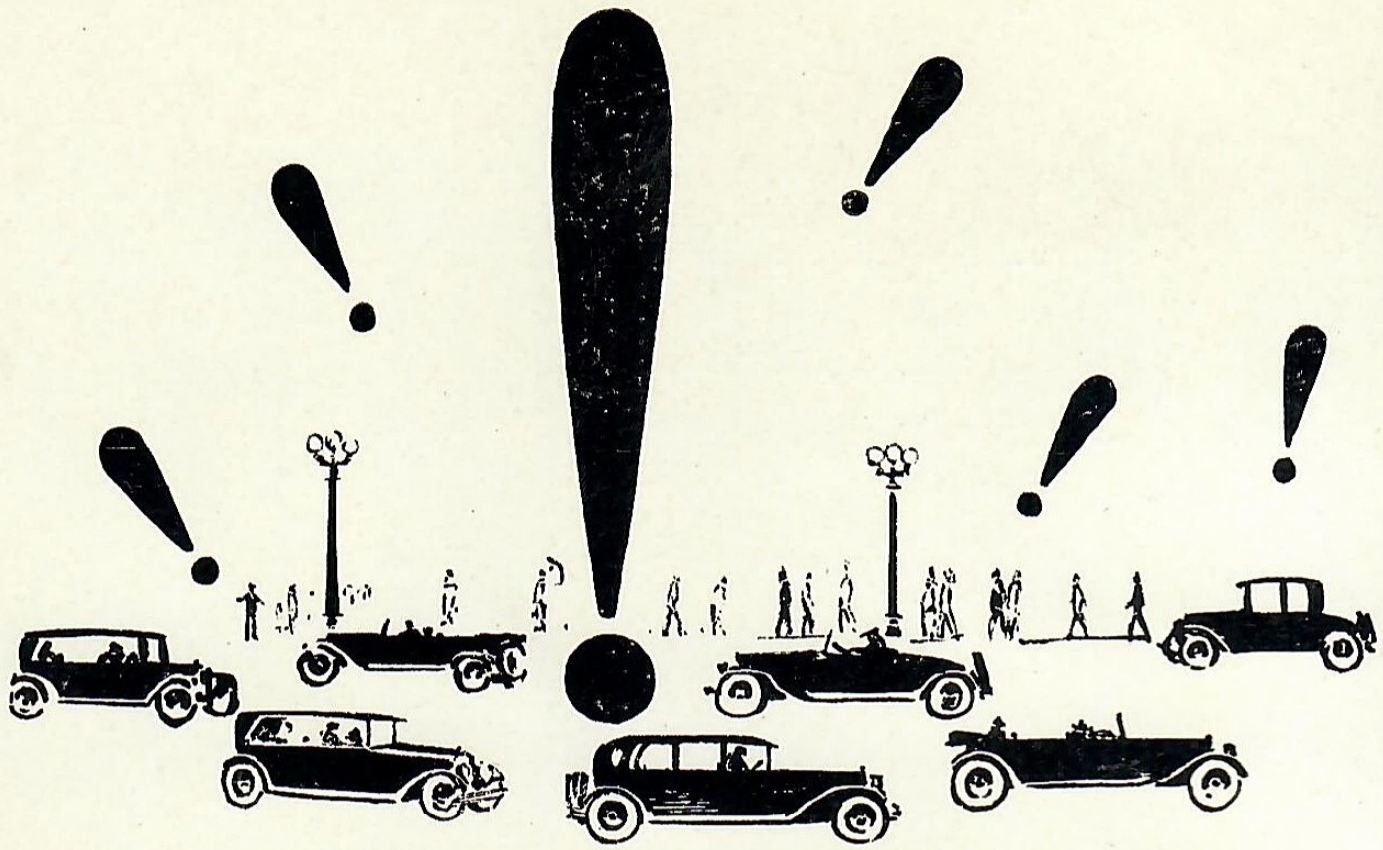


UNION
OIL
BULLETIN

MARCH 1928



The Power-Thrill

WHETHER you be climbing the steep ascents of the High Sierras or merely purring through traffic on a city boulevard you'll find there's more than just anti-knockability to *Union-Ethyl*.

The tremendous, evenly-released, smoothly-controlled power of this super motor fuel means a new experience in exhilarating speed that ordinary gasoline can't give.

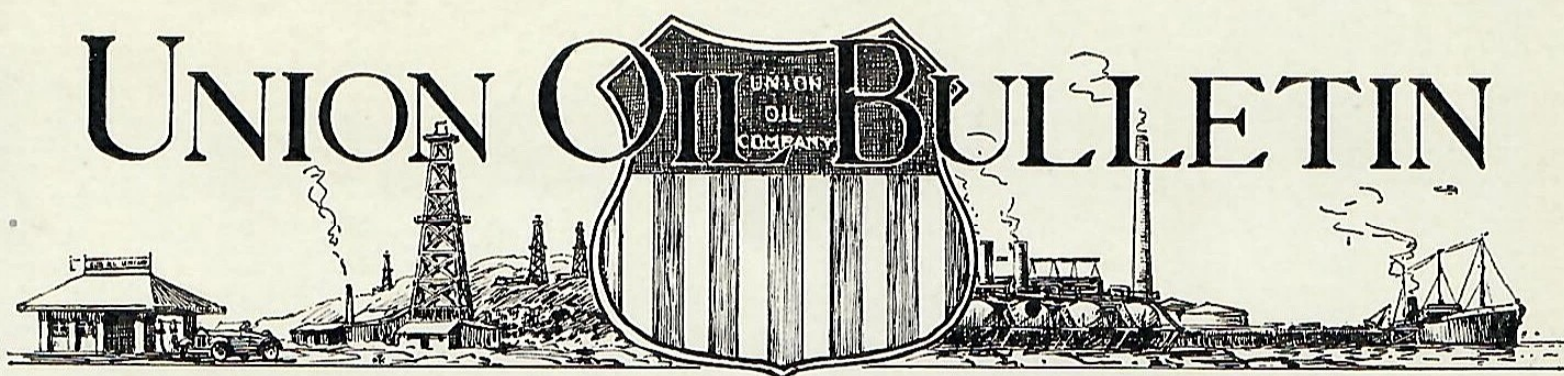
Union-Ethyl eliminates knocking, turns carbon into increased power, and guarantees the fullest number of revolutions per minute that your engine was designed to deliver.

Specify *Union-Ethyl* for maximum motor efficiency.

UNION-ETHYL
The Super Motor Fuel



UNION OIL BULLETIN



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VOLUME VIII

MARCH, 1928

BULLETIN No. 1

A New Era

THE annual report of our company for the calendar year 1927 is worthy of consideration by all of us. The results therein shown bring to our attention quite forcibly the statement made at the Chicago meeting of the American Petroleum Institute in December, 1927, which is now repeated:

"In my opinion the oil business is entering a new era. Conditions and practices under which we have been operating have gone never to return, a change similar in character to the passing of the old bonanza days of mining and metals; new conditions in our industry call for the exercise of strictly economical operations in every department—where in the past we have thought in terms of dollars, the future will call for study in the expenditure of cents—and profit in the business will flow only to him who gets the proper viewpoint, employs and makes use of the best technical advice and who produces his goods at the least cost."

Each and every employee has been and will be activated by a sincere desire to assume the proper place in the new order of things which will make for continuance of the favorable showing made in 1927.

—E. W. CLARK.



The Temple of the Boeroeboeder, near Djokjakarta, Central Java. This is the greatest and most spectacular monument ever erected to a human deity.

Java: The Garden of the Far East

By JOHN EDWIN HOAG

Illustrations from photographs by the author

EDITOR'S NOTE: *Interest in Java is aroused by the recent announcement to the effect that Union Oil Company has added that country to its list of foreign sales markets. John Edwin Hoag, the author of the following article descriptive of Java, recently returned to America from a sojourn of several months in the island that most of us know as the source of a favorite breakfast beverage. Mr. Hoag is an American, who lives in Los Angeles, but who is connected in a business way with De Koninklijke Paketvaart Maatschappij (The Royal Packet Navigation Company), of Weltevreden, Java.*

WHEN Java is mentioned around on this side of the earth, the popular American conception of it is a synonym for our favorite breakfast beverage. Java, however, has far greater claims to world renown. America buys a great deal of Java coffee, but the supply is so limited that we can use it only for blending the coffee we buy from other coffee-producing countries. To a greater annual money value than our purchases of Javanese coffee, we buy Javanese rubber, sugar, tea, drugs, spices, gutta percha, tropical hardwoods, and a multitude of other products of Dutch East Indian

fields and forests. Java is also a large export distributing center for products of the other great islands of the Netherlands India group—a trade for which Americans spent one hundred fifty millions of dollars last year. The bulk of this trade moves into the United States via the Suez Canal and the port of New York. But, a great deal of it is now shifting to the trans-Pacific route as the result of superior shipping facilities which permit competition with the established trade routes that have long clung to the eastern half of the globe. The people of Java buy American motor cars, machinery,

textiles, and an utterly endless assortment of manufactured products.

Java is one of the largest of the Greater Sunda group of islands, popularly known as the East Indies, and officially designated as Netherlands India. Being on the exact opposite side of the earth from the United States, and approximately 600 miles south of the equator, we may think of Java as being roughly 12,000 miles south and east of this country, or 12,000 south and west—depending upon the direction we choose to travel.

Java is not a little island. It is about 750 miles long and from 60 to 80 miles wide. Its superficial area is 48,480 square miles, or about one-third the size of California. It is one of the most densely populated lands on the face of the earth. The last census credited Java with thirty-five millions of people, but there is every reason to believe that the present population figure would be nearer fifty millions. This tremendous population is further congested by the fact that much of the island is mountainous. Land elevations up to 7,000 and 8,000 feet are numerous, and many of the mountains are active volcanoes.

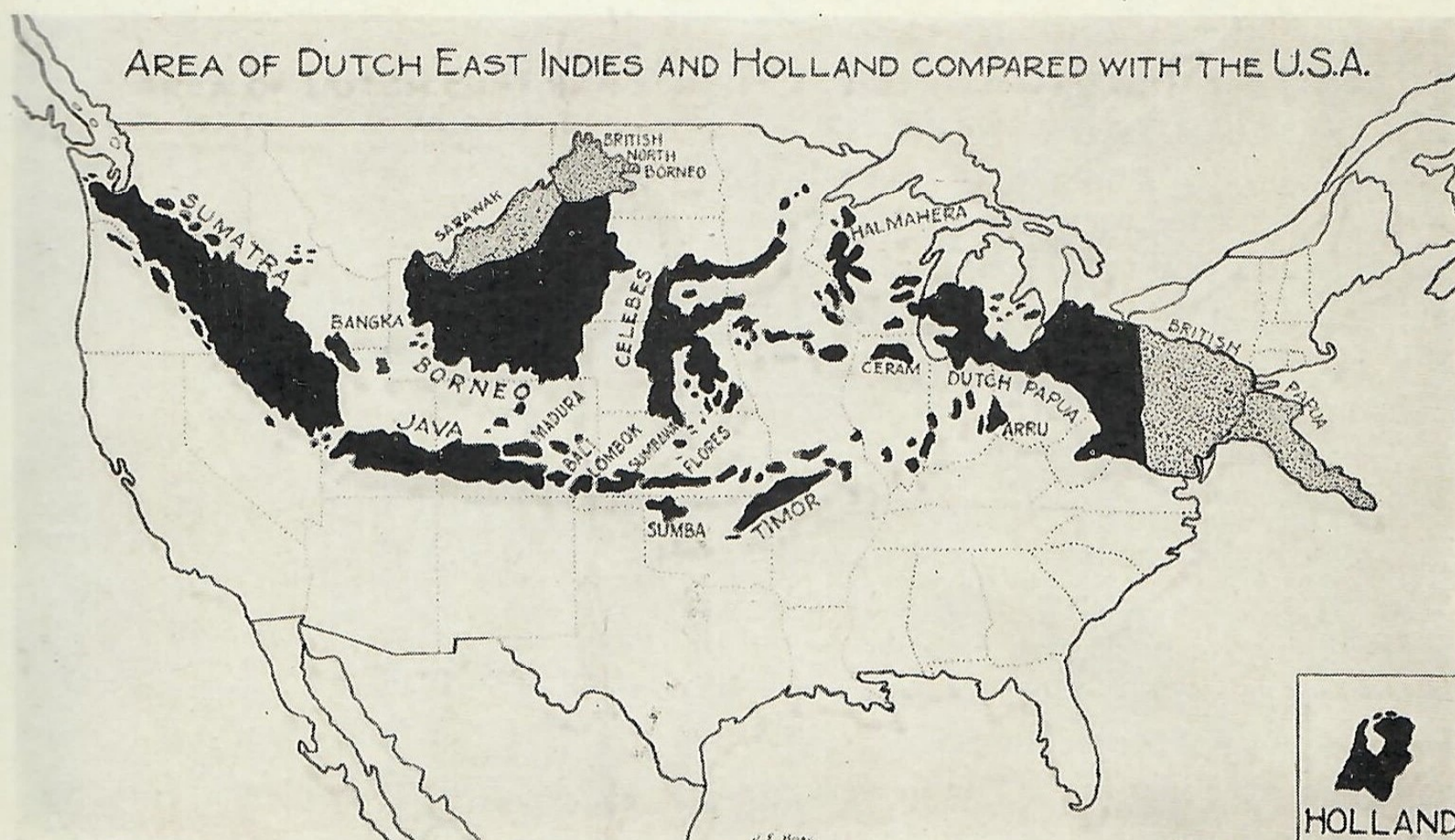
The question immediately arises—How



The crater lake of Kawah-Idjen in the Indjen plateau region of eastern Java.

do so many people live in such a small area? The answer to that is—they live, and live well! The whole of Java has a benign tropical climate. The natives suffer nothing from the weather. Their requirements of life are few and simple, and the problem of sufficient food is met by intensive agricultural development together with the combination of rich soil, abundant moisture, and the rapid production that characterizes all plant life in the tropics. The native population is almost solidly Mohammedan, and rice is the mainstay of their diet.

Due to its tremendous population, with the resulting abundance of cheap, native labor, Java is one of the most highly de-





Palace of the Dutch Governor-General of Netherlands India, at Buitenzorg, Java.

veloped countries on the face of the earth. It is a network of paved roads, irrigation canals and intensively cultivated crop fields. Every available square foot of ground is under cultivation. It is nothing uncommon to see whole mountainsides terraced, irrigated, and producing rice. The great plantations growing the products that Java supplies to the world are usually owned and operated by Dutchmen, or other Europeans, and furnishing employment to great numbers of native laborers.

Java, and very nearly all of the East Indian archipelago, are under the control of the Dutch government; Java and the other Dutch islands taking the status of a colonial possession of the Queen of Holland. The highest executive authority is the Governor-General, who is appointed by the queen, and with headquarters at Buitenzorg, in Java. Under the Governor-General are various advisory boards, and councils. As far as the European population is concerned, the government is primarily one of a democracy within a limited monarchy. The governing of the great masses of native population is done by the Dutch through various local sultans, regents, and rajahs.

The natives are also represented by the "Volksraad," or people's council, an advisory body, part of whom are appointed by the Dutch government and part elected by popular vote. Lacking the power to rule the tremendous native population by force, the Dutch have accomplished their aims by a policy of peaceful persuasion. It would take many pages to even give the highlights of this system of government, which has been so successful that it could profitably be studied by other nations—America included, who have similar colonial problems.



Scene on the Kali-Mas river near Soerabaia, Java.



A view of some of the latticed, stonework dagobas atop the Temple of the Boeroeboedoer. Each of these houses a life-size statue of Buddha.

To the tourist from America or Europe, Java offers attractions that are not to be found elsewhere. The whole island is a place of rare scenic beauty, coupled with picturesque native life, smoking volcanoes, and the ruins of the ancient Kingdom of Mataram—a Hindoo empire that flourished in that part of the earth more than 2,000 years ago. Java has literally hundreds of these ancient temple ruins, the most spectacular of which is the Temple of the

Boeroeboedoer, near Djokjakarta, in the central part of the island. The Boeroeboedoer, which means "Shrine of a Thousand Buddhas," covers ten acres of ground on the summit of a low hill. It is a structure of far greater interest than the Pyramids of Egypt. It is not quite as large as the largest of the Egyptian Pyramids, but infinitely more ornate, more beautiful, and offering more for study. The temple is not a hollow structure, but an open temple, or stupa, built up tier upon tier to form terraces and galleries. The walls of these galleries are beset with hundreds of stone statues of Buddha, and decorated with a total of $3\frac{1}{2}$ miles of stuated carvings in bas-relief. Stone dagobas, with the stone cut out to form a latticed construction, adorn the upper portions of the galleries. Each of these houses a life-size image of Buddha. The stairways converge to a huge central dagoba at the summit. This houses an enormous, uncompleted statue of "The Great Enlightened One." Days may be spent in this temple without the visitor being able to study more than its most superficial details. As nearly as is known, construction of the



A scene on one of Batavia's numerous canals. The canals not only carry a tremendous amount of commerce, but are the bathing and laundering places for the city's teeming populace.



Natives of Java planting rice. This is one of the most familiar scenes in rural sections of the island.

Boeroeboedoer began about 260 B.C., and ended about 600 to 800 A.D. In spite of its great age it is still in a remarkable state of preservation.

The visitor to Java may journey about the entire island in perfect comfort, and living in comfortable European hotels. Motor tours of the entire island may be made without getting off of paved roads. The railways are owned and operated by the Dutch government, and the service is comparable with the train service of continental Europe. The Batavia-Soerabaia Express, for instance, running between Batavia and Soerabaia, the two great commercial centers at opposite ends of the island, makes that distance of 700 miles in 14 hours. One eats his meals in a dining car on this train much the same as travelers do in this country.

A journey through the interior of Java is interesting indeed. Buitenzorg, the seat of the colonial government, has gained world renown from its botanical gardens of Dutch East Indian flora. Its museum also has what is perhaps the greatest collection of East Indian fauna ever assembled. Bandoeng, located in the mountains of the Preanger

regencies at an elevation of 4,000 feet, is famous for its cool, bracing climate. It is the center of the drug industry, as well as the Dutch Colonial Military Aviation Service. The "flying Dutchmen" are much in evidence over that portion of Java. Along the south central coast of Java are a whole list of mountain resort places, adjacent to active and spectacular volcanoes, turquoise crater lakes, and regions of geysers and hot springs. Further east we have the city of Djokjakarta, with a population of something more than a million people. A visit to the palace of the Sultan of Djokjakarta is an experience never to be forgotten. To



Javanese pottery makers at work. A scene near Djokjakarta, Central Java.

the east of Djokjakarta we have the city of Solo, where the Sultan of Solo holds sway over some five million subjects in the Sultanate of Solo. Still farther to the east is the great city of Soerabaia, the commercial and trading center of the Dutch East Indies. A two-hour motor drive from Soerabaia brings one to the Bromo volcano, and a four-hour trip on horseback gives the visitor a glimpse of the infernal regions by looking down into its tremendous crater.

The American, or European traveler in Java is not apt to experience much difficulty in connection with language. Practically every educated Dutchman one meets speaks English. They also speak French and German, in addition to Dutch, and the Javanese language. The natives, of course, seldom speak any language other than their own, but it's a simple, primitive sort of

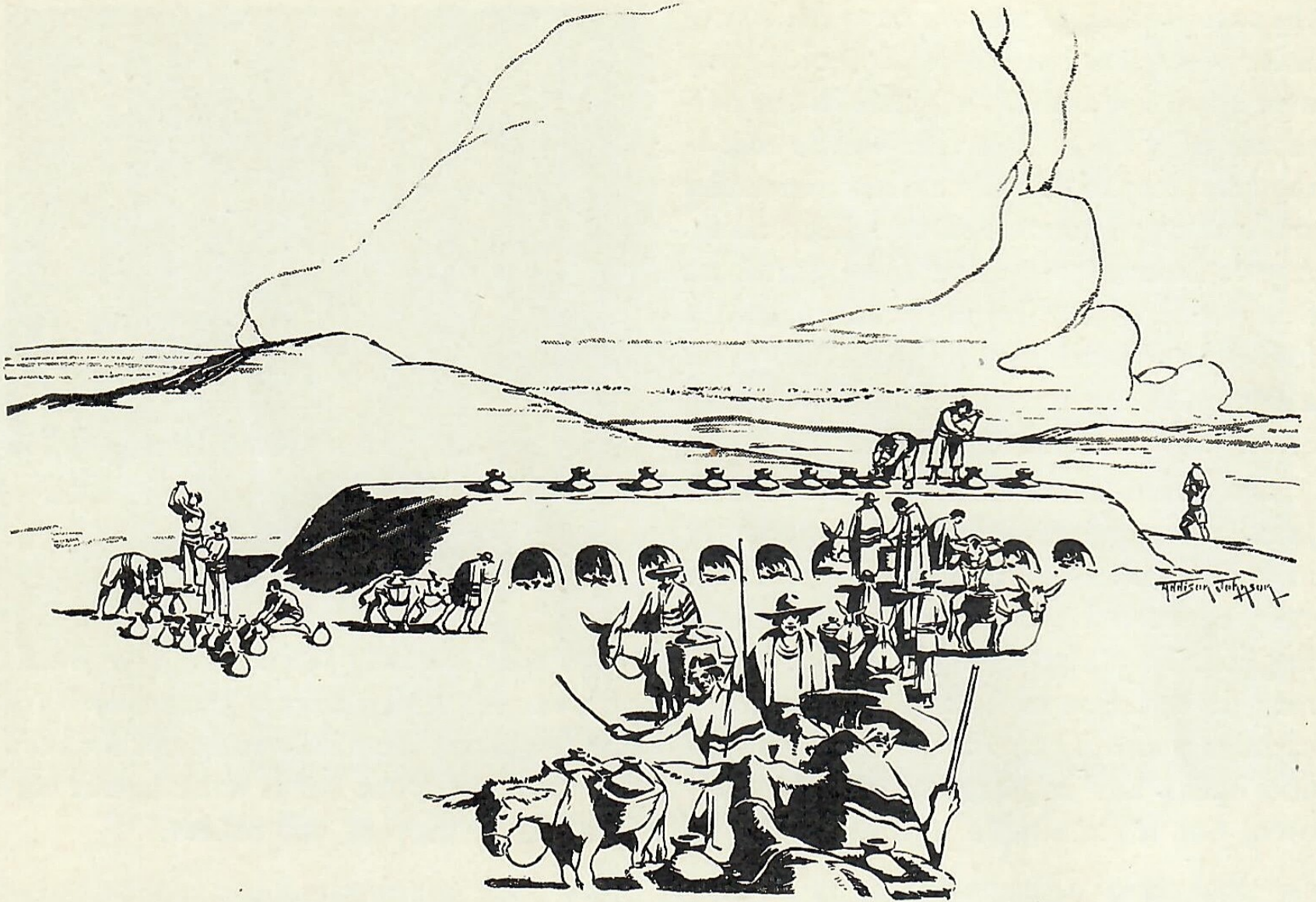


Where the material for our motor car tires is taken from the trees. This scene on a Java rubber plantation near Samarang, depicts the tapping of the trees.

lingo that is easily learned. A few words of Javanese, which anyone can easily learn in a few days, is entirely sufficient for such conversation as one needs with native servants, shop keepers, and others.



A Javanese tailor shop in Bandoeng, West Central Java. Most of the work is done on American sewing machines. Note the boy at the left who carries drinking water in a length of bamboo.



"Large earthen kettles were set in furnaces for the purpose of boiling the oil down."

A Petroleum Industry of the 16th Century

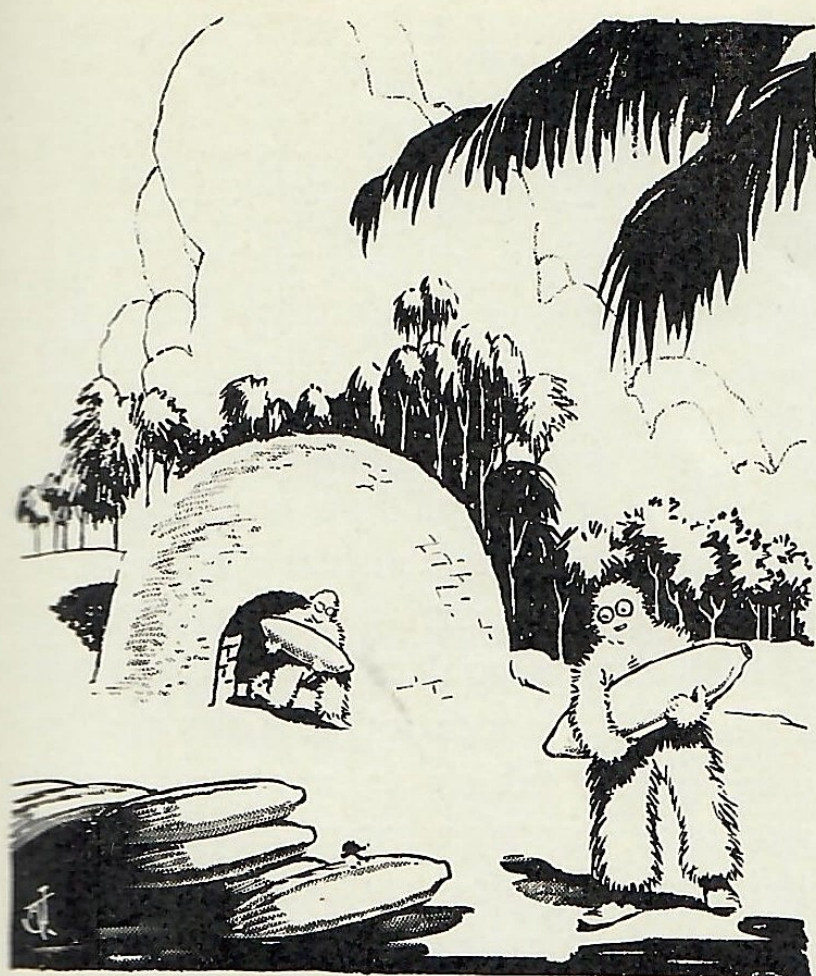
By A. E. FOWKS

Assistant Manager Field Operations

WITH the advent of the Spanish Conquistadores to the Americas, their first thoughts were to insure a supply of their customary alcoholic beverages, and the cultivation of vineyards was immediately begun. It may not be generally realized that the use of alcohol in any form was unknown to the Aztecs, Incas, or any of the peoples of these continents which had reached a high degree of civilization long prior to the advent of the Spaniard. They did not even indulge in chewing the leaves of the coca plant from which cocaine is extracted. They were a people without vices.

On the west coast of South America where the use of the familiar goat skin wine bag of Spain was not practical for various reasons and glass blowing was impossible with the limited facilities at their

disposal, earthen jars of the type familiar to juvenile readers of "Ali Baba and the Forty Thieves" had perforce to be used as liquor containers, and these jars are the "botijas" of Peru, known as such today from Mexico to Patagonia. I have been able many times to watch the primitive process of manufacturing these jars at Pisco in Central Peru, which is the center of the great wine and alcohol industry of that country. Clay is prepared by the natives, the jars moulded, and then baked in a kiln in the usual way. They are of several standard sizes, the one most generally used being of twenty imperial gallons capacity, the shape roughly that of a sausage with a hole in one end about four inches in diameter and an oblong knob on the other end to prevent it being placed on end. There would



"A man dressed in sheep skins will rush into the oven and dart out again with his botija."

seem to be no particular reason for making the jars in this shape at the present time, but they were so made by the Spaniards and the style has never been changed. As the jars are porous when taken from the kilns it was necessary to find some means of closing the pores and preventing the evaporation of their contents.

The Spaniards found oil seepages in Northern Peru where the Imperial Oil Company of Canada is now operating on a large scale, and a soldier of the forces of Pizarro made the discovery that by boiling this oil down to a certain consistency it became impervious, tasteless and odorless after it cooled and hardened; this substance is known as "brea." Here, then, was a suitable article with which to line the liquor jars. Pits were dug for accumulating

the oil from the seepages, large earthen kettles were made and set in furnaces in batteries of twelve kettles for the purpose of boiling the oil down, and the "brea" shipped to Pisco for lining the "botijas." Thus was established, somewhere around the year 1525, an oil industry which is in existence at the present day with few material changes, except perhaps that the kettles used for making the "brea" are now metal instead of earthen.

The process of lining the inside of the "botijas" is unique indeed. Enormous clay ovens, similar in construction to the Mexican bake oven of today, only of course much larger, are built and the fires inside made to keep the temperature high enough so that the brea is kept in a fluid state. A number of the botijas are also placed in the ovens where they are kept hot. A small opening in the wall of the oven furnishes the entrance and exit. A man dressed from head to foot in raw sheep skins with the longest wool procurable in order to protect himself from the heat, will rush into the oven, pour some of the liquid brea into a heated botija which he turns rapidly several times, pours out the excess liquid and darts out of the oven with his botija, which is placed in the open air to cool. As he goes out another man, similarly dressed goes in to repeat this operation. The result is a jar lined with a thin coating of pitch which is entirely satisfactory.

When night falls the scene of these weirdly-clad men with their strange burdens, rushing about, is one that once seen could never be forgotten.

Such was one of the earliest uses to which petroleum was put, and the practice of which still continues unchanged.



Geology Adopts the Airplane

By LEON T. ELIEL

Pacific Representative

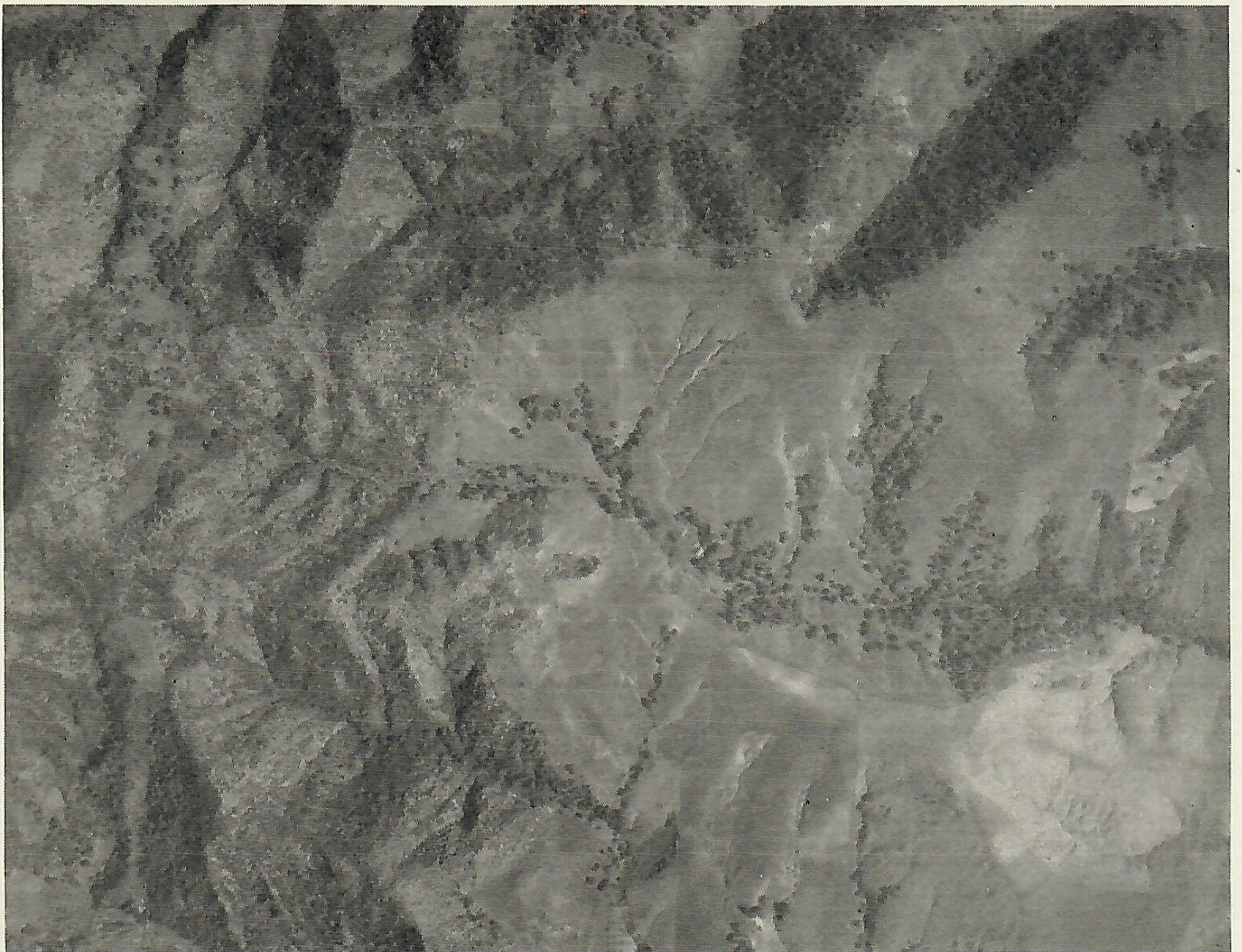
Fairchild Aerial Surveys, Inc.

The first of a series of articles dealing with the use of the aerial camera in geological survey work. THE EDITOR.

THE way of the geologist is hard. By the sweat of his brow he pursues the elusive oil field, up hill and down, through brush and jungle to the ends of the earth. The hottest summer weather usually finds him in the middle of the desert; in coldest winter weather look for him in the highest mountains and the northernmost latitudes. He bears the stamp of an out-door man from head to foot, broad of shoulder, ruddy of countenance, with health oozing out of every pore.

But today we find him in process of a metamorphosis. The airplane with its all-seeing eye, the mapping camera, gives him a three-dimensional mental background, facilitating the location of faults and bedding planes which in a surface survey would be recognized with difficulty. The airplane and its camera bring to his desk much information that heretofore was available only to the man who wrested it from the rock itself.

Today as the geologist makes his prog-



Fairchild Aerial Surveys, Inc.

This is the kind of information which the camera furnishes as an aid to the geologist, saving many weary hours of travel through brushy unfamiliar country.



Fairchild Aerial Surveys, Inc.

Evidence of bedding planes and faulting which the camera brings to the geologist at a glance.

ress slowly across the ground, he hears perhaps the faintest hum of a motor three miles above his head, and while he pauses but an instant to look, in that instant another mile, two miles, three miles, have been recorded by the camera. Two hundred square miles in the course of a day is play work for the airplane.

The airplane follows a frost-strewn course in its broad highway in the air. Back and forth it goes over the desired area, following parallel imaginary lines in the flight, strip upon strip, picture upon picture, each overlapping the other. At the end of the day the entire vast area which might require months to map from the ground is snugly tucked in the magazine of the camera. The little trail of film which has been wound through the camera, 9 inches wide and 150 feet long, tells the whole story on its two pieces.

The little things still must be searched

out upon the ground by the geologist. Some are so minute as to even require the use of a microscope to see. Shells, fossils, traces of vegetation, pebbles, stones and rocks, now as ever, urge him into the open. But the major features of topography: the faults where the earth has been wrenched at some prehistoric time; the contacts where definite types of soils indicate that long ago two different kinds of rock existed there, reveal themselves quite frequently in picture form.

With these tools he endeavors to solve his amazing puzzle: brushing back the work of centuries and reconstructing those changes in the earth which through the ages have created oil.

Many things can best be seen from a distance where a largeness of perspective permits analyzing those big features which cannot be seen too close at hand. This explains in a way why many things can be



Fairchild Aerial Surveys, Inc.

Supplemented with a three-dimensional photo of the area involved such as this, the geologist's notes take on greater significance.

seen by the geologist in his aerial maps that cannot be seen from walking over the surface of the ground itself.

A tiny bend in the channel of a stream perhaps has not the least significance when seen by itself on the ground; but when that tiny bend is seen in alignment with bends in dozens of other streams over a distance of many miles, it at once suggests that possibly there is a relationship between them.

At the edge of faults which sometimes are discovered in this way, oil is often found, and beyond them productive areas may end.

Differences in the color of soils sometimes so gradually blend, one into the other, that they are lost to an observer walking over them. The aerial map may show them

very distinctly, and possibly this contact between the two has an important significance in putting together the elements of a puzzle which ends in a discovery well.

Many things are being found from these pictures which cannot be seen on the ground. Intimations are transformed to confirmations by their evidence. A broadness of view and a continuity and intimacy of relationship are afforded the geologist by his picture map which he has never had before.

Whenever work is made less hard and results are made better by new methods, their permanence is assured, and so in the geological profession, the aerial map has come to stay as an aid to solving the mysteries below the surface of the ground.



Fishing boats being towed out to fishing grounds—Skeena River.

Harvesting the Sea Crop

An article on the Fisheries of British Columbia

By J. T. C. WILLIAMS

Special Representative, Vancouver, B. C.

THE most important feature which presents itself to the visitor going north along the fiord coast line of British Columbia is the great number of small craft rigged for fishing, some of them evidently set to go long distances and be many days at sea; while groups of smaller boats intermingled with scows and tugs are at work only a short distance from shore.

On the flat deltas at the river mouths and at other points, the corrugated iron sheds of the packing stations can be seen.

British Columbia is proud of her illimitable resources in the waters off her coast line. She is also deservedly proud of the fishermen who are ever ready to spend weeks at a time in the most confined quarters, often in the foulest of weather, to harvest this crop of the sea which means millions of dollars in her purse.

The two principal fisheries are those for salmon and those for halibut. The salmon is the most important from a marketable standpoint, but the least spectacular from the fisherman's point of view. Each year an irresistible urge comes over the ocean salmon which have reached a certain age and they swim in immense numbers towards the rivers discharging into the sea, forcing themselves ever and ever upward until they can get no farther; then, discharging their spawn into the beds of sand in these quieter reaches, their broken and battered bodies float down the stream they have so laboriously ascended.

It can be seen, therefore, that no special technique is required to get the salmon out of the water. Any method, whether by net, seine, or trap is successfully used, as is evidenced by the long string of scows



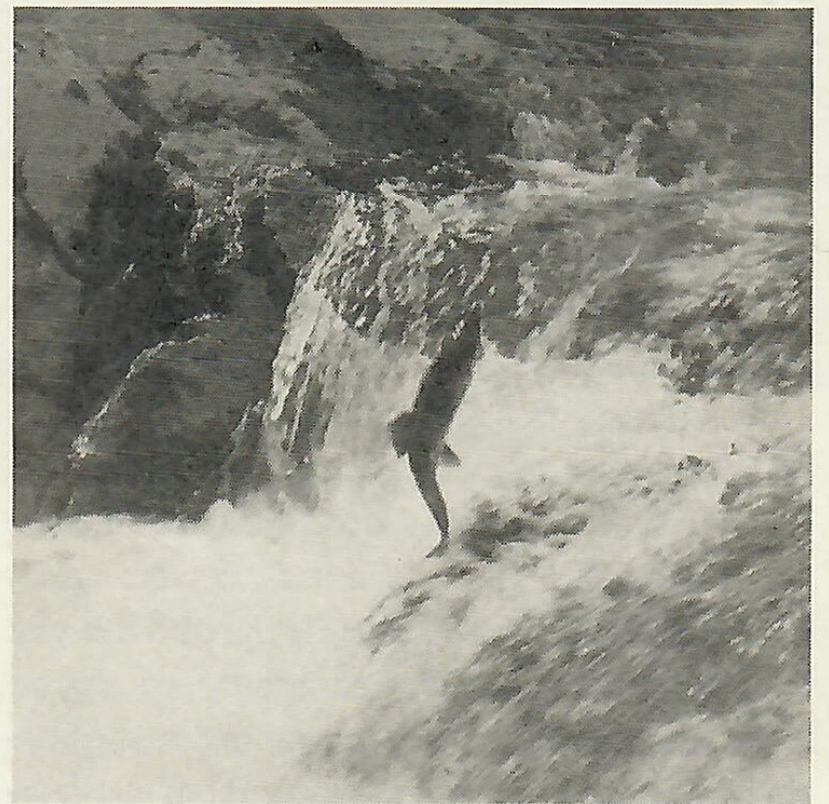
Halibut fishing fleet, Prince Rupert, B. C.

chock-full of fish which a fussy little tug is bringing over to the cannery, where the deft hands of the Chink or Siwash will have the salmon in either "talls" or "flats" within a few hours.

There are many varieties of salmon familiar to British Columbia fishermen, but from a popular and marketable viewpoint the sockeye stands preeminent. These fish, which are excellent in color, quality and flavor, are all canned and the majority shipped to the British markets, where they command a very high figure. Other varieties found in quantities are the spring salmon, pinks or humpback salmon, coho and chums or dog salmon. The remaining and rarer varieties are the steelhead and blue back. The former, if caught in the winter or early spring, is *par excellence* the best table fish we have. Its flesh is red and is delicious in flavor. In the early stages of its growth it frequents the mouths of creeks in tidal waters and is locally referred to as the salmon trout.

The main arteries where all these vari-

eties are found and captured are the Fraser River, Quathiaski and vicinity, Alert Bay and vicinity, Rivers Inlet, Bella Bella, Bella Coola and vicinity, Skeena River, Naas River and the Queen Charlotte Islands. In all these localities, Union Oil Company operate marine stations where the fisher-



A difficult leap. Salmon enroute to spawning grounds.



Pity the poor fish that encounters this ingenious labyrinth of hemp.

men are supplied with their fuel and oil requirements.

Halibut rank second in value to salmon as a marketable product. Very little is known of their habits and haunts. The Dominion Government chartered a vessel last season with a view to investigating the cause of a very apparent depletion in numbers as well as a reduction in size, but no report has been issued on its findings.

Twenty years ago halibut were caught in Hecate Straits in large quantities with skates of gear, which was the only method of capturing them. Now, most of the halibut fishermen go many miles north of Hecate Straits to secure their catch, as this area offers greater returns.

The halibut fishermen sell most of their catches at Prince Rupert for shipment in refrigerating cars to eastern markets.

On the west cost of British Columbia we have our salmon, herring and pilchard fisheries. The herring are taken in purse seines and are mostly salted for the Chinese markets, although a small quantity is canned. In some areas they are used by the reduction plants for making oil and fertilizer. They spawn in the bays and inlets,

attaching their eggs to sea grass or any suitable projection.

The pilchard fisheries have become valuable only during the last few years, as a market has now been found for the valuable oil that is produced from them in the reduction plants. The number of these plants is increasing annually on the west coast of Vancouver Island. These fish spawn in the ocean and run in the bays and inlets only during the months of July, August, September and October, when they are captured in purse seines.

The introduction of gas engines in the gill-net fishing boats and the continued augmenting of the seining fleet and carrying boats, has resulted in a large increase in the use of refined oils. To meet this condition our company began the construction of a chain of marine service stations along the coast of British Columbia in the spring of 1926, and most of the stations were completed in time to participate in the annual run of the "Silver Horde." These facilities and the work they are doing will be interestingly described in an early issue of the Bulletin by S. G. Horton of the Vancouver office.

W. C. Trew

WILFRED C. TREW, General Credit Manager, died February 9, 1928, at the Good Samaritan Hospital, Los Angeles, after a three-weeks period of illness. Death was due to pneumonia.

Mr. Trew's untimely demise at 48 years of age terminated a service of nearly twenty years with Union Oil Company, about five years of which was devoted to the position of General Credit Manager.

He received his early business training in one of the large Canadian banks. Joining the Union Oil Company as Cashier in the San Jose office in December, 1907, he was

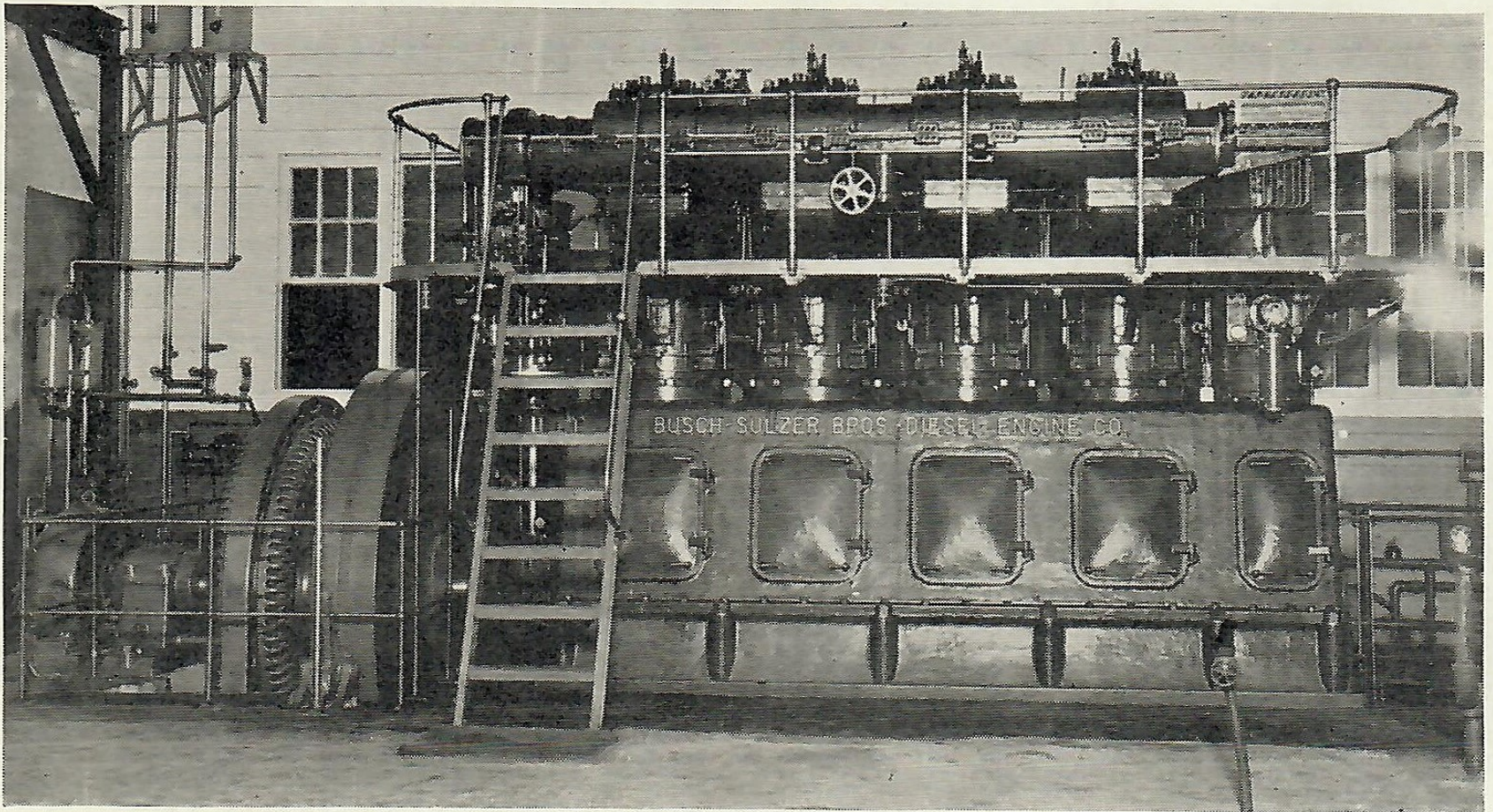
promoted eighteen months later to the cashiership in the Portland office. In 1914 he was appointed District Credit Manager at Seattle, and in May, 1923, was brought to Los Angeles to fill the position he held at the time of his death.

Mr. Trew had the faculty of winning and holding friends. He was democratic, warm-hearted and universally loved by his fellow employees who regard his passing as a personal loss.

The BULLETIN extends to his widow, Helen R. and two sons, Harry and Wilfred C., Jr., the heartfelt sympathy of the company.



W. C. TREW



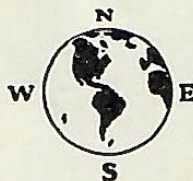
DIESEL ENGINE LUBRICATION

The above is a photograph of a Busch-Sulzer Type 4-B-90, 4 Cylinder, 4 Stroke Cycle, 365 H.P. Full Diesel Engine direct connected to a General Electric Generator, installed by the Elko Lemoille Power Company at their Elko, Nevada, plant, in 1922. The Busch-Sulzer Brothers Diesel Engine Company claim that this installation, as well as a similar one in San Francisco, are unquestionably the two most successful in-

stallations on the Pacific Coast.

The San Francisco unit was lubricated by Union Oil products throughout its entire period of service. The Elko plant has been lubricated and fueled by Union Oil products during the past four years. We naturally are very proud of the fact that our Union Diesel Engine Oils and Diesol have contributed in a large measure to the enviable record made by these plants.

NEWS OF THE MONTH



OPERATIONS FOR 1927

Gross profits from operations of the company for 1927 before deducting depreciation and depletion, etc., were \$25,638,086.76. Net profit amounted to \$10,048,493.74, equivalent to 10½ per cent on the average outstanding capital stock.

Sales for the year amounted to \$80,273,327.43, an increase of \$329,576.18 over the year 1926, and representing about 465,000,000 units of products or 31,280,006 barrels, an increase of 449,999 barrels.

Production, subject to royalties, of crude oil and natural gasoline by the company (including Colorado and Wyoming) in 1927 was 15,389,681 barrels as compared with 16,036,184 barrels in 1926, a decrease of 646,503 barrels. The average production of crude oil and natural gasoline (from 642 wells), at December 31, 1927, was about 38,300 barrels daily. In addition there were 177 wells shut-in, capable of producing about 19,000 barrels per day. The company is purchasing at the present time about 75,000 barrels of crude oil per day.

ANNUAL MEETING OF STOCKHOLDERS

Stockholders of both Union Oil Company of California and the Union Oil Associates, the holding company, re-elected the directors at the annual meetings held in Los Angeles late last month. The directors subsequently re-elected the officers.

LOMPOC EXPERIMENTAL WELL

The company is preparing to drill a test well, Purisima No. 19, in the Lompoc field for the purpose of obtaining more information on its large holdings in this area, which approximate 70,000 acres.

ANNUAL DANCE AT TAFT

Taft was the scene of a real Union Oil party on the night of February 17th, when three hundred danced until the small hours. Under the joint auspices of all company departments operating in the Valley and Coast, the dance committee provided a good floor, excellent music and a bountiful supper. The twenty or more guests from the head office felt well repaid for the long trip. Charles Woods' farewell injunction "Come again" was echoed with "You bet we will!" in every case.

RECENT A. P. I. COMMITTEE APPOINTMENTS

W. A. Raine, Manager Research & Development, has been appointed to serve on an American Petroleum Institute committee formed to cooperate with the Central Petroleum Committee in the selection of projects for the research supported by John D. Rockefeller and the Universal Products Company funds.

Ralph J. Reed, Chief Engineer, who served last year as a member of the preliminary committee appointed by President Clark to recommend Institute policy with reference to corrosion studies has been appointed a member of the General Committee on Corrosion.

W. L. Stewart, Jr., Secretary of the Manufacturing Committee, was appointed a member of the General Committee on Refinery Technology.

PROSSER STATION WINS TROPHY

In the office of W. B. Mahan, Agent at Prosser, Washington, is displayed a silver cup known as the Bailiff Trophy, having been presented by R. E. Bailiff, General Supervisor of the district in which Prosser is located. The trophy signifies that among approximately 100 stations under Mr. Bailiff's jurisdiction the Prosser station was adjudged the most attractive in appearance during the past year.

The well kept lawn, shrubs and flowers around the plant have attracted wide attention and the local employees are quite proud of their handiwork.

The cup has to be won two years in succession to be retained and Mr. Mahan promises a botanical display for 1928 that will shame all competitors.

THIS MONTH'S COVER

A seascape by Jack Wilkinson Smith! One sees just enough of the sea on canvas to stimulate a desire for more, and this contribution to the West's gallery of marine paintings by Smith ranks among the best.

G. G. Blue has a limited number of reprints of the cover which are being offered employees at 50 cents each. This price is very little more than actual cost, and the few cents difference will be placed to the credit of the company's athletic fund.

STANDARDS DIVISION CHANGES

Succeeding L. C. Hampton, who was transferred late last fall to the service of Atlantic Union Oil Company, Ltd., as Director in charge of engineering with headquarters at Sydney, New South Wales, E. P. Tallant, until recently assigned to special fire pre-



E. P. TALLANT



H. W. BRET

vention studies, has been appointed Engineer of Standards. H. W. Brett, Petroleum Engineer on the Field Department staff at Brea, has been appointed Assistant Engineer of Standards, succeeding C. F. Lienesch, transferred from the Engineering Department to become Manager of Technical Relations in the Sales Department.



YAKIMA BAKES A PIE

An immense apple pie which we guarantee would have disorganized the digestive apparatus of Mr. Gargantua himself was exhibited recently at Yakima, Washington. The occasion was National Apple Week and the giant pastry was the contribution of the Yakima Valley Traffic and Credit Association.

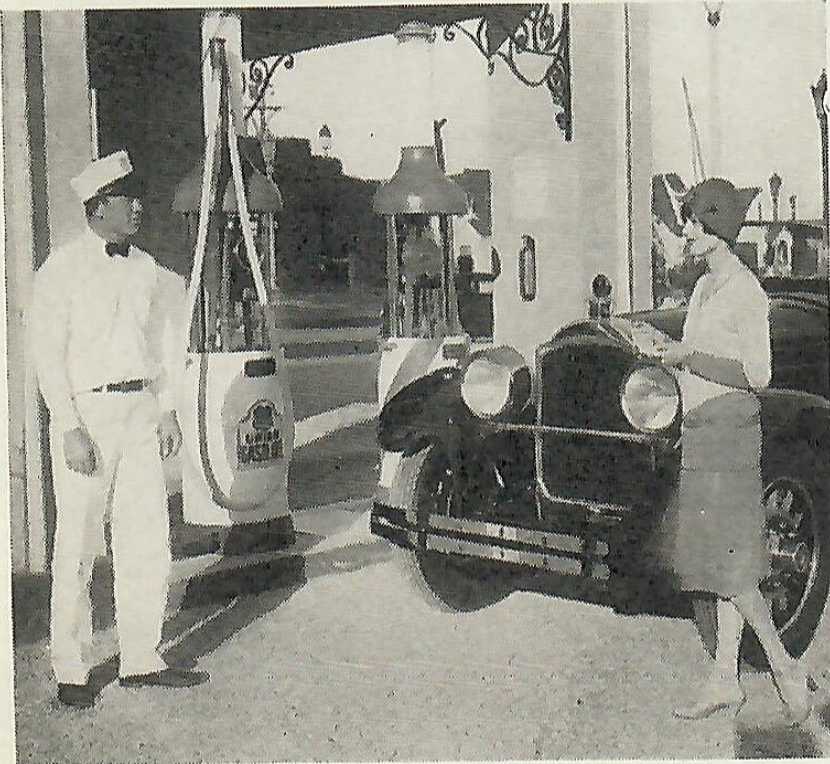
The pie weighed a ton, was ten feet in diameter and ten inches thick. It required 250 gallons of apples, 200

pounds of flour, 100 pounds of shortening, 100 pounds of water and five pounds of salt. S. C. Gardner, our agent at Yakima, cooperated with Herman Loevenstein, supervisor of the baking, by supplying a gallon of Union Crystal Oil for use in greasing the pan, and the tractor which pulled the pie in and out of the specially constructed oven used Union Gasoline and Aristo Motor Oil.

FRESNO ARISTO-CATS ENTERTAIN

The Aristo-Cats Club of Fresno, an organization of service station operators, held a dance on the evening of January 21st. This was the first of many informal affairs to be given by the club, and was attended by over 200 employees and their families. C. J. Price was chairman of the committee in charge, working in conjunction with the club president, M. F. Greve.

STAR USES UNION ETHYL



June Collyer, 1928 Wampas baby star featured in "Four Sons," patronizes our new Beverly Hills station.

SALES CONVENTION AT VANCOUVER, B.C.

Vancouver District, embracing the provinces of Alberta and British Columbia, held a very successful sales convention in the Hotel Vancouver, January 18 and 19. All stations and sub-stations were represented, and Messrs. Bailiff and Brand from the office of the Manager of Northern Division gave interesting and instructive addresses. V. H. Kelly's unavoidable absence was regretted by all present.

VISITOR FROM LONDON

H. G. Brameld, Manager Oil Department, Duncan Fox & Company, London, spent several days last month conferring with officials of our company at Los Angeles. Duncan Fox & Company are Union Oil Company's representatives in Great Britain.

ORANGE CLUB HAS NEW HOME

On Saturday evening, January 28, 1928, the Orange District Social Club gave an entertainment and dance, celebrating the opening of the new recreation hall on the Graham & Loftus lease.

The building formerly used as the G. & L. Boarding House was remodeled by the employees after their regular working hours and it is the intention of the committee to use the hall for mutual meetings and social gatherings.

At a short business meeting following the program W. D. Kuhns was unanimously elected president and Wm. Giltwedt was elected secretary and treasurer.

The committee responsible for the success of the evening was composed of R. H. Lee, chairman, R. W. Landreth, Cy Delaney, Wm. Robertson and Frank Ashworth.



1. *What are the principal exports of Java? See page 2.*
2. *What variety of salmon is considered to have the sweetest meat? See page 14.*
3. *What are "Botijas"? See page 8.*
4. *How does the island of Java compare in area to the State of California? See page 3.*
5. *Where is the center of the halibut fishing industry on the Pacific Coast? See page 15.*
6. *What is the Boeroeboedoer? See page 5.*
7. *Do the Javanese have a language of their own? See page 7.*



WORLD'S LARGEST CRIB BRIDGE

The above structure, the largest of its kind in the world, was built by the Coats Driving & Boom Company near Tillamook, Oregon. It contains 750,000 feet of lumber and reaches a height of 125 feet above the floor of the canyon. A. F. Coats of the Coats Driving & Boom Company and the A. F. Coats Lumber Company is a 100 per cent booster for Union Oil. Both of his companies use Union products throughout.

S P O R T S



FIELD BOWLERS WIN AT DOMINGUEZ

The Dominguez Bowling League season for 1927 came to an exciting end Tuesday evening, January 24th, after the most closely contested race it has ever enjoyed. Captain Berry's Field Department Pin Busters



THE WINNING FIELD DEPARTMENT TEAM
 Left to right, top: Rudolph Hartman, Wallace McIntosh, George Berry (Captain), Clell Lowry. Bottom: Mart Bowser, Tom Reed, Jim Craig.

sprinted to victory after a slow start, with the Geologists a close second. It appeared for awhile that the mud smellers would win by a nose, but concentrated effort by the Field five resulted in their grabbing the trophy.

The standings of teams at the close of the season were as follows:

TEAM	AVERAGE
Field	.660
Geological	.607
L. A. P. L.	.553
Gas	.535
Warehouse	.482
Santa Fe Springs	.446
Engineering	.392
Transportation	.339

COMPANY BOWLING CHAMPIONSHIP PLAY-OFF

The annual play-off for the company bowling championship and the handsome trophy presented by Major F. R. Burnham will be held on Thursday evening, March 8th at 8 p.m. The cup is at present held by the Phoenix, Arizona trundlers, who captured the initial competition last year with a record score. It is hoped that many more teams will enter this year and therefore make the competition still keener.

In addition to the trophy, the winning team will be presented with individual medals and the man rolling high scores in the tournament will also receive a special prize presented by E. W. Clark, Executive Vice-President.

IMPORTANT HOOP SERIES IN THE OFFING

A post-season Union Oil Company basketball tournament is being arranged to include teams from San Francisco, Oakland and Stockton sales offices and the Oleum Refinery.

There seems to be a feeling of optimism among the supporters of the "Red Liners" of Oleum regarding the outcome of the series, not only because the refinery quintet is reported to have the classiest uniforms of any company team, but also because they have defeated some of the best teams in Central California, including two wins out of three games played with the Shell Company Refinery aggregation at Martinez.

RUSHING THE SEASON

The employees of the San Francisco office have felt the urge of Spring and have challenged the Oleum Refinery to a baseball game. The challenge was accepted and a survey of available vacant lots is being made preparatory to the staging of this annual classic.

WE HOPE IT'S ACCEPTED

The Los Angeles District basketball team, which occupies third place in the second division of the fast-moving local A. A. U. League, is deliberating over a challenge issued by the crack San Diego Sales hoopmen. The San Diego boys are leading their local commercial league, and if arrangements for the meeting are completed satisfactorily, Southern District fans are in for a treat.

BOWLERS IN CLOSE RACE

After five months' play of a seven months' schedule, the Union Oil bowling team is tied for first place with Pan American in the Los Angeles Petroleum Athletic League tournament, both having won 43 games and lost 29. The top position is doubly threatened, however, by Shell and General Petroleum who share second place between them. Some very exciting matches are anticipated before the league closes April 25th.

TIGERS WIN

The Engineering Tigers finished in first place in the Los Angeles District bowling league, the final play taking place on the evening of February 28th. This gives them two legs on the Executive Vice-President trophy presented by E. W. Clark. Each member of the team also receives individual medals from the Davenport Recreation Hall, where the contests were held. The personnel of the winning team is as follows: A. E. Morrison, Captain, H. Wacker, L. P. Duffy, R. Stephens, C. R. Austin, L. W. Bruce and E. Moritz.

The standing of the teams in the league at the finish:

	WON	LOST
Tigers	52	28
Garage	45	35
Branch	43	37
Lions	42	38
Sales	42	38
Transportation	41	39
Gas	40	40
Lub	39	41

Arrangements are being made for the annual banquet to be held soon.

SAFETY IN THE UNION



OLE & UM

BY ANDY JARVIS

They save a little time

STARTING EARLY

February thirteenth saw an interesting experiment started in the Los Angeles schools. On the afternoon of that day two hundred and fifty teachers of manual training, shop work, carpentry and other branches of vocational education met together at Sentous High School to hear the first of a series of talks on safety in industry. These men are the teachers of our next generation of mechanics, foremen and superintendents. They can instill in the receptive minds of their pupils the need of caution, attentiveness and care which will make them safe workers in the future. That the teachers themselves may have the right perspective on their responsibility to these coming industrialists, the Supervisor of Safety for the Board of Education, Mr. E. B. Lefferts, called upon the Safety Engineers to supply speakers from various branches of safety work.

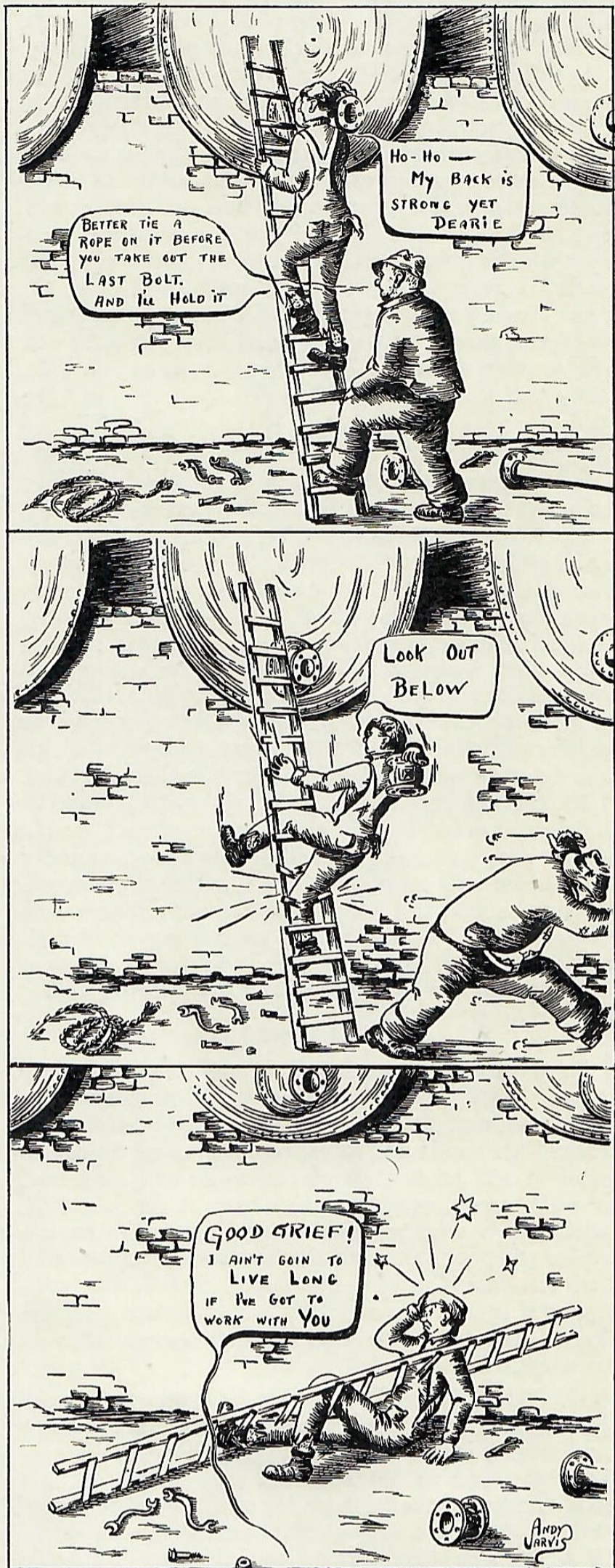
First of these was Hugh A. Matier, of our own Department of Exploration and Production. Those who have heard Hugh know we indulge in no exaggeration when we say that he made two hundred and fifty converts to the need of safety education. Speaking as man to man and without rhetorical flourish, he sketched the history of man's struggle for security from early times down to this age of the high-speed machine. "Every age had its safety rules and its dire penalties for their disobedience," he said. "Today the hazards to life and limb are different from those of the past but even greater. The boy leaving school enters a world that he knows little about and for which you men and women must prepare him by teaching him habits of caution. He must think before he acts and he cannot act safely unless he first thinks safety."

The second speaker, C. P. Anderson, Safety Engineer of the Richfield Oil Company, urged the teaching of the fundamentals of first aid. Said he: "Our experience has shown conclusively that knowledge of first aid pays. Not only directly, in avoiding infections and perhaps saving lives through properly taking care of the wounded, but by making men more careful in avoiding accidents. Men trained in first aid actually have fewer accidents than those who are not trained."

There will be other speakers at future meetings to be held throughout the balance of this year. It speaks well for the future of industry that the public schools and the safety engineers have begun to work on the coming generation. As Henry Ford says, "Big things are only little things assembled." The Safety Movement is made up of hundreds and thousands of little efforts toward avoiding accidents.

CEREGHINO ADVANCED

Carrying the best wishes of his many friends, William Cereghino has departed for Borger, Texas, to become superintendent of the McMillan Oil Company Refinery. While best known for his fire prevention and safety work at Los Angeles Refinery, "Bill" is a well trained chemical engineer. The work which he has so long supervised at Los Angeles Refinery has been divided between his two assistants, C. L. McCreary and Francis Bartella. The former will direct fire prevention under John Salmon, refinery superintendent, and the latter will have charge of safety and first aid, reporting to C. G. Brownlee, refinery manager.



Moral: Pride goeth before a fall

TRY, TRY AGAIN!

Within a few days of each other two accidents occurred at Oleum, neither very serious in itself yet each of great importance in its effect. One stopped what had become a habit with H. L. Smith, the crowing over his no-lost-time record. The other marked the end of the longest no-accident record of the refinery forces. Oleum has started all over again. The past months have been practice. Adding to the zest of the present competition is the National Safety Council Petroleum Section Contest for the entire United States. From March first until August thirty-first of this year the oil companies of this country will stage a contest, divided among the several branches of the industry. Our drilling and producing forces will be matched against those of every part of the country; our refiners, our marketers, our marine men, our pipe liners and natural gas gasoline men will have a chance to show how they compare in safety with the eastern and mid-continent operators, not to mention our competitors here on the Coast. In 1926 our field forces led the country with the lowest accident frequency reported to the National Safety Council. 1927 comparisons for the entire country are not yet available but our own record was better than it had been in nearly every department. The next six months will show what we can do if we really try.

SAFETY SCHOOL FOR SOUTHERN CALIFORNIA

It is not only the children who go to school these days. On March seventh hundreds of superintendents, foremen and workmen from every kind and variety of industry in Southern California will meet at LaFayette Junior High School in Los Angeles for the first of a six weeks course in safety. The sixth annual Safety School of the Chamber of Commerce starts on that evening with what looks like the best program ever gotten together for such an event. So large has the attendance at these schools become that they have outgrown the facilities of the Chamber of Commerce and will this year have an entire school building at their disposal.

As has been customary of late, the meetings will be divided by industries. Of these the petroleum section always draws a large group. This year the program for the oil men will cover production, refining, gas operations and marketing. Union Oil Company shares with Associated Oil Company the sponsoring of the refineries program. Programs will be mailed to all superintendents of our company before the opening day.

A COSTLY SMOKE

An experienced workman in an eastern factory stopped work at the noon whistle and on his way to the washroom, he filled his pipe ready to light. He washed his hands and forearms with waste dipped in gasoline, and when through cleaning them, he turned to walk away, reached in his pocket for a match, struck it—but never lit his pipe. Instead he took a trip to the hospital, with his hands and arms covered with second and third-degree burns. He is laid up with a painful injury, the company loses his time, production is delayed, a new man must be broken in to do his work.

NOW THE MORAL: Did the management dismiss the incident with the thought and remark "damn carelessness, man's own fault," as most plant executives are prone to do? They did not. This plant is a good accident prevention plant, with a good record of achievement and a strong committee always at work. They at once investigated various non-flammable cleaning solutions and will substitute for the gasoline.

It is unfortunate that a man had to be injured to bring about the correction of this hazardous condition and practice. Nevertheless the fact that his injury DID result in a correction shows that this company profits by their accidents to extent of removing the possibility of their recurrence. If such a condition exists in your plant, why not profit by the experience of this other company and remove the cause before one of your men is injured?

—Michigan Mutual Shop Man, September, 1927.

ACCIDENT FREQUENCY

	1927	1926
U. O. Bldg.	0.	16.4
Engineering Construction	52.8	68.
Exploration & Production		
Colo., N. M., Wyo.	31.7	66.9
California		
Maricopa	51.9	70.9
Orange	44.5	44.
Orcutt	18.6	8.3
Santa Fe-Domg.	58.4	61.9
Ventura	7.6	17.6
All California Districts	46.2	50.1
Gas Operations		
Northern	17.8	0.
Southern	20.3	25.7
Both Districts	19.8	20.1
Marine	18.	22.5
Pipe Lines		
Los Angeles	18.3	17.6
Lompoc & Producers	26.9	23.9
All Pipe Lines	23.5	21.6
P. D. Warehouses	5.1	26.8
Refineries		
Avila	0.	0.
Brea	0.	36.4
Los Angeles	36.	39.
L. A. Lub.	45.4	12.7
Maltha	14.6	0.
Oleum	26.1	25.
Santa Paula	0.	28.4
Vancouver	27.3	11.4
All Refineries	29.3	28.1
Research & Development	9.	7.6
Sales		
Fresno	12.2	16.8
Honolulu	36.7	16.2
Los Angeles	22.6	21.1
Los Angeles Garage	8.5	16.3
Oakland	31.9	23.1
Panama	0.	0.
Phoenix	22.8	17.7
Portland	16.8	13.2
Sacramento	15.	24.
San Diego	23.5	31.5
San Francisco	16.3	8.1
San Jose	24.4	13.5
Seattle	8.1	7.4
Spokane	3.3	8.2
Stockton	34.	33.2
Vancouver	27.3	22.3
All Sales Districts	19.2	17.6
All Company Operations	27.7	31.7

FREQUENCY RATE—Is the number of lost time injuries per million man hours.

California Oil Statistics, January, 1928

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

DISTRICT	BARRELS PER MONTH		DAILY AVERAGE	
		Jan., 1928	Dec., 1927	Jan., 1927
Kern River.....	777,448	25,079	23,268	13,236
Mount Poso.....	2,929	94	111	225
Round Mountain.....	1,195	39	—	—
McKittrick.....	148,361	4,786	4,932	5,290
Midway-Sunset.....	2,471,365	79,721	80,883	90,477
Elk Hills.....	745,635	24,053	23,955	34,325
Lost Hills-Belridge.....	128,873	4,157	4,153	4,819
Coalinga.....	606,612	19,568	18,768	19,896
Wheeler Ridge.....	28,958	934	989	1,053
Watsonville.....	1,783	58	58	56
Santa Maria.....	190,560	6,147	5,872	4,641
Summerland.....	3,885	125	125	137
Goleta.....	9,363	302	231	—
Rincon (Seacliff).....	13,556	437	157	—
Ventura Avenue.....	1,617,350	52,173	51,121	53,963
Ventura-Newhall.....	195,531	6,307	5,950	5,507
Los Angeles-Salt Lake.....	46,943	1,518	1,613	1,736
Whittier.....	51,577	1,664	1,730	1,967
Fullerton (Brea Olinda).....	465,500	15,016	14,969	25,213
Coyote.....	432,751	13,960	13,870	15,326
Santa Fe Springs.....	1,200,632	38,730	38,807	44,692
Montebello.....	395,946	12,772	12,947	17,492
Richfield.....	655,299	21,139	21,629	20,354
Huntington Beach.....	1,817,363	58,625	59,807	92,254
Long Beach.....	3,505,390	113,077	108,397	92,564
Torrance.....	610,527	19,694	20,361	25,783
Dominguez.....	401,629	12,956	13,612	18,461
Rosecrans.....	245,304	7,913	8,521	11,970
Inglewood.....	967,605	31,213	31,566	39,560
Newport.....	460	15	15	32
Seal Beach.....	1,287,989	41,545	42,514	10,094
TOTAL.....	19,028,228	613,814	610,930	651,125
December, 1927.....	18,938,823	610,930		
Increase.....	89,405	2,884		

STOCKS

	Jan. 31, 1928 **Dec. 31, 1927		Jan. Stock Increases **Jan. 31, 1927	
	Heavy Crude, heavier than 20° A. P. I., including all grades of fuel.....	95,621,539	94,907,147	714,392	90,462,728
Refinable Crude, 20° A. P. I., and lighter.....	20,784,053	20,268,569	515,484	31,176,493
Gasoline.....	12,919,356	12,733,763	185,593	13,503,134
Naptha Distillates.....	1,820,900	1,901,279	*80,379	4,114,777
All Other Stocks.....	9,251,941	9,529,592	*277,651	10,423,669
TOTAL ALL STOCKS.....	140,397,789	139,340,350	1,057,439	149,680,801

**Revised *Decrease

DEVELOPMENT

	DEVELOPMENT			Daily Initial Output	Active Wells		Abandoned Wells	
	New Rigs Up	Active Drilling	Completed		Producing	Drillers	Producers	Producers
Kern River.....	20	20	14	2,255	1,379	..	..
Mount Poso.....	..	1	..	..	3	..	..
Round Mountain.....	3	7	2	620	1	..	..
McKittrick.....	1	1	..	..	302	..	..
Midway-Sunset.....	2	7	6	574	2,853	1	3	
Elk Hills.....	..	..	..	..	225	..	..
Lost Hills-Belridge.....	3	1	..	..	309	1	..
Coalinga.....	..	2	1	43	992	..	..
Wheeler Ridge.....	..	1	1	70	31	..	..
Watsonville.....	..	..	..	..	6	..	..
Santa Maria.....	..	4	2	640	228	..	..
Summerland.....	..	1	..	..	91	..	..
Goleta.....	..	1	..	..	6	3	2
Rincon (Seacliff).....	9	20	3	775	4	..	..
Ventura Avenue.....	6	30	1	1,872	109	..	..
Ventura-Newhall.....	..	24	..	..	504	..	..
Los Angeles-Salt Lake.....	..	..	..	..	334	..	..
Whittier.....	..	..	..	..	183	..	..
Fullerton (Brea Olinda).....	..	6	..	..	381	..	..
Coyote.....	..	2	..	..	208	..	3
Santa Fe Springs.....	..	1	1	65	316	..	..
Montebello.....	1	3	1	50	175	..	..
Richfield.....	..	9	4	605	258	..	1	
Huntington Beach.....	3	17	..	..	571	2	7
Long Beach.....	42	137	5	10,564	619	..	14	
Torrance.....	..	..	1	95	650	..	2
Dominguez.....	1	2	1	182	70	..	1	
Rosecrans.....	..	2	..	..	109	..	4
Inglewood.....	3	3	..	..	224	..	..
Newport.....	..	1	..	..	4	1	..
Seal Beach.....	..	4	..	..	136	4	..
Potrero.....	1	2	..	..	..	..	..
Miscellaneous Drilling.....	18	137	..	..	..	9	..
January, 1928.....	113	446	43	18,410	11,281	21	37	
December, 1927.....	96	401	58	19,358	11,284	12	23	
Increase.....	17	45*	15*	948*	3*	9	14	
Average for year 1927.....	97	404	75	39,992	11,276	23	21	
Average for year 1926.....	95	422	76	32,635	11,288	24	17	
Average for year 1925.....	105	417	79	42,247	11,393	28	12	
Average for year 1924.....	103	510	103	42,412	10,903	28	21	
Average for year 1923.....	111	759	82	114,690	8,928		24	

REFINED AND CRUDE



Recent changes in production and refining methods have rendered it advisable to alter the character of Refined and Crude in keeping with the modern trend, and in order to improve future deliveries we are looking to our readers for a plentiful supply of raw material with a high chuckle content. Send in your quips and we'll try them out on Jack Geary. If he laughs, all well and good; if he sticks his tongue in his cheek, the joke positively won't appear.

* * *

Mrs. Lee, secretary to R. E. Haylett and W. L. Stewart, Jr., is one of the most erudite young ladies in the service of the Union Oil Company. She is just as familiar with Gibbon's "Rome," or Ruskin's "Seven Ages of Architecture," as most of us are with the works of Ring Lardner, and like all good readers she finds great enjoyment in discussing the books she has read. Quite recently, during a casual conversation, she informed a friend that she had just finished reading "Inferno." "How did you like it?" the friend enquired. "Oh, fine and Dante" was the instant response.

* * *

When our Manager of Refineries visits the tonsorial parlor, the barber invariably starts at the top of the Page.

* * *

Strikes are very prevalent just now in certain departments of the Union Oil Company, but there is really no cause for alarm. They are due to an epidemic of bowling that breaks out annually about this time.

* * *

"Am just sending you these few lines" wrote Lafe Todd, Superintendent of the Producers Pipe Line, as he forwarded a few lengths of six-inch pipe to Walter Straley at Midway.

* * *

And speaking of pipe lines, we understand that the acquisition of franchises and rights of way is becoming Ferry Ferry difficult.

* * *

Our readers will be interested and surprised to learn that Wm. Groundwater, Manager of Transportation, is a full-blooded Scot. Mr. Groundwater has kept the fact cunningly concealed for many years, but the truth will out. He was actually born on the Island of Orkney, which is not exactly on the mainland, but is very close.

* * *

The report that C. C. Ireland had been arrested for reckless driving in Spokane was grossly exaggerated. A man can't be arrested for reckless driving on the golf course.

* * *

The boys from the Cross Plant at the Los Angeles Refinery have developed a first-class quartette. They will make their debut at the next meeting of the Refinery Social Club in a song entitled "Way Down Upon the Swanee Rebber."

In delegating the work of measuring tanks for the preparation of gauge tables, Milton Kerr, Auditor of Production and Transportation Accounts, has been responsible for the development of some strapping young fellows.

* * *

Doc Merrill says there is no excuse for a man feeling chesty simply because he has graduated with a college degree. You can get a thermometer graduated with two hundred and twelve for a dollar and a half.

* * *

The plea for conservation in the oil industry is not intended to imply that conservation of energy on the part of the individual is involved.

* * *

Cracking has become a very important factor in refining practice and its possibilities seem to be unlimited. Wisely directed cracking made Will Rogers Mayor of Beverly Hills.

* * *

Paul N. Boggs, Assistant General Manager, has just purchased a six-acre property in Beverly Hills from Corinne Griffith. Doesn't this make the plot more interesting?

* * *

"A natural aptitude for athletics of all kinds prompted my initial attempt at bowling one evening recently. Bent on making a show, I nonchalantly picked up the ball, carefully judged my stance, and let fly. Imagine my embarrassment when, upon regaining consciousness, I found ten-pins down my coat collar and the ball reposing quietly at the head of the alley."—G. G. BLUE.

* * *

C. F. Lienesch says Ted Lundgren, our new Aviation Representative, is an interesting traveling companion, but extremely thoughtless. The two made an overnight stop at San Diego a few weeks ago, occupying adjoining rooms with connecting bath. Lienesch was awakened early the following morning by sounds of great industry in the bathroom. Investigating, he found Ted using his (Lienesch's) toothbrush. Remonstrances followed. "Sorry," gurgled Ted, "I thought it was one somebody had left here."

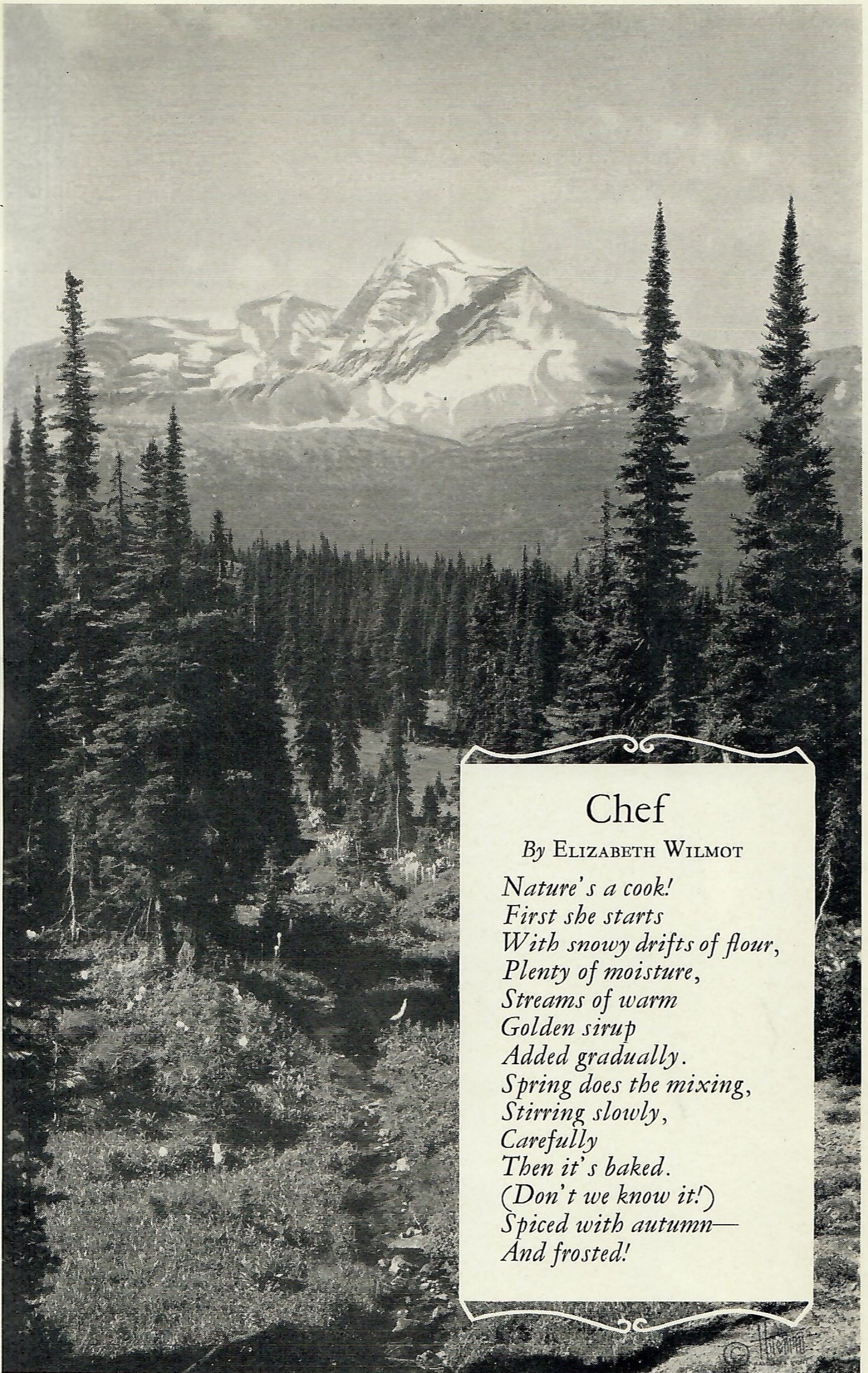
* * *

Standing on the first tee, with perspiration oozing from every pore, R. D. Matthews rested on his driver after the third vehement swing at the aggravating pellet, and glaring at the tiny mounds of displaced turf, remarked softly: "This is the toughest golf course I ever played on!" (He reads Judge.)

* * *

Desaix Meyers, Chief Geologist, and E. C. Noble were having lunch together when they were accosted by a dark stranger who represented himself as a prohibition agent. "I overheard your conversation," he said. "Come with me."

It all turned out all right, however, for it developed that they were merely discussing quartz.



Chef

By ELIZABETH WILMOT

*Nature's a cook!
First she starts
With snowy drifts of flour,
Plenty of moisture,
Streams of warm
Golden sirup
Added gradually.
Spring does the mixing,
Stirring slowly,
Carefully
Then it's baked.
(Don't we know it!)
Spiced with autumn—
And frosted!*

Photo Copyrighted by Hileman

