACKPOT

Just a year out of engineering school, Wilbert Chope (right) and George Foster (center) decided in 1950 to produce for industry a laboratory measuring device using radioactive strontium-90. With Wilbert's brother Roy (left) they had only \$600 of their own.

But the idea seemed so good that a friend put up \$100,000 and the Industrial Nucleonics Corp. was formed. Today it makes gauges, like the one above, which sell from \$7,000 to \$12,500 each. In two and a half years the company has grossed \$1.5 million.



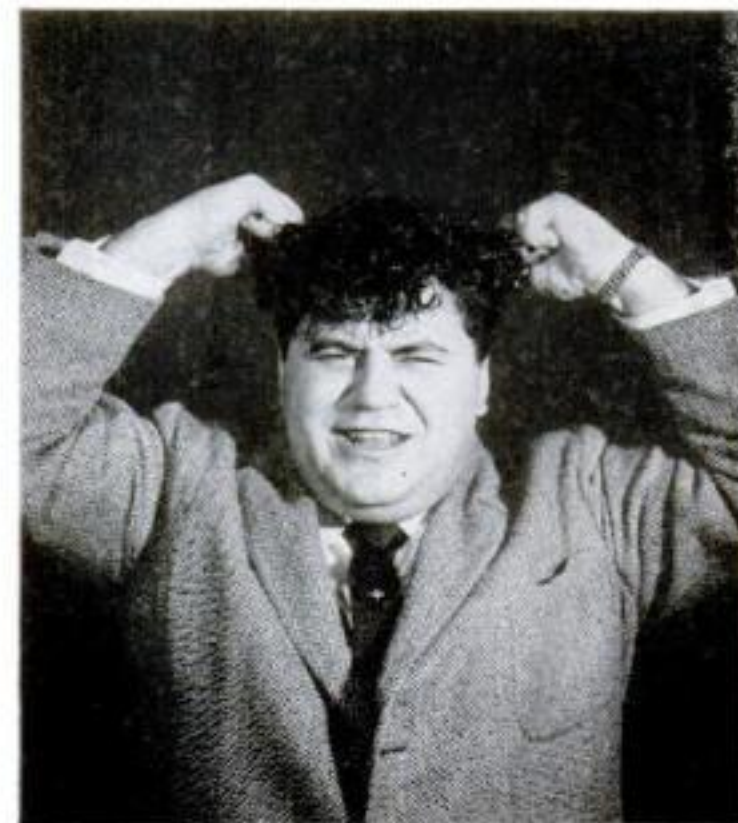
TEACHER GIVES UP SCHOOLROOM TO MOVE EARTH

As an Indiana schoolteacher, Robert Green in 1939 decided \$1,600 a year was not enough to live on. Looking around for something better, he bought a used earth mover and went into business. His first job, which paid \$100, was to dam a farm pond with

250 cubic yards of earth. The war brought him bigger jobs on military installations. In 1952 the Green Construction Co. was paid \$4.5 million to move 18 million cubic yards of dirt, most of it at the site of the AEC's Savannah River, S.C. plant (above).



Money-Makers CONTINUED



PITCHMEN SELL A HAIR CREAM

With \$210 to invest in TV time and a high-powered pitchman to use it up, Charles Antell Inc. of Baltimore two and one-half years ago put its hair cream on the market. Using a 30-minute, skull-thumping, nonstop commercial called *The Hair Raising Tale*, the company drew enough response from the viewers to encourage Charles Kashner (*center foreground at left*) and his partners, brothers Leonard and Jack Rosen (*left and right*) to hire a whole stable of pitchmen and pitchwomen (*background*). Largely through their persistent efforts and those of Lester Morris (*above*), who is their most convincing hair-cream seller, the company has grossed \$12 million.



STOCKBROKER TURNS TO SPICES

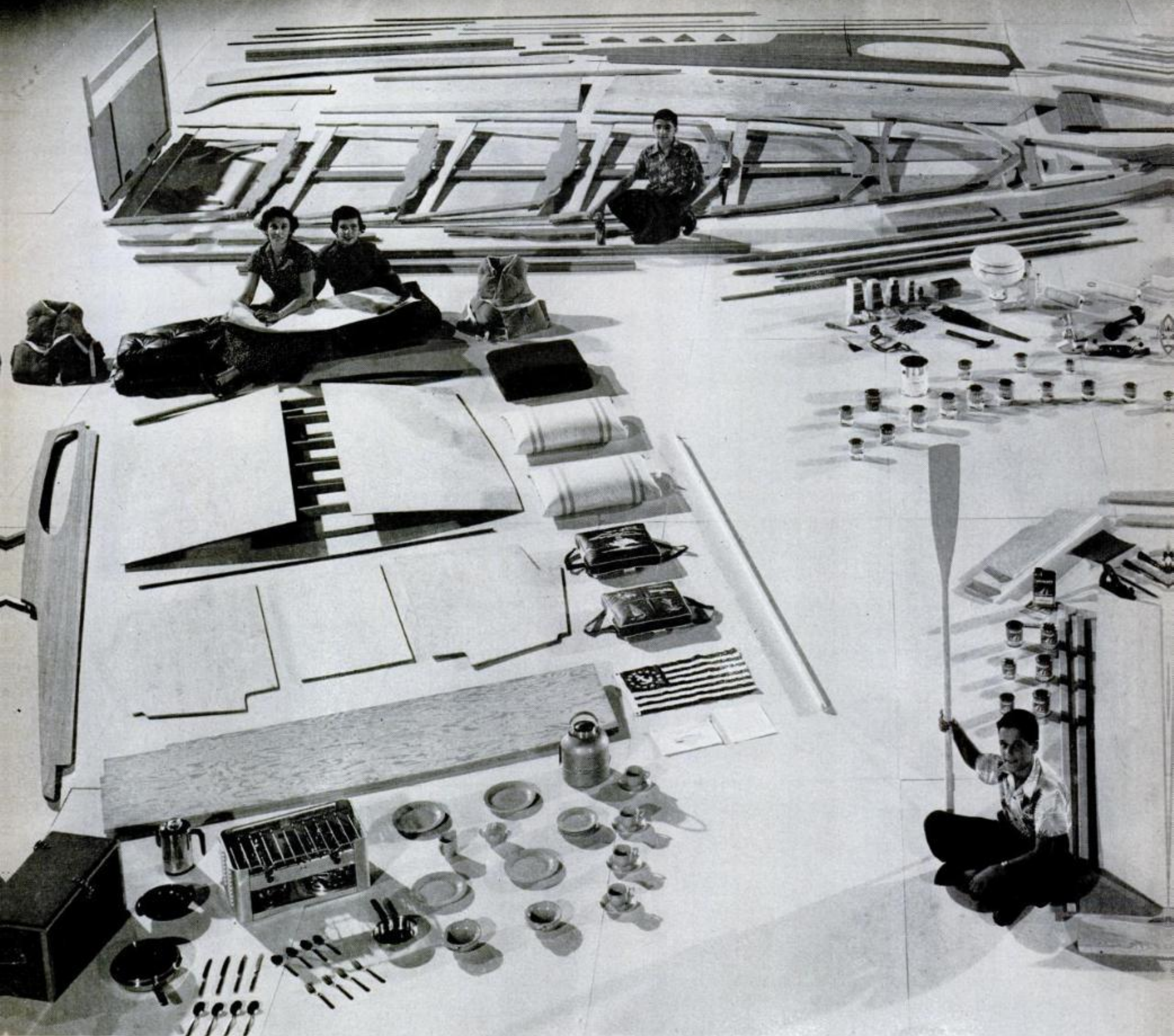
Fredric Johnson, who knew enough about stocks and bonds to be president of San Francisco's Curb Exchange and hold a seat on the San Francisco Stock Exchange, toted up a few figures in 1941. He discovered he owed \$8,500, had only \$4,000 in cash—and decided to throw over stocks and bonds and peddle vinegar instead. As an amateur chef he had often prepared wine vinegar for his friends. His first month's sales totaled \$124. Today, at 60, he helps harvest the thyme on his Spice Island Company's herb farm (*above*) and checks the vinegar bouquet at his factory (*left*) which in 1952 sold \$1,250,000 worth of vinegar, spices and other products.



FUNNY FACES PROVIDE A PAY-OFF IN PLASTICS

Bob Schwarz (*above, right*), a former Navy airman, used his GI educational benefits to study industrial design. Bill Gottschalk (*left*), an Army pilot, used his to study mechanical engineering. A mutual friend brought them together and in 1950 they set up, with \$6,000 savings and a \$10,000 loan, the Falcon Plastic

Products Mfg. Co. at Culver City, Calif. Acting as their own sales force, as well as production chiefs, they sell millions of novelty items like "Flicko the Clown," whose face fits over light switches and glows in the dark. Their \$600,000-a-year business keeps growing faster than the factory space they keep adding.



NEW BOATSMEN, 13-YEAR-OLD JOHNNY BOYLSTON (FRONT) AND THE SAMUEL REPACI FAMILY, SIT WITH KITS FOR BOATS SIMILAR TO THOSE THEY BUILT. AT



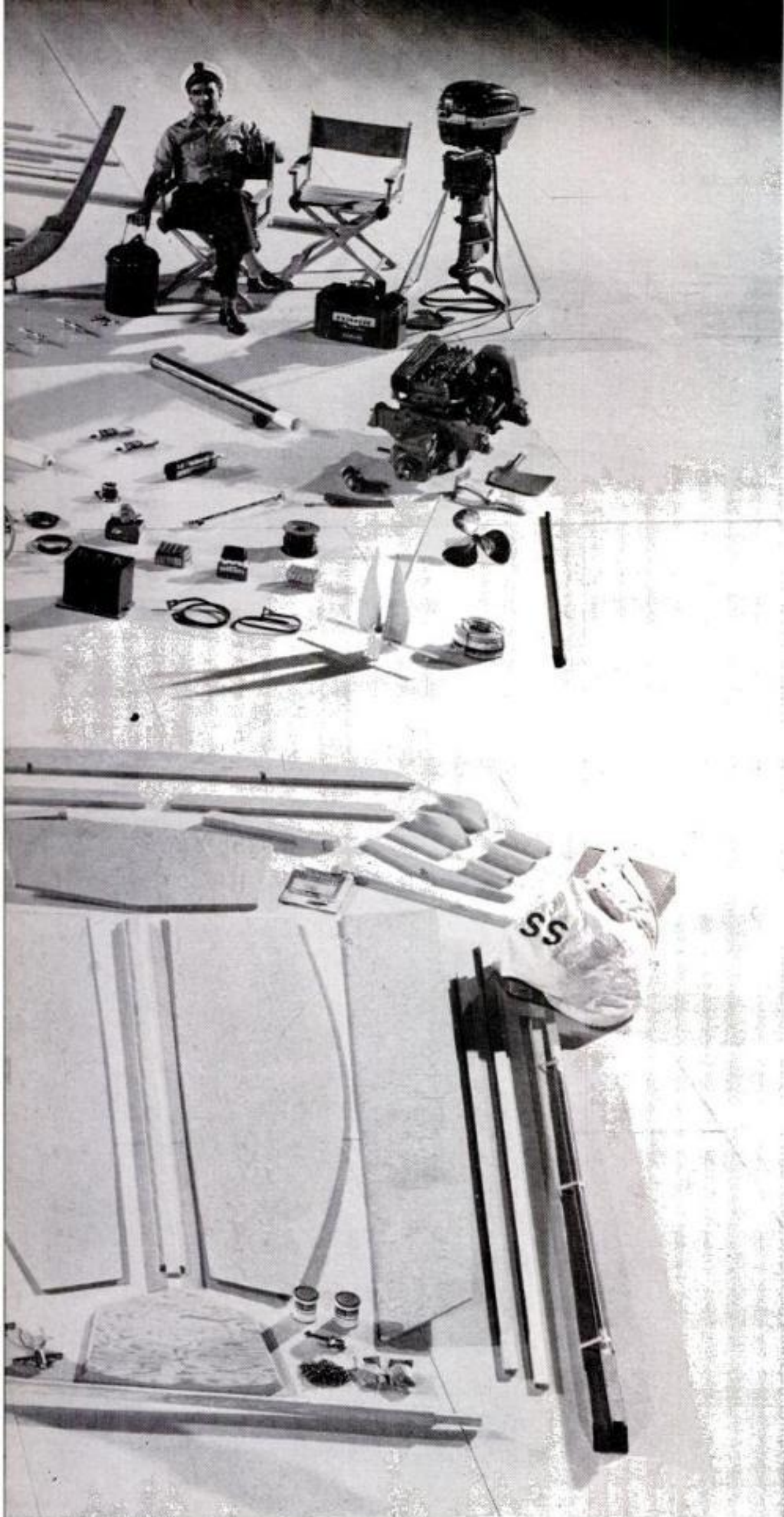
COMPLETED KITS perform in a Long Island harbor. Chris Craft cruiser (left) is same as Repaci kit (top of page). Tiny pram is Johnny Boylston's boat.

BOAT BUSINESS

Build-it-yourself kits and many new man-made lakes

Like most Americans, Grocer Sam Repaci of Byram, Conn. never expected to be anything but a landlubber. Then one day, while passing Byram's harbor and brooding about heavy traffic that took the fun out of Sunday drives, he saw some boats that are built like model airplanes—from kits. He plunked down \$595 for the kit shown above (minus the engine and accessories), got out hammer, screw driver, saw, sandpaper, putty knife and drill, made a sleek 18-foot cruiser.

Fifteen years ago boating for fun was largely a rich man's frolic. Since then, with the Sam Repacis who build their own boats and the people who buy them ready built, the boating population has doubled. There are now 4.8 million private U.S. rowboats, motorboats, sailboats and luxury yachts. In great part the increase results from the



REAR AND LEFT IS 18-FOOT CHRIS CRAFT; AT RIGHT: \$39 ROBERTS 8-FOOT PRAM

AT HIGH TIDE

change America's landlubbers into Sunday sailors

vast government dam-building programs which have sprinkled lakes over the country. Texas, once almost lakeless, now has over 300 boatable reservoirs. Tennessee has 18,000 boats on its TVA waters. Nebraska lawmakers are suddenly worried because they now have lakes and boats, still have no boating regulations. In Arizona one person in every 15 owns a boat and the Arizona Navy Boat Club (*right*) carts its fleet across desert highways to hold frenzied races on the new waters.

To boat dealers the boating craze looks like an inexhaustible gold mine. Americans this year spent about \$12 billion on play (against \$3.7 billion in 1940) and more on boating than on baseball. And of the many thousand tiny prams now afloat, large numbers belong to sea-struck boys who will progress to ever-larger boats in years to come.



BOATS ON WHEELS are towed by trailer from place of storage in backyards in Phoenix, Ariz. to Canyon Lake, a man-made reservoir 60 miles away.

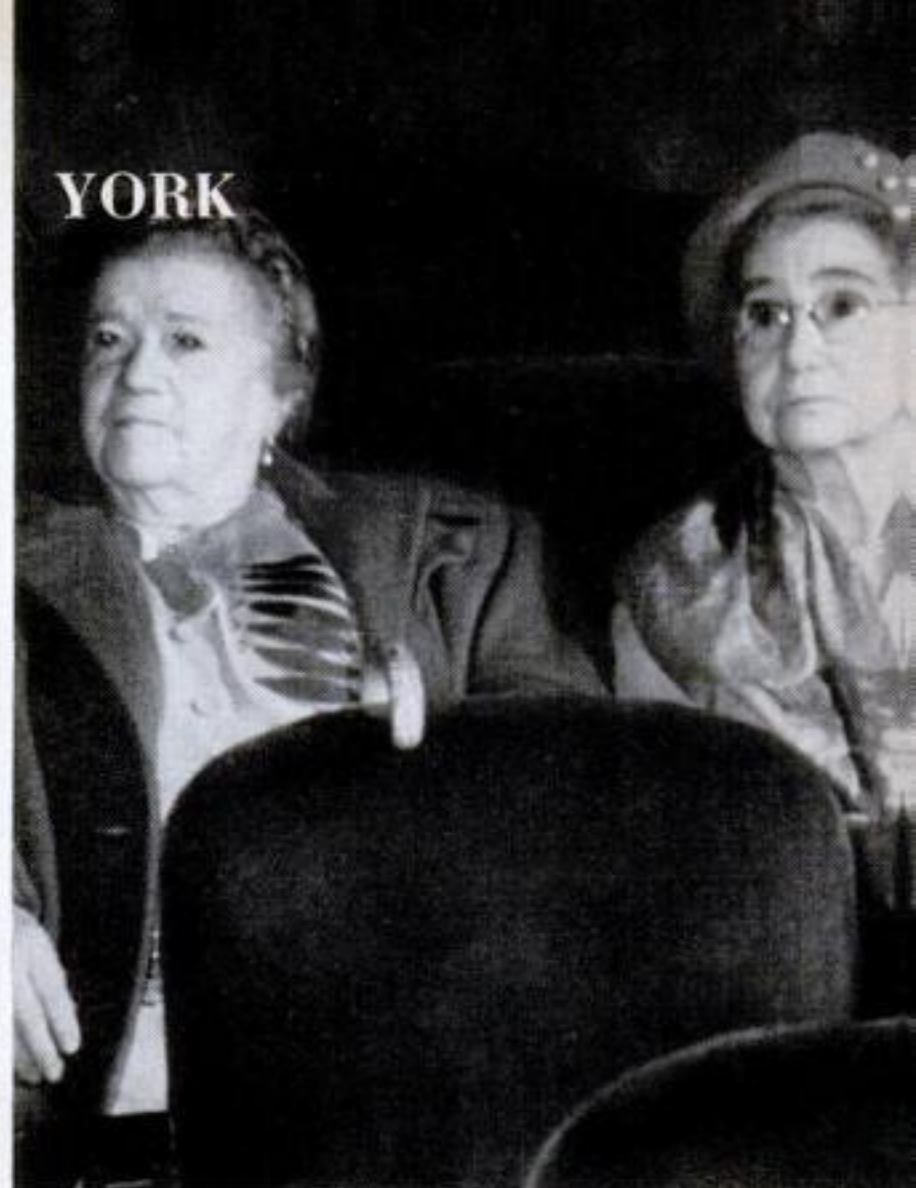


ARIZONA'S "NAVY" roars across Canyon Lake beneath cliffs of Mazatzal mountains. This "navy" is a boat-racing club, most active in winter months.



NEW

YORK



DENVER



SALT

LAKE





IN LOS ANGELES, RUG CONVENTION (P. 102) SHARES BILLING WITH OPERA

Life Looks in on Closed-Circuit TV

INFRARED PHOTOS SHOW NEW OPERA-GOERS AS GROWING INDUSTRY OPENS WIDER FIELDS

The fast-moving television industry, which pokes its many-lensed eyes into sports, politics and even hospital operating rooms, and carries its findings to 20.5 million sets, has also found a way to make itself useful to private interests. The method is closed-circuit telecasts which, by piping programs over phone lines instead of sending them through the air, brings to screens of movie theaters shows which cannot be seen on regular sets. A boon to embattled theater owners, it also has looked like a windfall to other promoters. When the Walcott-Marciano fight was telecast to movie screens last fall, the theaters sold out. A few weeks ago the Metropolitan Opera, seeing a chance to

cut into its whopping deficit, sold the theaters a live performance of *Carmen*. In 27 cities 60,000 persons paid up to \$7.20 a seat to see the same opera in their local theaters that 3,000 opera fans were seeing at the Met.

The moviegoers, shown here in pictures taken with infrared flash bulbs, heard the music distorted, often sounding like a worn-out record. Faces of singers became ghostly blobs, and their figures were so elongated that one critic saw "people resembling overripe bananas." Color was sadly missed. But, learning from their mistakes with opera, theater TV can come closer to its big dream—bringing live shows from Broadway to theaters in hundreds of U.S. cities.



OPERA ON THE SCREEN gave movie audiences closer view of Risé Stevens as Carmen than the Met

fans got. Like most others, this Denver theater was not sold out. Many of them lost money on the opera.



NEW PRODUCTS of carpet firm shown in studio (below) came out foreshortened on screen (above).

NOW PLAYING: SALES CONVENTION

A few days before the *Carmen* telecast, theater TV found another use: it was tested as a substitute for a convention of dealers. Instead of city-by-city demonstrations of its products the Lees Carpet Company of Bridgeport, Pa. invited 15,000 dealers and stockholders to movie houses in 17 cities. From New York over a closed circuit the company flashed exhibits of its 1953 line of carpets, lessons in sales technique, handsome models and even Kate Smith, who will be sponsored by the company on TV.

Like *Carmen* the carpet convention suffered from poor picture images and lack of color. Some dealers also found fault with the whole idea of replacing the oldtime get-togethers. "How else," complained a Midwest rug dealer, "can I get away from my wife for five days?" But Lees was pleased by the cost—only about \$30,000 instead of \$150,000 for in-person conventions. If other firms find equal gains in closed circuit, the convention may go the way of the bookkeeper's high stool and quill pen.





Good Deal!

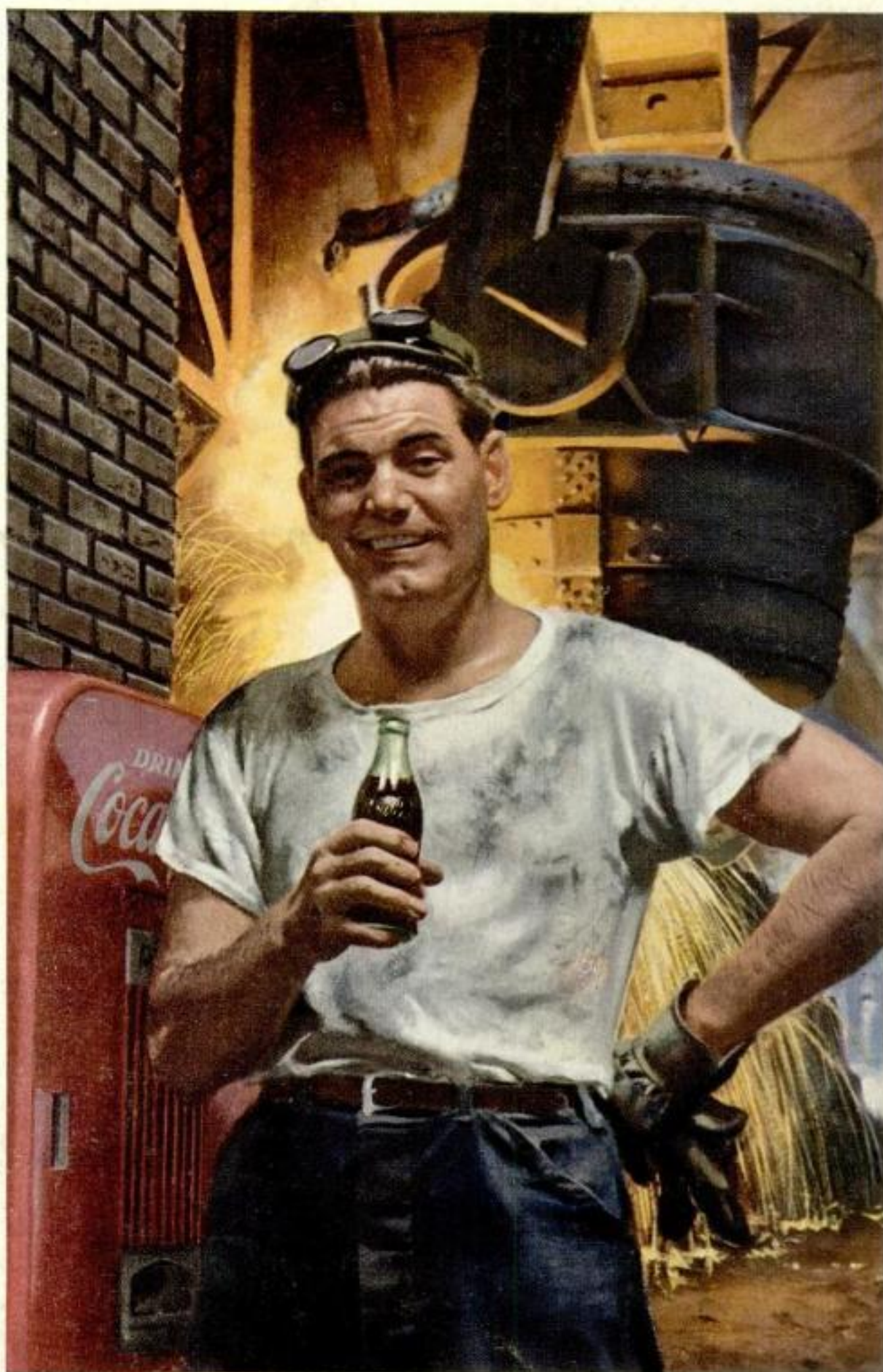
Only one way to play a hand like this—with your other hand holding a glass of smooth, sociable, satisfying Pabst Blue Ribbon! Here is a beer you love to linger over—a beer that reveals new depths of enjoyment with each satisfying swallow. Taste Pabst Blue Ribbon soon! See what you've been missing!

Try this ... for one week ... make Pabst Blue Ribbon *your* beer. When you find out how much you've been missing—your one week's trial of Pabst Blue Ribbon will stretch into a lifetime of beer enjoyment.

DRINK PABST BLUE RIBBON ... finest beer served ... anywhere!

FOLLOW PABST BLUE RIBBON BOXING BOUTS ... EVERY WEDNESDAY NIGHT ON TELEVISION ... CBS NETWORK. Copr. 1953, Pabst Brewing Company, Milwaukee, Wis. Trade Marks Reg. U. S. Pat. Off.

*A
little minute
for a big rest*



People who work have a happy custom.
They pause now and then for a Coke...
relax—get rid of tension.
Is it the matchless flavor that appeals?
The exhilarating sparkle?
The fact that generations
have found it dependable as sunrise?
Never mind... it's there;
ready to help you work refreshed.



You trust its quality