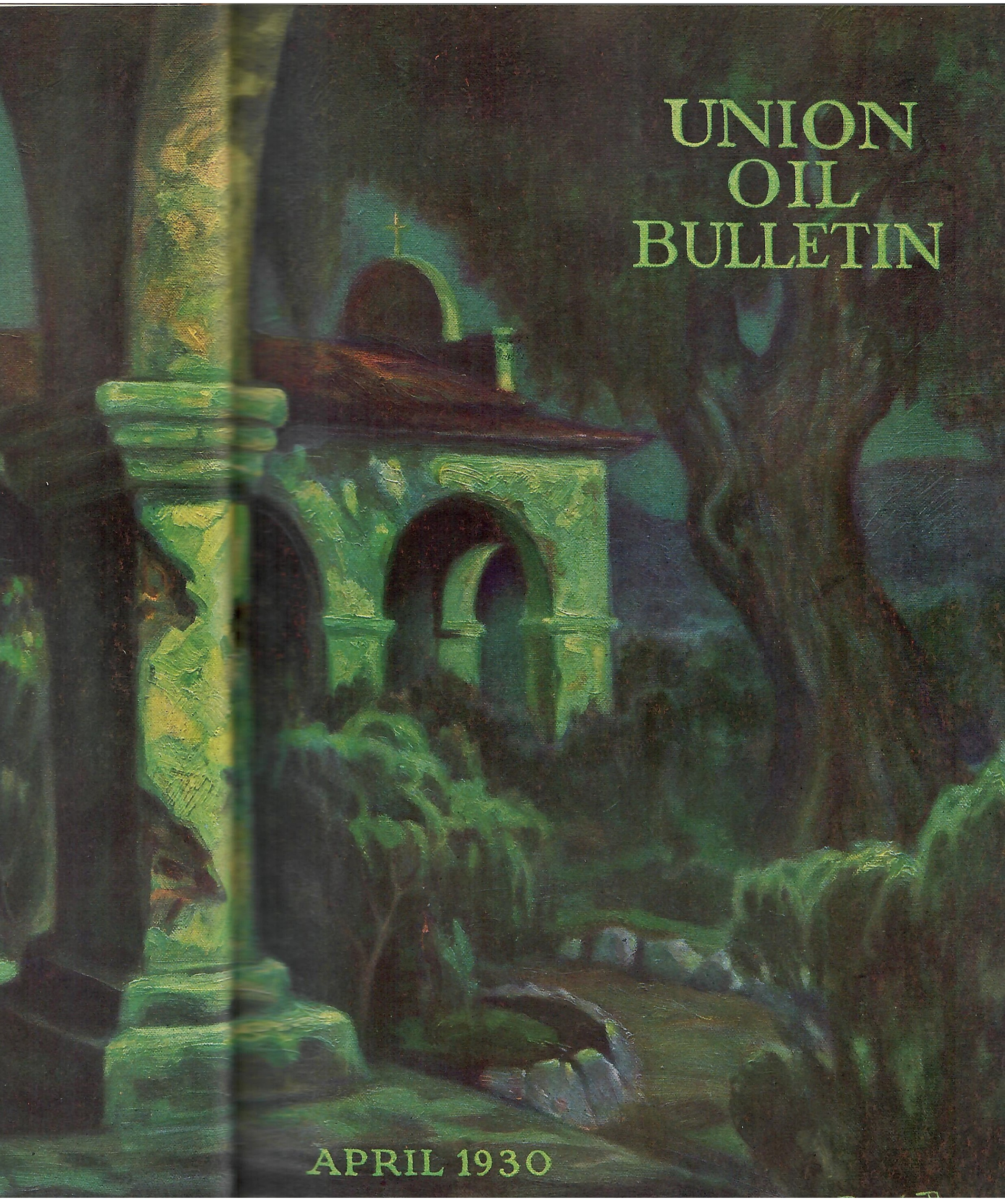
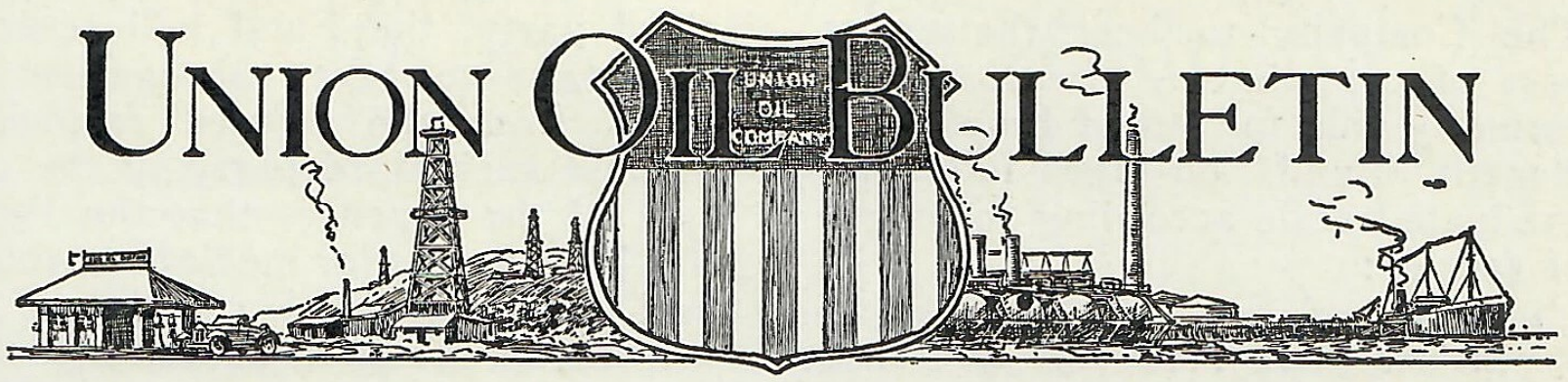

UNION
OIL
BULLETIN
APRIL 1930

Yosemite Valley from the Air

Flying at an altitude of about ten thousand feet, W. E. Carey, Union Oil Company aviation sales representative, took these three exceptional photographs of Yosemite Valley. Top—Looking east into the valley, with El Capitan just visible through the clouds and the famous Half Dome looming up in the middle distance. Center—Looking directly down on the center of the valley, with Cathedral Rock and Cathedral Spires beneath the plane on the left and El Capitan, a sheer wall of rock more than a half-mile high, on the right. Bottom—The east end of the valley with Half Dome in the foreground and the backbone of the Sierra Nevada Mountains in the distance. The peaks are fifty miles or more from the camera.

UNION OIL BULLETIN



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Address all communications to the "BULLETIN," 802 Union Oil Building, Los Angeles, Calif.

VOLUME XI APRIL BULLETIN 4

Revisions in Employees' Benefit Fund

THE Employees' Benefit Fund was inaugurated in October, 1915, with the main object of furnishing medical, surgical and hospital attention to eligible employees for non-industrial accidents or sickness—and life insurance for protection of employees' dependents.

A contribution of $1.00 has been deducted from the monthly earnings of all those of one year's service and over, and all reasonable treatment as above outlined was furnished up to a maximum of $250.00 for any one sickness or non-industrial accident.

Since the inauguration of the fund, more than 93,000 cases of sickness and accidents have been cared for at a total cost (including non-contributory life insurance) of $1,850,000.00—of which amount the Company has contributed $921,500.00.

Owing to the considerable increase in cost of modern medical, hospital and nursing attention, it was felt that the present maximum of $250.00 for any one sickness was inadequate for present needs, and a ballot was issued to employee members of the fund, in 1929, to see if it would be advisable to increase the maximum allowed in any one case, to $500.00—and increase the monthly deduction from members, to take care of the higher cost. The ballot resulted in an overwhelming majority in favor of the proposed plan, and effective March 1, 1930, the following main alterations in the old plan became effective.

1. That the administration of the fund be handled by five employee members to be elected by ballot of all members of the Fund. Ballots were submitted and the following duly elected:

   Arthur, J. B.—Manager Fuel Oil Sales.

   Blue, Gerald G.—Manager Insurance and Personnel.

   Prussing, Geo. F.—Secretary Safety Committee.

   Rearden, J. D.—Manager Traffic Department.

   Rubel, A. C.—Assistant Manager Field Operations.

2. The Company to bear the entire cost of contributory life insurance formerly paid for out of Employees' Benefit Fund, on the following graduated scale according to length of service:

Upon completion of 1 year's service	$ 500.00
Upon completion of 2 years' service	750.00
Upon completion of 3 years' service	1,000.00
Upon completion of 4 years' service	1,500.00
Upon completion of 5 years' service	2,000.00

3. Employee members to retain the privilege of purchasing further life insurance up to a maximum of $8,000.00—according to salary, at the rate of 60c per thousand per month, on the following scale:

Rate of Monthly Pay	Additional Available Insurance	Total Monthly Cost to Employee
$149.00 or less	$1,000.00	$0.60
$150.00 to and including $199.00.....	$2,000.00	$1.20
$200.00 to and including $249.00.....	$3,000.00	$1.80
$250.00 to and including $299.00.....	$4,000.00	$2.40
$300.00 to and including $349.00.....	$5,000.00	$3.00
$350.00 to and including $399.00.....	$6,000.00	$3.60
$400.00 to and including $449.00.....	$7,000.00	$4.20
$450.00 and over	$8,000.00	$4.80

4. A deduction of $2.00 per month to be made from each employee member's salary which is expected to more than cover the cost of the additional medical expense in which case the deduction will be revised to merely cover the actual cost.
5. The cost of administration to be borne by the company.
6. That all new employees be required to undergo physical examination before being accepted for employment —the cost of such examination to be borne by the company, and a second examination to be made at the discretion of the committee before employee becomes eligible to join the Fund upon the completion of twelve months' service. Cost of second examination to be borne by the Fund.
7. Should an employee member be injured due to the negligence of a third party, the Fund will reserve the right to take subrogation of claim from the injured employee against such third party to the extent of the expenses that the Fund has been put to for medical, hospital and surgical attention. Should an amount in excess of actual expenditure be collected from the third party, the injured employee will be entitled to such excess amount.

In order that the best medical, surgical and hospital attention available may be furnished to members of the Fund, arrangements have been made with the foremost physicians, surgeons and specialists in all principal centers where the Company operates —the appointments being made, in most cases, on the recommendations of the presidents of the medical associations in the various states.

Insurance of any kind is a matter which the average employee at present in good health does not as a rule give the serious consideration to which it is entitled, and a plan of this kind which provides for free life insurance up to $2,000.00—and an additional amount of life insurance up to $8,000.00—at a minimum cost—a provision for sickness and accident at actual cost, without any charge for administration—should appeal strongly to all members of the Fund.

Printed booklets giving in detail all provisions of the revised plan will be ready for distribution very shortly, when each employee member will be furnished a copy.

Further information can be secured from Gerald G. Blue—Manager Insurance & Personnel—Room 903, Union Oil Building, Los Angeles, California.

Pulp and Paper Industry

Editor's Note:—The intricate wheels of modern factories are dependent upon petroleum products for their efficient operation, and in no instance is this truer than in the case of the pulp, paper and paper products industry, which is becoming one of the major industries on the Pacific Coast. The Bulletin is indebted to N. M. Brisbois, general operating manager of the Fireboard Products, Inc., and the Zellerbach Paper Company which with its subsidiary paper mills is an extensive user of Union products, for the photographs and information contained herein.

THE Pulp, Paper and Paper products industry is rated seventh on the list of major industries of the world, and in the United States alone during the year of 1928 over ten million tons of paper, paper boxboards, paper roofing, etcetera, valued at approximately $1,250,000,000, was manufactured and consumed.

These figures clearly indicate the vastness of the paper industry in the United States alone, as well as the consumption of paper and paper products.

Wood being the fundamental raw material, the paper industry starts in the forests. In fact, the forest is the greatest problem of the paper industry in America. The question of a continuous, adequate supply of raw material which the mill must convert into paper is paramount. The paper mill must be located with a view toward accessibility to wood supply and water. For this reason those important waterways which are located near the timberlands generally afford a basis for the location of most paper mills. Whereas the lumber mills may be either portable or may be scrapped without great loss of capital in plant investment, a paper mill is not so situated.

In the early days, when raw material, because of its apparent abundance was given secondary consideration, manufacturers located their paper mills chiefly with reference to water power, transportation facilities and the market, especially the latter. This resulted in the paper industry in America being centralized in such districts as New England, New York and the Great Lakes states, where the greater portion of the capital is still invested. However, recent years, which has seen the gradual depletion of the supply of raw material in the East, has witnessed the influx of paper mills on the Pacific Coast and Canada, where the great pulp wood forests offer an almost inexhaustible supply of cheap raw material. These mills are increasing in numbers and the original mills are growing in size. Each year finds the western paper mills occupying a more important role in the production of paper products.

On the Pacific Coast at the present time there are more than thirty mills engaged in the manufacture of pulp and paper products with a combined total annual payroll of $6,000,000, which is paid to approximately 5000 employees. Cost of material per year for the industry on the Pacific Coast runs in excess of $26,000,000, with products valued at nearly $50,000,000. Washington leads the Pacific Coast states in paper manufacture, having more than a dozen plants in operation and employing the largest number of men. California ranks second, followed by Oregon. In British Columbia, the manufacture of paper is growing as rapidly as it is in the United States.

Newspaper publishers are the largest single class of paper consumers on the coast, their requirements for newsprint exceeding by a wide margin the demand for any other paper product.

In the manufacture of wood pulps the following woods are used:

For the manufacture of mechanical and sulphite pulps: Spruce, Hemlock, Balsam Fir, Aspen, Poplar and Willow.

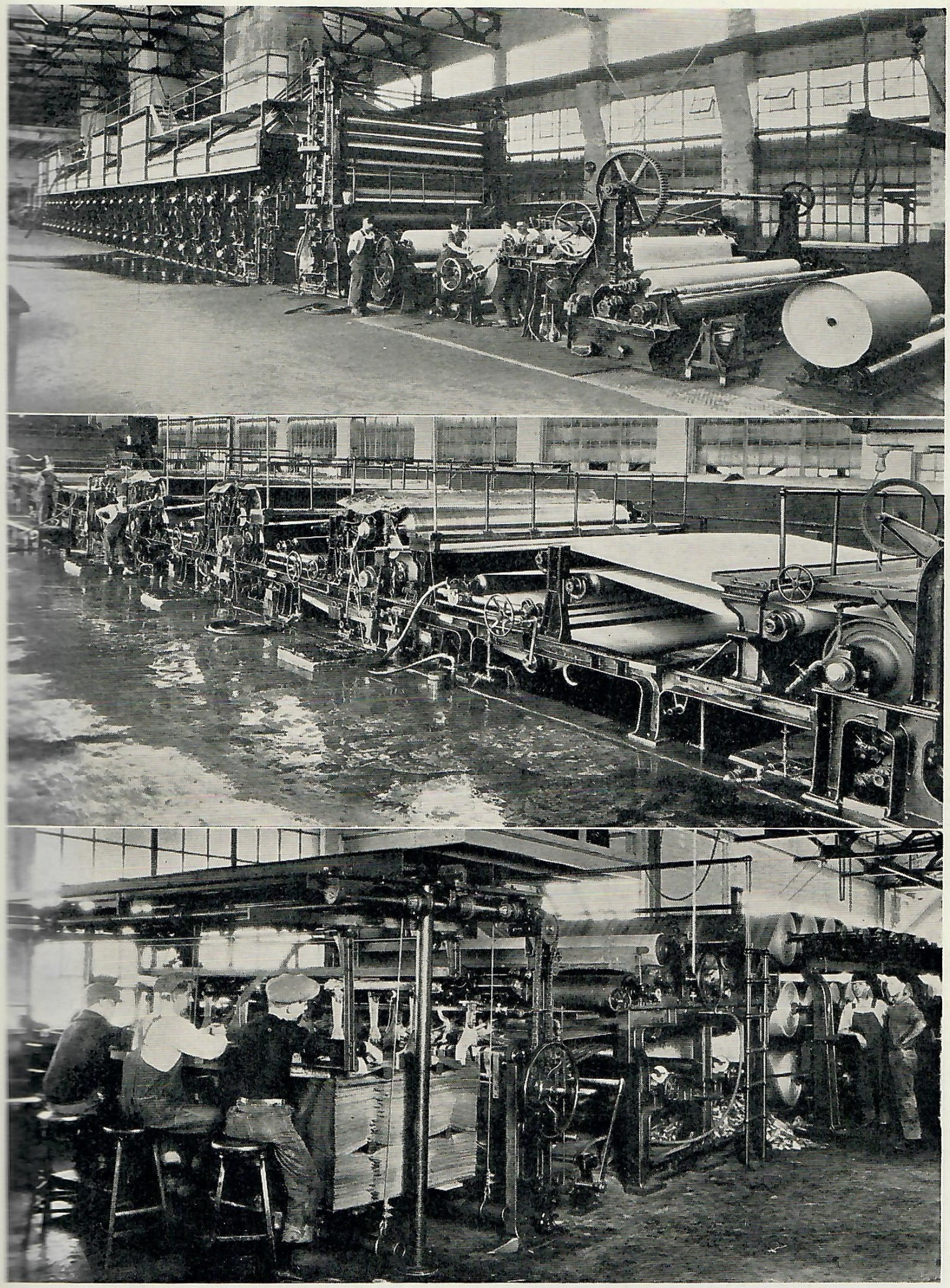
For the manufacture of soda, sulphate and Kraft pulps: Spruce, Tamarack, Larch, Hemlock, Redwood, Cy-

On Their Way to Press

In the above photographs you see the logs bound for the paper mill at West Linn and as they appeared a few hours later, transformed into rolls of newsprint. These huge logs are ground into pulp before they are fed into the paper machines. In the lower photograph you see the output of three newsprint machines during one eight-hour shift.

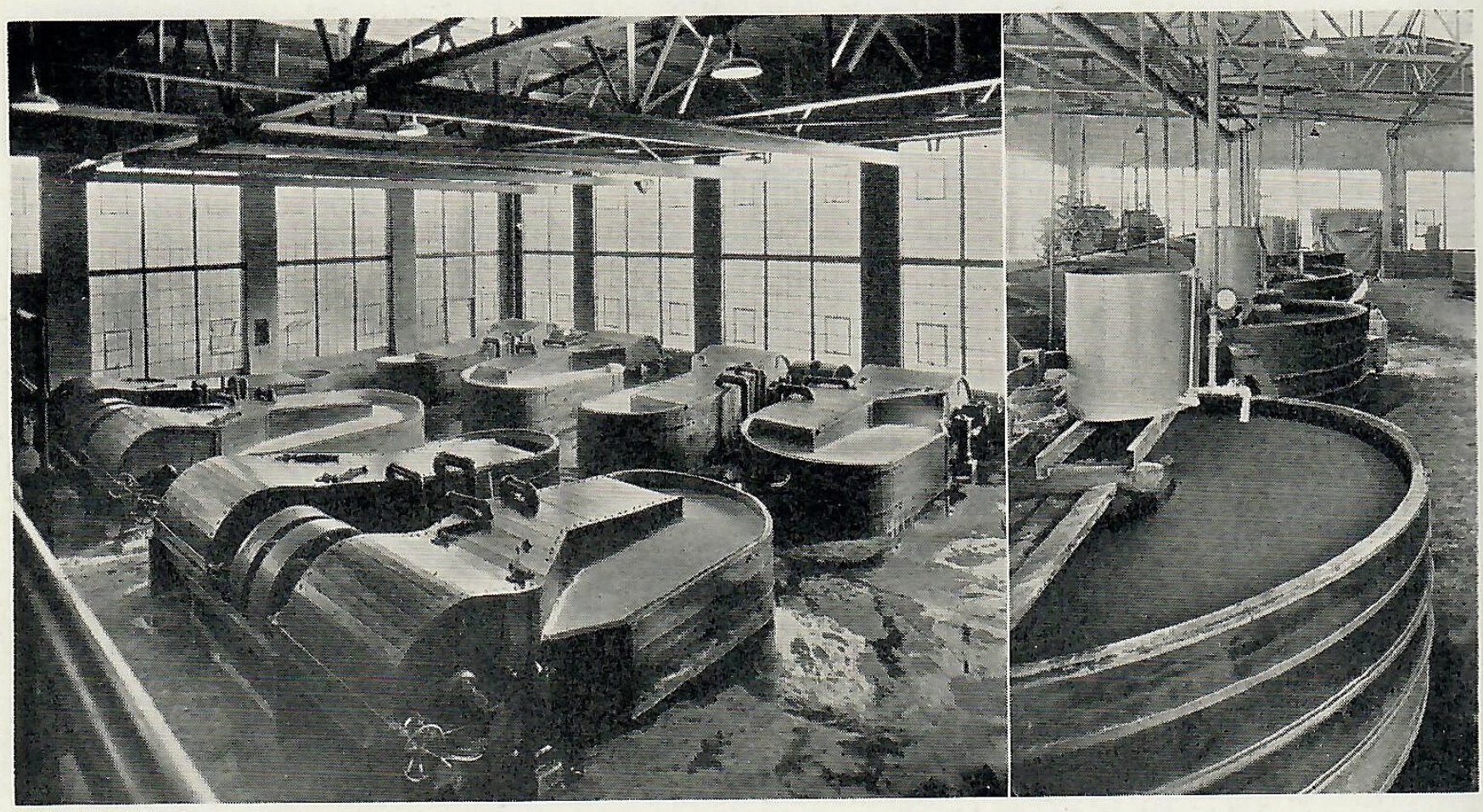
press, Balsam, Jack Pine, Southern Pine, Poplar and Aspen.

On the Pacific Coast there are many mills manufacturing all of the various grades of paper boxboard and paper. The Fibreboard Products, Inc., manufactures chiefly paper boxboards of all kinds, also annually converts paper boxboard into millions of solid fibre and corrugated ship-



They Need Oil and Lots of It

The sight of this battery of fast-running machines gladdens the heart of the lubrication engineer because he knows they cannot operate without the proper oils and greases. At the top is one of the newsprint machines at West Linn, and in the center is a modern Bagley & Sewall Fourdrinier newsprint paper machine that produces from 95 to 100 tons of paper each twenty-four hours. It turns out about 1100 feet per minute. At the bottom is shown the delivery end of a layboy cutter where thirty rolls of tissue are gathered together and cut off at the desired length.

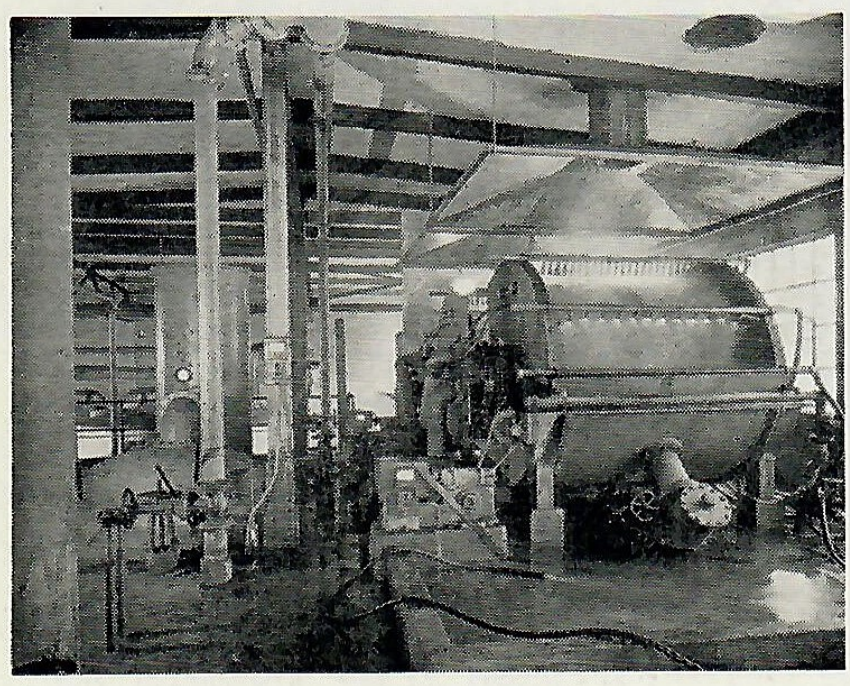


Groundwood Beaters

At the left is shown the groundwood beater room at West Linn. This is an extremely modern installation and helps to produce a finer and more even quality of pulp. The purpose of beating is to draw out and thread the fibre of the wood, which is done by passing the pulp under revolving roll which rests on a concave bed plate in the bottom of the beater. At the right is shown the kraft beater room at Camas, Washington, paper mill.

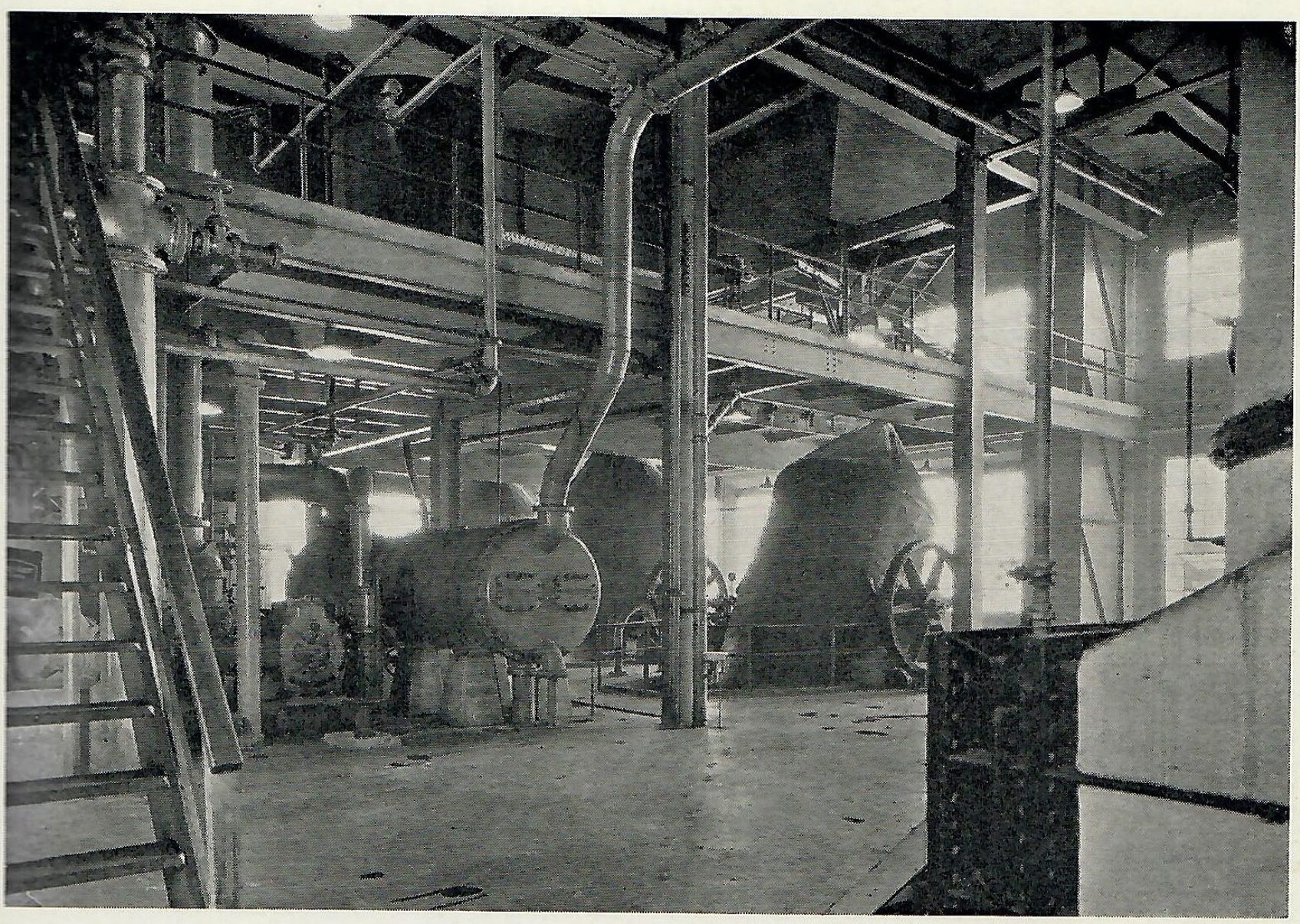
ping containers, printed and lithographed cartons of all kinds, paper boxboard tubes, cans, etc. The Paraffine Companies, with their very large, modern plant at Emeryville, specialize in roofing and roofing shingles, building papers, etc., all of which are made from a paper base. The Crown Zellerbach Corporation with its numerous large modern pulp and paper making units in Washington, Oregon and British Columbia, manufacture ground mechanical pulp, bleached and unbleached sulphites, kraft pulp, and all of the various grades of paper; and in their converting plants manufacture from their own paper products, paper bags, envelopes, printed waxed bread wrappers, paper sealing tapes, paper rope, and other products.

Modern individual paper boxboard or Fourdrinier paper machines can easily require the service of an entire freight train to transport from machinery builders' plants to paper mill, and the daily production from such equipment has, on the more recent, modern installations, reached as high as 200 tons from a single unit in one day, of boxboard, and between 150 to 200 tons on newsprint. The more modern installations of newsprint paper machines operate at speeds as high as 1200 lineal feet per minute and the widest machine operating to date will deliver a sheet more than 280 inches in width.



Kraft Pulp Washer

Before the pulp is ready for the paper machines it must be properly washed. The pulp is passed over the drum and under the water sprays shown in the picture.



Kraft Digester Plant

At the right is one of the revolving digesters, with two others in the background. These digesters or cookers treat about 100 *tons of pulp every twenty-four hours.*

Distribution Group Changes

To further facilitate the operation of the Distribution Group and to concentrate on direct effort, the position of "supervisor" was discontinued April 1, and two of the supervisors, M. W. McAfee and J. H. Dasteel, were assigned as managers of the Seattle and Los Angeles districts, respectively, and the third, J. B. Williams, to the position of assistant manager refined oil sales. W. F. Lewis, formerly manager of the Los Angeles District, will be active on special work in the Los Angeles territory, reporting direct to V. H. Kelly, manager domestic distribution.

Other changes made at the same time include the transfer of S. D. Herkner, manager of the Seattle District, to San Francisco as manager; W. A. Newhoff, manager of the San Francisco District, to Oakland as manager; W. E. Davenport, assistant manager in charge of operations of the Seattle District, to Spokane as manager.

The following additional district assignments were also made:

C. C. Ireland, manager of Spokane District, to Los Angeles as assistant district manager; E. J. Munn, assistant district manager of Los Angeles, to San Diego as assistant district manager in charge of operations; W. G. Talbot, assistant district manager at Sacramento, to Seattle as assistant district manager of that district; C. H. Myers, assistant district manager at Sacramento, to Seattle as assistant district manager; F. W. Nevitt as assistant district manager of the Oakland District; Otto C. Nissen, special agent at Oakland, to Fresno as assistant district manager.

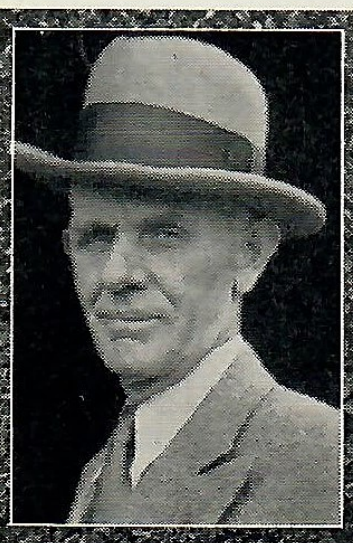
San Pedro Reaches Million-Unit Mark

A record of three successive months in which sales topped the million-unit mark, has been scored by the San Pedro special agency of the Union Oil Company, which comprises Santa Monica, Hyde Park, Hawthorne, Wilmington, San Pedro, Long Beach, Watts and Huntington Park. This figure does not include pipe line deliveries, which would greatly increase the volume of sales.

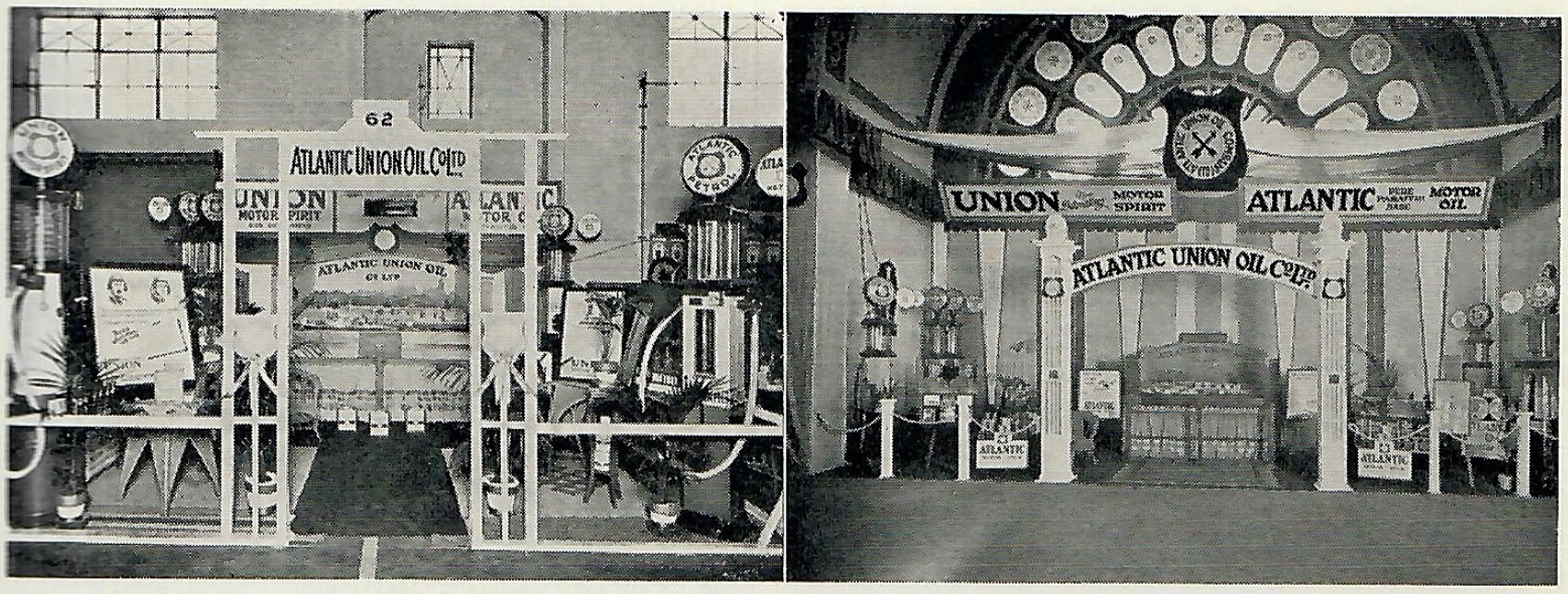
The agency for the first time in its history passed its million-unit goal in January, last, increased its margin in February, and at the close of March had again surpassed that figure for the third successive month.

The campaign to increase sales was begun the first of the year under H. F. Armour, special agent, who gives complete credit to the salesmen and supervisors for the success attained. He also states the increase in sales was not limited to any single agent's territory but was general throughout the agency.

The following men compose the personnel of the agency: H. F. Armour, supervisor; R. T. Gill, V. O. Derry, J. P. Sidford, C. G. Thompson, M. D. Raines, L. T. Writer, F. B. Foster, and R. H. Taylor, agents; and J. S. Schaub, F. B. Foster, H. R. Benedict, C. M. Downey, E. B. Williams, L. E. Artman, W. C. Gruendike, W. S. Lydick, Orville Leirbach, R. H. Rockwell, U. W. Threadgold, Solomon Alexander, R. E. Moliter, Ralph Collins, Harry B. Fackler, D. L. Guy, T. B. Allen, M. T. Jeppson, G. M. Palmer, F. H. Meyer, and W. I. Martin, salesmen.



The agents and salesmen of the San Pedro special agency whose combined efforts pushed sales volume for each of the past three months well over the one million unit mark. H. F. Armour, special agent at San Pedro, is shown in the insert.



Selling Australians on Union

An aggressive marketing campaign is being carried on by the Atlantic Union Oil Company, Ltd., in Australia. Above, left, is an exhibit of Union products placed in the Sydney motor show, and, right, is a similar exhibit displayed at the Melbourne automobile show.

Laying an 80-Mile Pipe Line

BY MAY 1, seven weeks from the time work was first started on it, the company's six-inch, eighty-one-mile pipe line, that will carry gasoline from the Kettleman Hills field to the storage tanks at Avila, will be ready for operation; a record for pipe line construction. Starting at Tar Canyon pump station this string of steel writhes its way coastward over mountain grades, through rocky canyons, across great level stretches, looking at times for all the world like a huge living serpent.

A six-inch gathering line, connecting Tar Canyon station with Kettleman Hills was installed last year. At Avila, where the gasoline will be loaded into tankers for shipment to the refineries, a sixteen-inch line, approximately 9,000 feet long, is being laid from the storage tanks to the loading wharf.

The new line, which is the longest single line laid by the company since 1913-14, when No. 2 line of the Producers Pipe Line system was installed, will cost, with the necessary auxiliary equipment, approximately $700,000. About five hundred men are being employed on the project under three separate contractors, who in turn are operating under the supervision of Lafe Todd, superintendent of the Producers Pipe Line, and a veteran pipe liner of more than twenty years' experience.

From Tar Canyon station the new line parallels the company's present one from Coalinga to Junction for a distance of about 8.5 miles; thence it runs through Cottonwood Pass, parallel to the Standard Oil Company's ten-inch line from Kettleman Hills to Estero Bay, for a distance of approximately 18 miles to Cholame Flat, where, approximately 4.5 miles east of Shandon Pump Station, it approaches our present pipe lines from Junction Station to Avila. From this point on it parallels our present lines except that it goes around the town of San Luis Obispo, instead of traversing it as the present lines do.

The speed with which the line is being laid can be attributed to the highly modern pipe line machinery being used, the expert supervision of the work, and the careful preparation which preceded the laying of the line. For instance, to facilitate the handling of the 4,000 tons of pipe which make up the line it was delivered by rail and boat to four separate points, Coalinga, Paso Robles, Santa Margarita and San Luis Obispo, from where it was trucked to a predesignated section

of the line. Then followed the stringing of the pipe along the right-of-way. In a number of places, as in Cottonwood Pass and for some distance between Santa Margarita and Creston, the pipe had to be unloaded from the trucks quite a distance from its final location, trucks being unable to get through on account of the mountainous character of the territory. Each piece of pipe was then hauled into position by caterpillar tractors, or by mules where machinery could not traverse.

In order to obtain really competitive bids and to save time in the installation, the line, for the purpose of welding, was divided into three sections selected with due regard to the topography, accessibility, and construction difficulties. Seven contractors were invited to bid on carefully prepared specifications. Bids were awarded to three contractors, one for each section. The line is being welded with oxygen and acetylene torches, one weld being necessary approximately every 43 feet. Because of the mountainous profile of the line, many bends and crossings of canyons are necessary. The line will be suspended across the San Juan River and encased in an eight-inch pipe across the Salinas River, the eight-inch pipe having been trenched into the rocky river bed.

The line is being laid in a thirty-inch deep trench so that it will be covered approximately two feet. This somewhat deeper than ordinary cover was decided upon in order to protect the pipe and its highly volatile contents from the heat of the sun. The trenching is being done by the welding contractors. The actual welding of the line takes place on timber skids laid across the trench. While still on the skids it is tested with 100 pounds air pressure in sections of from one to two miles, soap-suds being applied to the outside of all welds in order to detect leaks.

About twelve miles of the line will be protected against moisture and corrosive soil by painting and wrapping it with asphalt and special pipe covering paper. The sections where this will be done were selected on the basis of our experience with the existing main lines. The wrapping is being done by our own men and before the pipe is lowered into the trench. After the pipe is lowered it is tested with water pressure in sections from four to six miles, the pressure being raised to 1,000 pounds per square inch. So far, no defective welds have been discovered during these tests. This good record is largely due to the close inspection and supervision of the welding, each welder having been required to make some test welds before being permitted to weld on the line. During the progress of the welding, strips of pipe metal with a weld are being cut from the line and tested to destruction by bending about the weld or by pulling in a testing machine.

Since the new line passes through Shandon, Creston and Santa Margarita Pump Stations, block valves are installed at these stations, and also at critical points such as at the foot of Cottonwood Pass, Questa Grade, and on both sides of the known earthquake faults on the Cholame Flat, where our two main lines were pulled apart by an earthquake in 1915. These valves are being installed in order to block off sections of the line in which breaks might occur.

Naturally, the installation of so long a pipe line requires the installation of a lot of auxiliary equipment. At Tar Canyon Station, for instance, an 82,000 barrel tank with a Gallagher floating roof has been constructed to receive the gasoline from the Kettleman Hills field. One of the existing 37,000 barrel tanks has been cleaned, equipped with an insulated roof and the necessary venting equipment and also put into the service. Both tanks are being connected to a vapor collecting system which is now in course of construction. The gasoline vapors which rise freely from this kind of gasoline will be collected and saved by condensing part of them into gasoline, which will be returned to the tanks, and by making their incondensable portion available for fuel in the boiler plant at Tar Canyon station. It is estimated that the

value of these fuel gases will pay for the installation of the recovery system in a few months. At Avila a similar conservation plant is being installed for the purpose of taking the vapors from two 55,000 barrel tanks which are being rebuilt for the receipt of the gasoline.

In order to detect losses along the line recording pressure gauges will be installed at the pump stations, and to three of them recording flow meters will be added. These will be under the constant observation of operators at the stations.

For the present, pumping will only be necessary at Tar Canyon Pump Station, where a steam pump has been installed for temporary use. Later on when more gasoline is to be handled, an additional pump will be set up at Shandon Pump Station to boost the pressure. At that time centrifugal pumps will very likely be chosen for both stations. The line will be operated at a maximum pressure of 800 pounds, and with pumps at those two stations, will have a capacity of approximately 15,000 barrels per day. When pumping at this rate, any given barrel of gasoline will be in the line for about 24 hours in order to travel from Tar Canyon to Avila.

Water tanks are being installed at the pump stations along the line in which water will be accumulated and held for the purpose of plugging out the gasoline in the event of a break.

Lafe Todd is assisted in the general supervision of the new project by L. A. Sarter, resident engineer. All preliminary work, such as design, ordering of materials, specifications, etc., was handled by Fritz Karge, engineer of transportation. Trucking was arranged for by J. D. Rearden, manager of Traffic Department. The rights of way were obtained by H. H. Hart, Supervisor of Franchises and Rights of Way, the field work being done by R. J. Gill and L. I. Messinger.

Completion of the new line will give the company 576 miles of trunk pipe lines and 405 miles of gathering lines with a total daily capacity of approximately 260,000 barrels.

One of the many steep grades negotiated by the pipe line in its 81-mile run from Tar Canyon station to Avila.

Along the Ro

No. 1—*Ditcher carving its way along a hillside. No.* 2—*A view of the line as it emer* *and shovel crews are used where the ditching machine cannot operate. No.* 4—*The wr* *covering. No.* 5—*Backfilling is made easy with tractors. No.* 6—*One of the many gr* *fault. Special construction is required at this point. No.* 8—*A crooked mile of line.*

No. 11—*Over the hill t*


2.


3.


4.

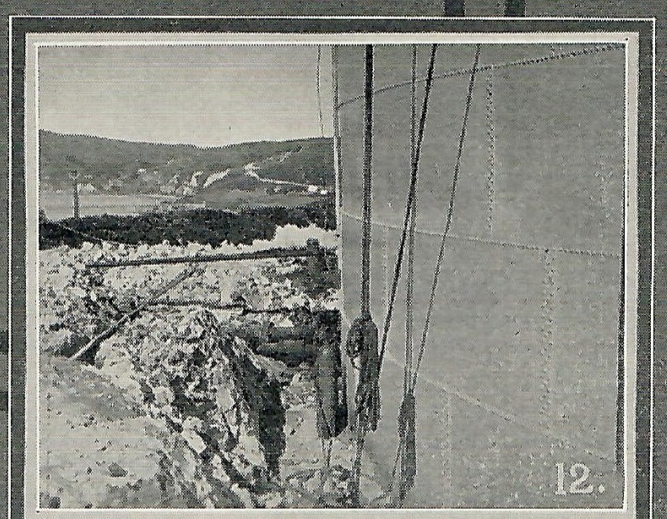

6.


7.


8.


10.

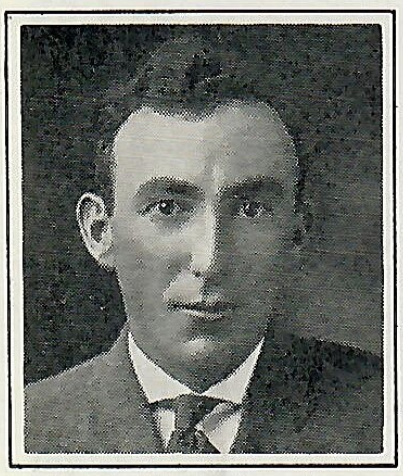

11.


12.

Along the Rou[illegible] Pipe Line

A view of the line as it emerg[illegible] Cottonwood Pass, with the country it must traverse shown in the distance. No. 3—Pick not operate. No. 4—The wra[illegible] twelve miles of the line passing through alkali country is protected with tar and paper No. 6—One of the many grad[illegible] by the pipe line. No. 7—Where the line crosses the famous San Andreas earthquake . 8—A crooked mile of line. N[illegible]ding crew in action. No. 10—This tractor doesn't appear to be awed by the grade ahead. No. 11—Over the hill to [illegible]. 12—The end of the line.

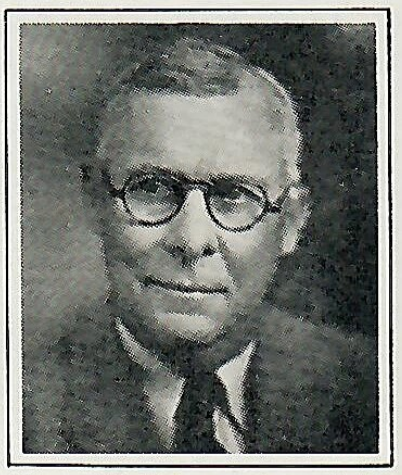
Service Emblem Awards



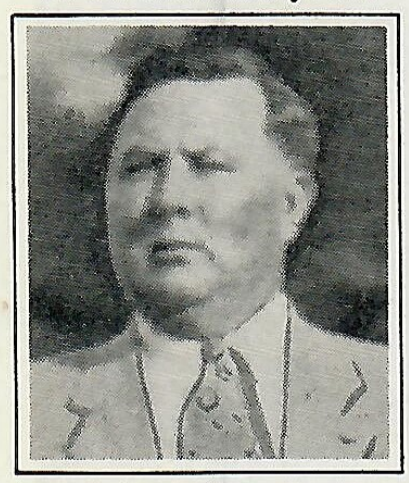
J. E. Harrington

C. C. Ireland

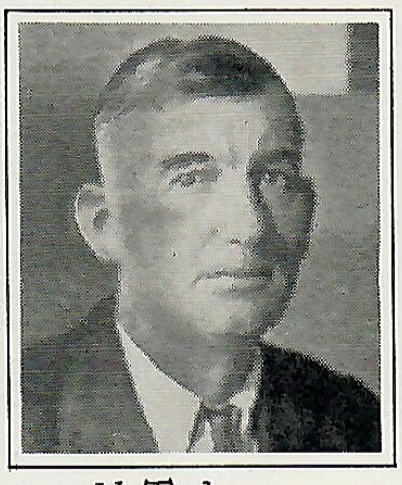
W. J. Chase



Ben F. Blanchard Sr.

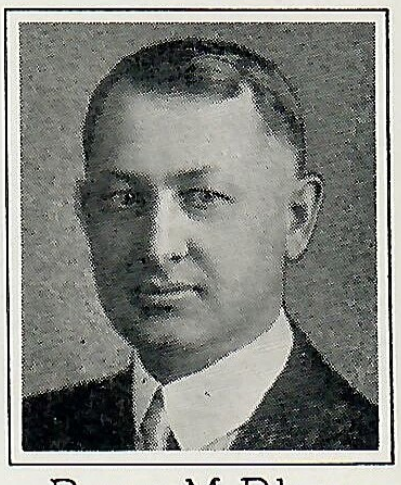


John Douglas



H. T. Jones

G. G. Anderson



Berry M. Rhyne

A TOTAL of 104 employees of the Union Oil Company received service emblem awards during the months of January, February and March. Of this number, one, Howard T. Jones, was awarded a third ruby for his service shield, significant of twenty-five years' employment; twelve received their second ruby, eighteen their first, and seventy-three were presented with their first service emblem.

Jones, who now holds the position of first class machinist at Oleum, has been employed at the refinery since Jan. 2, 1905, serving a greater portion of that time in the capacity of machinist. He is one of the oldest employees, from the standpoint of length of service, at Oleum.

Those awarded the second ruby for twenty years of continuous service include Chester W. Brown, director of exploration and production; Willard J. Chase, accountant at Santa Fe Springs; Charles A. Gaskell, pumper at Oleum; Gust G. Anderson, boilermaker foreman of the Southern Division; B. F. Blanchard, in charge of tool rack at the Stearns lease; John Douglas, gas engine expert in Santa Maria district; Jack E. Harrington, senior engineer at Santa Margarita pump station; C. C. Ireland, assistant district manager, Los Angeles sales district; Berry M. Rhyne, clerk in the order department at Oleum; Chester H. Rouse, Oleum, and William A. Clark, field department, Maricopa.

While Chester Brown's continuous service with the company covers a period of only twenty years' his total period of service dates back prior to the incorporation of the company to 1888, when he started to work as a roustabout for the Hardison-Stewart

Oil Company. His early connection with the oil business in California outranks that of any one still identified with the industry. A break in his service with the company between 1895 and late in 1909, when he was engaged in the mining and oil business in Peru, deprives him of the distinction of being the oldest Union Oil employee.

Chase, another twenty-year man, started his service with the company in San Francisco in the traffic department. In 1922 he became chief of field accounts in the valuation department, Los Angeles, and two years later was sent to Colorado as district accountant. In 1929 he was transferred to Santa Fe Springs as accountant.

The entire period of Gaskell's employment has been spent at Oleum where he started work as a gauger. During the war he was in military service and returned to the refinery in the capacity of a pumper helper, later taking over the duties of pumper.

Anderson, who built one of the first traps for the separation of water and oil in 1912, started his employment as a boilermaker on the Stearns lease. Later he became boilermaker foreman for the Orange field district and in 1929, with the formation of the Southern Division, was made boilermaker foreman for the entire division.

Brea was also the site where Blanchard started his service with the company. He is credited with the development of a number of oil tools, one of which is the U. S. hydraulic underreamer.

Douglas is said to have installed more gas engines in the Santa Maria field than any other single man, having been engaged in gas engine installation and maintenance work in the district for the entire period of his service. He also holds the Mt. Solomon golf course record and several cups as proof of his prowess as a golfer.

Harrington, senior engineer at the Santa Margarita pump station, was on the crew which twenty years ago built the station. He has held a variety of positions with the Transportation Department, having served as gauger at Santa Margarita, fireman at Antelope station and pumper at several different stations. In 1925 he was made senior engineer at Santa Margarita.

C. C. Ireland saw his first service with the company in Portland, entering the district office as bookeeper. He spent some time in various capacities in the office of the district, becoming salesman in 1916. In June, 1917 he was appointed agent at Corvallis, holding various sales positions until he became assistant district manager at Portland, August 1922. On May 1, 1924, he was advanced to the position of district manager in Spokane, holding this position until a recent change in distribution group personnel brought him to the Los Angeles district as assistant manager.

Rhyne completed his twenty years of employment with the company on March 9. He was first employed at the Oleum refinery in the capacity of general clerk. A few years later he entered the traffic department and has been clerk in the order division of that department since that time.

Following is a complete list of service pin awards for the past three months:

Fifteen Years

Anderson, Charles A.	Seattle Sales
Aston, Howard E.	Orcutt Field
Best, Percy L.	So. Div. Field
Blue, Gerald G.	H. O. Ins. & Per.
Bryant, Thomas W.	Oleum Refinery
Campbell, Julia T.	H. O. Transport.
Edwards, William R.	H. O. Secretary
Elkins, Herman H.	Sacramento Sales
Malstrom, A. Edward.	Oleum Refinery
Nance, Ernest L.	H. O. Transport.
Olivotti, Leno	Oleum Refinery
Piequet, Jos. W.	Oleum Refinery
Stats, Luby G.	Oleum Refinery
Stevens, Elmer C.	Portland Sales
Stockall, Douglas	L. A. Garage
Sutliff, Arthur P.	L. A. Sales
Wall, Fred H.	Seattle Sales
Wood, Robert J.	San Diego Sales

Ten Years

Bailiff, Boyd W.	Spokane Sales
Ball, Albert Wm.	So. Div. Sales
Banning, George	So. Div. Sales
Barjas, Fred P.	L. A. Sales
Barrett, Albert J.	Seattle Sales
Barrett, Chas. A.	Sacramento Sales
Barron, Joseph	Oleum Refinery

Beal, Darold L.	So. Div. Sales
Beck, Erwin C.	So. Div. Sales
Benedict, Newton R.	L. A. Sales
Best, Geo. M.	Field Ventura
Blankenship, A. W.	So. Div. Field
Bliley, Arthur W.	So. Div. Field
Bohannon, Charley H.	So. Div. Field
Brace, George F.	So. Div. Field
Budworth, Loyal L.	H. O. Transport.
Bunkelman, Fred W.	Southern Division
Burchfield, Bernard S.	Southern Division
Burchfield, Ray O.	Southern Division
Burleson, Harry A.	Sta. Paula Refinery
Cameron, Clinton M.	Portland Sales
Cardoza, Alfonse	Oleum Refinery
Carpenter, Arthur R.	Seattle Sales
Critton, Lloyd V.	So. Div. Field
De Buxton, Ray	So. Div. Field
Dowdy, Ben F.	So. Div. Field
Drake, Ronald R.	Seattle Sales
Drennen, William H.	Oleum Refinery
Edwards, Frank J.	Portland Sales
Emery, Robt. B.	H. O. Purchasing
Epson, Peter	So. Div. Field
Fliflet, Levii S.	Portland Sales
Frye, George G.	L. A. Purchasing
Giblon, Daniel M.	So. Div. Field
Giblon, Elery D.	So. Div. Field
Gier, Henry J.	So. Div. Field
Gragg, Frances A.	Legal Dept.
Hathcock, Eddie W.	L. A. Pipe Line
Howard, Grace	H. O. Secretary
Hughes, Jesse M.	So. Div. Field
Humphrey, Charles C.	H. O. Comptroller's
Kays, Clair D.	Portland Sales
Kirkham, Clyde L.	Santa Fe Gas
Marston, Frederick W.	L. A. Pipe Line
McEwen, Grover	L. A. Refinery
Moser, Theo. A.	So. Div. Field
Murphy, Geo. W.	L. A. Refinery
Olgiati, Robert	Producers Pipe Line
O'Rorke, Norah	Head Office Sales
Paul, Walter E.	Traffic Department
Peck, Charles R.	So. Div. Field
Perry, Wightman C.	So. Div. Field
Proctor, Riley C.	H. O. Comptroller's
Pumphrey, Jefferson M.	So. Div. Field
Richardson, Allen R.	L. A. Sales
Richardson, Ralph L.	San Diego Sales
Riley, Herbert L.	So. Div. Field
Robinson, John H.	L. A. Pipe Line
Russell, Wayne E.	Santa Fe Gas
Stevens, Kinton B.	No. Sales Const.
Stillson, Fred	L. A. Refinery
Stull, Cyrus	So. Div. Field
Summers, Clyde J.	L. A. Lub. Division
Titus, G. I.	So. Div. Field
Thompson, Howard V.	Santa Fe Gas
Wall, Mark L.	San Francisco Sales
Warlick, James E.	So. Div. Field
Waters, Thos.	L. A. Refinery
Westad, August	Oleum Refinery
Whitney, Geo. A.	L. A. Refinery
Wilcox, Paul	Head Office Sales
Wooten, James E.	L. A. Refinery
Wright, Irving E.	L. A. Sales

"...And All the Children Everywhere Can Hear..."

THE Bogey Man and fears of the dark exploded, and little wistful elves in beautiful chambers below the earth pushing up dainty, delicate flowers through the surface to be picked by good little boys and good little girls in the Land of Everyday,—such is the spirit of the daily radio program by the Union Oil Storyman, Baron Keyes, for the children of the Pacific Coast. The adventures always begin in the tower room in the Land of Make Believe, the actors are friendly little fellows, wooden men one-foot high. Clickety-Clack is the ringleader, Bugler Murphy his pal. Happy Duck, Boppo the Clown, and Yip, the little wooden dog; all contribute their action in their native tongue, which is charmingly understandable.

The president of the Land of Make Believe is a former resident of the Land of Up Side Down. He is a kindly Air Castle autocrat with an irrepressible confidence in himself and his inventions. He is the leader on all expeditions. He solves all problems and opens fantastic lanes for escape from any predicament. He is a president with patience and sagacity. His dialogue with the Storyman is whimsical symbolism and a great influence for good.

The Air Castle is a new Alice in Wonderland. While pure romance, it is filled with child psychology, and from the child's point of view. Peculiarly enough the hundreds of letters received each week expose a constantly growing mature audience from the ages of thirty to ninety, while the program is built up and the music ar-

The Storyman and Clickety-Clack

Baron Keyes and his famous little wooden man at his desk in Union Oil Building reading a few of the hundreds of letters received daily from his youthful radio fans.

ranged for children between the ages of four and ten.

The Storyman has an humbleness in his presentation that is extremely sympathetic and although he has no children of his own his early training as entertainer, consultant, and confidant of five brothers and sisters has contributed a remarkable understanding of youthful instincts both good and bad.

Baron Keyes is a talented pianist and a resourceful composer. All songs are original and have such interesting titles as "The Magic Bells Are Ringing for the Birthdays of Today," "The Funny Paper Jamborie," "The Japanese Dolly," "In the Land of Up Side Down," "If I Were a Farmer," and "Slumberland."

Probably no radio program on the coast receives more written response or applause. Certainy no program brings the listener closer to the sponsor.

The programs are being electrically recorded and released over stations KTAR, Phoenix; KEX, Portland; KJR, Seattle; KGA, Spokane; KFBK, Sacramento; KMJ, Fresno; KTAB, Oakland; KGB, San Diego; and KFI, Los Angeles.

AN OIL APPEAL OF 1905

Indicating that all oil problems have not been of recent date, we print the following clipped from the Los Angeles Express March 5, 1905:

"Pooling of local oil interests should effect an immediate advance in the price of petroleum if all individual well owners show enthusiasm in the movement. If the Los Angeles oil market is to be saved from further slump, producers should act in unison by joining the association formed for the welfare of the whole field."

Woman Invades Ranks of Airport Managers

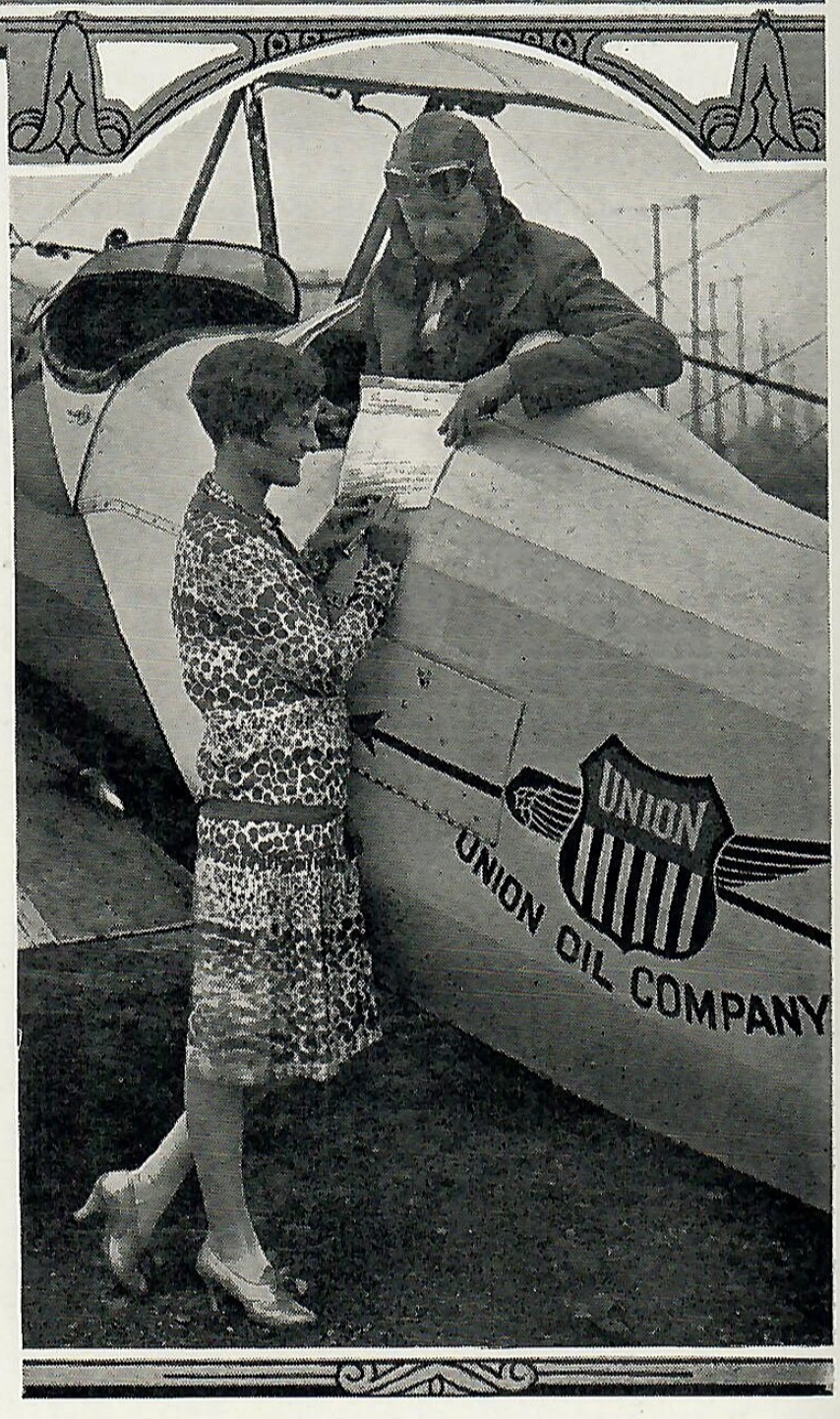
Culver City Airport above, and below, Miss Margaret Perry signing gasoline and oil contract presented by C. F. Lienesch, special representative of the company.

The distinction of being the first woman airport owner and manager in the United States was earned last month by Miss Margaret Perry, Beverly Hills girl, recently of New York City, when she leased the Culver City Airport.

Until she acquired the airport Miss Perry, who holds a transport pilot's license and owns her own plane, did all her flying just for the fun of flying. She participated in the Women's Cleveland Air Derby last summer, although she had had at the time but little previous cross country flying experience. She learned to fly in Los Angeles two years ago shortly after arriving from New York City.

Miss Perry understands the mechanism of an airplane thoroughly and can make adjustments on her own plane when the necessity arises. She will operate a ground school and primary and advanced flying school in connection with the airport, and will also charter special flights. She has as chief flying instructor, William B. Randall, a flyer of considerable experience.

One of the first contracts signed by Miss Perry, on acquiring the airport, was with the Union Oil Company for gasoline and oil.

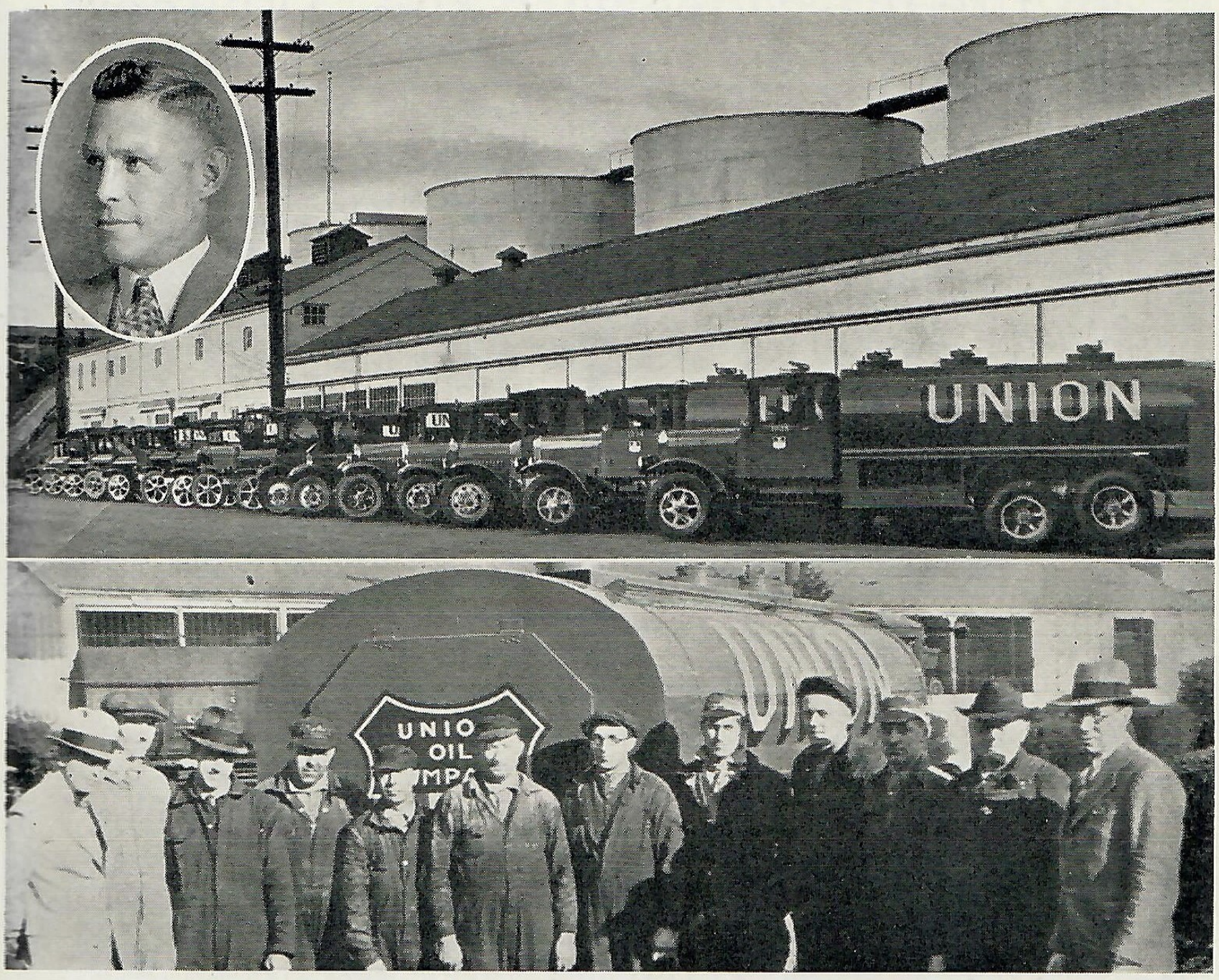


CASH AND STOCK DIVIDEND

A quarterly cash dividend of 50 cents per share, together with a stock dividend of one per cent, was declared on April 7 by the Board of Directors of the Union Oil Company of California. The dividend will be distributed May 10 to stockholders of record at the close of business April 17.

The company's financial report for the first quarter of 1930 discloses a net profit for all operations of $2,600,000, or $.61 per share on 4,264,067 shares issued and outstanding at March 31, 1930, as compared with a profit of $2,600,000 for the first quarter of 1929, and a per share profit of $.66 on 3,914,882 shares outstanding on March 31, 1929.

Seattle Delivery Equipment Grows



Seattle's Refined Oil Delivery Equipment

A portion of the refined oil delivery trucks operated in Seattle District are shown along with the crew of mechanics responsible for their efficient operation. Insert—W. E. Davenport, assistant manager of the district in charge of operations until his transfer to Spokane April 1. as district manager.

As the result of the acquisition within the past few months of five new trucks which embody all the latest features in safety, efficiency, and beauty, the Seattle district now has a fleet of delivery trucks comparable with any on the coast.

Additions to the Seattle fleet have been made necessary by the increase in sales reported by the district within the past year. During 1929 the refined oil deliveries registered an increase of more than eight million gallons over the previous year. In meeting the demands for additional delivery facilities, the company has adopted the use of larger and better equipment.

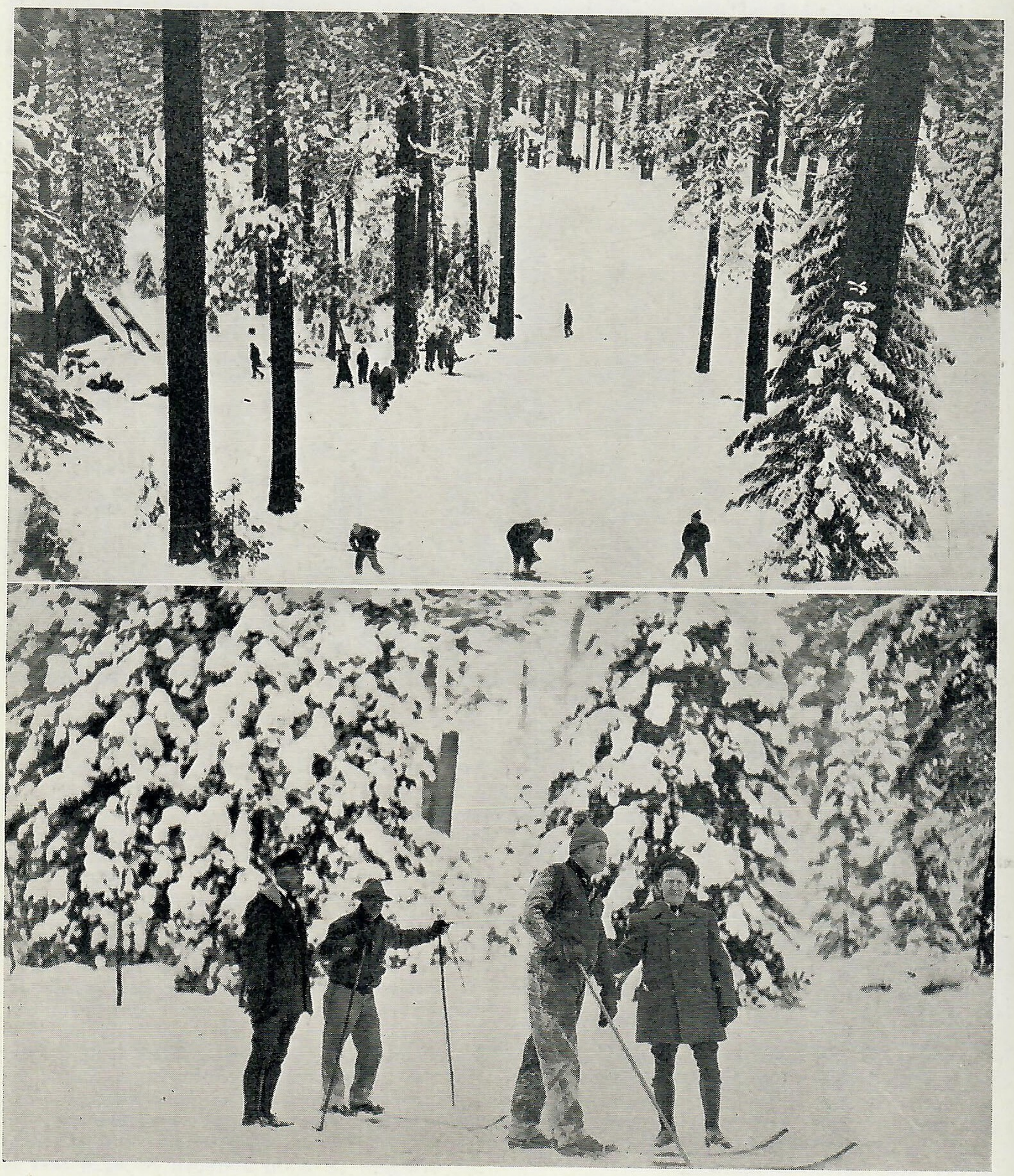
Two of the new refined oil carriers are Moreland six-wheelers, similar to those recently placed in service in other company districts. The trucks were purchased in Seattle and mounted by the Puget Sound Sheet Metal Works, under the supervision of A. C. Dockrell, division automative superintendent.

A feature of the Seattle automative department is the large and competent staff of maintenance men responsible for keeping the fleet in efficient operating condition.

FIVE NEW PRODUCERS

Five wells were completed during March, three at Santa Fe Springs, one at Poso Creek and one in the Belridge district. The latter two are standing for the time being. Of the three wells brought in at Santa Fe Springs, one, Howard 15, is producing from the old Bell zone, and another, Howard 14, is producing from the Meyer zone. Howard 15, brought in from a depth of 4128 feet is flowing at the rate of 175 barrels a day from a zone considered heretofore as being pretty well depleted. Howard 14 was brought in from a depth of 4682 and is flowing at a rate of 500 barrels a day. Bell 54, the only lower Clark zone well put on production during the month, is flowing at the rate of 1000 barrels.

"In the Cascades with the Skyliners"



The "Skyliners" of Bend, Oregon, and adjoining territory, have established a playground for winter sports in the foothills of the Cascade mountains, on the Mackenzie Pass, thirty miles west of Bend. From a group of four outdoor enthusiasts four years ago, the "Skyliners" have grown to six hundred; the youngest member being five years old, and the oldest, eighty-five. Will Searcy, Union Oil representative in that district, is one of the active members of the organization.

Introducing Ethyl to Honolulu Motorists

This photograph shows a parade of trucks that helped introduce Super Union Ethyl to gasoline users in Honolulu.

NEW GAS WINS SUPPORTER

The following letter, received from a patroness at Mentone, Calif., is typical of many received at the head office each day lauding some one of the company's products:

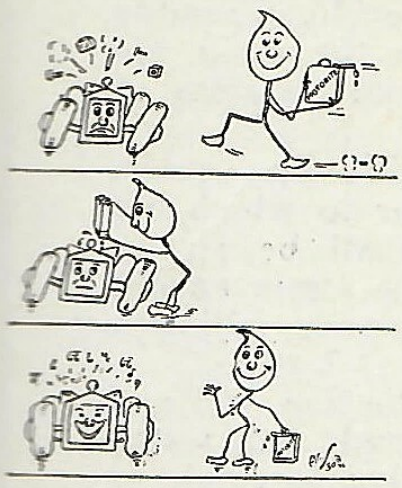
"I once thought when I saw and heard advertising about gas being quick starting that it was all imagination, but the first of the year we signed up with Union and I've found it **does** start quicker. I've worn out batteries and myself as well with gas that was supposed to be good, paying a lot more than we pay now for Union (with ranchers' rate.) Many a morning I've had to push the, yes, Ford to get it started. I can hardly believe that gas could make such a difference. Every morning now the car starts right off.

'I just wish everyone knew Union as we know it. We've already induced one neighbor to buy it.

"You have a marvelous salesman up here and the driver we have, Mr. Lyell, is just as pleasant and courteous a fellow as one could find.

"Sincerely,
"Just another Union booster,
"Mrs. R. E. S.,
"Mentone, California."

FIRST AID BY MOTORITE



Considerable enthusiasm has been evinced in Canada over the advent of Motorite, the Union Oil Company's new extra-mileage motor oil. The accompanying miniature reproduction of a cartoon drawn by the company's agent at Nanaimo, A. G. Smillie, for the "Tallow Pot," a monthly questionnaire put out in the Vancouver, B. C., district, reveals the high regard in which the new oil is held.

A. C. MARSHALL PROMOTED

A C. Marshall, an employee of the Union Oil Company since 1914 when he entered the treasurer's office in a stenographic capacity, was elected an assistant treasurer at a meeting of the board of directors held March 17. His service with the company has been continuous for the past sixteen years with the exception of a period of a year and a half during the World War when he served overseas with the 91st Division.

A. C. MARSHALL

During the past several years Mr. Marshall has had full charge of the details of the treasurer's office. His promotion gives Mr. Keown two assistants, J. M. Rust, who has held the office of assistant treasurer since 1918, continuing in that capacity.

SAFETY *IN THE* UNION

BELTS

Ever since the accident which revealed the weakness of the old harness type of derrick safety belt, the superintendents of the Field Department and their safety supervisors have been co-operating with the Safety Board and the Purchasing Department to develop a belt free not only from weakness but simple to adjust and use. Manufacturers here on the Coast and in the East have helped with suggestions and many belts have been made and tested.

The old type belt consisted of a surcingle with suspenders or shoulder straps. The life line was attached to the belt by means of a D ring as shown in the illustration. The weakness of this belt lay in the design of the D ring attachment. In order to prevent the ring from sliding up and striking the wearer on the back of the head, should he fall from his lofty platform, the ring was attached to a leather pad and this in turn was riveted to the shoulder straps. The result was a non-yielding harness that did not equalize the strain over the various parts. In the accident referred to in the first paragraph, the man fell obliquely, for the strain was so divided that apparently it all came first on one half of one suspender, then on another and after these had each failed, the ring pulled out of the pad. At no time was the surcingle brought into full use. The result was a serious injury from which the victim is still suffering, although more than a year has elapsed since its occurrence.

The old belt consisted of a surcingle with ***shoulder straps.***

The first step in the development of a new belt was to determine if the surcingle could stand the necessary legal test of sustaining the impact of a two hundred pound

Order number 1616 of the Industrial Accident Commission of the State of California.

"A safety belt and a life line shall be provided for each and every employee when working on a walking beam, and at every other point in a derrick above the derrick floor.

"On every derrick hereafter constructed, a wire cable or metal rod life line shall be extended from derrick leg to derrick leg completely about the inside of the derrick at every inside platform level. This line shall be strung not lower than three feet above the platform level, and in such a manner that each and every man working at any inside platform level can readily attach his belt line to the main life line at any point, around all sides of the derrick.

"Every safety belt, life line, cable, rod and derrick member to which life lines are made fast shall be strong enough to withstand the strain caused by a weight of 200 pounds falling a distance of five feet.

"Every safety belt, life line, rod and fitting shall be inspected and tested by drilling or production foreman or other competent person and shall be kept in good repair at all times."

A 3-inch belt of proven capacity of tested leather and hardware.

weight falling five feet. Using the finest grade of harness leather, cut close to the back, a belt was made three inches wide which was proved to be safe. The next step was to develop hardware—D rings and buckles. Using 0.20 per cent carbon content cold rolled steel, ⅜ inch stock was found to be amply strong. It was found preferable to place the weld in the straight side of the D ring, so as to subject it to the least strain. Using only one tongue in the buckle, belts of the type illustrated in cut No. 2 passed the test successfully. When repeatedly dropped, these belts failed only when the fall was increased to nearly double that specified by the Petroleum Safety Orders of the State of California. Failure finally came at the point where the buckle tongue passed through the belt. Reinforcing the belt at this point with a strip of soft but tough rawhide obviated this difficulty.

All effort to stiffen the belt under the D ring was abandoned when it was found that insertion of steel or copper plates had the opposite of the desired effect. Instead, a piece of soft, thin leather was used to line the inner surface of the belt and this was stitched, not riveted.

The last word in belts for derrick use is that shown in the third illustration. Here a quick opening buckle is provided at the front of the belt, from which escape in time of need can be made in a moment. The adjustment of the belt to the wearer is by the conventional buckle but this has been moved to one side and the strain on all parts of the buckle and belt tongue are reduced to less than one-half. Actual drop tests of this belt failed to reveal any weak spots and after the sixty days' service test, it has been adopted as standard.

An innovation in the use of derrick safety belts has also come about through sad experience. Some months ago a young man lost his life in a fall from a derrick at Santa Fe Springs. He had climbed the derrick ladder to get a better view of the casing hook, which had become unlatched from the kelly bail. Apparently he crawled through the framework of the derrick in order to call to the driller and in doing so fell forty feet to the derrick floor. At the next monthly safety meeting of the drillers it was suggested that an extra belt be kept on the derrick floor for use in emergencies and that some provision be made whereby a man could fasten himself to a girt or brace, at any point on the derrick.

Si Delaney and some of his old cronies finally conceived the idea of giving each derrickman his own belt and making him responsible for its care. But instead of dragging twelve feet of inch line up into the derrick, the belts are each provided with four feet of quarter-inch soft laid steel line spliced at each end to a forged steel safety snap. If any stops have to be made in the derrick, this little line can be snapped around a post or a girt. When the derrickman is at his regular work on the fourble board, the steel line is passed through a thimble spliced into the end of the conventional life line, which is kept permanently aloft. The net result of this move is that even with the derrickman up in the derrick there are always two extra belts and short lines available for emergency work. The last illustration shows the derrickman at

The "last word" in derrick belts—may be obsolete tomorrow.

If stops have to be made in the derrick, the little line is snapped around a girt or brace.

work with the new belt fastened by the steel line to a derrick brace.

With deeper drilling, safety in the derrick has become a matter of ingenuity. Fortunately the old days are gone when the driller and his crew scorned all safety appliances. Today drillers are judged by the straightness of the holes they have drilled and also by the care they take of their men. Since safety meetings have been made a regular part of the drilling program, practically all constructive ideas for the prevention of accidents have come directly from the drillers and drilling foremen.

Whether you call it with the French esprit de corps or just gang spirit, the fact remains that no perfect record in safety was ever made except as the result of close cooperation between the bosses and the men.

THE VALLEY REPEATS

CHAS. L. WOODS

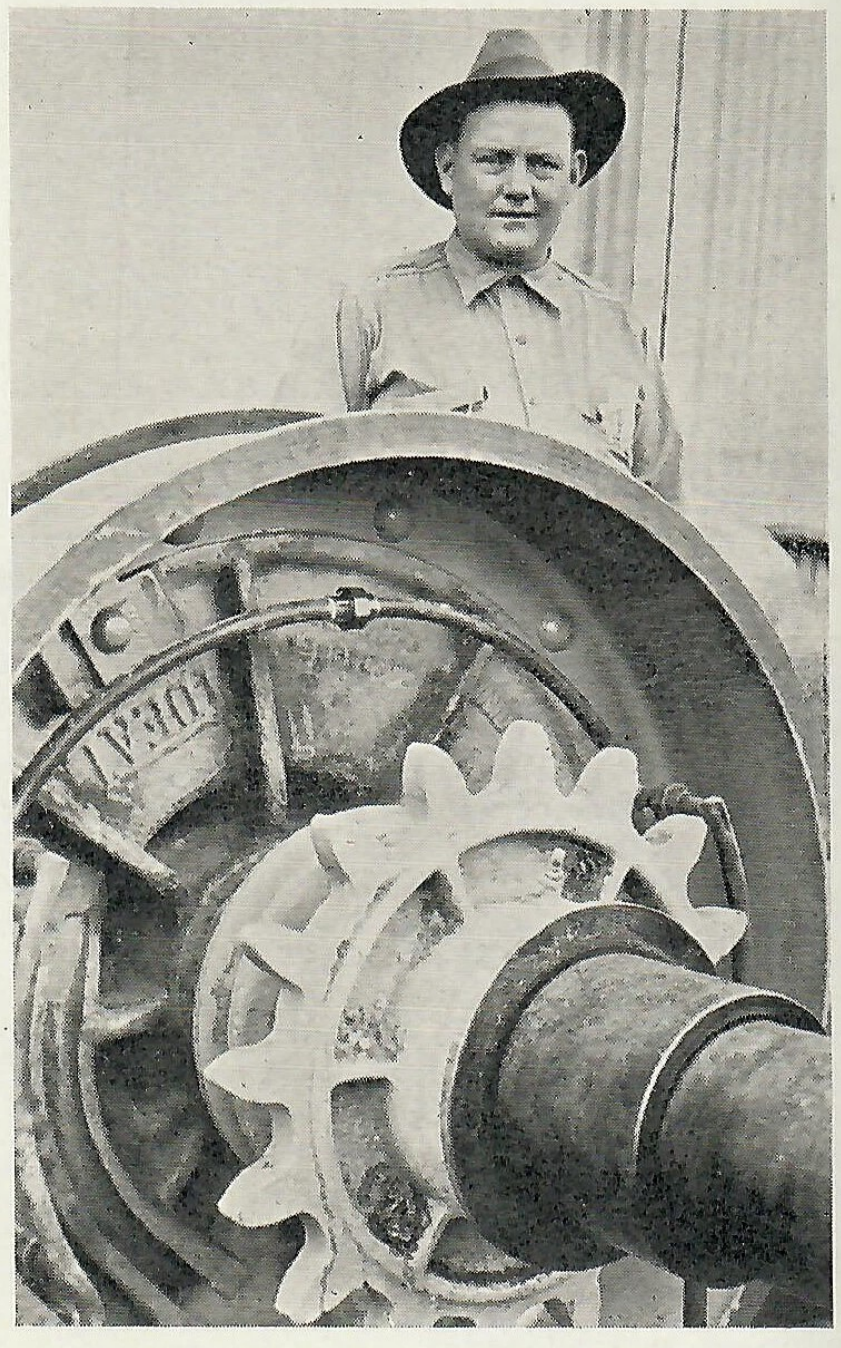
Again the Valley Division of the Department of Exploration and Production has set up a twelve month record of no lost time accidents. The real start of this achievement was in October, 1927, when a man was injured on the floor of a drilling rig and lost a week's time. For more than a year thereafter, the entire force, ranging in numbers from 150 to 200 men, suffered not a single lost time accident. That record was broken in March of 1929 when a safety belt broke and permitted the wearer to drop forty feet to the floor of the derrick. Nothing discouraged, Charles Woods, superintendent, and his men started to duplicate what they had done before and are now for the second time in their fourteenth no accident month. There is a spirit up there on the desert that gets things done.

NEW BRAKE DRUM COOLER

The recent development in the Southern division field of a cooling system for the inside of rotary brake drums has increased the useful life of rotary brake lining approximately 100 per cent, reduced repair costs materially, and greatly improved braking efficiency.

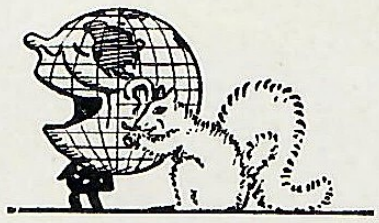
The device was designed by Charles Brown, shown in the above picture, under supervision of F. C. Boyd, drilling superintendent. It consists of a complete circle of half-inch pipe hung on bolts by means of pipe unions. The pipe is drilled with 1/64 inch holes spread six inches apart, and staggered so as to direct the spray to every part of the drum. After inclosing the drum and brakes to keep the spray from drenching the driller, the equipment has proved a satisfactory adjunct to the driller's equipment.

The theory on which the device is designed is that efficient braking is dependent on dissipating the amount of heat generated, at a temperature below that which will char the cotton used as binder in the lining. This implied that every portion of the brake drum must be drenched while lowering drill pipe into the hole. No trouble came from allowing the water to be spilled over the brake bands themselves.



Charles Brown and his device for cooling rotary brake drum.

REFINED AND CRUDE



In view of its scientifically sound development, the enthusiastic reception of Motorite was a foregone conclusion, but even the most optimistic have been astonished by the avalanche of orders that has threatened to engulf the Sales Department.

* * *

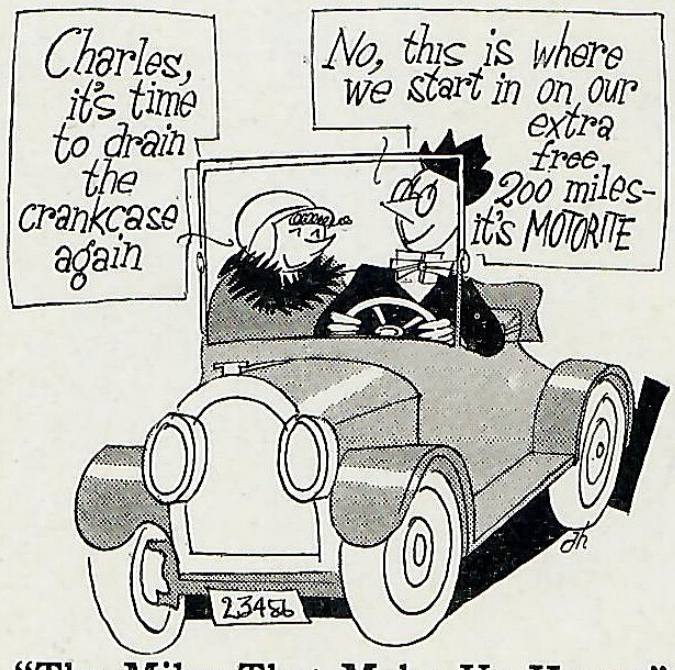
The new product has reached such an eminence that it may be correctly addressed as "Your Oiliness".

* * *

Incidentally, the strength of Motorite is plainly indicated by the fact that it positively resists dilution. Anything or anybody that can resist dilution in these entertaining times is no weakling.

* * *

At this point, just to prove that Spring has actually arrived we advance the following:



"The Miles That Make Us Happy"

I've driven my faithful bus afar
In the pitchy dark of night,
On a long, lone stretch of desert trail
With not a thing in sight

But the baleful patch of misty road
That unrolled as we sped,
And the scattered stars that twinkled
In the black plush overhead.

And never a spark of doubt or fear,
Assailed my tranquil thought,
For never the faintest trace of grief
Distressed my chariot.

Believe me, boys, it's cheering
On the long, lone trail at night,
To know you're power'd with SUPER GAS
And oiled with "MOTORITE".

* * *

The only complaint so far received regarding Motorite is from the young man who loaded up his crankcase and shortly thereafter burned out his brake bands trying to hold his car back on 24th Street hill at San Pedro.

* * *

And now, did you ever notice that some golfers take two lumps with their tee.

* * *

An Aberdonian in London proposed to an English friend that they should give a joint party. "We'll gang fifty-fifty" he said. "You see aboot getting the whiskey, and I'll send oot the invitations".

* * *

It's a funny thing but the wrinkles on women's faces are invariably caused by worry about their complexions.

* * *

And lots of people go broke buying books on economy.

* * *

Touring cars are not so common as they used to be, but we still have plenty of detouring cars.

* * *

When your wife breaks her string of pearls, you may find them by turning out the light and walking over the floor in your bare feet.

* * *

Vicar: "How did you get that black eye, Mrs. Green?"
Lady: "I'd rather not say, Sir. One who is very near and very dear to me done it."—Punch.

* * *

"MacBeth hath murdered sleep" says Shakespeare, and so we have named our neighbor's radio "MacBeth".

* * *

In the packing houses, they say, everything is used but the squeal. However, the customer uses the squeal when he gets the bill, so that makes it a hundred percent.

* * *

Tompkins: "I've just had a fortune left to me by an uncle, who has never even seen me."
His friend: "That explains it."
—The Orcadian.

* * *

Maybe we are advancing, but nevertheless we don't remember having had any trouble starting a horse on a cold morning.

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We conclude with a word of advice to young salesmen: "When things are not going too smoothly, don't be discouraged. Even the little bees have to cell their honey."

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