



UNION
OIL
BULLETIN

JUNE 1933



Guaranteed to cause your vacation fever to rise 10 points—the scene is in one of the Redwood groves at Bear Creek, Humboldt County, Northern California.

Photo by Gabriel Moulin.



UNION OIL BULLETIN

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VOLUME XIV

JUNE

BULLETIN No. 4



The Sign of Better Lubrication

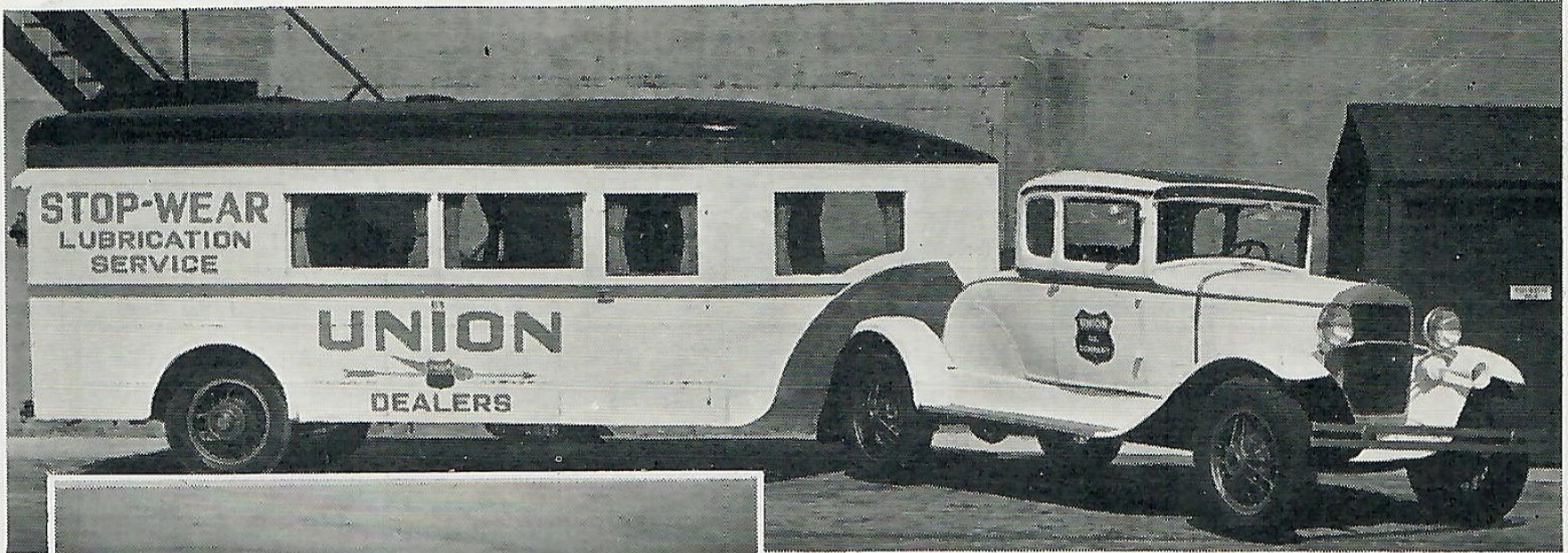
TO make available to automobile owners a uniform lubrication service of unquestioned dependability, the Union Oil Company, in co-operation with independent 100 per cent Union resellers and Union Service Stations, Inc., is inaugurating this month, on the Pacific Coast, "Stop-Wear Lubrication Service." It is an advanced step in automobile lubrication and is taken in order to assure the motorist each time he brings his car into a Union "Stop-Wear" station or garage that it will be lubricated

in accordance with the manufacturer's specifications.

Incorrect lubrication, due either to faulty lubricants or the failure to use the proper lubricants in the mechanism for which they were intended, is responsible, along with neglect by the owner, for the premature depreciation of the average automobile. "Stop-Wear" service is designed to eliminate the former and overcome the neglect of the car by its owner by reminding him when his car is in need of lubrication.



The Stop-Wear dealer, his identification and facilities. At the top, left, one of the Stop-Wear grease gun panels; each gun filled with a specified lubricant. Circle, consulting Stop-Wear lubrication manual. At the left, checking an accurate filing system for information.



Stop-Wear Demonstration Unit



In developing this new service lubrication data covering all cars built in the last four years were accumulated and correlated with facts supplied by the Research department, making it possible to present definite recommendations as to the lubricants to be used throughout each car. Lubrication equipment, produced by the leading manufacturers, was also investigated and tabulated, to help dealers complete their equipment, where necessary. In addition, the necessary charts, and an instruction manual were prepared, along with a carefully worked out plan to assist each dealer to merchandise his services and products. This includes newspaper advertising and folders, reminder cards, sales tickets and an accurate filing system.

The entire project is predicated on the fact that the Union Oil Company manufactures a complete line of lubricants for every automotive need—lubricants that have been proven equal to or better than the finest on the market.

Only dealers who have the proper equipment and are qualified lubrication experts are selected to become part of the "Stop-

Wear Lubrication Service" chain. As a result, the A-Board Stop-Wear shield, identifying these stations, is a guarantee to the motorist, whose car needs lubrication, that he will find there:

1. A complete line of Union lubricants including the exact ones recommended for his car by its manufacturer.
2. A complete set of instruments to apply these lubricants in the correct manner.
3. A complete set of car lubrication cards, including one for the model he drives, showing exactly which lubricant to use at any given point, and how to use it.
4. A competent attendant who has completed a course of instruction in car maintenance.

In addition it assumes the motorist will be charged a uniform fair price for the work, which price represents the cheapest insurance of long, trouble-free care life he can buy.

The interested motorist, having his car lubricated by the Stop-Wear system, will notice the following points, many of them unique:

When he arrives with his car, the attendant writes his order down on a job ticket, a carbon paper transferring his name and address to the front side of a lubrication reminder postcard, which is then placed in a chronological file so that it will come up for mailing a month (or any other period during which the

LUBRICATION POINTS, 25

I-A

AUBURN

MODEL—100-100A

LUBRICANTS REQUIRED, 6

YEAR—1932 and 1933

| MOTOR | | MOTOR OIL RECOMMENDATION | | | | CAPACITY (Qts.) | DRAINING INTERVALS |
|-------------------|-------------------|---------------------------|--------------|---------------------------------------------------------------|----------------------------|--------------------------|-----------------------|
| TYPE | MODEL | Below +15° | +15° to +35° | +35° to +90° | Hard Driving Above +90° | | |
| 8 Cylinder | 100—100A | S. A. E. 20 | S. A. E. 30 | S. A. E. 40 | S. A. E. 50 | 8 | 1000 |
| 8 Cylinder | 101—105 | S. A. E. 20 | S. A. E. 30 | S. A. E. 40 | S. A. E. 50 | 8 | 1000 |
| TRANSMISSION | | LUBRICANT RECOMMENDED | | | | CAPACITY (Pts., Lbs.) | DRAINING INTERVALS |
| TYPE | MODEL | Below +15° | +15° to +45° | +45° to +90° | Above +90° | | |
| Syn. Mesh, F. W. | 100—100A | Oil No. 90 | Oil No. 110 | Oil No. 160 | Oil No. 160 | 3 | 5000 |
| Syn. Mesh, F. W. | 101—105 | Oil No. 90 | Oil No. 110 | Oil No. 160 | Oil No. 160 | 3 | 5000 |
| DIFFERENTIAL | | LUBRICANT RECOMMENDED | | | | CAPACITY (Pts., Lbs.) | DRAINING INTERVALS |
| TYPE | MODEL | Below +15° | +15° to +45° | +45° to +90° | Above +90° | | |
| Spiral Bevel | All | Oil No. 90 | Oil No. 160 | Oil No. 160 | Oil No. 160 | 4½ | 5000 |
| Dual Ratio | All | Oil No. 90 | Oil No. 160 | Oil No. 160 | Oil No. 250 | 4 | 5000 |
| UNIT | TYPE | LUBRICANT | | INSTRUCTIONS | | | |
| DISTRIBUTOR | Grease Cup | Wheel Bearing Med. | | Fill cup; turn down one turn every 1000 miles. | | | |
| WATER PUMP | Gun Fitting | Water Pump Lubricant | | Insert 2 to 3 shots every 500 miles. | | | |
| FAN HUB BEARING | Reservoir | Motor Oil S. A. E. 30 | | Fill reservoir, turn fan and drain excess oil. Replace screw. | | | |
| GENERATOR | Oil Cup | Motor Oil S. A. E. 20 | | Apply 3 to 4 drop every 1000 miles. | | | |
| STARTER | Oil Cup | Motor Oil S. A. E. 20 | | Apply 2 drops every 1000 miles. | | | |
| CLUTCH REL. BEAR. | Ball Bearing | Lubricated by Bijur | | Capacity 1 pint S. A. E. 40-50. | | | |
| STEERING GEAR | Cam Lever | Steering Gear Lubricant | | Lubricate every 1000 miles. | | | |
| UNIVERSAL JOINT | Detroit | Universal Joint Lubricant | | Insert 1½ oz. every 1000 miles. | | | |
| SPRING SHACKLES | Pin Type | By Bijur | | | | | |
| CHASSIS POINTS | By Bijur | | | | | | |
| FRONT WHEEL BEAR. | Timken Roller Br. | Wheel Bearing Med. | | Remove and repack bearings every 5000 miles. | | | |
| REAR WHEEL BEAR. | Timken Roller Br. | Wheel Bearing Med. | | Insert ½ to 1 oz. every 1000 miles. | | | |
| SPRINGS | Open | Spray | | | | | |
| BRAKE CABLE | | | | | | | |

Stop-Wear dealers have a complete record of the lubrication requirements of each automobile in their files. Above is card for one of the cars. This is slipped into a holder and hung alongside of the hoist to be used as a guide while the car is lubricated.

dealer expects the motorist to drive approximately 1000 miles), hence.

From a metal filing cabinet containing over 150 car lubrication guides, the attendant selects the specific one for the car in question and places it in an oil-proof transparent holder, which is hung in a convenient place at the hoist, so it can be

checked while work is being done on the car. This card not only tells the attendant the exact lubricant and the amount thereof required for each wear-point on the car, but it also tells him the total number of points to be lubricated, precluding the possibility of any of them being overlooked. In addition, it gives him complete instructions for

reaching points which cannot be readily seen, such as the clutch release bearing.

The motorist will note a large assortment of grease guns, in addition to the power gun. Each one serves a specific purpose, such as wet clutch servicing, universal joint lubrication, Tryon shackle lubrication and water pump lubrication.

If the motorist is of an inquisitive turn of mind and questions the attendant, he will find the latter well versed in the details of the work at hand and quite capable of discussing car mechanism intelligently, especially with regard to their lubrication requirements. This is a direct result of his close study of the Stop-Wear Manual, which is one of the most important units in the system. This book, compiled at considerable expense, contains treatises on various car parts in all their commercial variations. It tells what to do, how they work, and what is expected of a lubricant to be used with them. It goes into considerable detail on the exact method to

follow in servicing the more complicated points, such as front wheel bearings.

In order that the Stop-Wear dealer may be informed of all late developments, he will receive a monthly bulletin, which will supplement his manual. Of course, as new cars are placed on the market, lubrication guide cards covering them will be issued.

Finishing touches have just been put on a beautifully equipped semi-trailer display unit which will soon tour the domestic marketing territory covered by the Union Oil Company. Inside the trailer the prospective Stop-Wear dealer, seated on comfortable, plush-covered chair, may listen to a talk, illustrated with charts showing the advantages to him of a Stop-Wear franchise. He may then wander about, inspecting power lubricating units, hand guns of all types, various packages of Union lubricants, and the Stop-Wear Record system.

Coastwise advertising of Stop-Wear will start in June.

Union Successful In Navy Fuel Oil Bid

DURING the coming fiscal year, the Union Oil Company, one of six successful bidders, will deliver to United States naval vessels 1,300,000 barrels of fuel oil, part of the Navy's estimated requirements at San Pedro of 5,000,000 barrels. This is in addition to 5,000,000 barrels of fuel oil sold to the Navy by Union for its operations in the Pacific during the current fiscal year, ending June 30.

The strengthening of the fuel oil market generally is believed to be reflected by the bidding on the Navy's requirements, the average prices quoted being the highest that have been asked in the past three years. No one company bid on the total amount, and some of the larger companies, anticipating low prices, did not bid at all. The fact that the fears of the latter group were proven not to be justified, and that higher prices were actually quoted by the bidders,

is regarded as indicating a definite firming of the important fuel oil market.

Attends A.P.I. Meeting

Geo. F. Prusing, safety engineer and secretary of the company's Safety Board, attended the National Petroleum Institute Midyear Meeting in Tulsa in May. For the past two years he has been national chairman of the



committee on fire prevention. At the Tulsa meeting he spoke on the effect of the March 10 earthquake on oil facilities in the Los Angeles Basin.

A Colorful Highway Guide

DETAILED highway maps of the Pacific Coast states, lithographed in three colors, showing main, secondary and unimproved roads, rivers, lakes, national parks, mountain ranges, elevations, and special points of interest, were placed in Union Service Stations, Inc., and independent stations for distribution the latter part of May. They are regarded by those who have had an opportunity to pass judgment on them as being the most attractive highway maps the company has yet issued.

They are published in four folders, one each for Arizona, California (with



which is included Nevada), Oregon and Washington. A map of the Western states, southwestern Canada, and northern Mexico, showing principal transcontinental highways, junction points, national parks and monuments, is incorporated in each folder. A mileage table, which gives at a glance distances between chief cities; and criss-cross index of municipalities, is also included in each state map, along with small insert maps of the largest cities.

The cover panels present an innovation in map folders, being an artist's clever conception of representative Western characters of bygone days.

Through the use of colors it has been possible to emphasize details that are slighted in the one-color folders and at the same time increase the maps' legibility.

The Canadian section of the Western states' map covers the territory that is customarily visited by travelers from the United States and even extends to some of the less accessible regions of the western provinces.

Union Lithograph Company engraver is etching and transferring map impression from zinc to press plate in picture at left. Below, engraver is shown reproducing cover design on zinc, a meticulous hand job.





To "Bill" Orcutt

COMMEMORATING 35 years of continuous service with the Union Oil Company, Vice-President W. W. Orcutt, May 1, last, was presented with a bronze and mahogany plaque shown above. The presentation was made by F. F. Hill, director of production, on behalf of the executives and department heads, at a dinner given at the home of Executive Vice-President R. D. Matthews.

Mr. Orcutt at the same time was presented with a service pin set with three rubies and a diamond. He is the only

living employee of the company with a continuous service record of 35 years. Mr. Hill, who is the second oldest employee from the standpoint of service, will complete 35 years with the company next February.

The inscription on the plaque reflects the sentiment of its donors. It reads:

"To Bill Orcutt—presented by his friends and associates in the Union Oil Company commemorating 35 years of continuous service as engineer, executive and pioneer California petroleum geologist."



Army Air Corps Maneuvers

PLAYING at war over Southern California for fifteen flying days, 300 combat planes of the United States Army Air Corps operated on an average of sixty hours each, while their pilots solved the puzzling problems presented to them during the Corps' annual tactical maneuvers.

With March Field, Riverside, Calif., as their key base, the nation's fighting birdmen started their games on May 4, criss-crossed the southern coastal area of California, attacking, defending and testing their military sky theories.

Such problems as locating at night a tiny ship on the Pacific—simulating an aircraft carrier—and theoretically bombing it; repulsing a landing party that had as its objectives the Navy's oil supply bases in the Los Angeles Harbor area; intercepting and engaging an invading air fleet and occupying, defending and then destroying deploy airdromes were on the strenuous program of tests.

That the 300 pilots and 1800 enlisted men did their jobs efficiently was attested at the conclusion of the exercises by Brig.-Gen. Oscar Westover, commanding the provisional Air Force.

"Our training and tactical theories were demonstrated to be sound," he pointed out.

"Only 40 per cent of our planes, however, met our present requirements. We need pursuit that will do 300 miles an hour—and should be able to test just such a ship within the next year.

"Our radio equipment also is lagging. Communication control sets can be improved.

"And we need 500 more tactical craft than the 1800 we now have in the air to offer adequate protection to our coastlines and land borders."

A remarkable safety record was established during the Southern California exercises.

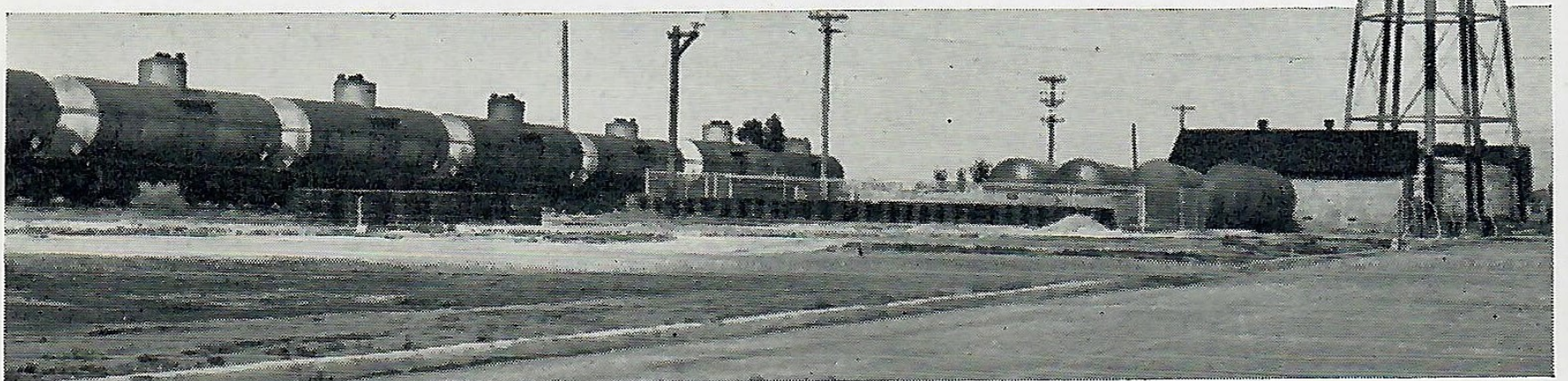
Not an injury or death to personnel resulted during the March Field war-like missions. One bomber nosed over and an observation ship had a forced landing, but these incidents were of no importance, officers pointed out, in comparison to the many massed flights of 300 ships made from the key base.

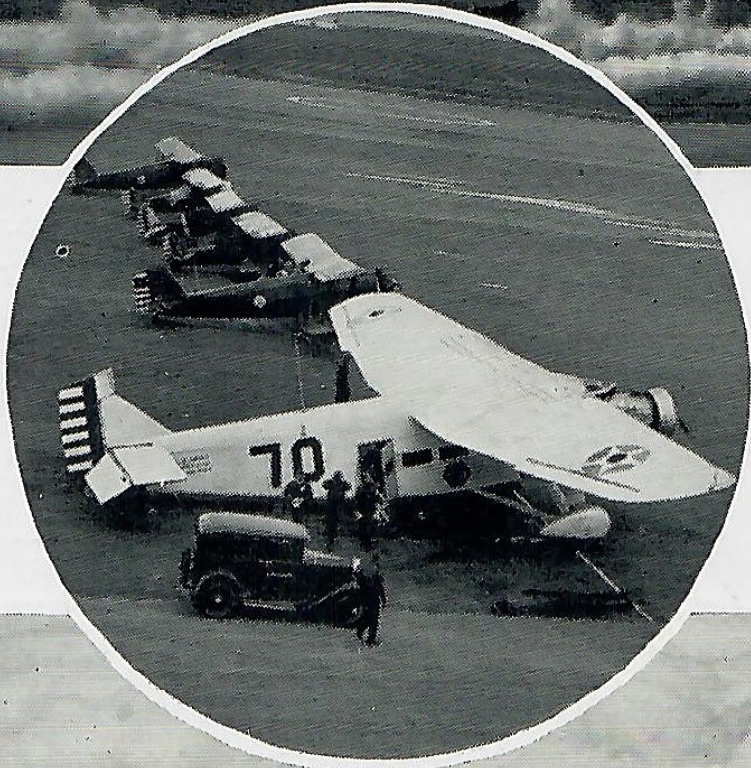
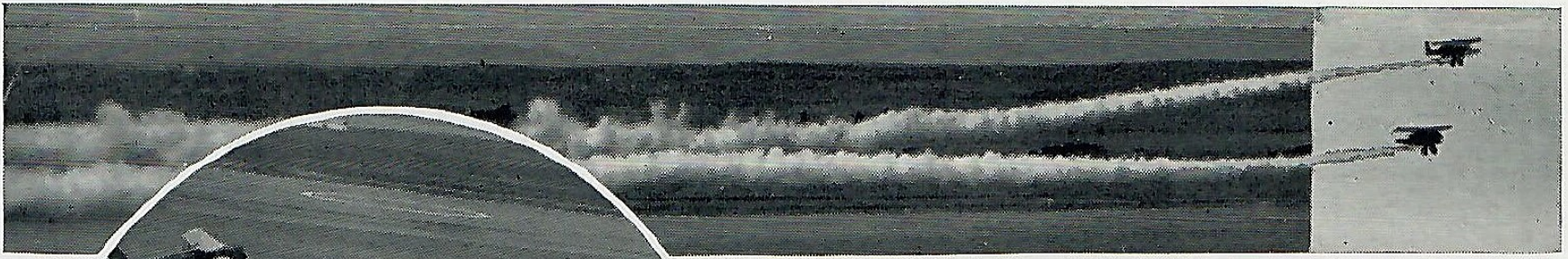
The first phase of this year's maneuvers involved the swift dispatch of combat units from practically every major Air Corps base in the United States to March Field.

Planes were shuttled via the "bottle neck" route through El Paso, Tex., to the California airdrome.

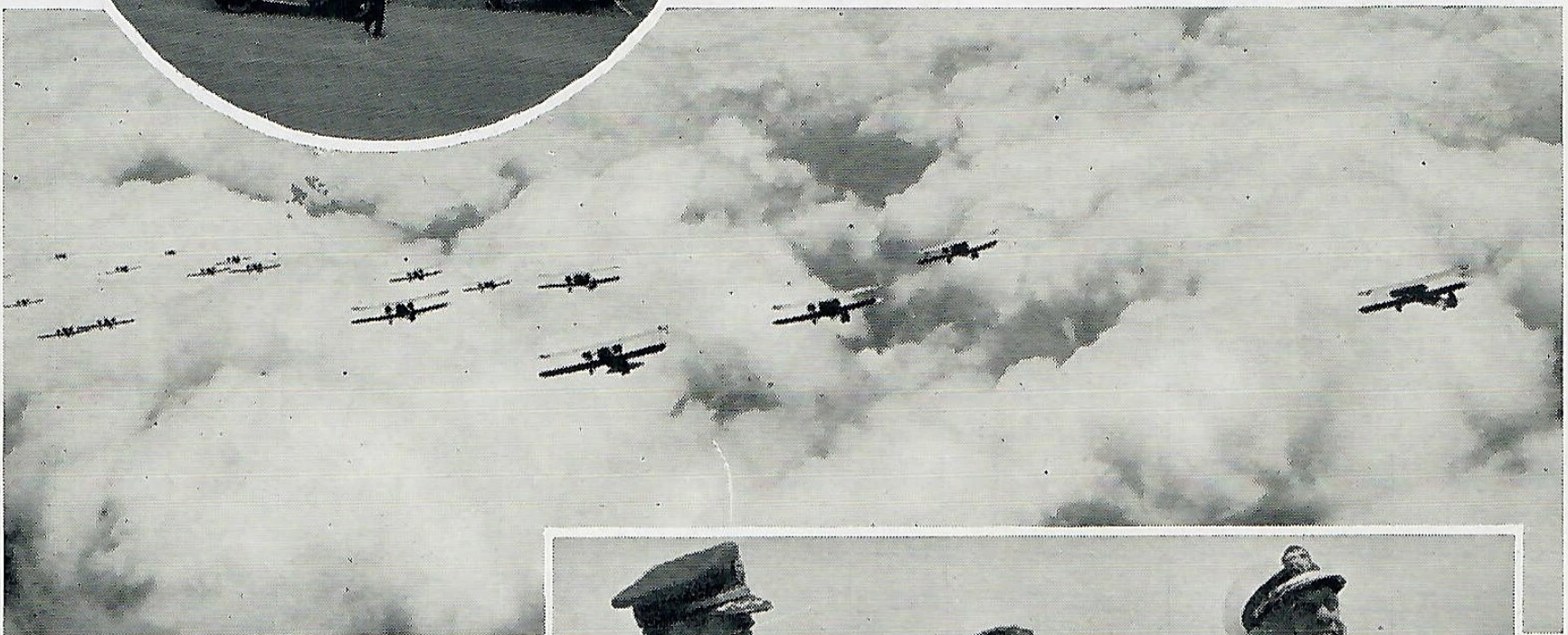
Some of the units returned to their home stations over the same flight line, while sixty ships flew northward to Seattle,

Union Oil Company tank cars, filled with aviation gasoline, on siding at March Field. Almost a quarter of a million gallons of fuel were delivered for the Army war birds during the maneuvers.





Pursuit ships, laying down concealing smoke screen during maneuvers at March Field, are shown above, and, left, Brig. Gen. Oscar Westover's transport plane and staff ships equipped with special radio sets that permitted communication with any of the numerous flights during the maneuvers. Flight of bombers, concealed from the view of persons on the ground by storm clouds, photographed below during an attack on Los Angeles harbor.



General Westover, center, commander of the provisional air force, Capt. R. F. Zogbaum, Jr., commander of the air craft carrier Saratoga, left, and Capt. C. A. Blakley, commander of the Lexington, watching mimic battle above March Field. Below, a few of the 300 planes awaiting orders to take off at March Field



Wash., there to add eight more days of tactical problem-solving to their March Field exercises.

Those sixty hopped eastward on the third phase of the maneuvers—that of again executing massed flight through another “bottle neck” route over the Rocky Mountains. Going home, the sixty craft flew over Portland, Ore., Sal Lake City,

Utah., Cheyenne, Wy., Omaha, Neb., Dayton, Ohio, and Washington, D. C.

During the course of the maneuvers the Union Oil Company delivered approximately 230,000 gallons of aviation gasoline to March Field. An additional 30,000 was shipped to Yuma, Bakersfield and Seattle for use by the Army planes at those points.

First Natural Gasoline Price Schedule Posted

A PRICE schedule for natural gasoline in the field, based on vapor pressure—the first schedule of its kind ever to be established on the Pacific Coast, and, as far as is known, in any other part of the United States—was posted May 1 by the Union Oil Company. The new schedule affects all deliveries from Union lessors’ properties.

The price ranges from 4.3 cents per gallon for natural gasoline with a Reid vapor pressure of 14.1 to 16 pounds per square inch at 100 degrees Fahrenheit, to 1.8 cents per gallon for gasoline of 52.1 to 54 pounds vapor pressure at the same temperature. The top price is paid for gasoline from nine Southern California oil fields: Richfield, Huntington Beach, Brea, Santa Fe Springs, Long Beach, Dominguez, Rosecrans, Playa del Rey and Santa Paula. A price of 3.8 cents per gallon is quoted for natural gasoline of the same vapor pressure in Orcutt,

San Joaquin Valley and Kettleman Hills. The difference in price from that quoted for the Southern California fields is due to transportation costs.

In the past a flat price was paid by purchasing companies for natural gasoline in the field without regard to vapor pressure. The price prevailing at the time the company announced its new schedule was about 3¾ cents per gallon.

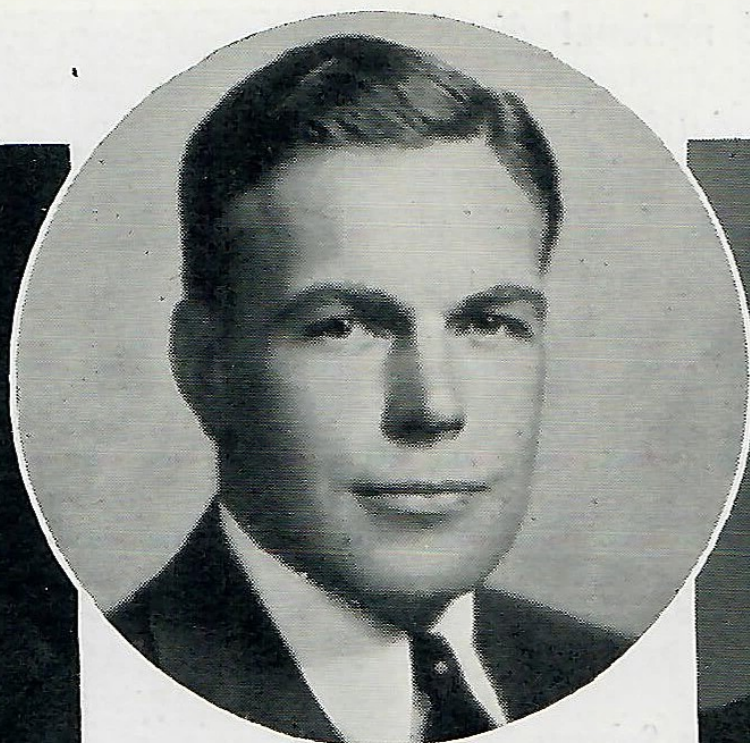
The difference between the price paid for the low pressure and the high pressure natural gasoline is compensated for by the fact that there is a greater volume of the latter produced, and that it contains a high percentage of the lighter, unstable fractions, such as propane, which must be distilled off before the natural gasoline can be blended with straight-run and cracked gasoline in the manufacture of a motor fuel.

The new price schedule follows:

| Vapor Pressure Lbs./Sq. In. REID at 100° F. | Rich- field | Hunt- ington Beach | Brea | Santa Fe Springs | Long Beach | Domin- guez | Rosecrans | Playa del Rey | Santa Paula | Orcutt | San Joaquin Valley | Kettle- man Hills |
|------------------------------------------------------|----------------|--------------------------|------|------------------------|---------------|----------------|-----------|---------------------|----------------|--------|--------------------------|-------------------------|
| 14.1-16.0 | 4.3 | 4.3 | 4.3 | 4.3 | 4.3 | 4.3 | 4.3 | 4.3 | 4.3 | 3.8 | 3.8 | 3.8 |
| 16.1-18.0 | 4.1 | 4.1 | 4.1 | 4.0 | 4.1 | 4.1 | 4.1 | 4.1 | 4.1 | 3.6 | 3.6 | 3.6 |
| 18.1-20.0 | 3.9 | 3.9 | 3.9 | 3.9 | 3.9 | 3.9 | 3.9 | 3.9 | 4.0 | 3.4 | 3.4 | 3.4 |
| 20.1-22.0 | 3.9 | 3.7 | 3.8 | 3.8 | 3.7 | 3.8 | 3.9 | 3.7 | 4.0 | 3.4 | 3.3 | 3.2 |
| 22.1-24.0 | 3.8 | 3.6 | 3.7 | 3.7 | 3.6 | 3.7 | 3.9 | 3.6 | 4.0 | 3.3 | 3.2 | 3.0 |
| 24.1-26.0 | 3.8 | 3.6 | 3.7 | 3.7 | 3.6 | 3.7 | 3.8 | 3.4 | 4.0 | 3.3 | 3.1 | 2.9 |
| 26.1-28.0 | 3.8 | 3.5 | 3.6 | 3.7 | 3.5 | 3.6 | 3.8 | 3.4 | 4.0 | 3.2 | 3.1 | 2.8 |
| 28.1-30.0 | 3.7 | 3.4 | 3.6 | 3.7 | 3.4 | 3.6 | 3.8 | 3.3 | 4.0 | 3.2 | 3.0 | 2.8 |
| 30.1-32.0 | 3.7 | 3.4 | 3.6 | 3.7 | 3.4 | 3.6 | 3.8 | .. | 3.9 | 3.1 | 2.9 | .. |
| 32.1-34.0 | 3.6 | .. | 3.5 | 3.6 | .. | 3.5 | 3.8 | .. | 3.9 | 3.1 | .. | .. |
| 34.1-36.0 | 3.6 | .. | 3.5 | 3.6 | .. | 3.5 | 3.7 | .. | 3.9 | 3.0 | .. | .. |
| 36.1-38.0 | 3.5 | .. | 3.4 | 3.6 | .. | 3.4 | 3.6 | .. | 3.8 | 3.0 | .. | .. |
| 38.1-40.0 | 3.4 | .. | 3.4 | 3.5 | .. | 3.4 | 3.6 | .. | 3.7 | 2.9 | .. | .. |
| 40.1-42.0 | 3.3 | .. | 3.3 | 3.5 | .. | 3.3 | 3.5 | .. | .. | 2.3 | .. | .. |
| 42.1-44.0 | 3.2 | .. | 3.2 | 3.4 | .. | 3.3 | 3.3 | .. | .. | 2.6 | .. | .. |
| 44.1-46.0 | 3.1 | .. | 3.1 | 3.3 | .. | 3.2 | 3.2 | .. | .. | 2.5 | .. | .. |
| 46.1-48.0 | 2.9 | .. | 3.0 | 3.3 | .. | 3.1 | 3.1 | .. | .. | 2.3 | .. | .. |
| 48.1-50.0 | 2.8 | .. | 2.9 | 3.2 | .. | 3.0 | 3.0 | .. | .. | 2.2 | .. | .. |
| 50.1-52.0 | 2.7 | .. | 2.8 | 3.1 | .. | 2.9 | 2.9 | .. | .. | 2.0 | .. | .. |
| 52.1-54.0 | 2.6 | .. | 2.7 | 3.0 | .. | 2.8 | 2.7 | .. | .. | 1.8 | .. | .. |



Frederick Sykes



A. C. Stewart



H. E. Bramston-Cook

Specialties Win Sales' Spurs

SPECIALTIES, manufactured from the by-products obtained in refining of crude petroleum, and not later than three years ago orphans of the Sales department, have in the past year earned their sales' spurs and recognition along with the other major products marketed by the company. Their sale is today being promoted, and their number and markets increased, through an established department headed by A. C. Stewart, who in the summer of 1931 was handed four specialties and told to see what he could do with them.

No one envied him the job. Disregarding previously conceived notions as to the limitations of these products he proceeded to study the specialty market, called in Dr. D. R. Merrill of the Research department

to see what improvements might be made in existing products and the feasibility of creating new ones. Convinced a market existed for specialties and that their success depended on the development of a full line he started to build up this line, a product or two at a time, and to put "sales appeal" into the packages. One of the first products added was "Union Fly Spray," the name of which was later changed to "Bif." Incidentally, with the change in the name came the first radical change in label design, now quite familiar to Union employees, stockholders and customers. It is one of the most popular Union specialties and is now enjoying a wide sale, as the quality of the product justly merits. Toxicity tests have proven it far ahead of com-



petitive products, even of national distribution.

The four original specialties have to date been expanded to ten, with three more, Union Sure-Fire, an improved lighter fluid; a garden spray especially developed for use against garden pests, and Union Spot Remover, scheduled to make their appearance on the market within a few weeks.

The list of specialties, in addition to the latter three, and Bif, already mentioned, includes:

Union Solvent Spirit

A spotting fluid.

Union Solvent Soap

A liquid soap used with Union Solvent Spirit and Union Cleaning Solvent to increase their cleaning properties in much the same fashion that soap is used with water.

Union Lustre Wax

A wax paste that produces a durable lustrous polish—may be used on woodwork, floors, linoleum, furniture, tile or automobiles.

Union Lacquer-Tone

Especially manufactured for Duco and lacquer surfaces.

Union Metal-Tone

A superior polish for all hard metals.

Union Top-Tone

A dressing for automobile tops.

Union Re-Tone Cloth

A hot wax treated twill weave Canton flannel polishing cloth.

Union Radiator Cleaner

Removes rust from radiators and prevents rust from forming in the water cooling system.

Union Clean-Lube

To be renamed Home-Lube, a general household lubricant, particularly designed for light, high speed machines.

In addition to these products, the Specialty department has brought out a Solvidor, a dry-cleaning machine to promote the sale of Union Cleaning Solvent, and sprayers for use with Bif and the garden spray.

All established resellers of Union specialties are identified by the "Union Supply Agency" sign, consisting of a shield with an orange background imprinted with the words, "Union Supply Agency," in blue.

In the development of the specialties and broadening the scope of their mar-



Display stand of Union Supply Agency on which Union Specialties are displayed in drug, hardware and grocery stores.

keting, Mr. Stewart called in Frederick Sykes, who recently was placed in direct charge of specialties being marketed through service stations, drug stores, hardware stores and other retail outlets. Mr. Sykes brought to the department a broad experience gained in various capacities in the sales and advertising departments of the Standard Oil Company (Indiana), as sales manager of the Williamson Candy Company, and as sales manager of Daggett & Ramsdell, cosmetic line, after that concern had been absorbed by the Standard Oil Company (New Jersey). He has been responsible to a large degree in expanding the sales outlets for the household and automobile specialties, and has participated, with Mr. Stewart, in the development of new products. In further developing his merchandise program he plans the addition, from time to time, of other items of petroleum base that are of proven merit and for which a market exists.

Not all of the specialties are limited to household and automotive uses. There is a large industrial field that has been partially served in the past and is to be expanded in the future. To take charge of the newly created industrial specialties, Mr. Stewart recently took into the department H. E.



Bramston-Cook, a graduate chemical engineer, with technical knowledge of these products, gained during years of service in the Research and Manufacturing departments of the company.

Mr. Bramston-Cook entered the company as a member of the Research department, and in 1928 was transferred to the Manufacturing department to take charge of refined oil treating at the Oleum Refinery. In 1930 he was appointed supervisor of the Lubricating division at the Oleum Refinery. This division included the pro-

duction of all lubricating oils and greases and household specialties.

The field of industrial specialties embraces thinners and special solvents for the paint and varnish industry, battery sealing compound, colored asphalts, rubber solvents, stucco water proofing compound, expansion joint compound, and a wide variety of special products.

It is the intention of the department to provide technical co-operation with other industries, in order to further the marketing of petroleum products in fields already existing, and to create new demands.

Union Fourth in Safety Rating

UNION OIL Company has slowly but surely bettered its position among the major companies by its nine years of organized safety effort. The 1932 figures give it fourth place among the oil companies operating five or more departments. In some of the individual departments it placed even better. In marketing, for example, where the company stood twenty-seventh when A. J. Martinson started his safety work, it now stands second. The pipe liners have established a similar record, taking second place among major companies. In the drilling and producing department the accident frequency has actually been reduced some 33 per cent in the past four years, which is consistent with the average throughout the country.

National statistics have just been published by the American Petroleum Institute department of accident prevention for the year 1932. Again the accident rate among oil workers has been lowered until now it stands at a figure less than the average for all industries. Once an extra hazardous occupation, the average job of working for an oil company has become comparatively safe. Today an oil company employee is safer at work than at home or on the street.

There are at least three good reasons for the rapid decrease in accident rate among

oil workers during the past three years. First is the organized effort made to instruct men in safe practices. The figures of the American Petroleum Institute show that the average rates of accidents to drillers, refiners, marketers, etc., have declined materially: only accident prevention work has accomplished that. There has, however, also been a reduction of work during the past three years in the more hazardous occupations in the oil fields, which in turn has reduced the average rate for the industry as a whole. Simultaneously there has been an increase in retail sales by oil companies, with a corresponding increase in numbers of men doing relatively non-hazardous work. This has likewise had its effect.

During the recent years of retrenchment, accident prevention budgets have been curtailed by most oil companies, but actually the amount of effort directed along this line has not been lessened. The return on the investment is too obvious to require much elaboration. Had Union Oil Company's accident rate of 1928, for example, prevailed during 1932, the company would have spent \$75,000 more for medical expense, compensation and the other costs of injuries, than was actually expended for that year. That money has been saved by safety instruction.

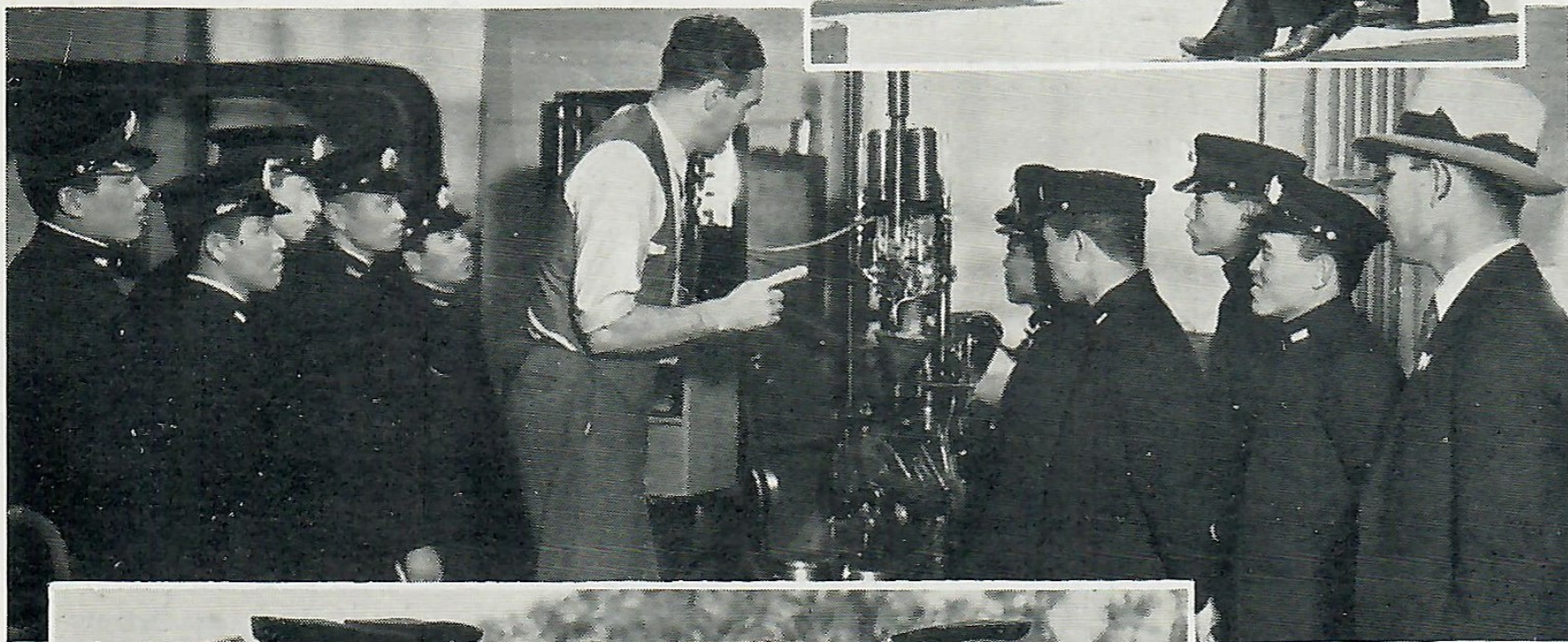
Japanese Naval Men Visit Refinery

ACTING on the invitation of the Union Oil Company and the request of the Tokyo office of the Imperial Japanese Navy, officers and midshipmen of the Japanese training cruisers *Yakuma* and *Iwate* devoted an entire morning to a tour of the company's refinery at Los Angeles harbor during the cruisers' stay in Southern California waters.

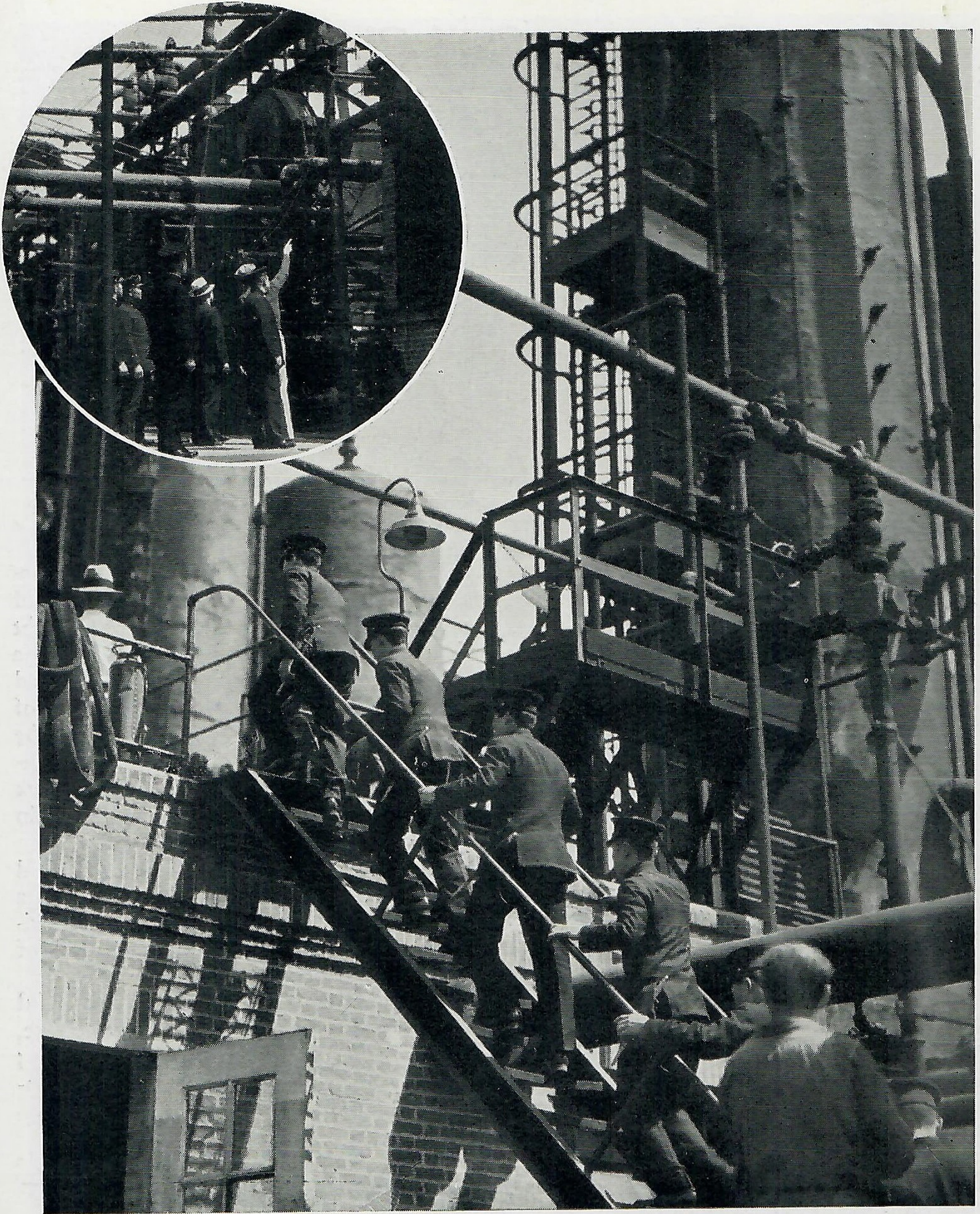
Due to the fact that the Japanese Navy and commercial concerns in Japan are large purchasers of California crude oil and refined petroleum products, the personnel of the training cruisers was anxious to view the various refining processes at first hand. The party from the two cruisers, headed by Engineer Capt. Kwanziro Hukumizu and Paymaster Capt. C. Mori, was met at the Outer Harbor dock by Ray Ingram, representative of the Fuel Oil department, Union Oil Company, and taken by automobiles and motor coaches to the refinery. Inside the refinery the party was split up

into small groups and a guide assigned to each group.

The officers and midshipmen regarded with considerable good humor the refinery regulations that required them to part with their matches before being permitted to pass through the entrance gate. They were aware that they were not being discrim-



Top — Officers and midshipmen examining gauges at the base of the stabilization towers. Center — R. E. Nettleton, Research department, explaining method of testing octane rating of gasoline. Bottom — Midshipmen parting with matches before entering the refinery



The crude stills (shown in circle) and cracking stills inspected by the Japanese visitors.

inated against when they observed employees leaving their matches with the guard as they passed through the portals.

The Japanese visitors were shown every phase of refining from the manufacture of gasoline, kerosene solvents and fuel oil down to and including the production of asphalt. In addition they were escorted

through the research laboratories. The batteries of crude stills, massive cracking units, 100-foot stabilization towers for treating natural gasoline, and the Edeleanu plant, where kerosene and solvents are made, proved exceptionally interesting to the visitors, as did the elaborate pipe line system within the refinery.

1933 Company Golf Championship



Jack Muzzall starting his winning rounds of 75-82 for total score of 157.

JACK MUZZALL of the field department is the company's golf champion for 1933.

It all happened on Saturday, March 22, at the Hacienda Golf club where almost one hundred company golfers matched shots for 36 holes and later matched appetites in a full course dinner in the evening. Golf balls fell like hail and so many shots ricocheted from the canyon sides and whistled through the trees that some of the players were reminded of that big event in France.

Although all of the entrants started from the first tee, many of them did not complete the full 36 holes of play.

After all the scores were totaled and the injured had received first aid, the survivors gathered in the dining room where L. G. Metcalf, manager of refineries, presided as master of ceremonies and presented the trophies. Jack Muzzall, of course, was awarded the President's Cup. Earl "Happy" Field of the Field Department and Bill Macpherson of Insurance and Personnel tied for runner-up position, Macpherson eventually winning the play-off for the Vice-President's Cup, defeating Fields at the 109th hole of the longest tie match of record. Other winners were: Ray Wilkes (U. S. S. I.), First flight; Jes Mac Clocklin (Field), Second flight; E. Ragatz (Research & Development),

Third flight, and R. L. Cain (Comptroller's), Fourth flight. Bill Sellers of head office sales gave a yelp of delight when his name was drawn to settle a seven way tie for a handsome cup awarded as a blind bogey prize. Frank Horton of Los Angeles refinery was awarded the prize for perseverance after a round totaling 141 in the morning, he came back with a snappy 128 in the afternoon, to win a box of oranges.

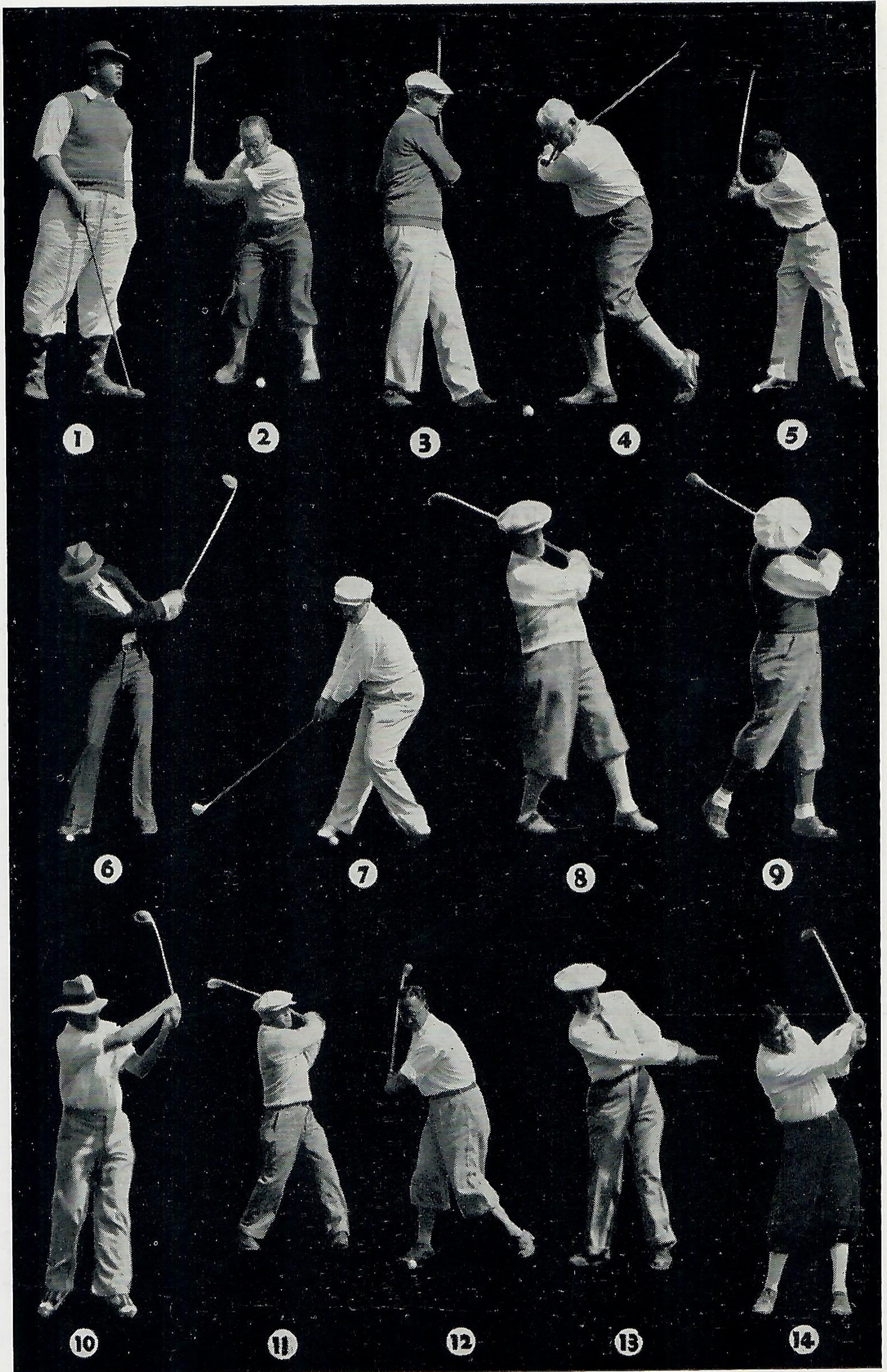
E. C. Rogers (Comptroller's) performed the unusual feat of losing two balls on a par 3 hole to shoot a birdie. An appropriate cup was awarded him by several of his admiring friends.

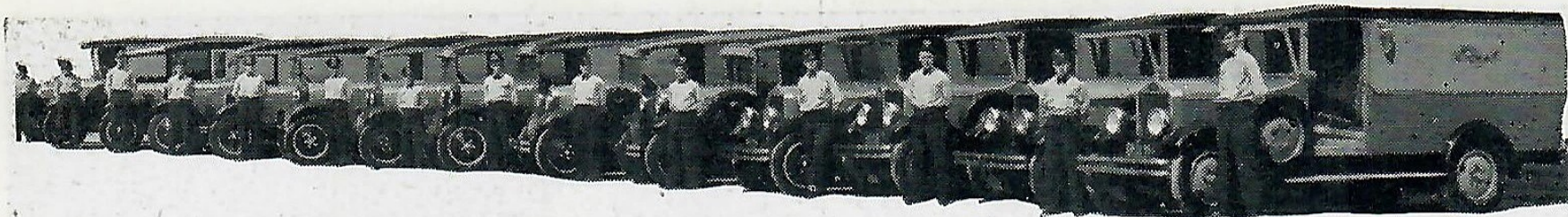
The committee directing the successful tourney was composed of Gerald G. Blue, chairman; J. P. Rockfellow, secretary; John T. Howell, L. G. Metcalf, R. C. Ingram and Wm. K. Hopkins.



Bill Macpherson tied with Earl "Happy" Fields at 158.

Key to photographs on next page:
 1. L. G. Metcalf. 2. Gerald G. Blue
 3. L. M. Bridgman. 4. M. G. Kerr.
 5. A. B. Mason. 6. Bob Thomas. 7. Elmer
 C. Rogers. 8. C. W. Peck. 9. "Bo"
 Robertson. 10. Frank Bescos. 11. John
 D. Rockfellow. 12. Robt. L. Cain. 13.
 Larry Green. 14. "Wild" William
 Hopkins.





"76" Increases Fleet Mileage 13.48 Per Cent

FUELED throughout the past year with Union 76 gasoline, 106 trucks and pieces of auxiliary equipment of The May Company, largest Los Angeles department store, registered an increase of 1.13 miles per gallon of gasoline consumed over the previous year, to establish an overall average of 9.51 miles per gallon. The increase in mileage was gained over a first grade major brand of gasoline.

The operating records, which include detailed information about each piece of equipment, disclose that the total miles traveled by the fleet was 1,249,000. Compared with the miles run the year before and the amount of gasoline consumed, the increased distance traveled, per gallon, with Union 76 represented a 13.48 per cent gain over the previous performance. On this basis it was determined that for a like quantity of gasoline, "76" gave the fleet a total of 148,667 extra or "free" miles.

In addition, a noticeable decrease in the amount of fuel knock, when trucks were heavily loaded, and better performance were observed. Drivers reported generally improved operation of the machines of which they had charge. Even in the equipment which is several years old, the superiority of 76 was demonstrated.

In the fleet which May Company operates are 36 White trucks, 42 Fords, and a variety of miscellaneous equipment. The garage from which all trucks are routed throughout the city is located two miles from the downtown store. Maintenance work, repair and overhaul jobs, washing, cleaning, polishing, painting of the fleet are all performed at the garage. The trucks are in daily use, averaging more than 50 miles per day.

A 76 pump is maintained in the garage, from which all equipment is fueled.





The Building Asphalt Saved

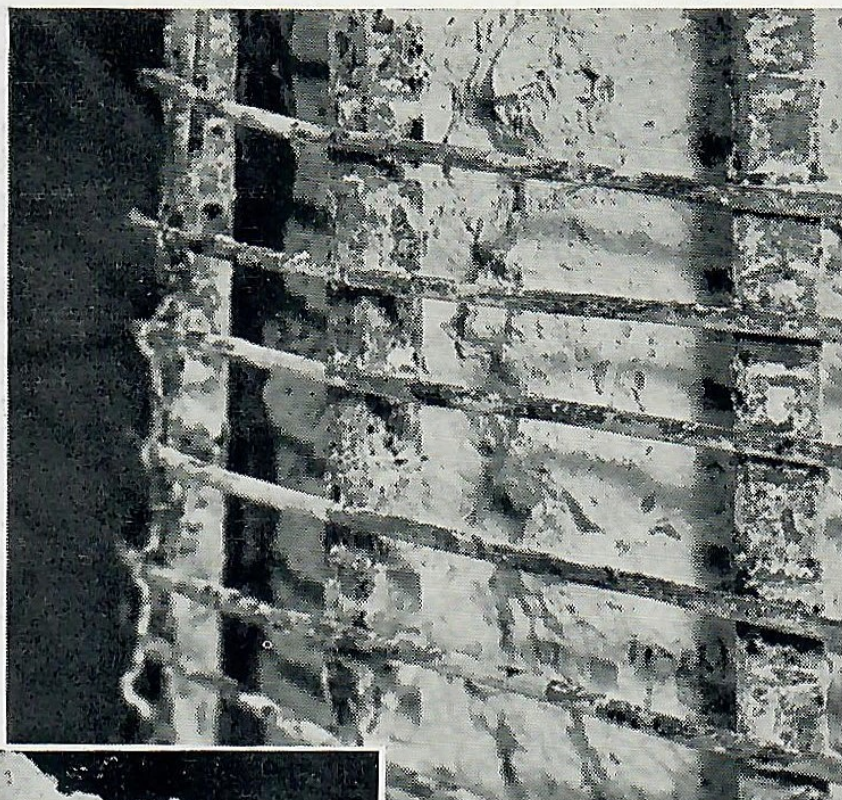
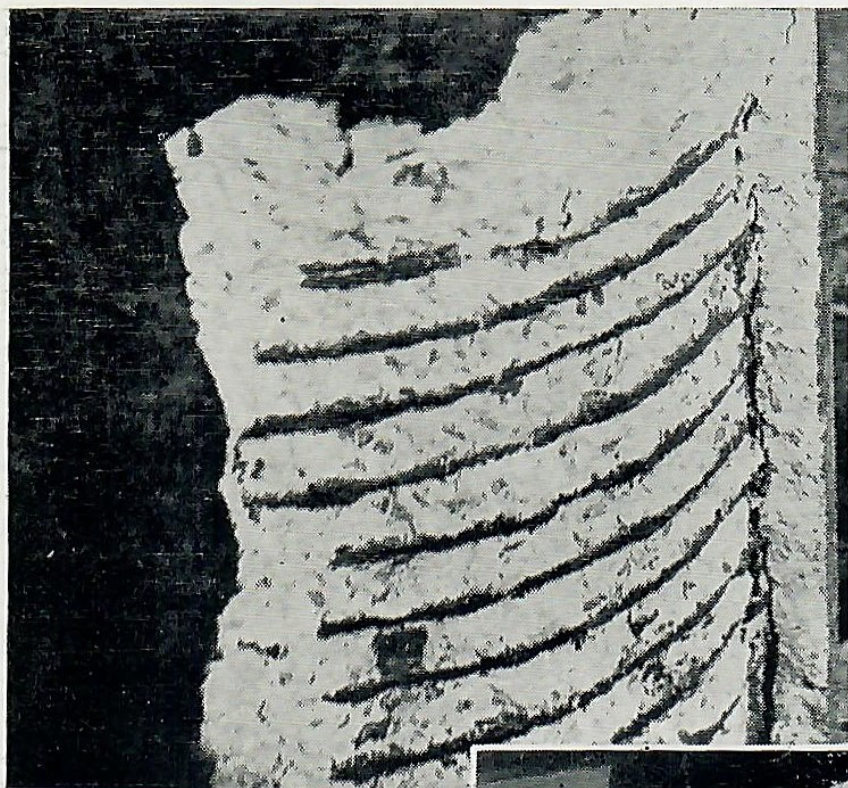
IT is part of industry's task today to find new uses for old products. Research laboratories have made a place for themselves in every line of industry working on this same problem, and their contributions have been many and large. But once in a while the man on the job makes progress along this line, too.

An example of this is the new uses found for Union Oil Company products by the Richards-Neustadt Construction Company on the repair of the A. Brownstein and Co. hide warehouse in Los Angeles. This warehouse was built of reinforced concrete in 1925 for the sole purpose of housing the hide curing activities of A. Brownstein and Co. In the process of curing hides the floors are wet all the time with a solution of salt and water. Despite the fact that the intended purpose of the building was known before it was constructed, no waterproofing was put on the concrete walls, columns, or floors.

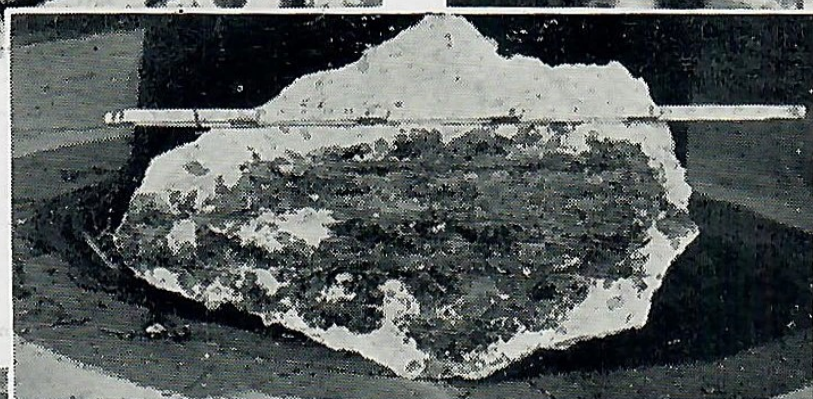
A salt solution, such as was present here, is very injurious to steel, causing it

to rust quickly and deeply. As the salt solution penetrated the concrete it reached the reinforcing steel and immediately started corrosion. Steel in rusting expands to approximately ten times its original volume and exerts a tremendous pressure in so doing. Due to the corrosion and resulting expansion of the reinforcing steel, the warehouse was in a dangerous condition by the spring of 1932. Great chunks of concrete were spalled from the walls and columns and from the surface of the first floor slab, causing a reduction in the steel area. Electrolysis, as the result of chemical action between the salt water and the impurities in the steel, further contributed to reducing the area of the reinforcing steel throughout the building.

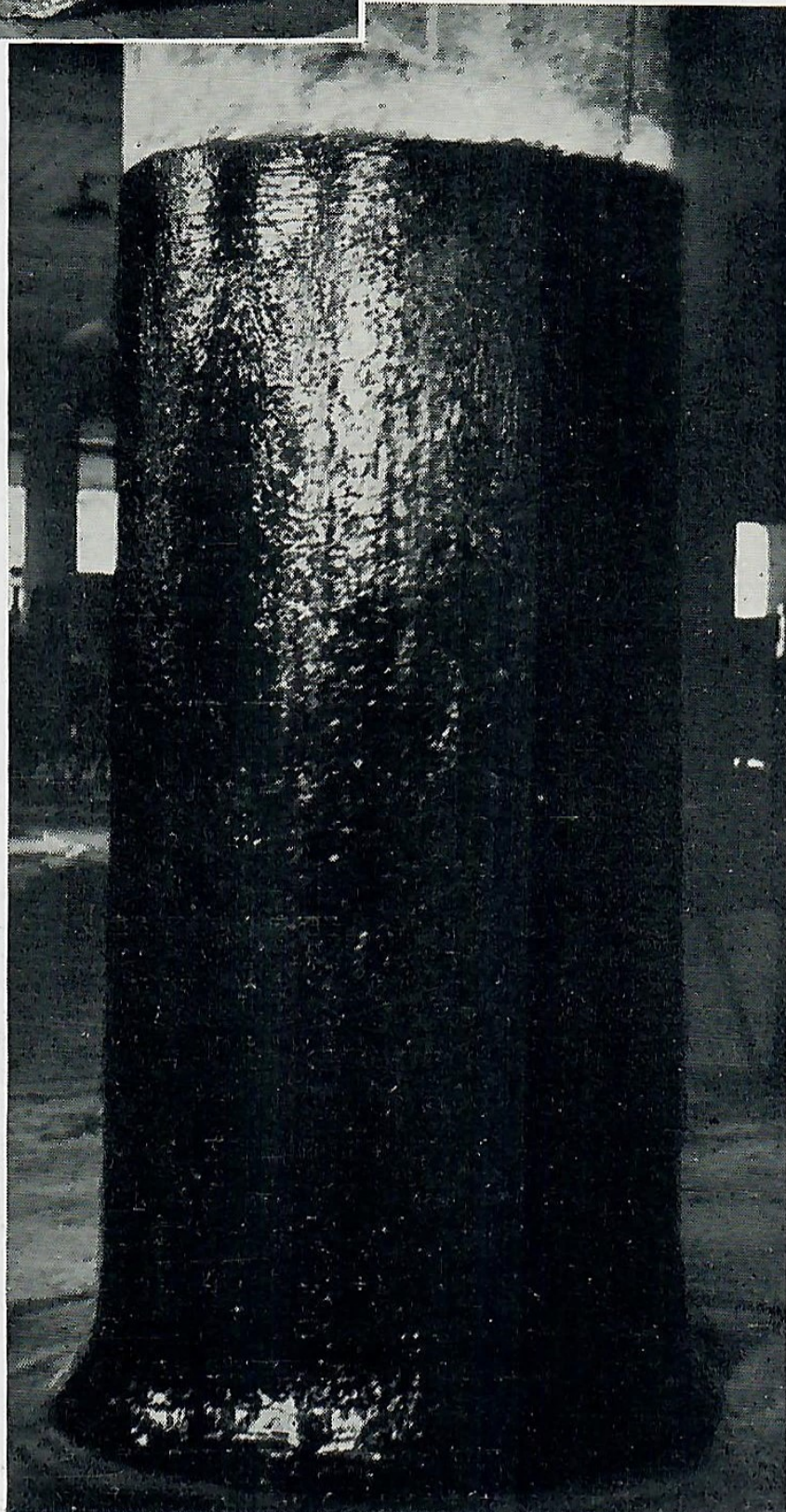
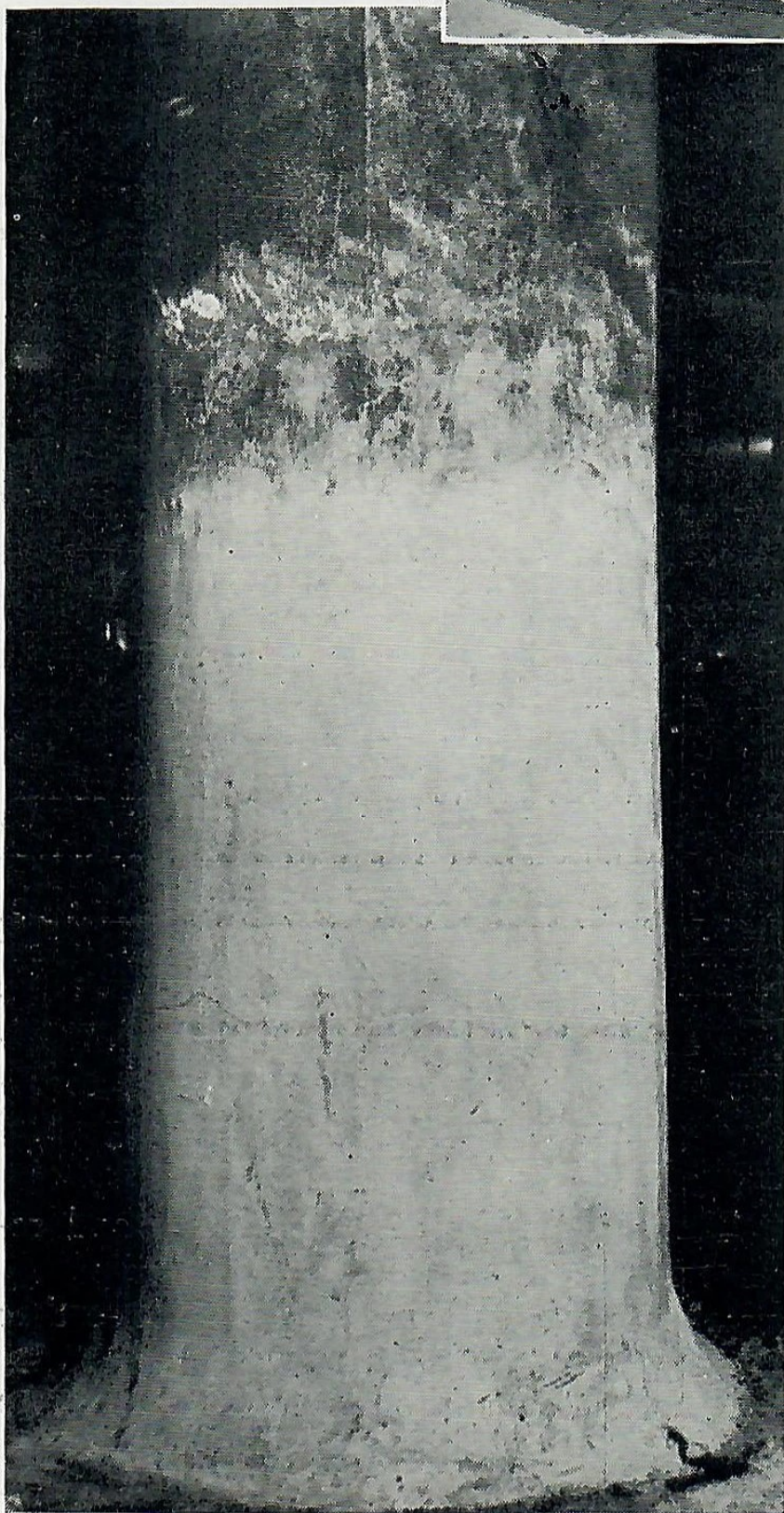
To save the life of the building and restore it to its original usefulness was purely a concrete job. But to waterproof it so that the damage would never again occur was a job for asphaltic products. The concrete was cut away from around the affected steel, which was then taken out and re-



Damage to concrete and steel through corrosion are shown in the three top photographs. Repair of damaged columns is shown below, the



one on the left as it appeared after Guniting had been applied and the one on the right after being waterproofed.



placed by welding in new reinforcing bars. Gunitite was shot into the walls and columns to take the place of the old concrete. However, the problem of waterproofing the walls and columns was found to be not merely a job of keeping the water away from the concrete but also of putting a coating on the concrete that would stand abrasions from passing hand trucks and wheelbarrows as well.

The engineer in charge of the repair work, Don Hull McCreery, who, by the way, was formerly an employee of the Union Oil Company, requested the advice of the company's sales and research departments, and with their co-operation, did a considerable amount of experimenting on the job. The results were highly successful.

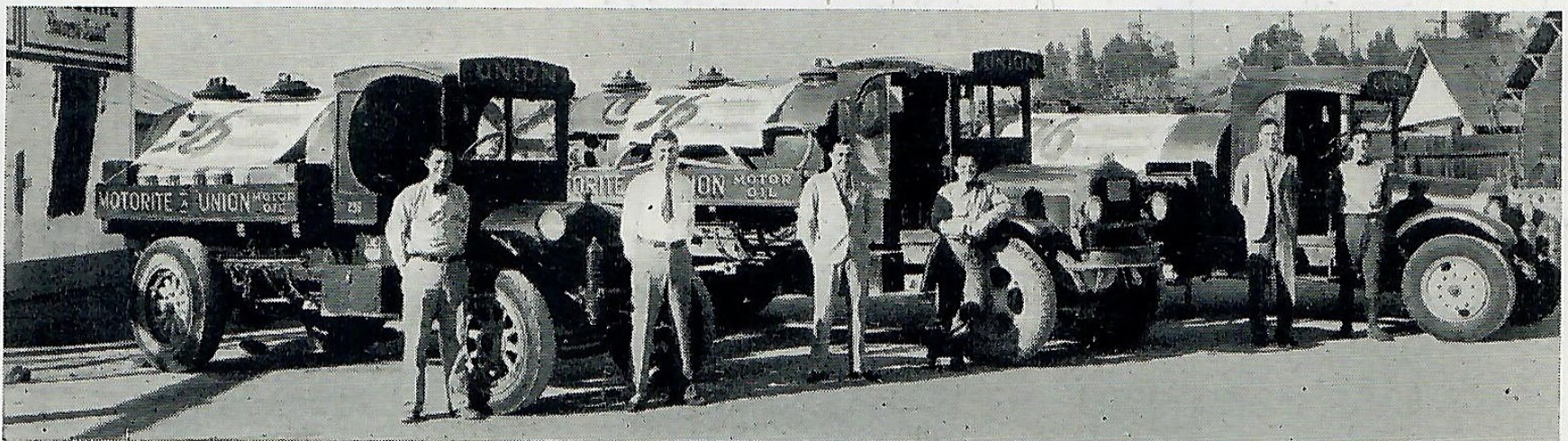
The procedure adopted was as follows: A priming coat of Union Emulsified Asphalt was brushed over the gunitite. Union Armor Coat Enamel, softened with solvent, was then mopped on hot and in it was imbedded a sheet of burlap. Another coat of softened enamel was then applied hot over the burlap, and finally a coat of hot straight armor coat enamel. The total asphalt protection thus obtained is a smooth, heavy coating approximately one-fourth-inch thick, and it withstands the hardest blow a man can deliver with a carpenter's hammer with no more damage than a slight dent.

When the building was two years old, an asphalt mastic flooring of a well known eastern make was placed over the concrete slab on the first floor. In order to repair

the concrete slab, it was necessary to cut through the asphaltic mastic flooring in many places and to take up small areas of it. To patch the flooring with the original brand of asphalt after repairing the concrete slab was found to be unduly expensive, so again Union products were called to the rescue. Union Cyclopean Asphalt had been developed originally for use in preventing erosion in breakwaters, but it proved successful as the asphaltic ingredient in the mastic for making the floor patches. The Cyclopean Asphalt was heated until it melted, and hot, dry sand was added until the mixture was of the proper consistency. The hot mastic was then poured into place in the patches and troweled to a smooth surface. The success of the repairs to the first floor depended entirely upon having perfect bonding of the new mastic to the old. Special methods and tools were developed on the job to assure that this requirement would be met. The extent of the success of these methods was demonstrated when sample pieces were cut from the mastic floor across a joint. The bond was so tight and the material so homogeneous that the actual joint could not be detected. Patches in the floor made with Union Cyclopean Asphalt have now been in service for several months and are standing up fully as well as the original.

Besides successfully solving the problems in hand with Union products, the job found new uses for these products that show possibilities of developing new markets.

San Bernardino Sub-station Sales Crew



San Bernardino, Calif., substation of the Union Oil Company celebrates one of most successful seasons—left to right, N. V. Ralphs, tank truck salesman; T. G. Wise, assistant agent; R. C. Copeland, agent; V. G. Sidler, tank truck salesman; J. S. Reynard, salesman, and R. G. Palm, tank truck salesman



Hans Ehlers



T. A. Grant



A. O. Pegg



J. H. Gunther



Roger Donohue



Service Emblem Awards

20 YEARS



R. A. Brand



A. G. Roseman



J. N. Byers



T. R. Westmoreland



W. E. Berry



M. B. Hatfield



W. D. Kuhns



C. F. Jennings



W. H. Steele

Albert O. Pegg, superintending marine engineer of the Union Oil Company, April 1, last, entered the select group of employees of the company boasting of thirty years' service. During the same month Hans Ehlers and T. A. Grant each completed a quarter-century in the employ of the company, and R. A. Brand, M. B. Hatfield, C. F. Jennings, A. G. Roseman and W. H. Steele each received the second ruby for their service pins in recognition of having served 20 years.

Roger Donohue, J. H. Gunther, and W. A. Nulsen rounded out twenty-five years of service during May, and W. E. Berry, J. N. Byers, W. H. Kuhns, and T. R. Westmoreland were credited with completing twenty years of uninterrupted employment in the same month.

When A. O. Pegg first joined forces with the Union Oil Company in 1903, a sailing vessel and two barges were the extent of the company's offshore oil carriers. Through his period of service he has seen the fleet develop into one now embracing twelve ocean-going tankers, fifteen barges and numerous smaller water craft. He entered the service of the company as first assistant engineer of the S.S. Whittier, the company's first steamship. He was later dispatched east to serve on the S.S. Lansing as first engineer when that vessel was purchased. For a tenure of eight years he was chief engineer of the Santa Rita, from which post he was transferred to shore duty as assistant superintending engineer. In 1917 he was appointed superintending engineer and has held the position since that date. Every modern tanker operated by the company was built under his supervision.

Hans Ehler's service has likewise been devoted to the growth of marine facilities. He was employed April 4, 1908, as a deck-hand on the barge "Wing and Wing." In 1911 he was transferred to Barge No. 9, remaining on duty there for four years, at the end of which time he was assigned to duty on the barge Santa Paula. In 1917 he was elevated to the post of pumper and in 1928 became master of the barge.

Capt. T. A. Grant was first employed in April, 1908, and since that date has served as master of virtually every tanker in the company's fleet. He was assigned to shore duty during construction of the La Placentia and Montebello, returning to the sea on completion of the two tankers. From October, 1926, to August, 1931, he served ashore as bay pilot of San Francisco Bay, re-entering the deep sea service at the latter date. He is at present master of the Montebello. Prior to entering the service of the Union Oil Company, Capt. Grant sailed as master of various vessels under British register and holds license for both sail and steam of American and British issue.

Twenty years ago, when the Seattle district office personnel consisted of but six employees, Russel Brand went to work for the company in the Northwest. Two years later he was appointed marine and Alaskan salesman, which position he filled until 1926, when he was appointed special agent of marine sales. In that year he opened the first four substations for the company in southeastern Alaska. He became assistant district manager, Seattle, in 1927, and the following year was transferred to the lubri-

cating department of the Northern division. Since 1932 he has served as lubricating sales engineer, Seattle district.

M. B. Hatfield started as a driller in the Orcutt field in 1913 and remained there until 1922 when he was transferred to Richfield to work on the Morse lease. He worked as driller in the Orange district until 1929, when Southern California fields were consolidated under one head. He continued as driller, working in the various districts, until June, 1932, when he was transferred to the production department, Stearns lease, where he has since served.

At the time C. F. Jennings went to work for the company at the Brea refinery, the Brea district was largely a glorified weed patch. During his service there he witnessed building of the huge earthen reservoirs, expansion of the refinery from its through-put capacity of 3,000 barrels per day to 14,000 barrels during the war period and its burning in 1926. He entered the refinery as fireman and filled practically all outside jobs until made superintendent in 1922, which post he held until the plant was shut down in 1929. That year he was transferred to the Los Angeles refinery as foreman of the operating and treating division, in which position he has since worked.

A. G. Roseman was first employed as office boy and clerk at the Los Angeles yard. He rose to the position of yard office cashier, leaving the company's employ in 1917 to serve with the Navy during the period of war. Returning to work, he was made assistant superintendent, transferring within a year to the equipment and property desk position. Since 1920 he has filled, respectively, the posts of superintendent of deliveries, office manager, chief of equipment and property, and in 1930 was again returned to the post of superintendent of deliveries which he now holds.

W. H. Steele entered the services of the company in the accounting department of the crude oil division April 22, 1913. He remained in the department until 1924 when he was elevated to the position of chief of crude oil accounts. January, 1928, he was appointed chief of general accounts, holding this position until he became auditor of general accounts in April, 1931, the duties of which office he is now discharging.

The Oleum refinery has been the locale for all of Roger Donohue's 25 years of service. His first duties were with the yard and pipe-line crews, but within a short time he was made fireman in the crude oil division. Within four years he had become assistant stillman. He was then transferred to the lube oil reducing stills as stillman and for the past twenty years has held that position.

Entering the service of the company in the sea-going fleet in May, 1908, as a seaman, Capt. J. H. Gunther served as seaman, quartermaster and boatswain until 1915, when he received his first licensed appointment as third mate. January, 1919, Capt. Gunther received his first command and has served as master of various of the company's vessels. Since November, 1927, he has been in command of the S.S. La Placentia.

The Southern California fields of the Union Oil Company have been the stamping grounds of W. E. Berry for the past twenty years. As

driller he worked on the Stearns, G. and L., Basten chury and Chapman leases, and for five years served as drilling foreman at Huntington Beach. Following the consolidation of the southern division fields into one unit, he was made drilling foreman at Santa Fe Springs, and is now head driller in that field.

J. N. Byers completed his twenty years of service for the company in the Ventura fields, first going to work as tool dresser on Twilight No. 1 well in the Little Sespe Petroleum Mining district. He worked as pumper at Newhall, gang pusher in the field and pipeline departments, and in 1921 was promoted to sub-foreman. January, 1930, he was made foreman in the Ventura district, the position he now holds.

The field department was also the choice of W. D. Kuhns when he went to work for the company in the San Joaquin valley area, serving first at Maricopa. Within a year he was transferred to McKittrick and Lost Hills. In 1913 he was sent to the Brea district, working there until 1931 as driller and drilling foreman. For the past two years he has been in the production department at Richfield. Kuhns holds the distinction of having been driller on the first well brought in at Santa Fe Springs.

T. R. Westmoreland started to work for the Pinal Dome Oil Company as pumper at the Sisquoc water station on May 23, 1913. He maintained his service with the company when Pinal Dome was absorbed by the Union Oil Company. He served at the Sisquoc station for a number of years going to the Rosedale station as fireman in 1930. He is now employed as relief fireman at Middlewater station.

Fifteen Years—April

Anthieny, John, Jr.....Sales, Fresno
Broderick, Pat.....Mfg., Oleum Refinery
Caldwell, W. R.....Mfg., Oleum Refinery
Carpenter, O. A.....Field, Southern Division
Costa, John.....Mfg., Oleum Refinery
Dezarn, Frank.....Field, Santa Fe Springs
Ellis, Nora.....Sales, Seattle
Ferry, Hubert C.....Land, Head Office
Flanders, A. L.....Sales, Los Angeles
Jones, G. E.....Sales, Los Angeles
Powning, J. G.....Prov. Fund, Head Office
Prior, H. S.....Mfg., Oleum Refinery
Scuri, G. J.....Transp., No. Div., P. P. L.
Wasson, Oak.....Field, Orcutt

Ten Years—April

Allaire, C. H.....Field, Santa Fe Springs
Barrett, Patrick.....Gas, Head Office
Biswell, J. W.....Gas, Santa Fe Springs
Blackwell, Fred A.....Sales, Oakland
Brockman, A. W.....Sales, Los Angeles
Brown, Kenneth W.....Field, Maricopa
Callison, Robt. D.....Sales, Oakland
Clegg, F. A.....Purch., Santa Fe Springs
Conner, Reuben T.....Field, Santa Fe Springs
Davidson, John.....Sales, San Francisco

Edgerton, Eleanor.....Credit, Head Office
Engler, Gertrude.....Fuel Oil, Head Office
Farmer, Verdine E.....Purch., Head Office
Fisher, Edw. C.....Field, Maricopa
Giltwedt, Wm. B.....Field, Santa Fe Springs
Groth, Louis W.....Sales, Phoenix
Harpole, H. M.....Sales, Portland
Hendricks, A. N.....Transp., So. Div., L. A. P. L.
Holmstrom, Harold.....Mfg, Research
Jackson, John W.....Mfg., Los Angeles Ref.
Johnson, C. A.....Sales, Seattle
Kehoe, John J.....Field, Santa Fe Springs
King, George W.....Sales, Los Angeles
Larson, Florence.....Purch., Head Office
Lovick, Robert L.....Transp., So. Div., L. A. P. L.
Marshall, Harry C.....Gas, So. Div.
Martin, Hugh H.....Mfg., Los Angeles
Mecartea, J. A.....Sales, Seattle
Nesbitt, Elvie J.....Sales, San Diego
Nilsen, Karl M.....Mfg., Oleum Refinery
Panosch, John F.....Sales, San Diego
Phillips, John D.....Mfg., Los Angeles Ref.
Rizor, George A.....Sales, Portland
Roberts, Fred W.....Transp., So. Div., L. A. P. L.
Rohning, Walter C.....Field, Santa Fe Springs
Sheard, Beatrice.....Mfg., Head Office
Silva, Manuel.....Mfg., Oleum Refinery
Small, Victor H.....Field, Santa Fe Springs
Smeal, Harold.....Transp., Head Office
Stockdale, J. F.....Prov. Fund, Head Office
Sullivan, A. L.....Transp., Los Angeles Garage
Thomas, Manuel.....Mfg., Oleum Refinery
Tilton, George I.....Mfg., Los Angeles Ref.
Venus, John.....Sales, Vancouver
Wadge, Ralph M.....Mfg., Oleum Refinery
Wilmot, Ray E.....Mfg., Los Angeles Ref.
Witt, John U.....Sales, Los Angeles

Fifteen Years—May

Anderson, Theodore.....Transp., No. Div. P. P. L.
Blankenship, J. E.....Field, Santa Fe Springs
Burchfield, Margaret.....Bldg., Union Oil
Davidson, Harold C.....Sales, Los Angeles
Dickson, Alex. G.....Sales, Honolulu
Farren, Homer B.....Field, Santa Fe Springs
Fleig, Robert H.....Transp., No. Div. P. P. L.
Hendry, Allen.....Field, Santa Fe Springs
Hutchins, Elmer.....Field, Orcutt
Muzzall, Jack.....Field, Santa Fe Springs
Pimentel, M. V.....Gas, No. Div.
Pope, Wm. E.....Field, Santa Fe Springs
Rickenbacker, Charlotte.....Field, Head Office
Roberts, Giles H.....Traffic, Head Office
Sartori, James R.....Mfg., Oleum Refinery
Sullivan, R. J.....Field, Santa Fe Springs
Tychsen, Paul E.....Sales, Spokane
Zam, Walter F.....Mfg., Oleum Refinery

Ten Years—May

Anderson, L. F.....Field, Santa Fe Springs
Bennett, Arthur P.....Sales, Vancouver
Bullock, Harold T.....Sales, Los Angeles
Callaham, W. E.....Mfg., Los Angeles Ref.
Campbell, J. A., Jr.....Devl., Head Office
Cerini, William F.....Gas, Santa Fe Springs
Crooks, Alfred C.....Sales, Spokane
Cummings, W. R.....Mfg., Los Angeles Ref.
Dahl, Dewey T.....Sales, Los Angeles
France, Carl H.....Field, Ventura

Geddes, Fred M.....Gas, Santa Fe Springs
 Gill, Thomas T.....Gas, Santa Fe Springs
 Gregory, Holt R.....Land, Head Office
 Hanson, Lester T.....Sales, Seattle
 Howard, Bessie M.....Geol., Head Office
 Jones, John W.....Transp., No. Div., P. P. L.
 Jones, Philip H.....Research, Head Office
 Kollarik, Frank J.....Mfg., Los Angeles Refinery
 McSpadden, Cecil.....Mfg., Los Angeles Refinery
 Napoli, Jack.....Sales, San Francisco
 Nichols, D. W.....Sales, San Francisco
 Ramun, Pall.....Mfg., Oleum Refinery
 Robinson, W. H.....Field, Santa Fe Springs
 Silin, Henry.....Mfg., Oleum Refinery
 Swindle, W. A.....Transp., So. Div., L. A. P. L.
 Varela, Jose W., Jr.....Mfg., Oleum Refinery
 Wilson, H. W.....Transp., No. Div., P. P. L.

Bowling Champions



Standing, left to right, A. C. Powell, John Daugherty and C. W. McConnell; seated, Harry Alger, R. A. Burke, Captain, and R. T. Hatfield.

When the final pin fell, sounding the end of the Union Oil Company Southern Division Field Department's 23-week bowling schedule, it marked the supremacy of the Brea Production Department bowlers over the ten-team league, and entitled them to permanent possession of the beautiful trophy presented by McNee's Recreation Parlors of Whittier.

The schedule was divided in two parts, with a final roll-off between the winners of the two periods for the championship of the league.

The close of the first half found the Breaites the winners with 39 points won and 17 points

lost. In the final half the Truck Transportation team took an early lead and finished with the standing of 39 points won and 13 lost, thus giving them the privilege of meeting the winners of the first period for the championship of the league.

The final scores for the three game roll-off were as follows: Brea Production, 2522 pins; Truck Transportation, 2517 pins.

Members of the winning team are: R. A. Burke (Capt.), C. W. McConnell, A. C. Powell, John Dougherty, Harry Alger, R. T. Hatfield.

McConnell annexed the high individual game of the season with a score of 255 pins.

Tanker Engineer Dies

Arthur O'Flanagan, for the past twenty-five years an employee of the company in the deep sea fleet and since 1909 chief engineer at various times on many of the company's tankers, died in San Francisco, May 4, following a brief illness.

During his period of service O'Flanagan served as chief engineer on the S.S. Lansing, S.S. Washenaw, S.S. Coalinga, and after filling shore duty, during construction of the La Placentia and the Montebello, as inspector of boiler construction, returned to the sea as chief engineer on the La Placentia. He later served in the identical capacity aboard the Santa Maria, returning, however, to the La Placentia. Just prior to his death he was assigned to temporary service on the Oleum.

He is survived by a widow and grown son.



Java Dealer Endorses Motorite

A. Van Deutkom, handling Union products in the city of Djockjakarta, Java, sets forth the following enthusiastic endorsement of Motorite in a letter to the company's agents in Soerabaja:

Dear Sirs: We herewith beg to inform you that we have had very good results with the Motorite oils of the Union Oil Co. of California imported by your good selves.

Through our repair shop we were able to make thorough trials with the oils on almost every type of motor car running in the Dutch East Indies, and results were, without exception, entirely satisfactory.

We can warmly recommend the Motorite oils to any serious motorist.

Yours faithfully,

AUTOHANDEL & REPARATIE-ATELIER.

A. VAN DEUTEKOM.

Yakima Man Proves "76" Gives Best Mileage

HIS interest aroused by the unqualified mileage claims for a number of competitive gasolines, F. B. Alexander of Yakima, Washington, recently decided to carry on an independent investigation of his own as to the respective merit of the various motor fuels in his district. The results of his privately conducted tests are set forth in the following unsolicited letter:

Dear Sirs:

I recently made a test of all gasolines sold in this city because I had read and heard various claims for different brands of gasoline, one leading make going so far as to guarantee at least one more mile per gallon than any other gasoline would give. I at once became very skeptical and decided to try them all out as nearly accurately as was humanly possible to do so in an automobile. I had a special measure made to fit on my carburetor, and used exactly the same amount of gasoline for each run.

I chose a level paved road and went over the same route with each gasoline. Each trip was made at the same speed and my accelerator was handled as evenly as possible for each make of gasoline. There was no trace of wind during the test, and my motor was kept at as nearly the same temperature for each run as possible. Also, after each run, I drained the carburetor, so that no two gasolines became mixed.

The result of the test convinced me beyond any doubt that Union 76 gasoline will go farther per gallon than any of the nearly dozen different brands of gasoline sold in this city.

The results showed "76" to be the leader by a margin of from $\frac{1}{2}$ to more than 2 miles per gallon.

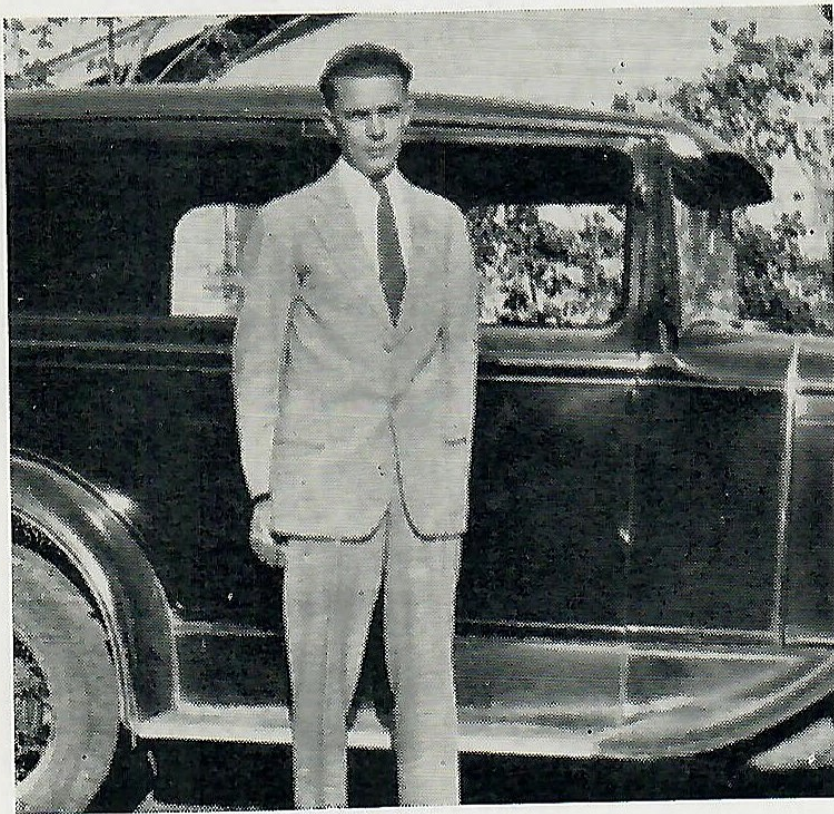
I used the best grade of each brand of gasoline for the test, and then to make doubly sure, and to prevent any mistakes being made,

I tested some of the gasolines a second time, but "76" held its advantage by the same margin or better, and I decided there was no use going any farther with the test from a layman's point of view.

I have no connection with any oil company, service station, garage or automobile company, and my sole object in making the test was that I might save money by buying the gasoline that would give me the most miles per gallon. There was no other way for me to know for sure than to make my own test, although I had always believed Union 76 to be the best gasoline on the market, and NOW I KNOW IT IS.

Yours truly,

F. B. ALEXANDER



F. B. Alexander of Yakima, who conducted his own gasoline mileage tests.

Vine Hoppers



The Vine Hopper is a serious pest as far as San Joaquin Valley is concerned, and above is shown one of the methods of exterminating him. The success of the operation depends to a large degree on the type of spray used, and in this particular instance it happened to be Union Vine Hopper Spray, which demonstrations have proved to have a higher Vine Hopper killing average than the other insecticides.

The apparatus being used here is attached to a tractor and equipped with a blower from which two wind pipes project. One directs the spray into the vines and the canvas, which stretches over the opposite side of the vines, prevents the escape of the hoppers and makes certain they are subjected to the spray. The second pipe sprays the lower part of the vines and the ground.

Five acres can be sprayed in an hour, approximately three gallons of spray being required to an acre.

Independent Basketball Champions of Oregon

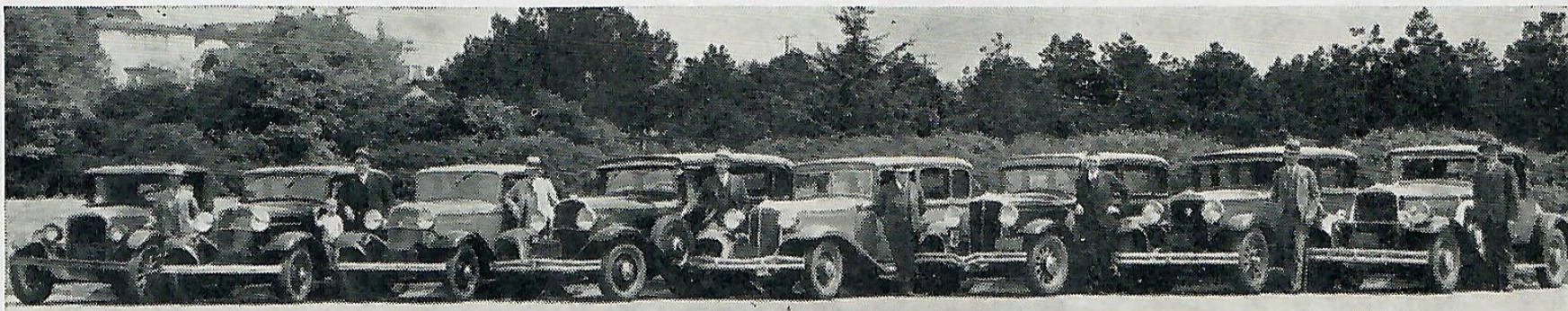


Union Oil basketball team of Portland district, left to right, standing, C. L. Brown, Mark Grayson, Ralph Cairney, Lowell Brown, Ray Edwards and R. V. Harrington—kneeling—Henry Levoff, Francis Wood, Vincent Dolp and Harold Inman.

Victorious over every opponent in the state of Oregon excepting the Oregon State College quintet, which won the Pacific Coast Conference championship, the Portland district's basketball team established one of the finest records ever made by a non-college organization in the state. In 37 games played, the Union Oil team won 32, ending the season with 28 straight victories. Of the five games lost, three were to the Oregon State College team and two to opponents who were later defeated.

By virtue of its showing the team is acknowledged as one of the strongest independent squads ever developed in the Northwest. Among the teams defeated were Multnomah Gun Club, Multnomah Athletic Club, Turn Verein Athletic Club, Y. M. C. A., Willamette University, Oregonians, Dallas, Pacific University, House of David (Chicago), Oregon Normal College, Gladstone Blackhawks, and Seattle district. Some 25 different opponents were faced during the season.

By Their License Plates You Know They're "Seventy-Sixers"



The license plates on the cars operated by this group of Oakland district sales representatives advertise them as "76" boosters. They are three-numeral plates, each ending in 76. The car owners are, from left to right, J. F. Gallagher, plant superintendent Emeryville; L. E. McCumber, sales representative, and McCumber, Jr.; E. F. Goeltz, special agent; R. V. Martin, special agent; J. Maguire, former special agent recently transferred to Fresno; J. H. Rogers, sales supervisor; J. E. Schmidt, assistant district manager, and S. D. Herkner, district manager.

Everybody Was Irish in Sacramento



Swearing by the shamrock and the shillelagh that they were entitled to be "a-wear'n" o' the green, the above Union employees in the Sacramento district attended an Irish party held recently in Sacramento.

Ad Parade at Honolulu Community Carnival



Products sold in Honolulu were presented in an Ad Parade held during the Community Carnival sponsored by the Outdoor Circle. Above, the parade is shown in progress, and at the right is Union Oil Company's entry. The young lady in the Union 76-labeled measure is Mary Louise Weller, daughter of H. B. Weller, district manager. The float bearers are attendants from the Acme Service Station and Auto Service Garage, Union resellers.



REFINED AND CRUDE

By RICHARD SNEDDON

We are advised by a friend who moves in high financial circles, that currency inflation is nothing but a scheme to boost the price of electricity.

Our informant is actually a janitor in one of the State's largest banks—the big floor flusher.

We are also told that the East is again on daylight saving time, so that when you think it is 4 p. m. in Oshkosh, Wis., it is in reality nothing of the sort. It is only 2 p. m., and in some place altogether different.

The idea is quite simple when you thoroughly understand it. Here's the low down: At a given instant each year, the various eastern states agree to start on the daylight saving schedule, and immediately the big annual argument is on. One half the people put their clocks back an hour, the other half put their clocks forward an hour, and the railroads remain neutral.

The result is that fifty per cent of the commuters arrive at the depot one hour before the train is due to leave, get disgusted and go back to bed, while the other fifty per cent arrive one hour after the train has gone, and decide they didn't want to take it anyway.

And now comes the startling report that a young man was found dead in a local playhouse a few days ago. Foul play is suspected.

In an effort to bolster the saving habit, an economist has estimated that if you deposit one thousand dollars in the bank, and leave them there for 150 years at six per cent interest, compounded semi-annually, your great great grandchildren will have a swell time.

Did you notice, by the way, after the recent bank holiday that many normally peaceful citizens suddenly became very quick on the draw?

Discussing last month's Bulletin cover with a sales executive, a safety enthusiast expressed the opinion that the picture of a man clinging to a "76" sign at an altitude of sixty feet, was rather poor safety propaganda, whereat the sales executive urbanely remarked, "One is safe anywhere on '76'."

Which simply proves the old saying, "Give a salesman enough rope, and he'll sell it."

And who, after all, has a more dire need of endurance than the poor patient American taxpayer?

Sport, we are told, has built up a splendid endurance in the American people. Very true. What, for instance, could possibly be more effective in developing this quality than the mere act of sitting on a cold concrete slab for three hours, watching a football game?

But please don't forget that it's the architect who designs the buildings. An artichoke is a vegetable.

Also, the best way to dispose of cast off clothing, is to hang them up and go to bed.

There is real joy for motorists in the announcement that a Northwestern freight train was derailed a few days ago by an automobile.

Motorists have been trying for years to demonstrate the feasibility of the idea.

There is also a great deal of consolation in the thought that if women ever take to cigars, we men will be able to get even with them at Christmas time.

Do you happen to recall, by the way, the old days, when it was dad that got the dicens for dropping ashes on the carpet?

Now it is altogether different. It's as hard in these days to find a man in a smokeroom, as it is to find a blotting pad in the postoffice.

And with vacation time upon us, might we suggest that an ocean voyage not only affords the maximum in vacation enjoyment, but also offers an elegant opportunity to dispose of old safety razor blades.

In this connection, take heed of the old proverb, "The bigger the vacation, the harder the fall."

We can't understand why scientists are so persistent in their quest for a means of abolishing sleep. How can they expect our police forces to do good work, with this "Sword of Damocles" hanging over their heads.

Incidentally, all the men who lead dual lives are not necessary expert swordsmen.

And the woman who appears to be taking an inventory of the store, is in all probability about to purchase a powder puff.

In conclusion, please note that new cards may be kept from skidding by serving candies to your bridge guests.

