

UNION OIL BULLETIN

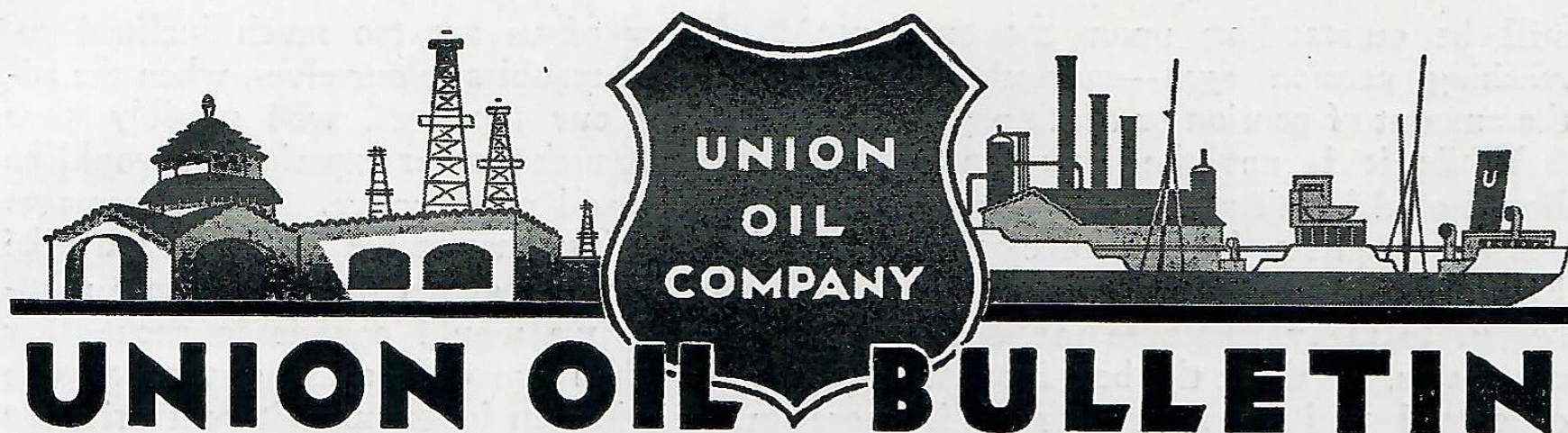
A black and white photograph of the St. Johns Bridge in Portland, Oregon. The image is taken from a low angle on the bridge deck, looking towards the left. The bridge features two prominent Gothic-style towers with pointed arches and intricate steelwork. Numerous suspension cables fan out from the towers to support the bridge deck. In the foreground, the bridge deck is visible with a metal railing. A street lamp is mounted on a post near the railing. In the distance, another smaller tower of the bridge is visible. The sky is a uniform light gray.

APRIL, 1934

St. Johns Bridge, Portland Ore.



Logging train of Sauk River Lumber Company, Darrington, Washington, passing through grove of cedars on its way to the logging camp.



EXECUTIVE COMMITTEE* AND OFFICIALS

*L. P. ST. CLAIR.....	President
*R. D. MATTHEWS.....	Executive Vice-President
*W. W. ORCUTT.....	Vice-President
*W. L. STEWART, JR.....	Vice-President
*PAUL M. GREGG.....	Vice-President and Counsel
A. C. GALBRAITH.....	Assistant Vice-President
JOHN McPEAK.....	Secretary
GEORGE H. FORSTER.....	Comptroller
J. M. RUST.....	Treasurer
F. F. HILL.....	Director of Production
R. E. HAYLETT.....	Director of Manufacturing
V. H. KELLY.....	Director of Sales
WM. GROUNDWATER.....	Director of Transportation
*A. B. MACBETH.....	Director

Published Monthly by the UNION OIL COMPANY OF CALIFORNIA for the information of its employees and stockholders.

•
Unless marked "Copyright" articles in this magazine may be used in any other publication.

•
Address all communications to the "BULLETIN," 709 Union Oil Building, Los Angeles, California.

Provident Fund Loans

By **GERALD G. BLUE**
Manager Insurance and Personnel

TOO many employees are inclined to look upon their personal credit in the Provident Fund as a "Savings Account," to be drawn upon whenever they see fit, as has been evidenced by the number of "repeat" requests for loans which have been received in the past by the Board of Administrators of the Fund.

This condition can and should be rectified by each department manager or representative in the various districts taking a very real and personal interest in each case presented, and only sending forward those requests which are urgent and cannot be arranged in any other way.

Many requests have been received which at first glance looked like reasonable ones. On further discussion with the employee, it was possible to effect a considerable reduction in the amount of the request, and

in some instances the matter was arranged with the creditors of the employee on terms which were satisfactory to all concerned, thereby eliminating altogether the necessity for drawing on his or her Provident Fund credit.

A difference should be established between an unexpected calamity, such as sudden serious illness or death in the immediate family, and a condition which with reasonable judgment could have been foreseen, and therefore budgeted out of earnings, such as taxes, insurance premiums, assessments, and purchase of radios, automobiles, etc.

The primary object of the Provident Fund is to provide for an adequate pension upon retirement of the employee, or a substantial payment in the event of death—and the granting of a loan (part of which may

still be outstanding upon the employee reaching pension age)—seriously impairs the amount of pension or death payment.

While it is not the intention of the Board of Administrators to discourage any merited requests for assistance from the Fund, as this provision has been a very real benefit to many employee members in recent years, we think the best interest of all concerned will be better served if more personal thought was given to each individual request.

Many of us are too much inclined to keep our troubles to ourselves, when the advice of our superiors, who possibly have gone through similar experiences, would be helpful and constructive. What seems to be an insurmountable obstacle may be eliminated altogether or reduced to a minimum if we would confide in each other more than we do, realizing that anyone who is human looks upon it as a privilege rather than a burden to "help the other fellow" whenever possible.

W. W. Orcutt Loses Arm In Accident

W. W. ORCUTT, senior vice-president of Union Oil Company and one of the West's best known petroleum geologists, lost his left arm, severed three inches below the shoulder, in an automobile accident on San Fernando road, three miles northwest of San Fernando, on the evening of April 3. His car was sideswiped by a truck, coming from the opposite direction.

The accident occurred at 9:30 p. m., while Mr. Orcutt was hurrying to the bedside of his mother, Mrs. Adeline M. Orcutt, who was critically ill in Santa Paula. She died a few hours after the accident.

The body of the truck ripped along the left side of Mr. Orcutt's coupe and completely severed his left arm which was resting on the doorsill at the time the two machines came together. Mrs. Orcutt, who was in the car with her husband, was unhurt and was the first to render first aid. Mr. Orcutt

was rushed by police ambulance to the hospital at Van Nuys, where he was given emergency treatment before being transferred to the Cedars of Lebanon hospital in Hollywood. Mrs. Orcutt remained with him until the following morning.

Attendants at the hospital paid high tribute to his courage and fortitude throughout the ordeal.

It was not found necessary to give Mr. Orcutt a blood transfusion at the hospital. Attending surgeons explained that the blow that had cut away the arm had miraculously pinched the main artery in such a way as to shut off the flow of blood. His vigorous physique enabled him to rally

quickly after the initial shock.

At the time the *Bulletin* went to press Mr. Orcutt was reported by attending surgeons to be improving rapidly. Next month he will have completed 36 years in the company's service. He is 65 years of age.



W. W. Orcutt



E. W. Hutton
Manager

Lubricants and Special Products

LUBRICATING oil for a 60-ton rotary kiln in a cement mill, or a centrifuging machine in a cleaning plant running at 9000 revolutions per minute; grease for the solid steel shafts of the driving journals of a steam locomotive, or the small rocker arms of an airplane motor; oil for mining machinery operating in sub-zero temperatures in Alaska, or for road-building equipment enduring the blistering heat of the desert; black oil for a hog's back to keep off the vermin, or white oil for cosmetics; agricultural and horticultural spray oils, or Bif spray for household insects; paint solvents for an Eastern automobile factory, or an oil substitute for brine used in refrigerating systems; oils for

rubber processing or battery sealing compounds; fluid for cigaret lighters, or solvent spirit for a spot remover; a metal polish, or an automobile top dressing—a list that embraces human needs in every walk of life, but their distribution is just routine for the recently consolidated Lubricants and Special Products department.

To "know your oil" is quite an assignment for the members of the department who must direct the sale of the multiplicity of lubricating oils, greases and special industrial, automotive and household products for the company. Every mail brings some new problem for them to solve: A hydraulic engineer is having difficulty in



R. Cubicciotti



T. F. Harms



J. P. Sidford



R. M. Harper



W. A. Montieth

lubricating a new type Diesel engine; a paint manufacturer requires a special thinner for a new product he wishes to market; the Army needs material to waterproof the fabric on the wings and

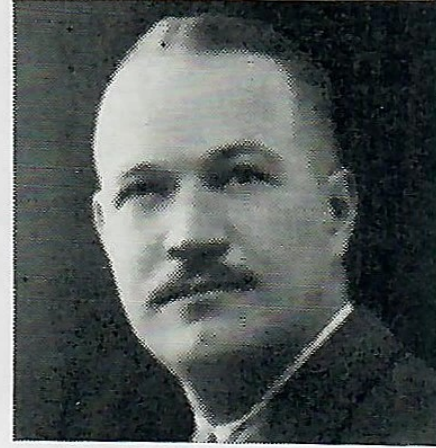


H. E. Bramston-Cook

fuselages of its combat planes; the sub-tropical conditions in Indo-China are complicating the lubrication of mill machinery operated by an English engineer; a Dutch mechanical engineer in Batavia, Java, in the Dutch East Indies, submits specifications for a special lubricant he requires; a trucking fleet owner wants advise regarding a transmission lubricant. New automobiles, new machinery—a constantly increasing demand for lubricants to meet new requirements, a constantly growing list of problems for the lubricating oil sales department to solve.

With customers in eighteen foreign countries and in the company's West Coast market constantly seeking information, members of the department are kept in consultation with the Manufacturing and Research departments in order to be able to obtain accurate and authoritative data.

Directing the diversified activities of the department is E. W. Hutton, who has had twelve years on the company's sales firing line. He served as manager of lubricating oil sales for three years prior to his recent assignment to also direct the sale of specialty products, including commodities for automotive, household and industrial uses. Mr. Hutton's initiation into the intricate demands of the users of petroleum products occurred in Portland, Oregon, where, in July, 1916, he was hired as a tank wagon (horse drawn) salesman for the Union Oil Company. After a few months he was sent to Astoria. The life of a tank wagon driver there was one thrill after another trying to control a skidding wagon on the steep hills or keep his horses from falling through the boards on the docks. By the end of the year he decided to return to his work as a mechanical and electrical engineer and continued in various enterprises until 1922, when, while working on a logging



Frederick Sykes

project for an eastern company at Tillamook, Oregon, he was asked to return to the Union Oil Company. He accepted and started out again as a tank truck driver, his headquarters being at Tilla-

mook.

This arrangement proved to lead directly to his present position. In contacting the lumber mills and logging camps in his agency he found that his mechanical training and experience enabled him to help solve some of his customers perplexing problems. Many of them had to do with lubrication. During the next few years he burned considerable midnight oil, profitably to himself, for in June, 1926, he was transferred to Portland as a lubricating engineer. His reputation soon won him promotion to the Los Angeles district, and, later, the assignment to Fresno as assistant district manager. In July, 1929, he was sent to Australia to assist in the organization of the lubricating oil sales department of the newly formed Atlantic Union Oil Company, Ltd. When his work was completed there he was called back to the head office as assistant manager of lubricating oil sales, receiving the appointment as manager of the department in October, 1930.

The present personnel has been carefully chosen. Three of the men—all taken into the department within the past eighteen months—have Manufacturing and Research training highly essential because of the technical information required of them. Happily, they combine sales ability with technical experience. The three men are R. Cubicciotti ("Cubi" to those of you whose ancestral limitations will not permit your tongue to get around the Italian consonants), T. F. Harms and H. E. Bramston-Cook.

All three are college graduates, Cubicciotti and Harms from the University of California, class of '25, and Bramston-Cook from University of British Columbia, class of '24. Cubicciotti and Harms, in addition to being from the same college were class-

mates, the former having graduated as a chemical engineer and the latter as a bachelor of science. At the time they obtained their sheepskins neither had any idea that their future work would be together. Harms had worked in the company's inspection laboratory at Oleum during his summer vacations, while attending college, and on graduation was made assistant foreman of the inspection laboratory. Cubicciotti applied his training in other quarters, but in March, 1926, entered the company's services as a chemist in the analytical laboratory at Oleum. That same year Harms was transferred to the Research department at Oleum as a chemist. The following year he was made assistant foreman of the compound in charge of the manufacture of grease. Cubicciotti, in the meantime, had been appointed technical assistant to the manager of the Oleum refinery.

In 1930 the foreman of the compound resigned and Harms was promoted to the vacancy, Cubicciotti being sent to the compound as assistant foreman. In 1932 Cubicciotti was transferred from Oleum to the Los Angeles lubricating division as assistant to the superintendent and in November of that year was selected by Mr. Hutton as one of his assistants. The following September, Mr. Hutton, looking for another technically trained man for his department, asked to have Harms transferred to his office, again bringing these two former classmates together.

During the World War Bramston-Cook served overseas with the Seaforth Highlanders and as a lieutenant in the Royal Canadian Air Force. He completed his schooling upon his return. For a short time after graduating from the University of British Columbia he held the position of lecturer in chemistry at the university. He entered the company's service in 1927 as a member of the Research department, and was transferred to the Manufacturing department in 1928 to take charge of refined oil treating at Oleum. In furthering his experience he was appointed supervisor of the lubricating division, handling the production of lubricating oils, greases and household specialties.

The early part of 1933 he was selected by A. C. Stewart, then manager of specialty sales, to handle the sale of industrial specialties, which embrace thinners and special solvents for the paint and varnish in-

dustry, battery sealing compounds, rubber solvents, stucco water proofing compounds, etc. When the specialty department was incorporated with the lubricating oil sales department Bramston-Cook continued his work under Mr. Hutton. Through the cooperation he has been able to extend to industries requiring special petroleum products—particularly in helping to solve vexing technical problems—he has greatly increased the company's business in this new field.

At the time Mr. Stewart started out to build up the company's automotive and household specialties, he called in Fredrick Sykes whose experience in the sale and promotion of merchandise of this character particularly suited him for the task. He is credited with developing many new products during the brief time he has been with the company, and under the new departmental arrangement has been placed in full charge of automotive and household specialty sales by Mr. Hutton. On the basis of sales so far this year, he expects to exceed the volume of sales for 1933, which were the largest and most profitable since the company inaugurated its specialty line.

In seeking a man to supervise the introduction of the Stop Wear lubrication system on the Coast last spring, R. M. Harper was selected to fill the position. His service dates from April 15, 1933, and in the short time he has been with the company has established a wide acquaintance from one end of the coast to the other in carrying on his Stop Wear work.

Prior to joining the company's sales ranks he served as sales manager for the Ferris Company, Texas automotive jobbers, and as division manager on the Pacific Coast for The Gray Company, automotive equipment manufacturer.

The most recent addition to the department is J. P. Sidford who was brought into the head office from Santa Ana, December 1, last. His service with the company, however, dates back to September, 1926, when he accepted the position of warehouseman at Long Beach. After juggling drums and package goods for a few months he took his place in the sales ranks, successively holding the position of salesman, office clerk, agent at Hawthorne, Watts, Culver City and Santa Monica. In 1930 he was transferred to Santa Ana as special agent, remaining there until his assignment to the

head office.

While his time is devoted almost entirely to bulk sales of industrial specialties, W. A. "Monty" Montieth is considered by Mr. Hutton as part of his head office staff. "Monty" is the oldest member of the department from the standpoint of continuous service, having been with the company since February, 1921, when he was employed as a sales representative in the Los Angeles district. Until his recent selection to handle industrial specialties he served in general sales capacities, devoting his chief

attention to lubricants. His orders came in for tank car lots.

"Monty" is a graduate of Yale and is still actively interested in track and field sports. In his personal collection are a large number of first place medals won during his college career. During the Olympics in Los Angeles he was one of the official judges in the high jump events, and now spends his Saturdays officiating in collegiate meets in various parts of the Southland.

Service Station Facilities Increased

WITHIN the past three months Union Service Stations, Inc., has officially launched eight new or completely rebuilt super service stations in the central and southern regions.

Two elaborate new plants were opened in Oakland, at Piedmont and Moss streets and Claremont and College streets. Both are the modern type structures being built by the company, with full use being made of new equipment and modern merchandising display ideas. Formal openings at both stations were highly successful, initial gallonage exceeding expectations of the most sanguine in the central region office. Sales, as the result of high first-day output, have continued at above normal for the respective locations.

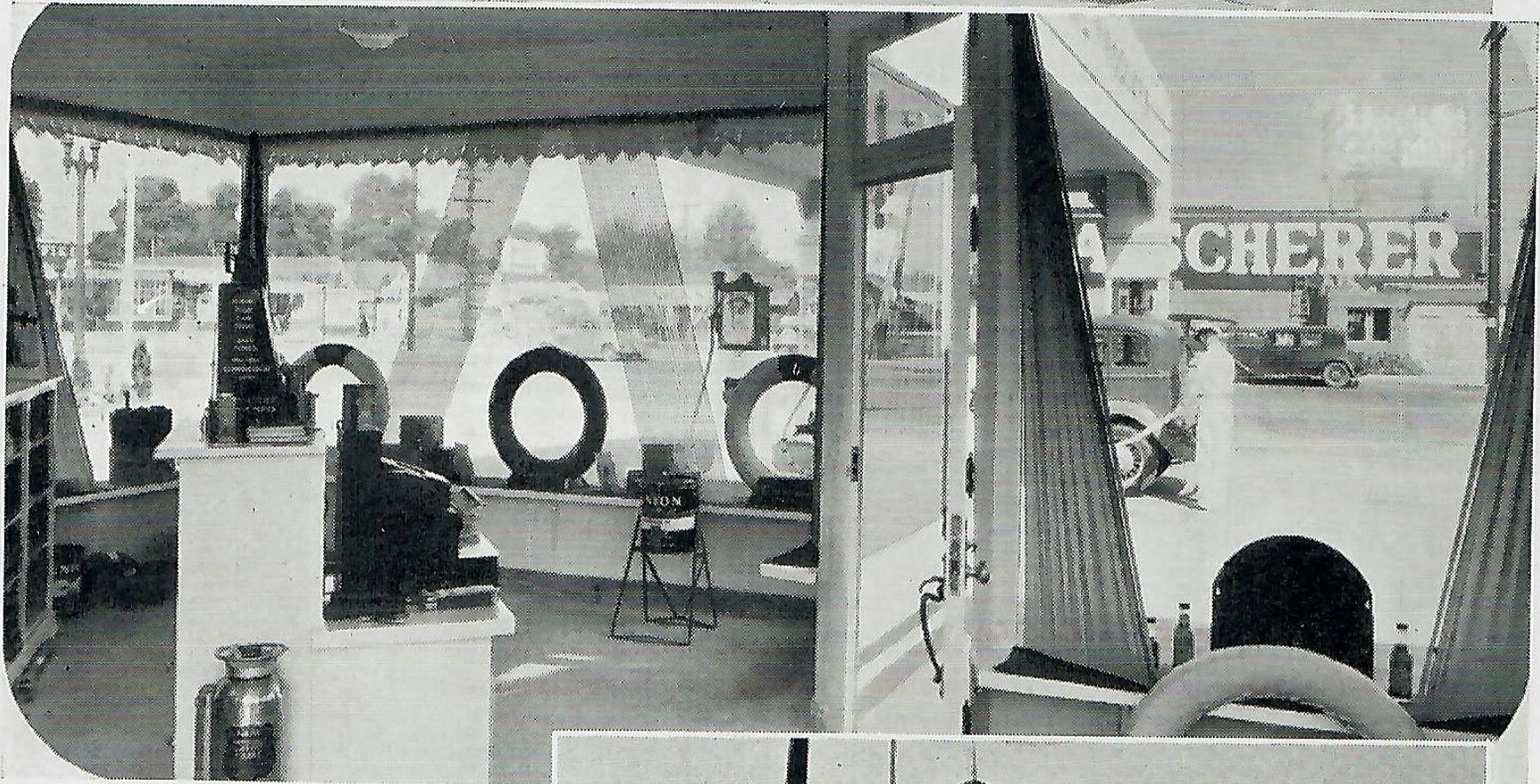
In Southern California, stations were opened during the past two months in Long Beach, Beverly Hills, Huntington Park,

and Los Angeles, three having initiated service in the latter city, and San Luis Obispo. The stations incorporate the latest designs used by the company in adding general visibility, both from the customer and service man standpoint. In the new stations, the combining of sales and service rooms has been furthered, increasing the attendants' ability to more quickly see incoming cars and meet them at the pump, yet making it possible for them to remain in the hoist room on service work without sacrifice to "front end" accommodations. Built-in features, such as spark plug and battery testing machines, have added to service facilities without detracting from the lines of the station or crowding sales or service rooms.

New stations are to be built within the next six months, and a number are to be rebuilt and re-equipped along super lines.

First Quarter Dividend

At a meeting of the Board of Directors April 9 a quarterly dividend of 25 cents per share was declared, payable May 10 to stock of record April 19.



New company operated stations opened within the past three months. Top, Huntington Park, in Los Angeles area; next is Long Beach, Calif., unit; the bottom is Piedmont and Moss streets station, Oakland. The interior view shows spacious sales room and the expanse of display space.



Oldest Company-Built Station Replaced

TWENTY-ONE years after the Union Oil Company opened its first service station in Los Angeles at Sixth and Mateo streets, its marketing subsidiary, Union Service Stations, Inc., launched on the same corner its finest super service unit, a station as different from its earliest predecessor as the respective ages of the two establishments.

Nor is the dissimilarity confined to purely physical features. Today the knowledge the men have of the automobile and the various problems involved in its maintenance and operation, and the manner in which they have been trained to use this information in servicing cars and offering assistance and guidance to the motorist, are as much improved over the "gas stand" operator as a modern airplane differs from the strutted crates which were miraculously lifted from the ground during the immediate pre-war era. The garb worn by the respective station attendants in the two periods offers parallel contrast.

Old No. 8 lost its number, its manager and his crew, and finally its complete identity, with the opening of the new modern station, and is now reduced to scrap material, while new No. 8, formally opened March 10, is well on its way establishing sales records for the Sixth and Mateo street location. In the first three weeks' operation, sales at No. 8 averaged approximately 300 per cent more than those recorded daily at the old station. When the Sixth street widening project is completed by the city within the next two months and the arterial is then able to carry its full quota of traffic, sales at the station will further increase.

The present site of station No. 8 is the one formerly occupied by the company's Los Angeles district offices. All the old buildings, many of which field employees will remember, have been torn down, and the plant yard radically changed. The service station was placed directly on the corner at the intersection.



The oldest and newest service stations built by Union Oil Company, both located at Sixth and Mateo streets, Los Angeles. The one on the left was built in 1913, and was abandoned with the opening of the station shown below.

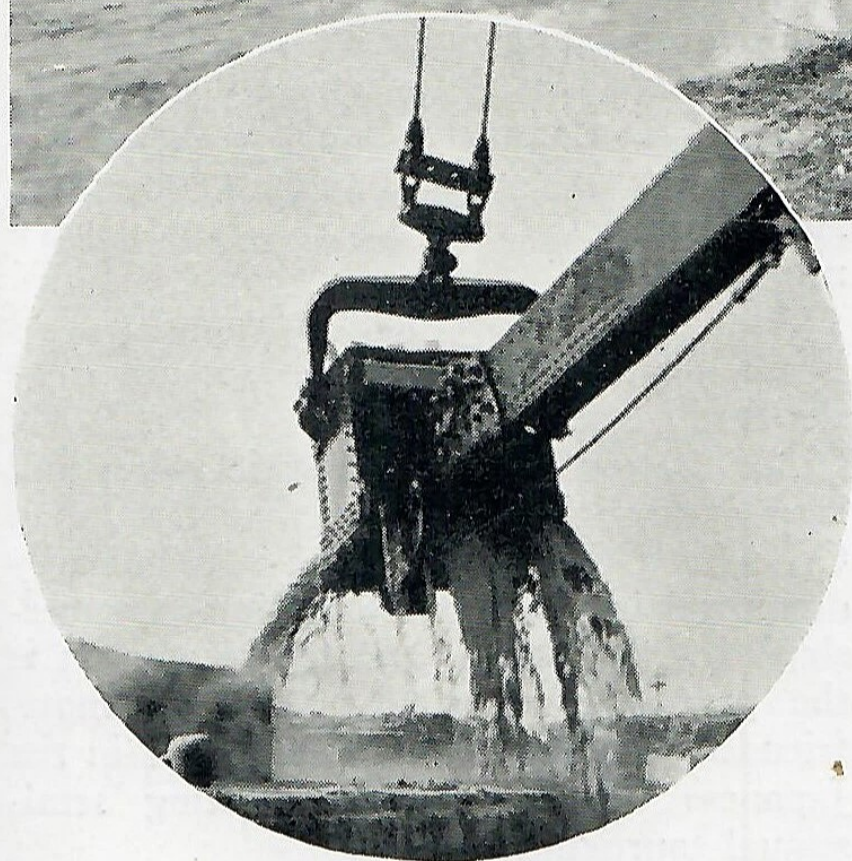
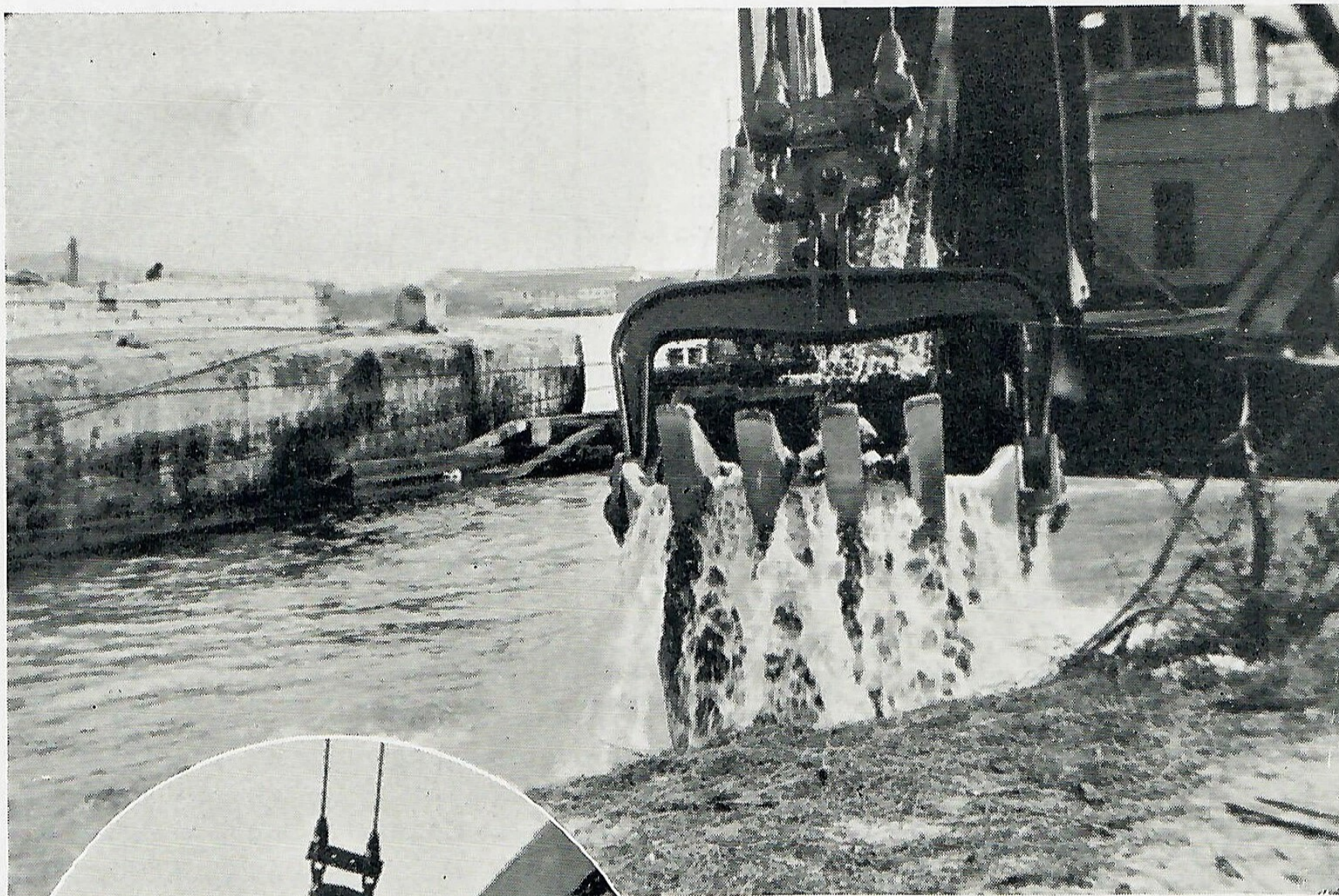


The station is representative of the modern brick and steel structures which Union Service Stations, Inc., is building. It has three wings branching off a spacious sales room which is inclosed in plate glass. Two of the wings form canopies for the pump islands. The other houses the hoist and car wash rooms where super service facilities are installed.

Automatic recording and computing

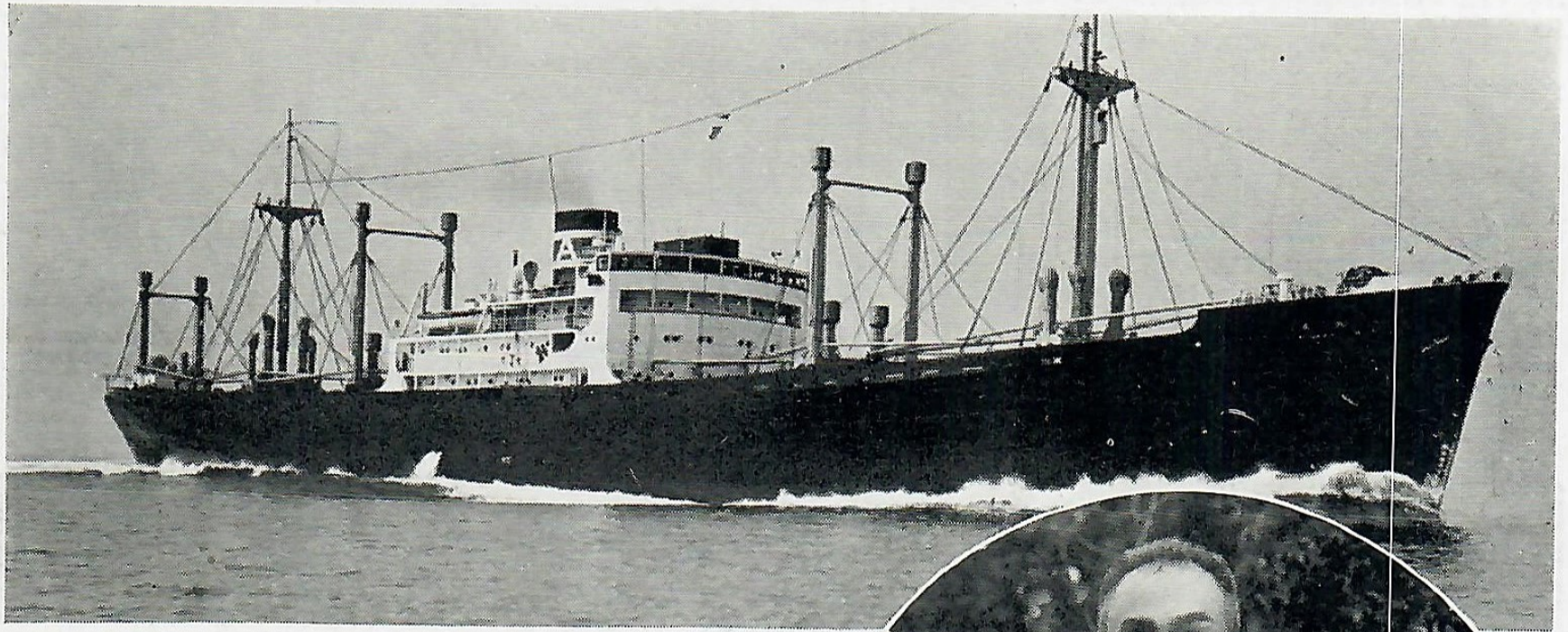
pumps, disappearing air and water hoses at each end of the pump island, built-in display cabinets in the canopy supports, and built-in spark plug and battery testers are the features of the station's equipment. Jimmy Shelvy, who operated old No. 8 for a number of years, has been installed as manager at the new location and is now capitalizing on the wide personal following which he has built up throughout the industrial section surrounding the station.

Deepening Honolulu Harbor



The "R. W. Atkinson," one of the Hawaiian Dredging Company's dredgers now on the job of deepening Honolulu harbor. The project involves an expenditure of approximately \$700,000 and will require 18 months to complete. Union Oil lubricants and greases are being exclusively used on the dredgers and tug boats operated on the job by the Hawaiian Dredging Company.

K. K. K. Line Launches Fast Cargo Carrier



New M/V Komaki Maru, speedy cargo boat of the Kokusai Kisen Kaisha, as seen on her maiden voyage from Kobe, where she was launched, to New York.

RATED as one of the speediest cargo vessels afloat, the M/V Komaki Maru was recently commissioned at Kobe harbor and is now in regular service of the Kokusai Kisen Kaisha between Japanese ports and New York. Plans for building three new boats similar to the Komaki Maru within the next three years are already being launched.

Powered with Japanese manufactured Shinko-Sulzer two-cycle, double acting airless injection type Diesel engines which develop 7600 brake horsepower, the Komaki Maru is capable of a maximum speed of 20 knots and cruises at 17 knots. This speed reduces the cargo boat run from Japan to New York to 25 days. The boat is equipped with a larger number of derricks operating with modern heavy-duty electric winches which greatly facilitate fast handling of cargo.

On its scheduled run, the Komari Maru will make regular calls at Manila, Kobe, Yokohama, Los Angeles, and New York, with bunker Diesel oil being taken aboard at San Pedro. The maiden cruise of the vessel was made on Union Diesol bunkers being taken from a supply brought over by her sister ship, the Kirishima Maru. Officers of the Kirishima Maru were transferred to the new boat when it was launched for service.

The Komari Maru is of 6470 gross tons, has a length of 478 feet, a beam of



G. Satow, manager foreign department, Asahi Petroleum Company, Tokyo, with the Union Oil Company golf trophy which he won in the 1934 Asahi-Kai tournament.

61 feet, and a molded depth of 40 feet.

The annual Asahi-Kai golf tournament held at the Kasumigaseki Country Club near Tokyo, to the winner of which the Union Oil Company trophy is presented, was last won by G. Satow, manager of Asahi Petroleum company's foreign department.

Asahi-Kai Association is comprised of Diesel oil distributors and is sponsored by the Asahi company.

Mr. Satow is an enthusiastic golfer and it was through his efforts that the Japan Oil Men's Golf Association was officially organized in 1933 with an initial membership of 100 Japanese and foreigners. It is the plan of the association to promote friendship among the representatives in the Japanese oil industry by holding semi-annual tournaments.

Death Ends Long Service



A. G. Page

A Gentleman Promoted

A man
 In whom nature planted
 With a generous hand
 Those qualities
 Of gentleness, tact, loyalty
 And consideration
 Which mark
 The gentleman—
 A man
 Whose fine mind
 Visioned to the end
 An ideal civilization
 Wherein the strong and able
 Shall help to lift his weaker brother—
 A civilization wherein
 Science aided by the Golden Rule
 Shall distribute nature's gifts
 Equitably—
 To all mankind—
 A civilization
 In which there is no deal
 But the Square Deal—
 To his family we say
 You should not grieve
 You should be proud that he has lived—
 To him we say
 Good luck
 A gentleman has been promoted.

—JOHN Y. QUAYLE

A. G. PAGE, formerly manager of refineries of the Union Oil Company and since 1930 advisor and consultant to the director of manufacturing, died at his home on Hobart street, Los Angeles, March 1, after an illness which had persisted since last October.

During the more than twenty years he served the Union Oil Company he won distinction in the technical field with which he was identified and the sincere loyalty of all who were privileged to work with and under him. He was scholarly, reserved, and at heart an idealist. He encouraged those who came under his jurisdiction and aided in their advancement. He was thoroughly grounded technically in the work he undertook, and appreciated and insisted in thoroughness in his own department.

He came to the Union Oil Company in November, 1913, as chemist at the Oleum, Calif., refinery. In recognition of his merit he was appointed assistant superintendent in 1915, and later elevated to the position of superintendent. In 1920 he was made manager of refineries and served in that capacity until selected as advisor and consultant to the director of manufacturing in April, 1930. In this position he advised on all new processes to be undertaken and developed. He was the company's representative sent to Germany in July, 1930, along with members from the technical staffs of 16 other major oil companies, to study the hydrogenation process.

Appointed to National Rivers and Harbor Committee

To voice the opinions of Western marine shippers and protect Pacific Coast shipping interests in formation of the general shipping code, William Groundwater, director of transportation, Union Oil Company, in company with other representatives of primary users of water-borne traffic, spent five weeks in Washington during February and March.

On his return to the coast, he was informed in dispatches from Washington that he had been appointed a member of the advisory committee of the National Rivers and Harbors Congress.

Up The Sauk River

By W. A. SPENCE

EVEN in this day of modern highways it is difficult to reach the forests where the highly specialized work of felling, bucking, yarding and loading of logs again holds sway under the new deal. But let's be on our way.

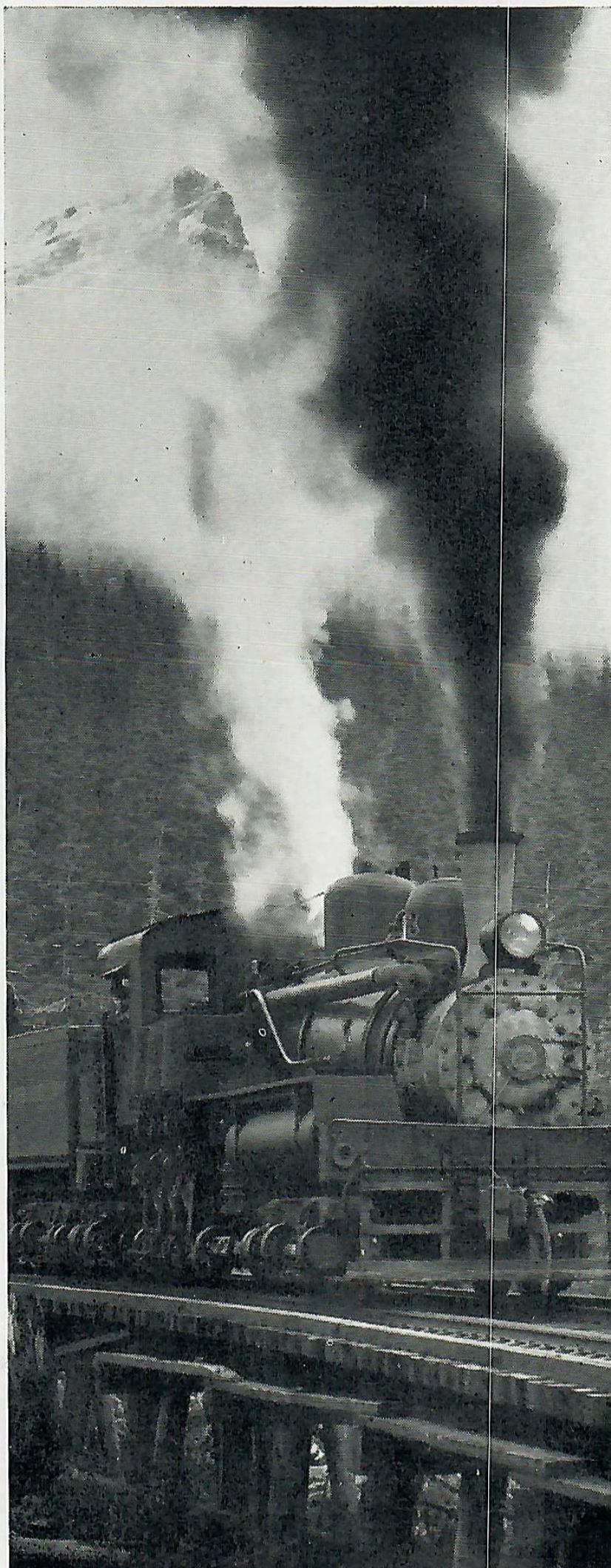
We drive north past the smoking stacks of Everett's mills until we reach that famous land-mark, the giant of Cedar Stumps, which 2000 years ago poked its face out of Mother Earth for a first glimpse of the sun. This marks the spot where the Arlington road branches toward the east, winding its way along those sheer canyon walls out by the restless Stillaquamish river. On reaching Arlington we follow the sign pointing toward Darrington. Mountains loom ahead—Three Fingers, Jumbo, Pugh and even old White Horse, wearing its mane of eternal snows. That's our destination.

In a short time we are in Darrington—our last chance! Two please—with pickle—and a cup of coffee. The speeder is just loading supplies including a tank of "76," and leaves in five minutes for the Sauk River camp. What a break.

We chase our gulped hot dogs down with coffee and we are away in the Sauk's open air, gasoline-propelled railroad speeder along the banks of the rowdy Sauk. No more highway, with its many signs, service stations and automobiles—we are lost to civilization. Snow-capped "Jumbo" raises its rugged gleaming crests on our right, and on the left is Mt. Pugh, with its jagged peaks and deep snow-filled crevasses.

Ahead is the camp of thirty or forty logging buildings. The buildings are provided by the Sauk River Lumber company for the comfort of those who turn these untamed forests over to civilization.

To see the real activities of the camp we must go up the left fork of the Sauk. We board a train of empties drawn by one of the company's locomotives, a 90-ton Sima Shay, known as No. 22, and geared to pull



Seventy-four-ton locomotive of the Sauk River Lumber company bringing load of logs down out of mountains.

these strings of cars around the curves and up the treacherous slopes of Mt. Pugh. A real test of locomotive strength and the film strength of Union Steam Cylinder lubricants.

As we reach a clearing we stop to watch the logs being swung down by cable from the mountain side to the track. A spar tree, trimmed of limbs, towers far above the tracks. Heavy yarding cable, handling the huge logs like match sticks run through large blocks near the top of the spar. Down the hillside, up over stumps, trees and gullies, nothing can stop the rush of these logs from thousands of feet away to piles being formed near the railroad. A small cable that runs through the smaller pulleys, fastened to stumps far up on the hillside, plays an important part in the skillful handling of the swaying loads. It is the haul back line. On the other side of the log pile, a donkey engine on skids, one of Sauk River Lumber company's 12'x14' Washington yarders, supplies the power. When it starts blowing forth steam the largest logs are moved about like toys.

But let's go on. There's a string of cars up ahead. The loader signals and another great log is carried off in the teeth of huge tongs and carefully placed on a flat car. This powerful engine is one of the company's 10'x12' Washington loaders, which uses what is known as the Guy-line system. The head loader on the job makes it look easy to operate. Down go the snapping tongs, and always they pick the right logs to balance the weight of the load on the cars; it is ridiculously simple! And just watch the engineer follow the loader's signals. No time lost here. The car is loaded and another moves up in its place.

In the ravine to the north the timber has hardly been touched, and fallers and buckers are in its midst hard at work. There's real timber. The man swinging the axe is known as the swamper or trimmer, and just watch him clean the logs of limbs and knots.

Over to our right are buckers at work. The man wielding the sledge hammer is driving a second wedge into the top of the cut; that makes the saw work easily and smoothly. If you step off the cuts on this tree you will find they are exactly thirty-two feet apart.

On a little further are the fallers, who

control, to a large extent, the amount of waste timber. Improper falling will cause waste through breakage and through inability of the buckers to make their cuts in proper lengths. To control the direction of the fall an undercut is first made on the side representing the direction in which



Some fast action during loading of logging train. The logs are lifted by cables run through blocks at the top of the spar tree, center, and attached to a drum on the donkey engine at the left.

the tree is to fall. The felling cut is then made slightly above and opposite to the undercut and as the saw buries itself in the trunk steel wedges are driven in behind it, preventing binding, and finally forcing the giant of the forest over in the desired direction.

There goes the whistle! The day is done, and there is a rush to board the last

train. At the fork of the main branch we board the comfortable inclosed man car and join the rest of the crews and Superintendent Mallonee, the man responsible for the successful operation of the camp during the last few trying years.

Darrington and civilization again. Hot Dogs?—Yes, four please, with pickle—mustard—and a couple of cups of coffee.

60 Years as Fuel Distributors

AT the close of George Washington's life the world was using less than a bushel of coal per year for each inhabitant. Today, the annual output of coal provides an average of more than four-fifths of a ton of coal per person for each of the 1,962,000,000 people of the earth.

The coal industry in the State of Washington is one of the oldest basic industries in the Northwest. Coal was first discovered in the year of 1850. Since that time the coal industry has grown to be one of the largest in the Northwest.

An important role in the development of the industry has been played by the Pacific Coast Coal company through its Black Diamond mines from which have been removed millions of tons of coal during the past half century. Recently the company abandoned its original mine, said to be the deepest in America. At the close of operations in this mine coal was being removed from the subterranean vaults more than 1500 feet below sea level. From the mine entrance down the incline to the twelfth level was an unbroken passageway piercing to a depth of more than a mile and a quarter.

The new mine is located about five miles up the Cedar River from Renton, Washington, on the Pacific Coast railroad, which carries the coal from the mine to the bunkers. This railroad was known to Washington pioneers as the Seattle and Walla Walla line.

In developing the new mine many difficult obstacles were encountered. An engineering feat was accomplished in driving a tunnel into the heart of a mountain, and

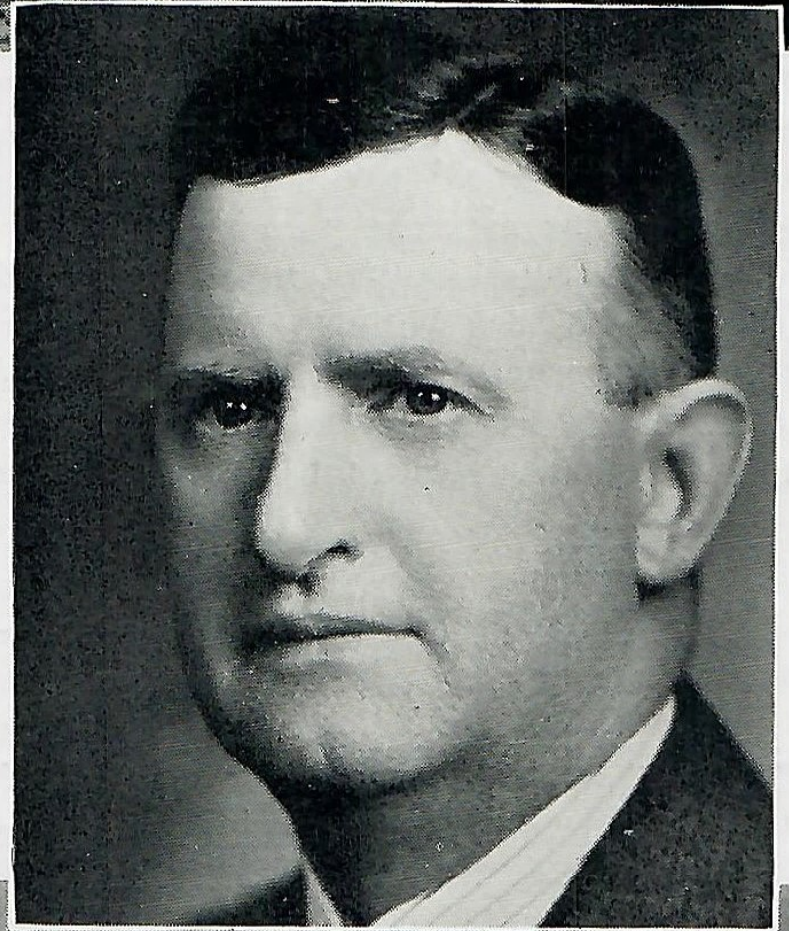
at the same time from a point on the top of the mountain more than a mile away, drilling another tunnel to meet the first. The two tunnels met squarely. At one point in the drilling of the main tunnel, builders struck a subterranean river which gushed water and sand into the tunnel much faster than it could be removed. Achievement of the Pacific Coast company's engineers in overcoming these difficulties is regarded as one of the outstanding feats of modern mining.

The mine surface plants and buildings are the most modern in western North America. The Rheolaveur processing or cleaning plant is the first of its kind used in the Northwest. It was selected by Pacific Coast Coal company engineers because of the better results obtained and the reduced cost of cleaning. After processing, the coal is passed to dewatering screens and then by elevators into bins or directly into railroad cars. The sludge and small particles of coal and water go to what is known as a Dorr Thickener, where the water is clarified and recirculated through the Rheolaveur washers.

For servicing various types of coal burning vessels, the Pacific Coast Coal company maintains large bunkering facilities at Seattle where ships may secure cargo and fuel at one time. It is also equipped to serve ships through bunkers at Tacoma, Portland and Astoria.

Among the important services rendered by the marine bunkers is that of supplying coal to the salmon fleet which operates each year so extensively in Alaskan waters.

The Pacific Coast Coal company's serv-



Scenes of Pacific Coast Coal Company's operations in Washington. At the top a tram-load of miners ready to descend into new Black Diamond mine. Insets, left, Carl R. English, purchasing agent of the company, and, right, Thomas M. Reeder, sales manager. The offices and powerhouse of the Black Diamond mine are shown immediately above the fuel and Diesel oil delivery trucks recently added to the company's fleet.

ice covers adequately the entire northwestern coast of the United States. Coal and briquets are distributed through responsible dealers from the British Columbia boundary in the north to Medford, Oregon, in the south. In this area the company maintains "handy neighborhood yards" in all sections of the larger cities, including Seattle, Portland, Tacoma, Wenatchee, Everett, and as far north as Juneau, Alaska.

Petroleum products play an important part in the present day fuel industry— asphalt is a most important factor in the manufacture of Diamond briquets, being used with pure coal to bind the particles together under extreme pressure.

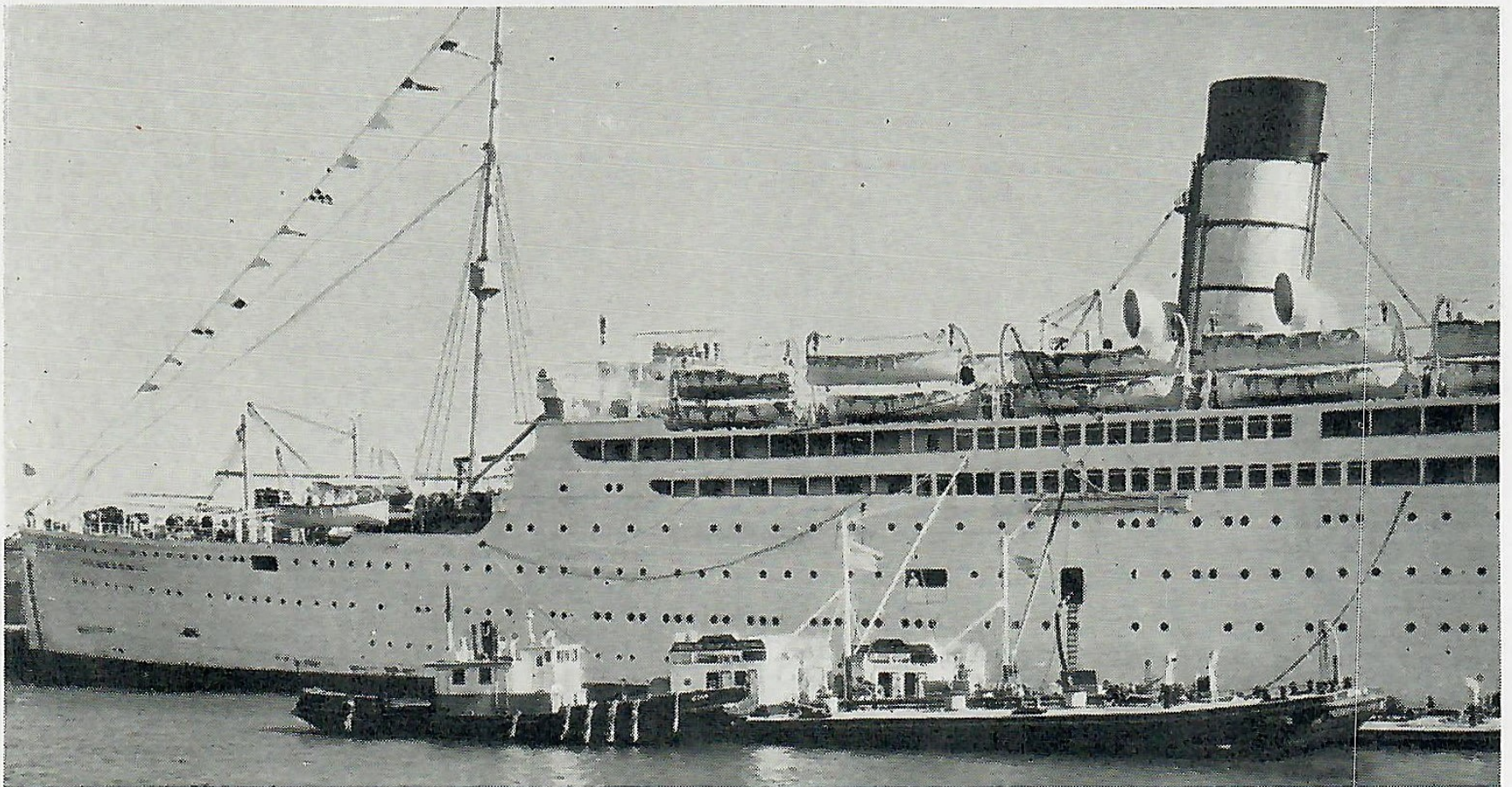
The coal used in the manufacture of briquets is of the highest quality and is carefully screened, washed and measured into mixers and then placed in huge dryers where the moisture content is reduced. The

correct proportion of asphalt is then carefully mixed with the coal at a temperature of 480 degrees. This mixture is then poured into huge revolving presses under 2,000 pounds pressure, which can turn out more than a million and a quarter briquets daily.

Other petroleum products which enter into the activities of the coal mining industry are gasoline, lubricating oil and industrial lubricants of all kinds. Of the more recent petroleum products being distributed by Pacific Coast Coal company are Diesel and fuel oil, and with the addition of these two products the company is in a position to care for the heating requirements of all types of homes, buildings and industrial plants.

In its sixty years of service to the Northwest home owners the company has kept ahead of the times in its effort to give satisfactory service.

Cunard Liner Bunkered by Union



The Franconia, 'round the world cruiser of the Cunard Line, which was bunkered with Union fuel oil at San Pedro and Honolulu. The sleek vessel of 20,000 tons has spacious accommodations for passengers on the globe-girdling voyage, and is equipped with large cargo space. It is one of a fleet of Cunard liners which regularly make calls at Pacific Coast ports. The Union barge from which the ship was bunkered at San Pedro may be seen in the foreground

Aqueduct Compressors

THIRTEEN compressors, eight months, 24 hours a day. A total of over four billion strokes without a sign of lubrication trouble. That is the record of Union Turbine Oil, heavy, used to lubricate the thirteen Pennsylvania compressors installed in the six aqueduct construction camps of the Metropolitan Water District.

Eight months of such rigorous service is considered the equivalent of two years normal operation.

During that time the compressors, which are rated at 865 cubic feet of air per minute, probably delivered in excess of two billion cubic feet of air, which was led away through miles of pipe to the many drills and drill sharpeners working at the tunnel faces.

Compressed air is one of the most flexible and convenient forms of power known. A modern construction job would be almost helpless without it. The six camps of the Metropolitan Water District are no exception, and the smooth performance of the Pennsylvania compressors played a large part in the encouraging progress made on this project.

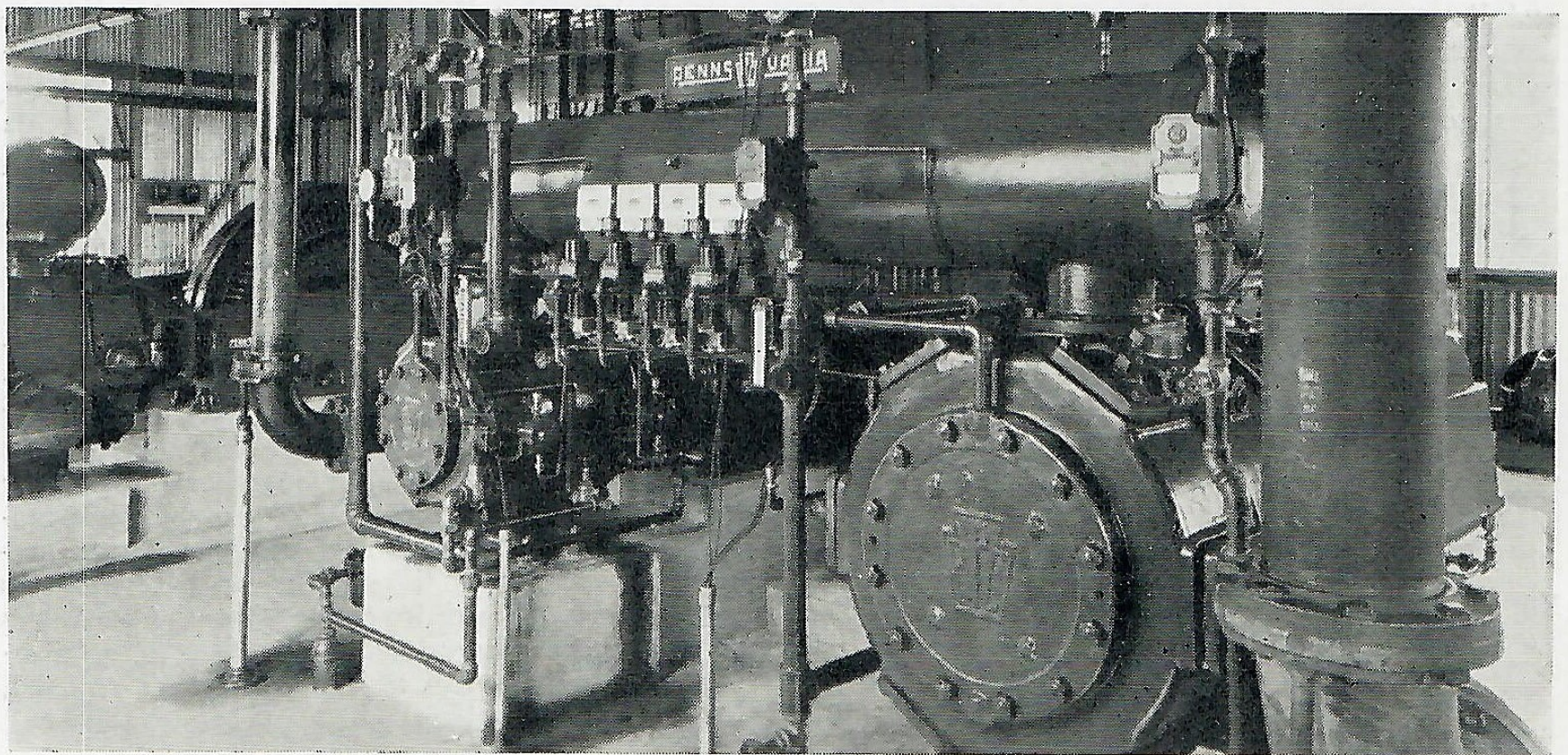
These compressors are of the two-stage type; that is, one cylinder raises the air pressure to, say, 35 pounds per square inch and this air, after being cooled in an inter-cooler, is delivered to the high-pressure cylinder, which further raises the pressure to 125 pounds per square inch.

The low pressure cylinder has a diameter of 12 inches, while the high-pressure cylinder has a diameter of 10 inches. The stroke in both cases is 17 inches.

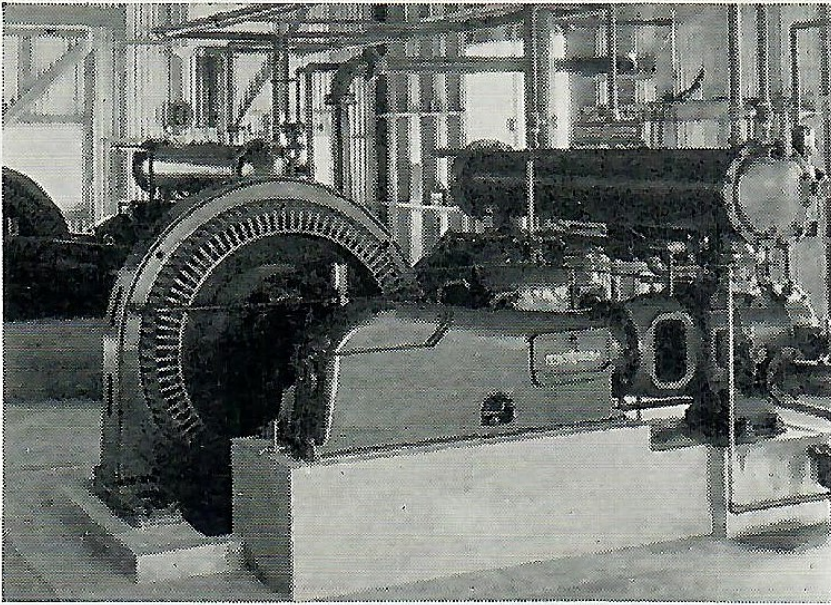
The machines are driven by integrally built synchronous motors, made by the Electrical Machine company. They are rated at 150 horsepower each, and run at 277 revolutions per minute.

In spite of the size of the compressors they are so well balanced that the only sound one hears in the compressor house is the steady hum of the motors, with an occasional click as a solenoid-operated automatic valve moves in or out.

The matter of water cooling these compressors is important, since the amount of heat released when air is compressed is very large. Each unit is equipped with Westinghouse flow indicators, which auto-



Close-up of one of the installations at Thousand Palms Camp, showing intake pipe at the right and the electrical 5-step control in the center. The box-like projections on the water pipes are the Westinghouse flow indicators mentioned in the article.



General view of the compressor house at Thousand Palms Camp. The cylinder straddling the low pressure cylinder on the left and the high pressure cylinder on the right is the intercooler.

matically control the flow of water to the cooling jackets. If, for any reason, the water flow falls below the danger point,

the Westinghouse device shuts off the motor and blows a klaxon-type horn which can be heard for miles.

In order to be as economical as possible of power, the compressors are equipped with a five-step control which accurately coordinates the delivery of the unit with the amount of air being used at that particular time.

The crankshaft, main bearings and connecting rods are splash lubricated from a pump in the crankcase, while other moving parts are fed oil under pressure from a Manzel lubricator.

A. V. Swartz, the West Coast representative of the Pennsylvania Pump and Compressor company, Easton, Pennsylvania, is firm in his belief that Union Turbine, heavy, has materially assisted in establishing a performance record pleasing both to his company and to the Metropolitan Water District.

Employees' Benefit Plan Report

January 1, 1934

The Board of Administrators of the Employees' Benefit Plan submit the financial report of the operations of the Plan from March 1, 1933, to December 31, 1933.

Balance in Fund at February 28, 1933..\$44,619.76
Add:

Employees' Contributions from March 1, 1933 to December 31, 1933	125,447.00
	<u>\$170,066.76</u>

Deduct:

Net payments for medical attention	\$108,586.62
	<u>\$ 61,480.54</u>

Add:

Interest paid on balance by Union Oil Company.....	\$ 1,887.39
---	-------------

Balance in Fund December 31, 1933..\$ 63,367.93

A. C. Rubel, chairman
A. C. Stewart, vice chairman
L. G. Metcalf
Geo. F. Prussing
Gerald G. Blue

J. P. Rockfellow is secretary of the Plan, and L. A. Gibbons serves as legal advisor to the administrators.

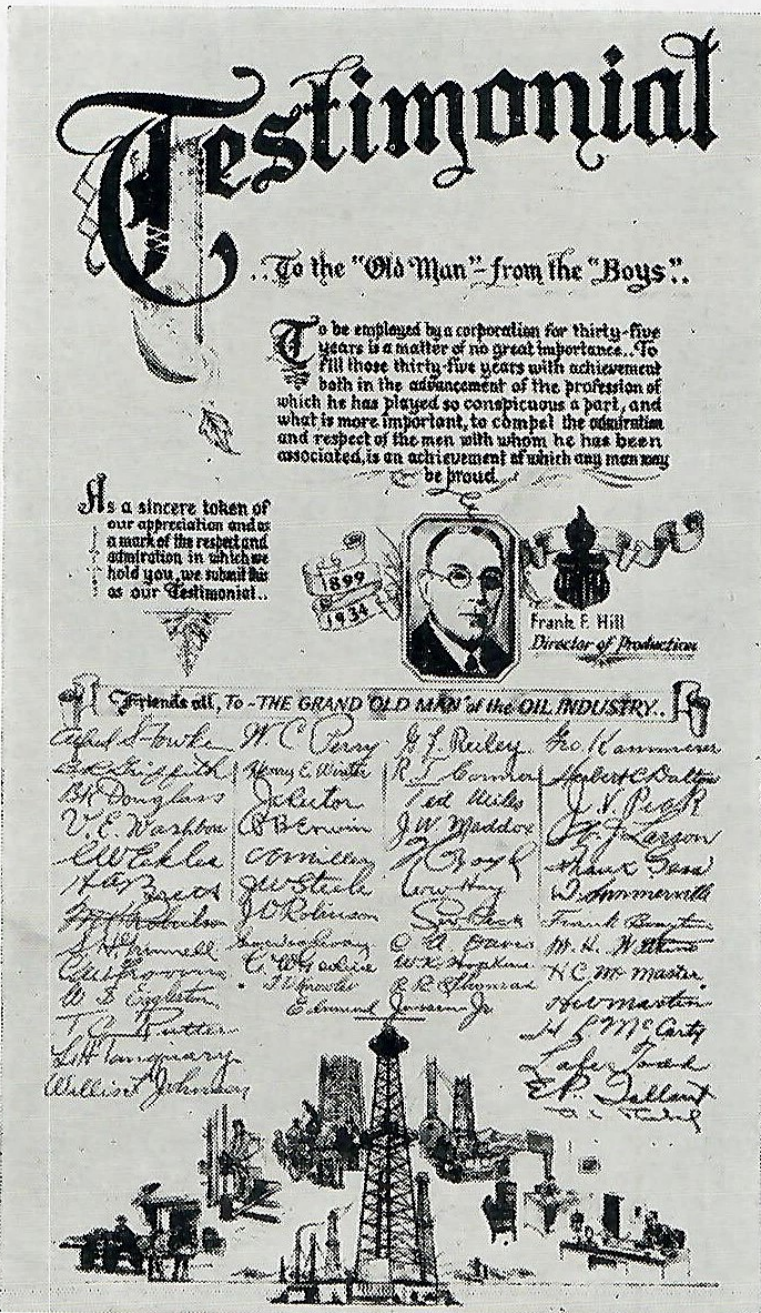
A substantial gain was made during this period. The \$63,367.93 surplus as of December 31, 1933, is held in reserve against the possibility of a serious epidemic.

The number of cases that have exceeded the maximum allowance of \$500.00 allowed by the Employees' Benefit Plan for the period shown was 19. The average number of cases handled per month was 534. The average cost per case over the year was \$20.33.

The Employees' Benefit Plan booklet, covering the rules and regulations of the Plan, incorporating the changes found necessary during the year, is now being revised and will soon be issued. Each employee member should see that he receives a booklet and should familiarize himself fully with the provisions and exceptions in force. The rules and regulations are clearly outlined in order that the members may be fully advised as to the Plan's responsibility and the benefits to which they are entitled, as well as conditions which it cannot cover.

Suggestions or complaints from employee members of the Plan will be fully considered by the board and members communicating directly with the board will, in all cases, be given a full explanation of any action taken.

Serves Thirty-Five Years



F. F. Hill
Director of Production

A reproduction of the scroll testimonial which was presented to F. F. Hill, director of production, upon completion of 35 years' service, is shown at the left, and below is the group of fellow-employees who feted Hill on his long period of employment with the company.



APPRECIATION of the long service rendered and tribute to the advancements which he has made possible within the industry was paid to F. F. Hill, director of production, Union Oil Company, at functions given in his honor during February, on the 18th day of which he completed thirty-five years of service.

He was the guest of honor at a dinner at the home of Vice-President W. W. Orcutt, 403 South Mariposa Avenue, Los Angeles, February 17, at which he was presented with a beautiful wrist watch, the band of which was made up of a series of platinum links engraved with the full names of the persons present.



Field department superintendents and foremen from both the northern and southern division met in Fullerton February 21 and during a typical "spread" presented Hill with a testimonial scroll, addressed to the "Grand Old Man of the Oil Industry." The inscription read: "To be employed by a corporation for thirty-five years is a matter of no great importance. To fill those thirty-five years with achievements both in the advancement of the profession of which he has played so conspicuous a part, and what is more important, to compel the admiration and respect of the men with whom he has been associated, is an achievement of which any man may be

proud."

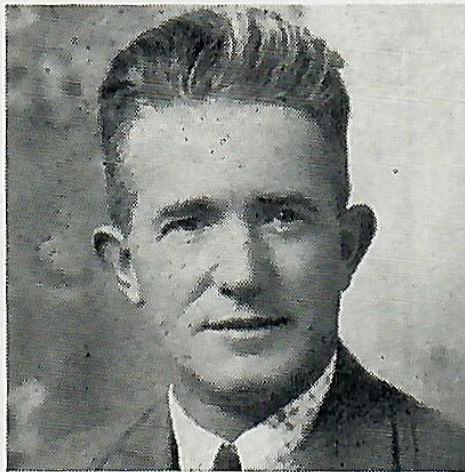
Frank Hill began his service with the company as warehouse man at Santa Paula in 1895. During the thirty-five years he has been identified with the company he has been credited with more contributions to better drilling and production practices than any other man in the West. He introduced oil well cementing to the industry in 1903, and, in addition to scores of drilling refinements, developed the sub-surface

circulator, perfected gas lift and gas drive processes, by means of which production of oil has been materially increased in low gas pressures areas, and in more recent years has given special attention to equipment designed to eliminate crooked hole drilling. He is recognized throughout the petroleum and dependent industries as one of the outstanding production men in the country. He was chosen director of production, his present capacity, in February, 1931.

Service Emblem Awards



30-Years

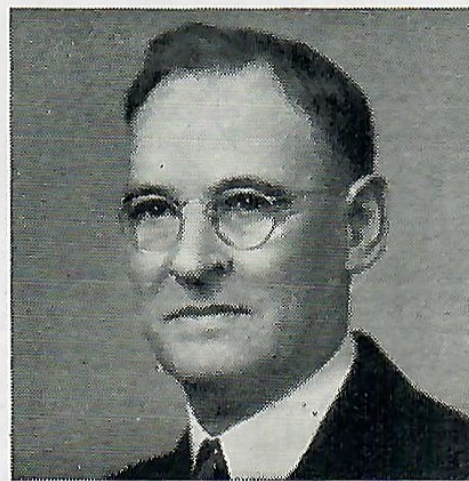


J. E. Reed



J. H. Curran

25
Years



F. L. Crang

J OHN E. REED, field department, northern division, with thirty years service accredited to him, led the list of employees who completed specified service periods during January. In the same month Frank L. Crang rounded out a quarter of century of service and A. J. Dunbar,

J. S. Holland, J. R. Putman and H. F. T. Schneider each completed twenty years.

On February 16, John H. Curran, Oleum refinery employee, could look back over a quarter of century of service with the company, while H. A. Delaney, T. J. Baily, jr., J. B. Heyward.

20-Years



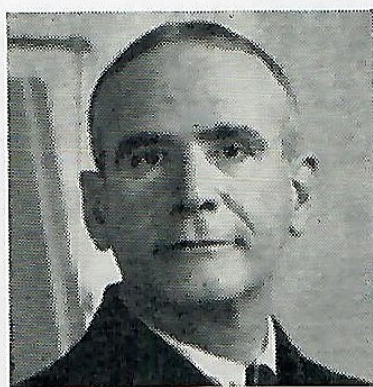
J. R. Putman



H. F. T. Schneider



T. J. Bailey, Jr.



J. B. Heyward



A. J. Dunbar



Pete Killip

Jr., and Peter Killip each finished a tenure of twenty years.

At the age of 19, John Reed started to work for the company as roustabout in the Lompoc field. Four years he engaged in rig-building, and then spent two years as tool-dresser. Since 1910 he has been driller, serving in the Santa Maria field until 1917 and then in the southern division until January, 1933. During the past year he has re-drilled some of the old wells for which he built rigs in 1906.

When the Astoria, Oregon, substitution was opening in 1909, Frank L. Crang was appointed agent, and pumped the first order of oil from that plant. He remained at Astoria until 1924, and was then transferred to the Portland plant at Willbridge, where he is still active in the sales division of this unit.

January 19, 1914, A. J. Dunbar was employed in the field department, Brea, on the G. and L. lease as roustabout. He worked in the production department for six years and then was shifted to the drilling department, where he remained for five years. For the past nine years he has served in the production department as head pumper. Dunbar has the distinction of having no lost time, from accident or any other reason, charged against his record during the entire twenty-year period.

James R. Putman has spent his entire twenty years of service in the field and gas departments. He worked successively as teamster, pumper on the Torrey lease, Stearns topping plant, Brea compressor plant, and as operator at Stearns No. 2 absorption plant. For the past six months he has worked in the field department, Santa Fe Springs,

The entire period of service completed by Heinrik F. T. Schneider has been spent with the deep sea fleet. For fifteen years he served as A. B. and quartermaster on various company tankers. April 7, 1928 he was assigned to the La Purisima as third officer. He has since filled this office, except for a brief period aboard the Warwick in identical capacity.

The Oleum, Calif., refinery of the company has been the center of J. H. Curran's activity. He was first employed there in 1909 as foreman of boilermakers, a post which he held for eight years. In 1917 he became foreman of mechanics, retaining that position until 1929. In 1931 he passed the examination as state boiler inspector. He has invented and manufactured many devices to improve operating and safety equipment.

Joining the ranks of the company in February, 1914, Thomas J. Bailey has been associated with the sales department in the San Francisco area during the entire period of his employment. At the present he is engaged in fuel oil and road oil sales for the central division, working out of San Francisco.

Employed as a chemist at Oleum in February, 1914, J. B. Heyward served for five years in that capacity and then was placed in charge of the inspection laboratory. In 1924 he returned to the chemical laboratory as assistant foreman, the position which he now holds.

Peter Killip, after having previously worked for the company and then withdrawn, was re-employed in 1914 at Oleum in the asphalt department. May, 1915, he was transferred to the asphalt stills as foreman. He became asphalt stillman in 1917, working in that capacity until 1927 when he was promoted to head asphalt stillman. He is now relief stillman,

Fifteen Years—January

Burt, Geo. A.....Mfg., Los Angeles Ref.
 Dixon, Robert P.....Sales, Central Division
 Goss, Calvin R.....Field, Northern Division
 Harris, Arthur G.....Sales, Central Division
 Holdsworth, Raymond E.....Marine, "Redline"
 MacLean, Chester E.....Sales, Southern Division
 Paulbach, Wanda A.....Sales, Northern Division
 Richesin, Hugh C.....Field, Southern Division
 St. Clair Wm. M.....Pipe Line, Northern Division
 Quayle, John Y.....H. O., Mfg.
 Rice, Geo. D.....H. O., Gas

Ten Years—January

Argo, Guy H.....Pipe Line, Southern Division
 Bishop, Edw. A.....Sales, Central Division
 Boller, Lewis M.....Field, Southern Division
 Burke, Edmond C.....Pipe Line, Southern Division
 Capitani, Joe.....Field, Northern Division
 Cassingham, Wm. O.....Mfg., Los Angeles
 Chida, Shigeru.....Sales, Honolulu
 Darrow, Wallace H.....Mffi., Oleum Refinery
 Fay, Maynard R.....Mfg., Oleum Refinery

Freeman, Grover C.....Const., Southern Sales
 Ingram, Daniel C.....Mfg., Los Angeles Ref.
 Judd, Chas. F.....Los Angeles Ref.
 Morgan, Viola V.....Union Oil Bldg.
 Olinger, Linneus E.....Sales, Southern Division
 Westley, Elmer E...U.S.S. Inc., Northern Division

Fifteen Years—February

Michielson, Jay W.....Mfg., Los Angeles Ref.
 Weston, Percy C.....Sales, Central Division
 Zoeter, Ernest M.....Field, Southern Division
 Salmond, John.....L. A. Refinery
 Johnston, Wm. S.....Transportation

Ten Years—February

Bishop, Nolan R.....Field, Northern Division
 Eipper, Clarence O.....Mgr., Los Angeles Ref.
 Evjen, Carl B.....Sales, Northern Division
 Merritt, Kenneth G.....Sales, Northern Division
 Nelson, Rasmus J.....Marine, S.S. "Cathwood"
 Simonsen, Chris J.....Mfg., Los Angeles Ref.
 Rockfellow, John P.....H. O., Ins. & Personnel
 Amaral, Arthur W.....H. O., Comptroller's
 Collins, A. S.....U.S.S.I., San Francisco

The Tuna Clipper—Sea Boy

ONE of the latest achievements in Seattle shipping was the completion of the Sea Boy, a tuna clipper, owned by the Italian Packing Company and manned by a crew of sturdy Portuguese.

The vessel bound on its maiden voyage, left recently for the fishing grounds off the Galapagos Islands nestled on the equator west of Ecuador.

The Sea Boy, representing an investment of approximately \$100,000, has many unusual features. On the port side forward is a chapel containing a shrine, beautifully finished in hardwood with gilded trimmings, in which the fishermen worship while on the fishing banks. These fishermen are devoutly religious and will not go to the fishing banks on a vessel which

does not have a shrine before which they can ask protection from the storms.

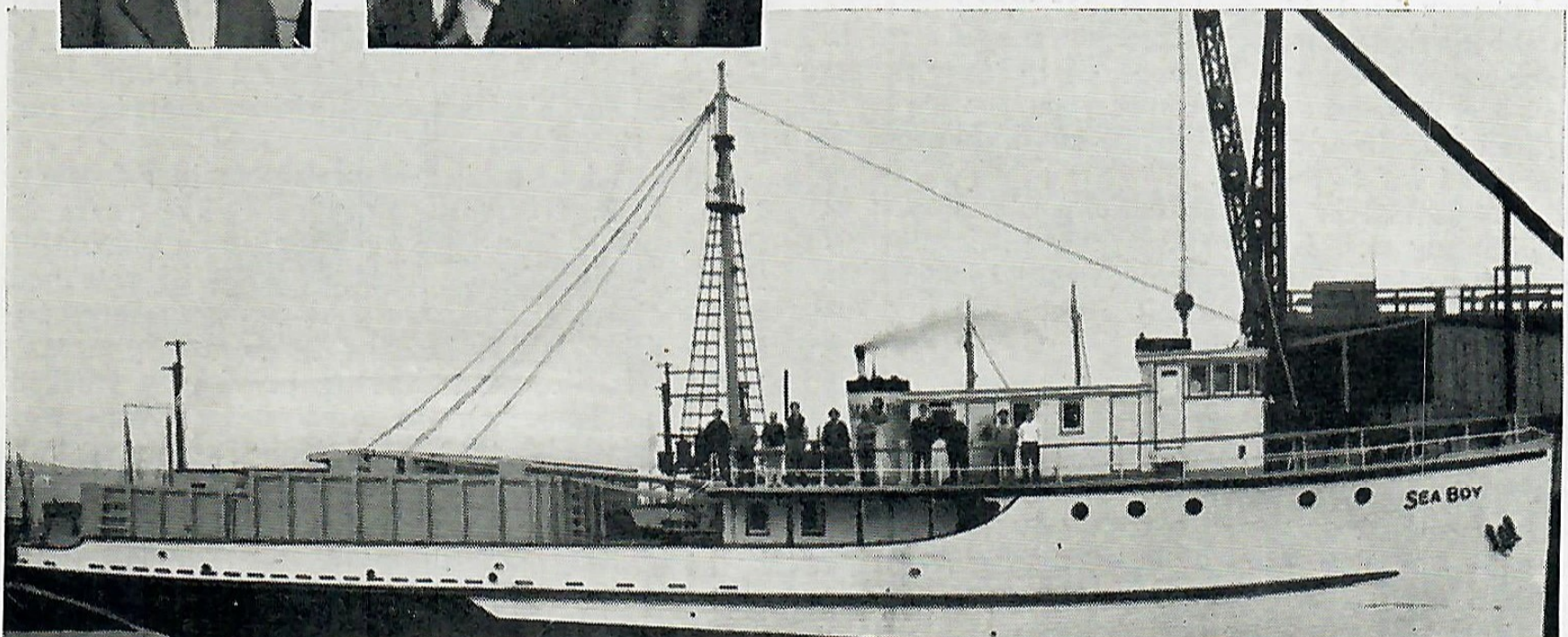
The Sea Boy is 126 feet long, has a 26 foot beam, and is 11 feet in depth. She is driven by 400-horsepower Diesel Western Enterprise engine and has two auxiliary Diesel engines of 80-horsepower each.

She carries large bait tanks on her after-deck, which have a capacity of thirty tons. On her stack is a large painting of a tuna fisherman. She has storage capacity for 200 tons of tuna. She was loaded with Diesel fuel oil and lubricating oil at the Union Oil Ballard marine plant, Seattle, just prior to her departure for San Pedro.

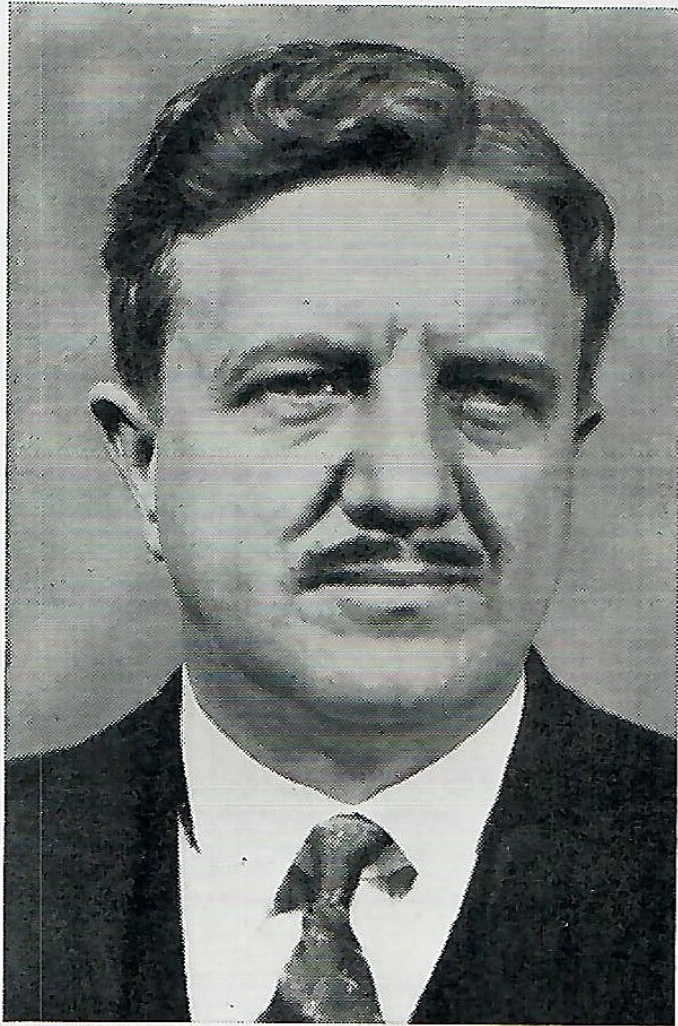
She takes her name from a brand of tuna fish—"Sea Boy."



At the left is A. E. Pires, captain of the Sea Boy; Ray Meyers, chief engineer, and Al Johnson, Seattle marine sales representative, Union Oil Company. The tuna fishing boat Sea Boy is shown below.



Union Oil Bulletin Apologies



Senator C. C. Dill
Washington



Frank A. Banks
U. S. Reclamation Engineer

Through a mix-up of photographs, The Bulletin, in January, reproduced a photograph of Senator C. C. Dill of Washington, in connection with a story outlining the Grand Coulee Dam project, and identified the Senator as Frank A. Banks, reclamation engineer in charge of present construction. The editor extends his apologies to both gentlemen. Insufficient identification of the photographs supplied, and his limited acquaintance in senatorial circles is his only alibi. Senator Dill's forceful championing at the National Capital of the Grand Coulee Dam is to a large measure responsible for winning governmental support for the project.

Central Division Holds "Get Acquainted" Dance



The Italian Ballroom of the St. Francis Hotel in San Francisco was the scene of the first "Get Acquainted Party" of the Central Division office, held on the night of February 9.

Canadian Group in Annual Meeting



February 12 and 13 sales representatives of the Union Oil Company of Canada, Ltd., gathered at the Hotel Vancouver, Vancouver, B. C., for annual convention. The meeting was divided into sales and operations classifications and problems pertinent to each discussed and worked out. The picture reproduced above shows sales representatives in attendance at the convention.

R. J. Kenmuir, district manager, is seated in the foreground at the left.

Wins Sales Contest



A. N. Tilston, specialty sales representative, Hollywood, who is credited with selling \$1700 worth of products in the 1933 Clean-Up campaign to take first prize on the coast and win the radio which he is here demonstrating.

Given Honorary Police Post

Honorary detective lieutenant, Los Angeles city police department, was the title conferred upon H. E. Cattermole, ship dispatcher, Union Oil Company, last month. The appointment comes in recognition of Cattermole's activity in intelligence work in the United States Naval Reserve.

Their Aim Was Good



The plundering career of this predatory "cat" was brought to a close by these two knights of the burnt powder, George Reed, left, and Gene Riordan. He was tracked down and shot in the hills back of San Jose. Riordan is manager of Union Service Stations, Inc., No. 448, San Jose.

REFINED AND CRUDE

By RICHARD SNEDDON

This month your columnist (loud and prolonged laughter) will endeavor to follow the lead of contemporary scribes, and present for your amazement a barrage of snappy comment on world wide news events, and late scientific developments. For instance:

Thousands of Scotch pilgrims journey annually to the Black Sea to fill their fountain pens.

In a recent "Buy German" campaign, in the city of Berlin, a ten-foot cheese from Tilsit, East Prussia, was rolled through the streets. That's a big piece of cheese all right, but not so big as the one who told us there was easy money in the stock market.

Science has developed an instrument that can detect sounds inaudible to the human ear, but is still unable to distinguish between the sound of a man eating celery and an elephant tramping on a banana crate.

Ten years ago a rhinoceros couldn't be bought for less than \$20,000. Yet recently Frank Buck, the well known big game hunter, offered one at the very attractive price of \$9000. We have every reason to believe that it was purchased by the folks in the flat above us.

The manufacture of antique furniture has reached such dimensions in the United States, that the Forestry Department is seriously worried over the depletion of our oak reserves.

According to a famous entomologist, bees can rise with three times their own weight. That's news to us, although we had often noted their capacity to sit down quite heavily.

Another ologist of some sort advances the belief that man is of vegetables origin. Sure, lots of people have been little sprouts.

But no one has yet satisfactorily explained why a full grown man will sit on the pavement for five minutes talking to a banana skin.

The Pass of Llanberis is one of the prettiest passes in the world; another one is the Pass of Killiecrankie in Scotland, and then, of course, there was the fall pass you got for the football game.

A certain New York café caters exclusively to midgets. Ours does the same, but makes no special mention of the fact.

And one advantage of a wooden leg is that you can put on your sock with a paint brush.

Incidentally, side whiskers (Dundrearies) are again becoming the vogue in London, England. This will enable British airports to dispense with air socks as a means of determining the direction of the wind.

During the late lamented depression, we are told, thousands of men abandoned the trades, and turned to art as a profession. Yeah, we noticed lots of poor guys making house to house canvasses.

A fowl with two hearts was recently discovered on a farm in the south of France. Which reminds us of a bridge partner we had once.

Another entomological note: The rhyssa, a small parasitic fly, is capable of boring a hole in the hardest wood with its ovipositor. Maybe so, but we'll bet four dollars the rhyssa would bust his ovipositor all to pieces if he were ever required to work on an ordinary railroad café sandwich.

And now scientists openly confess that in calculating the weight of the earth, they were in error by half a quintillion tons. There will not on this account, however, be any reduction in the quantity weighed up with your potatoes.

In Turkey a man doesn't know his wife until after he gets married, but in this country—well, what's the difference?

The fellow who talks in terms of millions is not necessarily a financier. He may be just a bacteriologist.

And to conclude: Sailors are so superstitious that when an unusually stout lady boards a steamship, she is always given a wide berth.

