

# SHELL NEWS

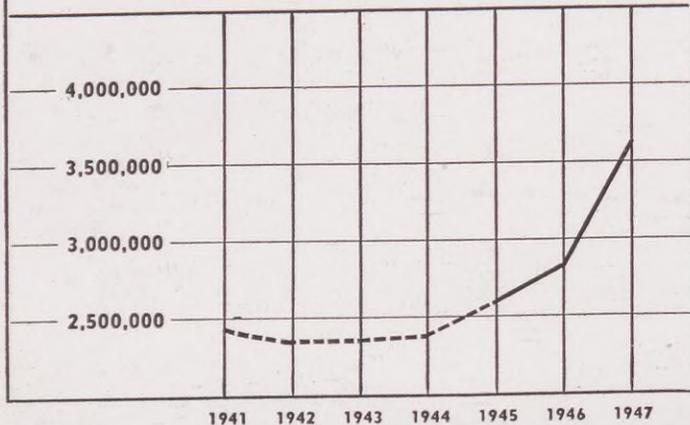


FEBRUARY · 1948

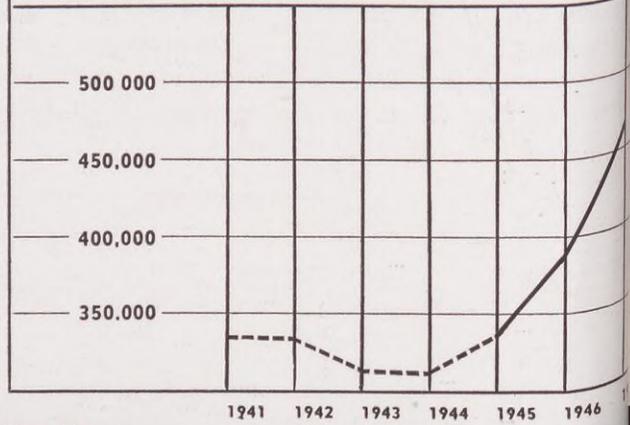
New York, N. Y.



**NUMBER OF DOMESTIC OIL BURNERS  
IN USE (END OF YEAR)**



**CONSUMPTION OF DISTILLATE FUEL OIL  
IN OIL BURNERS (BBL. DAILY)**



--- War Years

# The Fuel Oil Situation

By P. E. Lakin, *Vice President—Marketing*

**I**N this harsh winter of 1947-48, the consumption of fuel oil has shattered every record in fuel oil history. As a result the petroleum industry has found it very difficult to keep pace with the current demand.

As Shell employees it is important that you know the reasons for this situation. Your friends, each one of whom is a consumer of some petroleum product even if he does not use fuel oil, look to

you for the explanation. What has and is being done to meet the fuel oil demand? What are the prospects for meeting future demands? These, I think, are the questions which people are asking. I will undertake to answer them in the light of the latest information we have available.

Since the war there has been a tremendous demand for oil heating equipment. This happened because many people were eager to improve their

## SHELL NEWS

*Dedicated to the principle that the interests of employee and employer are mutual and inseparable*

FEBRUARY • 1948

*Employee Publications Division, Personnel Department, New York*

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### CONTENTS

The Fuel Oil Situation	1
Plastics From Petroleum	4
Doolittle Honored	9
Natural Gas—The Baby Giant	10
Your Future Automobile	12
Baltimore Marketing Division Organization Chart	16
A Service Station Grows	18
Shell People in the News	21
Legal Department	24
'Round the Refineries	28
Service Birthdays	29

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standard of living by spending part of their savings accumulated during the war. They had been denied this opportunity while the war was on because industry was swamped with war demands and was permitted to produce only enough to meet the most basic civilian needs. Automatic heat to replace hand-fired heating methods ranked high among the public's post-war demands. Consequently, the number of orders placed for oil burners was astonishingly high. New central heating units installed during 1947 totalled more than 766,000, almost two and one-half times as many as were sold in the best pre-war year. In the first nine months of 1947, vaporizing pot-type space heaters and floor furnaces increased by more than 993,000. New heating equipment of all types installed during 1947, need no less than  $2\frac{1}{4}$  billion gallons of fuel oil annually to keep them going. And bear in mind that the previous year, 1946, had itself seen a considerable increase in fuel oil demand.

## EFFORTS TO MEET DEMAND

What has the petroleum industry done about this situation? I think the story of the steps that Shell took is typical of what the industry did as a whole.

Last May it became evident that the fuel oil demand this winter might exceed the supply. Although we were already pressed to meet the increased demands for gasoline and other products, it was arranged that all refinery facilities that could be used for the manufacture of fuel oil would be used for that purpose at the earliest practical moment. Refinery schedules were stepped up as never before. Limited only by the availability of crude oil and adequate means of transportation, all three refineries in the East of Rockies Territory broke existing records in their daily output. Today this output is 11 per cent more than their rated capacities. Extraordinary steps were taken to move increased amounts of crude oil to the refineries. Pipe lines were already taxed to capacity so tank cars were replaced by trucks on short runs and pressed into service between the West Texas fields and the Wood River and Houston refineries at considerable expense to the company.

Fuel oil distributors and bulk consumers were

warned of the possibility of a coming tight supply situation. They were advised that they could expect no more fuel oil than they had received in the previous year. Nevertheless, oil-burner sales continued to sky-rocket at the insistent demand of the public.

By late summer, it was discovered that normally reliable seasonal forecasts of industry demand were not reflecting the rapidly accelerating actual demand. They had to be revised upward repeatedly. The industry as a whole became more and more aware of the potential seriousness of the situation.

In addition to all the steps that had been taken became apparent that the consumer must be asked to conserve fuel oil by utilizing available supplies as efficiently as possible. Experience has shown that consumption of fuel oil in the average home is relatively inefficient. This fact was proved during the war when fuel oil supplies to the householders were cut 30 per cent under government regulations. No serious hardship resulted.

Part of the explanation for the inefficient use of oil, of course, lies in the large number of oil burners in use today whose war-delayed replacements could bring about a substantial oil saving. However, there are many simple fuel saving practices which the average householder does not observe.

## DEVELOPMENT OF CONSERVATION PROGRAM

In September, Shell was one of the first companies to promote actively a conservation program. Subsequently, a conservation program was worked out under the auspices of the American Petroleum Institute and shortly thereafter placed in effect. The purpose of this program was to encourage a reduction in the consumption of fuel oil to bring it into balance with the supply. From the very beginning, we had urged our jobbers and distributors to help with this program.

In December, all of our direct household accounts were notified that we planned to reduce our deliveries to them. At the same time, we offered several suggestions on relatively easy ways to save fuel oil without hardship. In radio, newspaper and direct mail advertising we appealed to consumers

everywhere to practice conservation not only in the use of fuel oil but also of gasoline. It was hoped that the industry's conservation program would serve to enlist the cooperation of householders to this end. And it did. Our customers' response has been splendid, and the entire program is still in effect.

By the middle of December it looked as though we might get through the winter without undue hardship to anyone. It was then that the severe weather hit. This winter season, through January, has been 24 per cent colder than last year in the large fuel oil consuming regions of the country. Fuel oil stocks, already low, have been reduced still further to meet this emergency, so that the ever-rising demand must now be met almost entirely out of current output. With the delicate balance that exists between supply and demand, abnormally cold weather in March could bring about a serious supply dislocation. There was never a more real need for fuel oil conservation than there is right now.

## FUTURE PROSPECTS

What are the long range prospects? Do we face a similar situation for the winter of 1948-49?

This much we know. The unprecedented demand

for fuel oil and other petroleum products has still not reached its peak. The 1948 overall demand is presently estimated at 5 or 6 per cent over 1947. The requirements of the Army, Navy and Coast Guard are an important factor in this demand. It is noteworthy that for the fiscal year ending June 30, 1948, the needs of our armed forces are estimated to be seven times greater than they were in 1938.

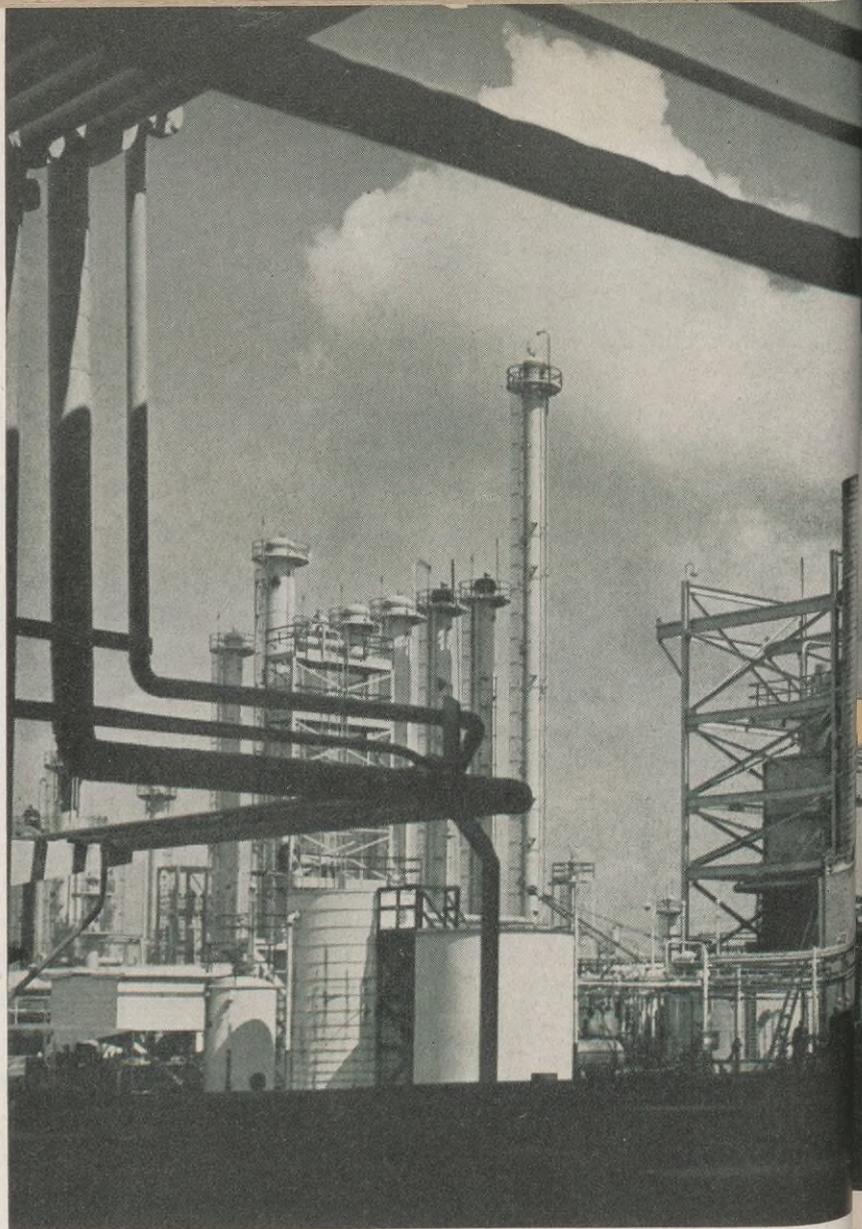
But the industry has under way a four billion dollar expansion program. New wells, expanded refining and storage capacity, pipe lines, tankers and other equipment are in various stages of development. During 1947, the program was greatly hampered by shortages of building materials and other supplies. 1948 should see an improvement in the delivery of materials so that, when next winter comes, many new facilities should be in operation. Unless the current estimates of demand are much too low, we should be able to meet the fuel oil demand next winter.

But make no mistake about this. Our facilities, both new and old, will be taxed to the limit for a long time to come. The increasing demand for petroleum products presents a long-term problem. All of us will be striving to solve it for the next few years at least.

## SAVE MONEY . . . save FUEL OIL . . . help stretch the supply

- 1 Keep temperature moderate—not more than 68 degrees. Turn thermostat to 60 or below at night.
- 2 Have your heating system checked to be sure you're getting the most efficient use of your fuel oil.
- 3 Install storm windows and insulation to keep heat in . . . cold out.
- 4 Keep doors, windows closed, shades drawn. Close off unused rooms.

Photos for cover and article courtesy of Celanese Plastics Corporation, American Cyanamid, Monsanto Chemical Company, Tennessee Eastman Corporation.



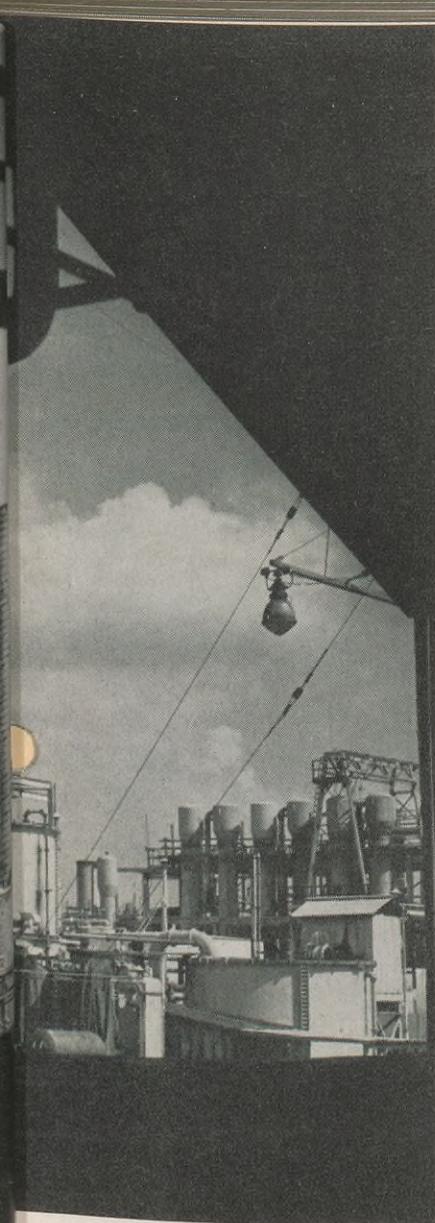
# Plastics from Petroleum

Petroleum is becoming increasingly important as a basic raw material in the manufacture of plastics . . . which has become a major U. S. industry.

THE word "plastics" has taken on a new meaning during the last decade. People have been inclined to apply it to almost any object, regardless of the nature of which they were not concerned about, particularly if the object has a shiny finish and is obviously new, whether of wood nor steel. In this way plastics have gained some fame and a little infamy.

The word "plastic" accurately describes any substance that can be given a definite form by the application of heat and pressure.





Many of the petroleum chemicals that go into the manufacture of plastics are made in Shell Chemical Corporation's Houston Plant.

us. It was first used commercially 75 years ago. Much later, in 1909, the American scientist Dr. L. H. Baekeland mixed phenol and formaldehyde to make bakelite—still one of our best known plastics.

Chemists were fascinated with Dr. Baekeland's material and set to work on research programs of their own. These have branched out to produce the scores of different plastics we know today. There are dozens of main types, many of which are subdivided by slight chemical changes into still other types. A list of some of the main family groups includes such formidable names as ureas, melamines, vinyls, polystyrenes, polyethylenes, etc. Add to these the commercial name given to each product and the listings would cover many pages.

### Raw Materials

Practically no plastics are made entirely from any single basic raw material. Until recently, coal-tar chemicals were the chief ingredients in plastics manufacture, but for a variety of economic reasons, these have become short in supply, and there appears to be no predictable increase in their production. As a result, the emphasis in plastics has shifted from the cyclic resins, which are largely coal-tar chemicals, to the acyclic resins, most of which can be obtained from petroleum chemicals. Thus, petroleum is becoming more and more important as a basic raw material. And plastics manufacturers have to have products like formaldehyde, acetic acid, phenol, etc., (all of which can be derived from petroleum) in ever-increasing quantities in order to meet the constantly swelling demand for plastic products.

In recent years, advances in petroleum technology have made it possible to manufacture the chemicals used in plastics more cheaply or more abundantly from petroleum than from any other source. This was brought about indirectly via the cracking process. In this process,

large quantities of gases were produced. The great heat and pressure used in cracking caused these gases to lose some of their hydrogen—and thus the hydrocarbon molecules had free "hands" available to hook onto the free hands of other molecules that happened to pass by. Under controlled conditions, scientists were able to get these hydrocarbons to join forces with other materials to form the particular product they wanted. This led to the manufacture from petroleum of an ever-widening variety of chemical compounds, many of which had not before been available commercially. Thus a huge new source of raw materials was opened to the plastics industry, which changes these petroleum chemicals into plastic solids by one of two principal types of reaction: *condensation* or *polymerization*. Polymerization, incidentally, is the general process used in the manufacture of high octane gasoline from cracking gases; with certain gases, the polymerization reaction can be carried a step farther, so that tough, useful plastic solids can be made directly from the gases without manufacture of any intermediate chemicals.

### Production of Chemicals

The petroleum industry's production of chemical products has been slow but certain. Shell was one of the two pioneering oil companies to become interested in manufacturing petroleum chemicals—as early as World War I.

Although it does not make any finished plastics, Shell does supply many of the solvents and chemical intermediates that enter into their manufacture. In the East of the Rockies Territory, most of the intermediates (like allyl chloride, allyl alcohol, and epichlorohydrin) and solvents (like acetone and methyl ethyl ketone) are manufactured at Shell Chemical Corporation's Houston (Texas) Plant from materials supplied by Shell Oil Company's Houston Refinery. Shell

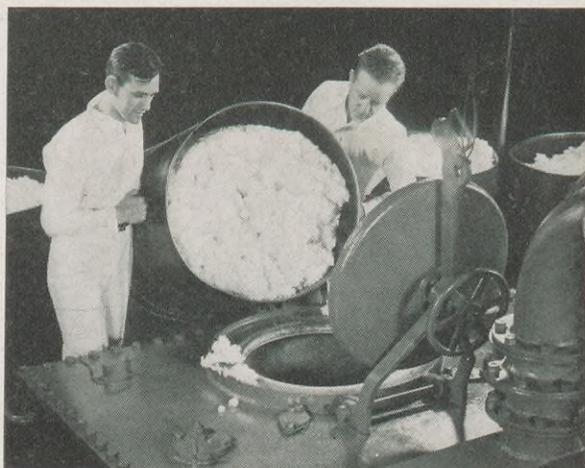
tion of heat or pressure, or both, and retain that form after the heat and pressure have been removed. Glass and putty are plastics. Industry, itself partly to blame for much of the confusion about plastics, has stretched the term to apply to substances that can be manufactured under moderate temperatures and pressures but which do not melt or soften under ordinary conditions.

Celluloid, the first plastic, was as well known to our grandfathers as to

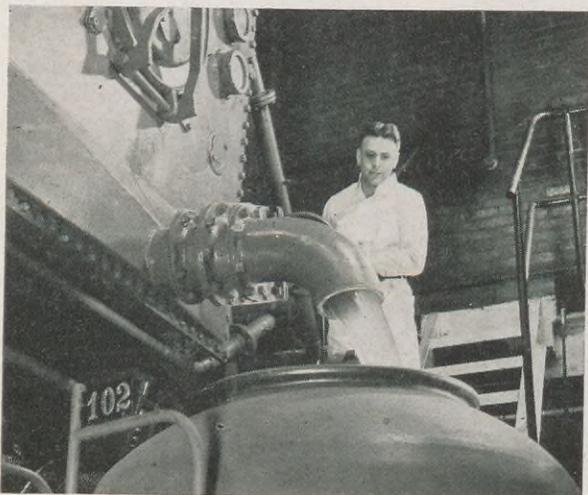


◀ Snowy cotton linters constitute the first step in the manufacture of cellulose ester plastics. The linters are first bleached, then scoured.

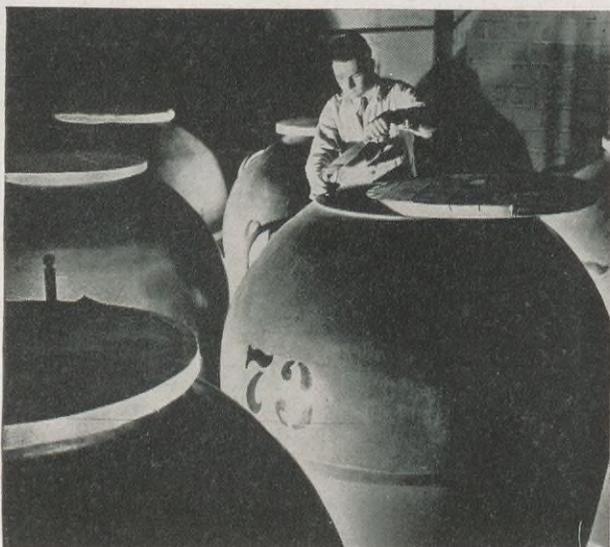
Next they go into an acetylating mixer together with acids and catalysts. Powerful machinery stirs the mixture during reaction. ▶



◀ When the mixing process is complete, the acetylator tips and pours out an entirely new substance—which is the raw cellulose acetate.



The cellulose acetate is "hydrolized" (or ripened) in huge storage jars. Frequent testing insures uniformity in the finished products.



◀ The mixture is then plunged into cold water where it precipitates into cellulose acetate flakes. These are washed free of acid and dried.





The material reappears in large, manageable cakes which will later be converted into a molding composition.



Cellulose acetate is supplied in pellet form for the molding of the many different products which can be made from it.

is noted especially for its "allyl twins," allyl alcohol and allyl chloride, and is, today, the only petroleum company supplying allyls to the plastics industry.

Allyl chloride, which is derived from propylene (a hydrocarbon gas), is the starting point for a new field of plastics based upon starch, sucrose, and other carbohydrates. Two manufacturers are now in the pilot-plant stage of plastics production with allyl starch. When these materials can be brought to the commercial stage of production, they will be used for surface coating applications.

Allyl alcohol, which, in turn, is de-

rived from allyl chloride, furnishes the base for a group of thermosetting compounds which yield permanently molded solid products of excellent resistance to wear and to the action of water and chemicals. Although these allyl derivatives are well adapted to the standard molding process requiring high pressures, they are noteworthy because they will set to full hardness and rigidity under low pressures or even no pressure at all.

#### Research

Shell Development Company, which has done much pioneering in petroleum chemistry, is not content merely

to develop better and cheaper base materials for the plastics field. Members of the Company's scientific staff actually devise new plastics made from these petroleum chemicals and, knowing the specific application for which each plastic is best fitted, they then explore the practical commercial uses to which they can be put. Shell is not in the plastics business, so this information is made available to manufacturers who are. This is good business for Shell since it means that plastics from its petroleum will be used in fields where they can perform properly according to their particular characteristics. Too often, plastics have performed poorly because they have been put to uses for which they are not suited.

#### Classification of Plastics

There are two main classifications into which plastics are divided: the heat resistant *thermosets*, and the heat-sensitive *thermoplastics*. Very few thermosets are derived mainly from petroleum, but most of the thermoplastics are. Some of the main types of thermoplastics which make use of petroleum (either invariably or very frequently) as their basic raw material include:

The *acrylics* (familiar trade names: Lucite, Plexiglass) are glass-like plastics used for mirror and picture frames, brush backs, combs, novelties, lamp bases, lighting fixtures, etc. *Nylon* is familiar to most of us as a thread, but it is also used to make solid objects, such as brush bristles, tumblers, and combs. It is extremely strong and unaffected by most chemicals. *Polyethylene* is a new, very light, and very versatile plastic. It is used to make curtains, aprons, refrigerator bags, garment bags, home-freezer bags, bowls, tumblers, dishes, ice cube trays, screens, clotheslines, and upholstery fabrics. *Polystyrene* is light and rigid, but unless properly formulated it is quite brittle and is likely to develop cracks or even break into sharp pieces under certain conditions. A few of its familiar trade names are Plexene, Loalin, Styaloy, and Lustron. It is frequently used in tableware, kitchen accessories, toilet articles, food containers, wall tile, and

radio cases. The *vinyl plastics* are another very versatile group. They are strong, waterproof, and are not harmed by fungus or mildew. The vinyl plastics occur in various physical forms: solid objects, like handles and wall tile; in thin films, which become shower curtains; as a thread, to be woven into upholstery fabrics; and in coatings, such as appear on drapery fabrics and wall paper. Finally, *vinylidene chloride*, which is better known by one of its trade names—Saran—can be classified as a member of the vinyl family, but it is distinguished for unusual resistance to damage or stain by chemicals. Its uses are the same as those of the other vinyl plastics, except that it is also widely used for outdoor furniture upholstery.

### The Plastics Record

Toward the end of World War II, it was generally predicted that there would be a noticeable slump in plastics production as soon as the war was over. These predictions failed to materialize. Not only has there been no slump; there has actually been an increase in production as new plastics are developed and as war-time appli-

cations are adapted to civilian use.

In 1939, the output of all synthetic resins in the U. S. (not including cellulose materials) stood at 33.7 million pounds. By 1945, this figure had increased to 808.2 million pounds. If the present rate of increase is maintained for another year, production in 1948 could easily double the 1945 rate.

But plastics people are nonetheless concerned over all the "panacea plugs" that have appeared in print about their products. In this connection, they draw a parallel between plastics and all the breath-taking articles published about the early sulfa drugs, and later about penicillin. In the first flush of enthusiasm, these drugs were too often presented to the public as cure-alls, and wide-eyed articles left readers with the impression that disease had practically become a thing of the past. Of course, this wasn't true. The sulfa drugs and penicillin have proved extremely valuable to medical science in curing some diseases, but they have no effect on others.

In its own field, plastics ran head-on into the same kind of problem. Too much was expected of them and

when they were put to a use for which they were never intended, they failed. No one who understands plastics believes, for instance, that they will ever make metals obsolete, or that the plastic in a shower curtain could ever substitute for the plastic in the handle of an electric iron. Where it is economically advisable and physically possible to do the job required, plastics will perform superbly, but, like penicillin, they can't do everything.

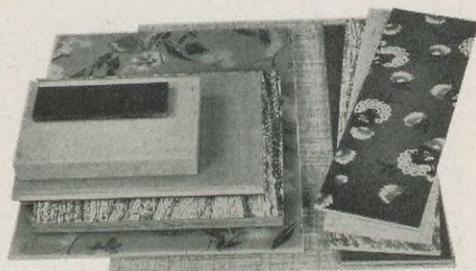
Within the range of their potentialities, plastics are doing great things, and they promise to do even greater ones. So far, they have become especially valuable in relieving household drudgery by making durable, easy-to-clean, attractive furnishings and appliances.

The plastics industry gives every indication of continued future growth and is rapidly assuming a permanent place in the economy of the nation. As this industry grows it will require ever-larger volumes of chemicals from petroleum. To meet these requirements Shell will utilize its production facilities to a maximum of its role as a supplier of solvents and chemical intermediates to this young and vigorous industry.



Fine detail is achieved in these plastic chessmen.

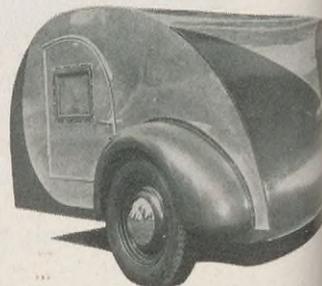
Plastic surface coatings give stainproof finishes.



One plastic manufacturer experimented with various formulae and finally produced an inexpensive plastic that would withstand scalding temperatures. Both of these spoons were made from polystyrene, but the one on the left has been specially treated.



Tough, durable plastics are made into fenders.



# Doolittle Honored

## AIR AWARD

New honors have come to a many-sided personality in aeronautics—namely, James H. Doolittle. Last evening he received the award of the Fellows of the Institute of the Aeronautical Sciences as this year's Honorary Fellow, one of the highest honors the aviation profession can bestow. This award recognizes the less vivid, but no less solid, attributes of a man who has been in the forefront of all the many activities of aviation with which he has been connected. Doolittle will always have the gratitude of aviation for his pioneering work with the Daniel Guggenheim Fund for the Promotion of Aeronautics in the first take-off, flight and landing of an airplane "blind." Meantime he had received the degrees of Master of Science and Doctor of Science in aeronautical engineering at the Massachusetts Institute of Technology, winning his doctorate in one year. Before the outbreak of the Second World War he was called back to active duty, where he contributed greatly to the pooling of production and subcontracting methods by the aircraft and automotive industries. There followed the spectacular first raid on Tokyo, which Doolittle led and which won for him the award of the Congressional Medal of Honor. Drive and resourcefulness as a military leader quickly led to command of the 12th, 15th and, finally, the 8th Air Force, with the rank of Lieutenant General at the war's end.

It is particularly appropriate that Doolittle, the aeronautical scientist, should now receive from his fellows a scientific honor tantamount to the many he has won as an airman.

—from The New York Times.  
January 27, 1948



## Institute of the Aeronautical Sciences

### Honors and Awards for 1947

#### HONORARY FELLOWSHIP IN THE INSTITUTE

*Honorary Fellows shall be persons of eminence in aeronautics and are elected by the Fellows and Honorary Fellows of the Institute residing in the United States. Not more than one person residing in the United States, nor more than one person residing in a foreign country, may be elected as Honorary Fellow in any one year.*

*Presented to*

**JAMES H. DOOLITTLE**  
Vice-President and Director, Shell Union Oil Corporation

# Natural Gas—The Baby Giant

**M**ANY of us think of natural gas as something that burns in the kitchen gas range. Indeed, the greatest and most important use of natural gas is as a fuel. But there are other interesting things that can be done with this invisible product. "Wring" it out, and you have natural gasoline. Take what's left after wringing—burn it—and you have carbon black. Take a combination of air, water, and natural gas—juggle expertly—and you have ammonium nitrate fertilizer. And that's

just the beginning. By compressing, burning and mixing, natural gas or its components can be turned into many other things.

Oil men for years have been looking for ways to make more efficient use of natural gas. They have had natural gasoline plants as long as they have had oil wells. Oil companies individually and collectively have spent many millions of dollars and incalculable time and energy searching for better ways of utilizing natural gas and exploiting its array

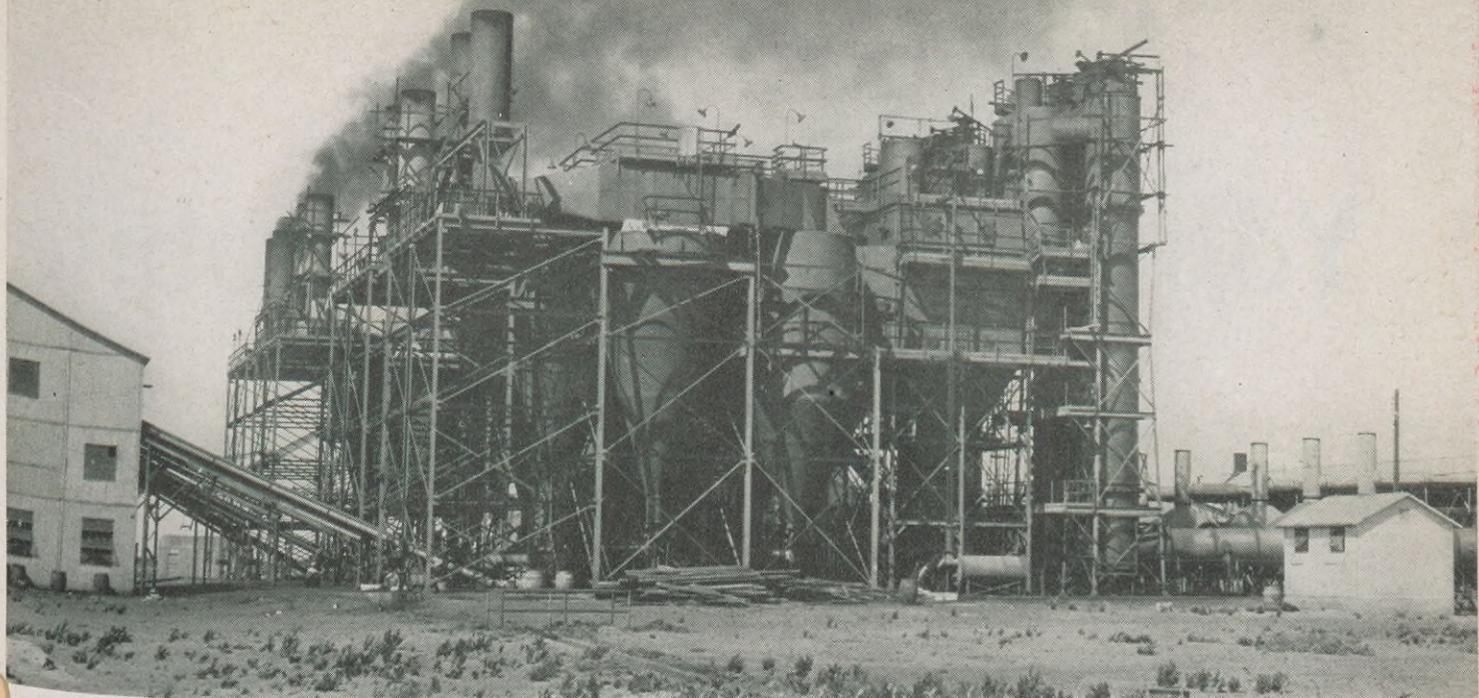
of useful elements.

Today the industry is beginning to get a return on its investment in time, money and energy. Today natural gas is in heavy demand, for it has been discovered to be a very versatile product.

Natural gas is a broad term covering both the gas that is produced in conjunction with oil (casinghead gas) and that produced from gas fields, independent of oil. For many years, natural gas was known to have two attributes; it burned well and it con-

Gas operated appliances provide kitchen comfort in millions of American homes.





This Seagraves, Texas, Plant uses residue gas from Shell's nearby Wasson natural gasoline plants to make special grade carbon black.

tained natural gasoline. However, for many years the difficulties of storage and transportation, and the expense of extracting the gasoline, hampered the full growth of the industry.

Improvements in equipment and procedures have of recent years steadily facilitated the storage of natural gas in quantity and its transportation to market. Much more important, however, has been the discovery of the importance as raw materials of the various components of natural gas. These components range from "dry" gases such as methane and ethane to liquids such as pentane and hexane. Depending upon the relative proportion of its liquid and dry hydrocarbons, natural gas is termed "wet" or "dry."

"Wet" gas contains many condensable products of commercial importance. These are separated from the gas in "gasoline plants." The principal product is "natural" gasoline which is blended with other gasolines for automotive and aviation fuels. In fact one component of natural gasoline, iso-butane, played a major part in the aviation program during the war. In addition, other liquid hydrocarbons such as hexane (low solvency naphtha) and heptane (solvent) are drawn off. Propane is also separated and in bottled form serves homes in outlying locations

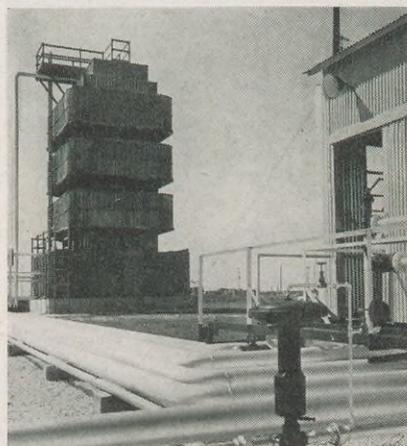
giving them a convenient and clean source of heat.

The "dry" residue gas from natural gas plants and the "dry" gas from gas wells find many and varied uses. The principal one is for fuel . . . for many millions of Americans, this natural gas heats homes and water, cooks meals, and cools refrigerators. Another is its utilization to make carbon black. The expanding carbon black industry burns the residue gas to produce special-grade carbon black for the rubber industry, for printing inks, etc.

A more recent development of an entirely different nature is the conversion of natural gas directly into motor gasoline and other liquid fuels through an adaptation of the Fisher-Tropsch process.

With the finding of new uses for natural gas, petroleum scientists have, in addition, learned to utilize it more fully for one of its basic functions . . . the lifting of oil to the surface. In the oil fields, after the gas has been stripped of all its valuable products, it is often forced back into the formation to help maintain pool pressures.

Today, with new uses developing on every side, natural gas has truly become a baby giant, one that bodes fair to outgrow itself in the next few years.



Above: Cooling tower and compressor house at a Shell Oil Company field near Lake Charles, Louisiana. Below: Processing columns at Shell's Sheridan, Texas, cycling plant.



# Your Future Automobile

Greater comfort and cleaner lines rather than radical mechanical innovations are the selling points of the new cars.

By Edward Dunning



This new instrument panel features oversize dials illuminated at night by non-glaring "black light" which was first developed for use in fighter planes during the war.

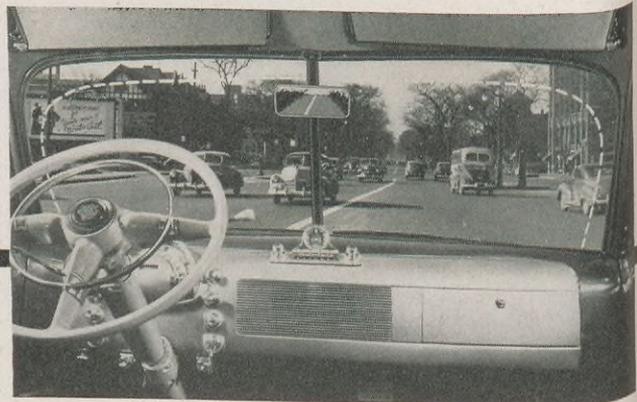
JOHN Q. MOTORIST, tired of squeezing the last few miles from his aged jalopy, may expect the coming year to give him the dream car promised in optimistic feature stories. If so, he will probably be disappointed. The revolutionary car of moderate price, with the New Look plus unlimited power, startling new economy, speed and driving comfort, is not just around the corner.

Manufacturers have an unprecedented backlog of new car orders, expected to continue throughout 1948. This means there is neither incentive nor opportunity for expensive design alterations which involve huge tooling costs and probable interruption of production—nor is this apt to change for some time. Major design

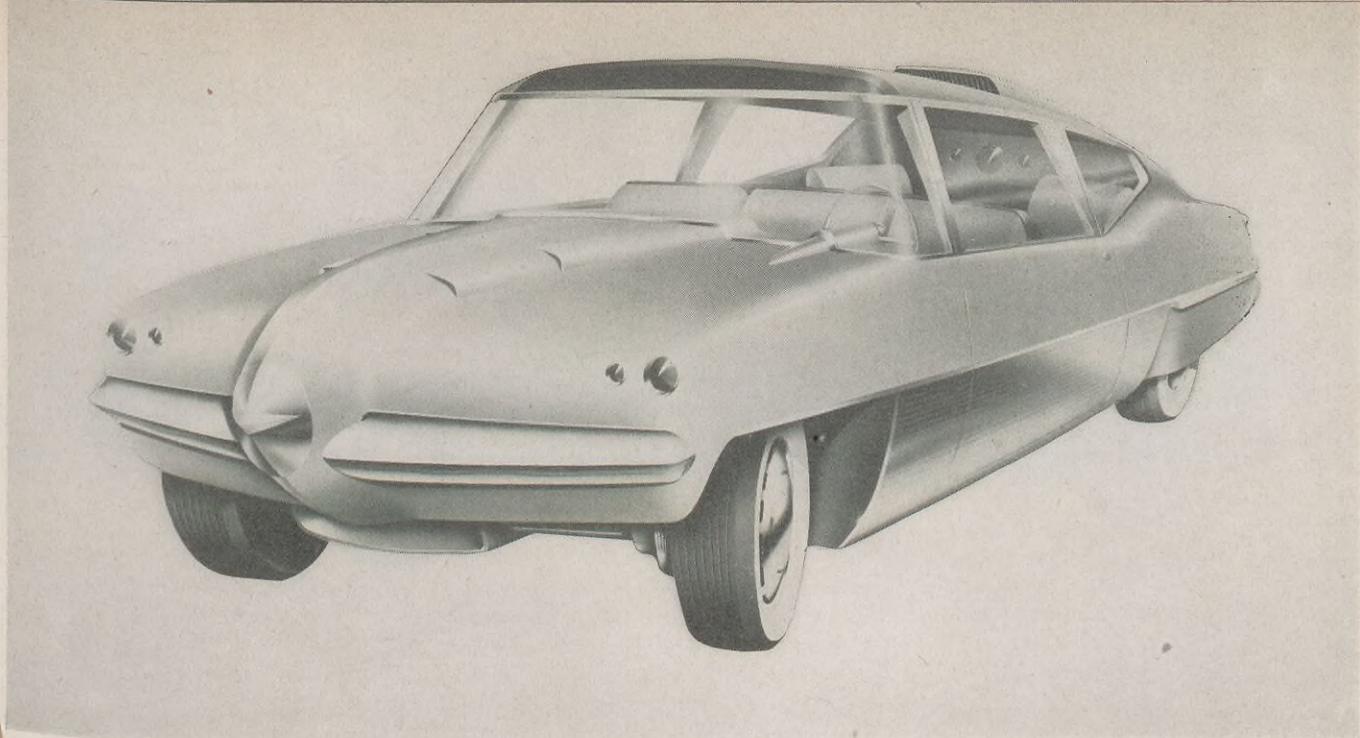
changes occur slowly, after many tests for field performance and customer approval. With the public crying for cars, such changes probably will be bypassed. Instead, production schedules appear to call for alterations which can be made quickly and economically but which will impress the prospective customer.

Style sells many cars, and manufacturers are expected to put styling changes in the number one spot on their programs for the next few years, with mechanical design improvements in second place. New style trends, already apparent in several 1947 and 1948 models, point toward wider, roomier bodies and more glass.

Sleek and streamlined, the new bodies hug the ground. Fenders



Curved glass and new design have considerably expanded both windshield and rear window areas, resulting in better vision for greater safety. This larger glass area was made desirable as the new low bodies brought the driver nearer the road, limiting his view to some extent.



Automotive designers, in "car of the future" sketches such as the one above, introduce as many innovations as they can imagine. Along with the low-slung body and unobstructed windshield, this model has separate rear seats swung toward each other, an instrument panel for back seat passengers, extremely small headlights, and tiny air intakes in place of the conventional radiator.

hoods and running boards have lost much of their identity, merging with the body which extends to the outside fender line for the entire length of the car. Roomier bodies provide seats 5 to 5½ feet wide for greater passenger comfort, though they do make right side door and window controls hard to reach from the driver's seat.

Lower bodies mean less visibility, and manufacturers have compensated for this by increased glass areas and wide sweeping windshields which give the new models a lighter appearance. For cleaner lines, metal trim in some cases has been removed from the body, although radiator grilles and bumpers are still bright with chrome.

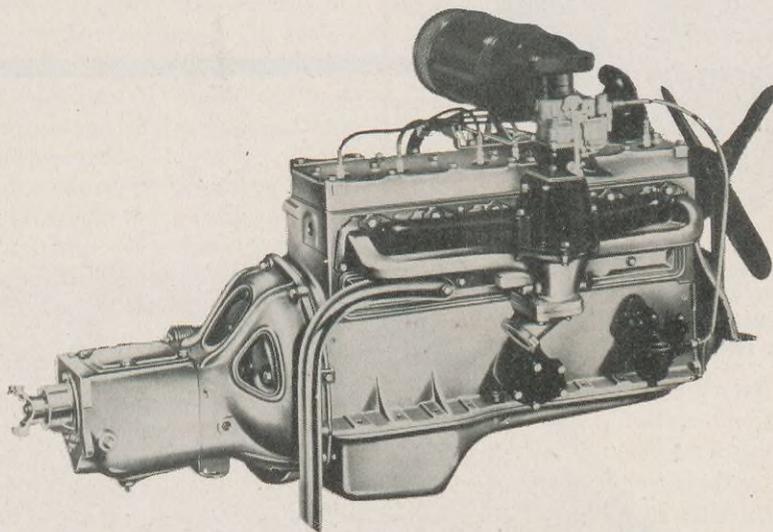
Stylistically speaking, Detroit designers have not yet produced revolutionary models like those now coming from the drawing boards of Europe. American motor-making is pegged to the mass production system and changeovers take time. Automotive history is built on evolution rather than revolution. So far, car manufacturers have produced no really new designs; have depended rather on updating their 1947 models. But four companies: Studebaker, Kaiser-Frazer, Packard and Hudson,

have been the first to point the way with models combining the low-slung silhouette, the wide body and a greater percentage of glass.

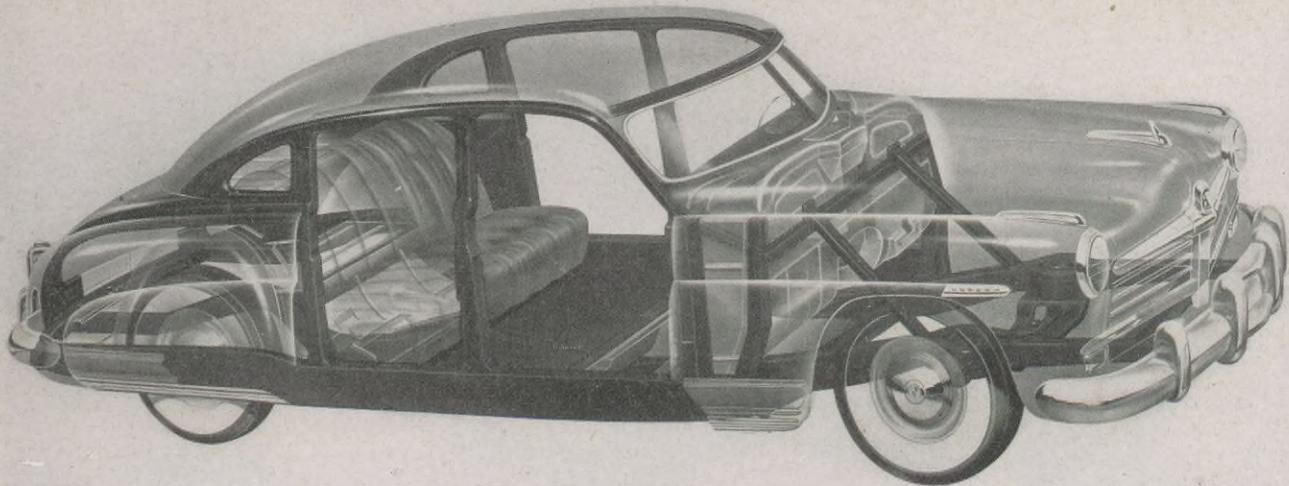
New construction materials for passenger cars, such as plastics and aluminum, have received much publicity in recent years, but there is no indication of any important swing to other materials than steel for body and chassis construction. Despite its

shortage and relatively high price, automotive production men consider steel the most satisfactory and economical material for present mass production techniques.

Automatic transmissions of the hydraulic type are among the new mechanical features we will see in the next few years. Fluid drive, Vacumatic and Hydramatic drive are all examples of hydraulic drive mech-



Years of automotive experience have produced the four cycle, liquid cooled, six cylinder engine (above) which will continue to be used in practically all cars of the lower price ranges.

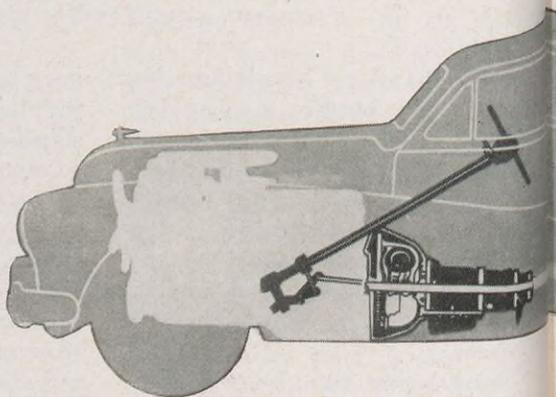


▲ Hudson's new all-steel, Monobilt body-and-frame is one modern answer to the constant quest for a strong, rigid and twist-free structure. Built into the body, the box-section frame extends outside the rear wheels to provide girder protection on all sides.

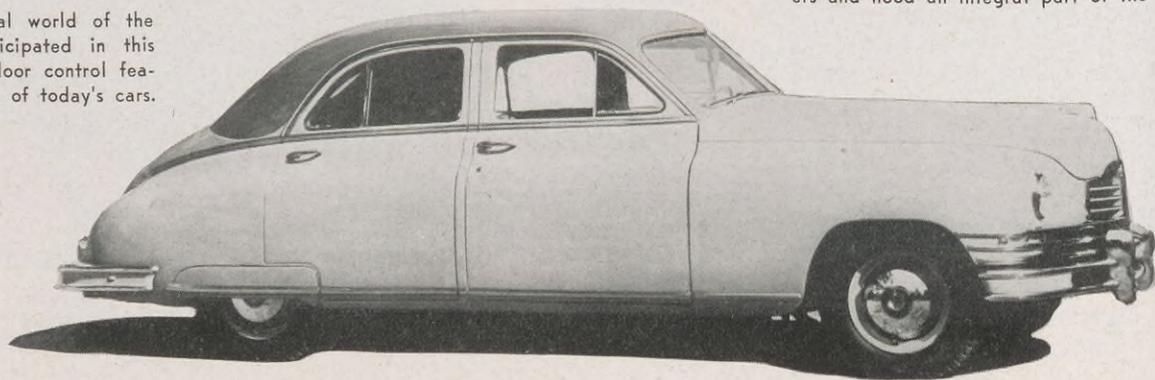


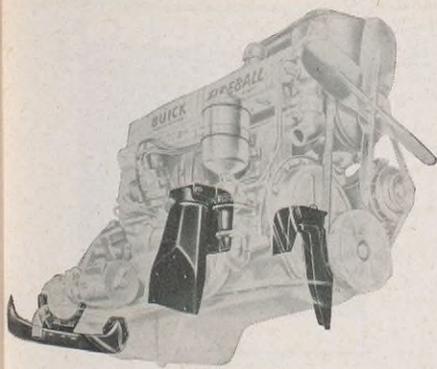
▲ The mechanical world of the future is anticipated in this push button door control featured in some of today's cars.

Buick's torque converter eliminates conventional gears and takes the clutch pedal out of the driver's compartment.



Smooth lines in the 1948 Packard pictured below show the current trend of making fenders and hood an integral part of the body.





New "controlled frequency" engine mounts prevent engine noise and road noise from reinforcing each other, resulting in quieter operation.

cars will have some form of transmission which provides automatic shifting.

Buick has recently announced its 1948 models; one series of which employs a torque convertor. This is the first completely automatic hydraulic transmission to be applied to passenger cars, although similar torque convertors have been successfully used in buses for some time.

Presently, the various forms of hydraulic drives have proceeded only part way toward the ultimate goal—completely automatic operation—*plus* the most economical engine-to-rear wheel-ratios for every driving condition. Every motorist knows low gear ratios are necessary for starting or climbing steep hills. What is not so generally understood is the important advantage of having a series of ratios higher than high gear to obtain greatly increased gasoline mileage under cruising conditions. The mechanical "overdrive" used in some cars during past years is a step in this direction, but only a partial solution.

The ideal transmission, like the variable pitch aircraft propeller, is a device which will be infinitely variable over a wide range of engine-to-wheel ratios. It will instantaneously and automatically select the most desirable ratio for every driving condition. The attainment of this ideal is nowhere in sight at present, but automotive engineers are working diligently, with it in mind. If such a transmission can be perfected, the fullest measure of improvement in car performance and gasoline mileage can be realized.

Engine improvements have received much attention from automotive engineers in the past three years and 1948 should see the introduction of at least three new power plants in the higher priced cars. In the lower price brackets, all indications point to continuation of the six cylinder engine, because of manufacturing costs.

There are no indications of revolutionary changes in engines; they will remain in front and will continue to be liquid cooled and four cycle. There is little possibility that we will see fuel injection, high com-

pression ratios above 8:1 or superchargers in the near future.

The common denominator in all new engine design appears to be greater power, since automobile manufacturers apparently feel there is a strong demand for still greater performance which requires higher engine horsepower. If some gain in gasoline economy can be obtained along with improved performance, it will be a welcome by-product, but this appears to be a secondary objective.

Present engines represent a long series of minor refinements on basic engine types which originated in the period 1929-1933. These engines have practically reached the end of their possibilities for producing still greater power output. Among the new engines which are planned for introduction in medium and high priced cars, the valve-in-head V-8 looks to be the favored type. It appears to offer advantages from the standpoint of high power output for a given size and weight, plus maximum smoothness at high power because of its compact, rigid structure.

Over the next 10 years, automobile design is expected to turn toward lighter and possibly somewhat smaller cars for obvious advantages in economy and performance. However, plans which major automotive manufacturers were considering seriously immediately after the war, for production of a smaller, lighter, and therefore cheaper car, have apparently been shelved for the present. Automotive engineers express the viewpoint that manufacturing economies possible at present for a lighter, economy car are too small to permit an appreciably lower price tag.

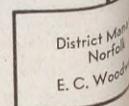
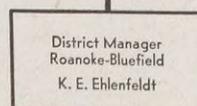
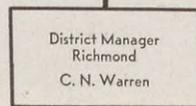
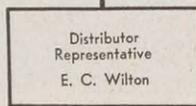
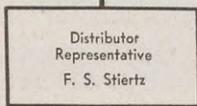
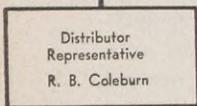
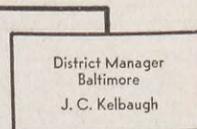
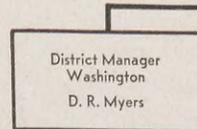
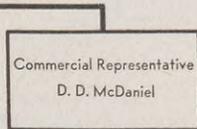
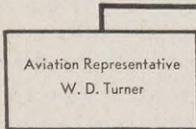
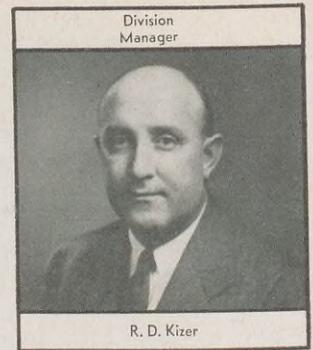
The man who buys a car in 1948 will end up with an automobile similar to the one he has been driving, even if it was purchased before the war. The qualities of comfort, reliability and power which the American consumer has come to expect will all be there. There may even be a face-lifting in the form of new exterior design and several fresh gadgets. But the day of revolution in automotive Detroit has not yet arrived.

anisms used in conjunction with a mechanical transmission. Such devices are the first step toward smooth application of power and simplified car control.

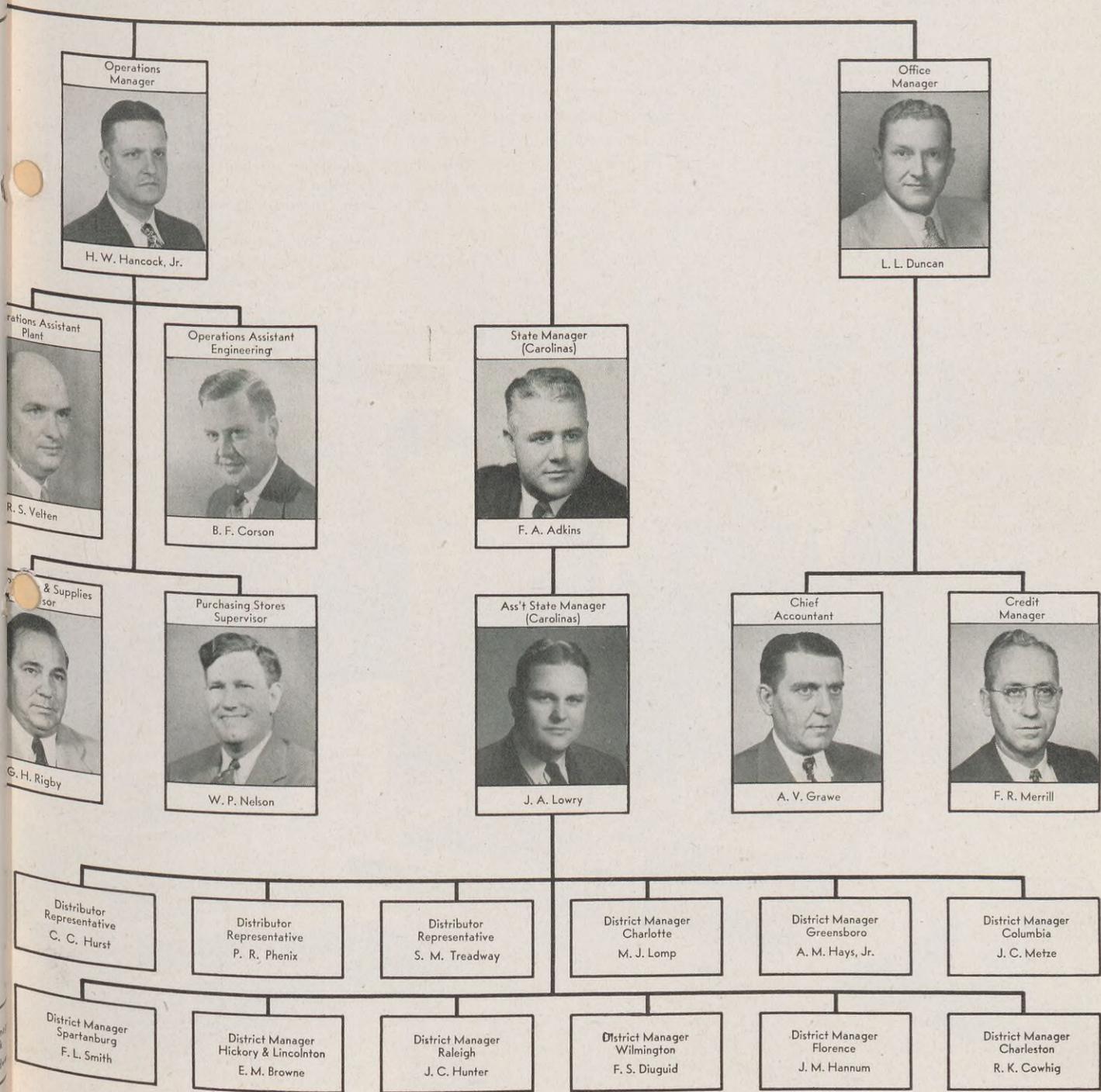
The idea behind this hydraulic transmission development program is elimination of the clutch and gear shift to achieve completely automatic control by means of the accelerator alone. Several manufacturers have produced designs which eliminate gear shifting except for reverse and emergency low. Probably within the next three to four years, nearly all



The fourteenth in a series of  
**Organization Charts**  
 Shell Oil Company, Incorporated  
 (East of Rockies Territory)  
 February—1948



# BALTIMORE MARKETING DIVISION



# A Service Station Grows

**S**HELL has two primary objectives in mind in the design and construction of its service stations—appearance and utility. Appearance to give the station identity and attractiveness; utility so that the dealer will have the proper facilities for rendering the best in customer service.

It is the job of the Marketing Engineering Department architects and engineers to put into specific form ideas for changes and betterments in service station construction and design. They are assisted in their task by other Marketing Departments, dealers and customers whose opinions and recommendations do much to in-

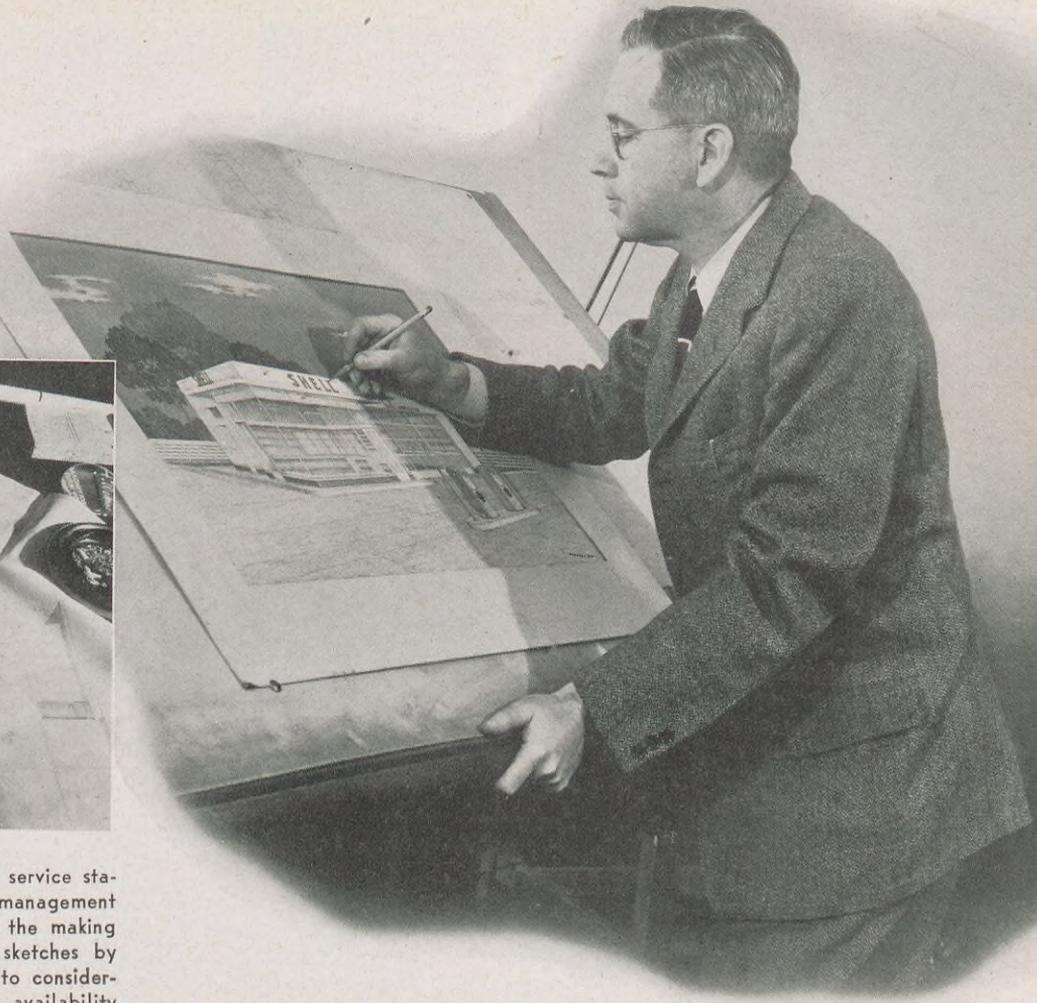
fluence developments and improvements in future stations.

Beginning as a series of rough drawings in Marketing Engineering, plans for new stations go through a blue-print stage and then are used to guide the construction of a carefully-built scale model. When the plans and model are approved, a full-scale pilot station is built. After the pilot station has proved its worth in actual service, a series of newer and better stations emerges to extend Shell service along the nation's highways.

The following pictures trace the evolution of a service station from idea to reality.

J. H. Hall, Manager, Marketing Engineering Department, Architect Harry Wearne, William Van Bree and A. L. Sibley discuss some scale models they have helped to create. Each model represents at least one completed installation, or one in progress, and is the result of months of design, careful drafting, and painstaking model making.





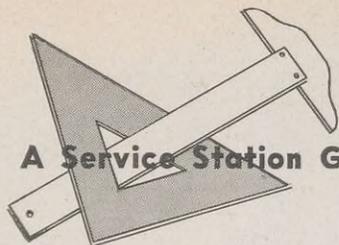
First step in the evolution of a service station—following the decision by management that a new style is needed—is the making of numerous free-hand pencil sketches by Architect Wearne. In addition to considering such practical problems as availability and costs of materials, etc., Wearne must be careful that his new design is completely modern, yet not so "extreme" that it will make other modern Shell stations seem out-of-date.

A full scale floor plan layout of the proposed new design is next prepared so the functional needs and physical dimensions of the station can be determined in a series of conferences and studies with the Retail Sales Department and other interested Marketing executives. Color and sign identifications are an important part of any design, and the advice and guidance of the Art, Design and Color Committee assist the designer in accomplishing the desired appearance and essential uniformity of identification. Outside consultants are also asked to study the proposed design and offer suggestions where indicated.

After these designs have been reviewed with Hall and with P. W. Engels, Marketing Operations Manager, the most promising sketch is turned over to Chief Draftsman A. L. Sibley (above right) for the preparation of a "rendering"—a more accurately detailed and attractive drawing. At the same time, draftsmen prepare floor plans showing the location of facilities and equipment. The rendering and floor plan are then presented to various Marketing executives and, finally, the Vice President—Marketing for approval.

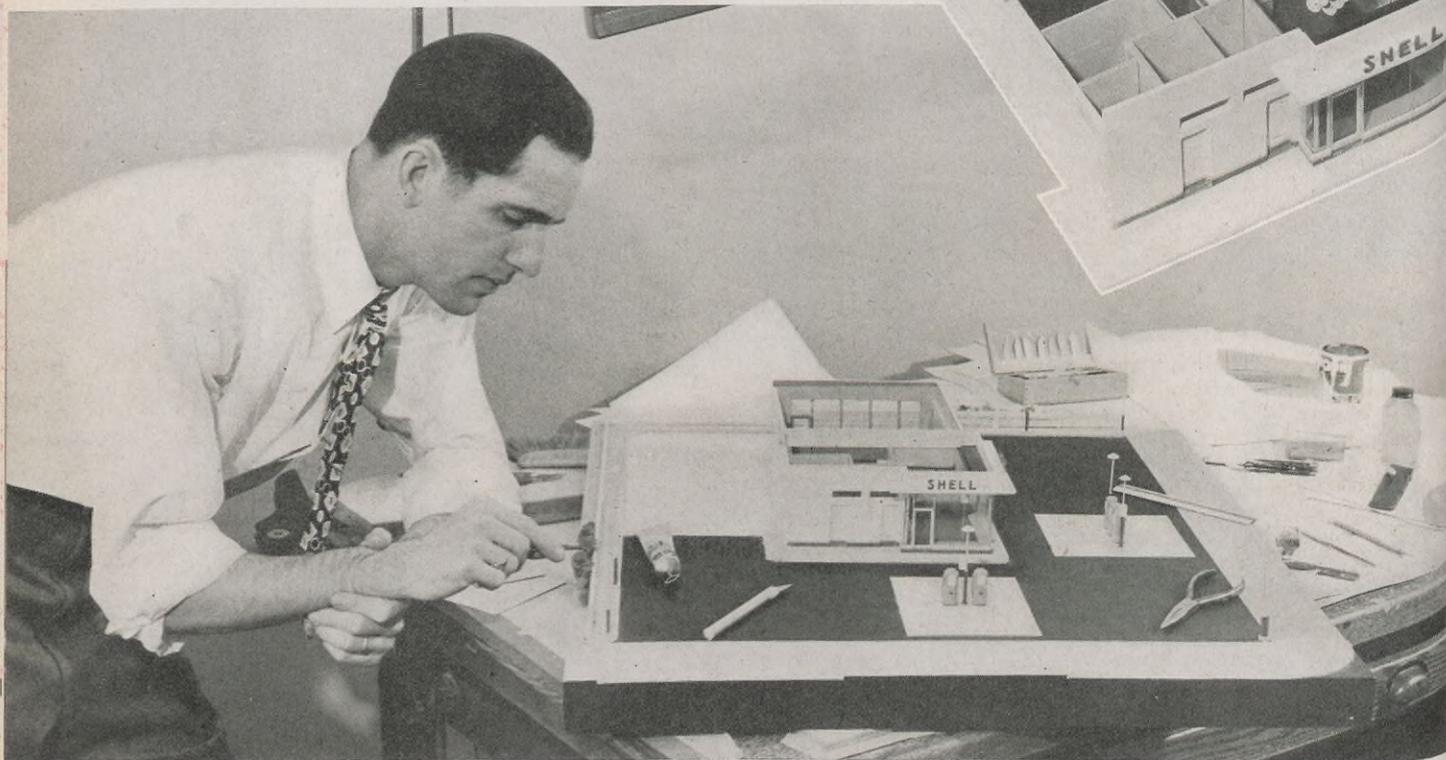
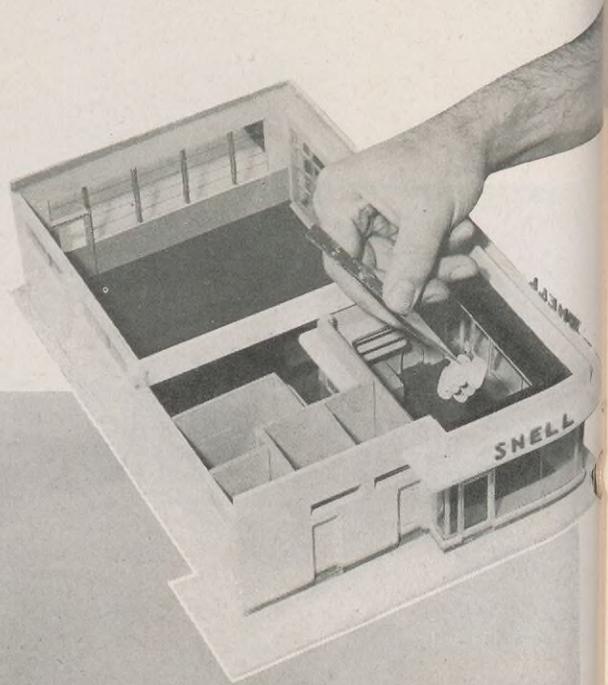
Now comes the most detailed phase of the work. The approved design is turned over to the draftsmen (below) for the preparation of working drawings and specifications. Accurate scale drawings are then made of the building, and all material to be used is carefully specified.





## A Service Station Grows

While blueprints are prepared, Draftsman William Van Bree sets to work to construct a detailed scale model of the proposed building. Simulated "Steel" I-beams are made of cardboard strips glued together, shower heads are made of bent pins, glass doors and windows are constructed of plexiglass with frames painted on. It takes Van Bree two to three weeks to complete the average model, although some models may require much longer. Models are useful, not only to management, who must approve the expenditure for the proposed station, but to the designers themselves, as they are able to get a better idea of what the completed structures will look like than they could from working drawings alone.



Even after management has given its approval to the finished model and the completed blueprints and specifications, the new service station design is not put into general use until a full-scale pilot station is constructed. Such a pilot station (built from these models) is, shown left, at Yonkers, New York.



A. A. BUZZI



J. M. FLAHERTY



A. HOWARD



W. G. PRECOBB



R. K. BURNS

# SHELL PEOPLE IN THE NEWS

A. A. BUZZI has been named Assistant Treasurer of Shell Oil Company, following the resignation of W. H. Garbade. Mr. Buzzi started with Shell in 1923 as a Time-keeper at the Arkansas City Refinery. He served in various positions at that location, becoming Office Manager in 1930. In 1933 he was named Office Manager at the East Chicago Refinery, a position he subsequently filled at Wood River from 1934 to 1941. In 1941 he was transferred to New York as Assistant Manager, Head Office Auditing Department and three years later became Department Manager. After a special assignment of several months in the General Planning Group, he became Manager, Head Office Accounting Department in April, 1946.

★ ★ ★

J. M. FLAHERTY has been named to succeed Mr. Buzzi as Manager, Head Office Accounting Department. A graduate of St. Louis University in Commerce and Finance, Mr. Flaherty started with the Company as a Clerk in St. Louis in 1920. He advanced through various positions in the St. Louis office until in 1932 he became Manager of Sales-Accounting. From 1934, until February, 1946, he served as Assistant Treasurer in the Mid-Continent Exploration and Production Area at Tulsa, Oklahoma, following which he came to New York as Manager of the Head Office Auditing Department.

★ ★ ★

ALLAN HOWARD has been named to succeed Mr. Flaherty as Manager of the Head Office Auditing Department, New York. Educated at Pace Institute, New York, and Georgetown University, Washington, D. C., Mr. Howard began his Shell career in 1937 at Head Office, New

York, as Division Office Auditor. In 1939 he became Chief Accountant for the Boston Marketing Division, a position he subsequently filled in the New York Marketing Division. In 1942 he became a member of the Head Office Auditing Staff and subsequently became Senior Auditor in January, 1944. In September, 1946, he was named Assistant Manager of the Auditing Department.

★ ★ ★

W. G. PRECOBB has replaced Mr. Howard as Assistant Manager of the Head Office Auditing Department. Mr. Precobb, who attended the University of Michigan, started with the Company in the Detroit Division as a Stock Clerk in 1930. He served in various clerical positions in Marketing offices at Detroit, St. Louis, and Omaha, prior to becoming Chief Accountant in the Chicago Division in August, 1941. The following year he was promoted to the position of Office Manager in the Minneapolis Division where he served until he was transferred to the Wood River Refinery as Office Manager early in 1946.

★ ★ ★

R. K. BURNS has replaced Mr. Precobb as Office Manager at Wood River. Mr. Burns was employed at Wood River as Office Boy in the Engineering Office in 1930. After becoming Cost Clerk the following year, he progressed through various clerical positions and was appointed Head Cost Clerk in 1940. In 1943 he became Senior Clerk and two years later became Assistant Chief Accountant. Since March 1946, he has been Chief Accountant.

★ ★ ★

*Continued on next page*



C. BARKER



R. V. MILLER



R. M. WALTON



G. A. CLARK



E. R. MUELLER

### Shell People in the News

CARL BARKER has been appointed Special Assistant to the President of Shell Oil Company. A graduate of Alabama Polytechnic Institute (Auburn), Mr. Barker started with Shell as an Engineer in Ardmore, Oklahoma, in 1916. Two years later he was named Superintendent of the Insurance Department in the Exploration and Production Office at Tulsa, to which the Tax and Claims functions were added in 1919. Later that year he was transferred to the Head Office in St. Louis in the same capacity. In 1940, he moved to New York as Manager of the Head Office Tax and Claims Department. Mr. Barker was made Manager of the Head Office General Tax Department on January 1, 1947, when this department was established by consolidating the functions and responsibilities of the Tax and Claims and Financial Tax Departments.

★ ★ ★

R. V. MILLER has succeeded Carl Barker as Manager of the Head Office General Tax Department. A graduate of Stanford University, Mr. Miller joined Shell at San Francisco as an Auditor in 1934. He later was successively Assistant Manager of the Auditing and Accounting Departments before coming to New York in 1940 as Manager of the Head Office Financial Tax Department. Mr. Miller was made Assistant Manager of the Head Office General Tax Department when it was established in January, 1947, at the time of the consolidation of the Tax and Claims and Financial Tax Departments.

★ ★ ★

R. M. WALTON succeeds R. V. Miller as Assistant Manager of the Head Office General Tax Department. Mr. Walton joined the Company in 1926 as a clerk in the St. Louis Head Office. He was made Chief Accountant in

the Exploration and Production Office at Tulsa in 1942 after progressing through various Treasury administrative assignments in St. Louis, Tulsa, and New York. In February 1946, Mr. Walton became Office Manager in the Tulsa office.

★ ★ ★

G. A. CLARK has succeeded R. N. Walton as Office Manager for the Tulsa Exploration and Production Area. Mr. Clark came to Shell in 1933 as an Investment Clerk for the then Texas-Gulf Exploration and Production Area in Houston. After four years in various accounting positions he was made General Ledger Clerk at the same location, and in 1939 he became Head of the General Ledger Section. In August, 1946, he was promoted to Chief Accountant and the following year became Office Manager of the Houston Area.

★ ★ ★

E. R. MUELLER has been named Office Manager for the Houston Area. Mr. Mueller came to Shell as a Clerk in St. Louis in 1923. He served in various accounting positions there before becoming Assistant Chief Clerk in 1933. The following year he became Division Accountant at Tulsa, later becoming Assistant Office Manager and Chief Accountant. In 1942, he was transferred to New York where he served in several Treasury assignments. He was appointed to the Regional Staff at Houston in 1946, where he served until his current assignment.

★ ★ ★

W. H. COLLINS has been appointed Production Superintendent for the Tulsa Exploration and Production Area. Mr. Collins, a graduate of Cornell University in Mechanical Engineering, began his Shell career in 1927 as an Air



W. H. COLLINS



H. E. DISCHINGER



J. F. JOHNSON, JR.



E. O. KING



F. E. CADDY

Lift Engineer in Tulsa, where, in 1930, he was made Acting Division Production Engineer. In June, 1932, following a short assignment in The Hague, he became Production Engineer in Head Office, St. Louis. The following year he was made Production Superintendent at Tulsa and subsequently served as Division Manager at Amarillo, Texas, until January, 1940, when he moved to Wichita Falls, Texas, in a similar capacity. He served there until his current appointment.

★ ★ ★

H. E. DISCHINGER has been named General Superintendent of the Products Pipe Line Department at Head Office, New York. Educated at the Armour Institute in Chicago, Mr. Dischinger came to Shell in 1924 as a Designing Engineer at the Wood River Refinery. He later became Safety Inspector there and, in 1929, became Safety Engineer in the St. Louis Head Office. From 1932 to 1936, he was Construction and Maintenance Engineer in the St. Louis Marketing Division. Late in 1936 he returned to the St. Louis Head Office as Safety Engineer where he remained until July, 1940, when he became Superintendent of the North Line Division of the Products Pipe Line Department. Prior to his latest appointment, he was Superintendent of the East Products Line.

★ ★ ★

J. F. JOHNSON, JR., has been appointed Acting Superintendent of the East Products Pipe Line, replacing H. E. Dischinger. Mr. Johnson, who studied at Chicago and Vanderbilt Universities, began his Shell career in May, 1936, as a Laborer in the East Chicago Refinery. Later that year he became Assistant Electrical Engineer for Shell Pipe Line Corporation at Houston. He subsequently served in an engineering capacity for Shell Pipe Line at several

locations until 1940 when he returned to Shell Oil Company as Corrosion Engineer at the Harristown, Illinois, Terminal. Following a year on special assignment, Mr. Johnson returned as Corrosion Engineer of the East Line in 1943. He became Engineer of the East Line in 1945 and two years later, Division Engineer.

★ ★ ★

E. O. KING has been named Assistant to the Vice President, Transportation and Supplies. A graduate of the Liberal Arts School of Wesleyan University and the Business Administration School of Harvard University where he took his Master's Degree in Marketing, he began his Shell career as a General Clerk in St. Louis in 1936. After various assignments, he was named Section Supervisor, Transportation and Supplies-Shipping at New York in 1942. He became Supplies Supervisor for the Mid-Continent Division in 1943 and for the Gulf-Atlantic Coastal Division two years later. From October, 1946, until his latest appointment, he served in the President's Office.

★ ★ ★

F. E. CADDY has been named Plant Superintendent at Shell Chemical Corporation's Houston Plant. A graduate of Stanford University where he received a B. S. degree in Chemistry and Physics, Mr. Caddy was employed by Shell Chemical Corporation at Shell Point, Pittsburg, California, in 1931 as a Laboratory Assistant. He was transferred to the Dominguez (California) Plant as a Laboratory Chemist in January, 1937. In 1941, he joined the Operating section of that plant and in 1943 was transferred to the Torrance (California) Plant as Department Manager in the Operating section. Prior to his new appointment, he had served as Superintendent of the Torrance Plant.

# Legal Department

66 employees at five separate  
locations take care of legal  
matters for Shell's East of  
the Rockies territory

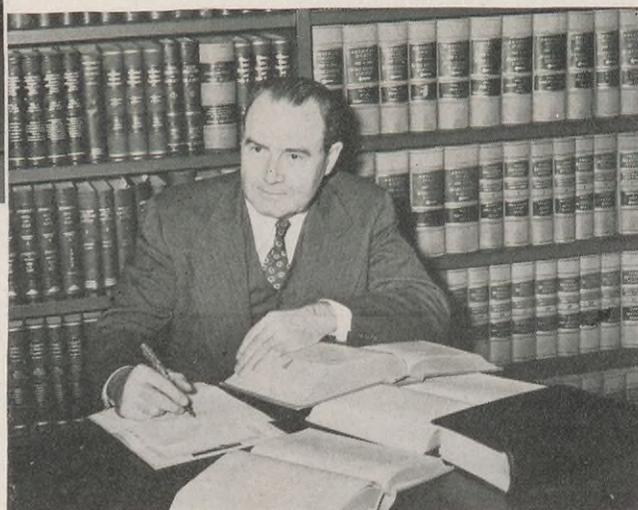


All advertising copy must be checked closely by the Legal Department.

**P**RIOR to 1933, Shell's legal work was handled by outside law firms. With the growth of the Company and the accompanying increase in the volume and importance of its legal work, it became apparent that it would be very difficult to carry on only through outside counsel. Consequently on January 1, 1933 Shell's own staff of attorneys was established. This proved timely because within a very short time were passed the National Recovery Act, Social Security Legislation, National Labor Relations Act, the Wage and Hour Law, the Securities Exchange Act, and various other statutes which imposed new duties and obligations upon business respecting its every-day activities.

## Legal Problems and Activities

The popular conception of an attorney is a loquacious individual who dramatically pleads the cause of his client in a tense and crowded courtroom. The actual court work of a lawyer, however, consumes only a very small percentage of his time. Most trial attorneys spend far more time in preparing their cases, assembling the evidence, writing briefs and looking up the law than in actual appearances in court. Shell has trial attorneys in each of its legal departments to prosecute or defend for the litigation in which it becomes a party and a substantial part of their time is consumed in trials or preparing for trial. But aside from trial



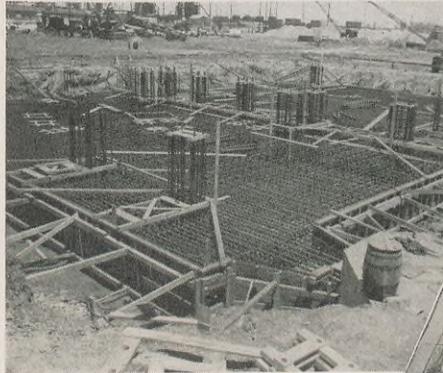
A good part of the attorney's time is spent in research, preparing briefs, preparing and approving contracts.

activities, how is the balance of our attorneys' time expended and how is the legal work of the Company organized to make the fullest use of that time?

Mention of just a few of the problems may give a somewhat better understanding of the manner in which a law department operates. One of the most time-consuming phases of each Legal Department's business, because of its volume, is the preparation and approval of contracts, conveyances and leases. Depending upon the complexities of the transaction a contract may be written on one page in simple letter form or may run thirty or forty pages of legal-size paper. The present trend, however, is certainly toward brevity and simplicity, and away from the "parties of the first part and of the second part," the "to-wits" and similar methods of expression of the traditional scrivener. Whenever an instrument is subject to standardization (as is true of most oil and gas leases, real estate leases, and sales contracts) a form is prepared which can be either printed or copied and widely used without further review by the attorneys. Experience in the practical application of the various contractual provisions and changes in the applicable law make necessary from time to time the revision of these standard instruments. Some transactions may differ only slightly from the terms of the form as printed, and in those cases differences can be taken care of by a simple amendment. Many instruments, however, because of the special nature of the transactions, are not subject to standardization and must be drafted on an individual basis.

### Real Estate Transactions

Anyone who has bought a home has discovered that numerous legal problems arise even in a simple transaction of that sort. Shell is in the real estate business in a very large way: we not only buy properties, we also sell them. Our purchases range from one involving millions of dollars for oil and gas



Legal works closely with the interested departments in the acquisition of Shell properties. The attorneys see to it that all papers of purchase and sale are properly drawn . . . that the Company acquires good title to the properties purchased.



producing acreage to one for a corner lot in a small town for a filling station. Annually we spend additional millions to obtain oil and gas leases on land on which some day we hope to drill. Purchases of huge amounts of crude oil every year are in effect the acquisition of so much real estate because we must be certain that the true owner of the land from which the oil was produced was the seller or had executed a valid oil and gas lease (or other conveyance) through which the vendor had acquired title to the oil. We also rent thousands of properties from other parties and we lease many such properties to service station dealers and bulk plant operators. The attorneys must make certain that the title to the property which we are purchasing is good and that the rental or royalty which we are paying is going to the rightful owner. From a volume standpoint, title examinations require the assignment of a much larger staff in the Area Offices than in Head Office. This is readily understandable when we consider the great number of oil and gas leases, royalty conveyances and crude oil

purchases to which the Company is a party.

### Other Legal Problems

From time to time practically every other department in the Company has occasion to consider matters on which legal advice is needed. The scope of this function of the Legal Departments is as broad as the Company's activities. Perhaps we wish to buy a small company which owns oil and gas producing properties or a manufacturing plant or a system of bulk plants and service stations for the distribution of petroleum products. The attorneys prepare the purchase contract, investigate titles to properties to be taken over, make sure that there has been compliance with all laws relating to the sale and see that deeds, bills of sale, and other instruments are properly drawn and executed so that the Company acquires good title to the properties purchased.

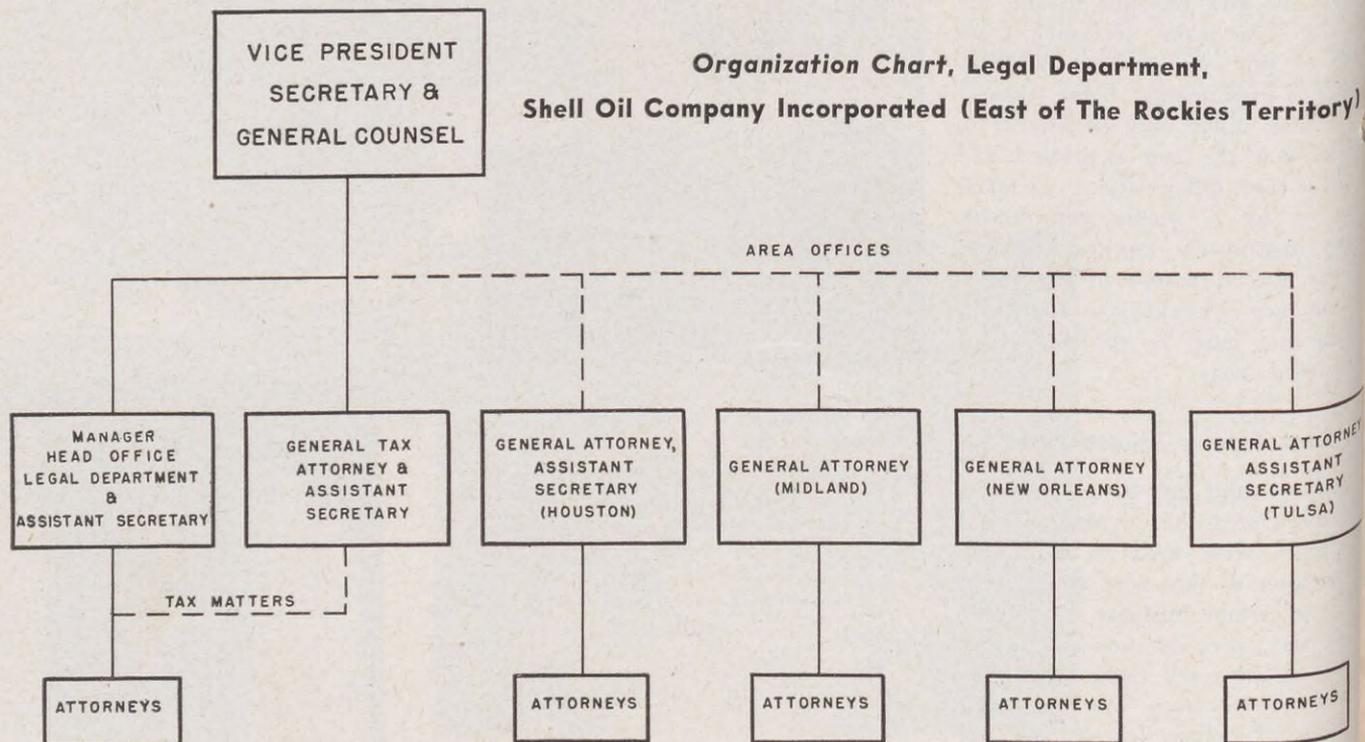
In the personnel field legal problems arise every day. An employee dies; his widow or children wish to obtain his Provident Fund as quickly

as possible in order to meet doctor bills and funeral expenses. To whom can the money be legally paid? And who is entitled to his group life insurance and the salary owing at the time of his death? The pension plan, simple though it is in structure, presents frequent questions involving legal interpretations; and in connection with the Wage and Hour Law we have a vast assortment of problems. It is to these and hundreds of other problems arising in the daily activities of every unit in our organization that the Legal Departments must address themselves.

Each Shell Oil Company Legal Department also acts as advisor for affiliated companies. The Head Office Legal Department is frequently consulted by Shell Union; both the Head Office and Houston attorneys handle work for Shell Chemical Company, and the Houston, Midland, and Tulsa Legal Departments all do work for Shell Pipe Line Corporation.

In the handling of every lawsuit, contract or legal problem, the lawyer must, to a limited extent, become a specialist on the problem at hand, whether it involves geology

**Organization Chart, Legal Department,  
Shell Oil Company Incorporated (East of The Rockies Territory)**



production methods, accounting, marketing practices or any of the many other phases of Shell's varied activities. Only then can his legal knowledge be applied in such a way as to achieve that result which is for Shell's best interests.

### Legal Organization

In the East-of-Rockies Territory we have five separate Legal Departments. The Head Office Legal Department is in New York. The other four function as separate departments in the Exploration and Production Area Offices in Houston, Midland, New Orleans and Tulsa. In addition, we have in New York a General Tax Attorney who counsels with management, with the members of the individual Legal Departments and with affiliated companies on tax matters and supervises litigation in that field.

The Area Legal Departments have responsibility for all the legal problems arising in the operations of their respective areas. In addition, the Houston Legal Department also serves the Vice President, Exploration and Production, and his regional staff. The Head Office Legal Department is responsible for the legal problems of all departments except those in the Exploration and Production offices. The Vice President and General Counsel has administrative responsibility for the work of the Head Office Legal Department and of the General Tax Attorney, and a functional coordinating relationship to the other Legal Departments, consulting with them on matters of major importance.

In charge of each of the Legal Departments is a Manager who also has the title of General Attorney. Each Manager has administrative supervision over the personnel in his department and is responsible for the work of his department from the standpoint of its legal adequacy and its conformity with Company policy. This involves both the assignment of work among the individual attorneys in the department and consultations with them on mat-



Court appearances by trial attorneys involve considerable preparatory work.

ters they are handling. He is also available for discussions with other departments and with management on problems of law.

### Outside Counsel

Leaving our own Legal Departments for a moment, the question is sometimes asked: Why, with our own attorneys, is it ever necessary to consult outside counsel? There are three general reasons: First, our attorneys cannot be specialists in every field, and therefore, for particular matters of an unusual type such as handling a valuation matter before the Interstate Commerce Commission, we wish to secure the assistance of a specialist. Secondly, our attorneys cannot effectively act as trial counsel in thirty-seven different states with their varying laws and procedures. Consequently, it is the practice to employ local attorneys to handle the actual courtroom work in areas other than those in which one of our Legal Departments is located. The third reason for employing outside counsel is the necessity for examining titles to properties in the different states. Here again it is

necessary that an attorney be employed who is trained in the laws of the particular jurisdiction. Because the territory which they cover is geographically more limited than that of the Head Office Legal Department, the Area Legal Departments have less occasion to consult outside counsel than does the Head Office Legal Department. The use of outside firms is, however, relatively small in comparison with the large amount of law work which is handled by our own staff.

The objectives of the Legal Department are to give competent and expeditious service and to reduce to a minimum the number of times the Company is involved in legal complications. The extent to which the latter objective can be attained depends very largely on the operating personnel of the Company, since obviously the attorneys can advise only on problems which come to their attention. The extent therefore to which all employees are alert to recognize legal problems and to bring them to the attention of the attorneys determines in part the effectiveness of our Legal Department.

# 'ROUND THE REFINERIES, AREAS, AND DIVISIONS



Recent Shell Service Birthday parties in the Atlanta Marketing Division took place at Jacksonville, Florida (above), Atlanta, Georgia (left), and New Orleans, Louisiana, (below).

Division Manager Selwyn Eddy and Operations Manager Mark Hannon of the New York Marketing Division watch Mayor William Hussey officiate in ground breaking ceremonies for a new Shell bulk depot at Mount Vernon, New York. The new depot is part of a \$1,000,000 Shell construction program in the Mount Vernon area.





# SERVICE BIRTHDAYS



## 30 Years



W. N. LeSUEUR  
Shell Pipe Line Corp.  
Mid-Continent Area

## TWENTY-FIVE YEARS



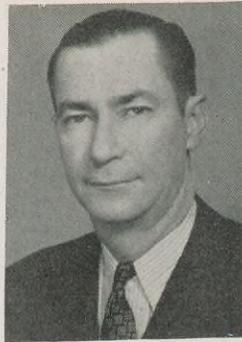
H. E. BAKER  
Shell Pipe Line Corp.  
Mid-Continent Area



G. BYERS  
Regional Staff (Houston)  
Personnel & Ind. Rel.



C. C. COMBS  
Shell Union Oil Corp.  
General Administration



E. E. DAVIS  
Regional Staff (Houston)  
Production



M. R. DONOVAN  
Cleveland Division  
Treasury



H. A. ENGELMAN  
Wood River Refinery  
Lube Extraction



T. W. EYSENBACH  
Cleveland Division  
Administrative



L. P. FAUCHEUX  
Norco Refinery  
Topping



D. E. FERGUSON  
Cleveland Division  
Marketing Service



C. FRY  
Cleveland Division  
Operations



H. J. FRYE  
Wood River Refinery  
Utilities



G. F. HOF  
Wood River Refinery  
Technological



C. E. JOHNSTON  
Tulsa Area  
Production



J. G. JONES  
Wood River Refinery  
Engineering Field



R. P. McMANUS  
Wood River Refinery  
Engineering Field



E. M. MEEHAN  
Wood River Refinery  
Engineering Office



L. M. MILLER  
Cleveland Division  
Treasury



E. R. MOREY  
Shell Pipe Line Corp.  
Mid-Continent Area



W. E. RATTERREE  
Tulsa Area  
Production



F. L. WELDON  
Tulsa Area  
Production

T W E N T Y   Y E A R S



E. D. BELLMYER  
Tulsa Area  
Gas-Gasoline



W. J. BETTES  
Atlanta Division  
Marketing Service



R. O. DAVIS  
Wood River Refinery  
Engineering Field



J. B. DAWSON  
Shell Pipe Line Corp.  
Bayou System



J. W. ELLEDGE  
Wood River Refinery  
Engineering Field



E. B. FONTENOT, JR.  
Houston Area  
Exploration



T. M. FRAZIER  
Shell Pipe Line Corp.  
Mid-Continent Area



H. H. HAISLEY  
Indianapolis Division  
Operations



EDWIN HAYDEL  
Norco Refinery  
Engineering



ERNEST HAYDEL  
Norco Refinery  
Automotive



O. L. HEMMICK  
Products Pipe Line  
DeWitt, Ill.



A. C. F. HULTGREN  
Head Office  
Transportation & Supply

T W E N T Y   Y E A R S



C. J. KELLER  
Chicago Division  
Marketing Service



J. W. KENNEDY  
Shell Pipe Line Corp.  
West Texas Area



H. V. KIRBY  
Wood River Refinery  
Treating—Light Oil



C. P. LONG  
Wood River Refinery  
Lube C. & S.



W. H. LUMAN  
Wood River Refinery  
Engineering Field



W. E. MATHEWS  
Houston Refinery  
Engineering Field



J. M. McDONALD  
Wood River Refinery  
Engineering Field



R. REYNOLDS  
Wood River Refinery  
Lube C. & S.



J. F. MEYERS  
Wood River Refinery  
Engineering Field



C. E. MITCHELL  
Shell Pipe Line Corp.  
Mid-Continent Area



E. C. MITCHELL  
Shell Pipe Line Corp.  
Mid-Continent Area



L. H. MONCRIEF  
Midland Area  
Land



J. A. MOORE  
Shell Pipe Line Corp.  
Mid-Continent Area



R. N. MYERS  
New Orleans Area  
Production



J. H. OLIVE  
Wood River Refinery  
Cracking



W. G. OTT  
Wood River Refinery  
Engineering Field



J. R. PILKINGTON  
Tulsa Area  
Production



E. J. RAY  
Wood River Refinery  
Treating—Heavy Oil



V. H. RECKER  
Wood River Refinery  
Gas



O. RHODES  
Wood River Refinery  
Cracking



G. E. SCHUENEMEYER  
Shell Pipe Line Corp.  
Mid-Continent Area



E. A. SLATER  
Wood River Refinery  
Engineering Field



J. C. SORENSEN  
Houston Refinery  
Engineering Field



I. L. SPAULDING  
Wood River Refinery  
Automotive

**TWENTY YEARS—Continued**



G. STRISKO Head Office Transportation & Supplies  
 R. O. UDDMAN Chicago Division Operations  
 E. M. VATER Products Pipe Line East Chicago, Ind.  
 H. T. VIETOR Minneapolis Division Real Estate  
 E. E. WALKER Cleveland Division Sales  
 C. Q. WILLIAMSON Houston Area Production  
 O. L. WYNN Shell Pipe Line Corp. West Texas Area

**Products Pipe Line**

15 Years

F. Worker.....East Chicago, Ind.

10 Years

R. W. Matsler.....Greenville, Ill.

**Shell Chemical Corporation**

10 Years

J. Hudig.....Houston

**Shell Pipe Line Corporation**

15 Years

E. G. Cruts.....Mid-Continent Area  
 M. E. Dean.....Texas-Gulf Area  
 C. C. Kaegi.....Mid-Continent Area  
 L. L. Taylor.....Texas-Gulf Area

10 Years

T. H. Price.....West Texas Area

**Houston Refinery**

15 Years

E. G. Samarripa.....Engineering

10 Years

G. W. Amonett.....Engineering Field  
 W. T. McBride.....Control Laboratory  
 C. A. Vetter.....Automotive

**Norco Refinery**

15 Years

E. P. Babin.....Main Office—Cost  
 J. M. Behre.....Engineering

U. J. Brignac.....Gas  
 J. L. Delaune.....Cracking  
 T. O. Hendry.....Gas  
 E. A. Laiche.....Gas  
 A. J. Lambert.....Cracking  
 T. A. Rivault.....Laboratory  
 J. L. Robichaux.....Gas

**Wood River Refinery**

15 Years

L. J. Bracken.....Engineering Field

10 Years

S. Aldredge.....Engineering Field  
 D. T. Maguire.....Cracking  
 A. F. McCarthy.....Engineering Field  
 J. P. Wilkinson.....Topping

**Exploration and Production  
 Departments**

**Regional Office**

15 Years

O. C. Morrow.....Gas-Gasoline

10 Years

J. H. Sembower.....Personnel & Ind. Rel.  
 May Stuart.....Exploration

**Houston Area**

15 Years

Mildred Smith.....Treasury

10 Years

C. A. Brooks.....Production  
 L. E. Lacy.....Production

**New Orleans Area**

15 Years

R. J. Becnel.....Production  
 H. E. Harber.....Personnel & Indus. Rel.  
 R. L. Huffman.....Personnel & Indus. Rel.  
 H. F. Jones.....Treasury  
 G. J. LeBlanc.....Production  
 J. C. Schwartz.....Law

10 Years

R. W. Delong.....Production  
 G. Stewart, Jr.....Production

**Tulsa Area**

15 Years

W. I. Bostwick.....Production  
 G. W. Cunningham.....Legal  
 L. Hopkins.....Production  
 F. E. Riddle.....Production

10 Years

S. B. Greeson.....Production  
 I. L. Shoffner.....Production

**Marketing Divisions**

15 Years

P. F. Causey.....Baltimore, Md.  
 F. F. Foulk.....Cleveland, Operat.  
 H. M. Wray.....New York, Md.  
 H. W. DeMott.....St. Louis, Operat.

10 Years

W. D. Bailey.....Albany, Md.  
 M. V. Whitaker.....Albany, Md.  
 H. C. Haynes.....Boston, Md.  
 D. G. Osborne.....Boston, Operat.  
 W. L. Baughman.....Cleveland, Operat.  
 W. H. Johnson.....Cleveland, Md.  
 A. T. McGill.....New York, Md.

# matters of *Fact*



Fortunately very few employees become totally and permanently disabled on — or off — the job, but it does happen.

Pension Plan changes effective December 31, 1947 reduce the Accredited Service requirement for a Disability Pension from 20 to 15 years.

The amount of a Disability Pension is 25% of the employee's Average Final Compensation less applicable deductions.

FULL DETAILS ON DISABILITY PENSION CAN BE FOUND ON PAGE 20 OF



"PROGRAM FOR SECURITY"

## How to tell a Fortune-teller's Fortune



• First, let her tell *you* about that dark, mysterious Stranger and the changes that may come into your life.

Then you tell *her* about the Future that is here *today*. Tell her about traveling nearly as fast as sound (jet propulsion), a new anesthetic (Cyclopropane), chemicals that may double the world's food supply (insecticides and fertilizers), or countless other advancements made possible by Petroleum and its by-products.

You won't be guessing. These things exist, because in the Petroleum Indus-

try more than 34,000 individual firms . . . 1,250,000 Americans . . . are constantly on the aggressive trying to outdo their competitors in every way.

**Understand rivalry and you understand America.** Competition in petroleum production, refining, research, marketing transportation and retailing means better products, better living for everyone — including Fortune-tellers.

Yes, progress is in the cards. Petroleum is progressive.

**THERE'S A PLUS FOR YOU IN PETROLEUM'S PROGRESS**