

UNION
OIL
BULLETIN

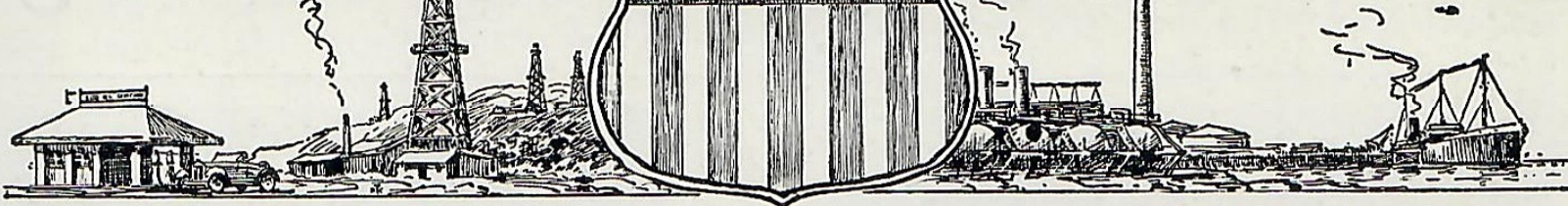
OCTOBER 1929



"THE MOUNTAIN THAT WAS GOD"

The clouds of a late August afternoon were just enveloping the peak of Mt. Rainier (in Western Washington) when the photograph at the top was taken from a trail 6500 feet up the side of the mountain overlooking the famed Nisqually Glacier. Lower photograph—Facing west from the same trail, a view of the picturesque range at the foot of the mountain and the alpine fir which from a height resemble a myriad of church spires.

UNION OIL BULLETIN



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VOLUME X

OCTOBER

BULLETIN No. 10

The New "Super" Union Gasoline

A UNION winter gasoline, quicker starting by 26 per cent than any previously manufactured by the company, is making its appearance on the Pacific Coast this month. This new gasoline was developed in the research laboratory at the refinery at Wilmington following extensive scientific experimentation and exacting tests on the road with leading makes of cars.

In manufacturing this new "super" gasoline, the refinery experts have set a new standard for cold weather fuel. It possesses quicker acceleration at every speed from five to sixty miles per hour, and a higher knock rating, which means lessened detonation.

In the distillation of the gasoline none of the power has been sacrificed, and the new feature of this quick-starting fuel is that it will continue to give the mileage which has long made Union gasoline one of the most popular motor fuels in the West.

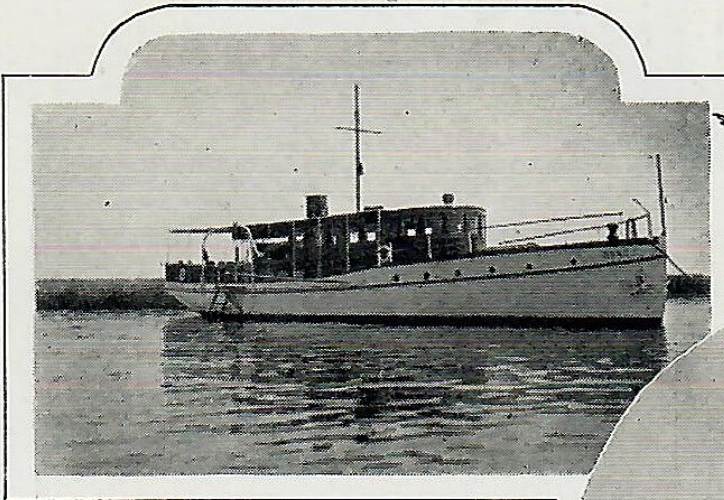
The exacting cold weather requirements of the latest model high compression motors was kept constantly in mind by the research department during the period the experiments were being conducted in the laboratory and on the road, and as a result the company is today manufacturing the smoothest operating winter fuel ever placed at the disposal of Pacific Coast motorists.

The quick starting and accelerating qualities of the new gasoline, measured at full choke, half choke and no choke, were accurately gauged in the laboratory by means of a dynamometer adjusted to reproduce the actual cold motor conditions encountered during the winter months.

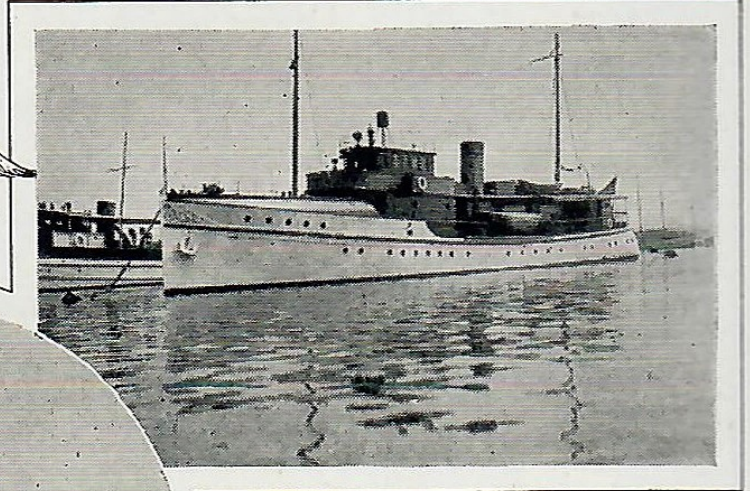
The starting and accelerating features of this "super" fuel will be particularly noticeable in a cold motor during short runs in traffic because of its smooth operation and quick pick up; its fast get away at the crossings and its speed and power on the grades.

The new fuel is now being made the basis for the Union Ethyl gasoline, which has in the past been a recognized leader in the Ethyl gasoline field.

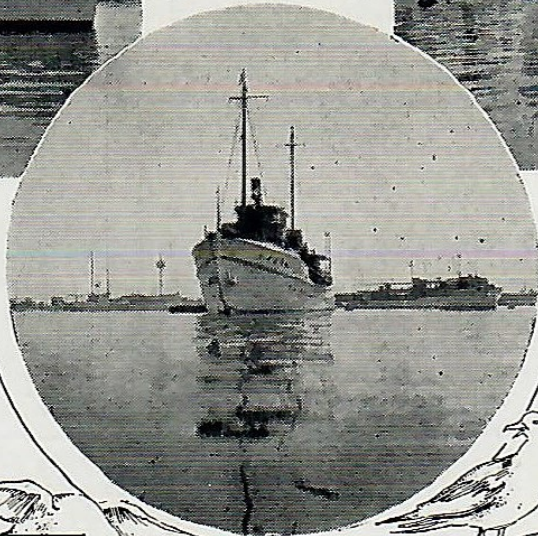
Southern California Yachting



The Anne C, owned by W. H. Cain of Los Angeles. A 70-foot craft powered with 60-horsepower Fairbanks Morse Diesel



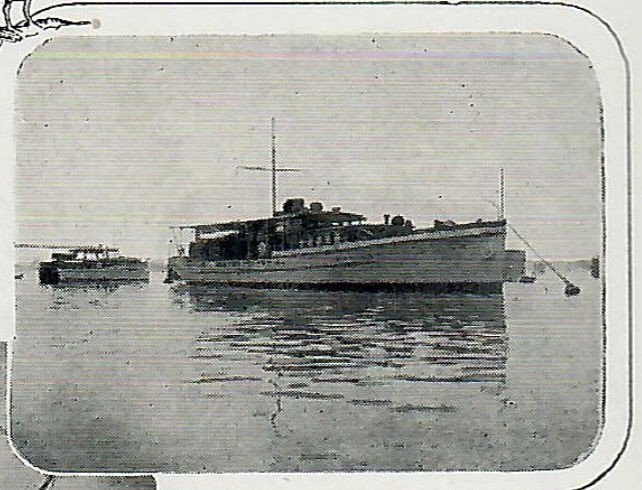
G. Allan Hancock's Velero II, one of the largest and finest equipped yachts in California. Her two Winton Diesel engines develop twelve knots per hour.



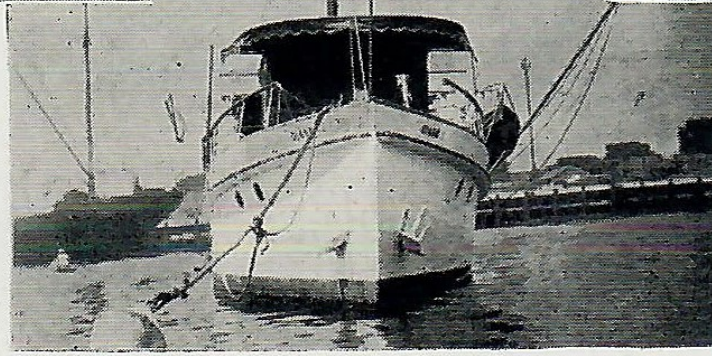
The Velero II, ready for a jaunt to San Clemente, home of her owner, G. Allan Hancock.



The Malibu, owned by Mrs. M. K. Rindge, makes long trips over the Pacific Coast. The Malibu has spacious accommodations for six or more people on long cruises.



The Samana, property of W. J. Hole of Los Angeles, recently returned from a summer cruise to Alaska. She is 115 feet long, has an 18-foot beam, and a cruising radius of 2500 miles.



Diane, a 71-foot boat, is a familiar sight to yachtsmen in Southern California. J. Park Dougall, commodore of the California Yacht Club, is her owner.

The above yachts are representative of the finest in Southern California waters, all are diesel driven, their engines using Union Diesol for fuel and Union lubricants in crankcase and auxiliary equipment.

THE ideal weather conditions that prevail in Southern California waters throughout the year has made the Southland a mecca for yacht owners. Since 1907, when members of the old South Coast Yacht Club boasted a group of fifty odd boats of varying sizes and shapes, interest in this water sport has grown greatly. At

present more than 600 trim-hulled boats anchor in the Los Angeles basin, some in the 24-acre anchorage of the California Yacht Club in Wilmington and others in the outer harbor. With this number in the harbor the mooring locations are overtaxed.

In a move to relieve this crowded condition, the Los Angeles Harbor

department recently inaugurated a \$1,000,000 building and reconstruction program which will send the pleasure fleet, one of the biggest in the United States, back to its original South Coast anchorage. The new terminal starts with an initial area of 112 acres in the water beyond the west channel

of the outer harbor and includes the city's Cabrillo Beach development. As the size of the fleet increases the anchorage will be extended to acreage east of the breakwater.

New clubhouses for the yachtsmen are now under construction on the bluff back of the anchorage.

First Locomotive Fuel Oil Test

THIRTY-FIVE years ago this month, representatives of the Union Oil Company, motivated by the knowledge that new markets must be found for the increasing supply of crude oil being drained from the earth, obtained the loan of an engine from the Southern California Railway, now the Atchison, Topeka, and Santa Fe, and sponsored the first test on oil as a fuel for locomotives ever conducted in the United States.

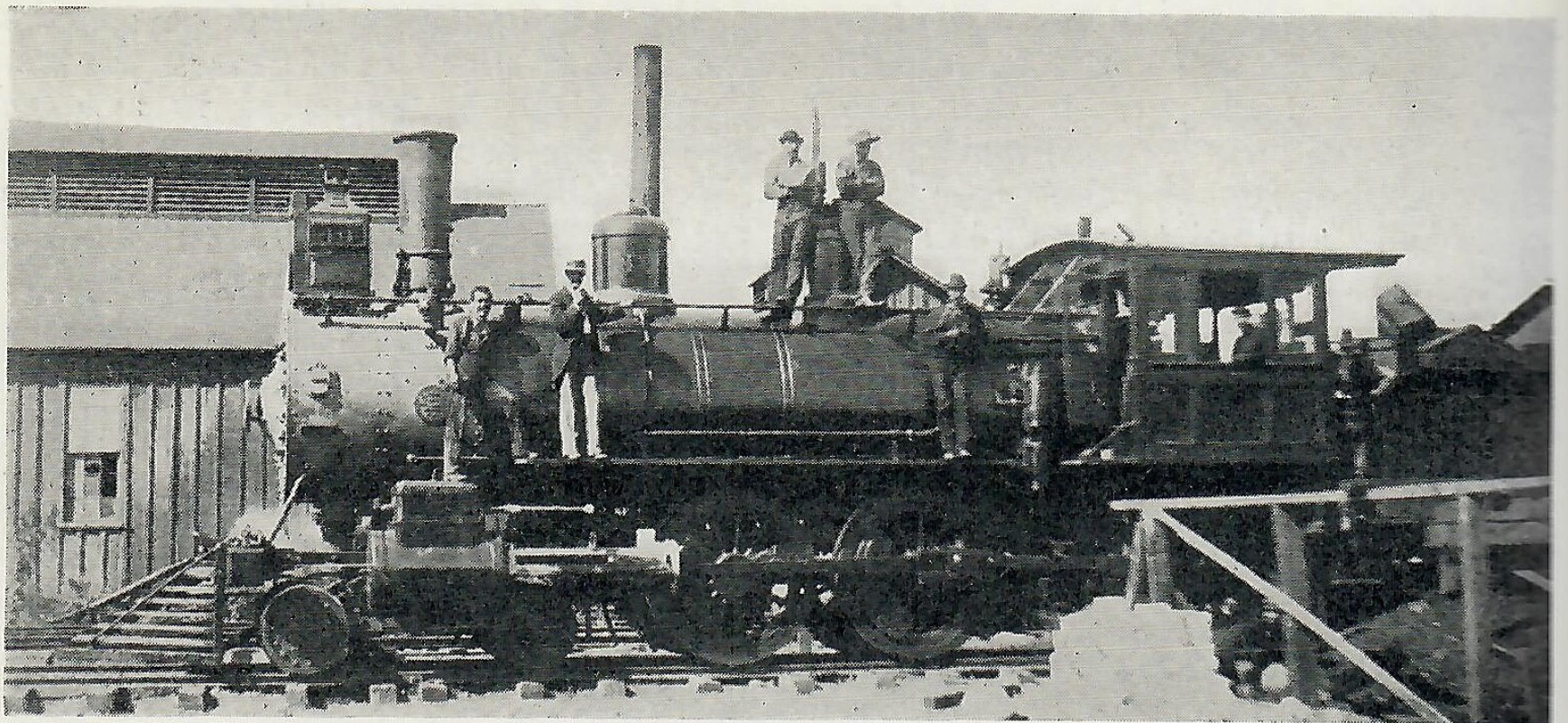
As a result of the experiment, a vast new fuel oil market was opened to the petroleum industry. Railway companies throughout the country in the years immediately following the test, began the installation of oil burning equipment on their lines. From the few hundred barrels burned by railway locomotives during the last two months of 1894, the annual consumption grew until it reached 70,094,416 barrels in 1927, the last year for which there is a complete record available. It is estimated that the number of barrels of fuel oil used by locomotives in 1929 will far exceed the 1927 total.

A large group of oil and railway company representatives witnessed this first test, among them Jesse C. Martin, engineer on the test engine, who is now retired and a resident of Santa Maria. Mr. Martin recently visited the head office of the company and vividly recounted experiences

which he, as fuel expert of the Southern California Railway, encountered in conducting tests initiated by the company at Santa Paula in October, 1894. Mr. Martin said:

"In October, the Southern California Railway company, through Mr. Wade, at that time general manager, made arrangements with the late Mr. Lyman Stewart, to have a locomotive furnished by the railway company sent to the Union shops in Santa Paula for installation of such equipment as the test would require. Union Oil mechanics, working under the direction of Foreman Davis, built a square fuel tank that fitted into the coal space in the tender and then completely revised the internal construction of the fire box, lining it with five rows of fire brick and installing new draft equipment, because it was feared that a strong draft would snuff out the blaze. Much experimental work was done, and many new ideas were placed into practice, only to be taken out and replaced with others that apparently would better serve the purpose. Considerable time and care had to be exercised in putting ideas into force because we were working with a fuel that was highly explosive and one which we did not know a great deal about.

"When all preparations had been completed, Mr. W. H. Prescott, super-



Southern California Railway engine No. 10, used in making the first test ever run in the United States on oil as a fuel for locomotives.

intendent of motive power, called me to take charge of the test run, advising me not to go more than a half mile down the track, fearing we would not have enough steam to return. However, he did not accompany us on the trial trip. We went about five miles and then returned. The fire burned very slowly. In fact, the principal thing we did was to throw off plenty of dense, black smoke without generating much heat. I remember some of those who were present to watch the test, and among them was Mr. Lyman Stewart and the late W. L. Hardison of the Union Oil Company, and many representatives of the railroad."

The results of this first experiment while not entirely successful were encouraging enough to warrant further tests being made. Mr. Martin emphasized the fact that early failures were due primarily to an attempt to burn oil in a coal burning furnace. Finding a suitable type of burner proved to be a real problem and was only partly solved when Mr. Stewart sent Mr. Edwards from Los Angeles. Mr. Edwards devised a burner similar to the one used in stills at the refineries.

The tests, which required about three weeks to complete, were not without their humorous incidents.

"In a later test, after the installation of Mr. Edward's burner," Mr. Martin related, "we set out down the track with a load of men and boys on the engine and tender. In a little while I discovered that we were throwing off a dense cloud of smoke very much like one of the old Mississippi river steam boats. Edwards seemed to have lost control of his oil supply. As engineer of tests, I closed the control valve in the pipe line leading to the burner. The smoke continued to pour out in tremendous volumes. Slowing down, I looked out and noted at the bottom of the furnace a sheet of flame was flaring out the entire width of the fire box. Men and boys began to fall and jump off the engine and tender, fearing that the fire would reach the oil tank. The engine was kept moving until the oil had burned out of the furnace and ash pan and the danger was removed. An investigation disclosed the cause of the fire. Plugs in an oil line that ran to a front end burner long since abandoned had jarred loose and the oil in the line immediately took fire."

When it was felt that the engine could, with reasonable safety, be run with fuel oil, Mr. Martin took it to Los Angeles and turned it over to the Southern California Railway.

Taking Kinks Out of Crooked Holes

THROUGH improved drilling methods, developed within the past year, the field department of the Union Oil Company, which has been one of the pioneers of the country in the advancement of drilling practices, has virtually eliminated the drilling of crooked holes, and in so doing has accomplished something field men have been striving to do for several years.

In taking the "crooks" out of crooked holes, the field department has been actuated by more than an ambition to achieve a mechanical and engineering success. The loss annually to the industry through the drilling of crooked holes runs into millions of dollars. At the beginning of 1929, the petroleum engineers of the oil companies throughout the United States, the directors of drilling operations, and the manufacturers of drilling equipment were called upon to make a concerted effort to solve the crooked hole problem.

The layman, unfamiliar with the problems which face the men who drill for oil, is no doubt as surprised to learn that all oil well holes are not straight, as the old-time driller is to learn that it is now possible to drill a deep well and keep the hole straight from top to bottom.

It has not been uncommon in the past, once a well had been properly spudded in, to believe there was only one thing to do and that was to let the drill take its course, and the course it took was not considered of vital concern as long as the hole eventually reached the oil sand. This accounted for the fact that in town-lot drilling

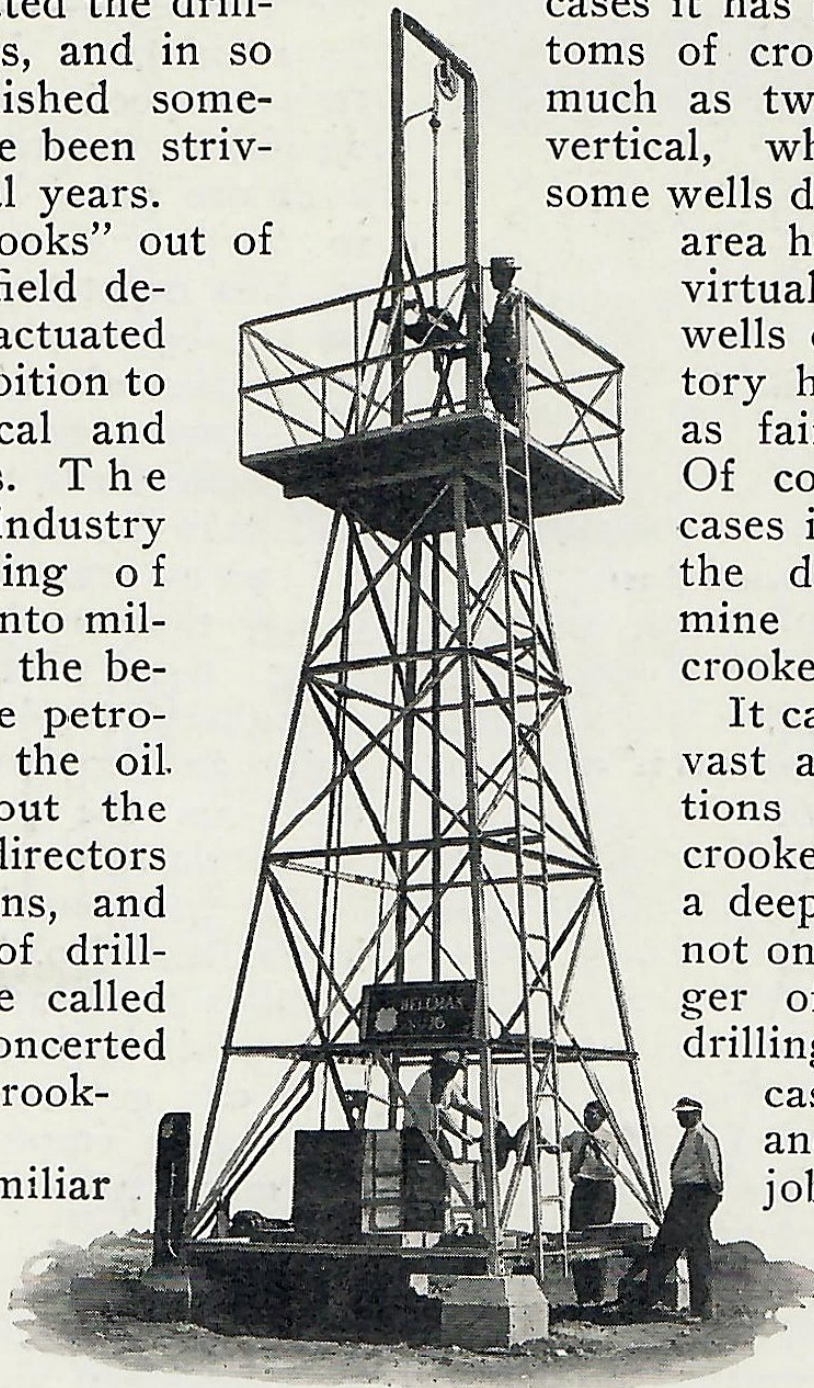
it was not uncommon for a vagrant drill to find its way to an adjoining lease and rip its way into the casing or drill pipe on the neighboring property before its wanderings were suspected by anyone. In some extreme cases it has been found that bottoms of crooked holes were as much as two thousand feet off vertical, which explains why some wells drilled in a productive

area have turned out to be virtually dry holes, and wells drilled in edge territory have been completed as fairly good producers. Of course, in the above cases it was impossible for the drillers to predetermine the direction the crooked holes would take.

It can be appreciated the vast amount of complications and difficulties a crooked hole, particularly a deep one, can cause. It not only increases the danger of bad twist-offs of drilling pipe and failure of casing but increases and complicates fishing jobs in general.

There are a number of things which cause holes, started straight, to veer off from the perpendicular.

Some of these have been pretty definitely catalogued and measures taken to overcome them. There are still a few which must be subjected to further research, and many fine points to be learned about drilling in general. These drilling problems the Union Oil Company has decided to take to the laboratory. The laboratory in this particular instance is a miniature rig—an Ideco gas trap tower—20 feet high, which has been erected on the Dominguez lease where



Test Rig at Dominguez

a series of drilling tests are now being conducted. Drilling tools and equip-

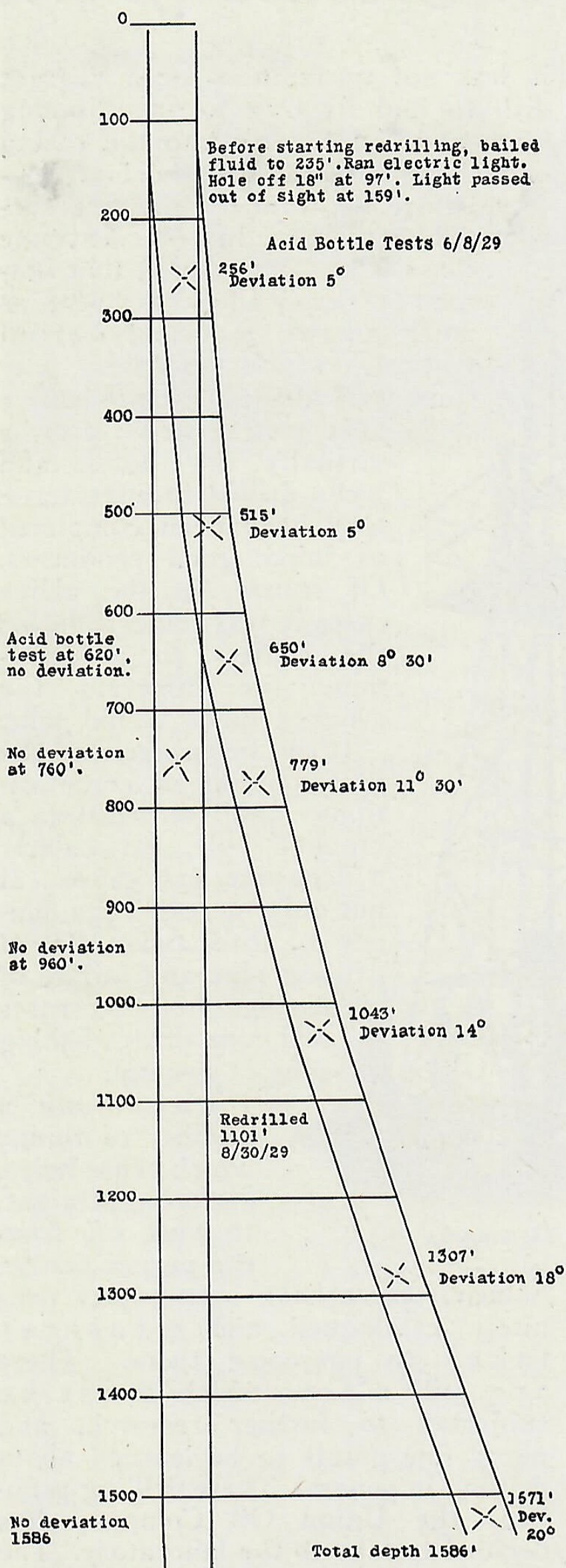
ment used in the rig have been reduced almost to toy size.

From the drilling tests being made at Dominguez it is hoped to determine the effect of formational dips on the drill; what happens when too much weight is placed on the drill; what speed the drill should be rotated at in the various formations to get the best results, and the relationship to be maintained between speed and weight on the drill.

Before going into further details on this experimental rig, built at the suggestion of F. F. Hill, manager of field operations, we will take up some of the practical things that are being done to straighten crooked holes and to keep holes on the perpendicular.

The company has a classic example in its Buell No. 1, being drilled several miles southeast of the present Lompoc field, in how crooked a crooked hole can get, and also the measures now being employed by the field department to straighten holes of this kind.

The Buell well is being drilled in extremely hard formations pitched at varying steep angles. After the well had been drilled to a depth of 1586 feet the hole began showing signs of being decidedly warped. Before starting to redrill, the fluid in the well was bailed to 235 feet and an electric light run in the hole. At 159 feet it passed out of sight. Subsequent acid bottle tests showed that at 256 feet the hole deviated off perpendicular five degrees. At 650 feet it was off 8 degrees and 30 minutes; at 1043 feet, 14 degrees, and at 1571 feet, 20 degrees. Had it been possible to operate a drill in the well to a depth of 5,000 feet at the same rate of curve, the bottom of the



DRILLING CHART BUELL NO. 1

Diagram on the right shows appearance of well as it was originally drilled, and the one on the left the way it looks since being redrilled.

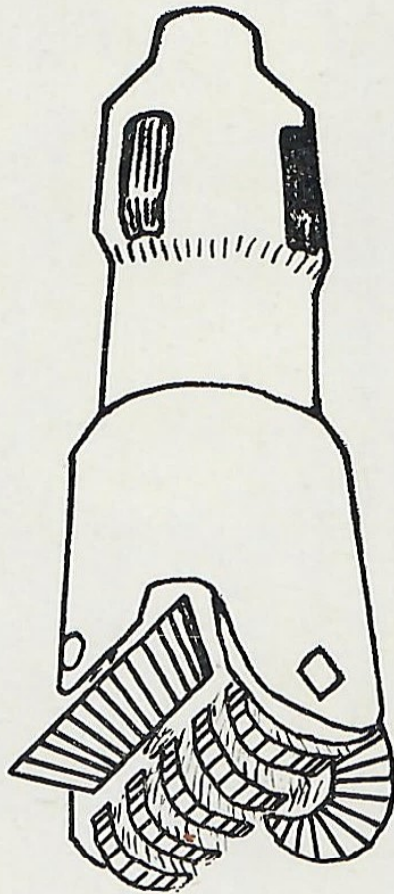


ROTARY SHOE
(bottom and side view)

hole would have been off perpendicular something like 60 degrees.

To straighten the hole the drillers began redrilling with a $14\frac{3}{4}$ inch rotary shoe at 30 feet. With the rotary shoe, a cut of which is shown on Page 6, it was found possible to cut into the walls of the hole to obtain a shoulder on which to drill. The hole was carried down to 150 feet with the rotary shoe, at which depth the Reed bit was substituted. At the point where the original hole had first started to curve badly it was discovered, by means of the electric light run down in the hole, that it was again starting to deviate from the perpendicular. It was immediately straightened. A Reed and Hughes bit were used from 250 feet to 308 feet and at the latter depth the light showed the hole to be straight. At 308 feet drilling was resumed with a Reed bit using a special type of side cutters. The light showed a straight hole at 420 feet. Except for an occasional run with a Hughes bit the hole was redrilled to 1101 feet with a Reed bit using an 80-foot drill collar.

When the hole reached a depth where the electric light could no longer be used accurately the drillers began making acid bottle tests. An acid bottle is nothing more than a test tube, about ten inches long. This is partly filled with an acid which etches a line on the glass at whatever level the liquid in the tube takes. The tube is dropped in the hole in what the drillers call a "go-devil". It looks like a spear carried by a native warrior of the Congo regions. The spear end of the "go-devil" operates against a set of springs which takes up the shock when it strikes an obstruction. The "go-devil"



REED BIT



THE "GO-DEVIL"

B. R. Griffith, assistant petroleum engineer at Santa Fe Springs, is holding a "Go-Devil" used in taking acid bottle tests to determine if holes are straight. The bottle is placed in a protected compartment in the "Go-Devil", which is then lowered in the drill pipe to the bottom of the hole.

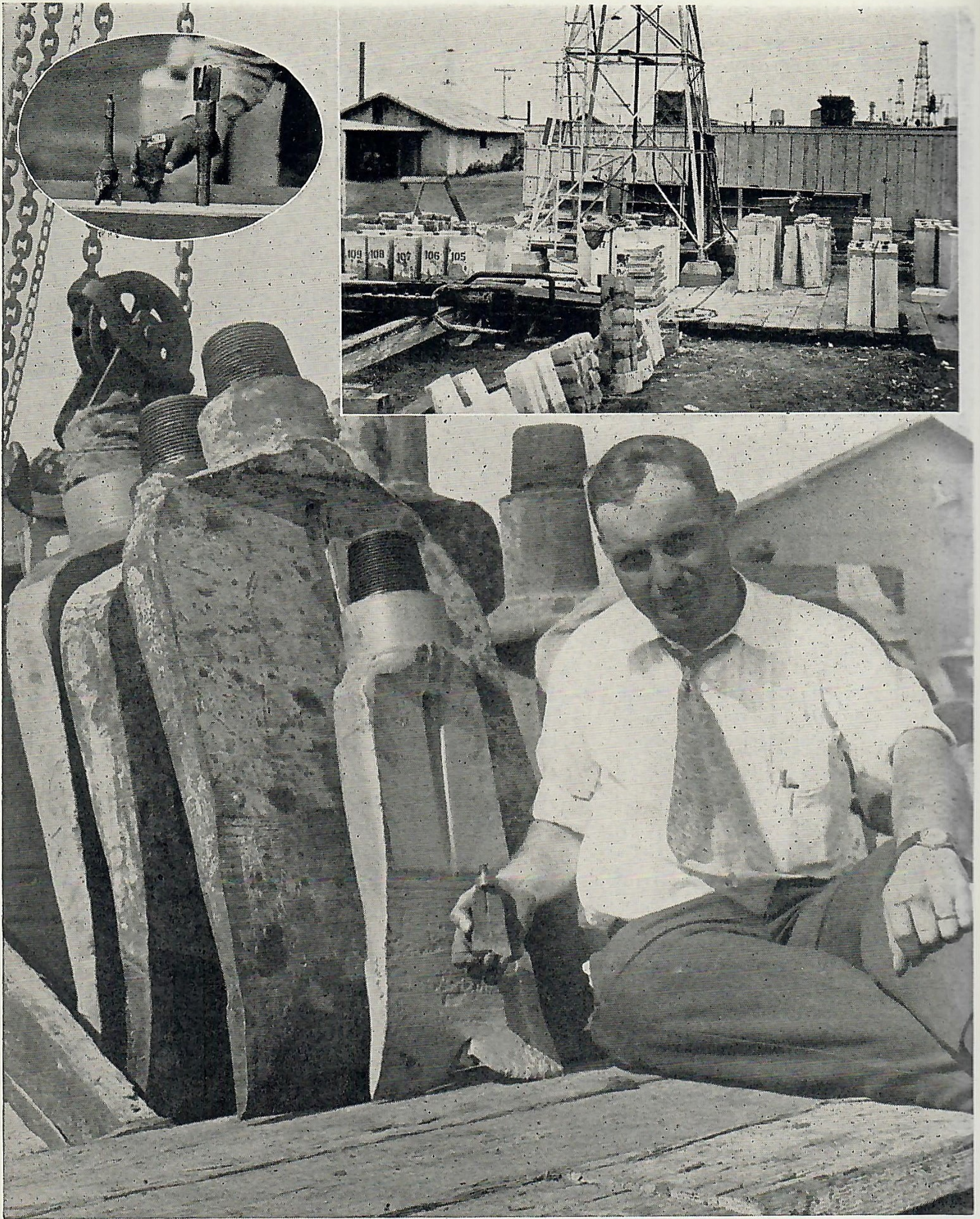
is dropped in the hole inside of the drill pipe and when it reaches the bottom the flanged springs hold it erect inside of the drill stem at the same angle the drill pipe is standing in the hole. If the hole is not straight the fluid in the test tube adjusts its own level and when taken out at the top the line etched by the acid shows what the acid level had been at the bottom of the hole. From this can be determined the angle at which the hole is deviating from the perpendicular.

The development of the acid bottle testing device, now being used by the Union Oil Company, is credited to "Hy" Winter, petroleum engineer at Santa Fe Springs.

Going back to the Buell well, we find that at approximately 650 feet, the drill passed completely out of the original hole.

At the time this data was obtained for publication the bottom of the redrilled hole was 1690 feet and there was no deviation at that depth. Between 1101 feet and 1690 feet it was found necessary to correct for an occasional bend that appeared in the hole.

In straightening the hole it was found that by using a rotary shoe, taking most of the weight off the drill



REGULATION BITS COMPARED WITH MINIATURE FISH TAIL

S. H. Grinnell, who helped build up the experimental equipment, showing how fish tail bit used in test drilling compares with some of the bits regularly used. The biggest bit in the picture is 24 inches across. Top left insert—Three of small bits used and, right, test rig surrounded by blocks prepared for new drilling experiments.

and rotating it at a faster speed than used ordinarily, the bit would cut its way into the wall of the hole, and after establishing a shoulder would keep the hole straight. This has resulted in

all drillers being cautioned to keep a close check on the weight maintained on the drill stem.

All wells being drilled by the Union Oil Company are being checked by



CLOSE UP VIEWS OF DRILLING EQUIPMENT

On the left is shown miniature rotary and one-half horse power electric motor at top of rig which drive the drill. The one-pound paint can gives some idea of the size of the equipment. Center—W. J. Larson ready to start drilling. Note the size of the bit and drill stem. Right—Weights attached to "kelly" to regulate weight on drill.

means of the electric light at the shallow depths and by the acid bottle test as soon as they get too deep to use the light. By this means the kinks in the wells are discovered while it is still possible to correct them. While keeping the holes straight has cut down on the average distance drilled each day, the loss in "yardage" is by no means comparable with the benefits gained.

And while the field department is demonstrating through actual drilling in the field that there is no longer a legitimate excuse for completing a crooked hole, it is carrying on the experiments with the miniature drilling outfit at Dominguez in the hope that further drilling refinements can be developed as a result of the tests being made there.

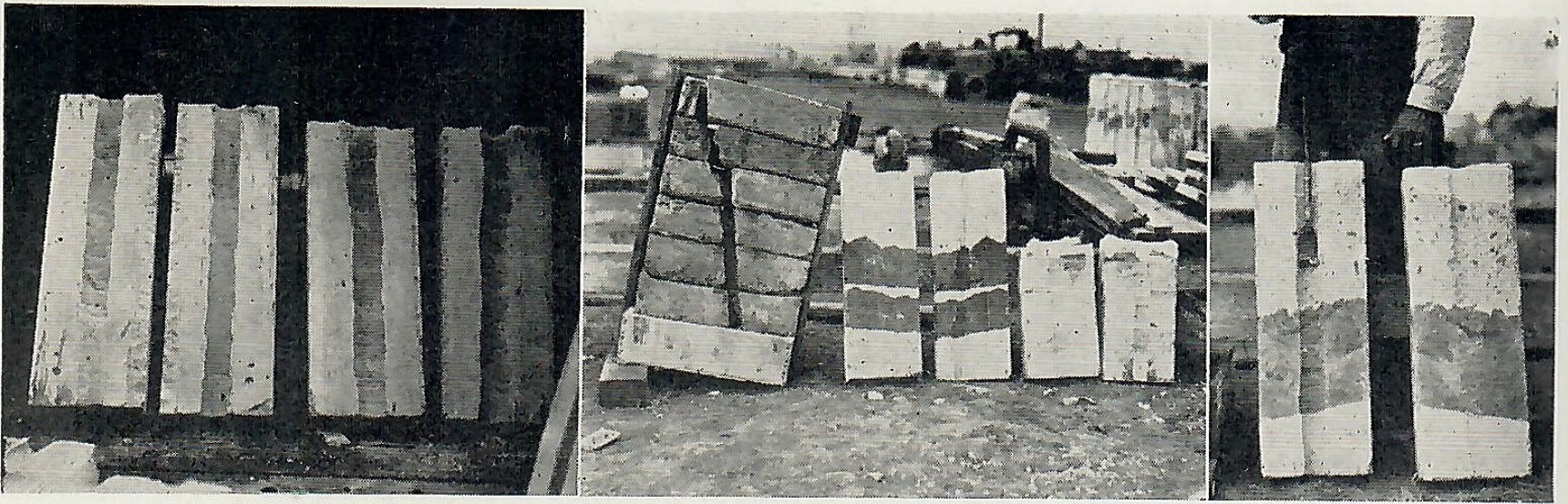
The equipment used in this experimental work was built up by S. H. Grinnell and E. P. Tallant. The idea of using such an experimental drilling plant originated with Mr. Hill two years ago. After some discussion of the problems involved the Brea field department was assigned the task of perfecting such equipment as might be needed and on July 1 it was decided to move the entire project to Dominguez.

The building of the twenty-foot rig was the simplest part of the problem.

The real task lay in reducing rotary, spindle, drill pipe, drill collar, bits, etc., to the proper size. Then came the question of power and regulating the weight on the drill. The power problem was solved by the installation in the top of the derrick of a half-horse-power electric motor equipped with a geared spindle. The gear on the spindle meshing with the reduction gear on the rotary controls the revolutions of the drill.

The preliminary experimental work with the equipment has about been completed and a few drilling tests have already been made. In preparation for the tests to be conducted within the next few months approximately one hundred blocks, thirty inches high, composed of gravel, cement, sand and clay, mixed in various proportions to represent nine different formations encountered in drilling the average oil well, have been made up. These formations are pitched in the blocks to represent the tilted formations encountered in actual drilling, and are of varying thickness. The formations represented are hard sandy shale, medium and soft sandy shale; hard, medium and soft sand; hard, medium and soft shell.

A range of rotary speeds will be used varying from 50 to 100 r.p.m. and weights from 10 to 40 pounds on the



TEST BLOCKS SHOWING RESULTS OF DRILLING

The blocks shown above were made up of cement, sand, gravel and clay in varying proportions to simulate earth formations. They have been sawed in two to show results of preliminary drilling tests.

drill pipe. These weights will be tested with each speed and in each formation.

The blocks are numbered and as soon as they are drilled will be sawed in two so the action of the drill as

it passed through the various formations can be observed. Complete data will be kept on each block. Because of the number to be drilled it is believed some very definite results will be obtained.

Air Race Victories for Union

AT the National Air Races and Aeronautical Exposition of 1929, held in Cleveland from Aug. 24 to Sept. 2, entries using Union aero products in their planes won five first and four second places. Victories were scored in the heavy and light plane classes in the National Women's Air Derby from Santa Monica to Cleveland, in the free-for-all 50-mile closed course race in which a new commercial plane speed record was set, and in the women's closed course and women's Australian pursuit races.

Mrs. Louise M. Thaden, flying a Travel Air, J-5C, equipped with a special N.A.C.A. cowling, completed the flight from Santa Monica to Cleveland in the heavy plane class in the National Women's Air Derby in 20 hours, 19 minutes and 2 seconds, elapsed time, to place first. The light plane race over the same course was won by

Phoebe Omlie, flying a Warner Scarab powered Monocoupe, with an elapsed time of 25 hours, 12 minutes, and 47 seconds.

Second place in the heavy plane class was won by Mrs. Gladys O'Donnell of Long Beach, with an elapsed time of slightly more than 21 hours. To further demonstrate her ability as a flyer, Mrs. O'Donnell won first place in the women's closed course race and in the women's Australian pursuit race. Mrs. Thaden, who nosed Mrs. O'Donnell out in the cross-country race, took second place in both events won by the Long Beach aviatrix, and placed second in the women's Pittsburg to Cleveland derby. Ruth Elder, another of the women flyers who used Union gasoline in her plane, placed fifth in the heavy plane, Santa Monica to Cleveland race.

Throughout the week of racing,



AIR RACE VICTORS AND THEIR PLANES

Upper left, Cliff Henderson, manager of the National Air Races, bestowing the wreath of victory on Mrs. Louise M. Thaden, winner of first place in the heavy plane class, Santa Monica to Cleveland women's air derby. Upper right, Mrs. Phoebe Omlie, who finished first in the light plane class. Mrs. Thaden and her Travel Air plane. At the right, Ruth Elder, fifth place winner in the heavy plane class. Gladys O'Donnell, lower left, winner of second place in the heavy plane class, women's derby, and first place in two other races. Bottom, left, the Travel Air "mystery ship," piloted by Doug. Davis, which set a new world's speed record for commercial planes. Davis is shown holding the cup won in the race.

Doug Davis, Atlanta air mail pilot, was one of the outstanding performers, both in speed and flying ability. Piloting the Travel Air "mystery ship," a low wing monoplane, powered with a Wright J-6, nine - cylinder motor, equipped with a supercharger, and fueled with Union gasoline, he won the free-for-all 50-mile closed course race with an average speed of 194.9 miles per hour. In winning this race he defeated the crack flyers of the Army and Navy, the first time a commercial pilot flying a commercial plane has accomplished that feat. On his fastest lap Davis was clocked at 208.69 miles per hour. His average speed and fastest lap set a new speed record for commercial planes. The "mystery ship" was the last word in streamlined jobs and was equipped with N.A.C.A. cowling. Even the "pants" on the landing gear were streamlined.

With a speed of 147.37 miles per hour, T. A. Wells, of Wichita, flying a Travel Air D-4000, powered with a Wright J-6 motor, and fueled with Union gas, placed second in the open cockpit race for planes with engines of not more than 800 cubic inch piston displacement. One of the high lights of the races was the experimental plane race for civilians. C. E. Clark, flying

a low-wing Travel Air monoplane, powered with a Chevrolet six-cylinder engine, finished third in the 25-mile closed course race with an average speed of 113.88 miles per hour.

The National Women's Air Derby was marred by the death of Marvel Crosson, holder of the woman's altitude record, whose racing plane crashed near Welton, Ariz. Miss Crosson was taken ill shortly before she hopped off from Santa Monica on the first leg of the race and is believed to have been overcome by the intense heat of the desert. The instruments on the instrument board showed the propeller was turning over at a high rate of speed when the plane hit the ground, indicating that the motor had not failed.

The company sponsored the flight last May in which she set the new altitude record for women. During the time she flew under the colors of the Union Oil Company she became one of the best known women pilots in the country.

The beautiful trophy won by Mrs. Thaden as victor in the women's air derby was engraved with Miss Crosson's name and presented by Mrs. Thaden to Miss Crosson's mother who resides in San Diego.

Kaibab Forest Open to Hunters

SPORTSMEN from all parts of Arizona and the West began a trek to the Kaibab National Forest, northern Arizona sanctuary of the largest deer herd in the United States, when hunting season opened in that district October 1. It is estimated that between fifty and sixty thousand deer are running in the Kaibab retreat.

An unusual situation exists in the Kaibab forest this year: the deer have become too numerous to insure the perpetuation of strong healthy herds.

At a meeting of the State Game Commission last August, it was first decided to decrease the number of deer in the herd, and

a co-operative hunting plan adopted, which will allow each hunter two deer this season, one of which may be a buck. The entire season's hunt which extends to December 15, will be under supervision of state wardens, two camps having been established, one on the east side and one on the west side of the mountain. The top of Kaibab Mountain has been reserved as a game shelter, and no hunting will be allowed. Due to heavy summer rains and a large mushroom crop coming on, the deer are in excellent condition.

Union Oil is playing a part in conveying hunters to the Kaibab forest. Scenic Airways, a 100 per cent user of Union products,



ARIZONA SCENES THAT GREET HUNTSMEN

At the top, views from the Kaibab forest. Central panel, left, a Grand Canyon scene enroute to the forest via plane; center, the Grand Canyon terminal of Scenic Airways providing air-plane transportation for hunters, and right, two other means of transportation available in forest area. Bottom, part of the Union fueled fleet the Fred Harvey Transportation Company has placed at the disposal of the hunters.

will carry passengers from their Grand Canyon terminal to the forest, and the Curtiss Flying Service will carry parties from Los Angeles to the forest. Going by way of automobile from California, the only route across Arizona is through Flagstaff. After leaving that city, the first service station

available is Richardson's Trading Post at Cameron. The next supply station is the Gap Trading Post, a 100 per cent Union account, then the Cedar Ridge Trading Post, and when the hunters arrive at the bridge across the Canyon, Buck Lowery's Union station is waiting to serve them.

Field Districts Combined

THREE field department districts in Los Angeles basin—Dominguez, Orange County and Santa Fe Springs—in which the major drilling activities of the Union Oil Company are now being centered, were consolidated last month in order to co-ordinate more closely the work in the various districts and to concentrate the supervision of the drilling operations in one administrative unit, rather than in three, such as existed under the previous arrangement. The consolidated districts are now known as the Southern Division.

F. F. Hill, manager of field operations, is of the opinion that the new arrangement will not only simplify the administrative details of the three former districts, but will bring about a uniformity of effort, increased efficiency and a standardization of equipment and drilling methods.

This reorganization had been contemplated for some time by Mr. Hill and executives of the company before it was put into effect. As one of the first steps toward it, A. C. Rubel, formerly chief petroleum engineer of the company, was last month appointed assistant manager of field operations.

The direct supervision of operations in the Southern Division has been placed in the hands of men who were formerly in one of the three districts. F. C. Boyd, who previous to the consolidation, was assistant drilling superintendent at Santa Fe Springs, has been appointed superintendent of drilling; F. W. Lake, formerly production superintendent of Orange County, has been appointed superintendent of production; C. W. Fromme, foreman of shops and tools at Santa Fe Springs, has been made superintendent of shops and tools for the entire division; Edmund Jussen, Jr., formerly in the geological department of the company,

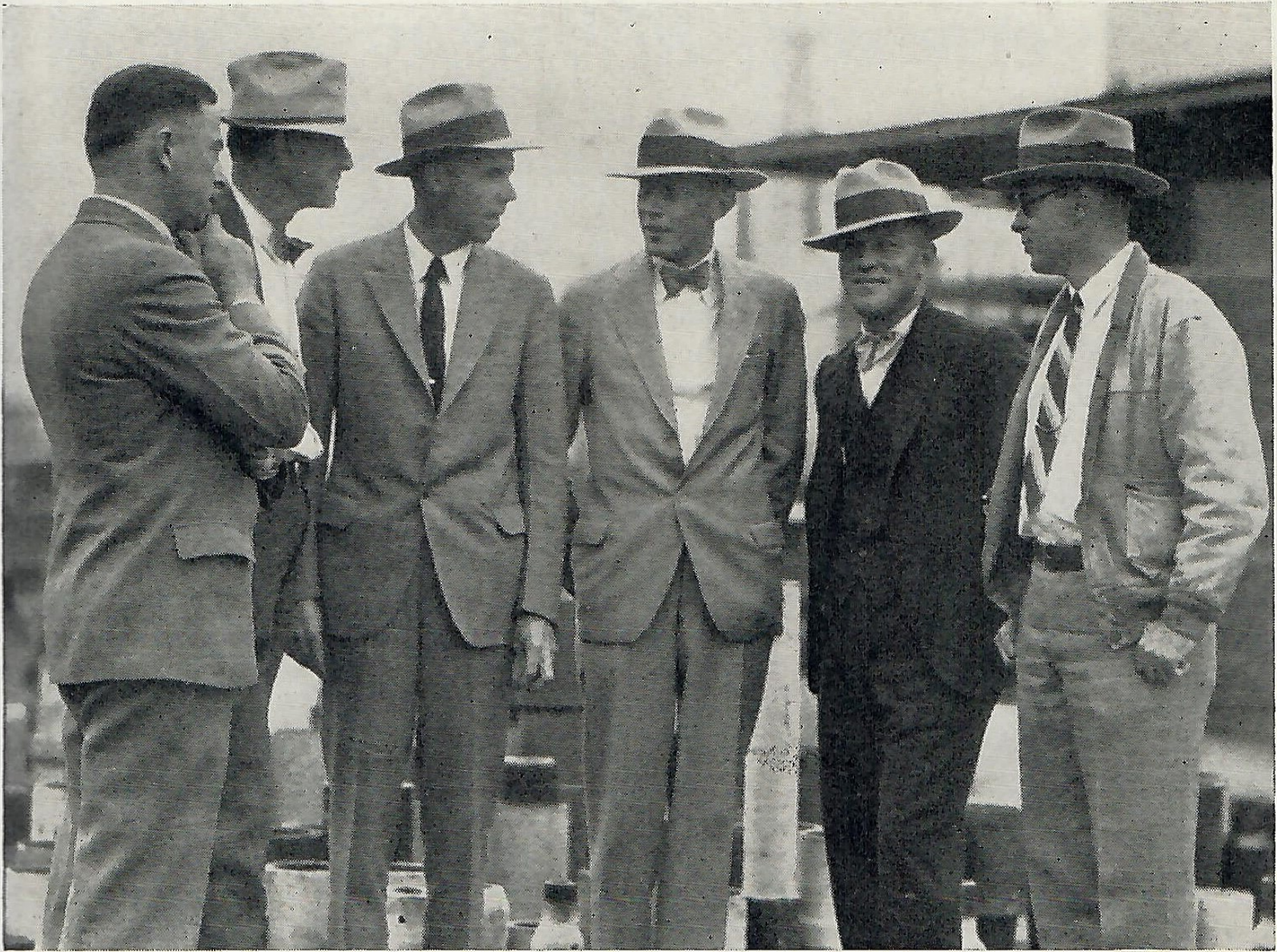
has been appointed chief petroleum engineer for the division. R. C. Hilsinger and C. W. Eckles, formerly superintendents of transportation and construction, respectively, in the area now comprising the Southern Division, continue in those same positions under the reorganization. The accounting departments of the three districts have also been consolidated.

The headquarters for the division is located at Santa Fe Springs, where new buildings are being erected to provide the necessary office space.

The men directing the field operations at Santa Fe Springs for the Union Oil Company form one of the youngest groups of superintendents in the field.

Mr. Lake has been with the company since June, 1922, starting as a petroleum engineer at Brea. In 1926 he was promoted to superintendent of production and remained in that capacity until his recent appointment. Under his direction many improvements in production methods have been worked out, some of which are being adopted by other companies. He has been active in the American Petroleum Institute and is national chairman of the publication committee and local chairman of the production practice committee, as well as being a member of the committee on standardization of pumping equipment.

Frank Boyd has been with the company for eleven years and in 1920 and 1921 was on the drilling projects carried on by the company in old Mexico. He started as a rotary helper on the Graham-Loftus lease at Brea and in two years advanced to driller. After drilling for four years at Brea he was sent to Montebello where he served in the capacity of driller and district superintendent. Later he was sent to Santa Paula as head driller and back to Brea within a few months as drilling foreman. He was transferred to Santa Fe



FIELD MEN WHO DIRECT WORK OF SOUTHERN DIVISION

Left to right—R. C. Hilsinger, superintendent of transportation; C. W. Eckles, superintendent of construction; Frank Boyd, superintendent of drilling; F. W. Lake, superintendent of construction; C. W. Fromme, superintendent of shops and tools and Edmund Jussen, Jr., chief petroleum engineer.

Springs a year and a half ago as assistant drilling superintendent.

Mr. Jussen, a graduate of the University of California, has been with the geological department for the past five years, specializing in valuation, appraisal, and surface work in proven fields.

Mr. Fromme came to the company in 1921 from the Navy where he had held the rank of machinist mate in the submarine service. He started as a machinist on the Stearns lease. In 1922 he was sent to Santa Fe Springs as assistant shop foreman and in 1926 was appointed shop foreman, which position he held until his recent promotion.

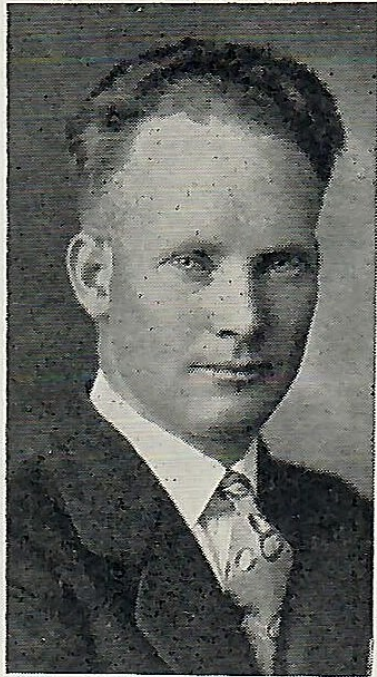
Mr. Hilsinger came to the company

thirteen years ago and in 1922 was placed in charge of the warehouse and tools at Santa Fe Springs. Prior to the formation of the Southern Division he had supervision over the field department transportation in the Dominguez, Orange and Santa Fe districts.

Mr. Eckles has been with the company approximately eight years. He started in charge of sales construction operations and was sent to New Zealand when the Atlantic Union Oil Company, Ltd., entered the marketing field in that country, necessitating the construction of a considerable amount of storage and warehousing facilities. Since his return to California he has been in charge of the field department construction in what comprises the Southern Division.

Advertising Manager Resigns

V. L. EHRENCLOU, familiarly known throughout the company as "Bud," resigned as manager of advertising Sept.



V. L. EHRENCLOU

15, in order to devote his entire time to the activities of the Occidental Publishing Company, of which he is president and general manager. The Occidental Publishing Company are publishers of Western Flying, recognized as one of the leaders in the national aviation magazine field, and Airport Construction and Management, started the first of this year.

Mr. Ehrenclou completed fourteen years of service with the company prior to his resignation. He entered the employ of the company in

September, 1915, in the comptroller's department and continued in that department in various capacities until the World War, when he went on Uncle Sam's payroll for a period of a year. Following the war he returned to the company and was assigned to the pipe line department, remaining there until the advertising department was organized in 1922, when he was transferred to that department. In 1926 he was appointed advertising manager.

Western Flying was started by Mr. Ehrenclou and Robert Pritchard, formerly a member of the editorial staff of the Los Angeles Times, four years ago, as a side issue. From a publication of only a few pages, prepared in the spare hours of the two men, it has grown to be the biggest aviation magazine in the west.

Don Forker, who for the past year has been directing the publicity activities of the company, will fill the post made vacant by Mr. Ehrenclou and will continue in charge of publicity.

R. W. Martin in New Post

The American Petroleum Institute, in another move to establish an operating judicial committee for consideration and enforcement of the National Code of Practices for Marketing of Petroleum Products recently made effective by the Institute, on September 30 appointed Ralph W. Martin, manager of refined oil export sales and secretary of the sales committee of the Union Oil Company, to the post of secretary of the Committee on Conciliation, Pacific Coast Region. Mr. Martin will devote his entire time to the work of the committee, of which Mr. V. H. Kelly, chairman of the sales committee of the company, is head.

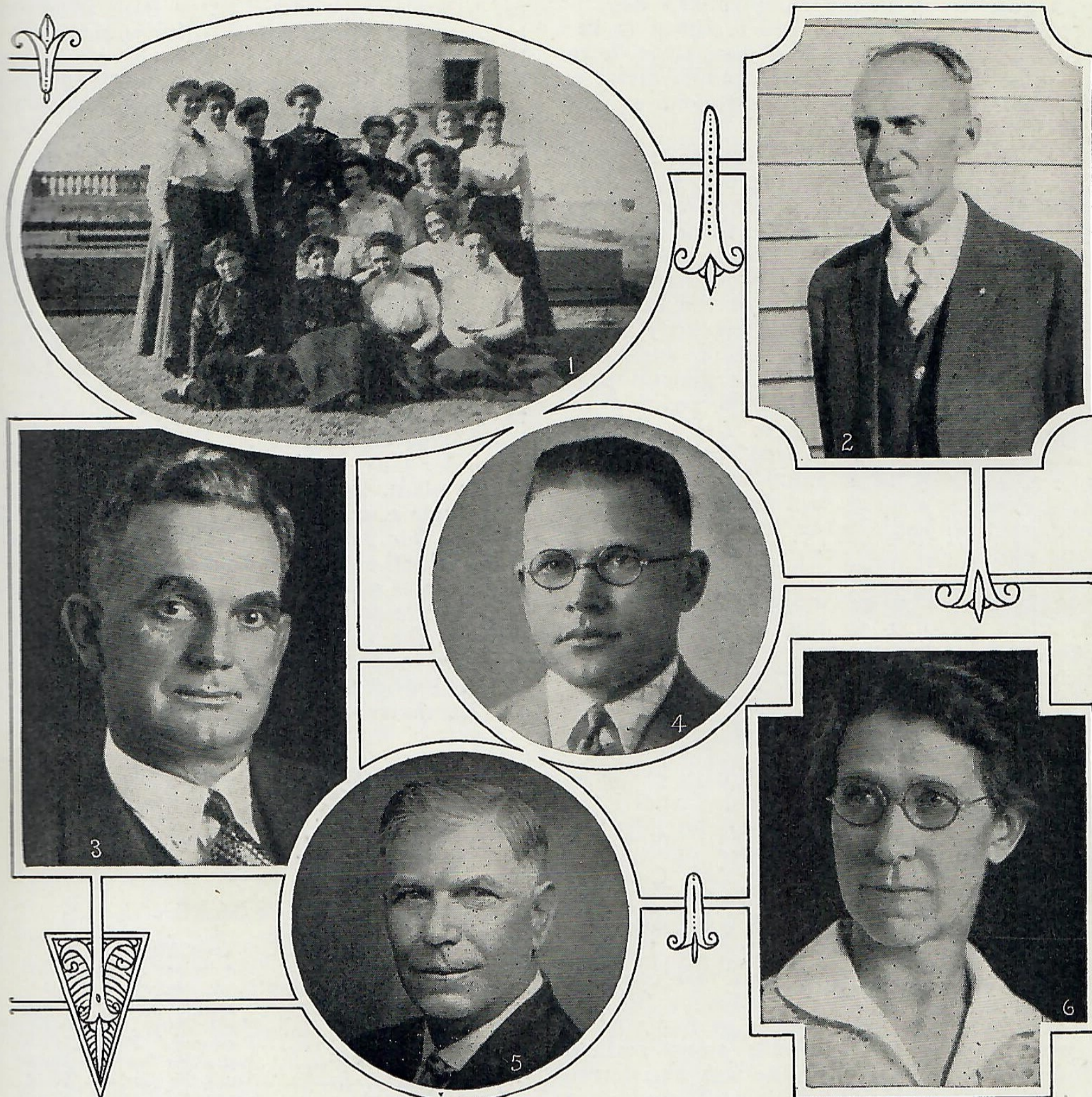
The Committee on Conciliation is composed of seven sales managers of operating companies on the Pacific Coast, one each from Union, Standard of California, Richfield, General Petroleum, Texaco, Shell, and Associated. This committee operates only in the Pacific Coast Region, one of six geographical divisions into which, for the purpose of putting the marketing code into practice, the United States has been divided. The Coast region is composed of Washington, Oregon, California, Nevada, and Arizona. The committee acts on cases where the various state subcommittees, also appointed by the Institute, have failed to reach an agreement.

Service Pin Awards

SEVEN employees of the company, two of whom are women, were awarded the second ruby for their service emblems, indicative of twenty years of service, during September. They are Miss Anna Lapp, Miss Grace Oxby, Fred M. Penter, Edward D.

Cook, Virgil E. Conkling, Arthur W. Anderson, and Arthur O. Marsh.

Three employees who completed fifteen years' service with the company last month were presented with the first ruby for their service pins, and thirty-one who had been



TWENTY YEARS WITH UNION OIL COMPANY

No. 1—Photograph of women employees in the company's head office in 1911, taken on top of the old Security building. Standing, third from left, is Miss Nettie S. Powell, who is completing twenty-second year with company. Sitting in front row, third and fourth from the left, are Miss Anna Lapp and Miss Grace Oxby, who entered ranks of twenty-year employees last month. No. 2—Virgil E. Conkling. No. 3—Fred M. Penter. No. 4—Arthur W. Anderson. No. 5—Edward D. Cook. No. 6—Miss Anna Lapp.

with the company since September, 1919, were presented with the shield emblematic of ten years' service.

Arthur W. Anderson started to work for the Union Oil Company on the fourteenth day of September, 1909, in the accounting department of the Oakland district, then just starting on its third year. In 1913, he was transferred to San Francisco as stock clerk and five years later was shifted back to Oakland as assistant cashier in charge of sales accounting. In 1919, he went to Stockton as district cashier, remaining there until March, 1920, when he was sent to Seattle as district cashier. From Seattle he was transferred to the comptroller's department in the head office and assigned to the refined oil division, which has since been combined with the station accounts division, where Mr. Anderson is employed at the present time.

Miss Anna Lapp and Miss Grace Oxby, two of six women employees who have been with the Union Oil Company for twenty years or longer, started to work for the company within a few days of one another in September, 1909. Miss Lapp was employed in the auditing department of the head office, then located in the old Security building at Fifth and Spring streets, and Miss Oxby started to work in the general payroll department. At that time the auditing department, since changed to the comptroller's department, was housed entirely in one office. In 1912, Miss Lapp was transferred to the cashier's office, and during the change in personnel made when war was declared, was shifted to the sales department where she is still employed. Shortly after the company's offices were moved from the old Security building to the Bartlett building, Miss Oxby was transferred to disbursements. In 1925, she was assigned to the head office payroll, and after remaining there a few months was returned to the disbursement department.

Virgil E. Conkling helped with the construction of the Avila refinery, and later, under A. Roy Heise, then superintendent of the refinery, operated the power house. After several years at the refinery Mr. Conkling was transferred to the ship loading plant at Port San Luis. In 1914, he was moved to Junction on the Producers' Pipe Line as fireman. In the fourteen years that followed he served as engineer at Sunset Station, Maricopa, as senior engineer at Santa Margarita, and at the Norwalk pump station, from where in May, 1928, he was transferred to the Producers' Pipe Line at Midway station, later to be moved back to Junction, his stamping grounds of 1914, as senior engineer.

Virtually the entire period of Edward D. Cook's employment has been spent on the company's leases in the vicinity of Santa Paula. Twenty years ago last month he was hired as a teamster by William Hill, then foreman of Adams Canyon drilling opera-

tions. After a few months as teamster he was put to work in the capacity of electrician, operating a dynamo which supplied electricity to several drilling properties. He was next employed as a tool dresser on Adams No. 40, and at the close of a few months was transferred as pumper to the ex-Mission lease in Adams Canyon where he is still employed.

Arthur O. Marsh's first introduction to the company was on the business end of a pick and shovel, working as a roadbuilder in the Orange field. From 1909 to October, 1921, he matched his muscles and skill with a wide variety of field jobs from mechanic to driller, and on the latter date deserted to the ranks of the white collar workers, going into the Orange field office as clerk. He served there in a number of positions until August, 1928, when he was transferred to the Santa Fe Springs office where he is now employed as well auditor.

Since the time of Fred M. Penter's employment, Sept. 9, 1909, many changes have taken place in gas department work, chief among them being the change-over from the compression method of extracting gasoline from gas to the present method of extraction by absorption. Mr. Penter came to the company as pipe fitter at Port San Luis, holding this job until 1917, when he moved to the Orcutt compressor plant which had been built by Mr. Heise. Mr. Penter served under Guy Goodwin, first superintendent of the plant. In December, 1917, Mr. Penter was made engineer of the compressor plant, holding this position until 1921, when he was made chief engineer. Three years later he became gas superintendent of the Orcutt division and was placed in charge of gas operations in the valley division, holding, at present, gas supervision over Kern, Ventura, Santa Barbara, San Luis Obispo counties, and sections of King and Fresno counties.

FIFTEEN YEARS

Lazear, WoodsonSan Francisco Sales
McGinley, BarneySanta Fe Springs Field
Smith, Arthur A.Oleum Refinery

TEN YEARS

Alger, George H.Orange Field
Archibald, Kenneth A.Vancouver Sales
Birmingham, John P.L. A. Refinery
Butler, William O.Santa Fe Springs Field
Cederlof, Francis H.Head Office Comptrollers
Childers, Charles E.Producers' Pipe Line
Combs, Cloran R.Santa Fe Springs Field
Dowell, WillSanta Fe Springs Field
During, EdwardSanta Fe Springs Field
Ellis, William B.Santa Fe Springs Field
Ferguson, ElijahOleum Refinery
Hood, Charles A.Orange Field
Johnson, Roy W.Producers' Pipe Line
Kahl, Andrew G.Head Office Purchasing
Lawrence, William M.Oleum Refinery
Limbocker, Lyman E.Head Office Disbursements
Petersen, John E.Los Angeles Pipe Line
Rathke, TheresaHead Office Sales
Schalk, John S.Land Dept.
Schlegel, JosephProducers' Pipe Line
Shepherd, ErnestL. A. Refinery

TEN YEARS (Cont.)

Stull, Dell A.	Orange Field
Turner, Charles B.	Santa Fe Springs Field
Vinson, Glen P.	Head Office Gas
Walz, Arthur	Field Const., S. Fe Springs
Willsey, Charles A.	Santa Fe Springs Field
Wilson, Joseph A.	Head Office Tax
Wilson, Samuel I.	Santa Fe Springs Field
Witter, Merlin C.	Head Office Cashiers
Woods, Gerald A.	Research & Development
Yager, Nelles A.	Head Office Sales

RENTON AGENT DIES

William Chaffee, an employee of the company since December, 1909, and special agent at Renton, Washington, since 1923, was stricken with an heart attack the morning of August 31 and died a few hours later. Mr. Chaffee had complained of not feeling well for several days, but had continued his work and was awaiting his turn in a Renton barber shop when the first attack came. He was rushed to an hospital, but failed to revive.

He first joined forces with the company as a salesman in the Seattle district, Dec. 20, 1909, remaining there for thirteen years. In July, 1922, he was transferred to Wenatchee, Washington, as salesman, and in November of that year, went to Bellingham in the same capacity. He was made agent at Renton, June 1, 1923, holding that position until the time of his death.

Mr. Chaffee leaves a widow, Mrs. Alberta B. Chaffee, and a host of friends among employees and the public in the Northwest.

"SERVICE STATION FOUR" ON NBC

Radio fan employees who for a time missed the Friday night broadcast of Frank, Sandy, Sally, and Jack, "Union's Service Station Four," will be glad to know that the men who man the "mike" on Friday nights, are back on the air, this time over the National Broadcasting Company's Pacific Coast system. Due to the disbandment of the American Broadcasting Company chain of stations, over which the boys formerly presented their programs, the Service Station Four were off the air for several weeks. Their first program over NBC was presented Friday, Sept. 13.

A change in the time of the aerial presentation has been made, the programs now coming on the air from 9:30 to 10:00 p.m. The type of program presented has not been changed, the boys constructing the body of their half hour of popular selections from hundreds of requests that have been coming to the main office on cards distributed to the public by the service station operators.

**MARINE BUREAU SELECTS
GROUNDWATER**

After having served for several years on the executive committee of the Marine Service Bureau as a representative of the Pacific American Steamship Association, William

Groundwater, manager of transportation of the Union Oil Company, on September 11, was elected to the chairmanship of the committee and will act in that capacity until July 31, 1930.

The committee of which Mr. Groundwater has just been elected chairman, is composed of fifteen members, five each from the Shipowner's Association, the Pacific American Steamship Association, and the San Pedro Steamship Association. Work of the committee consists in co-operating with government officials and city harbor commissions, and the general protection of steamship employee and company interests.

RALPH J. REED RESIGNS

It was with considerable regret that officials of the company last month accepted the resignation of Ralph J. Reed, chief engineer of the company since 1918 and an employee for twenty-one years. Many of the company's most important engineering projects were supervised by Mr. Reed during the time he was a member of the engineering department.

**RALPH J. REED**

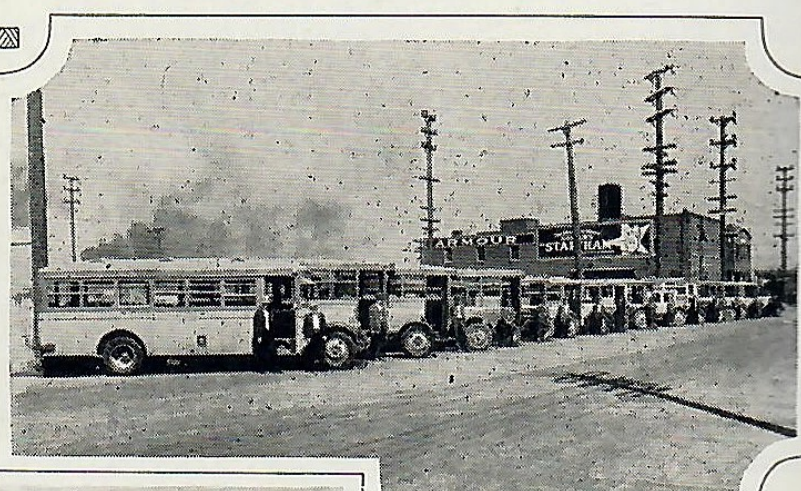
He first obtained employment with the company as a transitman in the geological and land department Oct. 26, 1908. One of his first assignments was to make surveys of the Coalinga-Port San Luis section of the present Producers' Pipe Line. In the years immediately following he engaged in general engineering activity, locating stations on the lines of the Producers' Transportation Company and repairing and building reservoirs on the San Luis Obispo tank farm. Establishment of an engineering division of the company in 1915 resulted in the appointment of Mr. Reed as engineer of the transportation department in addition to retaining his position in the geological and land department.

In 1916, Mr. Reed was placed at its head in the capacity of acting chief engineer, and in 1918 was appointed to the post of chief engineer of the company. For a time only sales and transportation construction work was handled by the department, but with the building of the steam and lubricating plants at Oleum, the department widened its activity to every line of petroleum engineering. Starting in 1918 the work of the department was confined chiefly to refinery extension and construction.

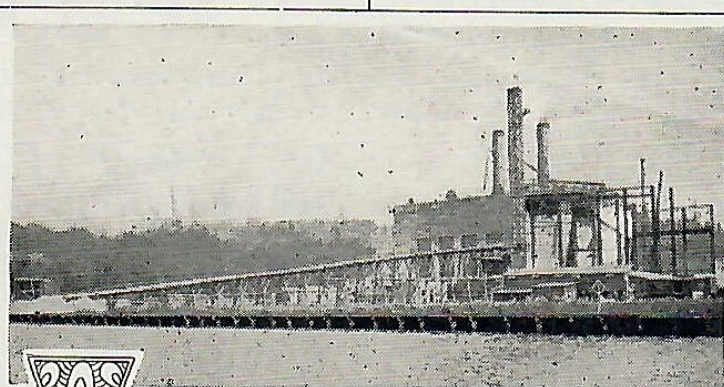
With Users of Union Products



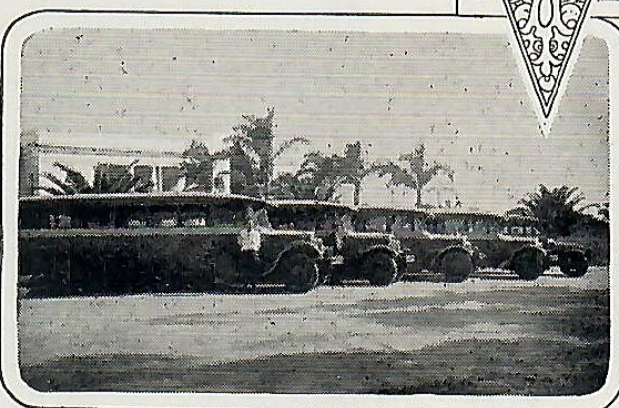
ROYCE TAXICAB CO., operators of the biggest taxicab fleet in Portland, are using Union gasoline and greases and Aristo Motor Oil.



TACOMA BUS COMPANY has used Aristo Motor Oil and Union gasoline for seven years in their fleet of busses with excellent results.



THE SHUFFLETON STEAM PLANT of the Puget Sound Power & Light Co., on Lake Washington, Seattle, recently received from the Union Oil Company the largest tanker delivery of fuel oil ever made on the lake.



OCEANSIDE - CARLSBAD Union High School busses.



CONSTRUCTION CO. calls for Union Service.

AWARDED SCHOOL CONTRACT

The Oceanside-Carlsbad Union High School at Oceanside, which owns and operates four Mack A. B. buses with a seating capacity of fifty students and an additional G.M.C. K-16 for short runs, has announced the awarding of the gasoline, oil and grease contract to the Union Oil Company for another year.

The buses operated by the school are oiled and greased in the auto shop division of the vocational arts department. All maintenance work throughout the school year is done by C. E. Line, auto shop instructor, with the assistance of the advanced auto shop students.

At the close of the past year, during which the buses were run with Union Oil products exclusively, over a distance of more than 18,000 miles, it was found unnecessary to replace any bearings, rings or valves. The big buses were also able to make better than 7.6 miles per gallon on Union gasoline.

MAKES REMARKABLE SUCCESS

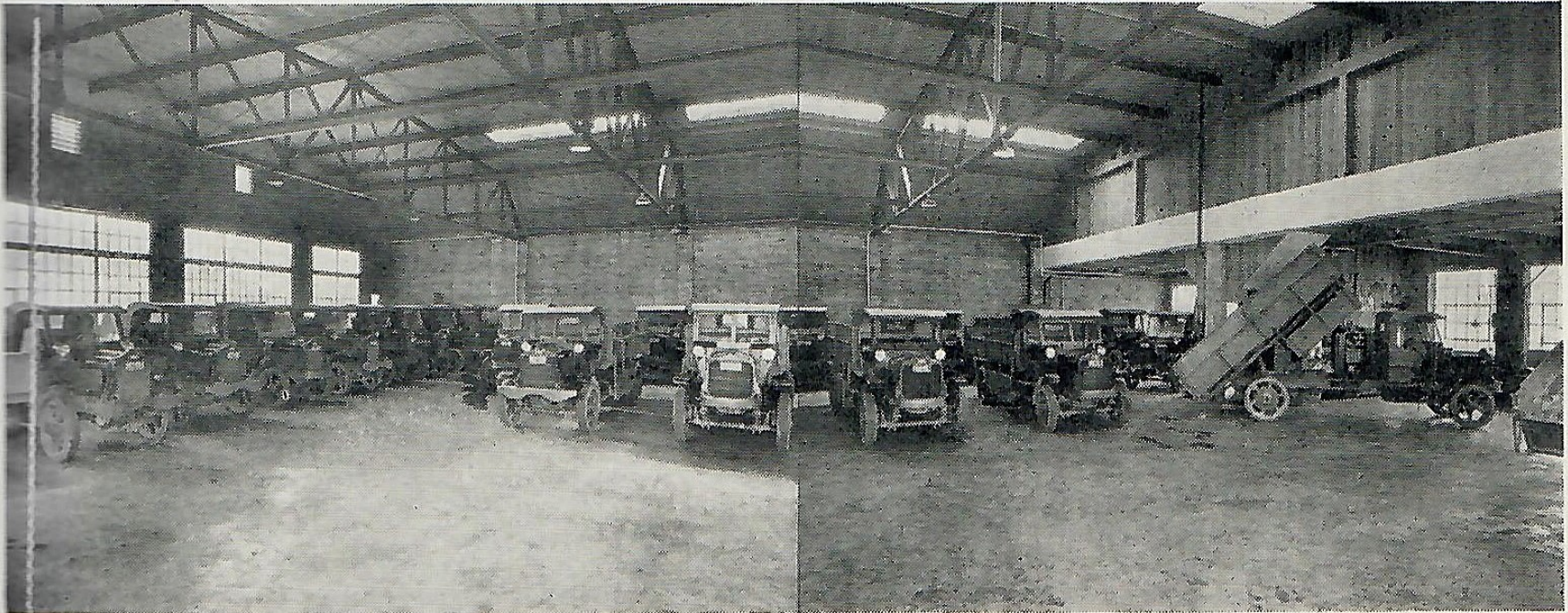
The L. J. Dowell Construction Company of Seattle, rated as one of the biggest contracting firms of its kind in the Northwest, was started in 1917 by Louis Dowell with one truck. During the past year he operated four gasoline shovels and a fleet of trucks. He is specializing in city, country and state highway grading.

The Dowell Construction Company has been using Union gasoline and motor oils since 1922, and last year used 68,000 gallons of gasoline in moving a half-million cubic yards of dirt.

OCEAN CURRENTS TESTED

On October 21, 1925, J. L. MacMillan, second officer of the "Coalinga", Union Oil tanker, cast a sealed bottle into the Gulf of Siam, in latitude 14° 14' N., longitude 104° 22' W. It was recovered among the Marshall Islands in approximately latitude 11° 09' N., longitude 169° 41' E. on February 24, 1929, nearly 5,000 miles due east of the point where it was dropped into the ocean.

SEATTLE DEPENDS ON THIS FLEET OF TRUCKS

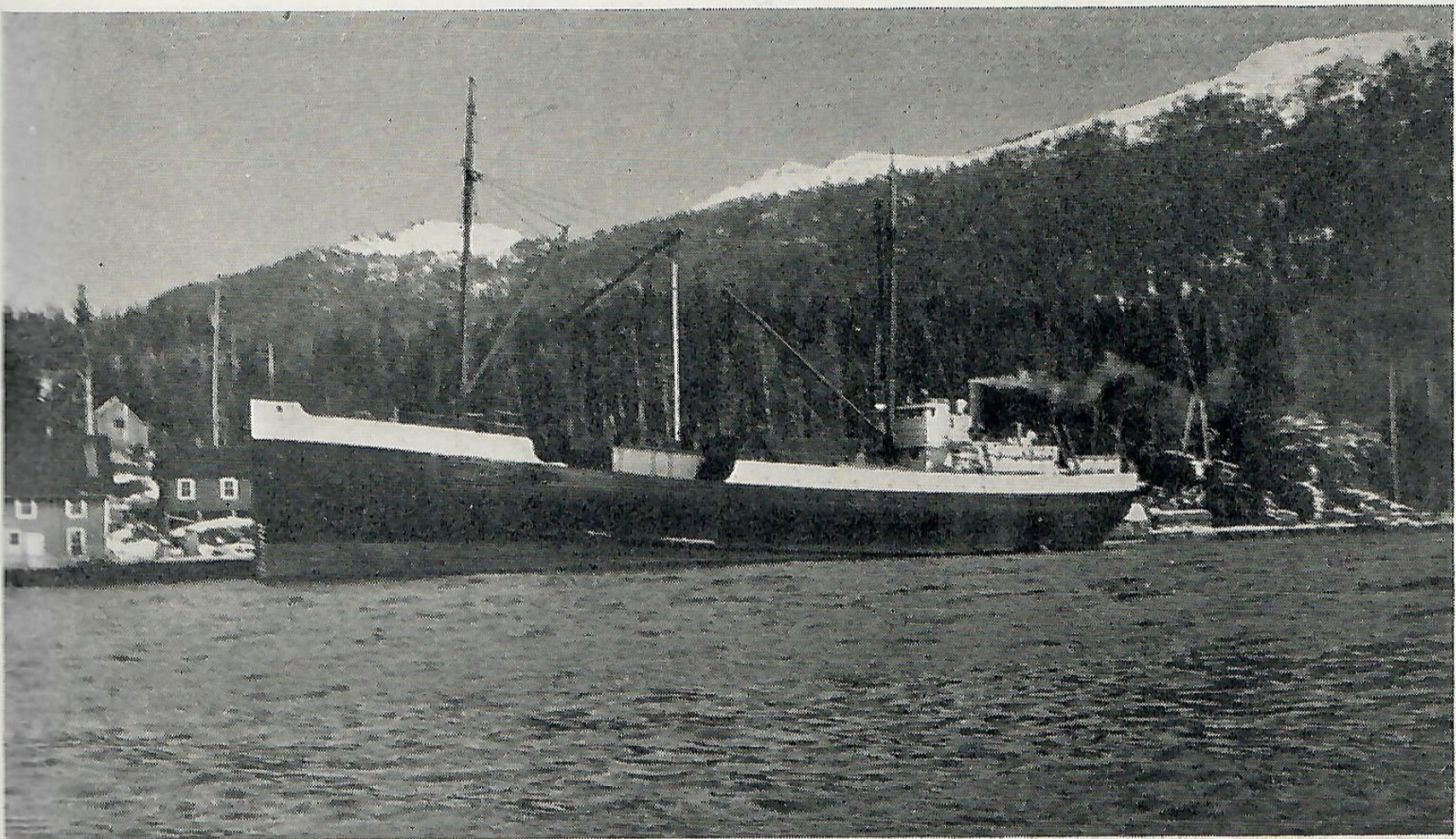


The disposal of garbage is one of the most troublesome problems of the larger cities. In Seattle, they have turned that problem over to the Seattle Garbage Collection Company, headed by Joe Manginni. Joe laid the foundation for the company which operates thirty-four trucks, back in 1911, when with two horses and a wagon, he started out to help solve the city's question: "What to

do with our rubbish and garbage?" Operated under the supervision of the department of health, this company has done much to make Seattle one of the healthiest cities in the United States.

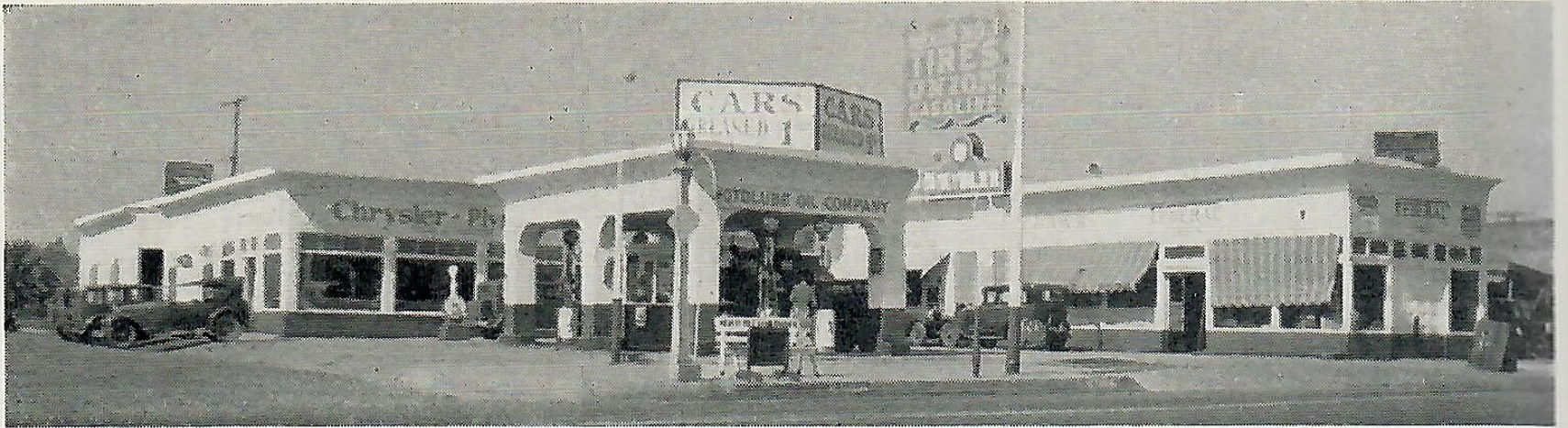
Aristo motor oils and other Union Oil lubricants are used exclusively in keeping up the operating efficiency of the truck fleet.

RELIES ON UNION PRODUCTS ON LONG RUN



The Independent Navigation Company, operators of the M. S. "Oregon," shown above, which runs between Seattle and Alaskan points, use Aristo Heavy in the 500 horsepower motors and auxiliary machinery, Oleum Marine in the thrust bearings, and Union Gear grease in winch gears

SUPER-STATION ON SITE OF STATE'S FIRST GAS STAND



Above is one of T. L. Brown's super-service stations built on site of California's first oil station at the corner of Fourth Street and Whittier Boulevard, Montebello. Photograph of first station shown on the right.

A SUPER service station at the corner of Fourth Street and Whittier Boulevard, Montebello, California, that deals exclusively in Union Oil products, stands on the same site where T. L. Brown, back in 1908, established what is believed to have been the first service station in Southern California. The "super" was built by this same Mr. Brown and is one of six similar stations owned and operated by him.

Previous to the opening of his "gas stand," as he called the station in 1908, Mr. Brown drove a delivery wagon for an oil concern in Los Angeles. In reminiscing on his establishment of the Montebello station, Mr.



Brown recalls how automobile owners became so numerous that rather than be stopped in the streets, he appointed a meeting place, the corner of Seventh and Olive Streets, now one of the busy intersections of Los Angeles, where they could come and obtain gasoline for their cars from his delivery wagon. Dispensing gasoline from his wagon precipitated the idea of establishing his "gas stand" on Whittier Boulevard.

LAUNDRY LAUDS UNION CLEANING SOLVENT

For a number of years, the Washington Laundry Company, Incorporated, of Seattle, has been a satisfied user of Union lubricating oils for its large fleet of delivery and collection trucks. The manager of automotive equipment states that Motoreze has proven better and caused the company less worry than other oils previously used. Over a period of a year, the laundry uses thirty-

six barrels of various grades of lubricants for its trucks.

Rapid strides in dry cleaning processes in recent years has called for research work on the part of laundry representatives, and resulted in the Washington Laundry Company selecting Union cleaning solvent and Union gasoline for use in its dry cleaning plant. Fifteen thousand gallons of cleaning solvent, 15,000 gallons of gasoline, and 300 gallons of kerosene are used for dry cleaning alone by the company during the year.

NEW SAFETY BOARD

Effective September 1, 1929, the safety board of the company was changed to constitute the following: R. E. Haylett, chairman; F. F. Hill, Wm. Groundwater, A. G. Page, R. W. Garman, and V. H. Kelly. George F. Prussing was appointed secretary of the board. The board will act in an advisory capacity, its chief duty that of keeping operating departments advised of the best safety practices and devices.



SAFETY IN THE UNION



ANOTHER LIFE SAVED

Alex Matheson, foreman of the Los Angeles Refinery sheet metal shop has been a first aid enthusiast since the first team was organized at Wilmington in 1924. It was this team that entered the State Industrial First Aid contest at Riverside that Fall and took every available prize.

Now Alex has added another winning to his credit, one that is not marked by silver trophy or official record. On August 11, while driving along the State Highway near Del Rey, he saw two men bringing an unconscious woman to shore through the surf. When he reached the group, the woman had been laid on her back, with her head up. To all appearances she was dead. A crowd was gathering and there were cries for the ambulance but Alex got busy and proceeded to give artificial resuscitation, meanwhile directing others to chafe the victim's limbs to promote circulation. In five minutes or so, the woman commenced to breathe. By that time the ambulance was waiting and she was taken to the hospital. It was like Alex neither to give his own name nor to ask that of the woman whom he had restored to life.

TWO PERFECT SCORES

Three hundred and sixty-five days and still going strong! That was the message flashed to the head office by the Los Angeles Pipe Line on September 4, when they completed their first calendar year without a single lost time accident among the operating and maintenance forces. Two hundred and thirty odd men were responsible for that record.

Hardly had our congratulations ceased when a call from Los Angeles Refinery announced the completion of their first year with a clean slate. Perfection is not to be compared, yet it must have been even more gratifying to Carl Brownlee and his men to realize that there were more than 640 men involved in this achievement. The happiest man in the bunch was Francis Bartella, safety supervisor, whose enthusiasm made the record possible.

EXCELLENT SAFETY RECORDS

The Valley Division of the Department of Exploration and Production is again after the coveted gold star for their Safety Flag. Six months have passed since the breaking of a derrick safety belt caused them to lose the record they had almost won. Nor is

Ventura many days behind them. As for the Northern Division of the Gas Department, they are already on the home stretch, with eight months of goose eggs to their credit. Brea Refinery is in its fourth no-accident year and Vancouver in its third. You don't have to sell Safety to those fellows!

FIELD FIRE FIGHTERS

With the consolidation of Field activities in the Los Angeles Basin, a reorganization has been effected in the fire fighters at Santa Fe Springs. Lead-tong men on drilling crews have been drafted into the fire crew and training has already started using the problem method developed at the major refineries and now used at all manufacturing and gas plants of the company. John Howell, fire protection engineer, is supervising the drills.

NATIONAL SAFETY CONGRESS

On September 30 the annual congress of the National Safety Council convened in Chicago. For nearly twenty years safety men in industry have been gathering once each year in these great meetings to compare experiences and methods, and to gain inspiration for another twelve months battle. So great has the attendance grown that most delegates have time only for the sectional meetings of their own industry. Last year about five thousand attended.

Union Oil Company will be represented by Geo. F. Prussing, safety engineer, who is scheduled to tell of the Company's experience in training refinery men in fire prevention and control.

L. A. BASIN ORGANIZED

With the consolidation of all Company field activities in Los Angeles and Orange Counties, safety work in the newly named southern division will be directed by Homer A. Delaney. He will be assisted by Ray Judy, who has been transferred to this work from the Department of Insurance and Personnel. Their work will take in the drilling, producing, shop, trucking, and construction groups, as well as all gas and pipe line operations.

The duties assigned to the safety supervisors are principally the education of foremen and other employees in safe practices. They are authorized, however, by the Superintendents of all departments operating in the Division to enforce State and Company safety regulations.

REFINED AND CRUDE



Most people know necessity is the mother of invention, but few are aware that the father is an Irishman by the name of Pat. Pending.

* * *

And all we have to say about the man who sings while he is shaving is that he must have a better razor than we have.

* * *

John, wishing to play truant from school, phoned to his schoolmaster, saying in a deep, gruff voice: "I am very sorry my son John cannot attend school today. He is very ill."

Schoolmaster: "And who is this speaking?"

John (in same gruff voice): "My father." "Orcadian".

* * *

According to *Life*, golfers are just people, only louder and funnier.

* * *

The shin guards that the hockey players use would be fine things to wear when playing bridge with your wife.

* * *

Statistics prove that if all the automobiles in Los Angeles were placed end to end, it would be Sunday afternoon.

* * *

"Answers," a well known English magazine, wants to know:—How can you possibly cross the street when the cars keep coming like this?

* * *

And we are informed by an automobile salesman that the only way you can get a Scotchman to buy a car is to throw in the clutch.

* * *

Before a man can wake up and find himself famous, he must first wake up and find himself.—"Life"

* * *

Service Station Attendant: "Shall I check your oil?"

Patron: "No, I'll take it with me."

* * *

Uncle Rastus says: "Ah regahds chickens as our most usefulest animals. You can eat 'em befo' dey is born, and aftah dey is daid."

* * *

Then there was the fellow who bumped his funny bone, and combed his hair in such a manner that it wouldn't show.

It seems pretty definitely settled that the reason why automobile drivers are invariably in a hurry is this: They are speeding up to get in front of you so they can slow down.

* * *

The following little poem is ancient, but it is good enough to repeat for the benefit of the few who haven't heard it:

The rain it falleth on the just
And also on the unjust fella,
But mostly on the just because
The unjust steals the just's umbrella.

* * *

We have often wondered if the elevator boys are the individuals frequently referred to as "birds in gilded cages".

* * *

Usher: How many please?

Exasperated Person: There were five of us, but three died.—"Life."

* * *

In the Jewish army we understand the customary command of the sentry is: "Advance friend and give the discount."

* * *

And Lennie tells us of the unfortunate endurance flyer who was obliged to come down on the thirtieth day to make another payment on his plane.

* * *

The significance of that old expression—"There is more in this than meets the eye"—must be fully appreciated by those people who still persist in eating grape fruit for breakfast.

* * *

By the way, if you wear glasses and are addicted to the above practice, you will be glad to hear that a tiny windshield wiper has been developed to alleviate your distress.

* * *

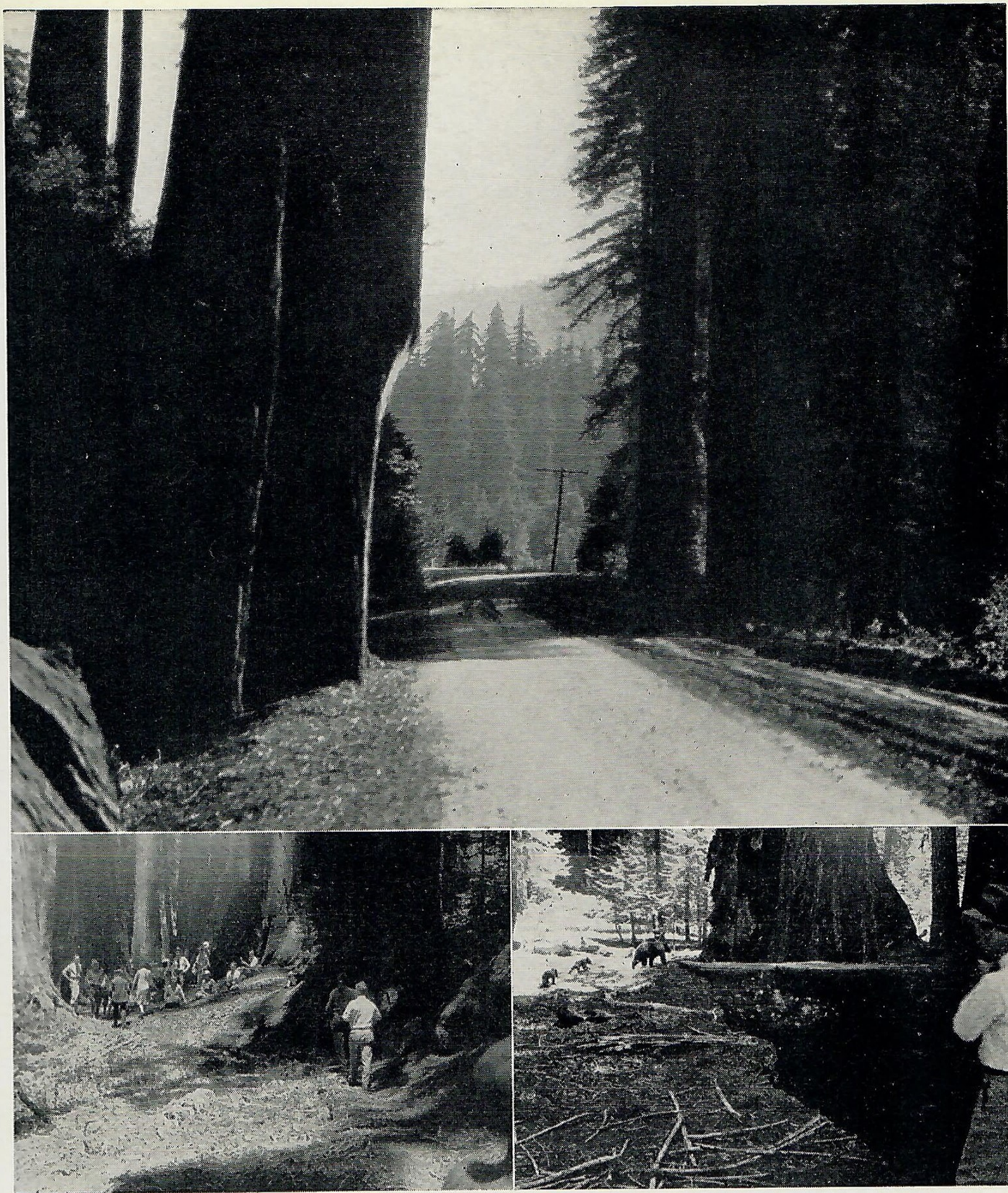
The latest definition of rigid economy—a dead Scotchman.

* * *

A Frenchman claims to have invented a game which in some respect resembles tennis. We Britishers have been playing it for years.—"Humorist."

* * *

In conclusion, let us again remind you: You don't have to be a pilgrim to make progress.



AMONG THE REDWOODS.

A vista through the redwoods on the Redwood highway, and below, left, members of the American Institute of Mining Engineers, San Francisco and Los Angeles sections, snapped during their annual summer meeting in Sequoia National Park. At the right, a bear and her two cubs ambling among the big trees. These photographs were taken by D. B. Myers, chief geologist of the Union Oil Company.

Editor's Note:—Employees of the company are taking interesting scenic pictures throughout the year. The editor would be pleased to reproduce some of these photographs from time to time, giving the persons submitting them credit for the same.

