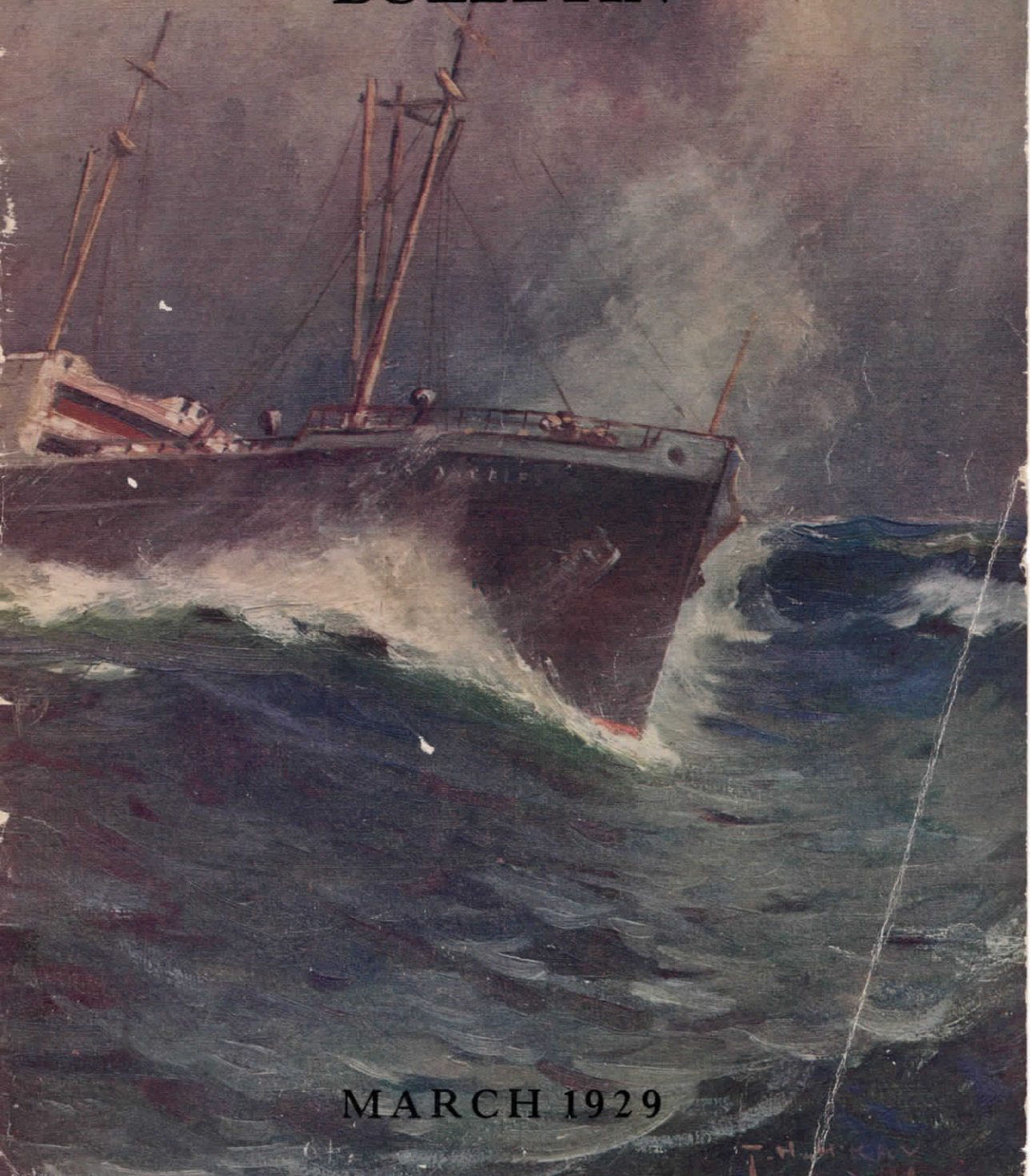


*Ray Beudet*

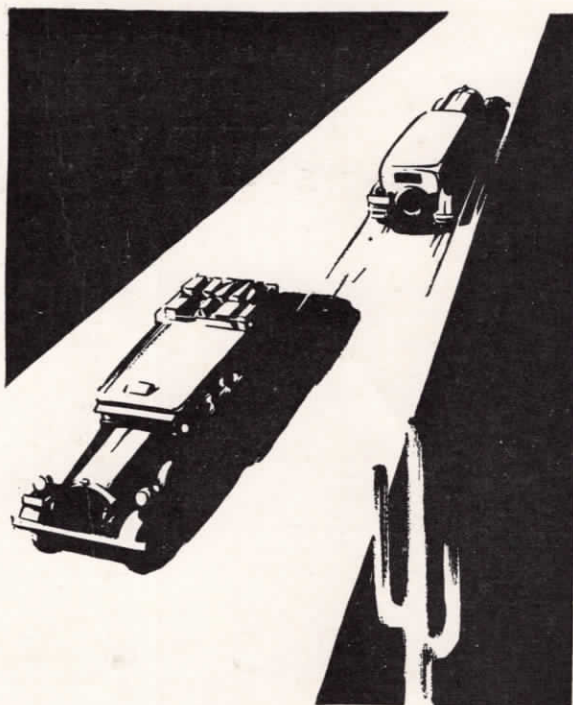
UNION  
OIL  
BULLETIN



MARCH 1929

# Here's PROOF of Union's Superiority

*Let these impartial  
tests be your guide  
in selecting gasoline*



Leading stage lines have to *know* which gasoline is best. So they make exhaustive tests of efficiency under all operating conditions. The results of these tests are why Pickwick, Motor Transit, Peninsula, Pacific Electric, Original and other leaders all use Union Gasoline.

They need a gasoline that supplies abundant power, quick pick-up, an instant response to the touch of the starter — greater mileage per gallon.



Union non-detonating gasoline furnishes all these qualities in fullest measure — then adds another.

Union protects your motor from the shock and extra wear caused by violent detonation. With Union, repair bills are less frequent. Motors last longer.

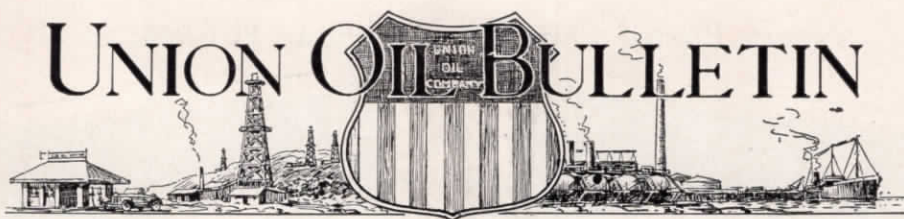
Let these tests be your yardstick in measuring the efficiency of gasoline. Give your own machine the benefit of Union Gasoline.

## Union Gasoline

*Non-detonating*



# UNION OIL BULLETIN



## EXECUTIVE COMMITTEE\* AND OFFICIALS

|                        |   |
|------------------------|---|
| *W. L. STEWART.....    | President                                 |
| *E. W. CLARK.....      | Executive Vice-President                  |
| *W. W. ORCUTT.....     | Vice-President                            |
| *L. P. ST. CLAIR.....  | Vice-President                            |
| *R. D. MATTHEWS.....   | Vice-President                            |
| *P. N. BOGGS.....      | Vice-President                            |
| JOHN McPEAK.....       | Secretary                                 |
| *R. J. KEOWN.....      | Treasurer                                 |
| GEORGE H. FORSTER..... | Comptroller                               |
| *CHESTER W. BROWN..... | Director of Exploration<br>and Production |
| PAUL M. GREGG.....     | General Counsel                           |
| *A. B. MACBETH.....    | Director                                  |

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VOLUME IX

MARCH

BULLETIN No. 3

## The Annual Meeting

**J**OHAN E. JARDINE, president of the William R. Staats Co., and the Los Angeles Stock Exchange, and Dwight Whiting, president of the Whiting Finance Co., and vice president of the Union Oil Associates, were elected to the board of directors of the Union Oil Company of California at

the annual meeting of the stockholders held in Los Angeles, February 26, succeeding William R. Staats and Frank C. Bolt, deceased.

At a meeting of the stockholders of the Union Oil Associates held the same day, W. L. Stewart, Jr., and Mr. Jardine, were elected to

the directorate of the holding company, filling the vacancies created by the death of Mr. Staats and Mr. Bolt, who had served on the board of directors of the Union Oil Associates as well as upon the board of the Union Oil Company.



**GEO. H. FORSTER**

The old officers of both the Union Oil Company and Union Oil Associates were re-elected without change, except in the case of George H. Forster, for nine years assistant comptroller, who was elected comptroller, relieving R. D. Matthews, elected vice president in June, 1928, and A. W. Milford, who was elected an assistant secretary.

The company was declared to be fortunate in the election of Mr. Jardine and Mr. Whiting to the board of directors. Mr. Jardine has been identified with the financial development of Southern California since 1904, when he associated himself with the William R. Staats Company, a firm of investment bankers. In addition to his other connections, Mr. Jardine is director of the Farmers & Merchants National Bank, Goodyear Tire and Rubber Company of California, Consolidated Steel and Southern California Iron and Steel Co. He came to California in 1892 and originally confined himself to his extensive citrus holdings.

Mr. Whiting was active in the organization of the Union Oil Associates and since the beginning has held the office of vice president. In addition he

## Newly Elected Directors of Union Oil Company



John E. Jardine



Dwight Whiting

is president of the Whiting Finance Co., the Indemnity Mortgage Insurance Co., and The Whiting Co.; vice president, Whiting Bond & Mortgage Co., and Ranch Development Co., and a director of the Estates Building & Mortgage Co., Webber Title Insurance Co., and the Braun Corp., as well as being a member of the Los Angeles Regional Board, Bank of Italy.

The business connections listed above have been established by Mr. Whiting in a comparatively few years. Just prior to and during the war he was engaged in the motion picture business. Those were extremely lean days for the picture companies and Mr. Whiting found himself taking a hand in directing and titling pictures as well as looking after the business details.

Mr. Forster's appointment to the post of comptroller followed almost sixteen years of service with the company. He began his employment in 1913 as an accountant. Within a year's time he was made chief accountant and in 1920 was appointed assistant comptroller. Since the death of R. S. Mill in 1926 he has been actively in charge of the comptroller's department.

For the past several years Mr. Forster has been an active member of the General Committee of the American Petroleum Institute, and at present is chairman of the Pacific Coast Regional Committee on Uniform Methods of Oil Accounting. He is also a member of the Institute's sub-committee on uniform tank measurements and gauge tables.

Mr. Milford, who was appointed to the post of assistant secretary, came to the Union Oil Company eleven years ago as assistant tax agent. He was appointed Manager of Taxes late last month following the resignation of H. L. Foster, who had been in the tax department for seventeen years.

The board of directors of the Union Oil Company is now made up of the following men: W. L. Stewart, E. W. Clark, W. W. Orcutt, L. P. St. Clair, R. D. Matthews, P. N. Boggs, R. J. Keown, C. W. Brown, W. L. Stewart, Jr., A. B. Macbeth, A. P. Johnson, Gurney E. Newlin, Henry M. Robinson, I. B. Newton, E. J. Bermingham, Clarence Dillon, Stanley W. Morshead, Malcolm McNaghten, John E. Jardine and Dwight Whiting.



## Giant Plane to Tour West

THE leviathan of passenger air transport planes, the Keystone Aircraft Corporation's twenty-passenger monoplane, "Patrician," is west bound on a tour that will take it to many of the larger cities of Arizona, California, Oregon, Washington, Idaho and Utah. It is forerunner of the type of planes that will soon be placed in transcontinental air transport service.

A request has been received by the Union Oil Company from the builders of the giant craft to fuel it from the

to Los Angeles and from there visit a score or more of the neighboring cities before continuing on up the coast.

The ordinary small commercial plane could hide under one wing of the "Patrician." Its total wing spread is 86 feet and its overall length is 63 feet. Empty it weighs 8500 pounds. It carries in addition to twenty passengers and their luggage, one pilot and two mechanics. Its "ceiling" is 18,700 feet and it can be throttled down to 58 miles per hour when landing.



time it reaches El Paso, Texas, until it leaves Boise, Idaho, to fly to Salt Lake City. According to the advance schedule the Patrician will arrive in El Paso, March 9, where it will pick up 500 gallons of gasoline and 50 gallons of aero oils. It will be refueled and serviced again at Phoenix and again at San Diego. There may be several stops between these points. From San Diego it is expected to fly

The big ship is powered with three 525 h.p., Wright "cyclone" engines capable of driving it at a cruising speed of 110 miles an hour and at a high speed at sea level of 150 miles an hour. It has storage space for 500 gallons of gasoline which is just about sufficient to maintain it in the air for six hours.

The structure of the plane is of alloy steel with welded joints throughout. The entire fuel supply is carried in three separate tanks in the inner wing panels away from the body. This is not only a safety measure, but prevents the gas fumes entering the cabin. The passenger cabin is 19 feet long and six feet across. It is thoroughly sound-proofed by means of thick insulation, which deadens the drone of the motors, permitting easy conversation among the passengers.

It provides all traveling comforts, even to a writing stand. The passenger cabin is so constructed that berths can be set up for over-night trips.

## The New Tanker "Unacana"

THE "M. S. Hopsborg," renamed the "Unacana," is northward bound after completing a 47-day trip from Rotterdam to San Pedro. The 12,000-barrel semi-diesel tanker, purchased by the Santa Maria Steamship Co., a subsidiary of the Union Oil Company of California, has been chartered to the Union Oil Company of Canada, Ltd., and is to be used in Canadian and Alaskan waters to replace the "Olinda," which is to be used on inside waters for delivery of fuel and diesel oil.

Enroute to Vancouver, B. C., the "Unacana" stopped at San Pedro for three weeks, during which time alterations and additions to the cargo pumping equipment were completed to enable the vessel to make deliveries of several grades of refined products without contamination. In addition more adequate electrical equipment was installed. On arriving in Vancouver she will be placed in dry dock for inspection. While in dry dock the Canadian Marconi Radio Corporation will install a 500-watt wireless transmitter set.

Following the dry dock inspection the tanker will be officially christened "Unacana" by Mrs. R. J. Kenmuir, the wife of the district sales manager of Canada.

The new tanker will be commanded

by Capt. F. A. Powers, who for the past three years has captained the "Olinda."

On the trip from Rotterdam the vessel was commanded by Capt. Hugh MacCallum, a veteran mariner with twenty-six years distinguished service on the sea. He is well known in the marine circles of the Union Oil Company. In 1922 he brought the "Santa Maria" from the Clyde, Scotland, to the Pacific Coast and commanded the tanker for two years and a half until she was transferred from British to American registry.

Capt. MacCallum is a holder of the Distinguished Service Medal awarded to him for meritorious conduct in action while serving with the Royal Engineers in the Mesopotamia region during the World War.

The officers who served under Capt. MacCallum on the trip from Rotterdam made a big hit on their arrival at the harbor. Capt. MacCallum said he had had few better or more likable junior officers.

The Tanker was met at the harbor by William Groundwater, manager of transportation; A. O. Pegg, superintending engineer; Capt. H. Halvorsen, port captain, and George B. McLean, port engineer. The vessel was given a test run and a thorough inspection on the morning of her arrival.



**NEW TANKER IN UNION SERVICE**  
*Top—The "Unacana" as she appeared on her arrival in San Pedro. Below—Capt. Hugh MacCallum, seated, and junior officers, left to right, Rodney Curuthers, second officers; Robert Toland, chief engineer; Lionel Stuart, chief officer, and Bernard H. Jackson, third officer. Top, left, insert—A. O. Pegg, superintending engineer of Union Oil Company, and right, William Groundwater, manager of transportation.*



## More Oil and Another Ruby

**A** FOURTH ruby has been placed in Frank Hill's service pin. On the 18th of last month the Union Oil Company's manager of field operations completed thirty years of continuous service with the company and nearly thirty-four years in the pursuit of oil in the state of California. The four-jeweled emblem was presented to Mr. Hill by L. P. St. Clair, vice president in charge of the field division.

Only two other men in the company, W. L. Stewart, president, and W. W. Orcutt, vice president, have been in the company's service longer than Frank Hill. He would rank second to Mr. Stewart were it not for the fact that shortly after he joined the company he was lured to other payrolls for a short time.

It was early in 1895 that Mr. Hill applied at the office of the Union Oil Company in Santa Paula for a job. He got one, wrestling drilling supplies around the warehouse and running errands. In the mornings he loaded supplies on the wagons destined for the wells that were at that time being drilled in Adams, Salt Marsh, Torey, Sespe and Bardsdall canyons, and later in the day he took a buckboard out to deliver the items the drilling superintendents had forgotten in the morning.

After a few months in the warehouse he was promoted to tool dresser and began his actual drilling experience. During the thirty-three years that have slipped by since then he has earned the reputation of being one of the foremost men in his line on the Coast. There are few men drilling for oil in

California today who do not know Frank Hill or know of him. He is given credit for having first developed the system of cementing oil wells that has made possible the deep drilling that is being done today and the recovery of oil from the various strata of oil sands that are separated by intermediate water. The first well in which this cementing process was used was in Hill No. 4 in Santa Barbara County. This well produced clean oil from the time it was completed until it stopped flowing a year or two ago. Since the



**F. F. HILL**  
*Manager of Field Operations*

drilling of Hill No. 4 thousands upon thousands of wells have been drilled in California and elsewhere in which this process, enlarged upon and improved with advanced drilling technique, has been used.

Mr. Hill also developed the sub-surface circulator which has made possible the drilling of wells into zones in which the gas has been depleted without the use of mud or oil, with a

resultant recovery of a large percentage of the oil that was formerly sealed in the formation when either mud or oil was used in drilling. He was among the first to perfect the "gas lift" and "gas drive" processes by which the production of oil has been materially increased in areas of low gas pressure.

From the beginning Mr. Hill took to oil well drilling like the proverbial duck to water, and as a result in the space of a few years he had progressed from tool dresser to driller, to foreman and on up the line to the manager of field operations. He had a hand in or supervised the drilling of the discovery wells of the Lompoc, Richfield, Santa Fe Springs, Rosecrans and Dominguez fields, and supervised the drilling of the Lake View gusher and Hartnell No. 1, two of the greatest wells in the history of California. During the years he has been on the firing line he has encountered all the grief that is encountered in oil well drilling, but he has seldom been defeated in the completion of a well. Oil men say he has the uncanny ability of being able to see beneath the surface and learn just what is taking place there. A driller with two or three years under Frank Hill has a diploma that is recognized in any field.

Men like to work under him or with him; either way they are certain of a square deal. Even tempered and patient, he is cool under the most trying conditions, and lends assurance and confidence to the men he is directing.

#### GRIM GETS 20-YEAR PIN

In February, 1909, George P. Grim, now one of the oldest drillers in the company from the standpoint of length of service, was employed as a gang pusher. In the course of a few months he was moved to the rig gang and in August, 1910, began dressing tools. Three months later he was promoted to driller, and since that time has been responsible for bringing in several score wells in the Brea-Olinda district, where the most of his drilling has been done, and in Richfield and East Coyote fields. He was one of two men last month who completed twenty years of continuous service with the company and was presented with a 20-year pin.

#### TWENTY YEARS AT OLEUM

Twenty years' service with the company was completed by J. H. "Jack" Curran, foreman of mechanics at the Oleum refinery, on Feb. 6, last, and he is now wearing a service emblem with two rubies. Except for an occasional assignment to expert the construction of stills at other refineries, his entire period of employment has been spent at the Oleum refinery, where on Feb. 6, 1909, he started work as a boiler maker. He was advanced to the position of foreman of mechanics in July, 1917, which position he has held, with increasing responsibility, since then.

As foreman of mechanics all skilled mechanical work at the refinery is done under his supervision. His particular forte is sheet metal and heavy steel work, the more complicated and the heavier the better. During the early days he built many of the storage tanks used at the Oleum refinery. Both the men who work under him and his superiors have a soft spot in their heart for "Jack," as they call him.

#### 15-YEAR SERVICE PINS

During the past month 15-year service pins have been issued to the following employees:

Amidon, H. B.—Purchasing Dept., San Francisco.  
 Bailey, T. J., Jr.—San Francisco Sales.  
 Brownfield, H. J.—Santa Fe Springs, Field.  
 Day, Miss Viola A.—Portland Sales.  
 Drowser, M. L.—Santa Fe Springs Field.  
 Delaney, H. A.—Brea, Field.  
 Hendricks, W. M.—Los Angeles Sales.  
 Heyward, J. B., Jr.—Oleum Refinery.  
 Killip, Peter—Oleum Refinery.  
 Putman, J. R.—Santa Fe Springs Gas.  
 Robinson, F. H., Jr.—Santa Fe Springs, Field.  
 Vestal, A. C.—Portland Sales.  
 White, M. H.—Purchasing Dept., San Francisco.

#### TEN YEARS WITH COMPANY

Ten-year service pins have been issued to the following employees since the first of the year:

Bankowski, A.—L. A. Refinery, Engineering.  
 Barrett, M.—Head Office Sales.  
 Burt, G. A.—Los Angeles Refinery.  
 Dixon, R. P.—San Francisco Sales.  
 Douglas, K. M.—Head Office Engineering.  
 Fitts, L. N.—Head Office Engineering.  
 Frankland, H.—Insurance & Personnel.  
 Gordon, L. B.—Los Angeles Pipe Line.  
 Goss, C. R.—Union National Petroleum Co.  
 Greenough, B. A.—Brea, Field.  
 Harris, A. G.—Sacramento Sales.  
 Johnston, W. S.—Head Office Engineering.  
 Karlock, G. L.—Portland Sales.  
 Kinney, H. H.—Head Office Land.  
 Landry, H. S.—Head Office Engineering.  
 Luce, S. A.—Maricopa Field.  
 Mackie, J. G.—Head Office Comptrollers.  
 MacLean, C. E.—Los Angeles Sales.  
 Michielsen, J. W.—Los Angeles Refinery.  
 Olsen, P.—Marine Department.  
 Paulbach, W.—Portland Sales.  
 Peyregne, A.—Maricopa Field.  
 Porterfield, G.—Fresno Sales.  
 Quayle, J. Y.—Oleum Refinery.  
 Rice, G. D.—Orcutt Absorption Plant.  
 Richesin, H. C.—Santa Fe Springs, Field.  
 St. Clair, W. M.—Producers Pipe Line.  
 Salmund, J.—Los Angeles Refinery.  
 Schneider, H. F. T.—Marine Department.  
 Vowels, J. R.—Refinery, Engineering.  
 Weston, P. C.—Sacramento Sales.  
 Zoeter, E. M.—Brea Engineering.



## Seeks Woman's Altitude Mark

MISS MARVEL CROSSON, who resides in San Diego and for two years piloted planes in the interior of Alaska, February 10th made her first assault on the woman's altitude record, using the Union Oil Company's Travelair J-5, and early this month, using one of the company's Eaglerocks, in which a new Wright whirlwind motor is being installed, will try again.

According to a semi-official check of the barograph carried on the first flight made from Clover Field, Santa Monica, Miss Crosson attained a maximum height of 19,800 feet, which is 470 feet short of the mark set by Louise M. Thaden at Oakland last December.

She is the sister of Joe Crosson, one of the two crack pilots with Capt. Wilkins antarctic expedition. Ben Eilsen, the other pilot with Capt. Wilkins, gave her her test for the commercial pilot's license issued to her while she was flying in Alaska. She was taught to fly by her brother five years ago in San Diego.

Since their childhood days, Miss Crosson and her brother Joe have been pals, and when Joe turned to mechanics and aviation, no one in the family was surprised when she followed his lead. Together they built a plane which they used and working side by side built up several motors.

When Joe went to Alaska a few years ago to become chief pilot for a Fairbanks airplane transportation company, it was not long before Miss Crosson was on her way north to join him in his hazardous venture. They piloted planes from Fairbanks to interior points that during the winter months—when they did most of their flying—could be reached by no other means of transportation. There were many narrow escapes, the closest call being when Miss Crosson's brother nosed his

plane over into the ice-filled Kuskikum River at McGrath.

Miss Crosson and her brother were at Fairbanks when Capt. Wilkins made his last two arctic exploration trips, which were concluded in 1928 with a flight over the North Pole from Point Barrow to Spitsbergen. They became acquainted with the captain while the expeditions were based at Fairbanks preparatory to being moved to Point Barrow. On one occasion Capt. Wilkins called upon Joe Crosson to make a particularly hazardous flight from Fairbanks to Point Barrow and his performance on that trip resulted in his selection as a pilot by Wilkins for the antarctic expedition.

The Southern Cross, which carried Capt. Kingsford-Smith and his companions across the Pacific, was used by Capt. Wilkins on one of his arctic trips and was once badly cracked up on an attempt to take off in the snow.

The oxygen mask used by Miss Crosson on her first altitude flight was loaned to the company by the Los Angeles Fire Department. Capt. Cecil H. Virdin, drill master of the department, accompanied by two firemen, installed the equipment in the plane at Clover Field and instructed Miss Crosson in its use.

W. P. Balderston, president of the Pacific Scientific Company; Floyd Adams of the same company, and Joe Nikrent, official timer of the National Aeronautical Association, were present to officiate at the flight.

Preparations for the flight were made under the supervision of C. F. Lienesch, head of the company's technical relations department. It was the plane which he has flown for the past six months that Miss Crosson used.

After Miss Crosson has set a new altitude record she proposes to try for a new endurance mark.



In the lower right hand photograph Miss Marvel Crosson is shown beside the Union Oil Company's Travelair, J-5, in which she attempted to set a new altitude mark. In the upper right she is shown with Ben Eilsen, noted Arctic flyer, when the latter was at Fairbanks with Capt. Wilkins. Upper left—Miss Crosson's brother's plane photographed just after it had nosed over into the ice filled Kuskikum River in an attempt to take off from a sandbar. Below is aerial view of Endicott Mountains over which some of Miss Crosson's flying was done. Opposite Miss Crosson is photo of the Southern Cross after a crack up at Fairbanks and two years before its famed hop over the Pacific. Lower left—Mt. McKinley, highest peak in North America, around which Miss Crosson has made many flights.



## Our Deep Sea Fleet

By H. E. CATTERMOLE  
*Ship Dispatcher*

THE white "U" on the black stacks of the trim-hulled tankers of the Union Oil Company's deep sea fleet has become a familiar sight to the mariners plying the trade lanes of the Pacific and Atlantic during the past 25 years. Tireless carriers—these vessels transporting California oil products to the far flung ports of the Western Hemisphere. They are here today and gone tomorrow.

There are no long delays in their home ports where they load cargoes and clear in from eight to 24 hours. This is made possible by the perfection of machinery and loading methods and co-operation between dock and ship crews. As a result, the tankers spend only about four per cent of their time in port. The rest of the time they are at sea. This accounts for the fact that during 1928 the company's twelve tankers transported a total of 28,106,895 barrels of oil cargo and covered a total distance of 720,584 miles.

During the past few years our tankers have at various times gone as far north as Nome, Alaska, and south as far as around the Horn and up to Buenos Aires. They have been west as far as Hankow and Shanghai, China, and eastward to Montreal, Canada, Rotterdam and Hamburg. They are not strangers either in the Antipodes and they have "rolled down to Rio" (Rio de Janeiro) and to Pernambuco, Brazil. The man who ships on a tanker sees more sea in a year than most sailors do in two, and most men in a life time.

Transportation of oil by tankers is of comparatively recent date. Thirty-nine years ago, when the company was incorporated, marine transportation of bulk oil was practically unknown. The first oil tanker built on the Pacific

Coast as an experiment to get away from the high cost of rail shipments was the "Hardison," constructed in 1888 for Lyman Stewart and W. L. Hardison, two years before the incorporation of the company. This vessel had a capacity of approximately 6500 barrels. She was short-lived, however, and soon after being put into service caught fire while loading at Ventura and burned to the water's edge.

The first vessel built for the Union Oil Company was the "Santa Paula," a full-rigged schooner. She was completed in 1900 and made many memorable voyages to the Hawaiian Islands, to the Northwest and coastwise. Her capacity was 8500 barrels. Oddly, after twenty-nine years of continuous service she is still operating in San Francisco Bay as a fuel barge.

The "Fullerton" was built for the Company in 1902, a barkentine of approximately 16,000 barrels capacity or twice the size of the "Santa Paula." She was followed in 1903 by the "Whittier", a steamer of 11,000 barrels capacity and at that time the pride of the Company, being the first steamer owned. Every rivet in her hull was hand-driven, which illustrates the laborious task undertaken at that time to build a steel tank vessel. Many were the odd voyages made by the latter vessels in the deliveries of their cargoes; notably a tandem tow by the "Whittier" to the Hawaiian Islands with the "Fullerton" and the "Santa Paula." The "Fullerton" outlived her usefulness and was eventually sold as a fishing barge. During a gale off Redondo Beach, California, recently, she was blown ashore and wrecked. The "Whittier" was wrecked on Saunders Reef off the California Coast in 1922, without loss of life.

In 1906 it was found necessary to acquire additional tonnage and the ex-cargo and converted tank vessels "Washtenaw" (25,000 barrels) and "Lansing" (42,000 barrels) were purchased. The steamer "Roma" was chartered for an indeterminate period so that the increasing offshore business of the Company could be adequately handled.

The year 1907 saw the addition to the fleet of the "Argyll" (26,000 barrels) a combination refined and fuel carrier. It was necessary to charter two larger vessels for the Panama and Chile trade as well as the Hawaiian business during this year.

During 1906 the "S. S. Santa Maria" and the "S. S. Santa Rita," each of 50,000 barrels capacity, were purchased by the company and kept in continuous operation until sold in 1914.

In 1910 other foreign vessels were chartered and were used exclusively in the Panama, Chile and Canadian trade. Our coastwise laws prohibit the use of foreign flag craft trading between United States coastal ports, therefore foreign ships are unable to compete with the American vessels in this trade, protecting, of course, American bottoms and goods.

The fleet was further augmented in 1910 by the purchase of the "Oleum", (32,000 barrels) a converted tanker, having formerly been a Government dredger. The "Oleum" was reconstructed to carry various grades of refined oils and on her initial voyage from Philadelphia to San Francisco via the Straits of Magellan she carried a cargo of nails in her tanks.

The full rigged steel sailing ship, "Erskine M. Phelps", was purchased in 1913. Her capacity is approximately 30,000 barrels. She was used for a time in the Hawaiian trade, is now engaged in the Port San Luis-Oleum run and is towed by a powerful ocean going tugboat between the two ports. At this point it is interesting to note what has become of the pioneer vessels of the Company's fleet. The "Washtenaw" lies capsized alongside berth 94 in Los Angeles harbor, this



*"ERSKINE M. PHELPS"*

*This steel-hulled veteran of the fleet started as a full-rigged sailing ship. She is now used as a barge.*

accident having taken place while the vessel was being fitted out as a whale reduction ship. She passed from the hands of the Company some years ago. The "Lansing" was sold and is now a very successful mother ship to a fleet of whale killer craft. These ships have their base of operations off San Clemente Island. The "Argyll" passed from the hands of the Company and now flies the French flag as a tanker and is frequently seen in Los Angeles harbor.

During 1914, it was decided to build a ship that would be better adapted to the company's needs than any of the vessels previously acquired. Hull No. 116 was laid down in the Union Iron Works (Bethlehem Shipbuilding Corp.) at San Francisco and was built according to Company specifications. This vessel at launching was christened "Lyman Stewart" in honor of our late Chairman of the Board. The



"Lyman Stewart" was accredited one of the finest tankers afloat and for eight years was engaged in various trade routes. In October, 1922, during a dense fog in San Francisco Bay, she was lost in collision with another vessel.

The hulls of the "La Brea" and the "Los Angeles" were laid down in 1916 and were also built to Company specifications at San Francisco. These two vessels are larger than the "Lyman Stewart," being of 10,000 tons deadweight; identical with the standard practice of present day tanker construction, and are actively engaged in the transportation of Company products at this time.

During the War, 1917-1919, the "Los Angeles" was commandeered by the United States Government and two of the British chartered vessels, the "Lompoc" and the "Cordelia", were requisitioned by the British Admiralty. After the war, when we relinquished our foreign charters, it became necessary to procure additional tonnage to meet transportation requirements, and in 1920 the hulls of the "La Placentia," "Montebello," and the "La Purisima" were laid down at San Pedro at the Southwestern Shipbuilding Company. The "Montebello" and the "La Placentia" are sister ships and are of 12,000 tons deadweight, having a bulk oil carrying capacity of approximately 90,000 barrels. The "La Purisima" is a smaller vessel of about 7500

tons deadweight with a carrying capacity of approximately 55,000 barrels. She is a combination refined and crude oil carrier and is used practically exclusively in our transportation of refined, diesel, and fuel oil from our refineries to Pacific Coast tide-water points.

The "Santa Maria" of 12,500 tons deadweight capacity, or approximately 100,000 barrels, was built in Scotland in 1921. This ship is the largest unit of the fleet and is used practically continuously in the Chile trade due to her size and capacity. She was built in a foreign country and does not, therefore, enjoy the coastwise trading privileges that our other American-built vessels have, although she flies the American flag.

Due to the loss of the "Lyman Stewart" and the "Whittier" in 1922, the 10,000-ton tankers "Cathwood," "Deroche" and "Utacarbon," as well as the 6000-ton tanker "Warwick," were purchased from the United States shipping board during the year 1923 and 1924. Their hulls (with the exception of the "Warwick") are similar to the "Los Angeles" and the "La Brea." They have proven exceptionally fine vessels. The "Warwick" being a smaller ship of approximately 46,000 barrels capacity is used in our refined coastwise trade.

The steamer "Radiant" was purchased in 1925 to be used as floating storage at Ketchikan, Alaska, and after being used for that purpose for about a year and a half was returned and put into active service in the Company's coastwise trade. She plies mostly from Oleum to the northwest and is a vessel of approximately 23,000 barrels capacity.

The Company recently purchased a small 11,000-barrel tanker in London to be used in the Canadian and Alaskan trade. This vessel is to be utilized for the movement of refined oils to our many Canadian stations. She will eventually fly the Canadian flag, and will be known as the "Unacana."

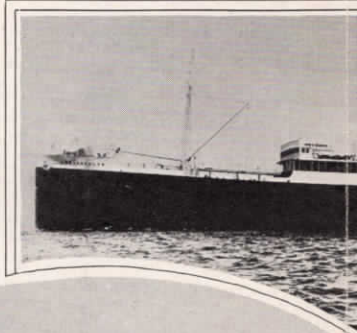
Numerous river craft, bay barges and work launches are also in operation at the major Pacific Coast ports.



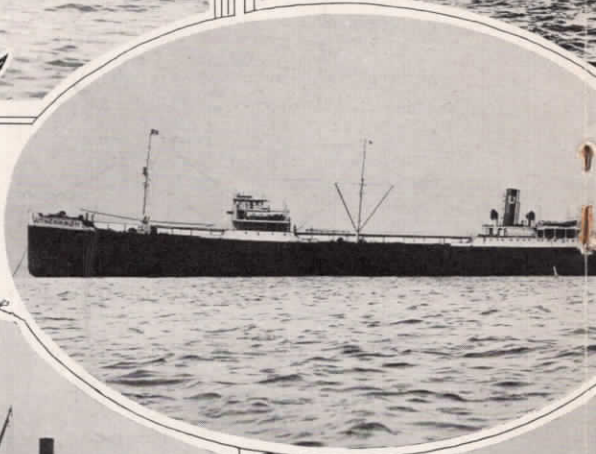
*Union Oil vessels arriving at the harbor must undergo the rigid scrutiny of these two men. Left, George B. McLean, port engineer, and Capt. H. Halvorsen, port captain.*



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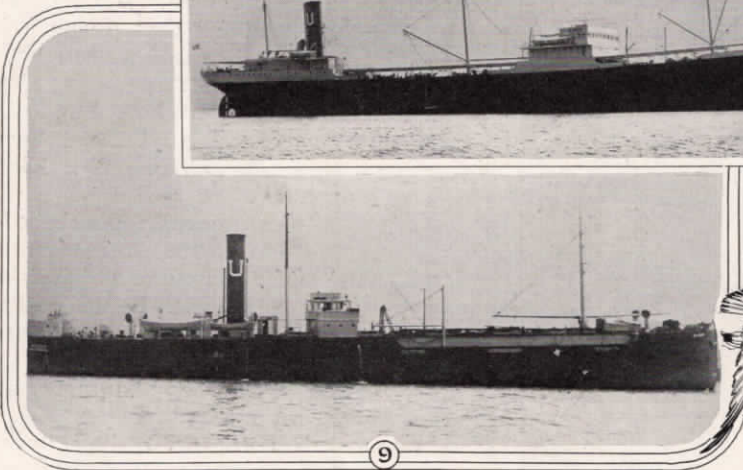
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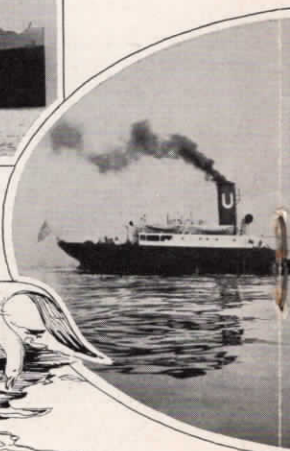
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⑨



TWELVE TANKERS OF UNION OIL COMPANY'S DEEP SEA FLEET. No. 1—  
No. 6—Deroche, No. 7—Warwick, No. 8—Radiant, No. 9—Oleu





3



4



7



6



8



11



12

Montebello, No. 2—Utacarbon, No. 3—Los Angeles, No. 4—La Placencia, No. 5—Cathwood, No. 6—Cathwood, No. 7—Cathwood, No. 8—Cathwood, No. 9—Cathwood, No. 10—La Brea, No. 11—La Purisima, No. 12—Santa Maria.

## Captains of Deep Sea Fleet—



**J. H. GUNTHER**  
Capt. of "La Placencia"  
Twenty-one years' service



**OSCAR S. CARLSON**  
Capt. of "Los Angeles"  
Fourteen years' service



**J. G. UHREN**  
Capt. of "Deroche"  
Fourteen years' service



**ERIK BELIN**  
Capt. of "La Purisima"  
Eleven years' service



**H. L. DAHLLOF**  
Capt. of "Radiant"  
Ten years' service



**JOHN S. COLLIER**  
Capt. of "La Brea"  
Nine years' service



**MARTIN SWENDSEN**  
Capt. of "Warwick"  
Eighteen years' service



**OTTO PHILLIPSON**  
Capt. of "Cathwood"  
Nine years' service



**FRITZ PLATH**  
Capt. of "Santa Maria"  
Thirteen years' service



**G. L. ASP**  
Relief Master  
Six years' service



**T. R. FISCHER**  
Capt. of "Utacarbon"  
Seven years' service



**MOGENS ANDREASEN**  
Capt. of "Montebello"  
Sixteen years' service



—and the Chief Engineers



**BERNARD SCHINDLER**  
Chief engineer of  
"La Purisima"  
Ten years' service



**L. S. EAKINS**  
Chief engineer of  
"Los Angeles"  
Seven years' service



**HENRY VORTMAN**  
Chief engineer  
"Radiant"  
Twenty-two years' service



**R. W. DAVIS**  
Chief engineer of  
"Utacarbon"  
Seven years' service



**C. G. REED**  
Chief engineer of  
"Santa Maria"  
Four years' service



**J. G. KUYPENDALL**  
Chief engineer of  
"Oleum"  
Twelve years' service



**T. O. CAMPBELL**  
Chief engineer of  
"Cathwood"  
Five years' service



**JAMES M. SPENCER**  
on leave  
formerly chief  
engineer "Deroche"



**A. B. BLUNDUN**  
Chief engineer of  
"Montebello"  
Four years' service



**ARTHUR O'FLANAGAN**  
Chief engineer of  
"La Placentia"  
Twenty-one years' service



**J. F. JOKI**  
Chief engineer of  
"Warwick"  
Five years' service



**EARL D. BOURLAND**  
Chief engineer of  
"La Brea"  
Eight years' service

# NEWS OF THE MONTH

## SANTA FE OUTPUT JUMPS

Eleven wells, having a gross production of approximately 35,000 barrels, were completed in the Nordstrom and Buckbee zones at Santa Fe Springs during the month of February, bringing the total deep zone production for the company up to 48,000 barrels per day. Prior to February five wells were put on production from the deep zones.

The completions were as follows:

Alexander 11, depth 5850 feet, production 1687 barrels; Alexander 13, depth 5850, 2472 barrels; Alexander 15, depth 5820, 3270 barrels; Alexander 16, depth 5844, 1544 barrels; Bell 31, depth 5388, 3586 barrels; Bell 35, depth 5850, 2656 barrels; Bell 36, depth 5850, 4528 barrels; Bell 37, depth 5850, 4341 barrels; Bell 38, depth 6020, 4148 barrels; Bell 39, depth 5356, 2322 barrels; Howard 9, depth 5325, 4545 barrels.

At the time the above figures were obtained the wells had been on production for a week or more, with the exception of Howard 9, which had been flowing for only forty-eight hours. Howard 9 is the only one of the new completions that is showing much water. At the end of the first forty-eight hours of production it was cutting about 35 per cent water and emulsion. This is the farthest north of the Nordstrom zone wells and is believed to be near the edge of that zone.

Bell 38, drilled to a depth of 6020 feet, is the deepest Buckbee well in the field, having taken in 392 feet of formation.

## GIVEN COMMITTEE APPOINTMENT

E. Power, manager of properties and facilities, has just been advised of his appointment as chairman of the Western Seaboard Transportation Committee of the Society of Automotive Engineers. This committee supersedes the one formerly known as the Operations and Maintenance Committee.

Through the newly formed committee the Society of Automotive Engineers is attempting to bring about the standardization of methods of maintenance and to overcome problems incidental to the operation of motor vehicles.

## FLY TO SAN FRANCISCO

As a reward for having presented the best suggested program for the aviation activities of the Los Angeles Junior Chamber of Commerce for 1929, Russ Kimble and Charles F. McReynolds, two of the organization's aeronautical enthusiasts, were taken on a round-trip aerial ride from Los Angeles to San Francisco in the company's Travelair, J-5. W. E. Carey, the company's Southern Division aviation representative, piloted the plane.

While in San Francisco, Kimble and McReynolds attended a meeting of the Junior Chamber of Commerce of San Francisco to assist in working out a program to establish air markers between Los Angeles and the Bay City.



JUNIOR CHAMBER MEMBERS RIDE TRAVELAIR, J-5

W. E. Carey, center, piloted the Travelair J-5, in which Russ Kimble, left, and Charles F. McReynolds, right, were passengers, on a round-trip flight between Los Angeles and San Francisco.



### FIELD DEPT. CHANGES

With the retirement of E. C. Critchlow, division superintendent of the Coast Division, after fifteen years' service with the company, two changes have been made in the field department.



**E. C. CRITCHLOW**

R. M. Putman, assistant manager of field operations, has been given the post vacated by Mr. Critchlow, with headquarters at Orcutt, and A. C. "Cy" Rubel, has been appointed chief petroleum engineer with headquarters in Los Angeles.

In the retirement of Mr. Critchlow the company has lost a veteran oil man. He engaged in the oil business in the east for many years prior to joining the company fifteen years ago. He has purchased a home in Los Angeles where he plans to take up his residence following a visit to his old home in Pennsylvania next summer.

Mr. Putman, who goes to Orcutt, has been with the company for several years, part of the time being spent in Texas fields.

Mr. Rubel came to the company six years ago following extensive exploration work in Mexico. He was assigned to the geological department for a short period and then was sent to the field department as resident geologist. A few months later he was appointed petroleum engineer and advanced to the post of superintendent of production in the Dominguez district. He was in charge of sub-surface work during the drilling of the discovery well and the subsequent development of the Dominguez field. As superintendent of the Dominguez district he was also in direct charge of the Rosecrans operations.

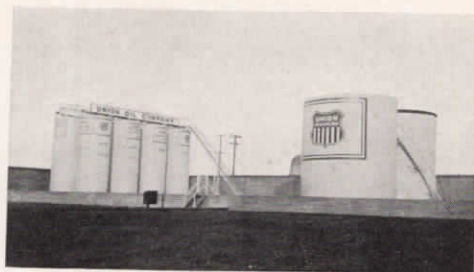
### FOUR DEATH CLAIMS PAID

During the past month death claims were paid under the Company's group insurance plan as follows:

|                                       |         |
|---------------------------------------|---------|
| Edmund A. Carr, Los Angeles Sales..   | \$2,000 |
| Wilfred P. Kruyer, Santa Fe Springs.. | 6,000   |
| J. H. Earnhart, Santa Fe Springs..... | 2,500   |
| Harry Krueger, Los Angeles Refinery.  | 3,500   |



**R. M. PUTMAN**



### MARINE PLANT AT TACOMA

Above is a photograph of the newly completed Marine plant at Tacoma, Wash. The former plant at Tacoma was inland and all shipments for that major distributing center had to be made by rail. The new plant provides for fuel oil storage in addition to tankage for kerosene, gasoline, diesel and lubricating oils.

### IMPROVING PORTLAND PLANT

Construction of a 600-foot dock by the Union Oil Company of California in the Bridgeport district, Portland, Ore., in connection with the development of that area by the oil companies, will be started about April 1.

The company is planning to re-arrange and modernize its present plant at Bridgeport to handle the rapidly growing business in Western Oregon. The storage tanks are to be surrounded with a high concrete fire wall to safeguard surrounding property.

The construction of the dock and new pipe lines will cost approximately \$125,000, while the re-arrangement and modernizing of the plant will cost in excess of \$80,000.

The City of Portland is now dredging a turning basin at Bridgeport for the oil companies for which it is being reimbursed by the companies. The new improvements will enable six ships to dock at once. This will greatly facilitate the handling of oil cargoes in the harbor and will materially speed up shipments.

### NEW TANKAGE FOR RAYMOND

Construction of a dock and tankage at Raymond that will more than double the present storage facilities at that point was started February 14. The improvement will consist of the erection of one 3000-barrel tank, one 6400-barrel tank and one 20,500-barrel tank for the storage of diesel, white gasoline and fuel oil, respectively.

The dock will extend forty feet from shore and will be 100 feet long. Pipe lines will be installed that will make it possible to fuel vessels at the dock. Heretofore no facilities have been provided at Raymond for fueling the vessels in Willapa harbor. The improvement will also make it possible to ship oil products to this distributing point by tanker.

In addition to the present storage, which provides for white and Ethyl gasoline and kerosene, the company maintains at Raymond a warehouse, pump house, office and four-stall garage.

**ORANGE FIELD WINS TELEGRAPHIC MEET**



*CHAMPION BOWLERS OF COMPANY*

*Left to right, back row, are J. P. Rockfellow, A. D. Clayton and H. L. McCarty; front row, Ray Hatfield, Louis Zimmer, Milt Varner, Earl Fields and Press Varner.*

The Orange Field team, with a record score of 2830, won the annual telegraphic roll-off for the company bowling championship and the right to hold the Major F. R. Burnham Bowling Trophy for the coming year. Second place went to the Los Angeles Refinery team which overcame a poor start to nose out Phoenix Sales. McCreary of Los Angeles Refinery rolled a fine series of 613 in the match to take E. W. Clark's individual prize. The match was rolled February 21st. Complete scores were as follows:

|                           |     |     |       |       |
|---------------------------|-----|-----|-------|-------|
| Orange Field .....        | 880 | 944 | 1,006 | 2,830 |
| L. A. Refinery .....      | 784 | 927 | 932   | 2,643 |
| Phoenix Sales .....       | 876 | 867 | 890   | 2,633 |
| Dominguez Field .....     | 906 | 837 | 864   | 2,607 |
| Oleum Refinery .....      | 820 | 875 | 855   | 2,550 |
| Spokane Sales .....       | 818 | 857 | 861   | 2,536 |
| Los Angeles .....         | 743 | 735 | 724   | 2,202 |
| San Jose Sales .....      | 739 | 699 | 718   | 2,156 |
| San Francisco Sales ..... | 694 | 660 | 692   | 2,046 |
| Producers Pipe Line ..... | 674 | 596 | 595   | 1,865 |

Producers Pipe Line appeared in the play-off for the first time and although their scores were a trifle low Lafe Todd claims the pins were on spring hinges and wouldn't stay down when he hit them.



*CREWS ON MCGOWAN WELL GET TASTE OF WINTER*

*Zero weather, accompanied by snow, visited southwest Washington while the drilling crews under Glenn W. Black were completing the installation of machinery in the company's wildcat well at McGowan in Pacific County. The accompanying photographs show the arctic conditions that prevailed just prior to the spudding in of the well on February 18. A large delegation of residents from the district in which the well is being drilled were on hand when the well was spudded in.*



**BROTHER OF P. N. BOGGS DIES**

W. W. Boggs, secretary-treasurer of the Crescent Tool Co., and brother of P. N. Boggs, vice-president of the Union Oil Company, died suddenly at his home of a heart attack on February 21. Mr. Boggs had many friends in the machinery manufacturing and the oil well supply business with which he had been identified since 1910.

He was first associated with J. F. Lucey and after about three years became connected with the Bean Spray Pump Co., in charge of its factory in Michigan. Later he joined the Fairbanks Morse Co., returning to California to go with the Oil Well Equipment Co. For the past two years, and just prior to the organization of the Crescent Tool Company with C. N. Abbott a few months ago, he was assistant manager of the U. S. Tool Co. of Long Beach, recently sold to Byron-Jackson, Inc.

**OPEN ALHAMBRA STATION**

The new distributing station at Alhambra, California, was opened for business February 18, with A. W. Miller as the agent in charge. The Alhambra station will operate as a sub-station of the Los Angeles district and will eliminate the long hauls from Los Angeles and Pasadena to serve the rapidly growing Alhambra district. The new station provides facilities for storing gasoline and lubricating oils.

**UNION HOCKEY TEAM LEADS**

At the time of going to press the Union Oil team is enjoying a two-game lead in the Southern California Amateur Hockey League and bids fair to run off with the championship. This is the first year the Company has been represented in this thrilling sport and the team has enjoyed a large following of employees and their friends who are pulling hard for victory. Only four more games remain to be played.

**GAS DEPT. WINS BOWLING CUP**

The Gas Department's Head Office team won first place in the Los Angeles Bowling League with a three-game lead at the close of the season over the Bears and Tigers, who were tied for second place. This gives the Gas team one leg on the Executive Vice-President's Bowling Cup.

The first five players in the league were Caldwell, Branch, 166; Cannon, Branch, 166; Williams, Bears, 165; McCutcheon, Tigers, 164; Kolar, Service Station, 164.

At the close of the tournament the Santa Fe Springs Gas Department team challenged the winners, and it is now a matter of record that the Santa Fe Springs boys bought a fine dinner for the Head Office bowlers. An attempt was made, according to reports of the event, to make one Mr. Russell stand the entire cost of the dinner as it was asserted that his failure to perform up to standard resulted in the loss of the match by the challengers.



**GAS DEPARTMENT BOWLING TEAM 1928-29**

*The winners of the Los Angeles Bowling League cup from left to right are: C. D. Gard, R. A. W. Bultmann, E. J. Leabow, H. C. Marshall, R. W. Garman, R. O. Jones and E. W. Gard.*



#### CAUGHT IN SNOW STORM

*Union Oil Company's Travelair J-5 is shown here just before C. F. Lienesch, head of technical relations dept., and Don Forker, director of publicity, took off from Winslow, Ariz., for Los Angeles, Sunday, Feb. 24. They left in a snow storm and bucked it for two hundred miles only to encounter terrific winds and general unfavorable flying conditions the rest of the way home. In spite of this they made the trip to Los Angeles in five and one half hours. Lienesch and Forker flew to Phoenix the 22nd to prepare publicity and fueling plans for the coming of the Keystone "Patrician" and then hopped to Winslow to make arrangements to fuel Col. Lindbergh's plane that was expected to land there before continuing on to Mexico City. The Colonel didn't land there but he would have found an ample supply of Union gasoline and oil ready for him had he stopped.*

#### LITTLE HELP GETS BIG BOOST

L. M. Lilly, who drives a "trouble shooting" truck out of Roseburg, Ore., for the Union Oil Company, performed a minor service for a stalled highway wayfarer a month or so ago that begot a column of warm praise in "The Alaska Daily." It appears that the man whom Lilly rescued from an all-night stop on the highway was Pat O'Cotter, who is a pilot of a newspaper column called "Thru Northern Glasses."

O'Cotter, after recounting the starting of a trip down the coast, tells of the sudden stalling of his car. "I climbed out and raised the hood, not for any good I might be able to do," he says, "but it seemed the proper thing to do. I could see nothing, and just then I heard the honk of a truck alongside, and a cheery voice called out, 'Having a little trouble?'"

"I tried to come back with something snappy, but the old bean didn't work, so I substituted a silly grin as a tall, good-looking young fellow climbed out of the car and came over to my stalled bus." At this point O'Cotter recounts how in a short time the "trouble shooter" had located the difficulty and had the car running perfectly again.

"Well, I felt like the Pilgrim Dads when they started Thanksgiving," he continues. "When I proffered cash he shyly grinned and said: 'It's nothing, and I couldn't charge you a cent.'"

"We started and I had no more trouble and when I met him in Medford he told me that he was a 'trouble shooter' for the Union Oil Company, and if I really wanted to show an appreciation, that really wasn't warranted, to say a good word for Union oil and gasoline, and to try it myself. Say, that boy made a booster of me, right, and every time I saw the gas tank getting low I looked for the little Union shield, and told the gas sta-

tion man what a trade-getter they had on the road. It's things like that that make a booster of a man and to me it is no wonder that when a company like the Union Oil Company has a man on the highway like L. M. Lilly of Roseburg, Oregon, that they get the business."

#### FIFTY TANK CARS PURCHASED

Purchase of fifty new insulated asphalt tank cars, equipped with steam coils, has just been announced by the traffic department. The cars will be delivered about May 1 and will bring the total tank car fleet up to 728. Of that number, 372 are used for refined oils, 113 for fuel oil, 184 for asphalt and 59 for lubricating oils.

The new tank cars will be used out of Oleum to supply asphalt for road construction work. The cars are being built by the General American Tank Car Corp. of Sharon, Pennsylvania.

#### L. A. REFINERY QUINTET WINS

In the playoff between the two leading Union Oil refinery basketball teams, held at the U. S. C. pavilion February 23rd, the Los Angeles Refinery quintet defeated the Oleum squad by a score of 41 to 21. Both teams played a fast game with the Los Angeles boys having a decided edge, as the score indicates. The teams are at present leading their respective leagues.

#### ETHYL USER WINS TROPHY

Pitted against the best speedboat pilots and the fastest boats on the Atlantic Coast, Dick Loynes, the smiling young Long Beach sportsman, February 21 and 22, again drove his "Miss California" to victory in the Royal Poinciana regatta at Palm Beach, thereby winning the Royal Poinciana Trophy permanently.



**OPERATING COST OF PLANE AND AUTOMOBILE COMPARED**

An interesting comparison between the operating cost of two automobiles maintained by the technical relations department, and two of the older planes flown by members of the department, is contained in the annual report of C. F. Lienesch, head of the department.

The figures show that the total average operating cost per mile for the Travelair OX-5, flown a total of 261.53 hours over a distance of 24,749 miles, was only 11.5 cents. The cost per mile to operate the Travelair J-5, flown for a total of 189.04 hours over a distance of 20,762 miles, was shown to be exactly the same. These figures include every cost—fuel, repairs and depreciation.

While the overall operating cost of both planes is the same, the actual expense of operating the whirlwind plane, the J-5, was less than for the smaller plane. The cost per mile for the J-5 was only 6.0 cents, while the cost for the OX-5 was 7.15 cents per mile. The overall cost of the two planes is equalized due to the fact that the initial cost of the OX-5 plane was only \$3585 and consequently it suffered a smaller depreciation than the J-5, which cost \$10,000.

The gasoline consumption of both planes was approximately ten miles per gallon.

The total per mile cost in operating a Chrysler 62, run a distance of 14,799 miles, was shown to be 8.15 cents. An accident, necessitating some major repairs, ran this cost up slightly higher than it normally would have been. The cost per mile to operate a Chrysler "72", run a distance of 20,063 miles, was shown to be 6.1 cents.

**SPORTSMANSHIP WINS PRAISE**

The sportsmanship and fine playing of the Union Oil hockey team in Los Angeles has so enthused one of the fans that he has written the following letter to the company:

"I have had the extreme pleasure of witnessing the last two games of Ice Hockey played by your team at the Palais de Glace.

"I commend you heartily on your management and selection of players, as they appear to me to be the finest type of sportsmen I have yet seen on an ice rink.

"I feel that you are doing a fine thing in presenting to the people of Los Angeles such a spirited game and I am sure that all those who have seen these contests are most cordially in favor of them.

"As a user of your products, I am more than glad to see the Union Oilers keep in the race and win the championship they rightfully deserve."

(Signed) A. Jacobson.  
California Glass Company.

**"LA BREA" TO CARRY BLACK OILS**

The "La Brea", after ten years in clean oil trade, is to be put into black oil service. The action of gas and vapors from the refined oils has been found to cause a deterioration and thinning of the hull, and to prevent this from progressing to a point where it might affect the utility of the vessel, the change has been ordered. The "Utacarbon", which has been in the black oil trade since it was purchased from the Shipping Board in 1923, is to be cleaned up to carry refined oils.

**BIG PRODUCTION GAIN**

According to figures collected by the American Petroleum Institute, Pacific Coast Office, the total production of Crude Oil in California for January amounted to 23,385,939 barrels, an average of 754,385 barrels per day. This is an increase of 58,427 barrels per day over December production.

Total stocks of crude and all products in Pacific Coast territory increased during the month 3,609,864 barrels. The total stocks at the end of the month were 144,666,873 barrels.

94 wells were completed during the month with an initial daily production of 187,800 barrels, compared with 81 wells completed during December with an initial production of 144,324 barrels.

**COMPARISON OF DAILY PRODUCTION FOR 13-YEAR PERIOD**

|             |       |           |
|-------------|-------|-----------|
| Total, 1928 | 712   | 681,629   |
| Total, 1927 | 901   | 479,905   |
| Total, 1926 | 913   | 391,620   |
| Total, 1925 | 948   | 506,969   |
| Total, 1924 | 1,238 | 508,944   |
| Total, 1923 | 980   | 1,376,279 |
| Total, 1922 | 801   | 524,397   |
| Total, 1921 | 684   | 187,567   |
| Total, 1920 | 587   | 169,500   |
| Total, 1919 | 558   | 114,870   |
| Total, 1918 | 597   | 126,925   |
| Total, 1917 | 749   | 128,296   |
| Total, 1916 | 619   | 103,765   |

**MONTHLY CRUDE PRODUCTION 1928**

| Month      | Total Barrels | Daily Average |
|------------|---------------|---------------|
| January    | 19,028,228    | 613,814       |
| February   | 18,038,459    | 622,016       |
| March      | 19,118,324    | 616,720       |
| April      | 18,280,729    | 609,357       |
| May        | 19,331,866    | 623,609       |
| June       | 19,164,244    | 638,808       |
| July       | 19,754,458    | 637,241       |
| August     | 19,444,899    | 627,255       |
| September  | 18,908,169    | 630,272       |
| October    | 19,430,992    | 626,806       |
| November   | 19,907,526    | 663,584       |
| December   | 21,574,703    | 695,958       |
| Total Year | 231,982,597   | 633,832       |

# SAFETY IN THE UNION



## Oleum Refinery

There is no property of Union Oil Company where it is more difficult to "crash the gate" than Oleum Refinery on San Pablo Bay just below Carquinez Straits. But let me hasten to add that when one carries the little blue pass with the "signs and countersigns" duly affixed, there is nowhere that the visitor from the Home Office is more truly welcomed. From Refinery Manager A. Roy Heise to the last barrel handler on the asphalt loading dock, the personnel at Oleum is one great family, with a community of interests far beyond those of the average American industrial plant.

Those of us who watch accident statistics and look for basic causes are continually reminded of the fact that human beings are very much the same, no matter where found. By way of starting a discussion, I asked Kyle Lutz why the accidents to new men had fallen off more than 50 per cent in the past year. It was his answer that prompted the thought just expressed: "Better selection, since we now have a personnel representative; better training, since we put all new men through our safety classes; better supervision, since the foremen have become interested in the analysis of accidents and have learned how most of them can be prevented.

"The average cost of medical care and compensation for injured refinery workers in California is about \$1.73 per \$100 of payroll. At Oleum the cost is one-third of that. That is an index of how we stand by comparison. It costs money to promote safety but I know that if the management had the choice they would gladly divert every cent they now spend for accidents to accident prevention, if by doing so it would eliminate all accidents. But money alone won't turn the trick. It takes interest, and that we have here at Oleum to the nth degree. If we have had any success, it has been due to the fact that the management wants Oleum to be a safe place in which to work.

"It may interest you to know that our foremen have been studying Heinrich's method of classifying accidents according to basic cause. Instead of merely reporting that a barrel fell on a man's foot, they now find out and report why the barrel fell; was the man properly trained, supervised, physically fit? When they have answered those questions they cease to consider the event an 'accident'. It is in the knowledge of these basic causes that we place our reliance for effective prevention."



**KYLE J. LUTZ**

*Safety Supervisor—Oleum*

James L. McCaulou, a rotary helper on Naranjal well 14, lost his life on February 24 in a most peculiar accident. The crew was "coming out of the hole", from a depth of approximately 4700 feet. The kelly had been set in the rat-hole and a lift was taken on the 5-inch drill pipe. McCaulou, with the other rotary helpers, was lifting the slips when one of the elevator links broke just below the weld, allowing the link to turn about the elevator lug. McCaulou was struck on the head and instantly killed.

It was developed at the inquiry held at the scene of the accident that the load under which the link broke was approximately one-eighth of its safe limit. It was therefore concluded that failure was the result of an inherent defect in the steel, not apparent to the eye, and the crew therefore was absolved of any responsibility in the matter.





### A "Nut" on Safety

These broken goggles saved the sight of William F. Sefzig, steel erection foreman, at Oleum Refinery. Had Bill not been safety-wise, he would have worn his goggles around his neck or in his hip pocket. Then the company would have bought him a beautifully hand colored glass eye and would have paid him compensation of several thousand dollars. The glass eye would probably have matched his remaining optic except in one particular: **Bill would not have been able to see through it.** Fortunately for Bill, he is a "nut" on the subject of safety, which accounts for the fact that he and his gang, doing the most hazardous work in the refinery, haven't had an accident in years. The Company has saved enough money to buy a good many pairs of goggles but all the money in the United States Mint could not buy what Bill has saved.

### Safety Sense

Accident prevention education must be carried to the point where every man thinks of the work that he is doing in terms of safety to himself, his fellow workmen and the material or equipment which he is handling.

A man starts a steam driven air compressor by opening the steam throttle. The piston moves slightly and then stops on dead center. There is a safe and an unsafe way of proceeding from this point. The safe way is to close the steam throttle and rock the flywheel of the compressor until dead center has been passed and not until this has been done, to open the steam throttle. The unsafe way is to stick one's leg through the guard rail around the flywheel of the engine and to turn the engine off dead center by pushing on a spoke of the flywheel while the steam is building up full boiler pressure on the piston. When the first method is used the engine starts with no damage to the mechanism and no possible hazard to the man. The second method causes the engine to start with a violent jerk with every possibility that the man's foot will be caught between the flywheel spokes and the side rods of the engine or the base on which it rests.

Some men can be told how to work safely and others have to have their feet mashed.



**WILLIAM F. SEFZIG**  
*Steel Erection Foreman—Oleum*

### Three Wise Men

Copeland 23, a Company well at Huntington Beach, California, was spudded in on July 2, 1928, and completed a few weeks ago at a depth of 4200 feet. The system of drilling used was the so-called "dry-rotary" perfected by Frank F. Hill, Manager of Field Operations. About twice the initial production of neighboring wells using the "wet" system has been obtained, a rather remarkable record.

But Copeland 23 hung up another record. In the eight months of drilling there was not one single lost time accident on this well and for that the drillers, W. H. Wallin, C. G. Turnquist and O. R. Dunham must be given much credit. Superintendent A. H. Brown and Drilling Foreman K. A. Hoxie are proud of these men.

(I got this story from Si Delaney. He says he had nothing to do with it—so it must be true.)

# CALIFORNIA OIL STATISTICS, JANUARY, 1929

Prepared by American Petroleum Institute, Pacific Coast Office.

**PRODUCTION**  
(Figures of production and stocks are in barrels of 42 Gals.)

| DISTRICT                     | BARRELS PER MONTH |                | DAILY AVERAGE  |                | Jan., 1928     |
|------------------------------|-------------------|----------------|----------------|----------------|----------------|
|                              | Jan., 1929        | Dec., 1928     | Jan., 1929     | Dec., 1928     |                |
| Kern River.....              | 560,451           | 18,079         | 17,957         | 17,957         | 25,079         |
| Mount Poso.....              | 2,914             | 94             | 151            | 151            | 94             |
| Fruitvale.....               | 26,828            | 865            | 1,315          | 1,315          | .....          |
| Round Mountain.....          | 1,277             | 41             | 81             | 81             | 39             |
| McKittrick.....              | 153,766           | 4,960          | 4,982          | 4,982          | 4,786          |
| Midway-Sunset.....           | 2,244,925         | 72,417         | 73,129         | 73,129         | 79,721         |
| Elk Hills.....               | 590,986           | 19,064         | 19,244         | 19,244         | 24,053         |
| Lost Hills-Belridge.....     | 135,170           | 4,360          | 4,372          | 4,372          | 4,157          |
| Coalanga.....                | 299,863           | 9,673          | 10,021         | 10,021         | 19,568         |
| Kettleman Hills.....         | 124,491           | 4,016          | 3,756          | 3,756          | .....          |
| Wheeler Ridge.....           | 23,986            | 774            | 819            | 819            | 934            |
| Watsonville.....             | 1,937             | 63             | 63             | 63             | 58             |
| Santa Maria.....             | 152,299           | 4,913          | 4,938          | 4,938          | 6,147          |
| Summerland.....              | 3,770             | 122            | 121            | 121            | 125            |
| Elwood-Goleta.....           | 517,323           | 16,688         | 11,995         | 11,995         | 302            |
| Rincon.....                  | 110,729           | 3,572          | 4,078          | 4,078          | 437            |
| Ventura Avenue.....          | 1,678,732         | 54,153         | 50,706         | 50,706         | 52,173         |
| Ventura-Newhall.....         | 175,581           | 5,664          | 5,653          | 5,653          | 6,307          |
| Los Angeles-Salt Lake.....   | 46,418            | 1,497          | 1,435          | 1,435          | 1,518          |
| Whittier.....                | 48,652            | 1,569          | 1,644          | 1,644          | 1,664          |
| Fullerton (Brea Olinda)..... | 441,236           | 14,233         | 14,679         | 14,679         | 15,016         |
| Coyote.....                  | 385,048           | 12,421         | 12,567         | 12,567         | 13,900         |
| Santa Fe Springs.....        | 4,759,671         | 153,538        | 97,449         | 97,449         | 38,730         |
| Montebello.....              | 341,035           | 11,001         | 10,998         | 10,998         | 12,772         |
| Richfield.....               | 561,458           | 18,112         | 17,422         | 17,422         | 21,139         |
| Huntington Beach.....        | 1,489,113         | 48,035         | 49,503         | 49,503         | 58,625         |
| Long Beach.....              | 5,635,018         | 181,775        | 186,912        | 186,912        | 113,077        |
| Torrance.....                | 460,849           | 14,866         | 15,543         | 15,543         | 19,694         |
| Dominguez.....               | 317,815           | 10,252         | 10,393         | 10,393         | 12,956         |
| Rosecrans.....               | 222,342           | 7,172          | 6,966          | 6,966          | 7,913          |
| Inglewood.....               | 833,875           | 26,899         | 27,406         | 27,406         | 31,213         |
| Newport.....                 | 1,700             | 55             | 39             | 39             | 15             |
| Seal Beach.....              | 988,240           | 31,879         | 28,450         | 28,450         | 41,545         |
| Potrero.....                 | 23,954            | 773            | 874            | 874            | .....          |
| Lawndale.....                | 24,487            | 790            | 506            | 506            | .....          |
| <b>TOTAL.....</b>            | <b>23,385,939</b> | <b>754,385</b> | <b>695,958</b> | <b>695,958</b> | <b>613,814</b> |
| December.....                | 21,574,703        | 695,958        | .....          | .....          | .....          |
| Increase.....                | 1,811,236         | 58,427         | .....          | .....          | .....          |

\* Decrease.

## STOCKS

|   | Jan. 31, 1929      | Dec. 31, 1928      | Jan. Stock Increases | Jan. 31, 1928      |
|---|--------------------|--------------------|----------------------|--------------------|
| Heavy Crude, heavier than 20° A. P. I., including all grades of fuel..... | 100,925,122        | 101,306,108        | *380,986             | 95,621,539         |
| Refinable Crude, 20° A. P. I., and lighter.....                           | 20,118,007         | 17,954,434         | 2,163,573            | 20,784,053         |
| Gasoline.....   | 12,057,326         | 10,766,410         | 1,290,916            | 13,897,623         |
| Naphtha Distillates.....  | 1,644,474          | 1,541,414          | 103,060              | 1,820,900          |
| All Other Stocks.....   | 9,921,944          | 9,488,643          | 433,301              | 9,251,941          |
| <b>TOTAL ALL STOCKS.....</b>  | <b>144,666,873</b> | <b>141,057,009</b> | <b>3,609,864</b>     | <b>141,376,056</b> |

## DEVELOPMENT

| DISTRICT                    | New Rigs Un | Active Drilling | Completed | Daily Initial Output | Active Producing | Abandoned Wells Drillers | Producers |
|-----------------------------|-------------|-----------------|-----------|----------------------|------------------|--------------------------|-----------|
|                             |             |                 |           |                      |                  |                          |           |
| Kern River.....             | 6           | 5               | 2         | 670                  | 1,227            | 1                        | 3         |
| Fruitvale.....              | 5           | 3               | .....     | 1,080                | 2                | .....                    | .....     |
| Mount Poso.....             | 4           | 8               | 6         | 1,800                | 4                | 2                        | .....     |
| Round Mountain.....         | 2           | 1               | .....     | 200                  | 3                | .....                    | .....     |
| McKittrick.....             | 1           | 2               | .....     | .....                | 988              | .....                    | .....     |
| Midway-Sunset.....          | 15          | 21              | 5         | 615                  | 2,426            | 2                        | .....     |
| Elk Hills.....              | .....       | 1               | .....     | .....                | 209              | .....                    | 1         |
| Lost Hills-Belridge.....    | 6           | 4               | 5         | 137                  | 317              | .....                    | 1         |
| Coalanga.....               | 1           | .....           | .....     | .....                | 800              | .....                    | 2         |
| Kettleman Hills.....        | 6           | 7               | .....     | .....                | 1                | .....                    | .....     |
| Wheeler Ridge.....          | .....       | .....           | .....     | .....                | 34               | .....                    | .....     |
| Watsonville.....            | .....       | .....           | .....     | .....                | 7                | .....                    | .....     |
| Santa Maria.....            | .....       | .....           | .....     | .....                | 226              | .....                    | .....     |
| Summerland.....             | .....       | 5               | .....     | .....                | 89               | .....                    | .....     |
| Elwood-Goleta.....          | 2           | 6               | 2         | 9,482                | 25               | .....                    | .....     |
| Rincon.....                 | 1           | 8               | .....     | .....                | 144              | .....                    | .....     |
| Ventura Avenue.....         | 10          | 50              | 4         | 6,772                | 517              | 1                        | .....     |
| Ventura-Newhall.....        | 2           | 24              | 1         | 175                  | 319              | .....                    | .....     |
| Los Angeles-Salt Lake.....  | .....       | .....           | .....     | .....                | 166              | .....                    | .....     |
| Whittier.....               | .....       | .....           | .....     | .....                | 376              | .....                    | 1         |
| Fullerton.....              | 1           | 6               | .....     | .....                | 208              | .....                    | .....     |
| Coyote.....                 | .....       | 1               | .....     | .....                | 354              | .....                    | 1         |
| Santa Fe Springs.....       | 16          | 176             | 40        | 146,240              | 869              | 1                        | 3         |
| Montebello.....             | .....       | 2               | 1         | 145                  | 168              | .....                    | .....     |
| Richfield.....              | 3           | 7               | 1         | 910                  | 269              | 1                        | .....     |
| Huntington Beach.....       | 2           | 5               | .....     | .....                | 556              | 1                        | 3         |
| Long Beach.....             | 17          | 135             | 22        | 18,974               | 399              | 1                        | 3         |
| Torrance.....               | .....       | .....           | .....     | .....                | 73               | .....                    | 1         |
| Dominguez.....              | .....       | 1               | .....     | .....                | 101              | .....                    | 1         |
| Rosecrans.....              | 4           | 4               | .....     | .....                | 220              | .....                    | .....     |
| Inglewood.....              | .....       | 2               | .....     | .....                | 5                | .....                    | .....     |
| Newport.....                | .....       | 7               | 1         | 600                  | 136              | .....                    | 1         |
| Seal Beach.....             | 1           | 4               | .....     | .....                | 2                | .....                    | .....     |
| Potrero.....                | 1           | 32              | .....     | .....                | 1                | .....                    | .....     |
| Lawndale.....               | 53          | 32              | .....     | .....                | .....            | 9                        | .....     |
| Miscellaneous Drilling..... | 10          | 124             | .....     | .....                | .....            | .....                    | .....     |
| January.....                | 164         | 654             | 94        | 187,800              | 10,750           | 19                       | 18        |
| December.....               | 97          | 640             | 81        | 144,324              | 10,711           | 12                       | 26        |
| Increase.....               | 67          | 14              | 13        | 43,476               | 39               | 7                        | *8        |
| Average for year 1927.....  | 97          | 404             | 75        | 39,992               | 11,276           | 23                       | 21        |
| Average for year 1926.....  | 95          | 422             | 76        | 32,635               | 11,288           | 24                       | 17        |
| Average for year 1925.....  | 105         | 417             | 79        | 42,247               | 11,393           | 28                       | 12        |
| Average for year 1924.....  | 103         | 510             | 103       | 42,412               | 10,903           | 28                       | 21        |
| Average for year 1923.....  | 111         | 759             | 82        | 114,690              | 8,928            | .....                    | .....     |

\* Decrease.



# REFINED AND CRUDE



The great strides now being made in invention and scientific accomplishment are the very logical result of a newly established self-confidence in the individual.

\* \* \*

Initiative used to be a rare trait. Parents whaled it out of their youngsters, and kept them generally so subdued, that there was little chance of this quality reasserting itself later.

\* \* \*

*Now the parental attitude has changed. We recognize the fact that our progeny should be permitted to expand, unhampered by convention: Curiosity should be satisfied: Initiative should be stimulated and encouraged: And the effect is very obvious indeed.*

\* \* \*

A new youth is being developed—more observant, more confident, and more daring, and a new mentality is resulting in progress surpassing anything we have ever known.

\* \* \*

No better confirmation of the greater keenness of our modern vision could be found, than the fact—that silk stockings were worn by the ladies away back in Queen Elizabeth's time, and yet they remained undiscovered until the present century.

\* \* \*

*We will now return to the main studio.*

\* \* \*

A friend of ours is very much excited these days over the report that land has been discovered on his Florida property.

\* \* \*

From a press report we learn that the Sultan of Turkey sleeps on a bed eight feet wide and twelve feet long. That's just a lot of bunk.

\* \* \*

*A student at one of our local universities worked himself up into such a fever on commencement day that he graduated with a hundred and three degrees.*

\* \* \*

And the guy who is always boasting that he runs things at home, is referring, in nine cases out of ten, to the vacuum cleaner.

*Faith will move mountains, and confidence is very much the same thing as faith, but there is a limit to everything. Light up your stogies and settle back while we elucidate:*

\* \* \*

A teeny little sparrow boldly flew to earth one day, and landing in front of a huge elephant, he gave a couple of indignant pecks at the big fellow's knees. Then he stepped back and waited, and when nothing happened he remarked in apparent bewilderment "For the luvva Mike, what's holding this guy up?"

\* \* \*

**Dissatisfaction with your present position is not necessarily an indication of ambition. Maybe you don't realize the importance of what you are doing.**

\* \* \*

For some unknown reason the Irish have always had the reputation of being great fighters. That's all bologna. As a matter of fact my brother and three other fellows licked one only last week.

\* \* \*

**Thank goodness, there is no skeleton in our family cupboard—just an old pair of bones.**

\* \* \*

*In these competitive days it behooves one to keep down the bills, and for this purpose we have found a paper weight very satisfactory.*

\* \* \*

And, of course, you have heard of the Scotchman, who got his third daughter married off, and then sent the confetti to be dry-cleaned.

\* \* \*

**An acquaintance of ours was run down by an automobile a few days ago, but it didn't take him long to vituperate.**

\* \* \*

*Since the ladies started wearing clocked hose, it is not such a disgrace to be a clock watcher.*

\* \* \*

To determine the horse power of your automobile, merely raise the hood and count the plugs for yourself.

