
"On Tour"

On Tour

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In This Issue

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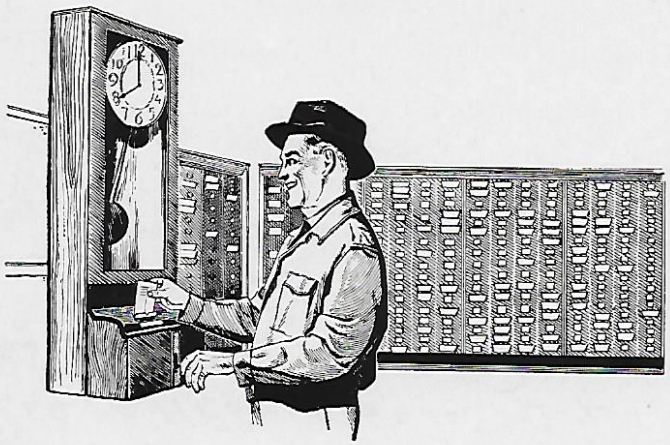


Two Days Off

Back in 1910, when a man left his home on Monday morning, he had a 58-hour work week before him.

But over the years—as workers, business and manufacturing methods became more efficient—it took less and less working time to produce goods of all kinds.

The result is that today the average work week has been cut to 40 hours. 18 hours—more than two whole working days—are missing from a man's work week. They've been transferred to the man himself—to use for leisure time!

But that's not the whole story. Back in 1910, the average household earned about $2400 (translated into 1950 dollars) for its year's work. Today, for a lot less work, it earns nearly *twice* that!

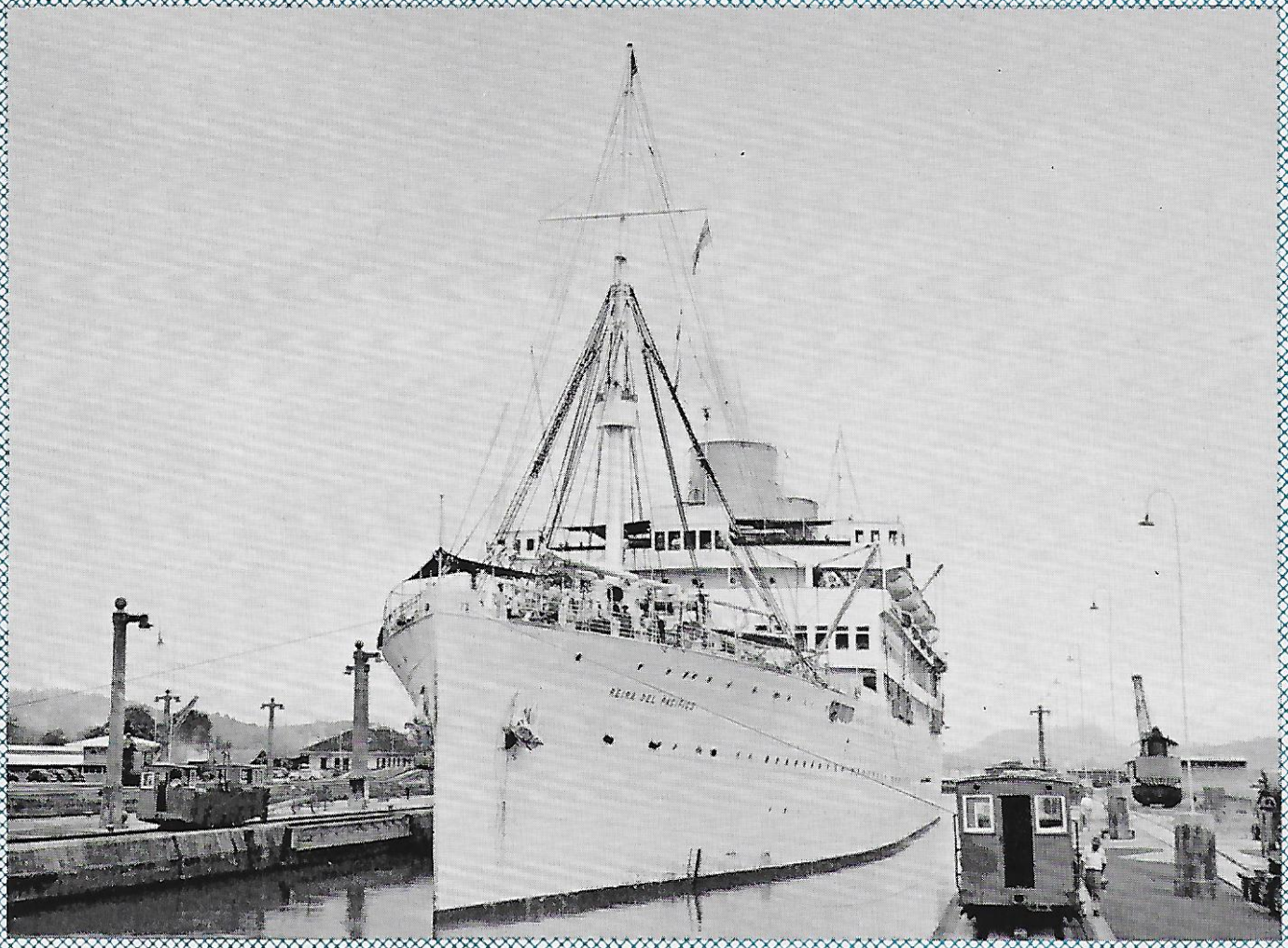
That's the American economic system at work.

This system has some faults—such as ups and downs in prices and jobs. And everybody in this country, except a small group of eccentrics and communists, is working to correct them.

But just remember this: If we want to earn still more money—if we want to work still shorter hours—the only way to do it is to make the American system work even *better*. And that means that every man, every business, every machine has got to produce more and more for every hour they work—just as they've *been* doing since 1910. And if they do, the gains can be shared by everyone.

All of us in this country *want* the system to work better. And if all of us work together—you can be sure it *will*.

THE BETTER WE PRODUCE
THE BETTER WE LIVE



Panama Pipe Line

By R. C. Worsley

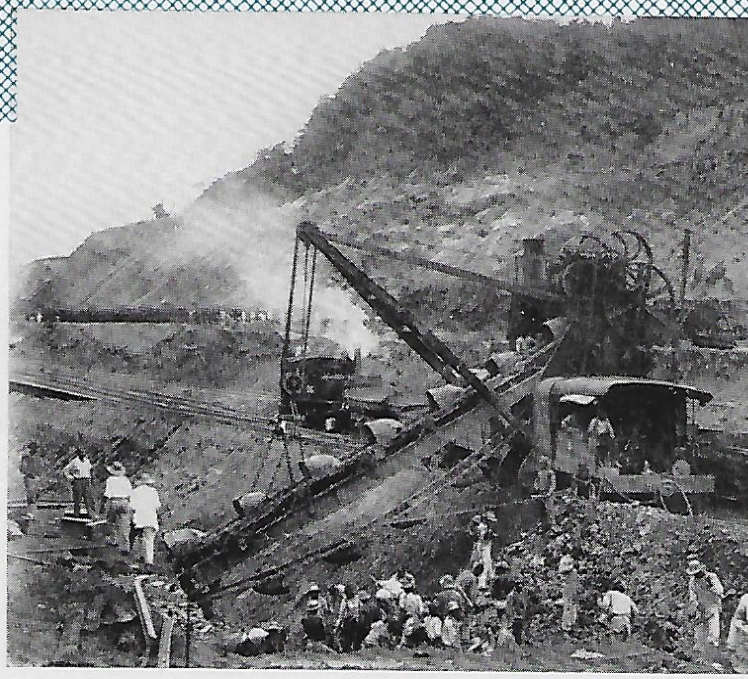
AMONG the many *firsts* claimed by Union Oil Company with justifiable pride since 1890, we seldom hear mentioned the first petroleum pipe line connecting the Atlantic and Pacific oceans. It is granted that the line had only to cross the narrow Isthmus of Panama to bridge a continent. Nevertheless, from a viewpoint of courage and resourcefulness, this achievement is deserving of a place on our record. The pipe line was equal to the job for which it was designed and turned out to be a servant of great worth to builders of the Panama Canal.

During 1903, when California fuel oil was being produced greatly in excess of West Coast needs, petroleum marketers began a spirited search for distant customers. A potential market existed on the more densely populated Atlantic Coast, but the long tanker trip around South America made such hauls unprofitable. It was then that Union Oilers hit upon the idea of running a pipe line across the Isthmus of Panama, unloading their tankships on the Pacific side, loading others on the Atlantic side, and thus shortening the haul by thousands of miles.

Negotiations were begun in 1903 with the Republic of Panama, the Isthmian Canal Commission and the Panama Railroad. Work was started on the installation in 1904 and completed in 1905.

Unloading was done from tankers anchored in the channel adjacent to Balboa. These would discharge

These old pictures, taken at Culebra Cut between 1896 and 1898, indicate the amount of progress made by



French workers before exhausting their capital and strength. Poor tools and disease proved their downfall.

their cargoes of 18-gravity fuel oil into an eight-inch submarine pipe line, whence it was pumped across tidal flats to our receiving terminal at the foot of Sosa Hill in Balboa. Four steel tanks, each with a capacity of 37,500 barrels, accommodated the in-coming oil. To move the oil across the isthmus to a similar pumping station at Cristobal required one heavy-duty and two smaller compound duplex pumps. Oil moved through the eight-inch line at a rate of about 200 barrels an hour.

At each pump station terminal were erected quarters for the manager, bachelor quarters, a mess hall, stables for horses and a shelter for buggies. As both terminals were located on land that had not previously been used commercially, connecting roadways had to be built to the nearest highway system.

The completed pipe line had little more than proved its worth before petroleum markets again began to change. The discovery of large fields in Mexico brought a new flood of fuel oil down to the Gulf to compete for Atlantic customers. At the same time, Pacific area demand began to catch up with California production. Our pipe line might have been left high and dry in the jungle. However, as the builders probably foresaw,

American builders used powerful steam-shovels and railroad techniques to move entire mountains of earth..

The Pacific entrance to Panama Canal, as it appeared in 1912, with a Union Oil pump station supplying fuel.

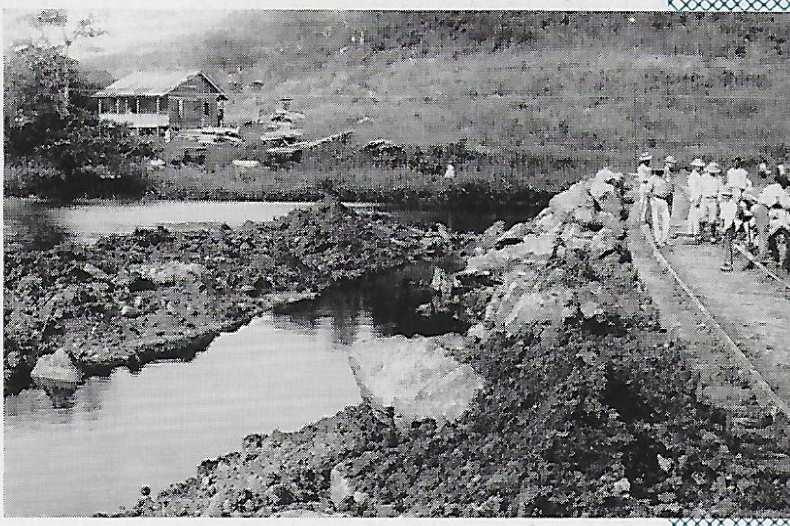
work soon began in earnest on the Panama Canal. And engineers from the United States were practically met at the dock by Company salesmen ready to deliver California fuel oil in limitless quantity, to any part of the jungle-choked job, and immediately.

Beginning in 1904 and continuing through 1914, Union Oil supplied through its pipe line system all the fuel oil used in building Panama Canal, including that consumed by the Panama Railroad Company. Monthly deliveries averaged about 75,000 barrels during the peak of construction. The oil was eventually used to operate electric power plants, compressor plants, water pumping stations, locomotives, tugs and nearly all else that could be converted from coal.

Two Company gaugers were constantly employed in making deliveries of fuel oil through lateral feeder lines to the Commission's storage tanks. Also, two pipe line gangs, under supervision of an experienced Company foreman, kept the line repaired and on one occasion moved a large section of it to high ground above Gatun Lake.

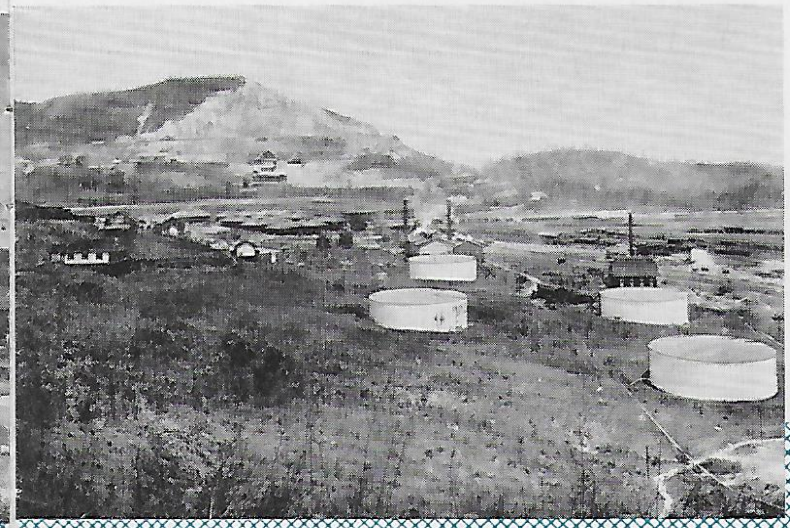
Soon after completion of the canal in 1914, the Isthmian Canal Commission notified Company representatives that our pipe line was not to be operated in competition with the canal. Accordingly, in 1915, much of the pipe was salvaged and shipped back to California. Here in the Los Angeles area it took on a job of transporting crude oil toward the refinery. Some of our veteran transportation men, who remember installing the line, believe that a few sections of it are still in service today.

The Company's transition from these early fuel oil sales to the varied type of marketing we now enjoy in Panama depended on salesmanship of a pioneering na-

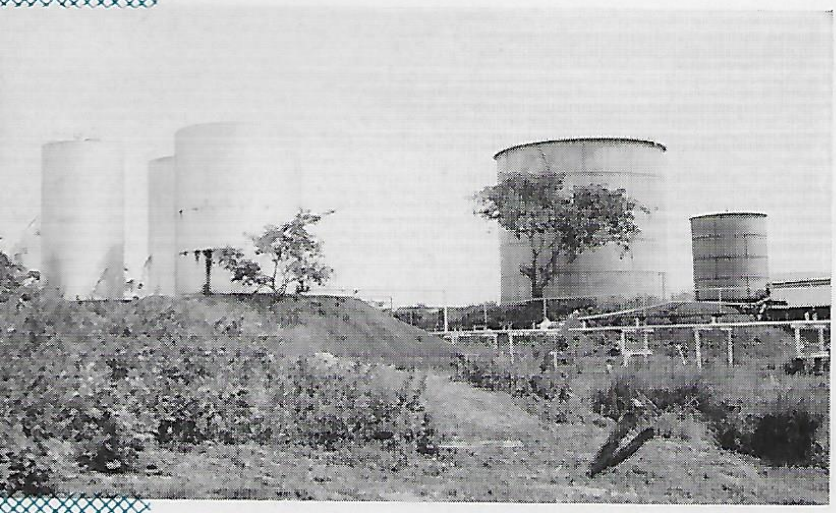


Above, one of the landslides that added to the cost of the canal. Below, rock from the canal was used to fill marshes helping prevent the spread of malaria.

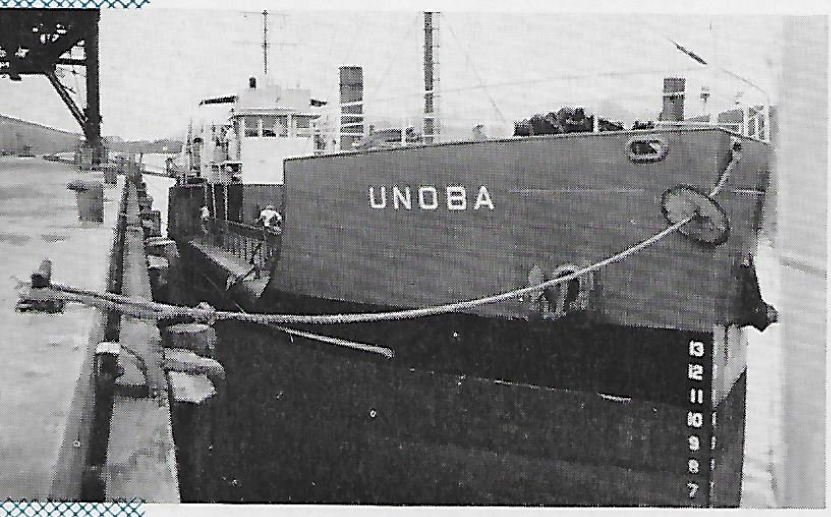
Another view of the Union Oil fuel oil terminal on Sosa Hill looking east toward Balboa in 1914.



As these administration buildings arose in 1915, our Canal Zone pipe line was ordered out of competition.



Today, at the Port of Aguadulce, three Company tanks at left and two Republic of Panama tanks at right are filled by tankship with Union Oil products.



Junior member of our tankship fleet is the UNOBA, here seen tied at Dock No. 7, Balboa. She sails under the Honduras flag and serves Central America.

The Henriquez Service Station at Bejuco, R.P., is one of the oldest operating stations in the interior. Minute Man Service goes beyond the horseless carriage.

ture. Government purchases declined almost to extinction in 1915 when the canal was completed and the Commission's own terminals were ready for operation. We had to turn toward other types of consumers for marketing outlets.

One of our first commercial customers in the Canal Zone was Herbruger & Tarte, now the Balboa Ice & Refrigerating Company, who used an occasional barrel of fuel oil in their ice factory. Also at Balboa we made some of our first deliveries of Diesol to motorships, operated by the East Asiatic Company and the Pacific Steam Navigation Company. Another good fuel oil account was born when the Panama Corporation was induced to convert its electric power plant from coal to oil; thereafter they kept our five-ton truck busy 24 hours a day hauling between Balboa and Panama City. Our lubricating oils next entered the Republic of Panama and fought stiff competition from other oil companies who recognized the commercial possibilities of this area. Union Kerosene in cases and gasoline in barrels were introduced as rapidly as the need for them could be developed. Thus, customer by customer and commodity by commodity our salesmen gained an enduring foothold.

The present strong position of Union Oil in the Republic of Panama dates from 1930. In that year, bulk gasoline storage was installed, and soon our gasolines, motor oils and greases began to gain the wide acceptance they enjoy wherever marketed today.

Union Oil people and products are now accorded exceptionally favorable recognition throughout Central America. Our Company is the longest established oil company on the isthmus. It has grown to maturity with the Panama Canal and has contributed much toward development of the Panama Republic.

The Big Ditch

Regarding the Panama Canal itself, from which the entire world has benefited, the following few facts should be worth recalling:

A canal across this 50-mile wide isthmus was envisioned by Charles V of Spain, who ordered a survey made in 1534 when his mariners were unable to find a natural passage to the Pacific. Many canals and similar schemes were proposed during the succeeding three centuries. But the first serious construction attempt was not begun until 1879, when the French obtained canal rights across Panama, then a part of Colombia. Twenty-five years of bitter struggle against the swamps, land slides and tropical diseases finally forced the French to abandon their inadequate tools and give up. The United States then bought the French rights for $40,-

000,000, at the same time aiding the Republic of Panama to gain its independence from Colombia.

The Canal Zone is 50 miles long and 10 miles wide and permits establishing a military protective belt for the vital water link. It bisects the Republic of Panama and was granted by that country to the United States in 1904 for $10,000,000, plus an annual payment of $250,000 that was later increased to $430,000. No land in the zone is privately owned. The President of the United States appoints the governor. On the Caribbean end of the zone is Cristobal, while Balboa occupies the Pacific end.

American success in building the Panama Canal was attributed to engineering skill and the use of steam-powered equipment. At the same time, a valiant staff of sanitary experts and doctors waged a brilliant campaign against malaria and other tropical diseases that had taken such heavy toll among the French. The project was completed in 10 years despite several immense landslides in Culebra Cut and elsewhere. Total cost of construction exceeded $300,000,000.

Gatun Lake, 85 feet above sea level, is the highest part of this water system. To reach it, ships are elevated through a series of locks at Gatun, Pedro Miguel and Miraflores. The locks are 1,000 feet long and 110 feet wide. Gatun Lake is the second largest man-made body of water and the earth dam by which it was created is the third largest in the world.

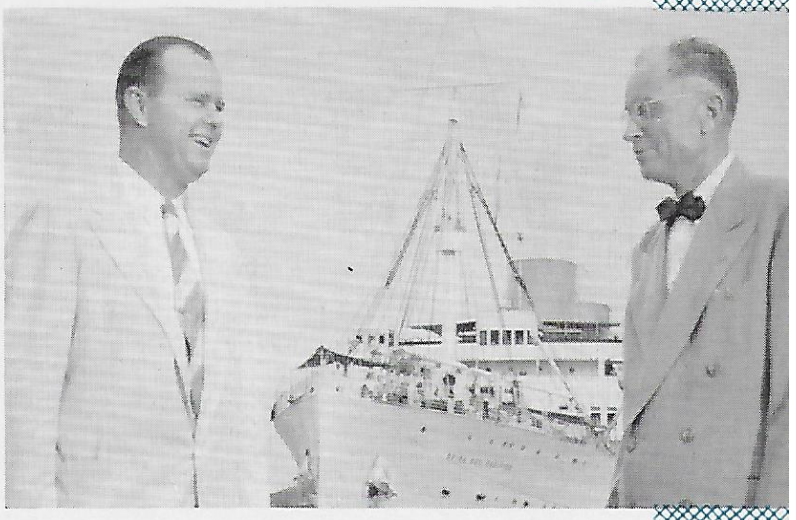
The position of the canal and the curve of the isthmus combine to twist the geographical bearings of many travelers. Actually, the Pacific entrance to the canal is 22½ miles east of the Atlantic exit.

Practically the only vessels permitted to pass through Panama Canal without paying toll are government craft of the United States and the Republic of Panama and ships that are proceeding to one of the canal yards for repair. Some of our largest aircraft carriers were limited in width during construction to permit their use of the passage; they can squeeze through the locks with only inches to spare. Foreign battleships have paid a toll of more than $20,000 for a single ocean-to-ocean transit, which is a bargain price compared with the cost of rounding the Horn.

All ships, American as well as foreign, pay toll charges on a basis of tonnage. The Union Oil tanker LOMPOC on a recent voyage to New York with fuel oil paid $7,107 to go through loaded and $5,696 to return light. Her Los Angeles-to-New York journey amounted to only 5,000 miles, whereas the same journey by way of Cape Horn would have logged 13,000 miles. During its first 20 years, the canal collected over $500,000,000 in tolls.

The Borace Service Station in Aguadulce is the Republic's largest and finest. Here an average of over 25,000 gallons of "setenta y seis" is sold monthly.

(L-R) Thomas Fogarty, our commission agent in Aguadulce; Messrs. Marioneaux and Chiari, customers; and Rodolfo de la Guardia, district sales manager.



S. J. Meares, left, is division manager of Union Oil's Central American Division, and R. C. Worsley, right, author of this article, is our Balboa district manager.

Open Letter to the President

Dear Mr. Taylor:

This is in no way intended as an attempt to discredit your economic viewpoint as put forth in your recently distributed pamphlet, "Capital and the Welfare State." In fact, the theories you express are fine . . . as far as they go. It is this "sin of omission" upon which I'd like to throw a little light.

First of all, let's get a few things straight about our economic system. Irregardless of the pretty phrases politicians, chambers of commerce and manufacturing associations spout, the fact remains that we do not operate under a "Free Enterprise System" (Oh! How that term is abused and misused!!) Nor do we enjoy any semblance of free competition in the market place.

These are the very facts which inevitably doom your theory of "full production" to oblivion before it can be put into full practice.

The two keys to the fallacy of your full production program as a panacea for our economic ills are:

1. Production for profit and
2. Artificially controlled prices

In order to make it clear why these two presently effective obstacles tend to cancel out any general gain made by full production, let us cite an example close to home.

Suppose, for the sake of argument, that all restraints to full production, including union regulations, managerial slow-downs, etc., were eliminated and every employee of Union Oil was free to produce his head off.

Although it doesn't necessarily follow that huge supply and full production lowers prices (That Ole Debil, controlled prices again!), we'll assume that the price of Union gasoline begins to drop . . . as a result of super production.

Now, here's where the trouble begins.

Under the Fair Trades Practices Act, which allows manufacturers to more or less "set" retail prices for their products, usually to the detriment of the consumer, Union Oil would be enjoined to maintain a minimum price per gallon for its gasoline . . . no matter how much of a surplus was produced!

Even if Union Oil were not forced by law to maintain a minimum price for its products, Standard, Shell, Richfield and other oil companies would consider it very "unsportsmanlike" of Union to under-sell them in the "competitive" (Sic!) market.

Now then, for the further sake of argument, let us assume that there are no such things as price fixing, Fair Trade laws or other control devices for maintaining a minimum retail price.

We'll "pretend" that the law of supply and demand is allowed to operate freely. Then what?

It may sound wonderful to say, "The more we produce, the cheaper goods become and the more there will be for everybody," but it just doesn't operate that simply.

Getting back to our gallon of gasoline: Suppose the price continues to drop. (No controls, remember.) Well, there is a definite limit to just how far the price per gallon of gasoline can "economically" be allowed to drop; controlled by two factors:

1. Cost of production, regardless of amount produced and
2. Demand for the product to the point of surfeit.

When either one of these points in free competition is reached, production must stop, bringing with it unemployment, loss of purchasing power and all the ills of depression. The reason is fairly obvious: The company cannot continue producing a product for which there is no demand. Or, if there is a demand (at a lower price brought on by full production) it cannot continue to produce for a selling price lower than the cost of production.

It isn't necessary here, Mr. Taylor, nor does space permit going into all the economic ramifications of foreign trade, embargo barriers, world-wide paper credits, etc., but this will give you some idea of why your proposal of "full production" . . . for profit . . . cannot solve present unrest and an insiduous feeling of doubt directed at our "best system so far devised."

On the problem of increasing Big Government and resulting heavy tax burdens, I agree 100 per cent that we cannot continue indefinitely "milking" one group for the benefit of another group.

Just how we will meet this problem and solve it, for solve it we must, I have no idea; but I am sure that under our present laws and economic regulations even your proposal for "full production", commendable as that goal is, falls more than just a little bit short of a true solution to our economic problems.

Sincerely yours,
Wallace J. Burke,
A Union Oil Employee.

The President's Reply

Dear Mr. Burke:

Thank you for your letter referring to my talk, "Capital and the Welfare State". It is indeed gratifying to know that some of our employees are giving thought to these perplexing problems.

Your letter has pointed up several important issues pertaining to the subject of the talk. On the assumption that there are other employees who have had questions on the same or similar issues, I am pleased to have this opportunity to answer the questions in the form of an "open letter".

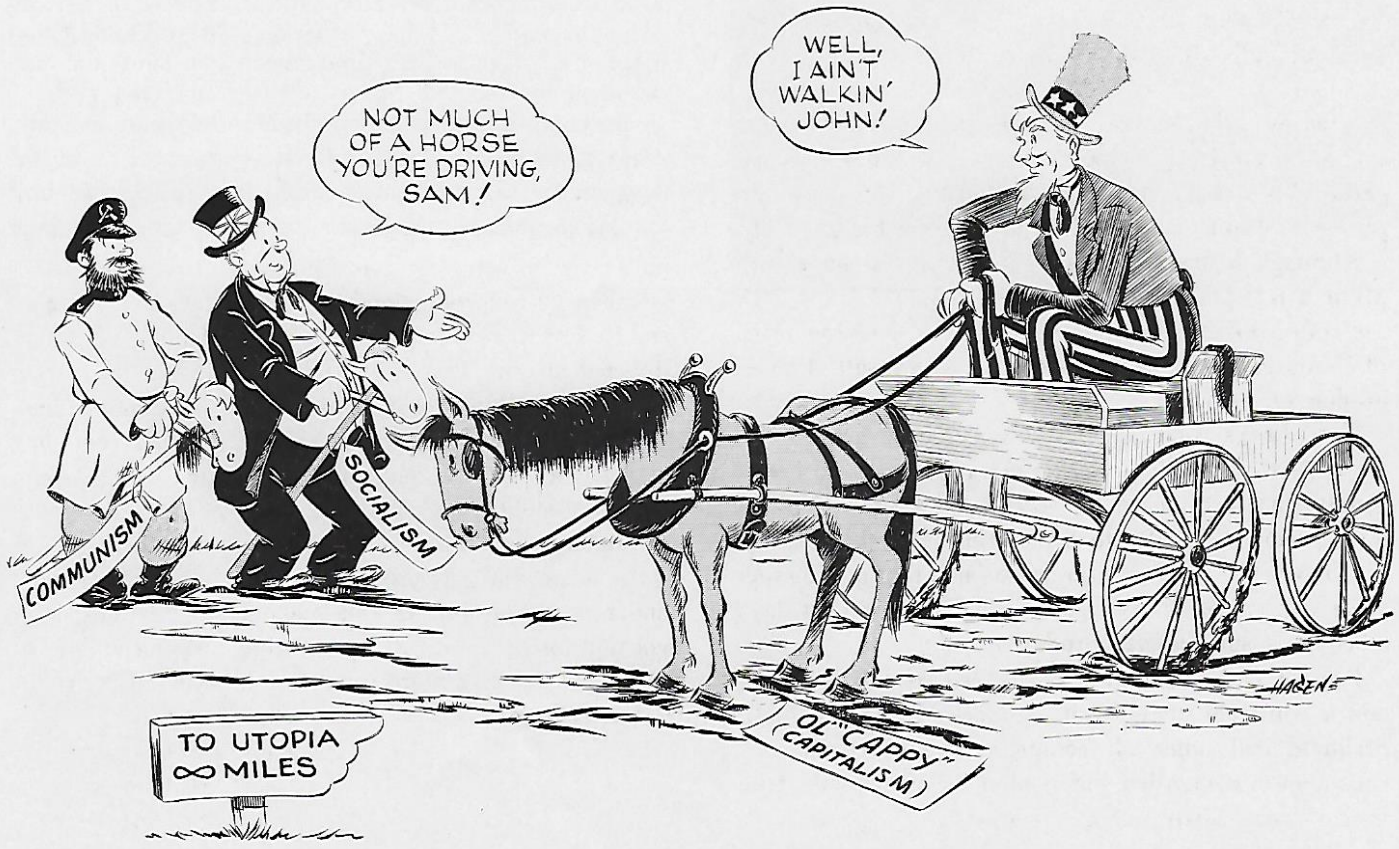
As you stated, it is unquestionably true that "Free Enterprise" is not completely free, and business, like the individual, is subject to many restrictions. But we can all agree that some restrictions are beneficial—for example, traffic laws are beneficial to the individual; restrictions against misrepresentation in advertising are beneficial to both individuals and business. Other restrictions range from those which are very annoying to those which are punitive.

However, freedom is a relative matter, and I think you will agree that enterprise in America, as compared with enterprise in England and Russia, is still relatively free. Likewise, it cannot be said our "best system so far devised" is not without its weaknesses. But most certainly, considering the extraordinary accomplishments of the past and present under the American way, it is clear our system by far surpasses any other.

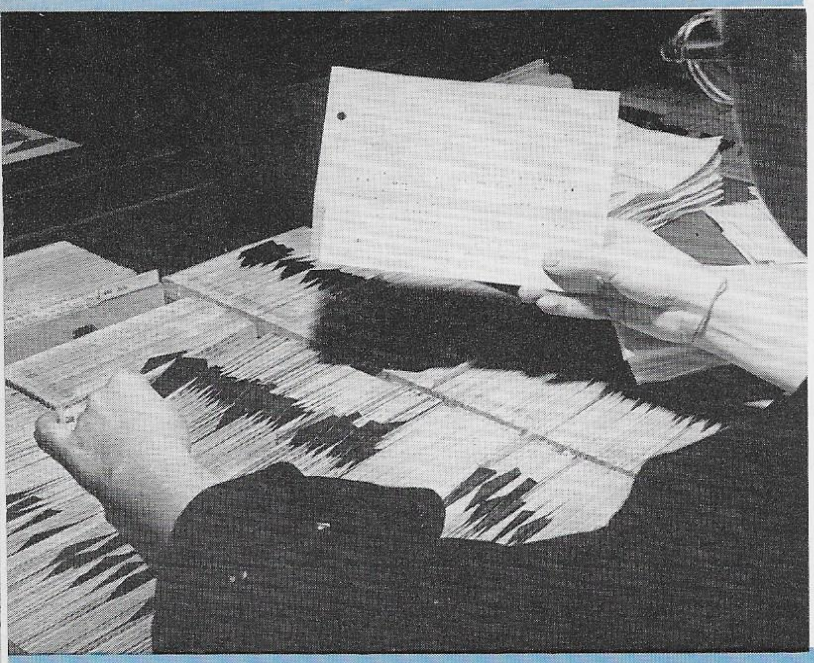
Your comment regarding the fixing of prices under the so-called Fair Trade law raises a point that should be of interest to all employees. It can best be answered by a discussion of the workings and limitations of this law. The Miller-Tydings Act and companion State Acts permit a manufacturer of branded products to establish the price to be charged by retailers of his product. They do not permit a manufacturer to make agreements with other manufacturers regarding selling prices; in fact, such agreements among manufacturers are forbidden by law. One of the effects of the Acts is to prevent large retailers from "freezing out" smaller competitors, selling the same brand, by destructive price wars.

To this extent, these Acts restrict unfair competition among retailers *of the same brand of product.* They do not prevent competition among products of different brands. Fair trade prices are not inviolate, as they may be changed up or down by the manufacturer at any time. Manufacturers of branded products are not obligated to "fair trade" their selling prices and many do not. As a result, such prices as are "fair traded" must

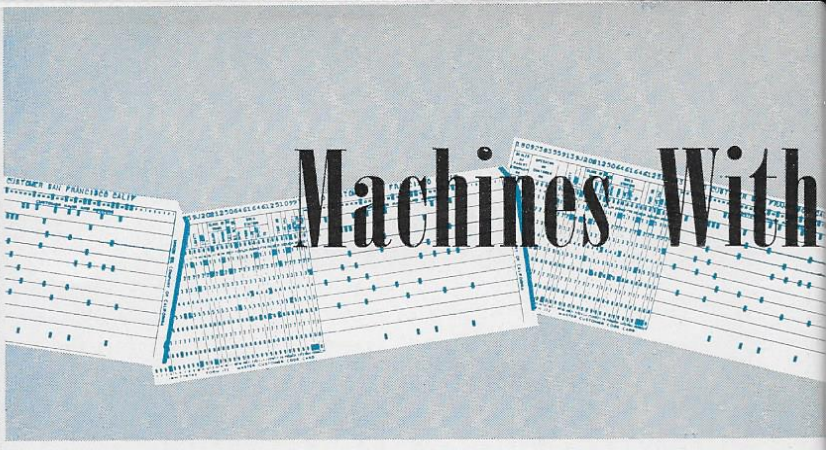
(Continued on page 23)



Above are the Central Territory "tub files" in which a punched-card record is kept of every customer. This master card, below, is paired with the corresponding ticket.



Customer names and other unchanging billing data are also posted in these index books for reference purposes.

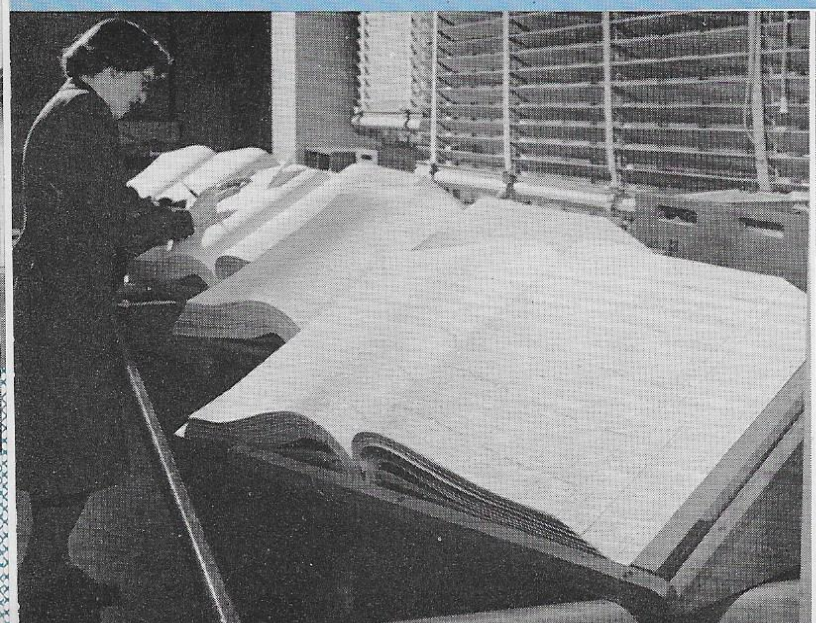


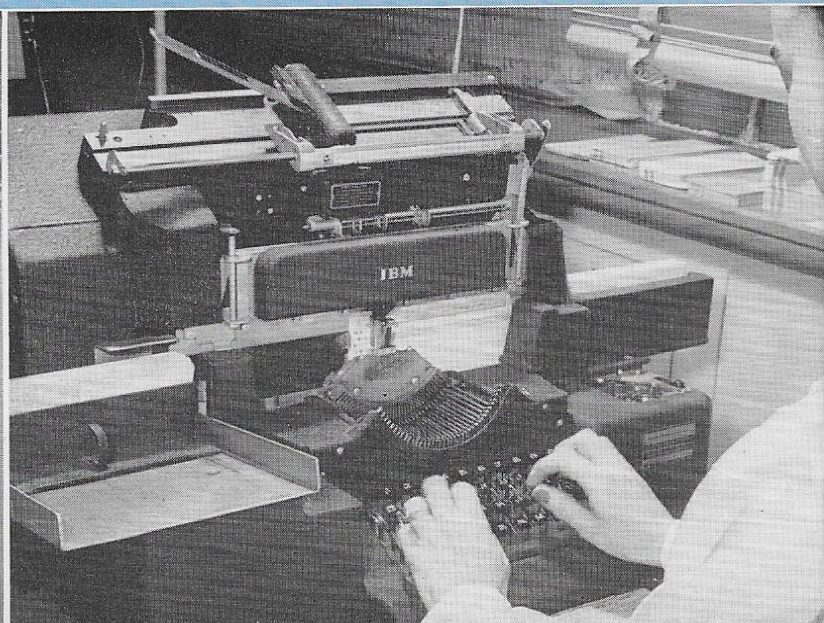
Machines With

PETROLEUM field operations, refineries and transportation systems no longer hold a monopoly on mechanical wizardy. Step into one of our new machine accounting offices at San Francisco, Seattle or Los Angeles today and you will witness how the inventive genius of mankind has practically transformed accountants into engineers, bookkeepers and clerks into operators and oilers, and comptometer operators into key punch experts.

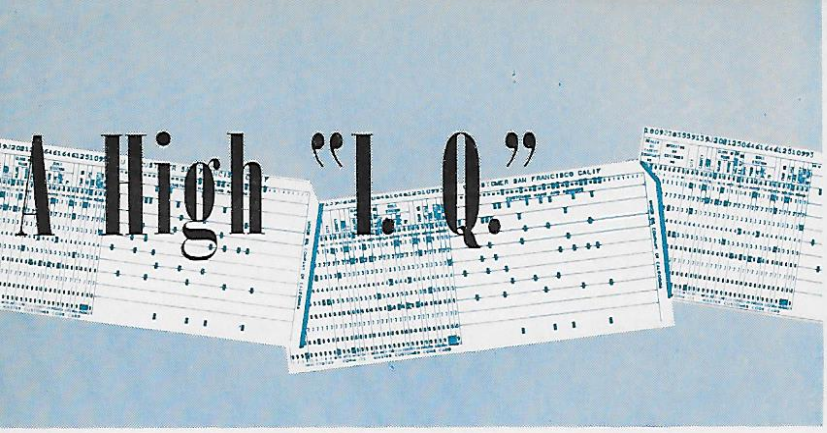
Behind this accounting revolution is the International Business Machines Corporation, whose ingenious IBM gadgets have nearly relegated pencils and mental calculations to the ash heap. At the flip of a switch their robots will add, subtract, multiply, divide, read, write, sort, classify, post and file. They are infinitely more accurate than the human mind and many times faster. One IBM machine recently built is capable of solving a mathematical problem that several men could not hope to complete in an entire lifetime.

As complicated as these machines appear and are, their wizardy can be understood by most of us at the cost of several years' study and time. The basic unit or brain around which the machines are built is a





The alphabetical printing punch records data on master cards in punched-hole and in readable printed form.

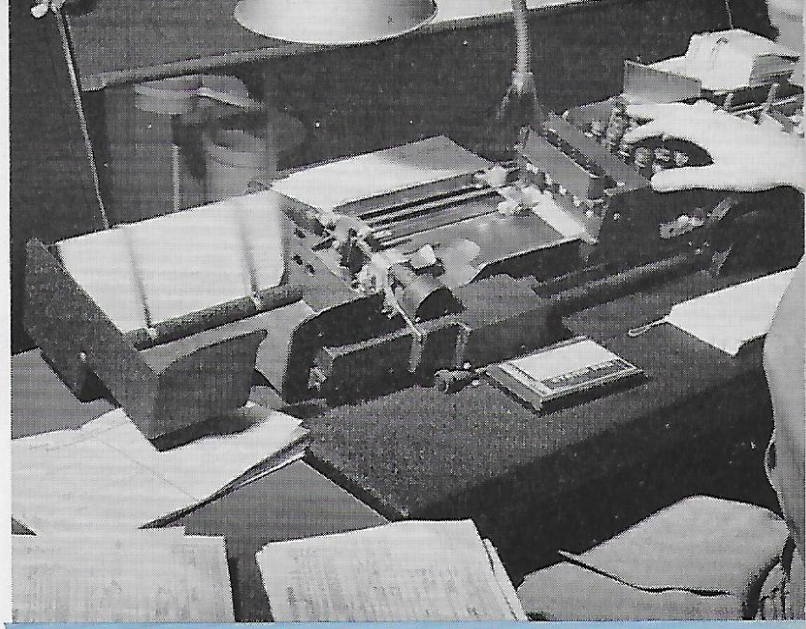


A High "I. Q."

simple card divided into some 80 columns. Names, amounts and other data are recorded on the card in the form of punched holes. As the punched cards pass through the "throats" of the various calculating and sorting machines, brushes sense the perforations, and, according to the column location of each hole, send out electric impulses to relays which govern the machine's calculating or sorting functions. In a sense, the IBM machines read by a sense of touch quite similar to the manner in which a blind man reads Braille. Thousands of wires provide a nervous system. The work of sorting, calculating and writing is done by electrically operated adaptations of our modern adding machines, calculators and typewriters.

The first job to which IBM machines have been assigned in the Company's Territory offices is that of doing the statistical accounting on some 200,000 sales tickets handled each month.

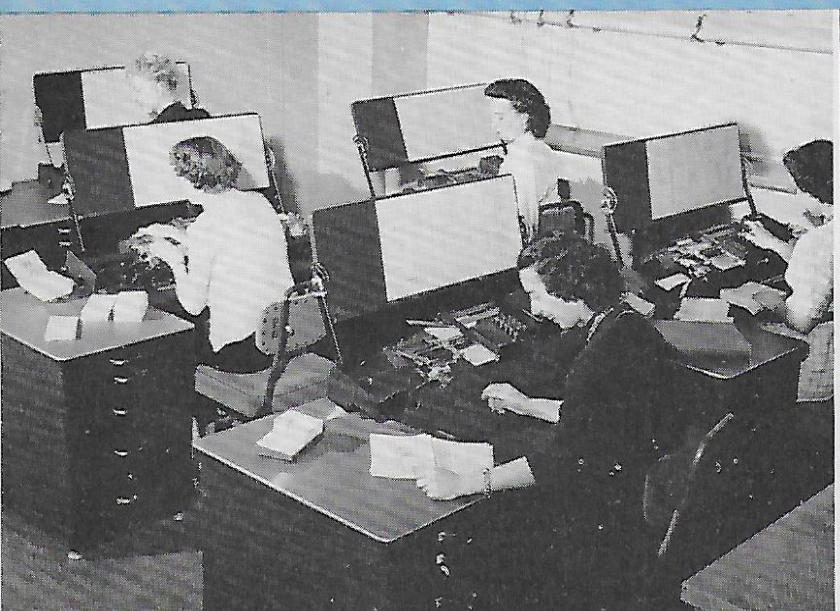
"Tub files" maintained at each office contain a master card on every Union Oil customer, showing in punched-hole form his name, delivery address, the type of trade in which he is classified, the marketing station that supplies him, the salesman who serves him, and other



The numeric punch is used to transfer numerical data from delivery ticket to duplicate of proper master card. Below, Seattle's operators and machines are in action.

These San Francisco girls found key-punching not too difficult to learn after a comptometer or typing job.

At Seattle, specially trained men are needed to keep the machines reading, writing and thinking properly.



unchanging data.

When a sales ticket arrives at the accounting office, it is first paired with the correct master card and sent to one of the key punch operators. Her machine transfers all master-card punched holes to a second card automatically, making it necessary that she add only the amount, price, description and tax of each commodity purchased.

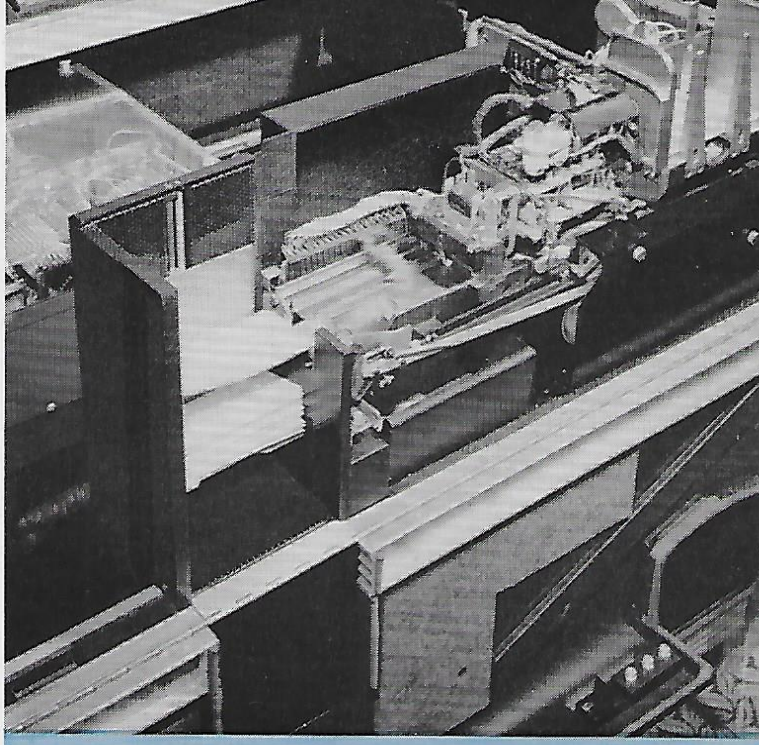
The sales card then becomes a permanent record, useful in providing data for many statistical reports required in the Company's operations.

Among the statistical reports now being IBM-prepared are:

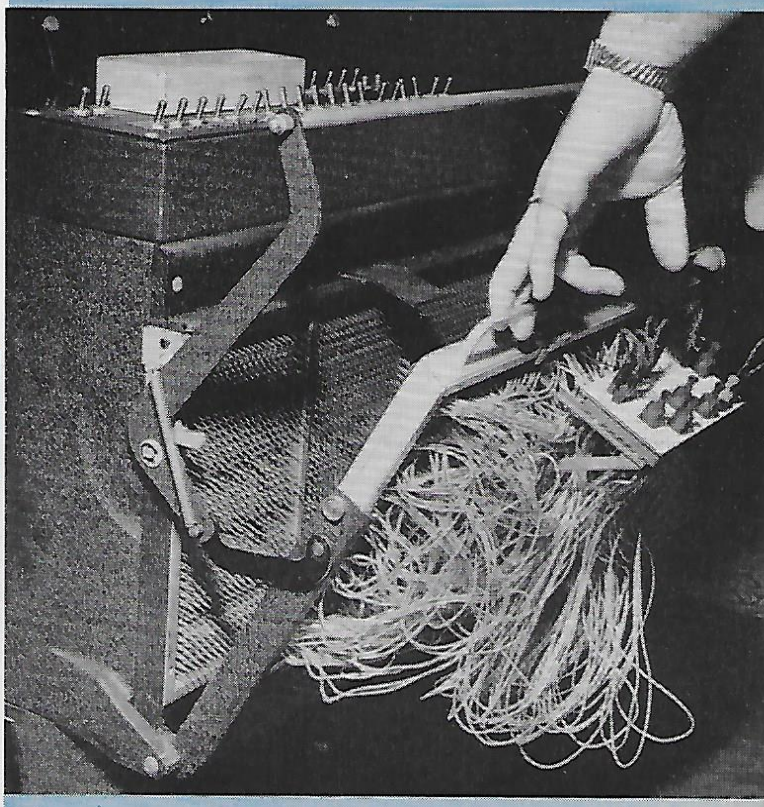
A gallonage and expense analysis of service stations, showing how the stations, individually and by area and Company-wide, are doing in comparison with their performances during previous months and years.

An analysis of every Company product sold, showing the quantities sold during the month and year-to-date, whether sales amount to a gain or loss compared with the previous year, and further breaking this information down into sales through marketing stations, motor transports, direct shipments and service stations.

Another analysis shows the quantity, gain or loss and yearly comparison of gasoline sales to every class of trade, namely, Company-operated service stations, leased service stations, other resellers, agricultural accounts, contractors, marine accounts, other consumers, the Federal government, State, County and City governments,

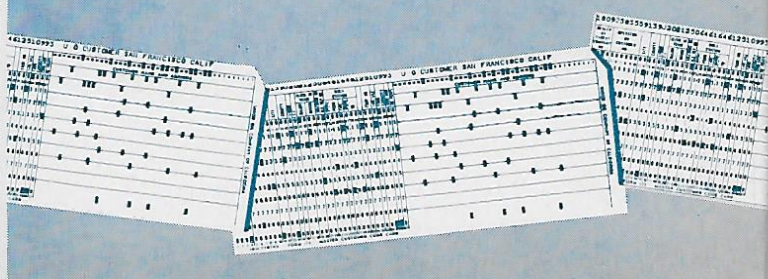


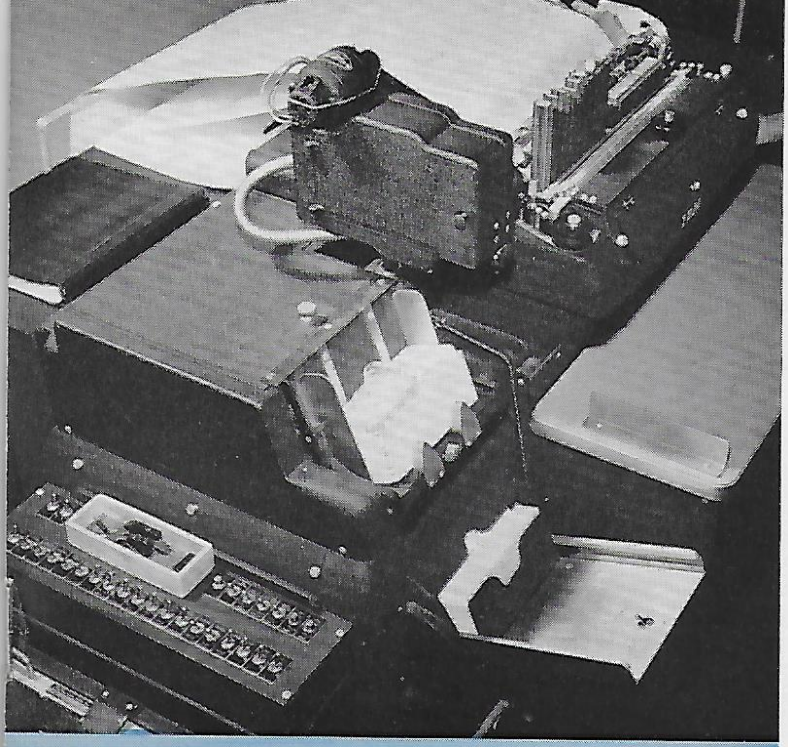
This device is capable of substracting each of several taxes from oil sales—but only for accounting purposes.



One IBM machine is capable of many calculations and operations, depending on how its plug-board is wired.

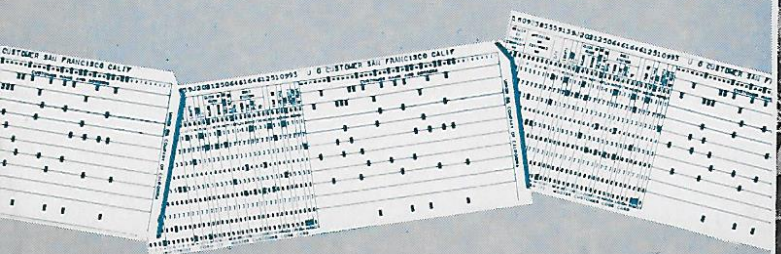
The electric card-operated sorting machine will sort cards into any desired sequence at about 600 a minute.





The electric accounting machine reads, adds, subtracts and finally writes its own answers on a statistical report.

Plug-boards that control each machine's train of thought are stored in this cabinet for convenience—not for rest.



and gasoline that is consumed by the Company.

Still another "Classified Gasoline Sales" report breaks total sales down into 26 classifications of resellers, consumers, government and other accounts.

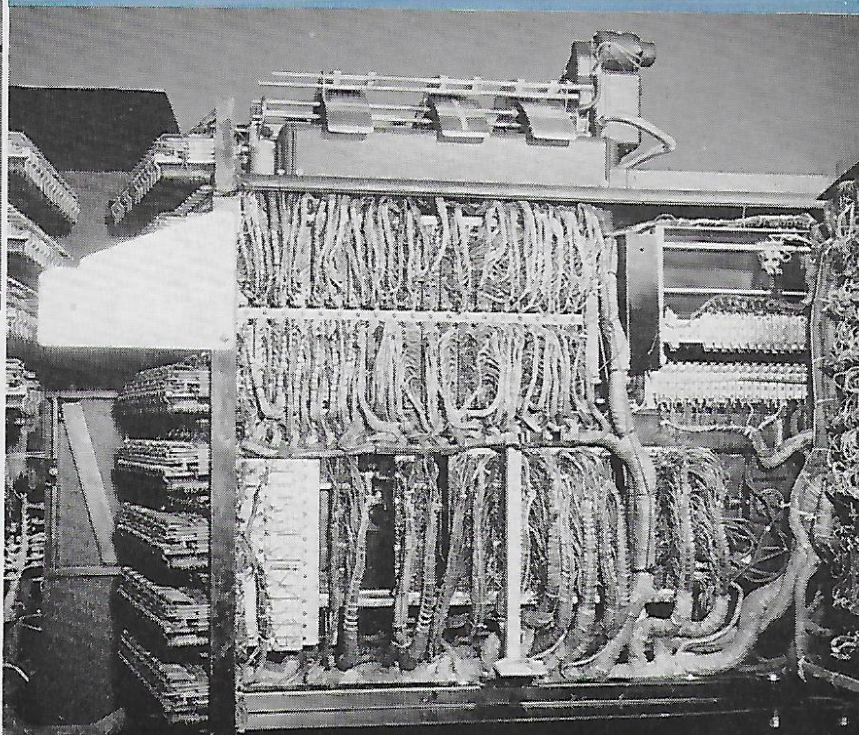
An itemized statement is required every month showing the commissions earned by each consignee. These list the units sold of each commodity within the consignee's area, their ex-tax value, the percentage rate of commission, and the total commission earned.

All of these reports, which formerly required a vast amount of manual accounting, are now prepared by the simple expedient of placing punched tabulating cards in the card hoppers of several IBM machines. The machines feed themselves automatically, sort at a rate of 600 cards a minute, check ticket extensions made by tank truck salesmen and sort incorrect cards into a reject pocket, subtract taxes from the total amount of a sale, perform a host of other mathematical services and finally disgorge an accurate, printed statement in three copies.

The scope of machine accounting is extensive enough to include many other routine clerical operations. Already, part of the Company pay checks are figured and written in this manner. And insofar as economy dictates, more manual accounting methods may feel a machine breathing down their neck.

The change-over so far has cost no Union Oilers their jobs and any expansion of the program will be undertaken with a resolve to keep the Company family intact.

Probably no machine has ever come nearer to imitating the human brain as to function—and in appearance.



ARISTOWAX, the Union Oil version of pure paraffin wax, is being removed from molds by R. L. Hoskins and B. Lazeres at Oleum Refinery, after which it proceeds to many commercial uses, including the making of candles.

Candle Power

A HALF-CENTURY ago, as kerosene began to illuminate even the lamps of China, many a candle-maker closed up shop and went into some other line of business. It appeared that candles and candle-making were doomed by this wonderful new petroleum product. Kerosene was safer and inexpensive; one lamp could put a dozen tallow candles to shame.

But today, when electricity and other brilliant illuminants have nearly crowded kerosene out of the lighting picture, the humble candle is still with us. It adorns the birthday cake and the dining table and the altar. Nearly every home has one or two sticks in reserve in case of an electric power failure. Millions of people in the Far East continue to depend on it to light their households. Other millions use it in their religious ceremonies, or on occasions of mourning to decorate the graves of their departed. The candle is considered indispensable to the proper observance of China's New Year. In fact, candles have remained an important item of world trade.

This primitive lighting device evidently antedates recorded history.

The earliest Egyptians are known to have immersed strands of reed or other vegetable fiber in household fats, thus producing a torch that would give light for an extended period of time.

The discovery that beef and mutton tallow would burn when heated probably suggested many an early experiment, for home-made tallow candles came into use among tribes and nations who had little or no contact with each other. Unquestionably, the tallow candle should be classed as one of the first and greatest inventions of mankind.

Beeswax was also discovered at an early date to be a good illuminant. Altar lights in some of the first Christian churches depended upon this source of fuel, with the result that beeswax candles are still required today in some instances for the recitation of mass.

When whaling became a major industry, it was found that the right-whale particularly yielded large amounts of spermaceti, a waxy solid that when manufactured into candles produced the most satisfactory light then known. In fact, our present unit of light measurement, a candle-power, was first defined as the "intensity of light from a 7/8-inch sperm candle burning at the rate of 120 grains an hour."

Finally, about 100 years ago, some Scotchmen discovered a new kind of wax. They were experimenting with small amounts of oil recovered from shale and found that part of the oil, when chilled to a low temperature, would solidify. By removing the solidified portion and further refining it through a "sweating" process, they produced a white and nearly pure compound now known as paraffin wax. The name paraffin is derived from two Latin words *parum* and *affinis*, meaning little affinity, and is descriptive of the compound's exceptional resistance to chemical change or affinity with other substances. However, it was not until about 15 years before World War II that paraffin wax became available in quantity and competitive with other waxes and fats.

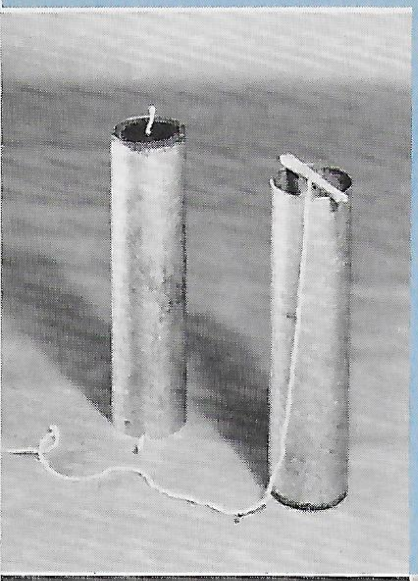
Greatest impetus to the production of paraffin wax was the development of motor oils. The petroleum industry found that lubricating oils produced from paraffin base crudes had a higher viscosity index, meaning that they were less influenced by high temperatures and

wide temperature changes. The wax contained in these crudes, however, was a hindrance to effective lubrication and had to be removed. Thus, paraffin wax became a rather voluminous by-product of motor oil production.

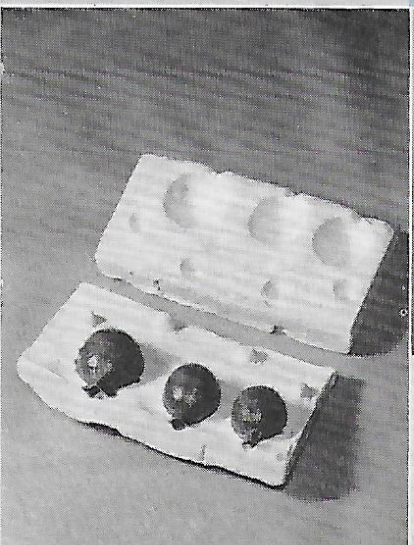
Union Oil scientists made an important contribution to refining processes in 1934 when they invented a solvent dewaxing method of treating oil. As a result, we are now producing large quantities of a product marketed under the trade name of Aristowax. It is paraffin wax of the highest quality known to commerce and is in constant demand because of its high melting points.

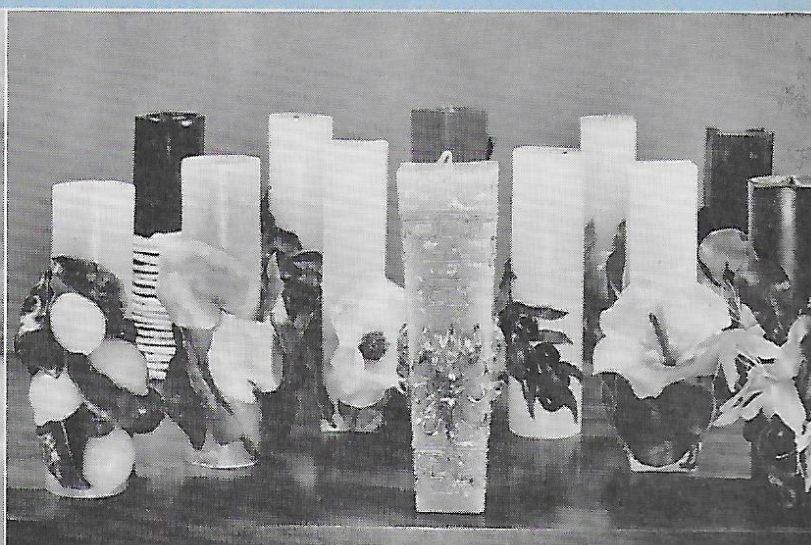
So, you see how it happens that candle-makers and oil men, bitterest of competitors 50 years ago, are now transformed into the best of friends. For, without the candle-maker, paraffin wax might not be the self-supporting by-product it is today. And, without petroleum's paraffin wax, modern candle-makers might have turned their skills and artistry to other mediums.

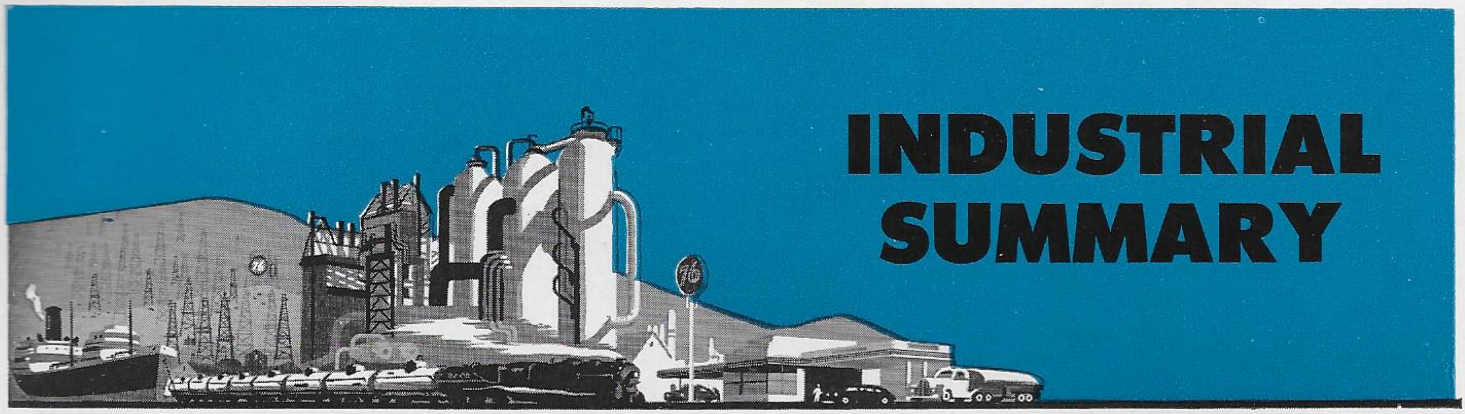
The decorative masterpieces of Ramon A. Castellanos shown in the accompanying pictures represent a new *high* in a most ancient art. And we are proud to report that Mr. Castellanos uses Aristowax exclusively.



A foremost artist among modern candle-makers is Ramon Antonio Castellanos of Los Angeles, above. Using Aristowax—because it makes smokeless, dripless and heat-resisting candles—this artist adds the desired dyes, pours molten wax into a large variety of molds, impresses leaf and petal designs into sheets of warm wax, does some expert trimming, and finally produces candle masterpieces that are far too beautiful to burn.







INDUSTRIAL SUMMARY

• FIELD

The operations of Union Oil Company's largest single field unit, in terms of clean oil currently produced daily, were commenced by the Field Department on March 1, 1950. On that date the Coalinga Nose Field Unit in Fresno County, California, began operating under Company supervision. Fifteen days earlier the Department of Interior had given its approval of a Unit Operating Agreement.

In acquiring this operation, the Field Department assumes responsibility for the operating interests of all parties to the agreement, which are Standard Oil Company of California, The Superior Oil Company, The Texas Company, Honolulu Oil Corporation, Seaboard Oil Company, Los Nietos Company, and McAlester California Oil Company. Union Oil Company recently acquired the Los Nietos interest and has a long term crude purchasing agreement covering the McAlester California interests. The Los Nietos and McAlester California Company's interests are each approximately 13.9 per cent of the Coalinga Nose Field Unit, which is producing approximately 39,000 barrels of oil and 33,000,000 cubic feet of wet gas daily. Taking over this unit involves the operation of 150 producing wells and an absorption-compressor plant.

The Coalinga Nose Field was discovered by the Robert S. Lytle group in 1938. The field is considered fully developed and comprises 3,500 acres of proven oil land. The main productive zone to which the Unit Agreement applies is called the Gatchell Zone and is found at an average depth of 7,850 feet. The oil produced has a range of 25 to 33 degrees API gravity.

There have been several shifts in Field Department personnel to make the Company-operation of this unit possible.

from Sam Grinsfelder

• MANUFACTURING

Approximately 1,800,000 barrels of fuel oil were shipped from Los Angeles Refinery and 500,000 barrels shipped from Oleum Refinery for a total of 2,300,000 barrels shipped during February. Deliveries to the East Coast and to the U. S. Navy accounted for the major part of the shipments. The continued heavy demand for fuel oil will tax our ability to maintain adequate supplies for our customers.

The movement of oil across the Los Angeles Refinery docks totaled 3,500,000 barrels, setting a new high for postwar operations.

A spectacular fire at the Los Angeles Refinery on February 10 destroyed a 19,000 barrel tank and 700 barrels of the gasoline it contained. The excellent work by the fire fighting crews in controlling the fire prevented the destruction of adjacent tanks.

It is of interest to note that the cost of operation, maintenance and modernization of our refineries during 1949 was about $47,000,000.

from K. E. Kingman

• TRANSPORTATION

In the course of the Company's modernization program, alterations at the Bell Pump Station near Santa Maria, at the Sunset Station in the Maricopa vicinity, and at the Poso Station in the Poso area were completed. Obsolete steam powered pumping equipment at the Bell and Sunset Stations was replaced with gas engine powered shipping pumps and at the Poso Station with electric motor driven pumps. Alterations were also completed on the oil heating equipment required for winter operations.

In addition, approximately 7 miles of 8 inch pipe line were installed between the Coalinga Nose field and Tar Canyon Pump Station to permit pipe line movement of recently acquired Los Nietos and McAlester oil in the Coalinga Nose field. Gas engine driven pumps also were installed at the Tar Canyon Station.

During the recent cold weather in the Northwest, ice conditions in the Columbia River caused some disruption in the normal tanker operations. The ice destroyed all buoys and navigation markers in the river

and vessels were stripped bare of paint by the scouring action of the floating ice. For about 10 days, all night navigation was entirely discontinued. At Tacoma, about four inches of ice formed in the salt water requiring the use of a tug as an ice breaker to permit berthing of the PAUL M. GREGG. Apparently this was the first time in history that such conditions have prevailed in the Puget Sound.

from R. D. Gibbs

• MARKETING

On the evening of March 8 approximately 140 service station dealers and their key assistants in the Chicago area gathered at the Hotel Sherman as guests of the Los Nietos Company, distributors of Union Oil products, for dinner and entertainment. This was in the nature of a kick-off meeting for the introduction of Royal Triton in the Chicago area. The dealers were addressed by Roy Linden, Vice President and Sales Manager, and A. E. Grogan, Special Representative in charge of eastern sales. There are now some 200 dealers handling Triton and Royal Triton Motor Oil in the greater Chicago area. This sales campaign has been supported by a full-page, two-color ad appearing in the Chicago Tribune. One hundred fifty billboards are also being used to advertise Royal Triton.

Dealers are now being lined up in the New York area and plans are in formulation for entering such other eastern points as Kansas City and St. Paul.

ASPPA (Armed Services Petroleum Purchasing Agency) has awarded Union Oil Company a contract to supply 1,040,000 barrels of naphtha-enriched crude oil to Japanese refineries which have been approved by SCAP, (Supreme Commander of the Allied Powers) for rehabilitation. This sale follows an award of 960,000 barrels of the same material which the company received earlier this year. Deliveries under both contracts, which will be supplied from our Port San Luis terminal, will be completed before June 30.

As a result of the large fuel oil sales to East Coast customers during the current winter season the company's inventories have been reduced to normal working levels.

A second training course for qualified sales employees which gets under way this month will feature the application of Triton, T5X, Unoba and our other principal lubricating products in all types of industrial equipment. Final classes of a first course on general product information were completed last month after a total of 336 men had been put through the organized schedule.

from Roy Linden

• PURCHASING

District Puchasing Agents from all sections of the Company held their semi-annual meeting in Los Angeles on March 13th.

Attending the conference were E. H. Weaver, Manager of Purchases, C. S. Perkins, Asst. Manager of Purchases, A. Paget, General Storekeeper, Wm. Stockert, Chief Clerk, L. L. Bevill of Midland, Texas, A. Erickson of Seattle, L. S. Hall of Los Angeles, H. R. Morrison of San Francisco, and R. C. Zell of Santa Fe Springs, and F. M. Knight, Los Angeles.

Subjects discussed included uniform policies, inventories, and other problems common to overall company operations.

from E. H. Weaver

• INDUSTRIAL RELATIONS

Early in March a letter was received from the General Cousel's office of the National Labor Relations Board in which the previous ruling of the Regional Director was sustained, stating that the charges brought about by the strike of a year ago were not in violation of the Act and that there is insufficient evidence to warrant further proceedings.

It is the opinion of the Legal Department that this effectively closes any action with respect to these cases.

On March 6 a letter was received from the Director of the Twenty-First Regional Office of the NLRB consolidating the various decertification and representation petitions. Hearing on these matters, which concern the Sixth and Mateo marketing terminal and the Oleum and Wilmington refineries, will be held on March 29. The purpose of this hearing will be to determine the proper unit to be covered in each instance and those eligible to vote in the unit after it is established.

Subsequent to the hearing the NLRB will undoubtedly direct that elections be held to determine who shall be the representative in each instance. The NLRB will then certify the winning agency who will probably request negotiations for the purpose of arriving at a contract. It is probable that several months will elapse before these matters can be finalized.

CHANGE OF ADDRESS

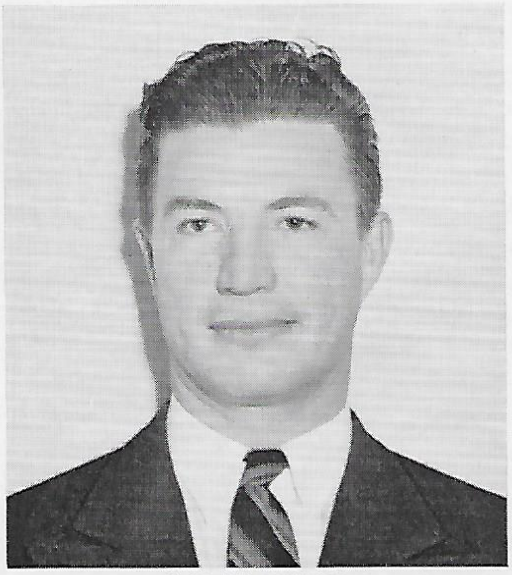
It is of the utmost importance to employees of the Company to promptly notify their payroll office in case of a change of mailing or home address.

It is most essential that current addresses be maintained in the head offices for reporting your earnings and withholding tax, unemployment insurance, and Federal Old Age Benefit taxes to the government and to insure the delivery of direct mailings or publications.

To faciltate reporting changes, form 129A may be obtained from foremen, supervisors, personnel or payroll offices.

Organization Changes

K. C. VAUGHAN



J. T. LEDBETTER

C. A. STEINER

RECENT appointments announced by Basil Kantzer, manager of Pacific Coast Field Operations, and Stanley G. Wissler, Chief Geologist, Pacific Coast, have meant promotions for the following Union Oilers:

KENNETH C. VAUGHAN became division superintendent in charge of drilling and production, Valley Division, with headquarters at Bakersfield, effective February 7. He replaces R. A. McGoey, who resigned to open private offices as a consulting petroleum engineer. Kenny, a graduate from University of Southern California's petroleum engineering school, entered Company employment in 1933. He served for three years as a well-puller and pumper before being made an assistant production foreman for the Coast and Southern Divisions in 1936. In 1941 he moved up to production foreman at Dominguez; then to production superintendent, Valley Division, in 1944, and production superintendent, Southern Division, in 1947. He has also served on the Employees' Benefit Plan Board of Supervisors.

J. TALBERT LEDBETTER is now acting division superintendent in charge of drilling and production, Southern Division, replacing Kenny Vaughan. His headquarters are at Whittier, California. Tal is also a graduate petroleum engineer from University of Southern California, where he enjoyed the advantage of a four-year scholarship. His first experience in the oil fields, aside from cutting weeds for General Petroleum during school vacations, began in 1933, when he joined Union Oil as a roustabout at Coalinga. In 1934 he gained experience as a rotary helper at Kettleman Hills; in 1935 as a field operator at North Belridge, a shipping clerk at Mt. Poso, and an apprentice engineer in the Research Department at Wilmington. The year 1941 marked his promotion to division petroleum engineer at Bakersfield. In 1946 he went to Paraguay as the Company's foreign representative. Returning to California, he was appointed senior petroleum engineer at Whittier in 1947 and division drilling foreman of the same area in 1949.

CARL A. STEINER was appointed division petroleum engineer, Valley Division, effective February 7.. He is a graduate of the petroleum engineering school at University of California, Berkeley. Joining the Company in 1927, Carl proceeded directly to Venezuela, South America, where he worked four years as an assistant

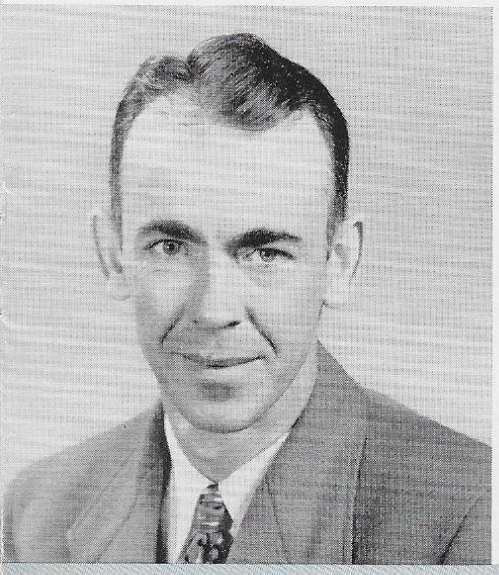
geologist. His return to California during the bad depression year of 1931 resulted in a brief but not unprofitable engineering detour; for two years he was glad to preserve his employment continuity as a roustabout, laboratory assistant and well puller. However, in 1933 he was appointed assistant engineer at Santa Fe Springs; in 1936 district engineer at Bakersfield; in 1941 district engineer at Dominguez; and prior to his latest appointment was serving as division petroleum engineer, with headquarters at Dominguez.

CHARLES F. BOWDEN has replaced Steiner as division petroleum engineer at Dominguez. "Chuck," a native of Pennsylvania, studied chemical engineering at Grove City College and obtained a petroleum engineering degree from Pennsylvania State College in 1939. His first Union Oil assignment when he came to work in 1939 was that of junior engineer "B" at Los Angeles Refinery. Three years of refinery training resulted in his promotion to assistant petroleum engineer, Dominguez, in 1942. At Santa Fe Springs, between 1943 and 1946, he took active part in the design and construction of water-treating plants for our first water flooding projects at Richfield and Dominguez. He was appointed petroleum engineer at Dominguez in 1946 and senior petroleum engineer, Whittier, in 1949.

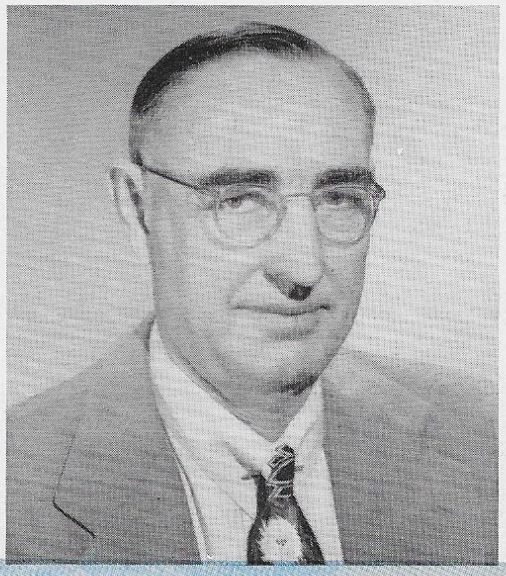
J. CHRISTOPHER RECTOR, newly appointed assistant to the manager of Pacific Coast field operations, is currently stationed at Bakersfield. Chris, one of the earlier pioneers of California oil fields, gained most of his book learning at a time when universities knew less about petroleum engineering than did some of our roustabouts. However, he took an electrician's course through International Correspondence Schools, a business course through Washington Institute, and applied for admittance into petroleum's University of Hard Knocks. Chris joined Union Oil at Orcutt in 1907 as an electrician. In 1911 he was loaned to the Pinal Dome Oil Company and was serving as their foreman of gas lines when Union Oil bought the Pinal properties in 1917. Among the many responsible assignments he later received were superintendent of gas operations at Orcutt and Santa Fe Springs between 1918 and 1924; production superintendent, Santa Springs, in 1944; and coordinator of equipment, safety and training, Santa Fe Springs, in 1947.

HARVEY W. LEE was appointed chief scout for the Exploration Department's Pacific Coast area effective December 15. He graduated in 1922 as a mining engineer from the University of California, Berkeley. Joining the Company that same year, he worked until 1929 in Research and Development at Wilmington, then transferred to the Valley Division as a scout. His service continuity was broken during the depression years, 1932 to 1935. He returned to work in 1935 as chief scout, Los Angeles; moved to the Land Department as lease man in 1947; and to the Exploration Department as senior geologist, Bakersfield, in 1949.

C. F. BOWDEN



J. C. RECTOR



HARVEY W. LEE

Operation Skier-Lift

Back home and broke (both legs) is Rolly Deering, ex-skiing enthusiast. Releasing him to Mrs. Rolly Deering is nurse "Penny" Penhale of L.A. Refinery.

Ambulance men completed the mission after W. G. Murphy, co-pilot, and J. E. Gotham, pilot, (below) had flown their patient from Reno to Long Beach.

ON February 5, while skiing down a Reno mountain side at about zippety miles an hour, Roland F. Deering, an irresistable force, struck a patch of soft snow and presently found himself involved with an immovable mass of terra firma. The result: two broken legs and an indefinite stay at Reno's Washoe Medical Center. Dr. McClean, who has set nearly as many bones as there are skiers in the Sierras, was Johnny-on-the-spot with medical attention, but he could do very little about getting Rolly back home to Long Beach.

Fortunately, Rolly's wife, Jean, was using the same vacation jaunt to better advantage. She eventually contacted Los Angeles Refinery, where Rolly is employed in the Process Department, and sought advice from the department supervisor, Phil Fawcett. Phil in turn contacted Ben Cooper, supervisor of Employee Benefits, and soon Jean was assured that Rolly was adequately insured against just such off-duty mishaps.

However, Union Oiler Good-Samaritanism can be more than Benefit-Plan deep. Rolly's plight touched off a series of phone calls and, several days later, a Company Beechcraft landed at the Reno airport. Pilot John Gotham was at the controls. Joining him in the flying rescue mission were "Penny" Penhale, nurse, and Ben Cooper. Handling arrangements on the Nevada side were L. C. Leonard, district sales manager, and E. W. Bollinger, resident manager, both of Reno.

At 1:30 that afternoon, the Beechcraft took off with said skier reclining comfortably in its five-place cabin. Two hours later, the plane landed at a Long Beach airport. There was a slight but not unpleasant delay while several reporters and photographers covered the unusual event. But after a short ambulance ride, Rolly turned over his medical reports and X-Ray photographs to Dr. Lee and arrived safely home. Operation Skier-Lift was happily concluded.

from Frank Riddick

In Best Form

HARDLY a tank truck salesman or accountant in Union Oil Company is not thoroughly familiar with Form 181. It has been in use for many years as a means of recording each driver's daily sales of commodities, barrels returned or delivered, money collected, etc. It was a very good form, as forms go, and might have lived on eternally with only minor changes had not a certain territory used its "bean."

The location we refer to is Northwest Territory and the "bean" to be commended is their assistant territory accountant, who pronounces his name that way but spells it B-I-E-H-N.

With the adoption of IBM machine accounting, Stan Biehn was assigned to the job of re-examining old Form 181. After a few rounds of deep thought, he came up with several streamlining suggestions. The new Form 181-S could be one-sixth the size of its predecessor. It could be prepared in less time. It would be cheaper to print, more convenient to use, less bulky to mail.

The upshot is that a new form is now in general use throughout all of our marketing areas.

Such suggestions, although seemingly of minor importance, become very valuable when magnified into Company-wide use. For example, Stan Biehn's idea will result in a postage saving of around $200 a month to Northwest Territory alone. The combined economies, multiplied by adoption in all marketing areas, amount to a really worthwhile achievement.

Bill Graham and Stan Biehn of Seattle

from J. U. Witt

Tom Wise, Betty Kemp and Northwest's courtesy plaque

Tangible Gratitude

Even a warm "Thank you for your patronage" can become rather trite if used over a long period of time without adding a few favors in return. So, the Territory office in Seattle has adopted something new and useful—a courtesy plaque.

The plaque is being given a most prominent display place in the building, thus obliging every Union Oiler to pause and give it consideration. On the plaque are spaces for the names of 20 Union Oil customers—business concerns such as laundries, dairies, merchants and service establishments, all of whom are also dependent upon customers for a livelihood. New names will be posted from time to time in order to give all buyers of Union products their fair share of courtesy advertising. The idea, of course, is to constantly remind ourselves that Company payroll checks wouldn't be cashed down at the bank if it weren't for the people who buy from us. Certainly many employees will show their appreciation by kindly reciprocating.

from Gudrun Larsen

From Tank to Tank Wagon

Bringing along a remarkable record of swimming achievements, Robert W. Anderson joined the Company last July as a Marketing trainee in San Francisco. At present he is learning the fundamentals of tank-truck salesmanship at Monterey.

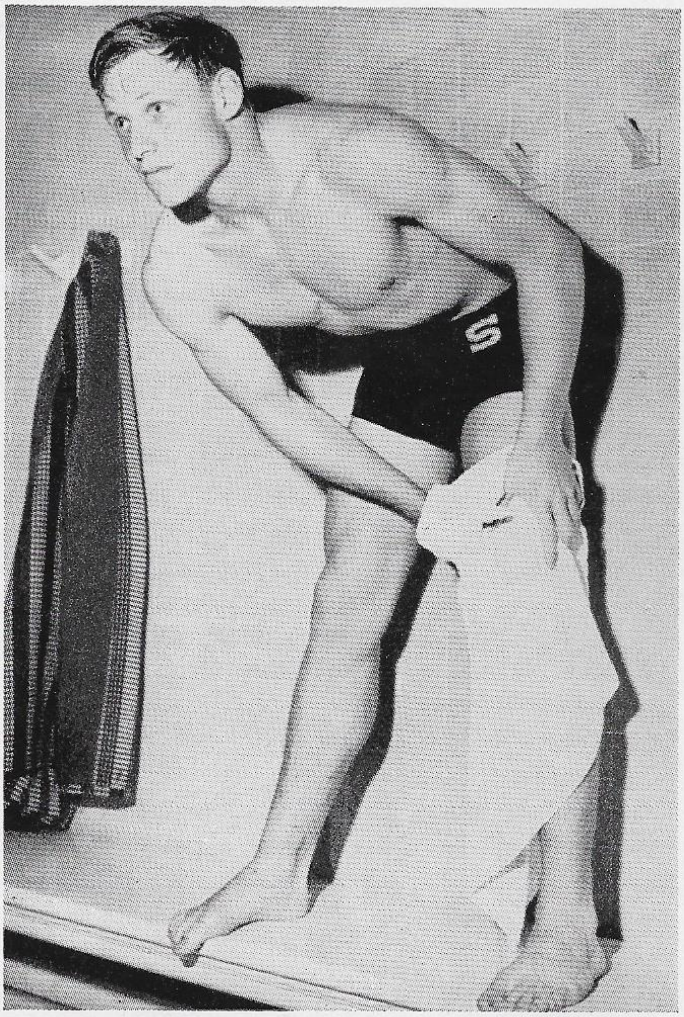
Although the swimming tank is a far cry from an oil tank, competition in any field is good training for the prospective oil salesman.

While attending Stanford University, Bob distinguished himself by winning the National Intercollegiate Sprint Championship and placed on the All-American swimming team three years in succession. He also assisted in coaching the Stanford swimming team, meanwhile remaining with the upper five per cent of his class scholastically.

To keep in competitive trim, Bob now spends several hours each week slicing through the waters of a nearby pool or bearing the Olympic Club's Winged O against the best college and other amateur swimmers on the Pacific Coast.

He is a native of Exeter, California; a pleasant and popular young man of 24; and a good bet to win many a race in salesmanship.

from Evertt Smith



Robert W. Anderson, tank champion

How Tacoma Service Stations dug for customers

Digging for Business

January 13 will be remembered on weather records as the day of Washington's biggest blizzard. Seventeen inches of fresh snow would have carpeted the ground everywhere had not a 60-mile gale blustered in to deposit the snow in drifts as high as 20 feet. It was so cold that windshields froze on the inside.

Snow, falling and drifting from every direction, obliged our service station operators and dealers to literally dig for business. However, by dint of skillful shoveling, they could route traffic directly under the canopy. The strategy paid off in brisk sales of oil, gasoline, chains, anti-freeze and all types of winter service.

But January 14 was by no means the beginning of spring. Winter continued in its unprecedented fury throughout four weeks.

from Gudrun Larsen

THE PRESIDENT'S REPLY . . . . cont. from page 9

be at a low enough level to permit retailers operating thereunder to be competitive with the retailers of generally similar products made by other manufacturers.

You are correct in stating that a company cannot continuously sell its products for less than the cost of production. A company operated in this fashion, spending more money than it receives, would soon be bankrupt, its plants would close, and its employees would be without jobs. However, if competitive prices are lower, it does force the high-cost manufacturers to devise more economical methods of production, or, as has been the history of the petroleum industry, develop new products from the raw material, if they are to stay in business.

Production cost is not permanently fixed. It can be pushed down by the use of new and more efficient facilities and by the application of improved processes. But, as both equipment and research are expensive, money must be provided either by borrowing or by plowing back a portion of the profits earned. The lowering of cost in this manner opens the way for lower prices and increased sales. Thus, while free enterprise provides the incentives for increased production or new production of needed products and services, its competition also constantly stimulates efforts to reduce costs and lower prices.

Although it is true that demand places an upper limit on production at any given time, demand is never static. Demand is variable, responding to population shifts, price changes, research developments, advertising, and many other factors. At one price level, production may be excessive, but at a lower level the same production can be wholly inadequate. Although the limit of demand for a few items has probably been reached—buggy-whips for example—we are still unable to produce *all* the things that people need and want. As long as there are homes without bathtubs and children without shoes, we will need greater production. But if increased production, or lower demand, for any given commodity reaches a point at which permanent excesses prevail and the possibility of "production for profit" diminishes in that direction under competitive prices, venture capital will seek other more useful "production for profit," which in turn creates more jobs.

It cannot be said without qualification that greater productivity is the one answer to all our problems. However, a nation's standard of living is directly dependent on that nation's production of *useful* goods and services. In fact, the volume of production—i.e. *useful* production—*is* the standard of living. (You will observe that in my speech I referred to the production of "useful" products.) In other words, a gain in the standard of living requires an increase in production of goods and services which can be put to beneficial use.

I appreciate your expression of agreement with my remarks on the problem of increasing government expenditures. It seems to me that the first step in solving a problem such as this is to see that the people are informed about the situation and its probable consequences. Once they are informed about the problem, they will begin to think about it, and thought will lead to action. Only by action of the people as a whole can we achieve the return of economy in government.

Yours very truly,
Reese H. Taylor

SERVICE BIRTHDAY AWARDS

APRIL 1950

Thirty Years

Butler, Harry E., H. O. Marine
Cardoza, Henry, Oleum Refinery Mfg.
Dunham, R. A., Research-Wilmington
Salvatori, Joseph, So. Div. Auto.
Skinner, Wm. R., Valley Div. Field

Twenty-five Years

Gjerde, Chester M., H. O. Comptroller's
Morrison, H. R., San Francisco-Purch.
Skinner, Wm. W., Southwest Territory
Spowart, Alfred, Oleum Refinery Mfg.
Stewart, William J., So. Div. Field
Vermillion, F. R., No. Div. Pipe Line
Villa, Joseph O., Oleum Refinery Mfg.
Wentworth, Francis P., Oleum Ref. Mfg.

Twenty Years

Bienert, Robert H., Southwest Territory
McMullen, Frank, Purch, Head Office
Neumen, Merna, Northwest Territory
Rowe, Robert R., Northwest Territory
Sorrells, James C., L. A. Refinery Mfg.

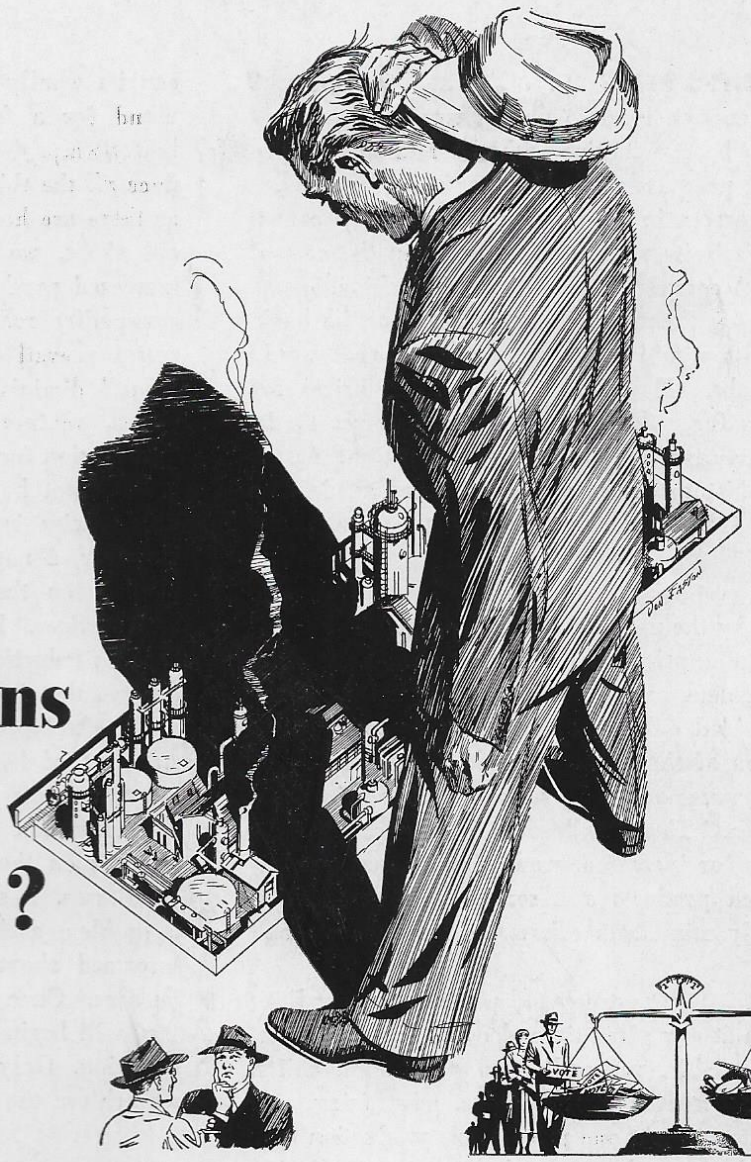
Fifteen Years

Askew, Lucille F., H. O. Compt. Medical
Bledsoe, Charles, Coast Div. Field
Brandle, Otto, So. Div. Field
Brennan, Mervin J., Central Territory
Burrus, Jesse, Southwest Territory
Carpenter, D. R., Marine-Wilmington
Coots, Laurence W., Southwest Territory
Dalton, Harold H., H. O. Comptroller's
Figueiredo, A. C., No. Div. Pipe Line
Fitzgerald, Ruby, Oleum Refinery Mfg.
Grant, James A., H. O. Land Dept.
Hesse, Charles E., Marine-Wilmington
Jones, Fay E., So. Div. Pipe Line
Jones, William M., Marine-Wilmington
Kreutzen, W. D., Oleum Refinery Mfg.
Nyberg, Carl F., Northwest Territory
Sheldon, Adrian W., Coast Div. Field
Wiemers, Henry G., Coast Div. Field
Wilson, Robert D., H. O. Compt. Medical
Winans, Robert L., Southwest Territory

Ten Years

Adams, George F., Central Territory
Ault, Fred T., Oleum Refinery Mfg.
Foreman, Paul M., H. O. Mfg. Plt. Proc.
Lowrey, Alan J., H. O. Exec.-San Fran.
Moore, Jerome J., Coast Div. Field
Nabers, Wm. A., Coast Div. Field
Smith, Charles E., So. Div. Field

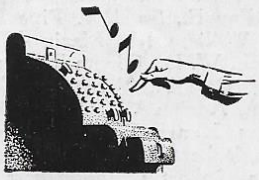
Ever wonder who runs the oil companies?



1. If you ask the average American to tell you who runs this country, he'll answer that the people do. He may qualify that some by admitting that the President, the Congress and the other officials in Washington make the day-to-day decisions. But he knows that in the final analysis it the people's vote and the people's opinion that really determine how our country shall be run.

2. Ask the average American to tell you who runs American business and 9 times out of 10 he'll tell you it's "management" or "Wall Street" or "Big Business." Actually, the American people have *far more voice* in the conduct of American business than they have in the conduct of American government. Because they cast thousands of times as many personal votes on it each year!

3. For example, every time an American in our marketing territory buys 5 gallons of gasoline he casts a "vote" for or against Union Oil Company, its products or its services. During the course of each week, practically every one of the 5-million-odd car owners in our territory "votes" at least once on this issue. At the same time, several million more "votes" are being cast that week on the hundreds of other products we make.



4. The combined total of these "votes" by the people in this country determines Union's *entire course of action*—whether it shall be big or small, whether it shall expand its drilling operations or curtail them, whether it must raise its prices or lower them, whether it shall succeed or fail.

5. When you realize that this voting on Union Oil Company policy (and the policies of all American business) is going on constantly 24 hours a day—the "ayes" with a resounding ring of the cash register, the "nays" with an equally resounding silence—you begin to understand that the person who actually runs American business is *you*, the American customer. Furthermore, you "vote" thousands of times oftener each year on the conduct of American business than on the conduct of the American government.

UNION OIL COMPANY OF CALIFORNIA

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This series, sponsored by the people of Union Oil Company, is dedicated to a discussion of how and why American business functions. We hope you'll feel free to send in any suggestions or criticisms you have to offer. Write: The President, Union Oil Company, Union Oil Building, Los Angeles 17, California.