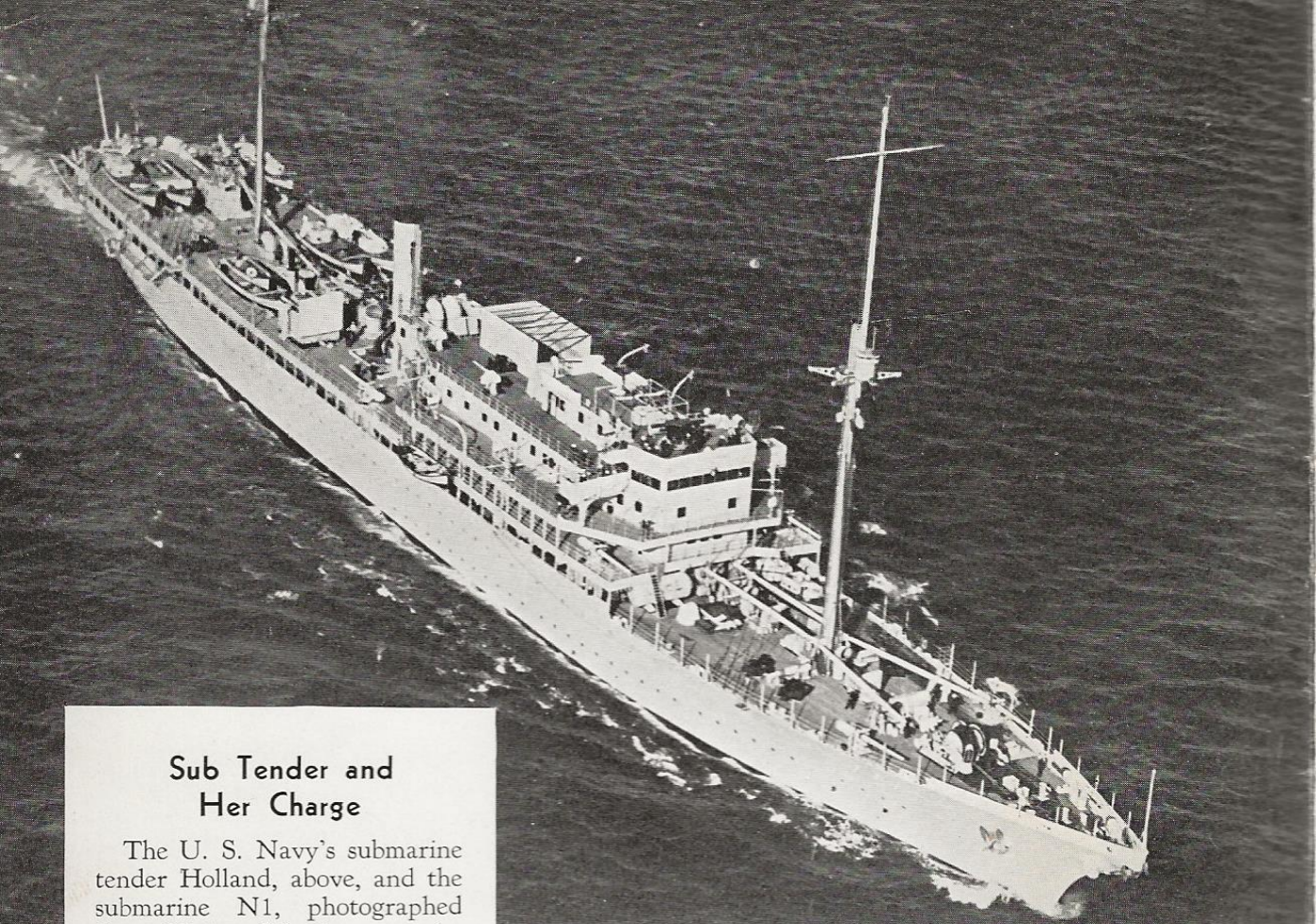


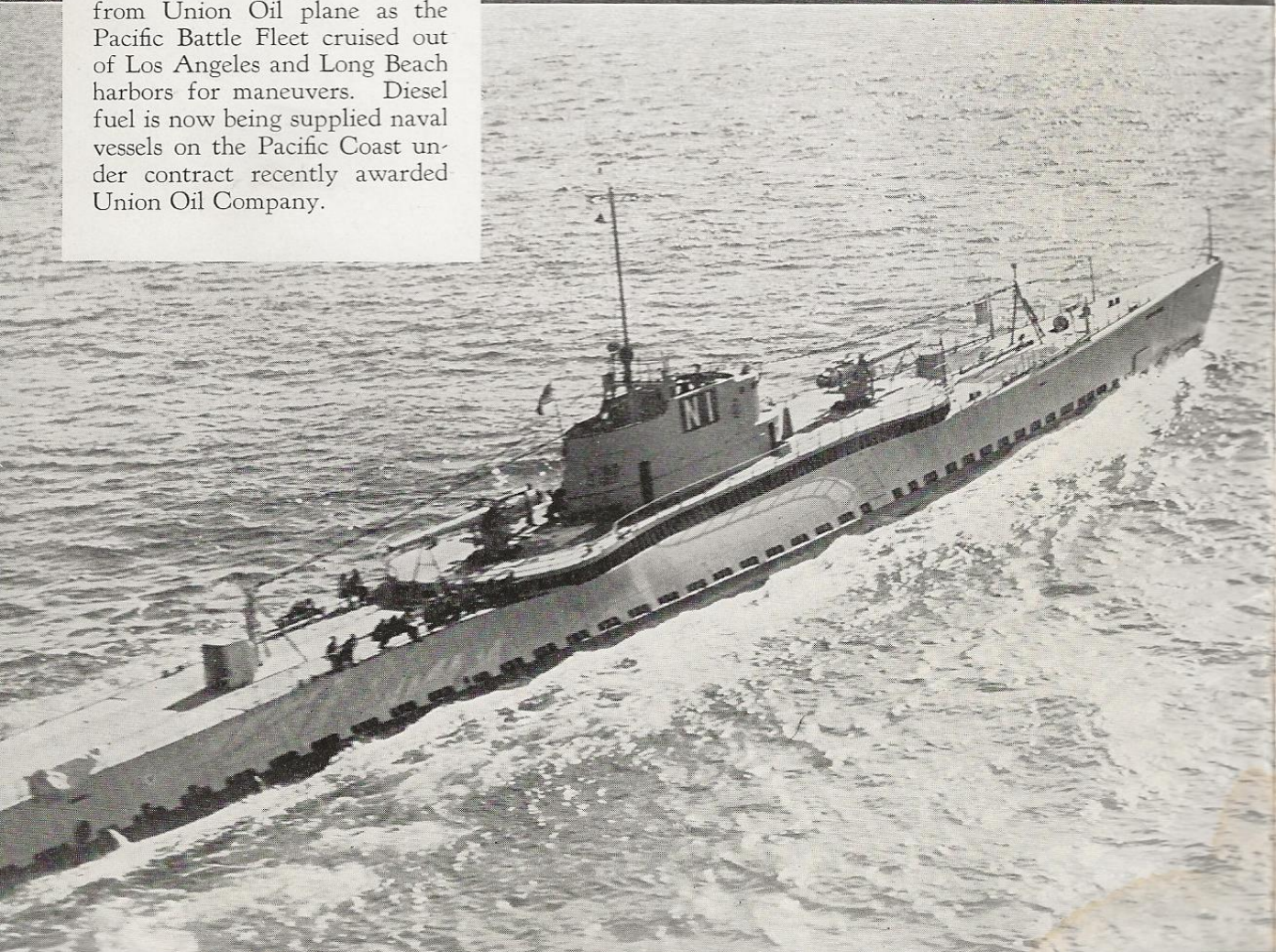
UNION
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BULLETIN

AUGUST 1931

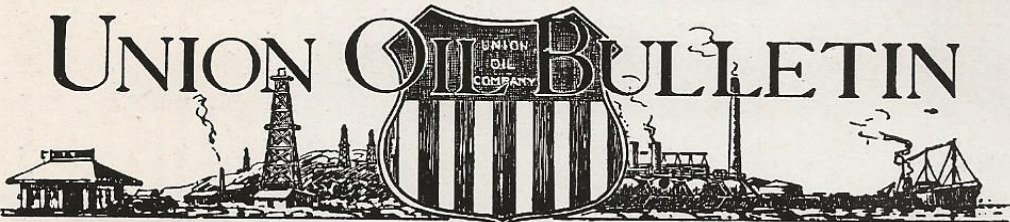


Sub Tender and Her Charge

The U. S. Navy's submarine tender Holland, above, and the submarine N1, photographed from Union Oil plane as the Pacific Battle Fleet cruised out of Los Angeles and Long Beach harbors for maneuvers. Diesel fuel is now being supplied naval vessels on the Pacific Coast under contract recently awarded Union Oil Company.



UNION OIL BULLETIN



EXECUTIVE COMMITTEE* AND OFFICIALS

| | |
|-------------------------|-----------------------------------|
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Safeguarding Tanker Cargoes

PROMPTED by the tragic history of men lost and ships destroyed as a result of conflagrations on the high seas, particularly among commercial oil carriers, leading oil companies have sought a means of minimizing the fire and explosion hazard inherent to the transportation of highly volatile petroleum products by tanker.

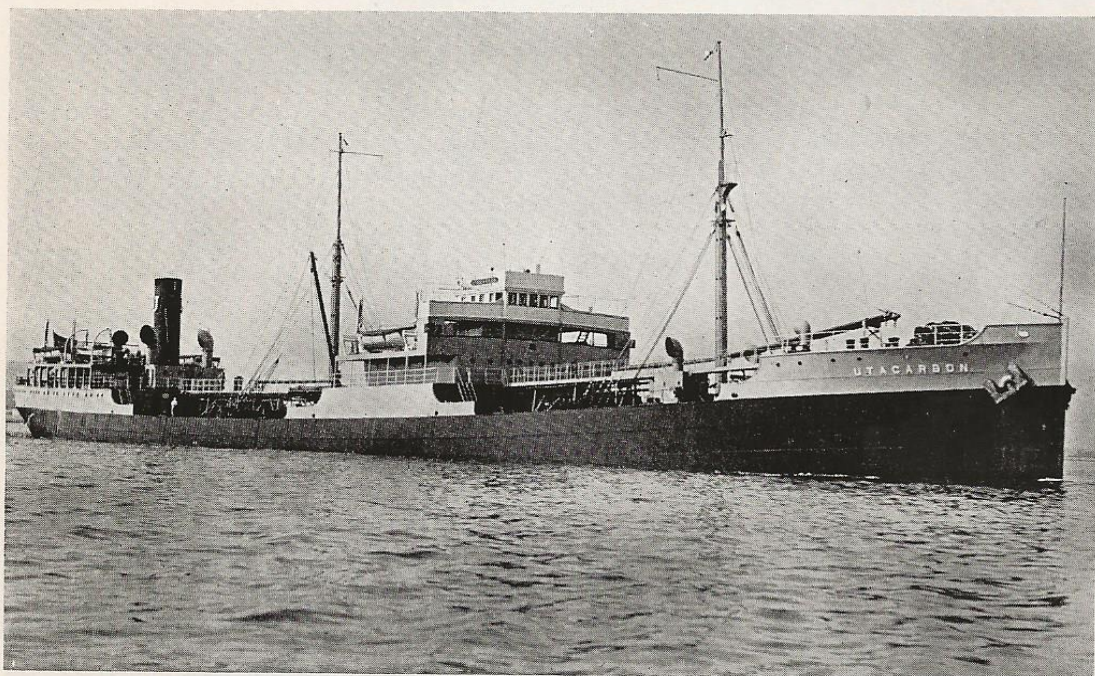
Most effective, simple, and economical of the various possible methods of reducing fire hazard aboard a tanker is the inert gas system which was recently installed in the Union Oil Company tanker Utacarbon. Inert gas has been used with much success on other oil carriers, and has in recent years played rather an important part in the protection of earthen storages from ignition by direct or induced electrical charges.

The knowledge that a mixture of air and gasoline vapor is potentially as explosive as a charge of dynamite, and that vapor without air is comparatively negative in combustible characteristics, led to the adoption of the inert gas, or carbon dioxide

(CO₂) system. It was apparent that the displacement of air in the cargo tanks by a non-combustible substitute practically eliminated the possibility of fire or explosion. The presence of only nine per cent of carbon dioxide with the gasoline vapor renders the combination non-inflammable.

The inert gas used in the system is produced in the combustion of fuel under the ship's boilers. Were it possible to obtain perfect combustion of pure carbon in the burning process, the 21 per cent of oxygen in the air would combine with carbon to produce 21 per cent carbon dioxide. However, foreign substance in the fuel, such as hydrogen, and the necessary presence of an excess amount of air in the fire box of the boiler, reduce the carbon dioxide content in the flue gas which is drawn off to approximately 12 per cent, well above the minimum requirements.

The carbon dioxide is taken from the center boiler through the introduction of a



Her cargo tanks protected from fire by a carbon dioxide system, the refined oil carrier Utacarbon is shown here clearing the breakwater at Los Angeles harbor.

ten-inch steel pipe in the boiler breeching. The heat of the gas at its source is approximately 650 degrees Fahrenheit. In order to lower this temperature, and at the same time eliminate all foreign substances, such as unconsumed carbon and ash, both discoloring agents, the gas is run through two scrubbers which are nothing more than a couple of salt water shower baths. To induce the gas to enter and pass through the scrubbers to the main supply line, a steam ejector is connected to the second cooler, the ejector consisting of a nozzle through which steam passes at high velocity. The friction of the steam jet is the basic principle of the operation.

The gas from the scrubbers, cleansed and cooled to about 65 degrees, passes to the control room where a seal tank and indicators are located. A dryer box in which all remaining trace of moisture is removed from the gas, adjoins the control room. From here the gas, now ready for distribution, is passed through an eight-inch header line running to all tanks.

When discharging cargo, the inert gas system is set in operation and the flue gas forced into the space above the dropping

gasoline level, displacing any air which might combine with the gasoline vapors to produce a combustible mixture. This operation continues until all unloading is completed. During the loading process incoming gasoline displaces the inert gas, which is released via the tank connection to the header line, from where it is conducted up the inside of two hollow steel masts to vents which permit escape to the atmosphere.

To purge the tanks of the gas, a six-inch air line has been constructed parallel to the eight-inch supply line, with smaller connecting lines leading to the fill pipes in the tank bottoms. If it is desired to air out the tanks the flue gas shut-off valve is closed, and the fresh air inlet opened. The air is passed through the system from the bottom of the tanks, forcing the gas out through the mast vents.

Safety features have been engineered into the system. Two diaphragm-operated regulator valves control the steam to the ejector. One is activated by the cooling water and shuts off the steam in the event of a failure of water pressure. The other is connected to the flue gas distribution line and provides constant pressure by increas-

ing or decreasing the steam to the ejector as the pressure in the tanks falls or rises. An automatic spring-loaded, steam-operated valve closes the main supply line in case the steam pressure to the ejector fails. Two water seals are provided in the line; one to prevent the backing up of gasoline vapors into the furnace and the other to release excess tank pressure to the atmosphere. Should the pressure or temperature become too high or too low, an electric howler in the engine room disrupts the usual quiet of that department and a remedy is immediately effected. A carbon dioxide indicator records the efficiency with which the system is operated. When the needle dials 12 on

this gauge, all hands know the Utacarbon's cargo tanks are safely guarded from fire.

The Utacarbon is at present the only tanker in the company's fleet in which the inert gas system has been installed. Its use in other carriers of the fleet is under consideration.

PHOTOGRAPHIC COVERS

As a measure of economy the reproduction of paintings on the covers of *The Bulletin* has been temporarily discontinued. Photographs will be used in the future. The two unusual views reproduced this month were taken by Will Connell.

Los Angeles to Celebrate 150th Birthday



Colorful historical parades and pageants will be among the features of *La Fiesta de Los Angeles*, Sept. 4-13, when the city celebrates the 150th anniversary of its founding. Five major events stand out during the celebrations—a Grand Historical Pageant, International Rodeo, Parade of the Counties, Motion Picture Pageant, and International Air Fiesta. Coupon books have been issued by the Fiesta Association which grant the holder at least one admission to each of the five events, and represent an actual cost of only half the price of individual tickets. Employees can obtain these books through Personnel offices at Head Office, Santa Fe Springs, and Los Angeles Refinery.

Century and Quarter of Service



At the top, left to right, are: F. W. Bayley, L. S. Klink, and F. O. Pressey. Bottom, Lafe Todd and W. J. Robertson.

Wears 20-Year Pin

Except for a year, during which he worked in the Field Department at Santa Maria, J. R. Humphreys has been affiliated with the comptroller's department in the head office for the past twenty years. His work has been mostly on gauge tables, where exact figures are kept on the capacity of all company-owned or leased storages and the amount of oil in each.



J. R. Humphreys

TWENTY-FIVE years ago last month F. W. Bayley, L. S. Klink, F. O. Pressey, W. J. Robertson, and Lafe Todd each entered upon a quarter of a century of uninterrupted service with the Union Oil Company and today are wearing service pins ornamented with three rubies in recognition of that service. There are at present approximately 30 employees who have served the company for a period of twenty-five years or longer.

Employed July 28, 1906, F. W. Bayley began his service with the Union Oil Company as a pipefitter's helper. During his quarter century of effort for the company he has served successively in the canning and barreling departments at refineries, on the loading docks, and as stillman on virtually every type of still. He is at present asphalt stillman at the Los Angeles refinery, where he has been located since 1919.

L. S. Klink's service dates from July 15, 1906, when he went to work with a surveying outfit

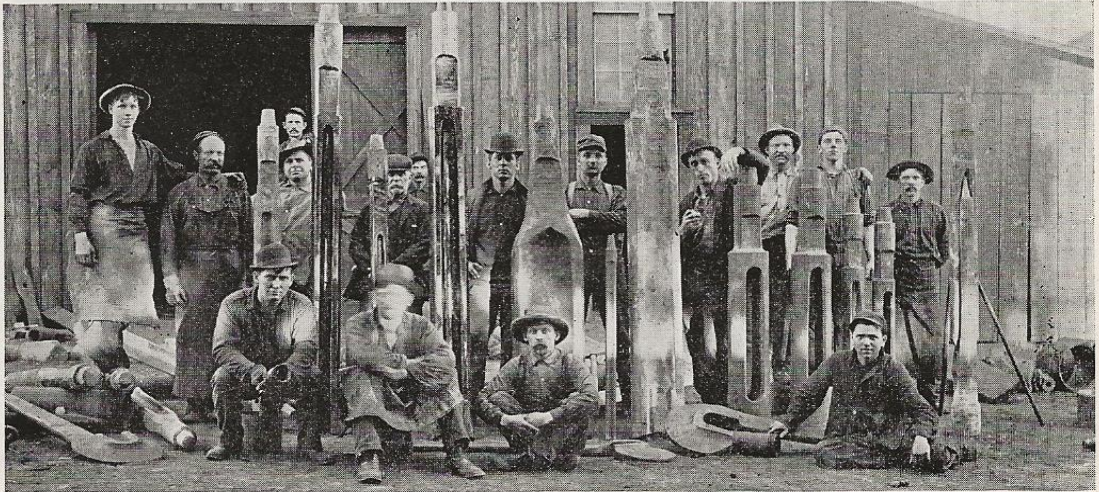
in the Coalinga district. He was transferred in 1907 to Orcutt, where he moved drilling tools by horse and mule team. From tool rustler he became tooldresser, and for the past twenty years has filled various positions in the development activities of the company. In 1922 he was transferred to the southern division and has worked there since that year.

To F. O. Pressey, who is at present but 44 years of age, goes the distinction of being possibly the youngest twenty-five years' employee the company has. At the age of 19 Pressey obtained first employment as roustabout on the Ventura Pipe Line. For sixteen years he served as pipe line gauger and in the past seven years has filled the positions of chief clerk and dispatcher for the field and pipe line departments at Santa Paula. Born in that city, he lived across the street from Union's first refinery and machine shops. Vivid in his memory is the night the refinery was destroyed by fire, a string of tank cars which subsequently burned presenting the most spectacular display of fireworks he'd ever witnessed.

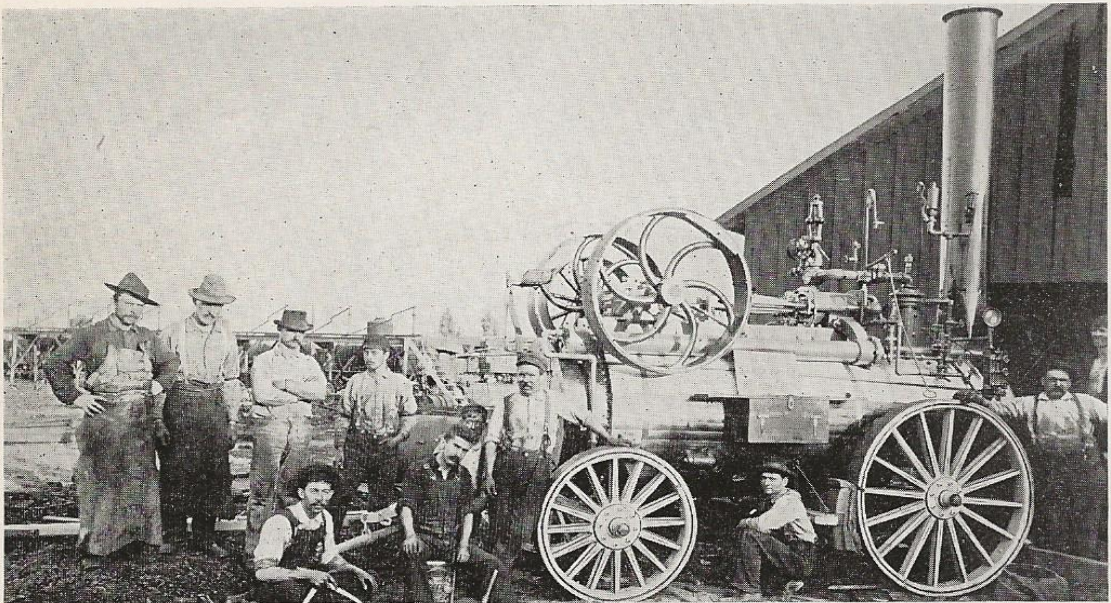
W. J. "Billy" Robertson, a native of Scotland, first found employment through W. L. Hardison, one of the founders of the Union Oil Company, at the Santa Paula refinery in 1891, and while his period of continuous service dates from 1906, he has served, with the exception of a few months, on Union Oil properties for the past 40 years. In 1894 Robertson helped move a portion of the refinery equipment to Oleum. In 1896 he returned to Santa Paula as apprentice

machinist, working under Edward Double, who later became president of Union Tool. In 1901 he left, but within a few months was back in the oil fields, at work for the Columbia Oil Company on Columbia No. 2, a well on the Stearns ranch which Columbia had leased from Union. Re-employed by the company in 1906 as pumper on the Stearns lease, Robertson later worked as tooldresser and for the past twenty-three years has been driller, tool supervisor, and again driller in Southern California fields. He is an entertainer of no small ability and among employees has earned the title of "Harry Lauder of the Pacific."

Harking back to early days at Santa Paula, Robertson recalls a thresher the Santa Paula shops completely built for farmers in the Ventura Valley, then the largest bean producing area in the world. This thresher was a straw burner and was the most difficult and complete job the shop had turned out up to that time, every part being built in the shops. The construction of storage tanks and refinery equipment were regular duties in the shops. During his brief sojourn at Oleum, Robertson assisted in setting up stills, steam agitators, and asphaltum kettles. Capacity of the stills at the time was only 200 barrels throughput per day. The S. S. George Loomis, the first tanker to carry supplies from Oleum to the San Pablo bay area, came to the refinery to load, and Robertson remembers that many of the refinery crew were shangaied aboard for a night when she got into the mud while docking and had to back off and lay in the bay until morning.



Taken about 1895, this picture presents the combined forces of the machine and blacksmith shops of the Union Oil Company at Santa Paula in that year. W. J. Robertson, twenty-five year employee who furnished the picture for the BULLETIN, while unable to identify all shown here, points them out as follows: Standing, left to right: Wm. McGee, unknown, Lou Spitler, Richardson, Ed Larson, Jack Riddick, Phil Taylor, C. Maxsmith, and the others are unknown. Sitting are Frank Dinger, Joe Krepsey, W. J. Robertson, and William Jones.



The pride of a bygone day, this straw-burning thresher was built entirely within the machine shops of the Union Oil Company at Santa Paula in 1896 for bean growers in the Ventura valley. Beyond the group of men on the left can be seen the old loading rack at the Santa Paula refinery. Shown in the picture, standing, from left to right, are George Whitmer, Ed. Nelson, two men whose names are not recalled by W. J. Robertson, owner of the original photograph; Fred Jones, machine shop foreman in 1896; Wm. Woods, and Joe Merrick. Seated are: Ben Younken, now an officer of the National Supply Company; Fred Stewart, deceased, son of Lyman Stewart, W. J. Robertson, and Wm. Fry.

Lafe Todd, at present general superintendent of the northern division, has seen changes of considerable magnitude occur in the methods of carrying on work in the transportation department during his twenty-five years' service. In horse and buggy days, due to long distances, it was necessary to carry camping equipment and pitch camp when night came rather than retrace steps to the nearest town. During heavy winters in Ventura county, rivers annually took their toll of pipe lines when they became swollen from rains. In order to re-establish the pipe line, it was necessary for someone to swim the stream with a line for swinging the pipe back into position.

Mr. Todd has been directly concerned with pipe line operations of the company since his first employment as a roustabout on the Ventura line. Later made foreman of the line, he continued in the capacity for four years, then going to the Stewart Tank Farm. The construction of a four-inch line from Ventura to Oxnard called him back to pipe line work the only time he sought to secure work in the field department. Transferred to Orcutt in 1914 as foreman of the Lompoc Pipe Line, he later became foreman of the San Luis Tank Farm. Two years later he was made assistant chief engineer of the Producers and Lompoc Pipe Lines. 1918 found him in the position of assistant superintendent, and in 1922 he came to the Los Angeles Pipe Line in a similar capacity. The year following, when Wm. Groundwater was moved to the

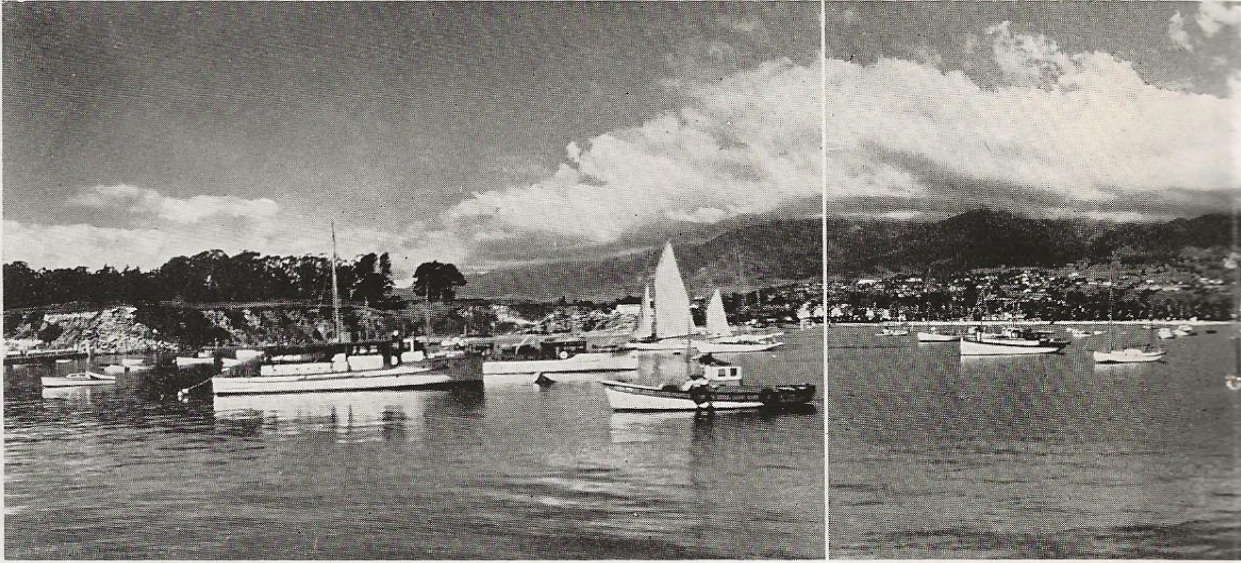
head office, Mr. Todd took over the duties of superintendent of the Producers and Lompoc Pipe Lines, which post he filled until his elevation to the position of general superintendent northern division, May 1, 1930.

Fifteen Years

| | |
|-----------------------|--------------------|
| Brown, Frank A..... | No. Div.—Pipe Line |
| Dana, Leslie R..... | No. Div.—Pipe Line |
| Duke, Albert E..... | Vancouver Sales |
| Schul, George A..... | Los Angeles Sales |
| Kuykendall, J. G..... | Marine Transp. |

Ten Years

| | |
|-----------------------------|---------------------------------|
| Anderson, John..... | Fresno Sales |
| Boxell, Morris L..... | Head Office, Oleum |
| Brennan, Edna..... | Head Office, Traffic, San Fran. |
| Carrier, Samuel H..... | So. Div., Pipe Line |
| Charleville, Nina..... | Head Office, Traffic |
| Fields, Earl..... | So. Div. Field |
| French, Merton C..... | Head Office Sales |
| Johnson, Albert G..... | Seattle Sales |
| Kipper, Alma Helene..... | Los Angeles Sales |
| Magnes, Lorenzo Don..... | San Diego Sales |
| Maxwell, Maurice H..... | Los Angeles Sales |
| Minor, Herbert Francis..... | San Francisco Sales |
| Ragatz, Edward G..... | Head Office, Dev. Div. |
| Smiley, William L..... | Sacramento Sales |
| Strick, Frank L..... | Central Sales Construction |
| Swaney, Harry M..... | Oleum Refinery |
| Wilson, Earl C..... | Head Office Sales |



It was such a scene as the above, minus, of course, the breakwater, the pleasure craft and the buildings that dot the hillside, that the venturesome Cabrillo viewed from the deck of his vessel when he dropped anchor in Santa Barbara Bay in 1542, nearly 80 years before the Pilgrim Fathers landed at Plymouth Rock. Again in 1602 the placid waters of Santa Barbara Bay captured the attention of Sebastian Viscaïno, who landed at the present site of the City of Santa Barbara to give it its name. In 1872, Father Junipero Serra, with Governor Neve, Captain

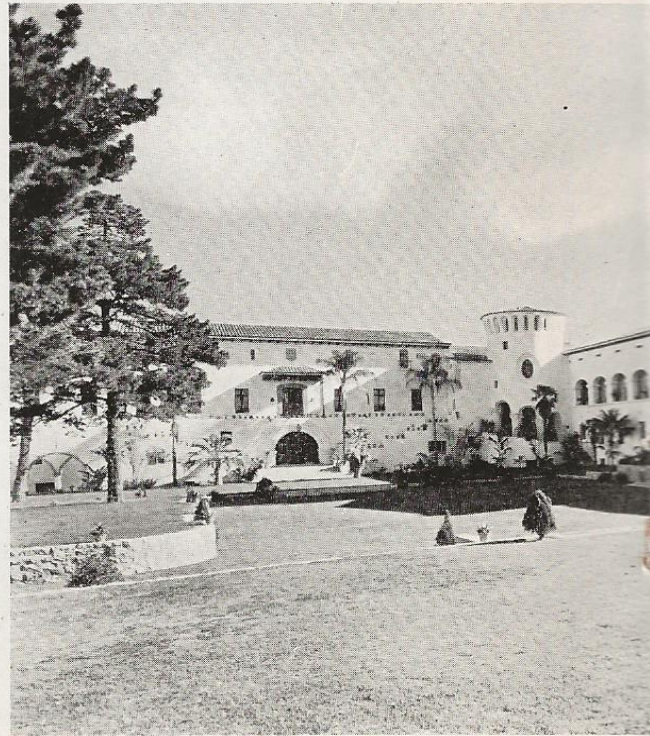
Ortega and their band of soldiers and missionaries, founded the presidio at Santa Barbara and laid the foundation for the building of a permanent settlement.

August 27, 28 and 29, the residents of Santa Bar-

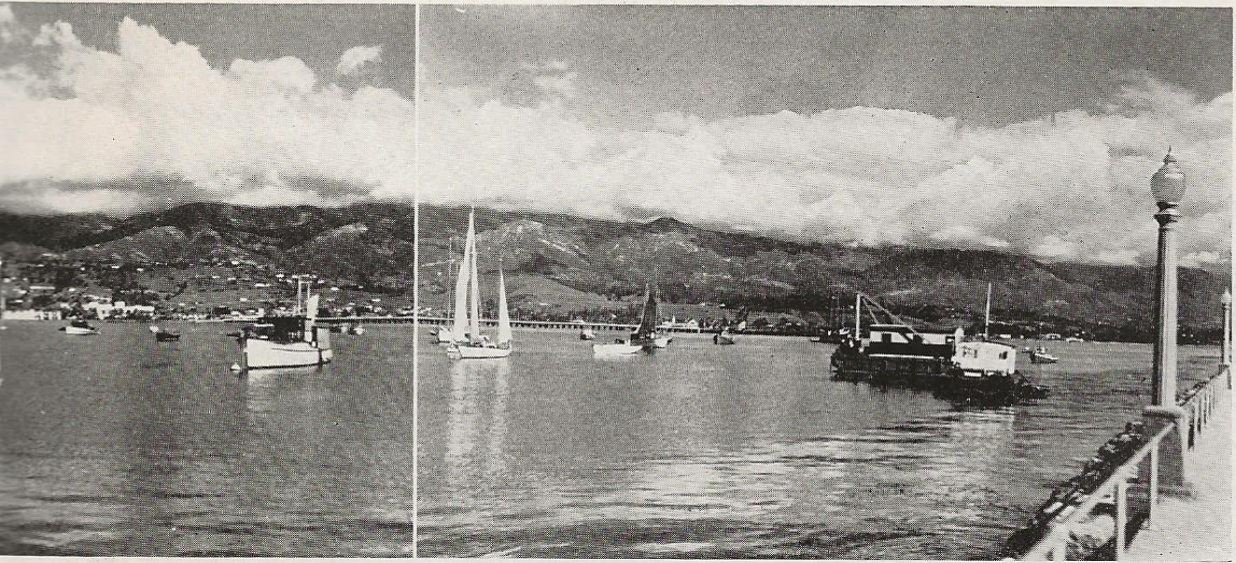
Santa Barbara and He



An old Spanish street painstakingly reproduced by Santa Barbara architects and builders.



The new Santa Barbara courthouse, one of the most beautiful where an expedition, in 1770, headed by Gaspar de Portolá, took the route to Alta California.



bara will hold their eighth annual "Old Spanish Days" celebration. The occasion will revive the color and splendor of the past.

Santa Barbara is one of the few early California cities to retain its Spanish background. This has

been accomplished through an architectural renaissance, started in 1922, which has witnessed the carrying out of a Spanish atmosphere in virtually all of the new buildings erected in the city. An earthquake, which in June, 1925, destroyed a large number of buildings, further stimulated building and made possible the broadening of the program to erect buildings of harmonious Spanish design. The result has been one of the outstanding civic achievements on the Pacific Coast.

er Spanish Ancestry

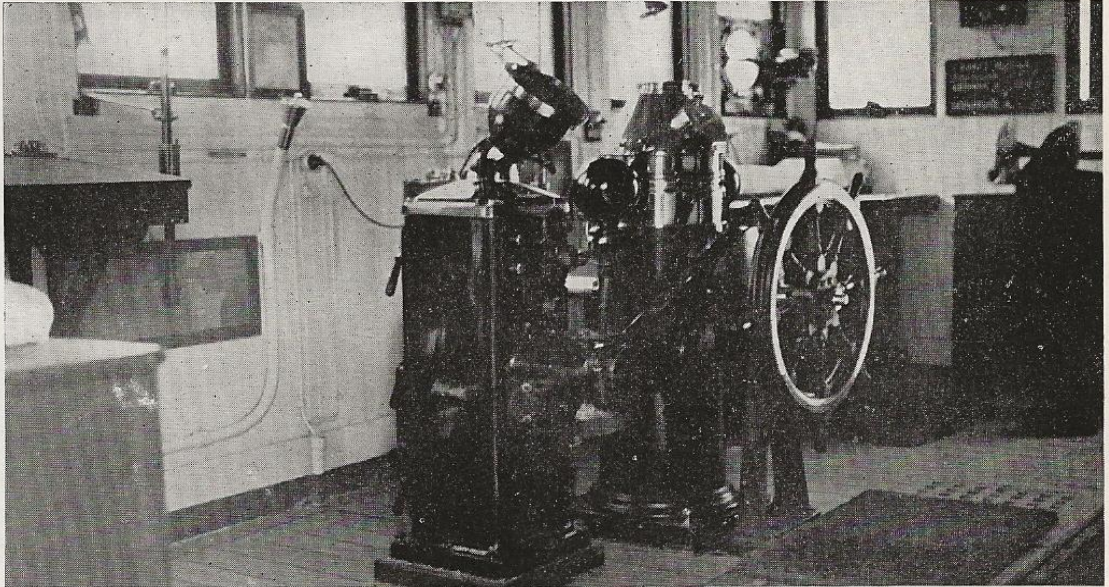


tiful civic buildings in the West, erected on the site
a and the illustrious Father Junipero Serra, camped en
to establish a mission.



One of Union Oil Company service stations in Santa Barbara which carries out the spirit of the Spanish architecture.

Ballroll Solves Gyro Compass Lubrication Problem



Sperry Gyro control equipment on bridge of the Royal Mail Motorship Aorangi.

Last September, after several failures of ball bearings in the Gyro Compass motor on the Royal Mail Motorship Aorangi, operating between Vancouver, B. C., and Australia and New Zealand, Union Oil Company's Ballroll Grease, light, was tried in the equipment with instant

and lasting results. To date no further bearing trouble has developed. As a result of the success scored with the Gyro Compass motor, Union lubrication engineers have been called on to run a test on the vertical shaft bearings in the engine room.

Twenty Years a User of Union Gasoline



Union gasoline has been used in the automotive fleet of the Los Angeles Saratoga Chip Company for twenty years, and is declared by Mr. Ginsberg, of that company, to have contributed to the low running cost of the delivery equipment. The above photograph shows a portion of the fleet of trucks in front of the factory.

The "Flying Dutchmen" of Outboard Racing



In the upper left photograph you see "Hienie" Fluhrer, Southern Oregon sportsman and outboard enthusiast, recent winner of the Portland Sweepstakes in Class D. In the upper right photograph is "Dutch" Welch, Northern California Class D



champion, while in the center is Gene Wright, chief mechanic, a familiar figure at Southern Oregon Boat Club races, who is a booster for Union motor oil and gasoline used by leading motorboat racing drivers, including Fluhrer and Welch.

Sowing Rice by Airplane

Planting of rice by airplane is one of the latest labor-saving innovations to find favor in California. The leading exponents of this highly modernized way of sowing rice are the owners of the Hughes and Johnson ranch, covering several thousand acres in the vicinity of Sacramento. Two planes operating under average conditions can sow from 500 to 600 acres a day. Recently, however, two planes of the Merced Wawaona Air Lines of Merced sowed 900 acres in one day. The cost per acre is only one dollar, considerably under cost of other methods.

Planes used for this purpose carry seven sacks of grain each trip. This is put in the front cockpit, which is lined with canvas. Two four-inch shutters at the bottom of the pit are manipulated by the pilot. In sowing the rice the planes are flown 20 to 25 feet above the ground at a high

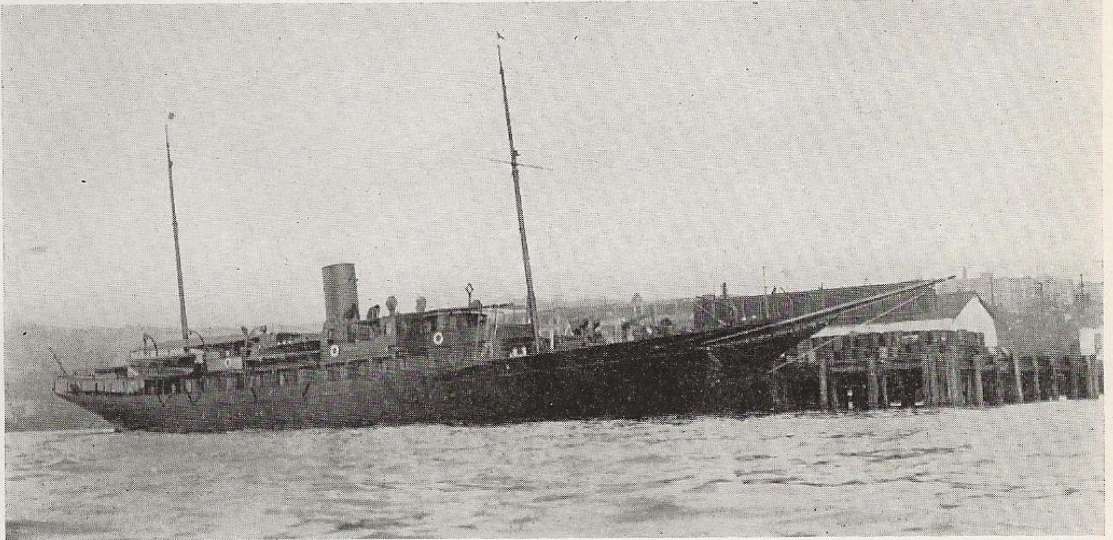
rate of speed. A width of approximately 30 feet is covered at one time. To obtain an even stand the fields are crisscrossed.

Preparatory to sowing rice from the air, the fields are divided into small sections and dikes built up around each section to a height of from 18 to 30 inches. The land is then flooded with from 10 to 15 inches of water which is kept circulating by a large pump to maintain a fresh flow of water on the land at all times.

By sowing the rice in the water it matures from ten days to two weeks quicker than it does otherwise and prevents the birds, ducks and mud hens from eating the grain as it is planted.

Both the Hughes and Johnson ranch and the Merced Wawaona Air Lines are 100 per cent users of Union products.

Yacht Haida Takes on Diesol for Alaskan Cruise

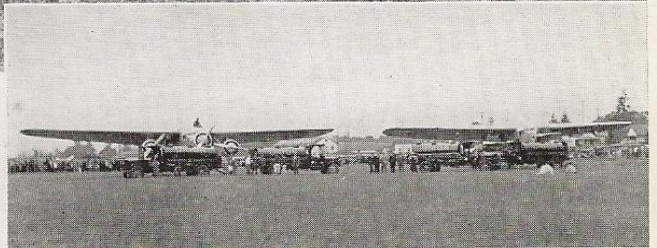


The black-hulled, 235-foot yacht Haida, owned by Maj. Max Fleischmann of Santa Barbara, Calif., manufacturer, explorer and author, photographed at the Union Oil Company dock in Seattle where she took on a capacity supply of Union Diesol for an extended Alaskan cruise.

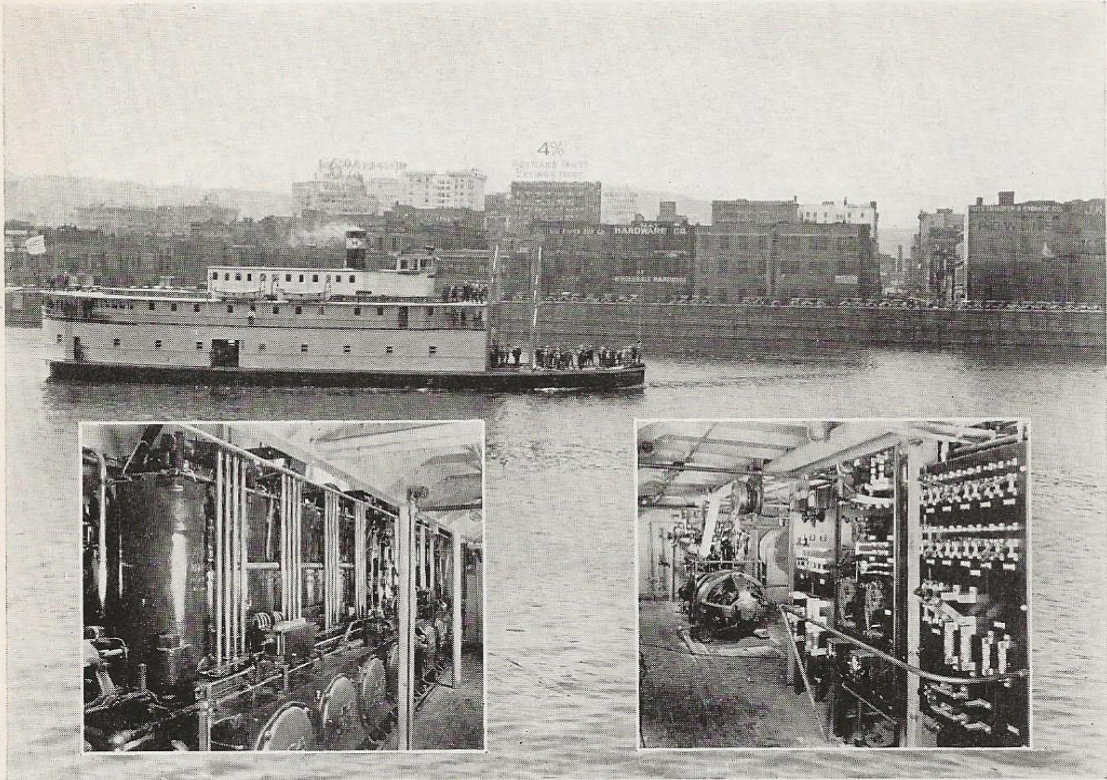
Union Gasoline for Army Air Squadrons



One hundred and forty Army planes from Mather Field, Sacramento; Rockwell Field, San Diego; Marsh Field, Riverside; Long Beach and San Francisco participated in the dedication of the Long Beach Municipal airport, July 17 and 18, by the U. S. Army Air Corps. These planes were all supplied with Union Ethylized Aviation gasoline from the Long Beach sub-station. The photograph at the top shows one of Union trucks used to service the planes. The lower photograph was taken at Pearson Field Vancouver, Washington, while two of six Army transports and 36 pursuit planes, en route to California from the East, were being serviced by Union Oil Company attendants.



New Type River Boat Launched at Portland



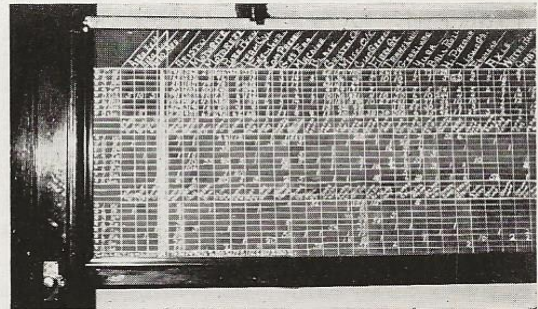
The motorship *L. P. Hosford* is shown above on the Willamette River, with Portland's downtown skyline looming in the background. The inset at the left is of the 500-horsepower Diesel engine which powers the craft. The engine room control board, as well as the auxiliary power unit, is shown in the inset at the right.

Replacing the orthodox river steamboat, which to some extent has become outmoded since the advent of modern methods of land transportation, the motorship *L. P. Hosford*, built by Harkins Transportation of Portland, Oregon, was launched last month and immediately placed in operation between Astoria and Portland.

Innovations in the design and operation of the boat are numerous, the most outstanding being the craft's marine elevator up forward on the main deck. It is so built that it can be raised or lowered to the level of any loading dock on the river and carries a large steel apron which can be swung into place from the floor of the elevator across to the dock, presenting a trucking way from boat to dock.

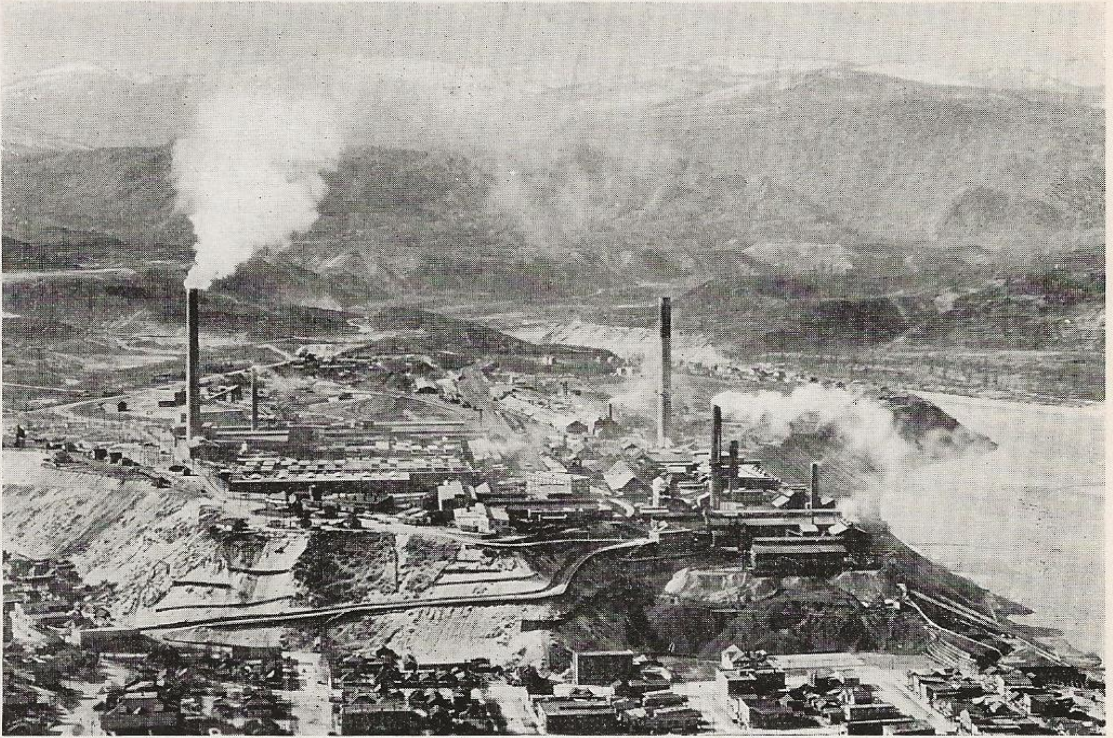
The *L. P. Hosford*, which has a cargo capacity of 425 tons and passenger accommodations for 75, is 160 feet long, has a 30-foot beam, and draws six feet of water loaded. It is powered with a 500 horsepower Atlas Imperial Diesel engine capable of driving the boat at a speed of 14 knots. It is equipped with a 40-horsepower auxiliary Diesel. Union lubricants are being used throughout in the engine room equipment.

Portland Sales Blackboard



The blackboard record kept on the recent "commodity sales" campaign conducted in the city of Portland resembled a stock exchange board by the time entries covering sales of 225 different Union Oil Company products had been made.

Largest Canadian Smelter Is User of Union Products



This bird's-eye view of the Consolidated Mining and Smelting Company's smelter at Trail, B. C., the largest in Canada, not only gives an excellent vista of the company's extensive operations, but shows as well the ruggedness of the country in which the plant is maintained. The Consolidated Company is a consistent purchaser of Union Oil Company oils and greases for use in its plant machinery.

Taft Concerns Repair Storm King's Damage



Some conception of the ravages of the cloudburst which swept through the athletic field of the Taft, Calif., Union High School, and of the activity engendered in effecting immediate reconditioning can be obtained from this picture.

As the result of a cloudburst in the Cuyama Valley June 7, a torrent of water swept through a portion of north Taft, Calif., filling garages with mud, undermining houses, depositing a layer of debris over the entire area, and virtually ruining the athletic field of Taft Union High School.

With a state athletic meet—one which for many years they had tried to obtain for Taft—scheduled for one week hence, officials of the school sent out an emergency call for all available equipment in the vicinity which could be pressed into immediate service in reconstructing the athletic grounds.

The Oilfield Trucking Company and the C. C. Simms Trucking Company, both of Taft, responded with trucks, graders, and tractors, and sales representatives of the Union Oil Company stationed a truck on the field so that the operating equipment could be refueled and supplied with lubricants on the job. Four days and nights the work of rebuilding the field went forward.

When athletes from all sections of the state gathered on June 14, a week after the flood, the track was again in excellent condition and several state records were equaled during the meet.

Thirty Tons of Locolube for Union Pacific



Interior of warehouse at Oleum refinery showing a portion of the 60,000 pounds of Union Locolube ready for shipment.

The largest single order (60,000 pounds) received for Union Locolube, in the six months this new high pressure locomotive lubricant has been on the market, was recently placed with the company by the Union Pacific System. It was the fourth large order for the new grease received from the railroad, and brought the total amount to more than 160,000 pounds.

Union Locolube is a soft grease developed for high pressure lubrication of locomotives to do away with hand oiling on the various moving parts. It has a totally different base than cup and fiber greases. In numerous tests it has proven far more economical and efficient than competitive greases and has given more miles per pound in operation than any other product on the market. While developed primarily for high pressure locomotive lubrication it has been found ideal in industrial plants where lubrication problems similar to those existing on railroads have been encountered. It will not break down on coming in contact with water, and, as a

result of tests recently conducted, has been placed on the approved list by the U. S. Navy for airplane rocker arm lubrication.

A prominent lubrication engineer connected with one of the major railroads, in commenting on Union Locolube following a series of tests conducted under his supervision said: "Early in the development of locomotive soft grease lubrication it was found that ordinary greases would not remain on the perpendicular sides of driving boxes and locomotive shoes and wedges. Ordinary running temperatures developed in driving boxes caused the grease to melt and feed too rapidly to the grease grooves, causing excessive waste and requiring frequent attention. Union Locolube, after becoming fluid at high temperatures, becomes viscous when exposed to the air and does not run from the perpendicular bearings nearly as rapidly as other greases. Our service engineers report that Union Locolube will lubricate perpendicular parts of driving boxes for runs as high as 885 miles without intermediate attention."

SAFETY IN THE UNION



Frequency Rate of Personal Injuries First Half of 1931 Compared With First Half of 1930

| | Frequency Rate | |
|----------------------------|----------------|-------|
| | 1931 | 1930 |
| Union Oil Building Mtnc... | 0. | 0. |
| Construction—So. Div.* | 46.0 | 36.6 |
| Field—California | 22.2 | 31.8 |
| Coast | 14.3 | 13.0 |
| Santa Fe Springs | 25.9 | 38.1 |
| Drilling | 47.0 | 40.6 |
| Production | 3.5 | 16.9 |
| Shop | 18.3 | 70.2 |
| Trucking | 43.2 | 62.0 |
| Valley | 7.7 | 0. |
| Ventura | 0. | 52.7 |
| Gas—Both Divisions | 13.3 | 14.4 |
| Northern | 0. | 0. |
| Southern | 15.3 | 16.8 |
| Marine | 9.7 | 23.7 |
| Pipelines—All | 20.8 | 18.6 |
| Los Angeles | 12.0 | 8.1 |
| Producers & Lompoc | 26.6 | 25.1 |
| Purchasing Warehouses | 0. | 0. |
| Refineries | 8.5 | 2.9 |
| Avila | 0. | 0. |
| Bakersfield | 0. | 28.3 |
| Los Angeles | 10.2 | 1.4 |
| L. A. Lubricating | 18.8 | 0. |
| Oleum | 7.2 | 3.6 |
| Santa Paula | 0. | 0. |
| Vancouver | 0. | 0. |
| Research | 18.2 | 0. |
| Sales—All Districts | 10.1 | 21.7 |
| Central Div. Garage | 0. | 0. |
| Fresno | 7.2 | 15.2 |
| Honolulu | 0. | 156.1 |
| Los Angeles | 6.5 | 28.3 |
| L. A. Garage | 0. | 0. |
| Oakland | 24.2 | 18.4 |
| Panama | 0. | 0. |
| Phoenix | 70.7 | 25.2 |
| Portland | 12.2 | 15.6 |

| | Frequency Rate | |
|----------------------|----------------|-------------|
| | 1931 | 1930 |
| Sacramento | 17.9 | 11.5 |
| San Diego | 0. | 33.5 |
| San Francisco | 3.4 | 24.3 |
| Seattle | 2.5 | 15.1 |
| Spokane | 6.4 | 20.2 |
| Vancouver | 9.0 | 19.8 |
| Sales Construction | 23.0 | 28.9 |
| COMPANY TOTAL | 12.3 | 19.4 |

*Departments for which work was done include the construction accidents in their rates.

Accident frequency rate is the number of lost time injuries per million man hours.

More Records Tumble



The cameraman snapped this flashlight photograph while the record-breaking Willys-Six roadster was being refueled with Union Ethyl gasoline on its 500-mile run at Muroc Dry Lake last month, during which seven American stock car Class C records were established. The speedy car, driven by Eddie Hughes, shown here in the driver's seat, averaged 70.2988 miles per hour for the 500 mile test. The event was sanctioned by the American Automobile Association.

REFINED AND CRUDE



By RICHARD SNEDDON

The big surprise of the month was undoubtedly experienced by the Austin owner who drove into the Third Street tunnel in Los Angeles and came out of a gopher hole in Whittier.

* * *

And do you know that some people actually believe all University graduates become bond salesmen. Whereas, as a matter of fact, many of them sell vacuum cleaners.

* * *

"This is the quarter deck," said Captain Uhren to the young lady visitor aboard the "DEROCHE." "Oh, how fascinating," she beamed, "and would you mind showing me what you have for fifty cents?"

* * *

During one of these perennial revolutions in Mexico, it was reported that the besieged troops called a truce and offered to trade two generals for a can of condensed milk.

* * *

"The boss says he isn't in. Is there any message?"

"Yeh. Tell him I never called."

* * *

A friend received one of these chain letters some time ago with instructions to make nine copies, mail them to nine more individuals, and on the ninth day some great good fortune would come to him. Being particularly fond of great good fortunes he complied with the instructions, and sure enough on the ninth day he received—two more chain letters.

* * *

Said the young lady to the clerk in the sporting goods store, "May I see some of your large handicaps, please. My husband said if he'd had one yesterday he would have won the golf tournament."

* * *

We can imagine that a fool and his money are easily parted, all right, but where the fool gets his money in the first place is the thing we can't understand.

* * *

The careful driver approached a railroad crossing. As usual he stopped, looked, and listened. As usual, all he heard was the car behind him crashing into his gas tank.

A certain Union Oiler has just returned from a vacation in the mountains and declares he investigated territory on which the hand of man has never set foot.

* * *

Which reminds us of the actor who fell over the footlights on his try-out night, and only got his leg in the cast—whereat the entire gallery was in fiers.

* * *

Statisticians tell us that a pedestrian is run over every three hours in Los Angeles. Some pedestrian.

* * *

A stream of lead poured forth—as the clerk unscrewed the top of his eversharp, so this is no gangster tale.

* * *

In an altercation between two Englishmen the following conversation ensued:

"The only difference between you and a horse is that a horse wears a collar."

"But, I wear a collar."

"Then there's no difference at all."

* * *

Still they say the English have fine manors.

* * *

And this tale, although somewhat ancient, is good enough to pass along to the rising generation:

A contractor on his daily tour of inspection arrived at a home building job just as the structure completely collapsed, whereupon he assailed his foreman in these words: "You idiot, didn't I tell you to put up the wall paper before you took away the scaffolding."

* * *

The utmost degree of cooperation is absolutely essential to the success of the oil business, in fact to the success of any business. We are certain for instance that if Junior's freckles would just get together he'd have a dandy coat of tan.

* * *

And in conclusion remember your home is no crematorium, so don't scatter your ashes all over the place.

