

SHELL NEWS



MARCH • 1944

-matters of *Fact*



To make easier the transition from civilian to military life, and to permit families of service men to remain in as comfortable circumstances as possible...as of January 1st, 1944, SHELL has paid, under the Military Leave Plan,

\$4,176,510⁰⁰

Shell Men and Women

5950

in the Armed Forces



SHELL NEWS

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

March • 1944

Vol. 12 • No. 3

This Issue

Our color cover shows one of Shell's expert Victory Gardeners, A. P. Ruether, Manager of the Crude Oil Department, at Head Office. (Photo by Syd Smith.) On page 7 you will find the first of the 1944 Victory Garden articles . . . and news of a new Victory Garden-photographic contest.

Synthetic Rubber is in the news frequently. Among the many questions which the article beginning on page 2 attempts to answer are: Why is a synthetic needed? What does the petroleum industry contribute to synthetic rubber? Are synthetics successful? and, What is butadiene?

On page 10 the story of the Lubricants Department tells the tale of how many new and interesting products that department is contributing to military and civilian life.

Shell's Military Camp Show is entertaining Army and Navy men and women in camps and hospitals. For a backstage glimpse turn to page 14. . . . The organization chart of the Shell Pipe Line Corporation is shown on pages 16-17. . . . The hub of Shell's communication activities is the St. Louis Telephone and Telegraph office . . . for a quick look at this particularly busy spot, turn to page 18.

A salute to our neighbors in California starts on page 21. New Army-Navy "E" flags proudly wave over the Martinez Refinery, and the plants of Shell Chemical Division at Dominguez and Martinez, in California.

Our regular monthly features are in their places . . . People in the News, 24; Home Front, 25; After Hours, 26-27; With the Colors, 28-29; and Service Birthdays, 30, 31, 32.

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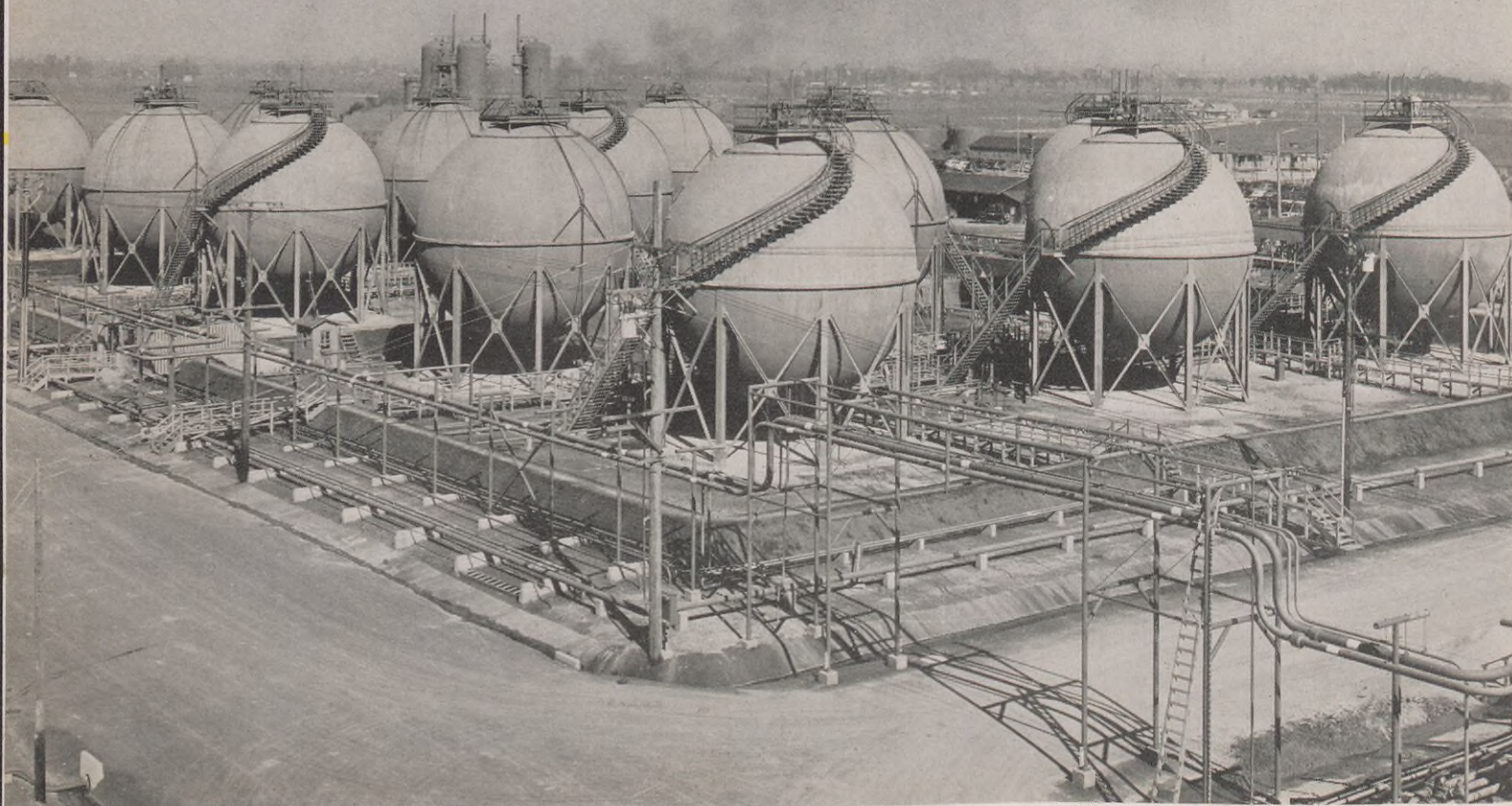
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Storage tanks for butadiene at Shell's new plant at Torrance, California.

THE STORY OF SYNTHETIC RUBBER

by Alan Miles

EVERY schoolboy knows that in 1492, on his first trip across the Atlantic, Christopher Columbus discovered America. Few persons are aware that on his second trip he made a discovery which ranks almost in importance with the one which gained him undying fame. Arriving at Santo Domingo, he saw natives playing with a black, heavy ball made of vegetable gum. He and his crew were astounded when the ball actually bounced. Columbus was impressed enough to take some of the gum to his native Spain where it was the object of great curiosity, but of little scientific study.

Centuries after, Joseph Priestly, an English preacher, found that this substance would rub out pencil marks.

He then gave it the name "rubber" by which we now know this vegetable gum. Twenty years later, Charles MacIntosh, a Scotsman, made his name a household word by spreading dissolved rubber over fabrics and fashioning rain-coats from the resulting material.

But the mackintoshes grew sticky in warm weather, stiff in cold weather. Inventors tried unsuccessfully to improve the processing of rubber. In 1893 Charles Goodyear, while experimenting, accidentally dropped a piece of rubber mixed with sulphur on the stove of his kitchen. The combination of heat and sulphur transformed the rubber into a more usable product. Goodyear gave the process the name vulcanization, after Vulcan, Roman god of fire.

Rubber comes from a milky substance, latex, which is found in many trees and plants. When the tree is tapped the latex flows from between the bark and body of the tree. Treatment with minerals and chemicals causes the rubber to coagulate and separate from the latex. Chief sources of rubber are Malaya, the Netherlands Indies, and Ceylon; other, less important, regions are India, Burma, and Brazil.

Since early in the 19th century scientists have made attempts to find a synthetic. Generally the demand for one developed when the price of rubber rose; consequently with each falling market the demand would ordinarily drop. In 1826, Michael Faraday, great English scientist, discovered that natural rubber was composed in the ratio of five atoms of carbon to eight atoms of hydrogen. Thus it is a hydrocarbon, as are gasoline, kerosene, lubricating and fuel oils.

In 1860, Grenville Williams, another Englishman, broke down natural rubber by heat, and derived from it a liquid (with the same ratio of carbon to hydrogen reported by Faraday) . . . isoprene, raw material for rubber. Twenty years later, G. Bouchardet, a Frenchman, while experimenting with isoprene, obtained a substance which had elasticity and some of rubber's other properties.

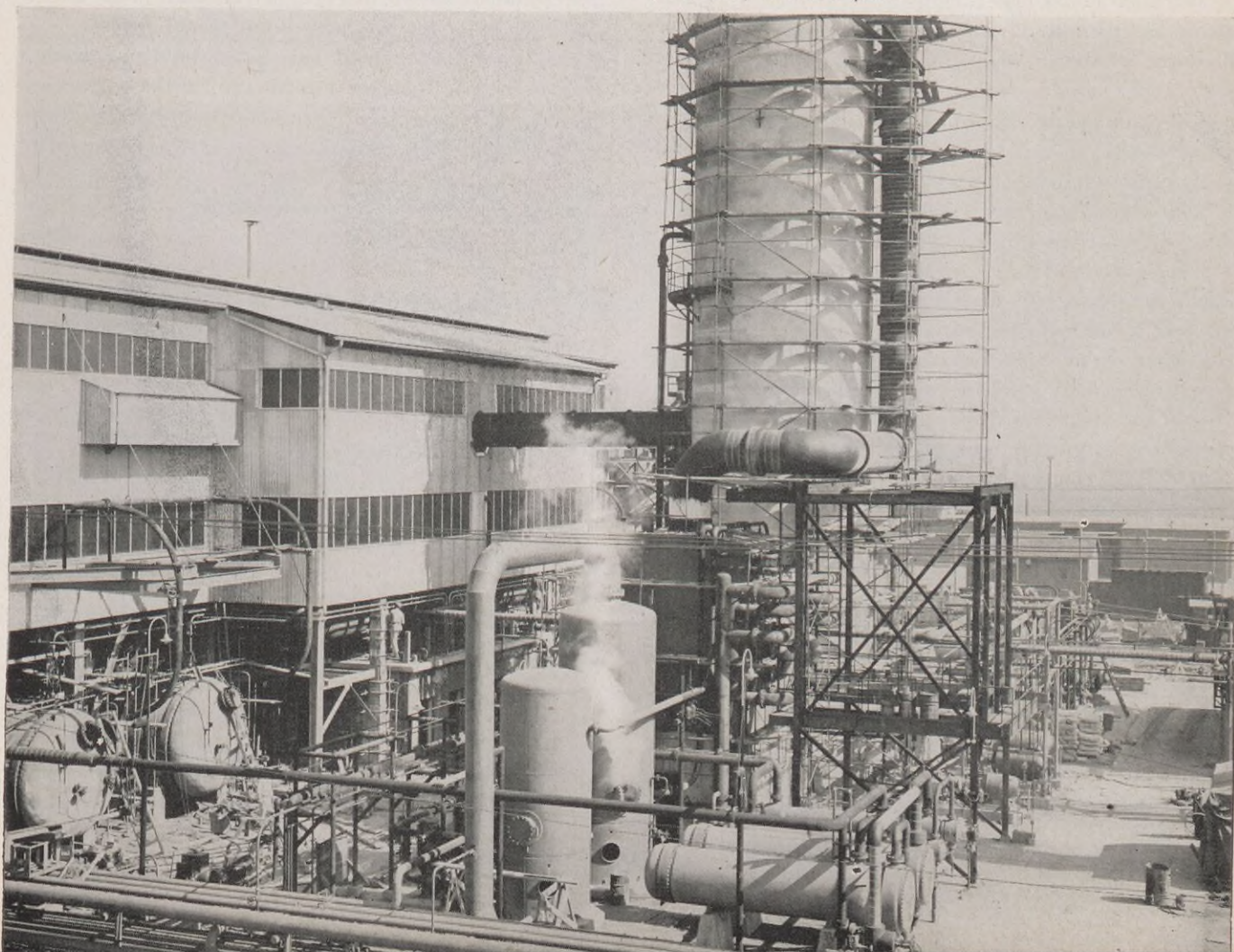
Bouchardet was the first to suggest that rubber was a polymer (a substance in which the original molecules have linked together to form giant molecules).

The next forward step in the search for a synthetic rubber was in 1892 when Sir William Tilden made isoprene from turpentine. He let it stand in a bottle . . . large yellow pieces resembling rubber formed, but were useless because he was unable to vulcanize the rubber.

In 1916 the Germans built and operated a synthetic rubber plant. But the process was long and expensive, the quality inferior. In 1921 the U. S. Rubber Company's Dr. I. Ostromislensky, a prominent Russian chemist, started his experiments which succeeded in making butadiene from ethyl alcohol. The following year that company produced a successful synthetic by polymerization (putting together little molecules to make big ones) of emulsified butadiene, producing a synthetic rubber latex.

In the late twenties the price of rubber started to fall because of the tremendous overproduction in the Malay states and the Netherlands East Indies. By 1933 rubber had dropped from a high of \$3.00 a pound (1910) and an average of \$1.30 a pound, to a mere three cents. Most research stopped . . . with rubber cheap, and in seemingly unending quantities there appeared to be little sense

Another view of the Torrance (California) butadiene plant.





Work on the Houston Refinery plant was rushed to completion . . . to get more butadiene for synthetic rubber.

in spending money and valuable time in further experiments. But there were some firms which continued. They produced synthetics which for many purposes were superior to the natural product. Natural rubber is not always best in many operations; for instance, a synthetic rubber gasoline hose is considerably more satisfactory because of its greater resistance to oil.

Shell was among those continuing the efforts to produce raw materials which would, in turn, be the base for a superior synthetic for special purposes. Scientists at Shell Development's Emeryville Laboratories had developed a method for manufacturing butadiene from petroleum. From 1939 through 1941 their pilot plant at Emeryville made available tons of butadiene to various rubber companies. Today, Shell research continues on methods of improving production, recovery, and purification of butadiene. The latter (purification) is particularly important, for the nearer to 100% pure the butadiene, the better the overall quality rubber obtained. Shell has just recently developed a process for quantity production of methylpentadiene from propylene, a compound still available in large quantities. It is expected that this will be another advance in the development of better bases for synthetic rubber.

At Shell's Houston Refinery, a plant was constructed (based on Emeryville's research work) which went into operation before Pearl Harbor, and consequently long before the Japanese seized most of the world's great rub-

ber centers. It was the first commercial plant in the United States built for the sole purpose of manufacturing butadiene. In 1942 it produced more butadiene than any other single source in America, regardless of methods of manufacture. Now, as part of the enormous rubber program of the nation, Shell is putting into operation a new plant at Torrance, California. Part of it is already working, the rest will be actively operating in the very near future. This plant, alone, will make available enough butadiene to manufacture well over 50 to 60,000 tons of rubber a year.

Butadiene is the base of two of the most widely used synthetics, Buna S, and Buna N. The former was chosen for the major part of the American synthetic rubber program because it is most similar to natural rubber in processing and in performance characteristics. It is more commonly referred to as GRS (Government Rubber "S"). Incidentally, Buna is a coined word which is a combination of Bu, first syllable of butadiene, and Na from natrium, scientific name for sodium, which is used as a catalyst in the rubber-forming polymerization process. The letter "S" stands for styrene, a laboratory curiosity for many years. Only after a means of producing it synthetically were developed could styrene be made available in such quantities as are required for the synthetic rubber program.

Buna N (GRN) is produced by polymerization of approximately three parts of butadiene with one part of acrylonitrile. GRN is difficult to handle in some opera-

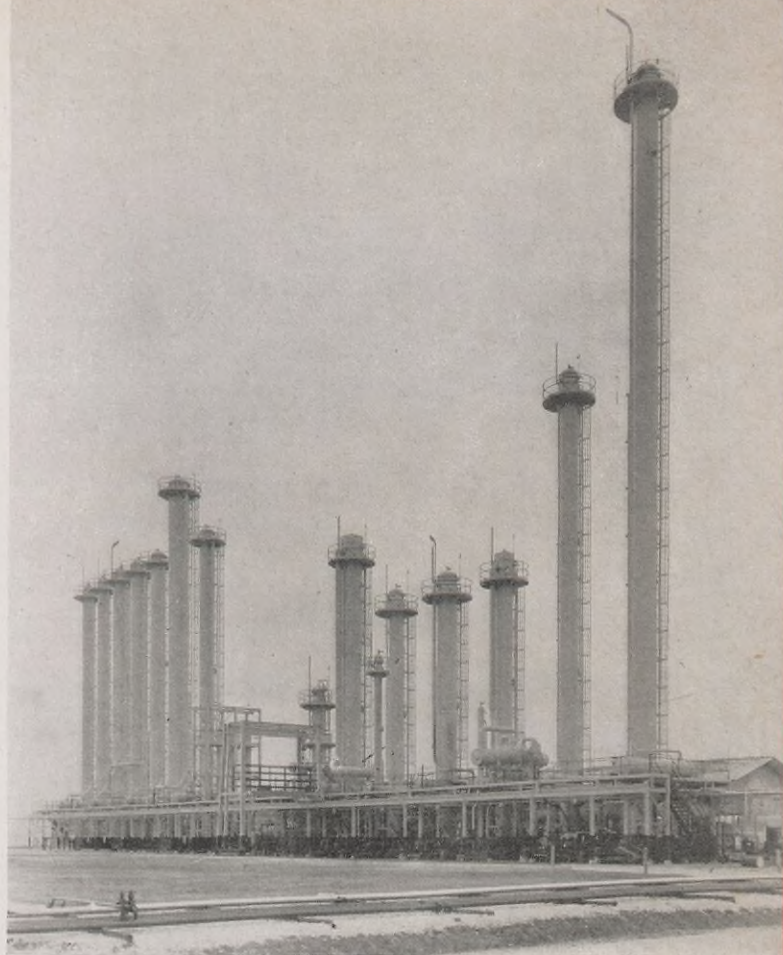
tions, and its resistance to light is poor; however, oil resistance is good and it is used extensively in tank linings and gasoline hoses.

At this point it would be quite logical to ask what, if any, are the major differences between a widely used synthetic such as GRS, and natural rubber? The chief differences are: the processing characteristics, (in most cases synthetics are more difficult to process); natural is superior in several performance characteristics; synthetics are superior in resistance to most influences causing deterioration.

Synthetic tires for automobiles have been particularly successful. This success has been accomplished in the short time of only a few years, while it has taken forty years, at least, to bring the natural rubber tires to their pre-war state of perfection. Today the Army uses synthetic tires on over 50% of its machines with the exception of heavy trucks. A Chicago newspaper made a survey, recently, of synthetic tires and discovered that the indicated life expectancy for passenger automobile tires, driving at 45 miles per hour, with reasonable care, would be over 32,000 miles . . . a highly commendable showing. For heavier duty, tires are composed of both natural and synthetic rubbers, and have been quite successful.

Since synthetic rubber, its faults notwithstanding, must supply not only the needs of essential domestic trans-

One advantage of buna S synthetic rubber is that it is handled like natural rubber and processed on standard equipment. Here it is being milled to proper plasticity and uniformity before being baled for shipment.



Towers of Butadiene Plant "B" at Houston Refinery.



portation, but the increasing needs of war transportation, the petroleum industry has received a challenge to its resourcefulness and ingenuity. There has been some criticism of the industry's contribution to the synthetic rubber program. The Baruch Committee, appointed by the President earlier in the war, had predicted that the majority of synthetic rubber produced during the war would come from petroleum base butadiene, rather than the alcohol base. However, figures show the opposite to be the case on production to date, but they also show the chief reasons why.

Alcohol plants received the highest priority ratings for materials for 96% of their plants under construction, while only 40% of the petroleum plants had that advantage. It is not surprising, then, that only 39% of the petroleum-type were completed, against 87% of those using alcohol.

Aside from the difficulty of obtaining construction material without high priorities, the industry was faced with a problem impossible of solution. Butylene is a fundamental raw material for both butadiene and high octane gasolines. Obviously it cannot be used for both processes at the same time. When the Baruch Committee made its recommendations they based their figures on the predicted needs for aviation gasoline by the armed forces. But the Army's aviation needs so greatly exceeded these predicted demands that manufacture of 100 octane gasoline had to be stepped up many times. Consequently, it was a question of which was more important . . . the answer was obvious.

We can live without tires and rubber goods, but planes cannot fly without gasoline. The petroleum industry put its great efforts toward turning out unprecedented amounts of aviation gasolines. At the same time some cracking plants are operating intensively to produce a certain amount of the required butadiene, but the major portion will have to be produced by the slower process of dehydrogenation, working with butanes and butylenes as raw materials. But once equipment is available there is little doubt that production of butadiene will increase immeasurably.

The December issue of the Industrial Bulletin of the Arthur D. Little Company of Cambridge, Massachusetts, stated, "The creation of a synthetic rubber industry within so short a period is surely one of the great achievements of the war. While the actual production of synthetics for the year 1943 was considerably less than hoped for, the major uncertainties have been resolved. The shortcomings are due to the delay in delivery of materials. Adjustments have had to be made with other war programs, notably the greater than anticipated demands for steel in naval construction, and for process equipment in high octane gasoline plants. The demand for aviation gasoline now greatly exceeds the figure upon which the Baruch Committee predicated certain statements."


But with all the difficulties facing the industry no attempt has been made to halt research. Instead it is continuing daily, every effort is being made to solve the unsolvable. And Shell, once again, is taking a leading role. Recently the Shell Chemical Division of Shell Union Oil

Corporation, and Shell Development Company were among the recipients of the 1943 award given by the Chemical and Metallurgical Engineering industry "in recognition of its meritorious contribution to the design, construction, and operation of the American Synthetic Rubber Industry. A great wartime miracle made possible through patriotic sharing of the creative knowledge, engineering experience and manufacturing facilities of the rubber, chemical, and petroleum industries."

Naturally this recognition was gratifying to all at Shell, but the important thing is to look to the future and forge ahead in war, and in the peace to follow.

Source material and illustration on page 5 from
U. S. Rubber Co.


A reward for efforts . . . in
this "great wartime miracle."



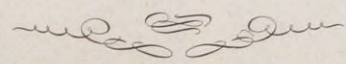
AN AWARD
for
Chemical Engineering Achievement
to
Shell Chemical Company

*In recognition of its meritorious contribution to the
design, construction and operation of the*
AMERICAN SYNTHETIC RUBBER INDUSTRY

*A great wartime miracle made possible through
patriotic sharing of the creative knowledge, engineering
experience and manufacturing facilities of the rubber,
chemical and petroleum industries*



PRESENTED BY
CHEMICAL & METALLURGICAL ENGINEERING
DECEMBER 8, 1943





The Grubber Fair of the Detroit Marketing Division was one of the most successful of last year's "country fairs."

GARDENING . . . for fun, food and victory

by Robert Forrester

THERE'S a Victory Garden gleam in the eyes of many a Shell employee these March days. Seed catalogs with their tantalizing color pages have arrived long since, evenings have been spent in debating the relative merits of pole beans vs. bush beans or head lettuce vs. leaf lettuce. Garden plans are being made, and seeds ordered. In Southern areas seeds have been planted and have already sprouted.

In 1943 more than 6,000 Shell employees joined the army of American Victory Gardeners who dug and planted, cultivated and harvested over 20,000,000 individual gardens and who produced 8,000,000 tons of vegetables—nearly half the total produced in the entire coun-

try. This year the goal has been raised to 22,000,000 gardens.

The need for food will be greater than ever. We must feed our fighting men at home and abroad, and feed them well. Many of our allies are unable to raise their own food—we must aid them. Our farms are short of help and equipment. Every Victory Gardener who rolled up his or her sleeves and pitched in last year must do even more this season. For the veterans who successfully campaigned against bugs and beetles, weeds and weather, this is a challenge that they will accept with a determined grin. They are sure that they can do better this year!

The beginners, new at the game of home gardening,

will soon find it a fascinating battle . . . one that will repay them in better health, better eating, and in actual cash savings, besides helping Uncle Sam solve a truly important problem.

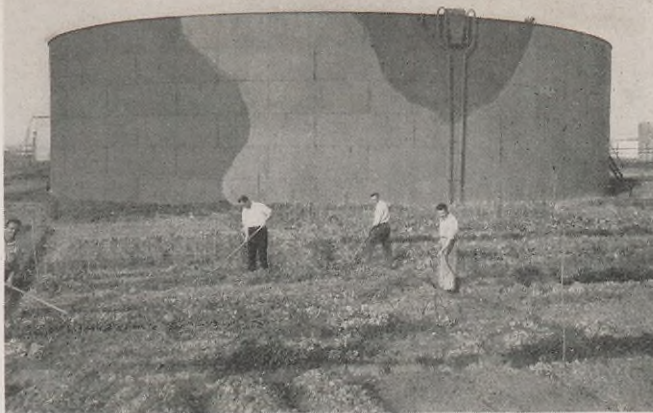
PLAN YOUR GARDENS

If your last year's plot was small, perhaps its size can be increased a few feet in each direction this year. Root crops will fit along flower borders. Tall or viny type vegetables such as pole beans, tomatoes, and cucumbers may be planted along fences or outside the garden. Remember to plan your rows so they will get the maximum of sunlight, so taller plants will not shade lower ones. Planning your garden to scale on paper is a good practice and a time-saver as well. You will know what vegetables you want to plant, how many feet or rows of each, how many packets of seeds you will need. Almost every seed catalog contains information about the number of seeds needed per row, and you can adapt these figures to your own particular needs.

It is best to plant standard varieties of vegetables. There's no use lavishing hard work and care on trying to raise types that prove to be "sissies" when weather conditions become a bit unusual or when blights or insects strike. And, by the way, don't try to raise every vegetable shown in the seed catalogs.

Start your 1944 planting early. Some vegetable seeds such as peas, beets, carrots, turnips, lettuce, onions,

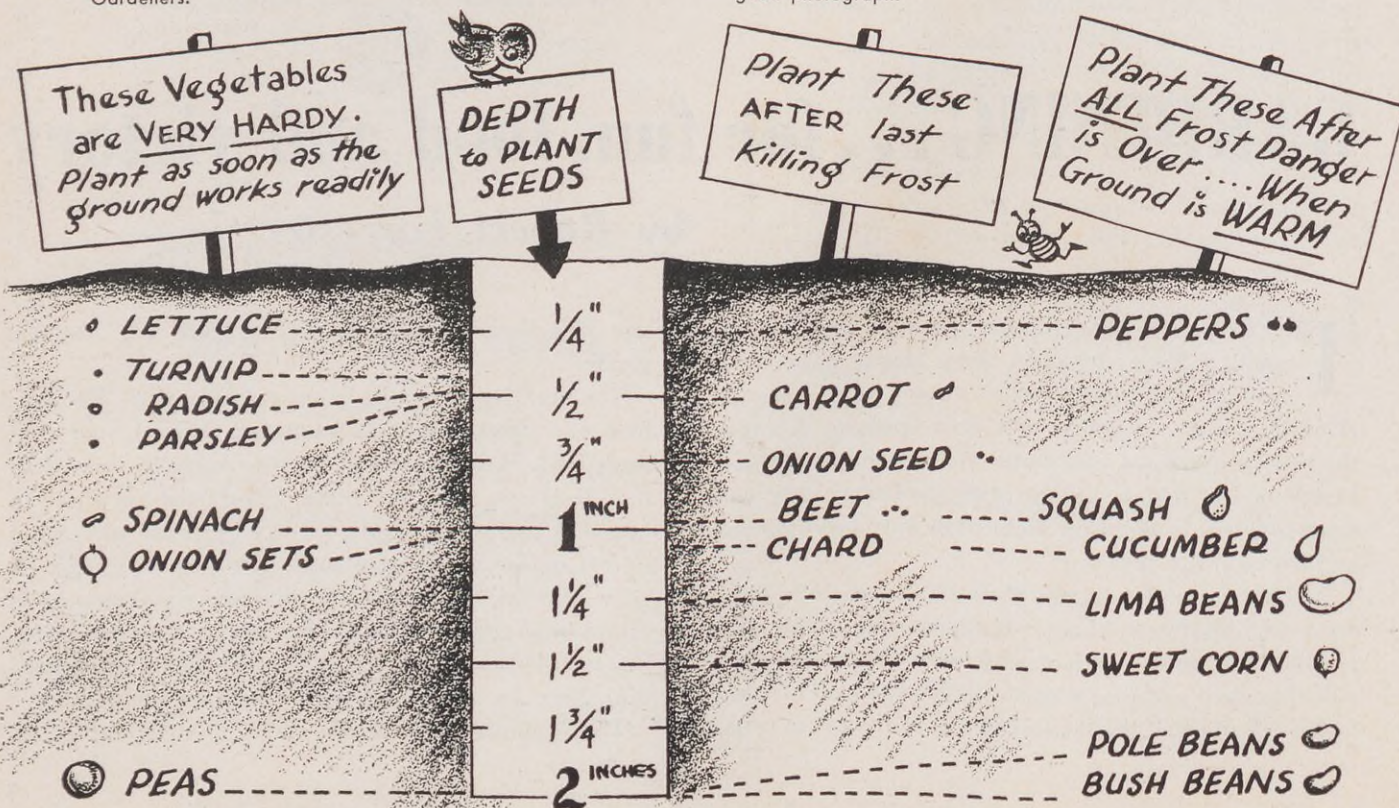
The first of charts which will appear from time to time, and, we hope, be of some help to all Victory Gardeners.



A picture of the type which may win an award in the Shell News Victory Garden Photographic contest. The Norco Refinery employee, who took this picture last Spring, will receive a check shortly.



Norco has a head start. Their Mid-Winter Fair was held in late January. (l. to r.) Messrs. Ector, Babin, La. State Univ., and Simmons, Parish Agent are judging some of the entries . . . and another award to a Shell Victory Gardener for a good photograph.



and spinach can be planted as soon as the soil can be worked. Late frosts won't hurt them, as they like cool weather for germinating and growing. But other crops including corn, beans, tomatoes, peppers, pumpkins, and squash need warm weather before they can be safely planted. When the plants are still small, remember that thinning is important—plants need room in which to grow and mature.

SAVE TIME AND MONEY

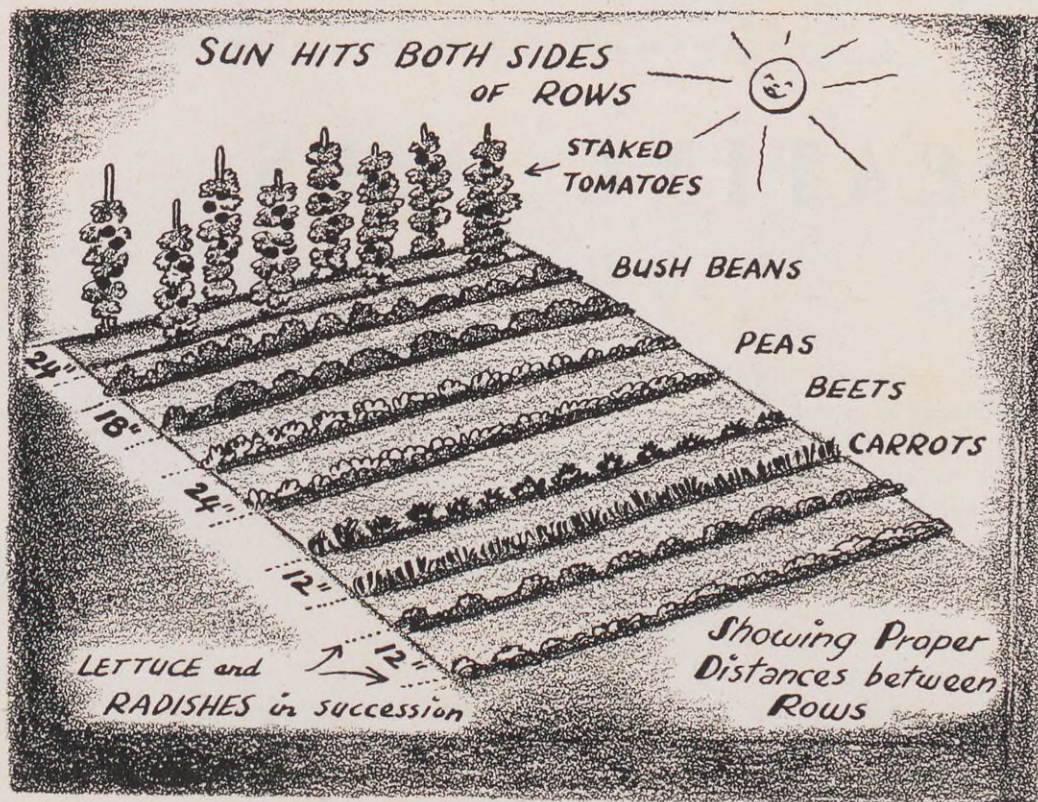
You can save money and gain several weeks of valuable Spring growth by raising your own seedlings. Use shallow boxes or trays in a sunny exposure in a room, cellar, garage or cold frame for planting seeds and you will have a head start on the season, and can transplant the seedlings into your garden when the danger of late frost is gone.

Last year over 3,000,000 square feet of Shell property was loaned by the company to Shell Victory Gardeners through local Shell Victory Garden clubs. Some outsiders were given permission to use company property, too. All who participated in the local "country fairs" remember the keen rivalry and intense interest created by these affairs. This year the rivalry will be stronger than ever, with "veterans" competing against each other as well as against undaunted newcomers in the Victory Garden program.

PHOTOGRAPHIC CONTEST

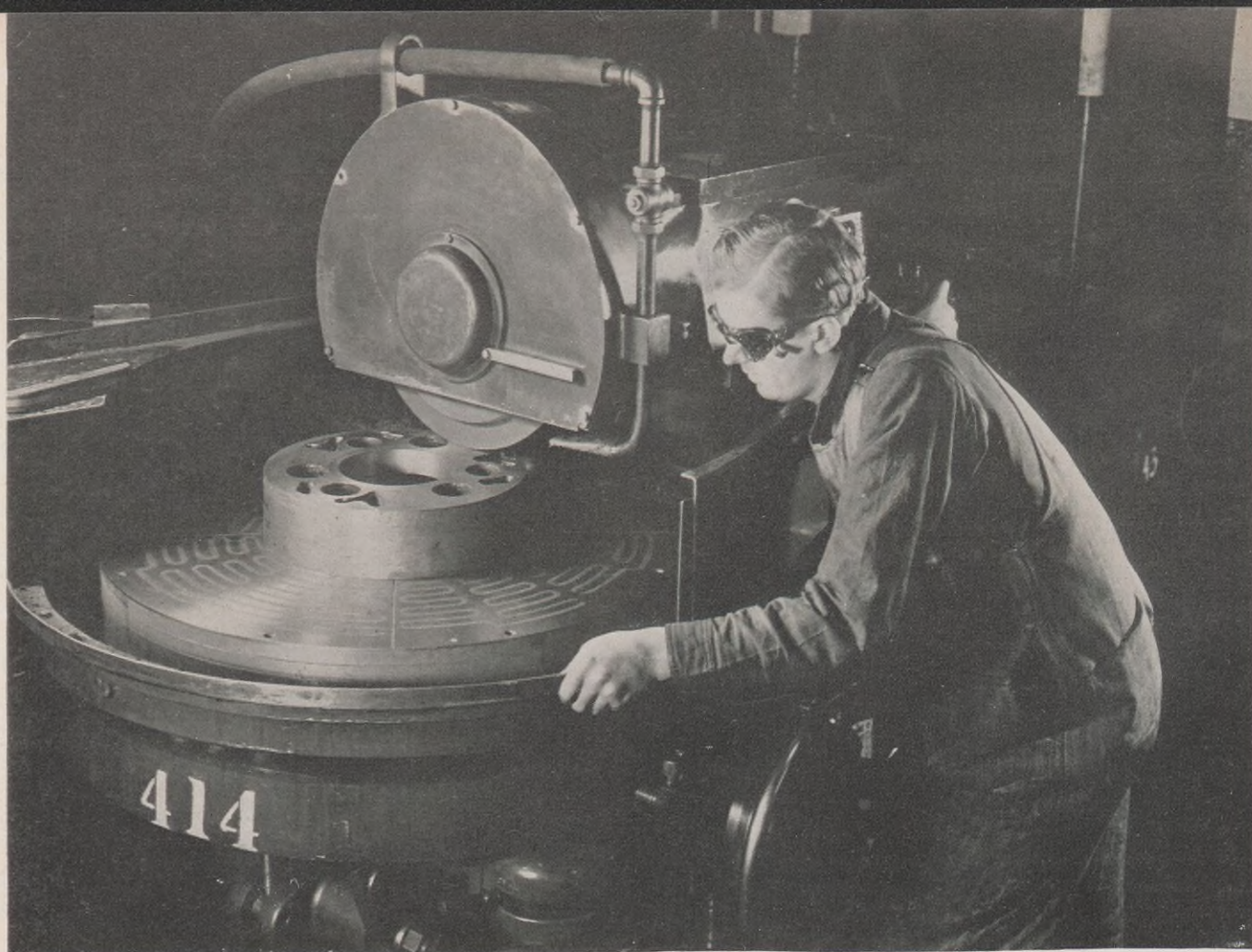
Along with the possibilities of garden-fresh vegetables for your table, or for preserving, and the pride of accomplishment you will feel when harvest time comes, SHELL NEWS is adding another incentive. Five dollars will be paid to every Shell Victory Gardener who submits a photograph that is used in SHELL NEWS. Photographs should be taken by Shell employees of their own work or that of their families or other Shell employees. Perhaps you have a good shot of Dad hoeing corn, or Mom picking beans, or the "small fry" pulling weeds. Or you may have an exceptional picture of one of the "country fairs," a display of preserves, or your own prize garden produce. Actual garden activity pictures are preferred, but they're all welcome. Make sure that you give your negatives, when possible, plus prints, to your Associate Editor of SHELL NEWS. All photos and negatives will be returned. Each photo printed in SHELL NEWS will win \$5.00 for its contributor. Photographs by professional photographers will not be considered. If any non-employees appear in any print, be sure to secure their permission to publish their pictures in the magazine.

This is your chance! Roll up your sleeves. Get into the swing with the other millions of Americans who are going to produce food for themselves and their families this summer. And remember to get out that camera—snap those pictures—and send them in now!



Experts recommend following these directions closely . . . see if you can't increase your produce this year.

Drawings on pages 8 and 9 have been adapted from two which have appeared in "The Lamp."



A typical operation in which cutting oils are used—a magnetic grinder smoothing a pinion cage to be used in the engines of a Navy Motor Torpedo boat.

LUBRICATING OILS

by Herbert Squires

WHEREVER metal parts rub against each other in the generation or transmission of power, lubricants are needed. The tiny cogs in your watch, as well as the colossal gears in a steel mill, must be lubricated to function properly. Mechanized warfare requires a large number of specialized lubricants for applications ranging from delicate aircraft precision instruments to heavy duty Diesels in rugged tanks rumbling over muddy battlefields. In addition, lubricants are used in numerous processes of fabrication where they perform manifold jobs of metal protection.

It is interesting to note the circumstances surrounding the development of some of Shell's hundreds of lubricating oils. For instance . . .

. . . piston rings are an important part of aircraft en-

gines. Frequently, from the time they are manufactured, to the final assembly of the planes, a month or more passes. In that time rust attacks many of the rings and renders them useless. The impression of a fingerprint may begin corrosion, destroying the fine tolerance necessary for perfect performance. One company found many of its rings rejected for that reason. Shell met the challenge, and developed a new product . . . Ensis Oil 107, which performs a miracle of protection.

Thousands of tons of machinery, engines, and mechanized weapons go to every war front daily. Much of this equipment is lashed to the decks of convoy vessels where it is exposed to the ravages of weather and salt water. Some supplies are floated ashore. Under these conditions a rust preventive must be wholly effective, since the toll

on metal surfaces is so great. Rigid Army and Navy specifications must be met . . . and Ensis Oils stand the test.

One Ensis Oil is dual-purpose . . . rust preventive and engine oil. When military cars, trucks, and tanks powered by Diesel or gasoline engines are awaiting shipment they frequently remain idle in outdoor storage depots. They must be protected from rust inside, as well as externally. Shell Ensis Oil 401 does this, as well as being a lubricant.

BOTTLENECK IMPEDES PRODUCTION

Late in 1942 production in a plane plant was surging ahead. But orders were to turn out planes even faster. One serious bottleneck was impeding production. This was an operation in which an aluminum sheet had to be coated with a lubricant prior to being drawn or shaped; it then had to be put through a special bath to remove the lubricant. This was expensive and time-consuming. A lubricant had to be found which would wash off with hot water.

Shell engineers working with plant engineers produced a lubricant that did the job . . . one that had the merits of a water-soluble oil, plus those of a heavy-duty cutting oil (one applied to the edge of metal-cutting tools to remove frictional heat). It was called Shell Virgo Oil 84R. In the metal working field it is particularly useful in cutting operations, combining excellent lubricating properties with high cooling efficiency. It is non-corrosive,

gives effective rust protection, and can be removed with hot water. Its high wetting characteristics make it economical to use.

WARTIME DEMANDS

Wartime demands resulted in the development of Shell-draw Compound 151. Before its introduction several separate drawing compounds were used in various stages of steel cartridge manufacture, with no conspicuous success. Now "151" handles the entire lubrication job. It has speeded up production by acting as a coolant, and a lubricant, and keeps die wear at a minimum. Since it was first used many millions of cartridges have been produced and received Grade A rating by the Army. Shell-draw compounds are attaining acceptance in many diversified drawing operations.

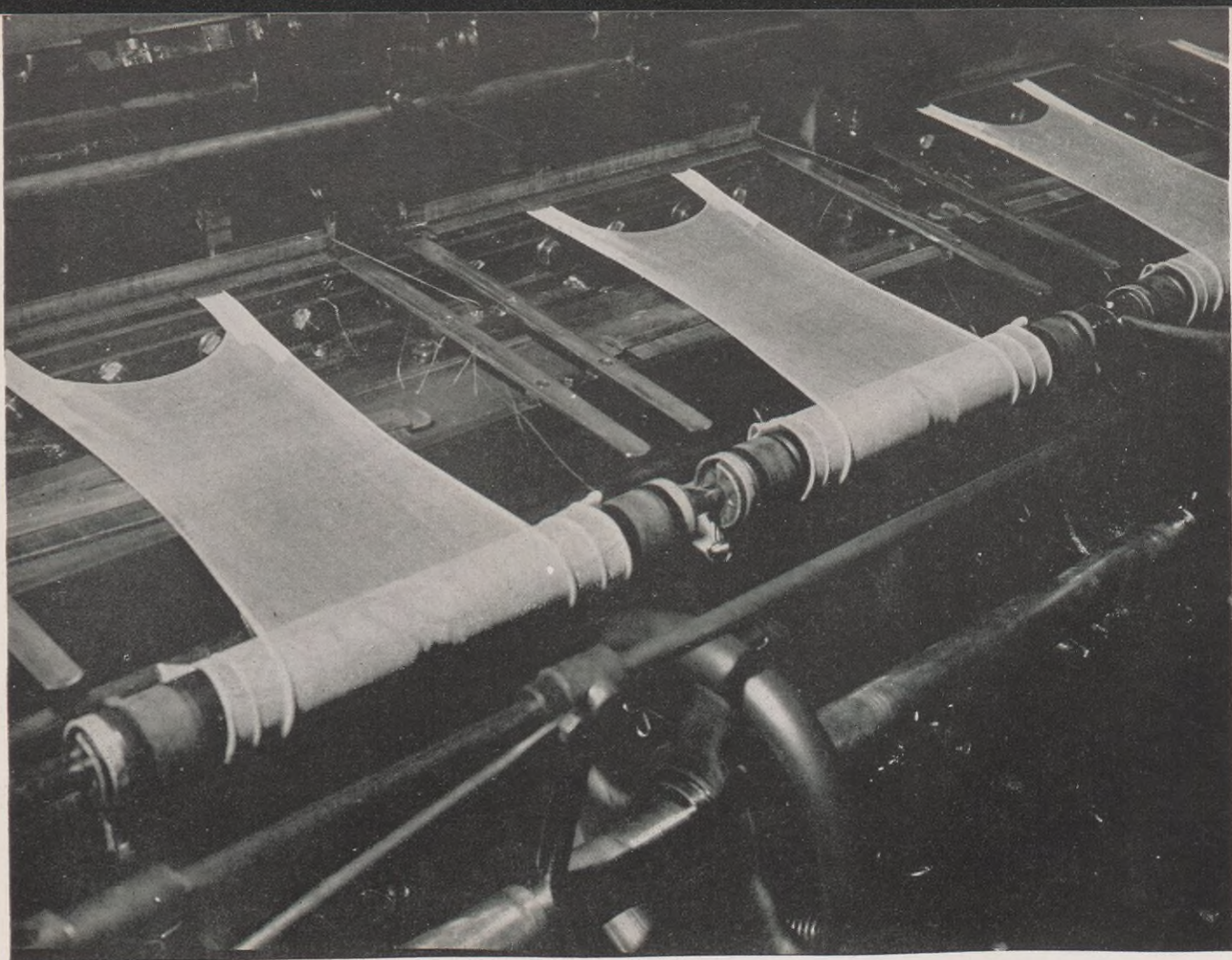
TURBINE OILS

"Turbine" comes from the Latin "turbo" . . . that which spins or whirls around. Naturally this whirling and spinning generates friction and heat . . . oil then steps into the picture with three important jobs to do: lubricate, serve as a coolant, and protect the turbine parts it contacts against rust. Sometimes there is a fourth job . . . as an hydraulic medium to move the governor mechanism (parts controlling or regulating the speed of engines).

When "ordinary" oils were used several things happened. Oxidation (the process in which oxygen unites with other substances) caused the formation of certain

Rust preventive lubricating oils help keep mighty Diesels humming.





A full-fashioned hosiery knitting machine in action—

acids soluble in oil. In addition certain oil-insoluble products formed. With progressing oxidation, sludge may develop in the lubricating system, collect in low points in the turbine, plug up oil feed lines and strainers, and reduce oil flow to the bearings. If oil oxidation products accumulate in the governor's pilot valve they may make this delicate mechanism stick, causing uneven speed in the turbine.

Another problem complicates the turbine's smooth running . . . rusting. Rust may contaminate the oil, cause the governor to stick, and create uneven operation by getting into lines and tanks. Air, heat, moisture, and metals are all factors contributing to rapid oxidation in normal turbine operations. Shell tackled the problem of licking these enemies of smooth, efficient performance.

The first step was to make a highly refined turbine oil. Carefully selected crude oils known to contain desirable base stocks were segregated from other crudes and refined by a special process. An anti-oxidant was added to increase the oil's inherently high oxidation-resisting properties. As a result Shell turbine oils have shown little trace of oxidation after years of use in marine, industrial and other installations.

It was also necessary to perfect a rust preventive that did not affect the demulsibility of oil (property to separate rapidly from water). The rust inhibitor developed by Shell has an affinity for metals, as well as oil, but repels water. It attaches itself firmly, in a thin film, to metal parts of a turbine and to the oil as well, binding oil and metal together.

The Navy had experienced trouble with its ship turbines because of rusting and sludging. They tested a series of turbine oils and decided Shell's product was outstanding in its resistance to oxidation. Later, when the Navy issued new specifications for an oil that would resist both rust and oxidation, Shell's Turbine Oil was the only one to meet the rigid requirements. For a year Shell was the Navy's sole supplier of turbine oils.

OIL FOR DELICATE MECHANISMS

Tellus Oils are another of the products Shell's engineers have developed. They are used extensively as industrial lubricants, and as an hydraulic medium. The control valves in hydraulically operated machine tools and pumps are delicate mechanisms. Here again the enemies of smooth operation are oxidations of the oils, and rust.

Before Tellus oils were developed, metal-working machines in busy plants had to be shut down at frequent intervals for removal of sludge. Use of these oils has made shut-downs few and far between.

At Wood River Refinery there are many "stand-by" pumps for emergencies. They stand idle much of the time, and their bearings show a tendency to rust during these periods. By using Tellus oils the problem of rusting is greatly alleviated. The result is greater efficiency and economy.

NYLONS GO TO WAR

Although nylons and silks are marching into battle, hosiery continues to flow in great quantities to feminine consumers. The machines that manufacture stockings* are complicated, some having as many as 108 places to be lubricated in each inch; the clearance is hairbreadth. Oil is needed for protection against wear, prevention of rust, and to clean the needles. Clinging qualities are important; the oil must be non-dripping, and should be able to be washed out of textiles or fabrics by ordinary finishing and dyeing processes.

Shell laboratory men studied the needs and problems of the textile industry. Their research produced Textilis Oil 24K which meets all of these exacting requirements. It can be used when machine-knitting any fabric. Textilis oil is also used to lubricate high-speed sewing ma-

chines, and helps keep the millions of needles clicking in factories throughout the United States.

SCOPE OF LUBRICANTS

The scope of lubricants is almost unlimited, and new applications are being discovered daily. The lubrication engineer has to be a "jack of all trades," familiar with industry operations and transportation.

Adequate coverage of the lubricant field requires a staff of mechanically and chemically trained specialists qualified to make recommendations and evaluate performances. They must keep abreast of industrial developments, service and satisfy a rapidly changing market, and aid manufacturers and users of equipment.

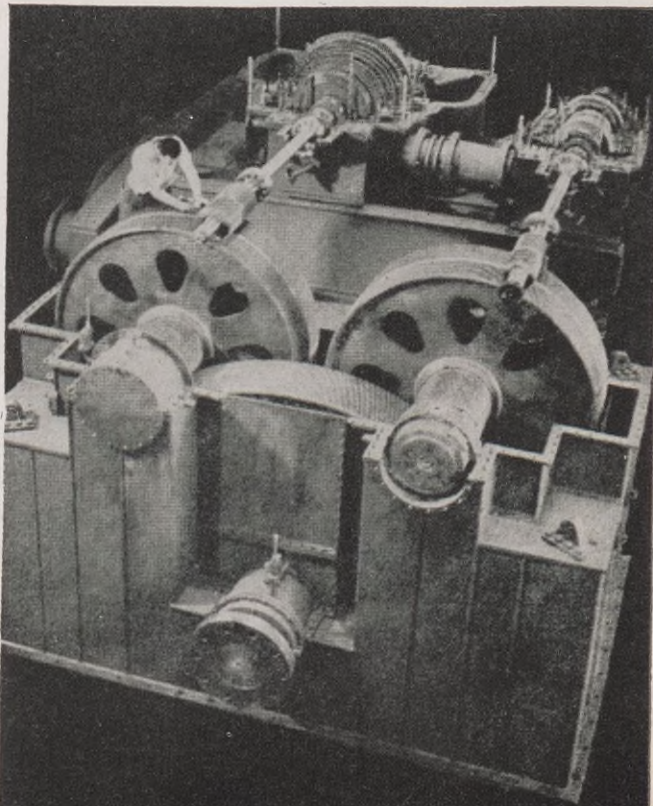
The functions of the Lubricants Department are to plan, coordinate, and consolidate the allocation of our lubricant products to the armed forces, and war industries; stimulate the development of new products; and supply our Divisions with information and educational materials.

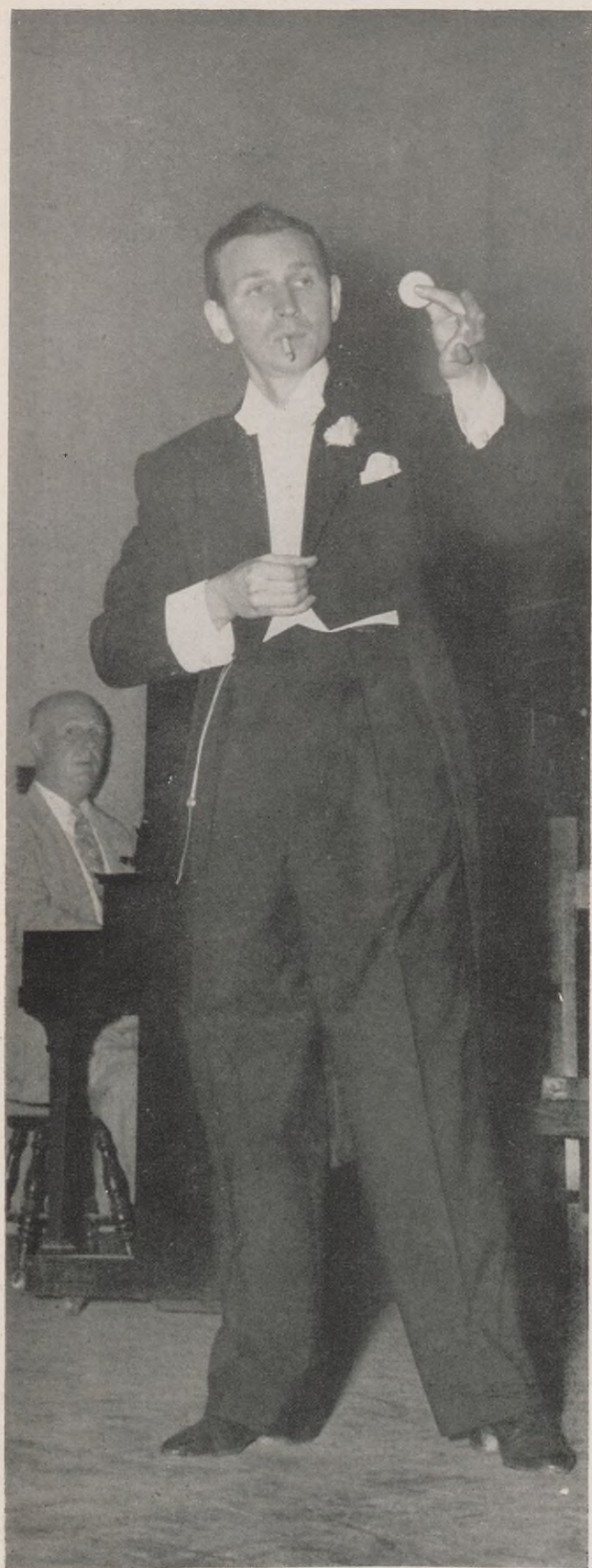
Oils for turbines, textile machines, and piston rings; drawing and cutting oils . . . are but a few of the many products developed by Shell's Lubricants Department, working in cooperation with our Manufacturing Department and Research laboratories. Each of these specialized products is filling an important place in today's biggest job . . . Victory.

Cotton Ring Spinning Spindles run at speeds from 5,000 to 12,000 R.P.M.



The drive for a modern cargo ship, showing turbines, reduction gears and propeller shaft.





One of the highlights of the show is the magician who mystifies audiences with his legerdemain.

CAMP SHOW

by

Norman Walters

AT noon on Thursday, the tenth of February, a strange caravan left New York, bound for the warmer climate of Miami, Florida. Among those who started the southern journey were a magician, tumblers, singers, a pianist, and several Shell employees . . . all part of the Shell Show for Service Men; the second of Shell's units. California's troupe has entertained countless thousands of service men.

Five days later the first performance was given to enthusiastic sailors of the 7th Naval District of Miami. Since then performances have been given at Army and Navy bases and hospitals at Homestead, Richmond, Miami Beach, West Palm Beach, Sebring, Avon Park, Tampa, Lakeland, Daytona Beach, and Jacksonville, Florida.

Enthusiastic audiences have greeted each performance with loud cheers which indicate how much they enjoy the show. Each act is introduced by a mistress of ceremonies; among those performing are a tap dancer, comedians, and a "blues" singer, in addition to those already mentioned. The personnel of the company will change from time to time as many of those engaged had previous commitments.

After the Shell Camp Show left Florida it toured through Georgia stopping at Fort Benning, the Marine base at Parris Island, Camp Stewart and other bases. It then tours North and South Carolina, and in April goes to Norfolk and Richmond, Virginia; later in that month it will play at Washington, Baltimore, Wilmington, and Atlantic City, and early in May will perform at Asbury Park and other Jersey resorts now taken over by the Army.

Typical of the response, so far, is that of Major Frank E. Rokusek, Special Service Officer at MacDill Field, Florida, who said, "In behalf of the enlisted men and



Audiences have found the show great relaxation after a day of maneuvers.

officers of MacDill Field please accept my sincere gratitude for the splendid Shell Oil Review, which was put on at this Base for the benefit of the military personnel.

"This show was . . . excellent and well received by the crowd. Your Company should be complimented for bring-

ing this good-will tour to the various Army Camps."

Other letters have been received which indicate that the show will meet with continued success. Efforts are being made to appear in camps which do not have frequent entertainment.



Ready to go to the next Army or Navy base the Shell truck refuels at one of our service stations. The truck carries a piano, drapes, speaking equipment and has wardrobe cabinets for each of the entertainers.

SHELL PIPE LINE CORP.

ORGANIZATION

T. E. SWIG
PRESIDENT



P. H. SWINCHATT
VICE-PRESIDENT



D. H. LEWIS
ASST. SECY & CHIEF ENGINEER



O. W. HEYDEN
ASST.
CHIEF ENGINEER



B. L. BROWNE
CHIEF DISPATCHER



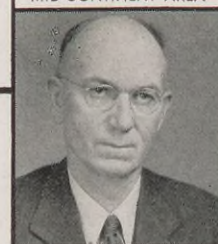
LEE GEILER
MGR. PERSONNEL &
INDUSTRIAL RELATIONS



G. G. BILLINGS
ASST. SUPT.
MID-CONTINENT AREA



L. F. YOUNG
SUPT.
MID-CONTINENT AREA



W. H. SHELTON
SUPT.
WEST TEXAS AREA



W. B. SANDERS
SUPT.
MISSOURI DIVISION



J. R. FLOYD
SUPT.
KANSAS DIVISION



W. H. CRADDOCK
SUPT.
HEALDTON DIVISION

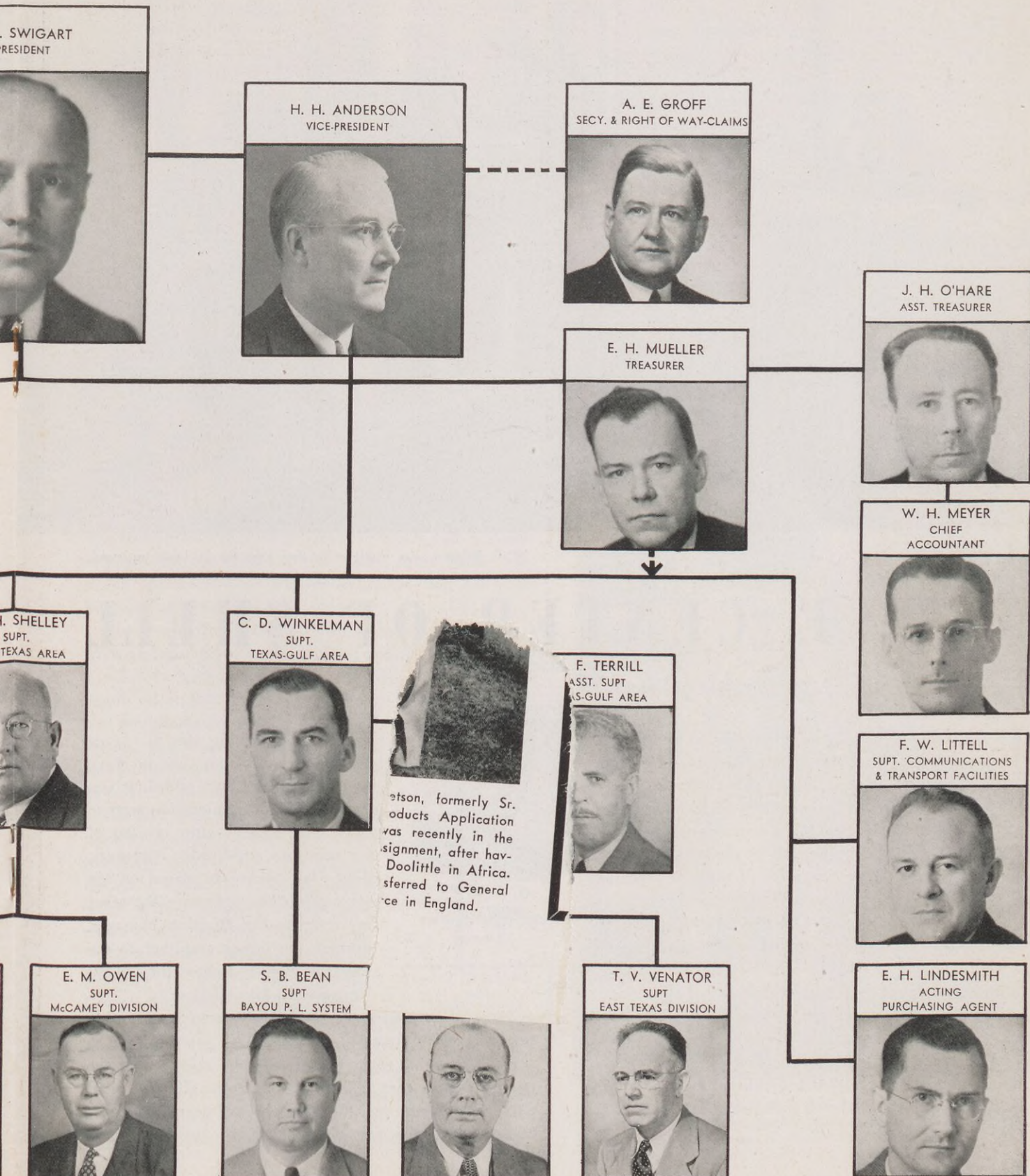


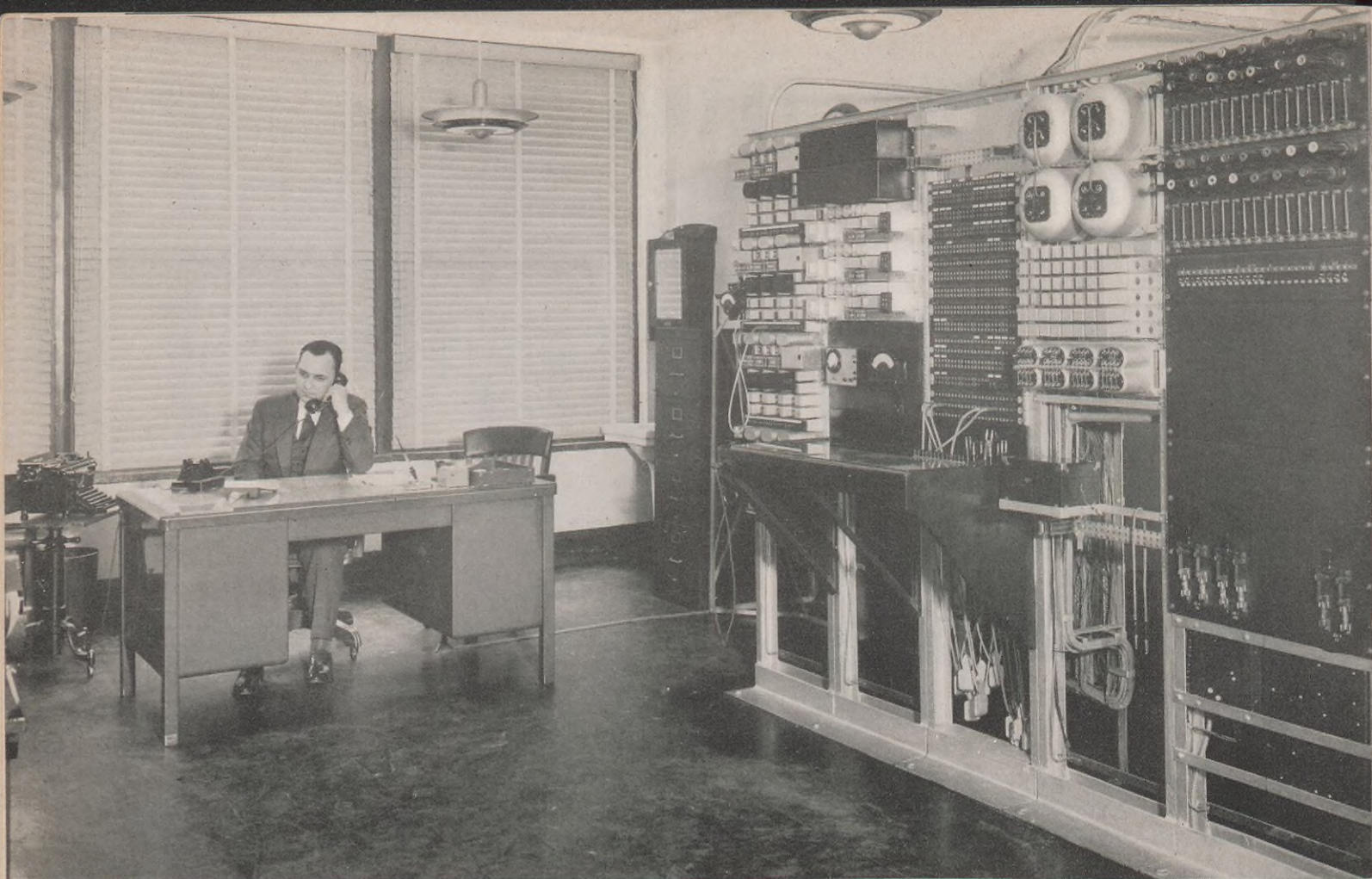
H. M. HOVIS
SUPT.
COLORADO DIVISION



RP. — HOUSTON, TEXAS

ATION CHART





W. E. Baldwin, wire chief, at his desk near the St. Louis testboard.

NERVE CENTER OF SHELL

by Martin Edman

LOCATED near the virtual geographical center of the nation, the St. Louis communications office is truly the nerve center of Shell's communications activities. The office has the responsibility of maintaining and operating a great part of the company's telephone and telegraph lines and equipment. In the nearby state of Illinois, alone, there are hundreds of miles of pole lines, many teletype machines with their necessary associated equipment, numerous telephone and telegraph repeaters, high frequency telephone circuits, and local telephones, as well.

Studies made at the switchboard show that an average of 5,000 calls a month are handled over the combined company-owned and leased long-distance lines. In addition approximately 630 long-distance Bell telephone and 350 suburban calls are completed monthly, to say nothing of the incoming local St. Louis calls which average 72 per hour.

While the switchboard equipment in the St. Louis building is of the latest design and up-to-date in every respect, a paging system has recently been added. It was designed and installed by Shell's communication men to provide local convenience. This added feature consists of two microphones, power amplifier, and five loud speakers.

Its purpose is twofold. One "mike" is placed on the switchboard within easy reach of the operators, the other on the desk of the secretary to the Division Manager. Both are connected through the power amplifier to the loud speakers which are conveniently located throughout the two floors comprising the St. Louis Division.

The telephone operators are able to save considerable time on important calls, when a called party cannot be reached over his regular telephone, by asking over the paging system that he call the operator. If the called party is anywhere on either floor, he will hear the request and call from the nearest telephone. In case the wanted

person is out of the building, the operators are usually promptly notified by someone knowing of his absence.

The "mike" in the Division Manager's office is used principally in calling together a group of men for a hurried conference, or in quickly locating some needed person who happens to be temporarily absent from his regular telephone.

The Telegraph office, located on the tenth floor of the Shell Building, is modern throughout, having been completely rewired and equipped during the past three years. The Morse system of telegraphy is used on all company-owned lines except between St. Louis and Wood River Refinery. On this circuit, teletypewriters, replaced the Morse in the early part of 1942. In addition, this office is served by one A.T.&T.—St. Louis-New York full-time teletype circuit, two Bell telephone "Timed Wire Service" teletypewriters, and a teletype machine which connects with the commercial telegraph company.

An average of 21,000 telegrams a month are handled by the St. Louis telegraph office, 7,000 of which are over wires serving the Houston office, Houston Refinery, Tulsa office, Wood River Refinery, and the Shell Pipe Line Corp. offices at Houston, Texas; Cushing, Oklahoma; and Colorado City, Texas. About 9,000 are transmitted over the St. Louis-New York leased circuit and 5,000 are handled over the "Timed Wire Service" teletypewriters serving Atlanta, Chicago, Indianapolis, Minneapolis, Norco, and other points. Handling this heavy file of rush business requires the services of a wire chief, three Morse telegraph operators, three teletype operators, and one combination messenger-teletype operator.

The company-owned telephone, telegraph and teletype lines and associated equipment are conveniently wired to a spacious testboard. All the latest testing devices are employed at this board to insure constant service. Line and equipment troubles are analyzed by the Wire Chief, located and cleared, night or day, as they occur. Voice level measurements are made daily before working hours in order to maintain high quality telephone service.

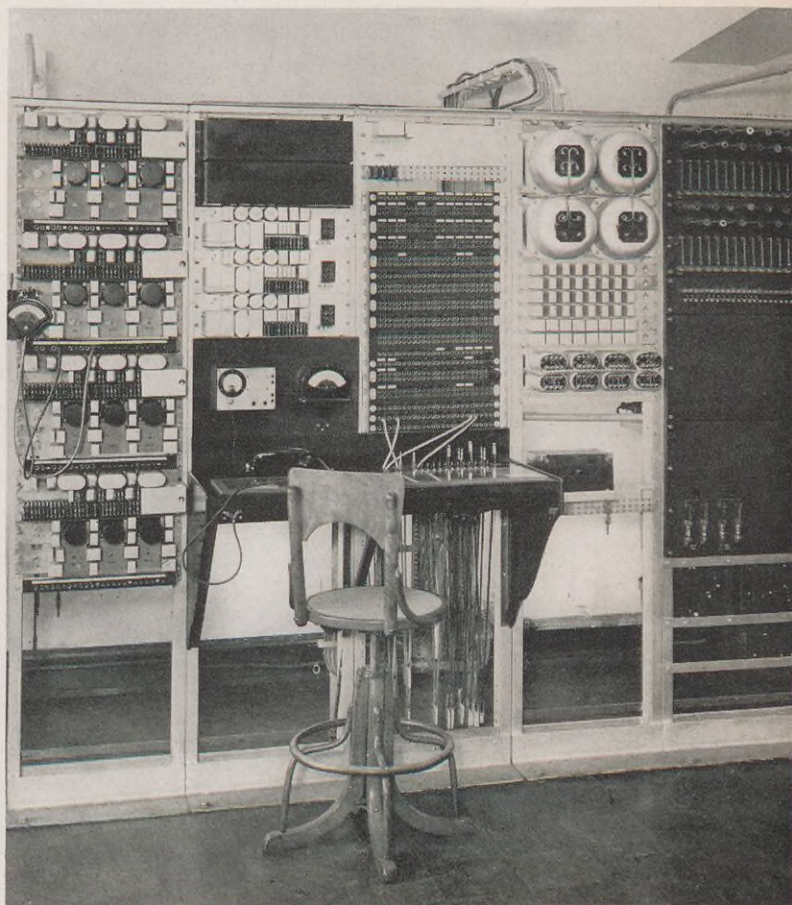
A.T.&T. Bell Telephone, and company teletype machines are identical, and all are equipped for manual or automatic sending; and with typing reperforators (a new device designed to eliminate the necessity of retyping wires at relay points), they are geared for a transmitting speed of sixty words a minute.

An automatic sending device allows an operator to write up or "punch" the outgoing telegrams on a continuous perforated recording paper tape, while incoming wires are being received. Then when the all-clear signal is received from the distant office, the tape, with many messages already written, is fed through the automatic transmitter which sends the signal out over the line at maximum speed.

The reperforating machines are located in the St. Louis

office and are remotely controlled by the distant office. For instance, when the distant operator transmits wires to St. Louis, which are to be relayed to other points served by teletype, she simply depresses key "F" on her keyboard. This operation automatically switches the St. Louis typing reperforator into the teletype circuit. Running in synchronism with the teletypewriter, it perforates tape to correspond with the incoming message, and to aid in handling, types the words over the perforations. This tape, together with a copy of the wire, is then transmitted to the final destination.

It is no longer considered something miraculous for several calls to be made on one wire. With "phantom" telephone circuits it is possible to transmit three telephone messages over two pairs of wires. Ordinarily only one circuit is obtainable over each pair of wires. However, if four wires run between two points on the same poles, three telephone circuits may be made over these wires without one message interfering with any other. The "duplex" telegraph circuit permits two messages to be sent simultaneously over one wire in opposite directions without interference.



Telephone, telegraph, and teletype lines and associated equipment are conveniently wired to the spacious testboard. All the latest devices are employed at this board to insure continual service.



Wire Chief W. E. Baldwin, left, and Area Telephone and Telegraph Supervisor, J. E. LaBoon discuss T & T matters in Mr. LaBoon's office.

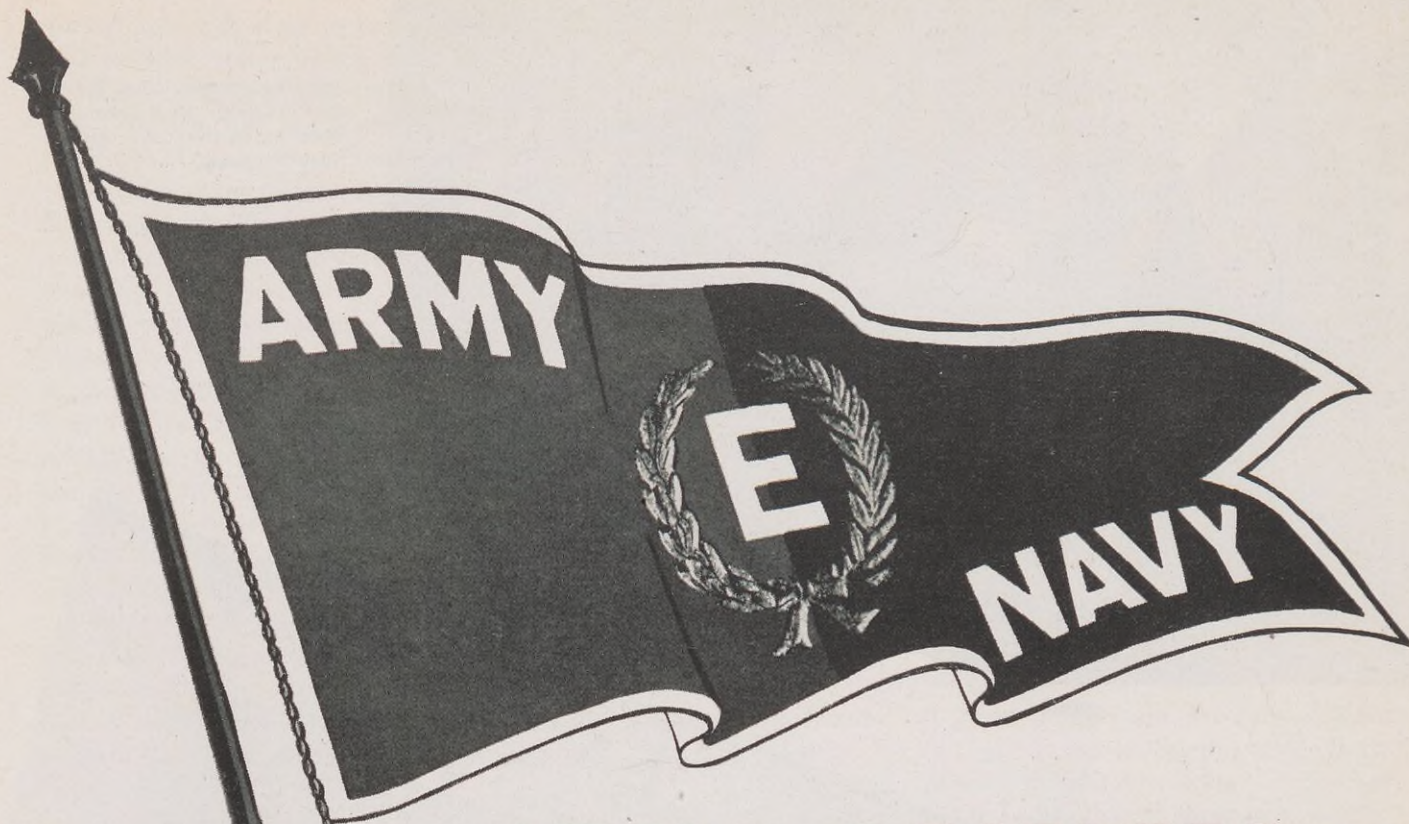
Fast and reliable telephone and telegraph service, while regarded as commonplace by most of us, plays a great part in company-wide operations. Were we without this service for any appreciable length of time, our pipe lines and refineries would be forced to curtail operations, shipping would be delayed. Head and Field Offices would be

out of touch with each other, and operations in all departments would be materially affected.

As with most service departments the work is behind the scenes, most of the time. However, when you reach for that phone or grab a telegraph blank, you may be assured the communications employees will be in there making sure that the best service possible is furnished you.



Teletypewriter Operators Margaret R. Cox and Gladys M. Wilson on the left are working on scheduled connections to Division Offices and Refineries. Bernice T. Perrot, right foreground, and Eileen A. Koch are sending messages to Wood River and New York. The reperforators at the left of each machine enable the operator to punch the outgoing telegrams while incoming wires are being received. When the all-clear signal is given at the distant office, the tape is automatically fed through the transmitter which sends the signals out over the line at maximum speed.



SHELL RECEIVES NEW ARMY-NAVY “E” AWARDS

by David Cochran

NEW honors have come to Shell. With military pageantry indicative of the importance of the event, Shell News of California reports, the Army-Navy “E” award for “excellence in war production was presented to management and employees of the Martinez Refinery in an impressive ceremony on February 19th.

Earlier this year, on January 27th and February 1st, the Army-Navy “E” awards had been presented to the Dominguez and Martinez plants of the Shell Chemical Division of Shell Union Oil Corporation.

Admiral Carleton H. Wright, commandant of the 12th Naval District and veteran of Guadalcanal and the Aleutians, made the presentation of the “E” flag at the refinery. Col. William B. Cobb, Western Defense Command, gave

the first “E” pins to two refinery employees chosen to represent all.

Admiral Wright told a cheering audience. “Our fighting forces and our industrial forces are mutually dependent. Less than three percent of the individuals engaged in industrial production in the United States have attained the high standards necessary for this award. You have become our partners. You have had an outstanding record of performance. You have produced vitally needed lubricants and 100-octane gasoline. You have had no rejections. There have been no work stoppages.

“In days to come I ask you to remember Tarawa and the Gilberts, where for three long days and nights an American died every four minutes in order to press on



Jan Oostermeyer, Vice President in Charge, Shell Chemical Division, receives the Army-Navy "E" award.



Ceremonies at the Shell Chemical plant at Dominguez were attended by all employees who heard many Army and Navy officials praise their work.



Martinez Refinery, too, received an "E" award . . . a fine start for Shell in 1944. (l. to r.) Rear Admiral Wright, James Douglas, representing the employees, and Refinery Manager Hemphill.

toward Tokyo. It is up to you to keep this "E" flying, with resolution equal to that which they showed there."

Admiral Wright handed the banner to Refinery Manager I. M. Hemphill, and James Douglas, representing the employees. Together they raised the flag.

In accepting the flag, Hemphill said, "Fellow workers, this award and ceremony are only made possible through your efforts and the cooperation of the inspectors of material for the armed forces, labor organizations, contractors, and various business houses and citizens of this community. I wish also to thank those employees of retirement age who, for patriotic reasons, are continuing to work for the duration. You have not fallen down on a single shift. In accepting this flag, we also accept the challenge. Every six months, our production efforts will be reviewed and if we continue to produce as we have, we will be entitled to keep the flag flying and to add a white star for each six months."

Telegrams of congratulations were read from Ralph A. Bland, assistant secretary of the Navy, Senator Hiram Johnson, and Representative Albert E. Carter. After the ceremonies "E" pins were distributed to all employees. Copies of the program were sent to all Martinez employees in the armed forces.

High ranking Army officers highlighted the imposing "E" award ceremonies held recently at the Dominguez and Martinez (California) plants of the Shell Chemical Division of Shell Union Oil Corporation.

Both plants have been signally honored in receiving these awards simultaneously, for producing and shipping

large quantities of vitally needed industrial chemicals . . . all of which are contributing to Allied victory.

Amidst large groups of plant employees, U. S. Treasury Department representatives, senior Army and Navy officers, executives of Shell Oil, Shell Development and Shell Chemical, brief but impressive ceremonies were held.

J. Oostermeyer, Executive Vice President in charge, Shell Chemical Division, accepted both awards on behalf of the company and employees. He said, in part, "We accept this highest token of appreciation from the Armed Forces for production excellence, as a tribute to the men and women in our plants. It is through their untiring efforts, and fine spirit of comradeship that the outstanding manufacturing records have been made possible."

"Their energy, plus the technical research behind them, have kept a constant stream of important war materials flowing to the fighting fronts."

"These awards . . . will spur us on . . . to even greater accomplishments."

And now, both plants are proudly flying Army-Navy "E" flags—for excellence in war production. Shell Chemical Division's plants and the Martinez Refinery join Wood River Refinery in the select circle of those receiving the highest awards of the home front. Wood River Refinery recently received its first white star, for continued excellence.

These tributes are to jobs well done, jobs that will continue to be performed at the same high standards.



Colonel Cobb and Rear Admiral Wright addressed the crowd of refinery workers.

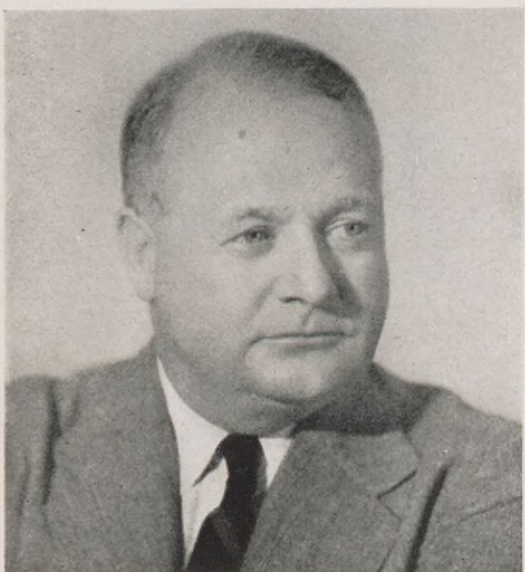
PEOPLE IN THE NEWS



H. A. CURTIN



F. J. MORRISON



E. G. ROBINSON

H. A. CURTIN has been appointed Office Manager for the Jackson Heights Office of the New York Marketing Division. Mr. Curtin entered the employ of New England Oil Refining Company at Fall River, Massachusetts, in 1921, and was a clerk in the Boston Office when that company's operations were taken over by Shell in 1929. Later that same year he became Chief Clerk at New Haven, Connecticut. In 1932 Mr. Curtin was appointed Manager of the Auditing Department in New York, and in 1941 became Chief Accountant—Marketing in Head Office Accounting Department, which position he retained until his recent appointment.

• • •

F. J. MORRISON has been made Chief Accountant—Marketing in Head Office Accounting Department. Mr. Morrison came with Shell as a clerk in the St. Louis Office in 1925. In 1932 he became Chief Accountant of the Michigan Division at Detroit, and in 1936 was transferred to Chicago in the same position for the Northern Division. Two years later Mr. Morrison came to New York as Chief Clerk in the Accounting Department. In 1940 he was appointed Office Manager of the New York Marketing Division at Jackson Heights, where he remained until his present appointment.

• • •

ERNEST G. ROBINSON has recently been named Manager of the Exploration Department for the Texas-Gulf Area. Mr. Robinson attended the University of Montana, and received degrees at Cornell University. He also did graduate work at the University of Nebraska.

He came with Shell in 1925 as a District Geologist at San Antonio, Texas. In 1928 Mr. Robinson became Division Geologist at St. Louis, and two years later was appointed an Assistant to the Vice President of Exploration. In 1937 he became Manager of the Illinois area at Centralia, and in 1943 went to Houston, Texas where he made a special study of production and drilling operations.

THE HOME FRONT



Mrs. Jimmy Doolittle, wife of the famous General, (Manager, on military leave, of Shell's Aviation Dept.), launched the Navy's great carrier, Shangri-La, on February 24th at the Norfolk Navy Yard. It was from the deck of its mythical predecessor that Doolittle launched the planes that first bombed Tokio.



Mr. and Mrs. Joe Parsons are members of the Gallon Club Blood Donors of the Indianapolis Chapter of the American Red Cross. Mr. Parsons is an Area Sales Clerk in the Indianapolis Marketing Division.



Employees in the Utica area of the Albany Marketing Division are putting 14 percent of their monthly earnings toward the purchase of War Bonds. George C. Pugh (left) receives congratulations from the Utica area manager, Ralph E. Purinton, for purchasing one bond each week, since War Bonds were first sold.



Employees of the Manchester Area of the Boston Marketing Division are presented with service pins by A. E. Lander, Area Manager.

AFTER HOURS



The Indianapolis Marketing Division (Right) too, held its annual service award dinner recently. Pins were awarded 20 employees.



A meeting of North Line Supervisors (Products Pipe Line) was held recently at the Palmer House, Chicago. In the evening they were joined at dinner by East Chicago employees and the feature of the program was the presentation of service awards to 19 employees.

The Ten-And-Over Club (Shell employees in Texas-Gulf Area who have completed ten or more years of service) held its annual banquet in late January at the Houston Country Club. Three hundred persons from Shell Oil, Shell Pipe Line Corp. and the Atlanta Sales Division attended. A. J. Galloway, vice president of Shell, and T. E. Swigart, President of Shell Pipe Line were masters of ceremonies. On the right are those at the 15-year table; below, the 20-year table.

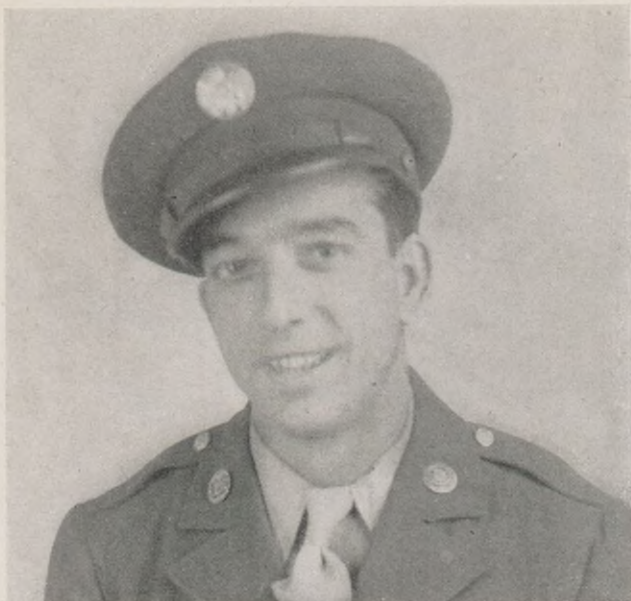


Many of the Wood River Refinery employees are bowling enthusiasts. This winter there has been competition in three leagues, Shell Ladies'; Super-Shell; and Golden Shell. The officers of the Shell Bowling Association are (above, standing l. to r.), Tanner Smith, vice president; John McConnell, Secretary-Treasurer, Super-Shell League; Ray Schindewolf, President; B. L. Walters, Secretary-Treasurer, Golden Shell League. Officers of the Ladies' League are (l. to r.) Marion Teachout, Secretary-Treasurer; Mrs. J. R. Roberts, Vice President and Mrs. Rose Bohart, President.



The Purchasing and Stores meeting of the Marketing Divisions was held at Head Office in late February. Representatives of all Marketing Divisions, East of the Rockies, attended the sessions.

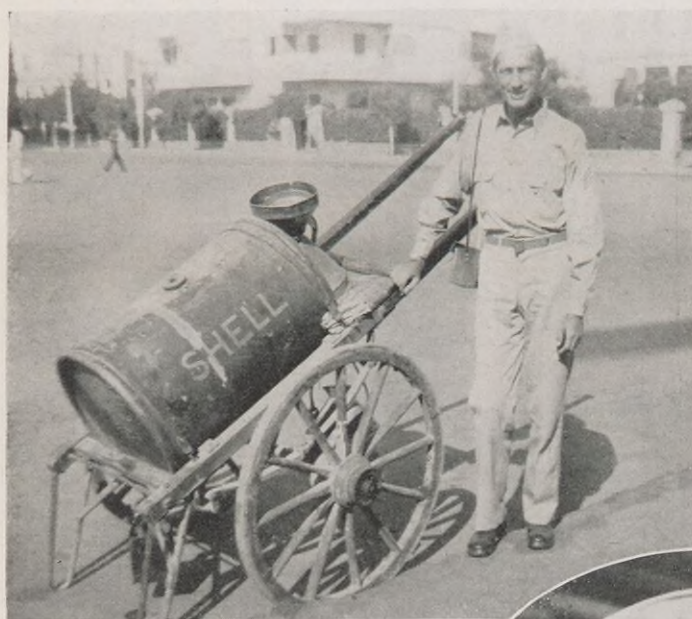
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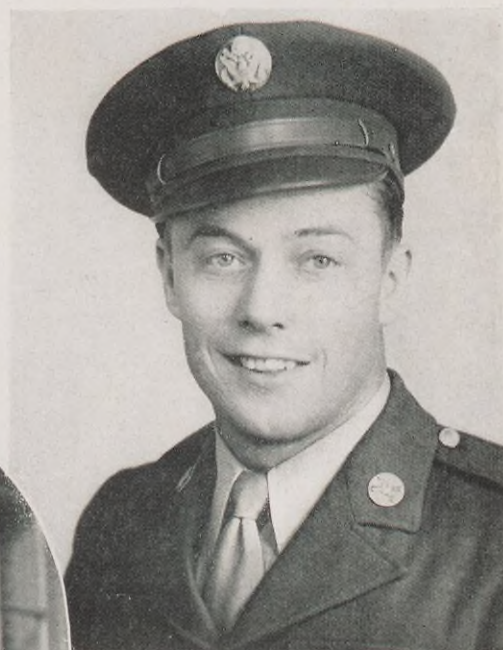
Private Salvatore J. Vasques, Operations Department, East Hartford Depot (Boston Marketing Division) is stationed at New Orleans, La., where he is completing a technical training course.



Private Frank Nagy, Sewaren Terminal, is now in the Field Artillery, at Camp Chaffee, Arkansas.



S/Sgt. Eugene W. Thomas, Clerk in the St. Louis Marketing Division, is standing beside a Shell "tank truck" in Iran.



S/Sgt. L. F. Henderson, Clerk in Mid-Continent Area, is now "some-where overseas."



Lt. William W. Barry, Area Sales Clerk in the New York Marketing Division, is Surveillance Officer at the Navajo Ordnance Depot, Flagstaff, Arizona

COLORS



Corporal J. J. Perilloux, Norco Refinery, is stationed at Boca Raton Field in Florida.

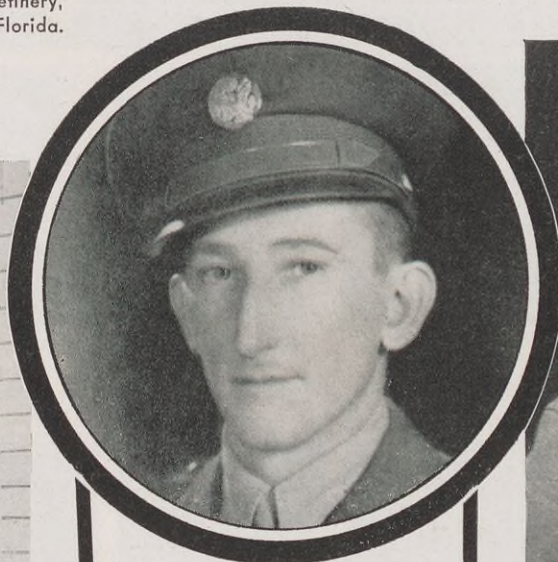


A group of Shell men on military leave met recently in Houston, Texas. They are (l. to r.) Lt. (jg) Ralph Erwin, Land Dept., Wichita Falls, (North Texas Division); Lt. (jg) E. H. Leemann, Ass't Eng. at Pampa, Texas (Panhandle District); Ensign Jim Tichy, Geologist at Amarillo, Texas (Panhandle); Lt. (jg) Jack Brown, Geologist, Mid-Continent Area.



TEXAS-GULF AREA

Major George L. Smith, Minneapolis Division Field Engineer in Pr Dept. (H.O.-Mfg.) states on a special as ing been with Jimmy He hopes to be tran Doolittle's 8th Air For



Sgt. George H. Smith, Engineering Field Yardman at Wood River Refinery was killed in action in Italy on December 24th, 1943. Sergeant Smith was granted a leave of absence to enter military service in May, 1941. He received his basic training at Camp Wolters, Texas and later at Helena, Montana. For the 18 months preceding his death he was a member of a para-ski-troop unit. After service in the Aleutians Sgt. Smith was returned to the States and again sent overseas last October.



Corporal E. E. Pruitt, Welder-Helper at Wood River Refinery, was recently awarded the Distinguished Flying Cross for extraordinary achievement while participating in 50 operational flight missions in the Southwest Pacific area. Corporal Pruitt was serving with a troop carrier squadron of the Fifth Air Force. The operations consisted of dropping supplies and transporting troops to advanced positions, involving low altitude flying over mountainous country, under adverse weather conditions. The citation stated that Pruitt demonstrated outstanding ability and devotion to his duties as radio operator.

SERVICE BIRTHDAYS

... TWENTY-FIVE YEARS ...



C. J. TROXLER
March, 1944
Norco Refinery
Dispatching



L. P. FAUCHEUX
March, 1944
Norco Refinery
Topping



C. E. WIGHTMAN
March, 1944
Houston Refinery
Stores

T W E N T Y Y E A R S



K. H. FARRAH
March, 1944
Mid-Continent Area
Production



W. L. CANNON
February, 1944
Mid-Continent Area
Production



J. J. EAST
March, 1944
St. Louis Division
Marketing



C. S. MUMFORD
March, 1944
Mid-Continent Area
Exploration



F. R. CHASE
March, 1944
Columbus, Ohio
Products Pipe Line



E. W. WEISS
March, 1944
St. Louis Division
Marketing



H. J. KEMLER
March, 1944
Texas-Gulf
Production



J. B. LEISER
March, 1944
Mid-Continent Area
Exploration



L. C. HERWIG
March, 1944
Texas-Gulf
Exploration



S. S. SMITH
March, 1944
Head Office
Products Pipe Line



J. M.



R. S. SULLIVAN
March, 1944
Wood River Refinery
Laboratory

C. G. KITCHEN
March, 1944
Cleveland Division
Marketing



L. A. ROBINSON
March, 1944
Mid-Continent Area
Production



L. M. HETER
March, 1944
Mid-Continent Area
Production



A. R. GROFF
March, 1944
Texas-Gulf Area
Insurance-Tax-Claims



S/Sgt. L. F.
Mid-Continent
where overseas.

J. R. LEWIS
March, 1944
Texas-Gulf Area
Gas-Gasoline

H. E. WHITE
March, 1944
Chicago Division
Marketing

FIFTEEN YEARS

R. P. ALLAN HEAD OFFICE
T. & S.

B. R. ALLEN MID-CONTINENT AREA
Shell Pipe Line Corporation

W. K. ANDERSON WOOD RIVER REFINERY
Pumper

P. L. ANDRY, JR. HEAD OFFICE
Manufacturing

J. J. ARBISI EAST CHICAGO, INDIANA
Products Pipe Line

R. M. ARNOLD TEXAS-GULF AREA
Shell Pipe Line Corporation

R. W. BALDWIN BOSTON DIVISION
Marketing (Military Leave)

P. W. BAUDOIN NORCO REFINERY
Engineering

S. C. BIDDLE TEXAS-GULF AREA
Shell Pipe Line Corporation

R. L. BISSETT ALBANY DIVISION
Marketing

J. A. BOURGEOIS NORCO REFINERY
Main Office

E. J. BURNS NEW YORK DIVISION
Marketing

S. G. BRAND TEXAS-GULF AREA
Production

R. L. BUCKLES MINNEAPOLIS DIVISION
Marketing

P. F. CANTWELL BOSTON DIVISION
Marketing

J. A. CATES WEST TEXAS AREA
Shell Pipe Line Corporation

V. P. CHAMPAGNE NORCO REFINERY
Engineering

F. E. CHANCE EAST CHICAGO, INDIANA
Products Pipe Line

R. M. CONLON INDIANAPOLIS DIVISION
Marketing

S. I. COURTNEY NORCO REFINERY
Gas

J. R. CROCKET TEXAS-GULF AREA
Production

A. W. CRONAN WOOD RIVER REFINERY
Engineering

C. E. DANA WOOD RIVER REFINERY
Engineering

J. O. DION HEAD OFFICE
T. & S.

P. J. DUNCAN BOSTON DIVISION
Marketing

O. K. FACKLER ST. LOUIS DIVISION
Marketing

J. A. FELDER ST. LOUIS DIVISION
Marketing

J. J. FITZPATRICK NORCO REFINERY
Main Office

W. P. GILLESPIE BOSTON DIVISION
Marketing

M. T. GRENNAN BOSTON DIVISION
Marketing

F. G. HARKNESS MID-CONTINENT AREA
Shell Pipe Line Corporation

O. W. HATFIELD TEXAS-GULF AREA
Treasury

R. J. HOWELL ST. LOUIS DIVISION
Marketing

L. N. LANKFORD TEXAS-GULF AREA
Exploration (Military Leave)

C. M. LARSEN CHICAGO DIVISION
Marketing

C. R. LATOWSKY HEAD OFFICE
Marketing

G. H. LYMAN HEAD OFFICE
T. & S.

G. E. MANNING MID-CONTINENT AREA
Production

L. A. MAYFIELD WEST TEXAS AREA
Shell Pipe Line Corporation

K. L. MENNING EAST CHICAGO
Products Pipe Line

O. V. PENNINGTON TEXAS-GULF AREA
Shell Pipe Line Corporation

D. PHILLIPS MID-CONTINENT AREA
Shell Pipe Line Corporation

L. A. POCHE NORCO REFINERY
Topping

W. A. POLLEY MID-CONTINENT AREA
Production

L. E. REDON NORCO REFINERY
Main Office

M. F. RICE BOSTON DIVISION
Marketing

W. T. RIDDER INDIANAPOLIS DIVISION
Marketing

O. ROBINSON MID-CONTINENT AREA
Production

J. G. ROBINSON MID-CONTINENT AREA
Shell Pipe Line Corporation

J. J. ROSS TEXAS-GULF AREA
Shell Pipe Line Corporation

E. J. ROTH NORCO REFINERY
Dispatching

F. P. SANTORA NEW YORK DIVISION
Marketing

G. W. SEED DeWITT, ILLINOIS
Products Pipe Line

A. E. SLAYTER TEXAS-GULF AREA
Shell Pipe Line Corporation

E. G. SMITH INDIANA DIVISION
Marketing

K. L. STEELE NEW YORK DIVISION
Marketing

M. F. SULLIVAN BOSTON DIVISION
Marketing

W. E. THOMPSON MID-CONTINENT AREA
Shell Pipe Line Corporation

M. D. WALSH BOSTON DIVISION
Marketing

G. R. WOOLF TEXAS-GULF AREA
Land Department

C. A. YANKEE TEXAS-GULF AREA
Production

TEN YEARS

W. S. ADKINS TEXAS-GULF AREA
Exploration

A. G. ALT MINNEAPOLIS DIVISION
Marketing

W. D. ASHTON, JR. CLEVELAND DIVISION
Marketing

R. M. BAKER MINNEAPOLIS DIVISION
Marketing

V. L. BENNETT TEXAS-GULF AREA
Shell Pipe Line Corporation

C. J. BOYLES WOOD RIVER REFINERY
Stores

H. W. BRADVOGEL WOOD RIVER REFINERY
Engineering

L. H. BRETT WOOD RIVER REFINERY
Lubricating

H. O. BROWN DETROIT DIVISION
Marketing

A. L. BUREN ST. LOUIS DIVISION
Marketing

W. B. CARPENTER MID-CONTINENT AREA
Shell Pipe Line Corporation

C. E. CARTER WOOD RIVER REFINERY
Engineering

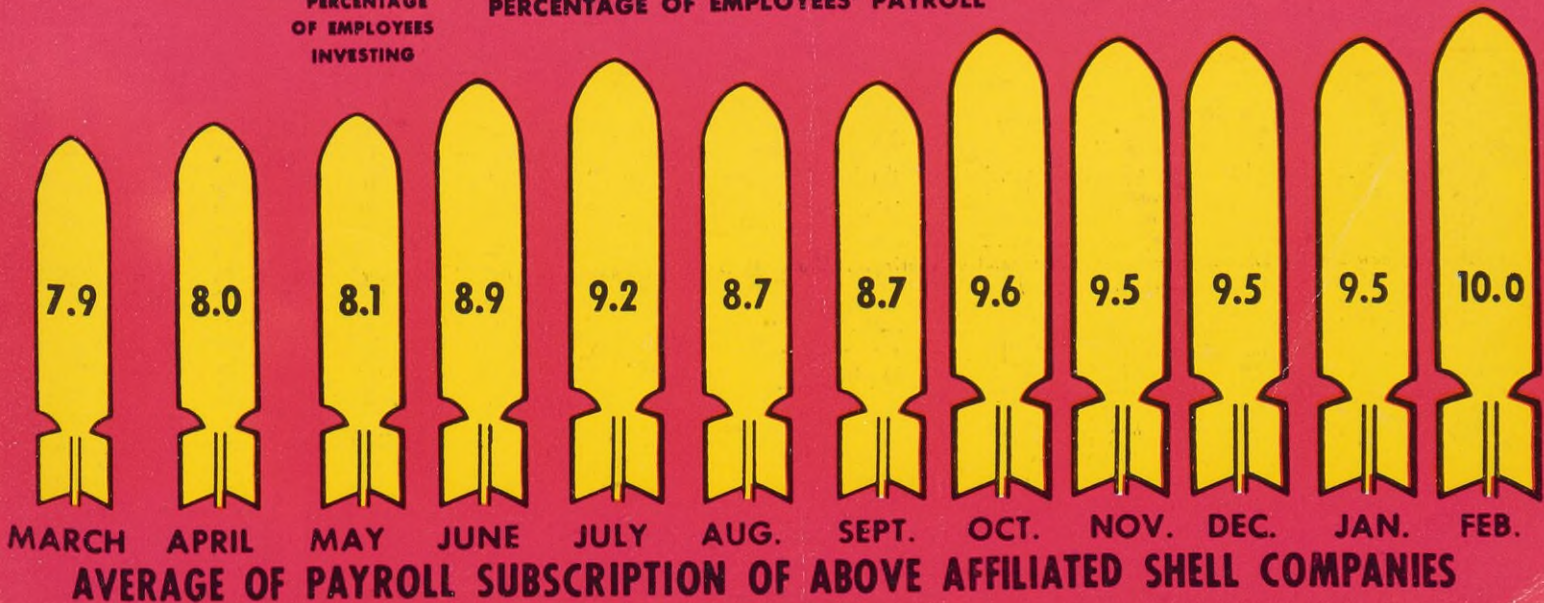
T E N Y E A R S

(continued)

T. W. COLLINS WOOD RIVER REFINERY Main Office	W. J. JUDD ALBANY DIVISION Marketing	J. A. RYAN WOOD RIVER REFINERY Engineering
L. G. DAILEY CHICAGO DIVISION Marketing	C. W. KEY WEST TEXAS AREA Shell Pipe Line Corporation	L. T. SCHILDROTH . . . WOOD RIVER REFINERY Main Office
O. L. DODD HOUSTON REFINERY Control Laboratory (Military Leave)	A. F. KOSKI CHICAGO DIVISION Marketing	H. G. SCHLEISLEDER . . . CHICAGO DIVISION Marketing
F. W. DURBIN MID-CONTINENT AREA Exploration	H. O. KRASS DETROIT DIVISION Marketing	J. J. SCHMITZ CHICAGO DIVISION Marketing
G. E. DUSCHAMP HOUSTON REFINERY Engineering	C. E. LATHROP WOOD RIVER REFINERY Engineering	R. C. SCHNACKE CHICAGO DIVISION Marketing
J. E. FAIRWEATHER TEXAS-GULF AREA Shell Pipe Line Corporation	I. D. McMILLAIN HOUSTON REFINERY Engineering	J. SHWEIGER CHICAGO DIVISION Marketing
J. P. FUSSELL WEST TEXAS AREA Shell Pipe Line Corporation	J. L. MADDEN SEWAREN Marketing	D. SHELTON WOOD RIVER REFINERY Engineering
K. J. GAUTHEREAUX TEXAS-GULF AREA Production	L. N. MANCUSO HOUSTON REFINERY Engineering	S. W. SHEPARDSON BOSTON DIVISION Marketing
J. F. GERRITY HEAD OFFICE Treasury	A. J. MARNETT BOSTON DIVISION Marketing	J. A. SHERIDAN CHICAGO DIVISION Marketing
J. E. GROVER WOOD RIVER REFINERY Engineering	L. L. MIDDLETON WOOD RIVER REFINERY Engineering	D. R. SMITH WEST TEXAS AREA Shell Pipe Line Corporation
L. GUGLIELMO NORCO REFINERY Gas	C. E. MUSGRAVE WOOD RIVER REFINERY Engineering	A. R. SNYDER WOOD RIVER REFINERY Engineering
A. J. HAAS WOOD RIVER REFINERY Engineering	R. T. NELSON CHICAGO DIVISION Marketing	C. A. STIMSON DETROIT DIVISION Marketing
M. HADLEY TEXAS-GULF AREA Shell Pipe Line Corporation	H. J. NIEMANN WOOD RIVER REFINERY Stores	E. G. STOREN CHICAGO DIVISION Marketing
D. R. HAGGART ATLANTA DIVISION Marketing	E. F. OBERT WOOD RIVER REFINERY Engineering	E. L. STREETY WEST TEXAS AREA Shell Pipe Line Corporation
J. W. HANEY ATLANTA DIVISION Marketing	H. A. ORN CHICAGO DIVISION Marketing	L. B. SULLIVAN CHICAGO DIVISION Marketing
T. J. HARGIS WOOD RIVER REFINERY Engineering	J. T. OSEP CHICAGO DIVISION Marketing	O. SUMMERS WOOD RIVER REFINERY Engineering
VERNON A. GARRELL KOKOMO, INDIANA Shell American Petroleum Corp.	J. R. PATTERSON WOOD RIVER REFINERY Engineering	E. J. TESHNOW CHICAGO DIVISION Marketing
W. T. HARRISON BALTIMORE DIVISION Marketing	D. L. PATTON WOOD RIVER REFINERY Engineering	S. J. THEALL TEXAS-GULF AREA Production
L. C. HINMAN WOOD RIVER REFINERY Engineering	MISS D. M. PLATT MID-CONTINENT AREA Treasury	L. C. TOFFIER HOUSTON REFINERY Engineering
T. E. HINMAN WEST TEXAS AREA Shell Pipe Line Corporation	F. E. POLLIN CHICAGO DIVISION Marketing	R. L. TRAPP MID-CONTINENT AREA Production
A. W. HOGLE WOOD RIVER REFINERY Engineering	A. F. PRESTON WOOD RIVER REFINERY Engineering	A. S. VROOMAN ALABAMA DIVISION OFFICE Marketing
D. HOLCOMB BAYOU PIPE LINE SYSTEM Shell Pipe Line Corporation	J. C. QUILTY HEAD OFFICE Industrial Relations	C. V. WALDEN BAYOU PIPE LINE SYSTEM Shell Pipe Line Corporation
C. J. HURST HOUSTON REFINERY Topping	H. A. RENK CHICAGO DIVISION Marketing	J. H. WALKER TEXAS-GULF AREA Production
H. F. IRETON HOUSTON REFINERY Engineering	L. M. RHEMANN HOUSTON REFINERY Control Laboratory	F. A. WELSH MID-CONTINENT AREA Production
R. W. JOHNSON WOOD RIVER REFINERY Engineering	W. T. RIX BOSTON DIVISION Marketing (Military Leave)	J. G. WHITEHURST, JR. . . TEXAS-GULF AREA Exploration
JOHN H. JONES TEXAS-GULF AREA Production	J. B. ROBERTS MID-CONTINENT AREA Production	C. A. WORKMAN CHICAGO DIVISION Marketing
		L. C. ZIMMERMAN WOOD RIVER REFINERY Engineering

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PERCENTAGE OF EMPLOYEES' PAYROLL



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New York, N. Y.
Permit No. 1101



IN the tense hours of every American advance, "roll out the barrel" means *paint*. Paint out the enemy's targets—our guns . . . trucks . . . tanks . . . planes . . . runways . . . whole villages and towns! Blend them with the landscape, as we take them . . .

This new kind of landscape painting isn't careful or sparing. You're betting paint against American lives. You spray it on, hose it on, dump it on.

Yet we can hardly spare so much paint right now. Linseed oil, the backbone of most paint, is valuable as a food product—it's a good vegetable oil, and the world is crying for more vegetable oils for food.

At the "University of Petroleum," Shell's research laboratories, scientists combed through the vast number of products, by-products, and "waste products" of refining, looking for "the makings" of camouflage paint.

They didn't find it ready-made—they went to work. Now, from a refinery by-product, Shell is

producing petroleum resins, by the thousands of barrels, for camouflage.

This basic material is mixed with pigment—"color"—and other ingredients by paint manufacturers. Shipped as a concentrate, it is mixed with water, by troops "on the spot," and applied.

It doesn't attempt to compete with our finest domestic product for brightening up the home. But for its specialized camouflage use, it's good paint, and plentiful. It doesn't have to last 5 years. From the taxpayer's standpoint, it ought to be low in cost. It is.

* * *

As a result of Shell Research, petroleum molecules arrive at amazing destinations. The end may be synthetic rubber, or TNT in a block-buster . . . or it may be the dental plate or the rayon stockings so important in your own daily life.

First oil refinery to win the Army-Navy "E" — Shell's Wood River Refinery.

**SHELL
RESEARCH —**



**Sword of Today
Plowshare of Tomorrow**

WS

work in the Jacksonville,
since as an organist of
the in recital recently, his
were lauded by critics.



(Above) Two Shell men were elected to office in the University of Michigan Club of St. Louis recently. R. B. Kerr, Tax Department (above), is a member of the Board of Governors, and Glenn R. Winters, Public Relations Section (left), is vice-president of both the St. Louis club and the Seventh District Alumni Association.

SHELL NEWS

Dedicated to the principle that the
employee and employer are mutual

EUNICE HORTLEDER, Editor

ASSOCIATE EDITORS

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Volume 7

AUGUST, 1939

THE KINGDOM IN A PEANUT



By Eunice Hortleder

WHAT IS A PEANUT? To most of us it's simply a food
moreover, decidedly lacking in glamor
of in the
h

SERVICE BIRTHDAYS

TWENTY-FIVE YEARS



R. O. ROBERTS
25 years
December, 1942
Production
Wirt, Oklahoma



LUCY E. ROSEBAUGH
25 years
December, 1942
President's Office, H.O.
New York, New York

TWENTY YEARS



J. O. BRODIGAN
20 years
December, 1942
Treasury
Houston, Texas



E. B. BURRIS
20 years
December, 1942
Engineering Field
Wood River Refinery



E. J. BAUDOIN
20 years
December, 1942
Boiler House
Norco Refinery



M. R. HANSELL
20 years
December, 1942
Car
Wood River Refinery



J. P. DUNPHY
20 years
December, 1942
Engineering Field
Wood River Refinery



N. MALLORY
20 years
December, 1942
Dispatching
Wood River Refinery



F. O. LORTS
20 years
December, 1942
Coke Disposal
Wood River Refinery



W. C. DAVIS
20 years
December, 1942
Land
Midland, Texas



W. C. BEAN
20 years
December, 1942
Exploration
Wichita Falls, Texas



G. L. SHANKS
20 years
December, 1942
Shell Pipe Line Corp.
Head Office



H. E. KEENE
20 years
December, 1942
Engineering Field
Wood River Refinery



F. H. SCHLAPRIZZI
20 years
November, 1942
Personnel, H. O.
New York, New York

E. E. WHITAKER
20 years
December, 1942
Lubricating
Wood River Refinery



Lieut. J. P. McKeon, U.S.N.R. (right in inset), and Lieut. J. S. Morse, U.S.N.R., of the Detroit Division were honored at a dinner by fellow employees upon their departure for Service. Lieut. McKeon reported for training at Princeton University, Lieut. Morse at Massachusetts Institute of Technology.



Employees of the Minneapolis Division honored C. B. Goodman with a dinner at Radisson Hotel, Minneapolis, on the occasion of the Operation Manager's transfer to Boston Division.



Two teams active in the Houston Community War Chest campaign were composed entirely of Shell employees. The Central Division Team covered a residential district, hit 173% of quota.



The Houston Office's Industrial Division Team contacted business firms, achieved 114% of their goal.



O. F. Minor, St. Louis Division Area Manager (left), handled publicity in a recent St. Louis Navy Recruiting Campaign which developed 16,000 enlistments. He is shown watching Jack Starr, St. Louis sports announcer, being sworn in the Navy.

Head Office employees recently attended a special showing of the Shell movie "Ten Thousand Feet Deep" and U. S. Treasury Department film "Bonds at War." President Alexander Fraser, in a brief address, emphasized that a continuance of favorable war news depends upon adequate supplies reaching our forces. "And regular, systematic purchase of War Bonds," he said, "makes a steady stream of supplies possible."



...ed to
ing of his speedy

...own
...quick and efficient service in fueling
...many of the contesting and visiting planes.

The accompanying group of celebrities includes, left to right:
Clifford W. Henderson, Managing Dir., Natl. Air Races; Maj.
James H. Doolittle, Shell's Aviation Mgr.; Mary Pickford;
Vincent Bendix, donor of the Bendix Trophy, and Louis W. Greve,
Pres. Nat'l. Air Races of Cleveland, Inc., and Greve Trophy donor.



Archie... great pride in the clean
that an immaculate and business-like ap
ists than any other single feature.





When Miss Grace Swail (second from left at head table) left Baltimore Division to join the WAACS, she was tendered a farewell dinner by other women of the office.





SPAIN

MAJ. GEN. JIMMY DOOLITTLE

It is now *Major General* Jimmy Doolittle, the top military figure from the Shell ranks having again been promoted after nomination by President Roosevelt.

General Doolittle won his first star and a Congressional Medal of Honor for his air raid on Tokyo last April. His latest honor is in recognition of his services as commander of the Army Air Force in North Africa. The highly successful invasion of that territory owed much, it has been said, to the efficiency of air operations.

IN THIS TEMPLE
AS IN THE HEARTS OF THE PEOPLE
FOR WHOM HE SAVED THE UNION
THE MEMORY OF ABRAHAM LINCOLN
IS ENSHRINED FOREVER



February 1937

SHELL NEWS



While the city sleeps, a cameraman comes upon this picturesque winter view of one of Detroit's picnic spots at Belle Isle. In the background is the Detroit River reflecting the lights along the Canadian shore in Windsor, Ontario.