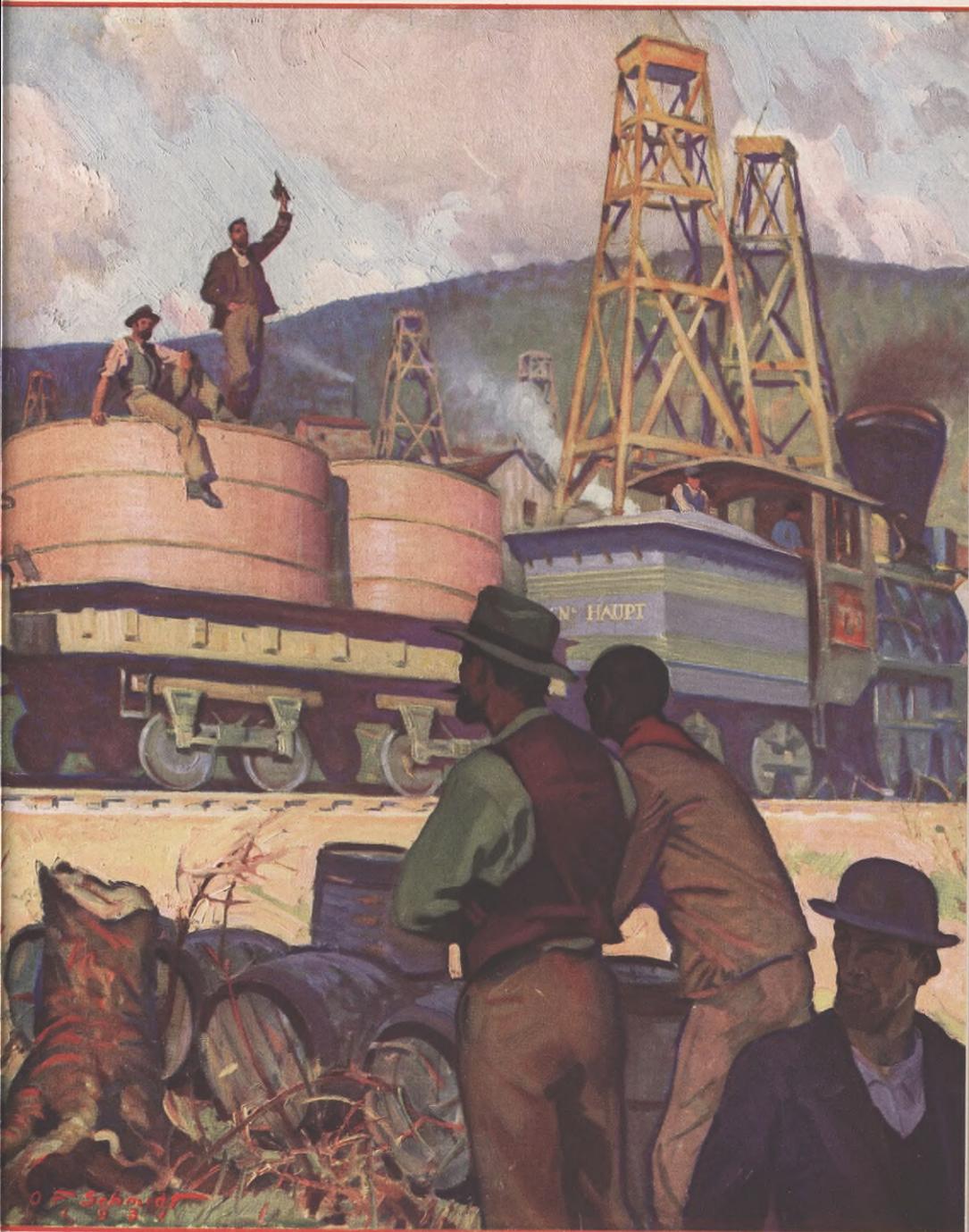


The **TEXACO STAR**



NOVEMBER 1931

And Then They Made a Tank Car

MORE than three years passed after Colonel Drake drilled the first American well for petroleum before producers had time to take a breath. They were too busy drilling wells and getting their oil to market to let inefficiency and make-shift methods bother them. When at last they stood off and surveyed with comparative calm the havoc of the oil fields they saw one great stumbling-block before them. It was the leaky, greasy, clumsy oil barrel.

Rafts of empty barrels being towed up Oil Creek collided with flatboats filled with loaded barrels floating down. The 6,000 teams that carted barrels of oil from wells to refineries, railroad depots, and steamboat landings made every road an almost impassable quagmire. Trainloads of barreled oil caught fire and endangered everything near by.

In 1862 efforts were made to ship oil from Canadian fields in iron tanks. Less than a year later Charles Scott of Lawrenceville, Pennsylvania, exhibited a model of a tank car he had invented—simply an ordinary railroad car lined with tin compartments. Charles P. Hatch built a box car containing three wooden tanks soon afterward. In 1865 John F. Keller of Pittsburgh was working on some sort of an oil tank car.

On April 20, 1866, the inhabitants of Shaffer's Farm, Oil City, Pennsylvania, turned out to view some "curiosities" that had been brought in on the Oil Creek Railroad. These were four platform cars, each carrying a pair of tanks built of hoops and staves like the familiar oil barrels. Each car carried 80 barrels of petroleum in bulk.

Today 80 per cent of the nation's crude oil is transported through pipe lines, but more than 138,000 fire-proof, steel tank cars, an outgrowth of the tubular iron cars that appeared on the Jamestown and Franklin Railroad in 1870, carry the refined products of the petroleum industry.



THE COVER ILLUSTRATION ON THIS ISSUE OF THE TEXACO STAR, SHOWING ONE OF THE OIL INDUSTRY'S FIRST TANK CARS, IS THE SEVENTH OF A SERIES OF ORIGINAL PAINTINGS, BASED ON AUTHENTIC DATA, DRAMATIZING OUTSTANDING INCIDENTS IN THE DEVELOPMENT OF THE AMERICAN PETROLEUM INDUSTRY. REPRODUCTIONS, SUITABLE FOR FRAMING, ARE AVAILABLE TO READERS.

The TEXACO STAR



VOLUME XVIII
NUMBER 9

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NOVEMBER
1931

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Cover by O. F. Schmidt

A PUBLICATION OF THE TEXAS COMPANY

Published monthly for distribution to employees and stockholders

DIRECT ALL COMMUNICATIONS TO THE EDITOR OF THE TEXACO STAR
135 EAST 42ND STREET NEW YORK CITY



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BRIEF

★ A liquid-fuel rocket, a diminutive model of a projected interplanetary express, recently made a successful 1,000-foot flight in Germany.

AND

★ A quarter of a century will have passed this year since the seals of the National Tuberculosis Association began to appear on holiday mail. These seals, at one cent each, help 2,084 groups in this country stamp out tuberculosis.

TO

★ Locomotives and cars shaped like the bodies of fast birds or fish are being considered in efforts to streamline railroad trains for faster service.

THE

★ The Texaco Educational Exhibit, an article concerning which appeared in the August-September issue of THE TEXACO STAR, has been moved from West Fifty-Seventh Street, New York City, to 334 Madison Avenue, northwest corner of Forty-third Street, one of the busiest street corners in the mid-town shopping district. The exhibit attracts crowds from the opening of the business day far into the night.

POINT

★ Warning signs along highways may be overdone, in the opinion of the Connecticut Commissioner of Motor Vehicles. Too many of them are likely to have a bad effect on the man at the wheel. A slight curve, he believes, needs no warning, and "Caution" signs might better be limited only to spots where actual danger exists.



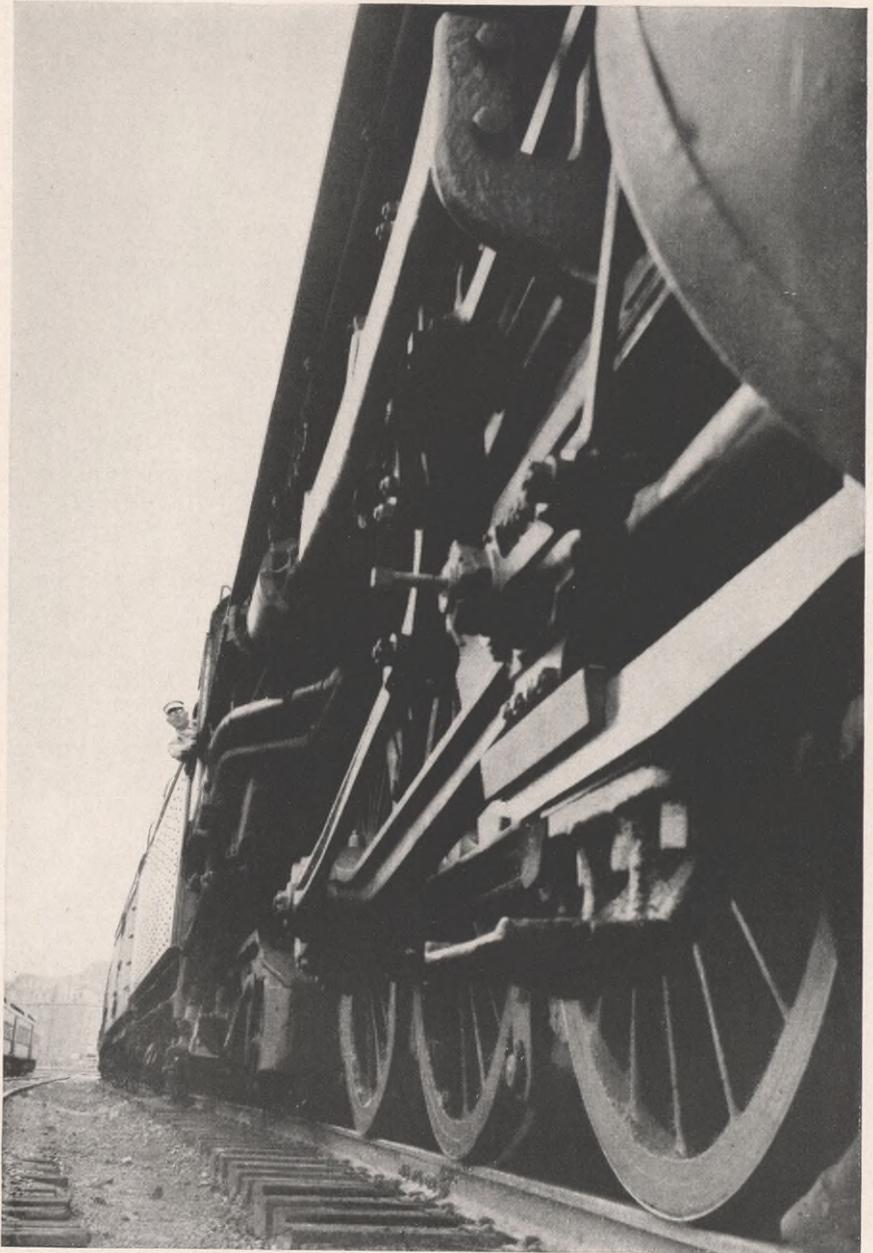
★ About 50 cents out of each dollar spent by the American motorist for gasoline represents the combined cost of crude oil and the expense and profit of refining, according to a study made by the United States Department of Commerce covering the petroleum industry of the Gulf Southwest.



★ More trips are made daily on elevators in New York City than on horizontal lines of transportation.



★ There is one dentist to every 1,700 persons in the United States.



EWING GALLOWAY

**LOOK OUT FOR
THE ENGINE**

About 40 Per Cent of the Locomotives on Class
One American Railroads are Texaco Lubricated

The Tax Evasion Racket

*An Erstwhile Harmless Source
of Revenue Becomes a Major
Problem of Law Enforcement*

By J. H. HILL

Chief Attorney, The Texas Company, Oklahoma and Kansas

ONE of the most serious problems confronting the oil industry today is the evasion of payment of the gasoline tax. Much is said and written regarding the over-production of crude oil, excessive refinery runs and the multiplication of service stations, and each of these subjects is undoubtedly important in considering the stability of the oil industry. But on a subject which is probably more important and vital to those interested in every phase of the oil industry, very little is said.

The importance of the gasoline tax evasion racket is either not realized by most members of the oil industry and by the officials charged with the duty of collecting the gasoline tax, or it is purposely disregarded. Many of those interested in the production, transportation and refining divisions of the oil industry are under the impression that gasoline tax evasion is essentially a sales problem. But this is not true. The question is vital to every branch of the industry and it is in the interest of all that vigorous and effective support be given to the efforts now being made to suppress this evil. Everyone in any way interested in the oil industry should help not only in the interest of the industry but also as a public duty.

The character of the tax-evader is such that in order to maintain sales he must cut prices. He does this at the expense of the state (deprived of the tax) and his law-abiding competitors, who are compelled to market their products in the face of a three- to six-cent advantage in favor of the tax-evader. The consequence is that the whole market structure is affected and undermined by this evil, resulting in lower prices for crude as well as refined products. The stake is so large and the risk of apprehension and conviction so small that the practice has become far more prevalent throughout the country than is generally realized by members of the oil industry. If the facts regarding gasoline tax evasion were fully exposed in each state, an alarming and astounding situation would be disclosed.

The gasoline tax was first enacted in Oregon, 12 years ago. At that time the rate was one cent per gallon and with the revenue devoted to highway maintenance and construction, the tax looked in-

nocent and unobjectionable. It met with public favor and in a few years was enacted, in most cases with higher rates, in every state in the Union.

The rates have been increased from year to year until the maximum state rate is now seven cents per gallon and the average state rate exceeds four cents per gallon. In addition to the state tax, many towns, cities, and other municipal sub-divisions have also levied gasoline taxes until at some points the total rate is from nine to 10 cents per gallon. The total tax collected on gasoline in 1930 was more than five hundred million dollars.

In 1925 the average tax equalled approximately 20 per cent of the Oklahoma tank car price. In 1930 it was more than 60 per cent of this price, and at the present time the average tax actually exceeds the Oklahoma tank car price.

The price of gasoline in tank car lots at Texas Gulf ports is approximately one and one-half per cent per gallon higher than the Oklahoma price, but even on this basis, at the present time the average tax is from 80 to 90 per cent of the price of gasoline at Texas Gulf ports in tank car lots.

Gasoline is the only article subjected to universal sales taxation in the United States. Almost everyone connected with state government considers it perfectly proper to tax gasoline at exorbitant rates while denouncing all other forms of sales taxation as "nuisance taxes."

The last Oklahoma legislature considered the question of enacting a sales tax on certain other commodities but finally concluded not to do so. Despite the fact that Oklahoma is a great petroleum-producing-and-manufacturing state, petroleum ranking next to agriculture, the gasoline sales tax (which was then exorbitant) was increased from four cents to five cents per gallon, effective until December 31, 1931. Notwithstanding the disastrous results, there is now a movement under way to make this increase permanent. This is due principally to the erroneous idea that the tax can be collected without trouble and expense to the state.

Gasoline is the largest product in quantity and return derived from crude oil. It is the backbone of the petroleum industry. In addition to all other taxes paid by the industry; ad valorem, income,



EWING GALLOWAY

Traffic at the New York Entrance to the Holland Vehicular Tunnel Under the Hudson

production or severance, inspection, and license taxes, it is burdened with a vast sales tax on gasoline, which is annually growing greater. The tax, owing to increased rates, will probably exceed \$650,000,000 in 1931.

From the beginning of taxation, exorbitant rates have reduced or destroyed revenue. In the case of sales taxes this is brought about by decreased use of the product and tax evasion. The moment the rate is raised to the point where evasion becomes profitable, then evasion becomes a problem. No one will deny that when the tax approaches, and in some cases exceeds, the delivered wholesale price of the product, evasion then becomes profitable.

Oklahoma is a striking example of the result of exorbitant rates. The state is collecting less this year at a five-cent tax than it did last year at a four-cent tax. The total revenue in August, 1931, was \$970,203.76, against \$1,029,080.51 in August,

1930—a decrease of 5.72 per cent notwithstanding an increase of 25 per cent in rate.

In addition, the tax against gasoline purchased by cities, towns, counties and school districts direct from refiners could not be enforced in 1930. The law of 1931 made such tax enforceable.

Oklahoma's decreased revenue is doubtless due in part to economic conditions. But it is also attributable in part to a higher tax rate which brings in its wake reduced consumption and tax evasion. The exemption for July, 1931, (the last month for which information is available) on account of farm tractors and stationary engines on farms, was 6,251,776 gallons, against 4,528,783 gallons in July, 1930. These exemptions undoubtedly reflect a large percentage of tax evasion.

In the adjoining state of Missouri, where economic conditions are much the same but where a two-cent tax rate prevails, there has been a material increase in revenue. August, 1931, revenue was \$931,914, against \$807,491 in August, 1930. Although the exemp-

tion provisions are much broader than in Oklahoma, since they include all gasoline not used on the roads, the amount of exemptions is less than three per cent of taxable sales. There is a vast difference between an exemption of three per cent, as in Missouri, and one of 25 per cent of taxable sales, as in Oklahoma, or of from 60 to 75 per cent of sales, as in Kansas.

There are many forms of tax evasion; failure to report the gasoline, failure to pay the tax, mis-billing, blending kerosene or naphtha with high-grade gasoline, paying the tax on the gasoline part of the blend only, reporting sales as exports, and abuses of exemption. All these forms of evasion are common throughout the country. Much publicity has been given to large delinquencies and other forms of evasion which existed in California. Delinquencies of known gasoline taxes in excess of five million dollars existed in Pennsylvania in January of

The TEXACO STAR

this year. That state is now patrolling its navigable waters with armed patrol boats and its borders with state police in an effort to suppress gasoline tax evasion.

Gasoline tax evasion has grown into a major criminal racket in Illinois, where one distributor, among many others, was found to have evaded the tax in excess of one hundred thousand dollars. A refinery in Texas was recently put into the hands of a receiver at the suit of the state for an alleged tax evasion claim in excess of fifty thousand dollars. In Tennessee, where cities and towns are exempt, it is charged that tax-free gasoline was dispensed. Every exemption provision is being abused. Cases of various kinds of tax evasion can be pointed out in almost every state.

There is no more competitive business than petroleum sales. One price-cutter can disorganize the market over a large section and destroy the hope of the law-abiding dealer for a profit. For months the tax-paying dealers of Chicago have had to meet the cut-throat competition of tax-evaders in that city.

If the state fails in enforcing the gasoline tax, it works the greatest injustice on the law-abiding. It has thereby set up a competitor who has an advantage which the law-abiding cannot meet. The tax-payer, either by loss of business or in meeting cut-throat competition, operates at a loss while his tax-evading competitor reaps unusual profits. It is little consolation if in the end the tax-evader is apprehended, for the tax-paying dealer has already suffered great loss.

It is hard to understand how the state can per-

petrate such an injustice on those who pay the tax and, by failure to enforce the laws, aid and enrich those who evade payment. The legislators who make the laws and levy taxes often fail to comprehend fully their ultimate effect and the difficulty of their enforcement. This is illustrated by the inadequate force that has been provided to enforce the gasoline tax in almost every state. Many legislators do not comprehend the injustice wrought by an unenforced sales tax, and that at high rates the tax is increasingly difficult to enforce.

The injustice of the present gasoline taxes should be apparent to all. The original reason of highway construction and maintenance has lost much of its force, for a large portion of the revenue derived from gasoline taxes is now used for other purposes. But even if all of it were devoted to roads, there is no adequate reason why gasoline should be singled out for sales taxation if rubber, steel, copper, and cotton are not likewise taxed. Each of these substances is an essential factor in the operation of an automobile and is involved in the use of roads.

Gasoline is the fuel which propels the vehicle over the road, but every product of agriculture and commerce uses the roads. If it were proposed to saddle any other industry with a great burden of sales taxes for any purpose, there would be a great outcry against it. Recently a prominent United States Senator suggested a universal sales tax of one or one and one-half per cent. The press has carried numerous protests against this nominal sales tax. If the petroleum industry does not secure relief from its great burden, *(Continued on Last Page)*

BURTON HOLMES FROM EWING GALLOWAY



★

*Paris Formerly Taxed
All Gasoline Bought
Outside the City Lim-
its: This Custom Has
Since Been Stopped*

★

★
Old
Towns
for
New

★



The Barlow House, An Early Colonial Home of Williamsburg

TO THE tune of hammer and pick, Williamsburg, Virginia, cornerstone both of its native state and, to a degree, of the United States, is taking on its former Colonial appearance. Within a few years it will be a typical Eighteenth Century town of the American Colonies, in the midst of a Twentieth Century American countryside.

Under the direction of the Williamsburg Holding Corporation, Williamsburg is fast losing all traces of modernity and is gradually acquiring the style and grace of the many old Colonial structures which have remained in the town throughout the years.

Williamsburg is still far from restored. Visitors this year who hope to find the old capital of the Royal Dunmore and Dinwiddie complete to the last detail will be disappointed; the project was begun about four years ago, but today not more than 20 of the old structures have been restored. Thirty others are now in the process of reconstruction.

Painstaking research is necessary before actual restoration work can begin. For many years a highly trained body of men have been scouring the United States and Europe for authentic data. While archaeologists have been digging in and around the town, examining the ruins and the old foundation stones, an even larger band of architects have been preparing plans and blueprints. Expert landscape gardeners have been at work for more than a year beautifying the buildings already restored. Gardens and nurseries of boxwood were planted last Fall and large shipments of holly, mock orange,

and crêpe myrtle were brought into Williamsburg from points all along the Atlantic Coast.

The Williamsburg Holding Corporation has already spent more than three million dollars in the purchase of property alone; at the present time the corporation owns about 92 per cent of the Colonial town. A total of more than seven million dollars has been spent on the project.

A few years ago the Reverend Doctor W. A. R. Goodwin, rector of the Bruton Parish Church, conceived what has developed into the largest restoration project ever undertaken in the United States. John D. Rockefeller, Jr., gave his support to the idea and the corporation was formed.

When plans are completed, the entire Colonial town, which is about one mile long and several blocks wide, will have taken on the appearance of the years prior to 1800. All houses within the Colonial city limits which do not date back to that year will either be completely demolished or moved out of town. The older buildings will be remodeled and made sound, while buildings of historic interest which have been burned or torn down will be reconstructed on their original sites. With them will reappear the spacious lawns and the quaint gardens of the Eighteenth Century.

A few structures will serve as exhibition houses, to which the public will have access. Such buildings as the old capitol, where the first House of Burgesses met, the Royal Governor's palace, the Powder Horn, and perhaps others, will be open to sightseers.

During the past year two major projects of the



★
*Raleigh Tavern, Center of
Social Activities and Political
Meeting-Place of
Pre-Revolutionary Days:
A Perfect Reproduction*
★

restoration were finished. The old Sir Christopher Wren building of the College of William and Mary was dismantled, carefully studied and then completely restored. It was ready for use this Fall. The structure, originally planned by Sir Christopher Wren, designer of Saint Paul's Cathedral in London, is one of the most interesting buildings in America. Built in 1695, it once housed the entire College of William and Mary. Thomas Jefferson, James Monroe, John Marshall, Peyton Randolph and Bushrod Washington received their education in the old structure which, in its early years, sent an annual donation of 40 pounds "to the infant college of Harvard." The Brafferton Indian School building of 1723 and the President's house of 1732 are also being restored.

The next big job this year was the shifting of the business district. This block, housing shops, banks, and stores, will extend from the college to the old Blair house, and will consist of a series of structures patterned after old inns and taverns. These will be Colonial to all outward appearances, but will be equipped with modern facilities.

Further plans call for the complete restoration of the Governor's palace, of the old capitol, where the fiery speeches of Patrick Henry helped to inspire a trampled land to rebellion, and where George Mason's immortal Bill of Rights was framed.

Other work includes the building of a James City court house and jail. Within the next year about 20 Colonial houses will take their places, completely restored, among the shrines which either have withstood the years or have already been re-

constructed and now stand upon their original sites.

Among the historic houses already rebuilt is the Raleigh Tavern, built in 1735. This building was the social center of the Colony; Thomas Jefferson and his beloved Belinda danced there frequently. Just before the hostilities with England broke out it was the meeting place of the Virginia burgesses, for after Lord Dunmore dissolved them they still met at the tavern. In 1859 the original structure burned, but it has been duplicated to the smallest detail.

One of the first homes to be restored was the John Blair House, former property of Governor John Garland Pollard of Virginia. Before it stand what are said to be the original stone steps of the first theater in North America, built in 1716 by William Levingston but later burned. The rambling foundations of the theater were recently uncovered and as soon as details of the plans are confirmed it will be restored.

Excavations at the site of the Royal Governor's palace have been going on for some time. Within the first few days many interesting things were brought to light; several skeletons, the original flagstone floors, and a network of underground passages.

The George Wythe House is probably more well known to outsiders than any building in Williamsburg. It is two stories high and in it lived George Wythe, first professor of law in this country, and teacher of Marshall, Jefferson, and Monroe. In this lovely old home George Washington made his headquarters for a time during the War of Inde-



*An Early American Jail:
Colonial State Prison,
Built in 1701, Housed
Many Well-Known and
Equally Well-Disliked Po-
litical Prisoners*



pendence; the Battle of Yorktown was planned in its paneled front room. The Wythe House is the parish house of Bruton Church.

Bruton Parish, official church of the Royal College of Virginia, has stood since 1715. Old Bruton contains the clock which originally hung in the capitol building, the font and communion silver of the first church at Jamestown, the Royal Governor's pew, and the graves of many famous Virginians.

Behind the capitol site is a splendid example of Colonial architecture, the Garrett House, which dates back to 1721. It is a marvel of sloping gables and graceful chimneys and contains a magnificent staircase of Chinese Chippendale design.

A few rods away stands an older structure, the Colonial State Prison. Here the hated Indian instigator of the border, Governor Hamilton of Detroit, was brought by George Rogers Clark after the Northwest Expedition. A section of this ancient

jail has remained intact. In front of it stands the office of the Secretary of the Colony, as solid as it was when built in 1705.

Within a few years all will be complete, and after the last workman has doffed his overalls, one may round the bend into Williamsburg and leave the Twentieth-Century world completely behind him. It will be like turning the hands of time 130 years backward.

The Texas Company has erected near Williamsburg a Texaco service station which was designed especially for that location. A neat, prim little structure, it fits unobtrusively into the Colonial picture.

In the town itself huge flagstones or bricks will replace the ugly, grease-stained concrete. All modern structures will be placed outside the town limits. Even the busy state highway must change its important course and slip around the old town instead of cutting through it.



*Texaco Colonial
Type Service Station
Especially
Designed to Fit
into the Restora-
tion Scheme*



PHOTOS COURTESY
NORFOLK-PORTSMOUTH
CHAMBER OF COMMERCE



COURTESY
THE LUFKIN LINE

Joiner Well, Discovery Well of the East Texas Pool

Petroleum and the Law

By C. B. AMES

Vice-President, The Texas Company

OIL and gas enter into the daily life of our people. There are 5,448,000 domestic consumers of natural gas and as many million consumers of gasoline and lubricating oils as there are automobiles. The oil and gas deposits are exhaustible and irreplaceable. There are no known substitutes for them at reasonable prices. Their migratory nature sets them apart from other natural resources and this peculiar characteristic demands peculiar treatment adequate to the subject.

The principal oil-producing states recognize this situation and have enacted statutes particularly applicable to these products. These statutes have been based on the power of the state to prevent waste and to protect each landowner's right to acquire his ratable share of the production. They have been most helpful and the legislatures and conservation agencies of these states are entitled to much credit. Waste, however, has not been prevented. The waste of gas has been appalling, has been permitted for years, and is being permitted today. Approximately two billion cubic feet of gas are being blown into the air

Paper read at a National Conference on the Relation of Law and Business with Specific Emphasis on the Anti-Trust Statutes, under the auspices of the School of Law and the School of Commerce, Accounts, and Finance, New York University, Oct. 26 and 27, 1931

every day. In 1930 there were 5,448,000 domestic consumers of natural gas who used a total of 376,407,000,000 cubic feet, or a little more than one billion cubic feet per day. We are, therefore, blowing into the air approximately twice as much natural gas as is being used by 5,448,000 domestic consumers. This is a three-fold waste. It wastes the gas itself, but the gas which is being wasted is bringing to the surface an excessive quantity of oil which results in wasteful use and inadequate price, and in addition, this wasted gas is bringing to the surface its natural gasoline content which, in turn, is crowded into an unwilling market to the detriment of the industry as a whole.

The laws, therefore, while designed to prevent waste, have failed to accomplish that purpose. This failure is caused by another failure of the law; namely, its failure to exercise adequate control over drilling; and this, in turn, is because of the failure to recognize the physical and economic fact that an oil and gas pool is a unit and should be controlled as such. Instead of this, the law pays greater

The TEXACO STAR

regard to the artificial boundaries of the surface ownership than it does to the natural economic and physical boundaries of the oil and gas deposit. It permits the surface owners to drill into the deposit practically without limit and without regard to the orderly scientific and economical development of production. When one surface owner drills, the migratory nature of the oil and gas requires other surface owners to drill or suffer drainage, and this brings about the hasty, unnecessary and improper flush production which is today a fundamental problem confronting the oil-producing states as well as the industry.

The flush fields now developed are more than sufficient to supply the nation's requirements for a long time and unless the production is brought under control, unless supply and demand are balanced, the oil-producing states cannot expect an early return of prosperity to their greatest industry. But how is this result to be accomplished?

THE INDUSTRY CANNOT REGULATE PRODUCTION

Honest differences of opinion, selfishness, ignorance and inertia combine to prevent agreement by the industry upon a sound course. The major companies themselves do not agree upon a program. Some important companies are willing to take advantage of the situation for their selfish interest. The owner of a 10-acre tract in East Texas is ignorant of the far-flung consequences of excessive production from his land. In addition to this, the real or fancied effect of the anti-trust laws interferes with efforts of the industry to restrict production.

PRODUCTION CANNOT BE CONTROLLED BY THE FEDERAL GOVERNMENT

Under our constitutional system, this is not a subject for Congressional legislation. If Congress has any authority, it rests upon the Commerce clause of the Constitution, giving Congress power to regulate commerce between the states. Until the oil has been produced, it is not the subject of interstate commerce. The production of oil is mining and is purely a local and intrastate transaction. It is no more interstate commerce than is the production of wheat or coal or cotton. The decisions of the Supreme Court seem to establish this proposition.

In *Hammer v. Dagenhart*, 247 U. S. 251, (272) the Supreme Court says:

"The making of goods and the mining of coal are not commerce, nor does the fact that these things are to be afterwards shipped or used in interstate commerce, make their production a part thereof."

In the *Coronado Coal Company* case, 259 U. S. 344, (407) the Supreme Court says:

"Coal mining is not interstate commerce, and the power of Congress does not extend to its regulation as such."

In *Heisler v. Thomas Colliery Co.*, 260 U. S. 245, (249) the Supreme Court says:

"The reach and consequence of the contention repel its acceptance. If the possibility, or, indeed, certainty of exportation of a product or article from a State determines it to be in interstate commerce before the commencement of its movement from the State, it would seem to follow that it is in such commerce from the instant of its growth or production, and in the case of coals, as they lie in the ground. The result would be curious. It would nationalize and withdraw from State jurisdiction and deliver to Federal commercial control the fruits of California and the South, the wheat of the West and its meats, the cotton of the South, the shoes of Massachusetts, and the woolen industries of other States, at the very inception of their production or growth, that is, the fruits unpicked, the cotton and wheat ungathered, hides and flesh of cattle yet 'on the hoof,' wool yet unshorn, and coal yet unmined, because they are in varying percentages destined for and surely to be exported to States other than those of their production."

PRODUCTION CANNOT BE CONTROLLED BY A SINGLE STATE

The power of a single state ends with its own boundaries. It can control production within its boundaries but in order to be effective, the control must be more comprehensive. This has been demonstrated during the past few years when Oklahoma has been controlling its production to harmonize with market demand, but Texas and California have not. The result has been during the present year a complete collapse of the price structure in Oklahoma as well as elsewhere, notwithstanding Oklahoma's effective control of its own production.

THERE SHOULD BE AN INTERSTATE COMPACT

Adequate control must be secured, if secured at all, by agreement between the principal oil-producing states, and this must be done by constitutional methods and not by armed forces.

The Constitution of the United States provides that:

"No state shall, without the consent of Congress, . . . enter into any agreement or compact with another state. . . ."

The subject of an interstate compact or agreement for regulating oil production is not new. The Federal Oil Conservation Board in its report of September 6, 1926, said:

"There should be active coöperation between the oil-producing states in the study of proposed legislation to the end that uniform laws may be enacted, or even

agreements or compacts entered into between the states, subject to ratification by Congress."

In 1929 the Board again said:

"The problem appears to the Board, therefore, due to the legal inhibitions, to be one in the real solution of which action must be secured from the different states. The Board recognizes that individual state action without coordination would not cover the question, but with a view to bringing about such a program and its coordination, the Board believes it would be worth while to renew discussion with the state authorities of the three or four principal oil-producing states, particularly to learn if it is not possible for them to enter upon an interstate compact under the provisions of the Constitution authorizing such compacts to which the Federal Government through Congressional action would be a party. . . ."

In the early part of this year the governors of the principal oil-producing states recognized the necessity for interstate cooperation and created the Oil States Advisory Committee which is now studying the subject of an interstate agreement or compact.

In the meantime, however, the necessity for such action became urgent. As I have previously said, Oklahoma has for several years exercised a very intelligent control over its production, but has suffered from lack of similar control in other areas. The following illustrates the point: In October, 1930, 36-gravity oil in Oklahoma was selling for \$1.29 per barrel and Oklahoma was holding its flush areas under control. The East Texas pool was discovered at that time and the state failed to control its development. The result was a wild orgy of drilling and by July, 1931, the production of the East Texas pool had risen from nothing in September, 1930, to more than 800,000 barrels per day. There was an ample supply of crude oil prior to the discovery of the East Texas pool and the addition of these 800,000 barrels broke down the price structure so that 36-gravity oil in Oklahoma in July, 1931, had fallen from \$1.29 per barrel to 13 cents a barrel, and this despite the fact that during the entire period Oklahoma had not increased its own production. This price was ruinous to the producers and was depriving the state of its legitimate revenues from royalties and production taxes. The Governor of Oklahoma thereupon resorted to the unprecedented expedient of declaring martial law in the flush pools of Oklahoma and ordering the National Guard to shut in their production. Soon afterward the Governor of Texas declared martial law in the East Texas area and ordered the National Guard to shut in that production. The result was an advance in the price from 13 cents to 63 cents. This,

however, is still below the cost of production, which averages \$1.10 per barrel, according to the findings of the United States Tariff Commission.

While this acute situation existed conferences were held between representatives of the governors and enforcement bodies of Kansas, Oklahoma and Texas which resulted in the following agreement:

STATEMENT OF THE GOVERNORS AND THE REGULATORY COMMISSIONS OF THE MIDCONTINENT STATES

"The Governors of the States of Texas, Oklahoma and Kansas, and the regulatory commissions of those states; viz., the Railroad Commission of Texas, the Corporation Commission of Oklahoma, and the Public Service Commission of Kansas, having jurisdiction over the conservation of crude petroleum and natural gas, in joint meeting at the state capitol, Austin, Texas, September 18, 1931, after having considered the world oil stabilization program, submitted and approved at the Oklahoma City, Oklahoma, Oil Stabilization Conference, September 11, 1931, hereby record our hearty approval of the general program and purpose of this Conference, in so far as the laws of our respective states permit.

"In like manner, we endorse the effort to limit the maximum production to the amounts recommended for the three states, to wit:—Texas, 902,000 barrels, Oklahoma, 546,000 barrels, and Kansas, 110,000 barrels, of crude petroleum daily, for the remainder of the year 1931, and pledge ourselves to continue thereafter to cooperate to this end to the extent of our ability.

We take this action in the belief that such program will tend to prevent physical waste and preserve our mineral resources to the people of the states we represent for our own generation and posterity."

GOVERNOR OF TEXAS

By Cullen F. Thomas (signed)

His Representative

GOVERNOR OF OKLAHOMA

By (signed) Cicero I. Murray

His Representative

GOVERNOR OF KANSAS

By (signed) Thurman Hill

His Representative

THE RAILROAD COMMISSION OF TEXAS

By (signed) C. V. Terrell, Chairman

THE CORPORATION COMMISSION OF OKLAHOMA

By (signed) Paul A. Walker, Chairman

THE PUBLIC SERVICE COMMISSION OF KANSAS

By (signed) Thurman Hill

Commissioner

This agreement is now being performed by these three states, although in both Oklahoma and Texas martial law is still in effect and the production is being regulated by orders of the governors as well as by the regulatory bodies. A peculiar situation has resulted. In Texas a Federal District judge has

granted a temporary restraining order pending a hearing before three judges restraining the public officers of the state from enforcing the orders of the Commission and of the Governor, and under this temporary order, wells of the plaintiffs were opened. The Governor countered by ordering the National Guard to ignore the restraining order and close the wells and the soldiers have obeyed the order of the Governor. What the outcome will be is not yet disclosed.

That the governors have usurped power must be admitted; that they have done so in order to protect a basic natural resource of their states must be admitted; that they have demonstrated the necessity for an interstate agreement must be admitted; that their action has met with general public support must be admitted. This indicates the gravity of the situation and emphasizes the necessity of substituting an interstate agreement enacted according to constitutional procedure for the informal agreement above quoted enacted under the protection of bayonets and supported by martial law. If we desire orderly government administered by civil officers under the protection of constitutional guarantees, the principal oil-producing states should now without delay enter into an interstate agreement subject to the approval of Congress. Texas, Oklahoma and the adjoining states, from an oil-producing standpoint, constitute an economic unit. Conditions in either of these states bear directly upon the others. In some cases the same oil pool is partly in one state and partly in another. The artificial boundaries which separate these states do not delimit separate economic units. It is obvious, therefore, that the laws of these states should be uniform and that they should be uniformly administered, and that there should be adequate legal machinery for legal co-operation between these states.

The obvious answer to the problem of overproduction, therefore, is a carefully prepared interstate agreement between the principal oil-producing states enacted according to constitutional form.

THE ANTI-TRUST LAWS

But this conference on law and business is directed especially toward the anti-trust laws and I must not close this paper without some reference to them. It is only in connection with the anti-trust laws that the Federal Government plays an important part in the petroleum industry. I make no attack upon our Federal anti-trust laws. They are based upon the sound principles that the American people are opposed to and will not tolerate monopoly, but that they intend to preserve individual initiative and independence. While these principles are sound and

legislation should harmonize with them, questions arise under our anti-trust laws which should be quickly settled. The petroleum industry affords illustrations. The refining capacity of the United States is approximately 4,000,000 barrels per day while the refining requirements do not exceed 2,400,000 barrels. About a year ago the Federal Oil Conservation Board appointed an Economics Committee to make a study of the probable future gasoline requirements for a six-month period. This committee was composed in part of government employes and in part of independent petroleum economists. The committee reported to the Federal Oil Conservation Board, which, in turn, released its report for consideration by the annual meeting of the American Petroleum Institute. The report was in harmony with that of the Economics Committee of the Institute and outlined a program, which ought to be followed by the refining industry for the approaching six-month period. Would an agreement between the refiners to limit their output to the quantity stated have been a violation of the anti-trust laws? The program was one suggested by the Federal Oil Conservation Board. Could the industry under these circumstances agree to abide by the program? The anti-trust laws do not condemn all agreements but only those which are unreasonable restraints of trade. Would such an agreement have been an unreasonable restraint of trade? The time involved was for a six-month period. The subject involved was balancing production and consumption. The formula was one prescribed by the Federal Oil Conservation Board. Certainly some reasonable men would believe that an agreement in conformity with this program would not have been an unreasonable restraint of trade, but in view of the uncertainty of the law, the agreement was not made. If the agreement had been made, its validity could not have been tested by a civil suit during the six-month period, and therefore, if the Attorney General had deemed it unlawful, his only practicable remedy would have been an indictment. Such an anomalous situation should not exist.

Our anti-trust laws at present interfere with legitimate economic development. This interference is not because of the substance of the law, but because of the uncertainty in the minds of many honest and intelligent men. This uncertainty could be removed by the simple expedient of providing some Federal agency which would have authority to give approval to proposed agreements when, in the opinion of such agency, the agreements are not in violation of the law. Such an agency should be created.

There should be *(Continued on Last Page)*



*Another Aid to the
Citrus Industry—
Spraying Oranges
With Texaco Texide*

When Winter Comes to the Citrus Groves

*Orange Ice Is No Treat to
California Fruit Growers*

By T. P. REMY

Technical Division, Refining Dept., The Texas Co., (California)

CAN you imagine a radio fan cutting out Amos 'n' Andy to turn to a weather bureau report? Yet this is exactly what many Southern California railroad officials, oil men, merchants, and orange growers do on many a night from November 15 to

February 15, and they listen with rapt attention.

There is a very definite reason why the aforementioned gentlemen prefer to listen to Mr. Floyd Young, of the United States Weather Bureau Frost Protection Service, give exact data on the chances



Orchard Heaters in the Citrus Belt Consume 272 Tank Cars of Oil Per Hour

EWING GALLOWAY

of a freeze in each locality every night. The reason is—oranges.

Next to oil, Southern California's largest industry is oranges, and in Winter they are very often in danger of being frost-bitten. Such a circumstance would at once remove the railroads' second largest tonnage out of Southern California, with a direct freight revenue of more than \$25,000,000. It would impair the ability of the growers to meet their obligations to business with the \$147,000,000 they receive for their crop. At the same time the danger of a freeze puts the oil man in a position to save the day.

Petroleum kept millions of California oranges from freezing to death last Winter. During that season approximately 300,000 barrels of oil and a lesser quantity of petroleum coke were burned in small orchard heaters to protect the citrus.

The typical orchard heater, as used in California orchards, consists of a base pot of sheet metal which holds from seven to nine gallons of fuel oil. A weather-proof lid covers the pot and in the center a stack of variable height is placed to allow the flames to pass upward and out. A small damper is placed

at the edge of the lid to regulate the air flow, assisting the creation of a chimney draft. Some of the newer-type burners have a draft ring placed around the base of the stack to assist combustion. However, with some low-grade fuels even these modern heaters produce soot after a short period of burning. The lighter ends burn off, leaving a heavy, tarry residue which cuts down heat throw-off materially. A recently perfected heater operates somewhat on the general principle of a kerosene stove. This secures the maximum heat from the oil without the formation of excessive soot and tarry matter.

The total number of heaters now in operation in the citrus belt requires 272 tank cars of fuel per hour. Of the total 223,523 acres of citrus in California, 62,412 acres are equipped with an average of 50 heaters to the acre, a total of 3,120,600 heaters.

The heaters are generally placed as closely to the orange tree as possible, without danger of injury to the branches. They consume an average of one gallon of oil per hour. The heat liberated raises the temperature of an orchard from eight to 10 degrees.

Suppose we look further into this cold weather business that last December caused oil men to load

The TEXACO STAR

several special tank car trains of oil to run on a passenger schedule to save oranges in Tulare County when the thermometer suddenly dropped.

When the mercury falls to 23 degrees, the dead line is reached. In a section of mountains and valleys such as exists in Southern California, the contour makes for exceedingly spotty local temperature conditions. However, certain general factors influence the entire region.

There are two distinct causes of low temperatures: the movement of cold air currents from Alaska and Western Canada southward into California; and the radiation of heat from the soil, especially when the ground is dry and a thin, dry air with a "high ceiling" prevails.

A high ceiling is due largely to high barometric pressures east of California. This results in dry, north-to-east winds, preventing an influx of moist air from the Pacific Ocean.

Regardless of temperature, the ability of oranges to withstand cold and the ease of keeping the temperature up to 23 degrees Fahrenheit depend on several conditions:

Fruit which has enjoyed a warm sun throughout the day and which is perfectly dry will stand considerable undercooling without being injured. At the same time a low ceiling makes for easy heating, while a high ceiling prevents the dissemination of heat into the grove.

While it is true that various types of orchard heaters will burn almost any type of fuel oil, the

prevailing preference is for an oil of from 27 to 30 degrees A. P. I. gravity, having an asphalt residue of not more than three per cent and a low carbon and sulphur content. Due to the enormous amounts of soot formed during the combustion of low-grade fuels, and the failure in efficiency of orchard heaters after burning low-grade fuels for several hours, there is a strong movement afoot to enforce the use of high-grade oils which burn completely, or to enforce the use of heaters which will insure complete combustion of low-grade fuels with a minimum amount of soot formation.

The 154,599 acres of citrus not equipped with heaters represent a new business possibility, for much of this acreage is endangered from time to time by low temperatures.

As an example of how orchard heating pays, in orchards where an average of \$90.00 per acre was spent in saving the crop there was a fruit sales return of from \$277.00 to \$684.00 per acre which would have resulted in a total loss without heating. Usually the grower can tell from his previous cost records, compared with the current cost of oil, whether he can fire 10 nights or 20 and still have a chance to break even.

Fuel oil storage to the amount of 49,710,866 gallons is provided at a number of private orchards and packing houses. This is usually enough to start emergency firing which is always backed up by the full cooperation of the oil companies in emergency periods.

Next to Oil, Southern California's Largest Industry is Oranges



WHILE YOU



INTERNATIONAL NEWS

(Above) Hour After Hour Through the Long Night the Cop Makes His Weary Way From Door to Door

★

(Below) At Midnight Tomorrow's Milk is Being Inspected and Sent to the Pasteurizing Plant



INTERNATIONAL NEWS

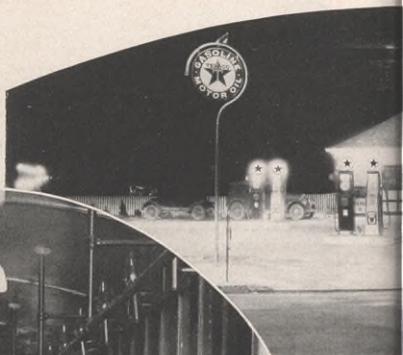


EWING CALLOWAY

(Above) Traveling Toward You at 60 Miles an Hour, Aboard This Train, Your Morning Mail is Sorted

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(Top, Center) Many Texaco Stations Remain Open All Night to Serve Those Who Drive While You Sleep



RE ASLEEP

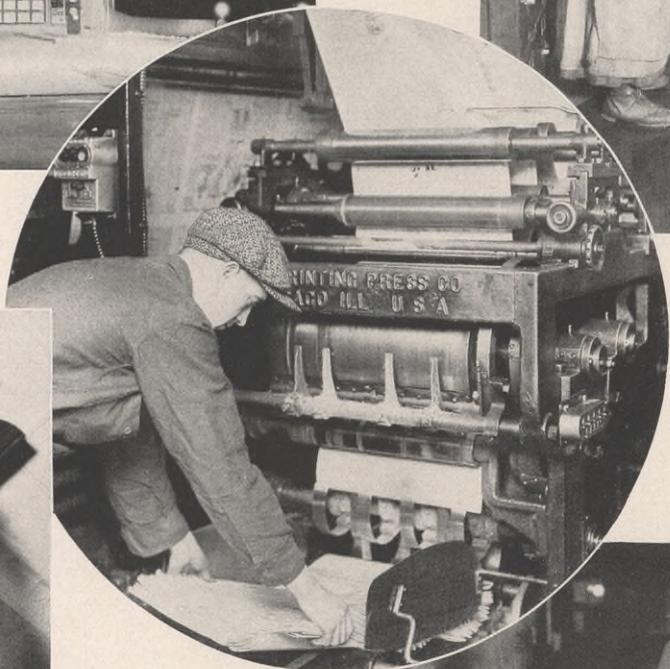


INTERNATIONAL NEWS

(Above) The Captains and the Kings Depart and the Scrubwoman Mops Up All Traces of the Day's Toil



(Below) As Lonely as a Cowboy on the Range, the Construction Job Night Watchman Waits for Dawn



EWING GALLOWAY

(Above) From Midnight to Dawn the Presses Roar to Bring the Morning Paper to Your Breakfast Table



(Left) With Property and Human Lives in the Balance, the Fireman's Lot Can't Be a Sleepy One



INTERNATIONAL NEWS

EWING GALLOWAY



★

With a knife and a bit of driftwood this old salt cunningly whittles out a dainty sailing vessel as he puffs contentedly on his favorite "Missouri meerschaum" pipe

WARREN BOYER

It's Just a Pipe

By R. P. HOPSON

ALMOST drowsing in the warm sunlight and dreaming perhaps of days spent on great ships like the little one he is whittling, a rural character puffing slowly upon a corncob pipe expresses contentment about as perfectly as the artist's brush and the camera's lens have been able to depict it. As the final touch to any scene of idyllic serenity, there is nothing like the corncob to "win the secret of the weed's plain heart."

Hollowed nubs of the maize cob instead of the stone "pipe of peace" are said to have been smoked by certain North American Indian tribes, and the superior mellowness and sweetness of the corncob discovered in this way. The corncob is as American as tobacco itself, which was taken to Europe from Mexico in 1558 by Francisco Fernandes, a Spaniard.

In Boonville, Missouri, a town of 7,000 persons, corncob pipes at the rate of 50,000 a day are manufactured by the Phoenix-American Pipe Works. According to tradition, French and Spanish explorers paddled their canoes up the Missouri River more than 200 years ago into regions now known as Cooper and Howard Counties. Later this section of Missouri was the territory where Daniel Boone fought the very race that gave the world this pocket aid to contentment and tranquillity, which has come to be known as the "Missouri meerschaum."

From a small beginning in 1893 the Phoenix-American Pipe works at Boonville has grown to occupy a three-story brick building with several warehouses and seasoning sheds, filled with cobs produced by a special kind of corn. Seventy-five different styles of Missouri meerschaums are made there. A few are marketed abroad but most of them sell at popular prices in the United States and Canada.

Volume production by a highly-skilled factory personnel using modern equipment makes it possible to sell these pipes, requiring so much time and labor to fashion, for a few cents each. From the seasoning sheds the cobs pass to the plant, where they are sawed into standard lengths, sorted and bored for the tobacco chamber. The outside of the bowl is skilfully shaped on a lathe and the bowls are next placed in a tumbling machine which removes the loose chaff and dust and prepares them for another machine which fills all the external grain pits with a special plaster. Shellac is applied and then sand, to smooth the shellac coating. More

The Corncob, Symbol of Contentment, Is Made 'Way Down in Old Missouri

sand smooths the tops and bottoms before the bowls are deposited on the inspection tables.

Meanwhile the pipe stems are being prepared; nine separate operations are necessary to shape and make them ready. After the stem holes have been bored in the bowls, a small label glued to the bottom of each, two more coats of shellac applied, the bowls and stems are assembled, reamed and subjected to an air test. The finished pipes are conveyed to the packing tables where boxes, made in the same plant, await them.

Actual colonization of this section of Missouri took place early in 1810 when a party headed by Benjamin Cole of Kentucky pitched camp on the northern side of the Missouri River opposite the present site of the town. William Cole, Benjamin's brother, was killed by marauding Indians and his widow, Hannah, crossed over and built a cabin on the site now occupied by St. Joseph's Hospital in Boonville.

More settlers arrived the next year, and Indian uprisings forced them to maintain a constant vigil. After the War of 1812 a flood of settlers came, and a townsite called Franklin, on the northern side of the river, became the most prosperous trading post west of St. Louis, as well as an important transportation center because of its location at the western terminus of the Boonslick Trail and the starting point of the Santa Fé Trail.

A change in the course of the Missouri River caused the evacuation of Franklin, and by 1826 it had disappeared. Boonville took its place in the industrial life and by 1839 had become the most flourishing town west of St. Louis.

A granite slab in front of Boonville's Lyric Theater tells of the capture there of three companies of Union soldiers on October 16, 1864. According to Boonville records, Will Rogers made his first public appearance in this theater when he was enrolled at Kemper Military Academy. Other noted players who have trod its boards are Walker White-side, De Wolf Hopper and Marguerite Clark.

The Texas-Empire Pipe Line Company's Seminole-to-Chicago line crosses the Missouri River at Lupus, and a field construction office opened in Boonville early in 1929 is still maintained there. The Missouri-Kansas Pipe Line Company's new gas line passes close to Boonville and this company has also established a field office there.



As a Contemporary Artist Viewed a Liquid Gold Rush of the '60's

Davy Crockett Was Right

THERE was a smell of smoke in the air, but the engineer, as he leaned out of his cab watching the track ahead, did not perceive it. The fireman, who had an occasional moment of leisure, climbed on the tender and casually looked back over the train. From one of the cars streaked a tongue of flame and a wisp of smoke. The engineer heard the cry of "Train afire!" and gave a startled glance to the rear. Then he pulled the throttle wide open.

This train of the 1860's carried crude oil in barrels—barrels none too tight, from which the crude seeped into the grain of the wooden cars. Along the track were hundreds of oil derricks standing on oil-soaked ground in the midst of squat, oil-streaked storage tanks.

The train tore along at 60 miles an hour with whistle shrieking. It thundered over trestles, panted up steep grades, and shot down into valleys with the blazing car belching smoke and flames like a pursuing comet. To have uncoupled it there might

Oil Transportation in the 1860's Was More Picturesque Than Practical

have made a holocaust of the whole oil region.

Another mile or two and the engineer slowed his train to a snail's pace while the fireman went ahead to open the switch into a long siding. In a moment the train was safely off the main track. The engineer and the fireman detached the engine and two cars and sat down to wipe their brows while the rest of the train blazed up and sank into a mass of charred wood and twisted metal.

Fire from a locomotive that exhaled almost its weight in live sparks was just one of the tribulations of the producer and shipper of oil from the early Pennsylvania fields. "Hell in harness," the name that the scout Davy Crockett gave to the first railroad train he saw go past him on a dark night, was an epithet well suited to the first railroad trains of the oil fields. Hazardous as the business of shipping oil was, a company in New York made the first offer, in 1863, to insure oil in transit.

The whistle of a locomotive, as tracks pushed

farther into the booming oil country in the Sixties, was a warning to teamsters and oil boatmen that their days of prosperity were over. The railroads and the pipe lines, which entered the oil fields hand in hand, were the emancipation of 6,000 teams of horses but the ruination of the teamster business and an honest living at the rate of 10 to 30 dollars a day.

"Pond freshet" and wagon-team were the prime movers of the oil that flowed copiously after Colonel Drake's "discovery" of petroleum. A pond freshet occurred when lumber mills, which held the waters of Oil Creek in their dams for a fee, opened the sluice gates. As the water rushed down, boatmen cast off and shot the rapids with their loads.

The demand for barrels caused a shortage of good timber even as early as seven years after Drake's well came in. Staves were sawed out in cooperage works and put together after being kiln-dried, hooped with iron, and tested with an air-pump. For refined oil the barrels were coated inside with a preparation mixed with glue to prevent leakage. Rafts of empty barrels being taken to the producing country were familiar sights on the creek.

Teamster transportation was popular before the pipe lines got a foothold. Rubber-booted nearly to the waist and flannel-shirted to the chin, the teamster led a rough life, but his horses led a rougher one. Five to seven barrels of oil, each weighing about 360 pounds, was a wagon-load. The oil dripped from the barrels, became mixed with the dirt of the roadbed, and was kneaded into a slimy ooze by much travel. The price of a team could be earned easily in a week and so, if a horse fell into the quagmire, it was left there to drown or

smother. Teamsters had no hesitation about tearing down fences and driving through the fields, and did so until the busiest sections of the early oil fields were little more than lakes of mud.

This was the situation in the oil country as the railroads crept, tie by tie, closer to the centers of production. Not until February 20, 1866, did the railroad reach Oil City, and then a train crossed Oil Creek over tracks laid on the ice. Five days later the ice broke up, and a temporary wooden bridge was washed away by a flood.

A composite tale of passenger travel in the oil regions three-quarters of a century ago sounds like the daily trials of a "commuter" in a large, modern city. Writers of the time said "the trains are crowded with freight and passengers. Rolling stock cannot be procured in sufficient quantity, the crossings are clogged up, and the freight depots crowded to their utmost capacity. Passengers are packed into miserable little stations like herrings in a cask. At the shout of "Train!" the crowd rushes anxiously at it and swarms up the steps. All the courtesies and amenities of life are disregarded. Men fight for precedence as if their lives depend upon it and women are rudely thrust back. Three cars and a baggage car are in three minutes packed almost to suffocation. For every person who leaves the train at a station at least three get on, until a number are driven to the platforms of the cars."

"The good old days" may be a watchword to some, but not to the shipper of petroleum. Today's safe and scientific tank cars, tank trucks, crude oil pipe lines, and gasoline pipe lines make yesterday's transportation methods seem a horrible nightmare.

HISTORIC OAKS OF TEXAS

MONTEZUMA, Texas, is no longer on the map, but when the Lone Star State was a republic, a Mexican village of that name stood about where Columbus, Texas, is now located.

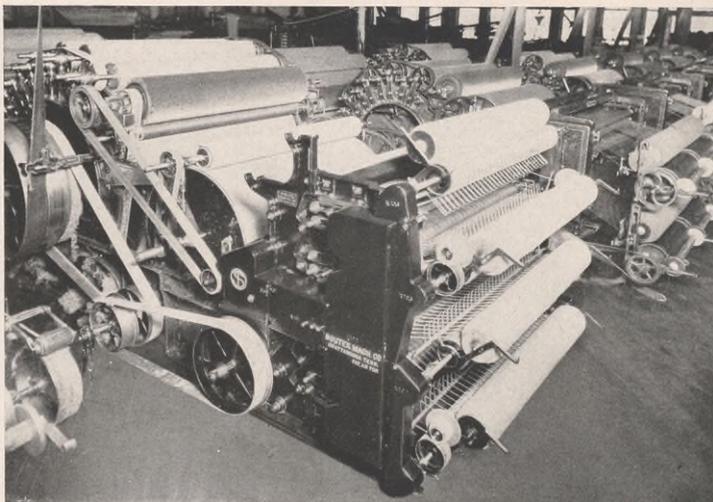
Ancient links connecting the Texas of today with its past are rows of huge oaks lining Court House Square at Columbus. Beneath their shade was held the first district court in the Republic of Texas in April, 1837. The first criminal case was tried here, also, and a man named Bibbs convicted of grand larceny. According to old records, he was sentenced to be "given 39 lashes on the bare back, branded with the letter T (for theft), fined \$500 and kept in custody until the fine would be paid. Later, it being made represent to the Court that there was



The Brunson Oak, Columbus, Texas

not \$500 west of the Colorado River, that portion of the sentence was remitted and he was discharged."

The "Brunson Oak," another thick-foliaged tree on the southern side of the square, is pointed out as the scene of the bloodiest part of an Indian battle in a forgotten year.



Rolling Loose Yarn on Cylindrical Beam at Finishing End of Carding Machine

Have You Any Wool?

By W. L. HEINZ

Chief Lubrication Engineer, Atlanta District

BACK when prehistoric glacial ice was receding northward and the ancestors of present-day man discovered they could return to the lands from which the ice had driven them, they found that the loose-fitting skin of the saber-toothed tiger did not provide all the warmth they needed. One of their number, more ingenious than the others, sheared the shaggy wool from his flock of half-wild sheep and crudely fashioned the first woollen garment.

The various kinds of wool and the cloth made from them were described by Pliny in classical times, and it is recorded in ancient writings that the art of wool fabricating was taught the Britons by their Roman conquerors in the first century. The sheep had been a domesticated animal in Britain for some time, but its value for making textiles was not realized until the Romans established a "wool factory" to supply clothing for the occupying army.

Wool is still an important adjunct to warfare, and control of a country's wool supply is imperative in times of war. The wool used in a soldier's clothing and equipment is from four to ten times the amount required for a civilian.

Even Our Prehistoric Ancestors Knew Their Mutton

The wool of Winchester, England, had a wide reputation during the Middle Ages, and a writer of the time said that "the wool of Britain is often spun so fine that it is in a manner comparable to the spider's thread." Wool was many years ago "the flower and strength and revenue and blood of England." One of the expedients for stimulating the demand for woollen manufactures was an act passed in the reign of Charles II decreeing that all deceased persons be buried in woollen shrouds. This act remained on the statute books for 120 years.

With early English colonization in America came the woollen industry. Sheep were brought to Jamestown, Virginia, in 1609, and in 1643 a fulling mill was erected at Rowley, Massachusetts. The first carding machine, on the other hand, was not operated in America until 1794. Most Colonial families had their own flocks of sheep, and carding and spinning wheels were used so extensively as to become, in time, a symbol of pioneer domestic industry.

New England soon became the center of the woollen manufacturing industry and is still the most important section of the United States in this re-

The TEXACO STAR

spect, but with the more recent industrial movement to the South, a number of important woolen mills opened in that section. Among them was the Peerless Woolen Mills at Rossville, Georgia, just across the Tennessee line at the foot of Lookout Mountain.

The importance of the woolen manufacturing industry in the United States is indicated by the fact that in 1927 \$225,000,000 in wages was paid by woolen manufacturers. The value of finished products was more than one billion dollars, and 650,000 horsepower was used to manufacture these finished goods. In 1929, 363,000,000 pounds of wool were produced in the United States, while during the same period 3,632,000,000 pounds were produced throughout the world.

Wool is especially suitable for the manufacture of cloth because its fiber structure permits the making of a light and warm product. It takes dye well and lends itself to a variety of weaves and finishes.

Grading raw wool is done by experts who select batches of various qualities for the particular kind of finished product desired. The skin-like yolk, the natural oil, and the foreign matter in raw wool are removed by scouring. Drying prepares it for the dye vats. After emerging from these and being dried again, fibers of many colors are combined by highly skilled workers in the blending room so that the resulting yarn will be precisely the shade desired.

In the blending room the natural oil removed in the scouring process is replaced with a specially prepared oil that eliminates static electricity, which would prevent the otherwise unruly fibers from

laying flat. They then pass through the carding machine, where they are straightened out, brought parallel to one another and wound upon a spool in the form of a loose yarn called roving.

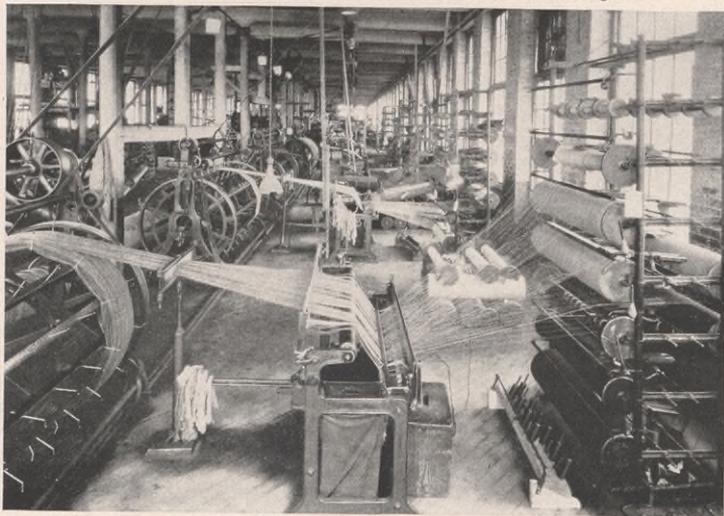
The roving is drawn and twisted on spinning frames, wound on bobbins, and is then in the form of yarn, ready to be woven into cloth. Before entering the loom, the yarn is wound on spools and rewound on a cylindrical beam in a series of parallel coils, forming the warp of the cloth. In the loom the filling yarn is passed through the warp yarn by the shuttle, weaving the type of cloth desired.

As it leaves the looms woolen cloth is unsightly, and must be sewed together in a single strip to undergo the fulling or felting process which mats and interlaces the fibers. Washing, drying, winding, passing over heated rollers, shearing, and bolting complete the manufacture of wool cloth. Heavy Melton cloth, weighing from 24 to 30 ounces a yard, goes through the same general processes as Mohair textures, which weigh only two or three ounces a yard.

The Peerless Woolen Mills manufacture high grade woolen fabrics and, in common with many other woolen mills, entrust the lubrication of their plant to The Texas Company. Texaco lubricants, properly recommended and applied to machinery, have handled difficult lubricating problems encountered in this mill with utmost satisfaction.

EDITOR'S NOTE: This is the ninth of a series of articles dealing with important customers of The Texas Company.

Yarn is Wound on Winding Machines for Further Processing





Observation Platform of The Louisville & Nashville's Crack Train

From Ohio to the Gulf

TEN YEARS ago the Louisville & Nashville Railroad did what every company wishes it could do frequently—gave the public something new that sprang into immediate favor. The new “product” was the Pan-American, an addition to the railroad’s already excellent twice-a-day service between the Ohio River and New Orleans.

So popular was the new train from the beginning that in May, 1925, the company improved it even further and outfitted three new trains to run as the Pan-American. The new train from that time has been made up exclusively of Pullman cars, with a club car, dining car, drawing-room, compartment and open section sleeping cars, and parlor-observation car. It offers a ladies’ lounge, shower baths, maid and valet service, and a radio receiving set.

The Pan-American makes the run of 921 miles from Cincinnati to New Orleans in 23 hours and 45 minutes. From Cincinnati it glides through central Kentucky, across Tennessee, down into the center of Alabama and then across the southern part of Mississippi.

The traveler on the Pan-American sees between Cincinnati and Nashville an agricultural territory of rolling hills. In these hills, about one hundred miles south of Louisville, is the famed Mammoth

Speed, Comfort and Safety Are Provided on the Pan-American

Cave and numerous other caves and caverns which are soon to be a part of Mammoth Cave National Park. Nashville, the capital city of Tennessee, is an educational center of importance. Near Birmingham the Sand Mountains, from which quantities of iron ore are extracted for smelting in the city, are outlined against the sky as the Pan-American pulls in.

Montgomery, the capital of Alabama, was the first capital of the Confederacy, and there Jefferson Davis was inaugurated as President of the Confederate States of America. Mobile, the only seaport in Alabama, is rich in historical associations and beauty spots. Between here and New Orleans lies the Gulf Coast region, a long stretch of cities and resorts with ideal climatic conditions the year around—Biloxi, Gulfport, Pass Christian, Bay St. Louis, and smaller towns.

In New Orleans, the terminus of the Pan-American’s run, is both the quaint, old French Quarter and a modern city of splendor. It is known the world over for its attractiveness.

Texaco lubrication on the Pan-American enables the fast train to keep its rigorous schedule and is a constant guarantee to the Louisville & Nashville Railroad against costly repairs as well as an assurance of comfort to passengers.

Gentlemen of the Great Open Spaces

By GRACE GADDIS

A TRAIN pulled into a Texas town where shop workers had gone on strike. Feeling was running so high between strikers and non-union workers who had supplanted them that citizens felt a riot was impending. They had sent in a hurry call to the nearest ranger station. Word had come back that the rangers would arrive on this train.

The train stopped. Two or three passengers alighted. At last, a tall, lanky Texan wearing a six-gun came into view. He got off and the crowd waited breathlessly for his comrades. No one else appeared. The train started. The worried citizens gasped. They crowded about the lone, tall ranger.

"Where are the others—the other rangers?" they queried in disappointed unison. This roving policeman of the West shoved his Texas hat back from his forehead, hitched his wide belt to a more comfortable location and looked about inquiringly.

"How many riots *are* there?" he demanded.

This is but one of the many ranger stories that have traveled the border country from end to end. Stories of this unique organization have been told since 1837 and they increase yearly. Each one is a glimpse from a different angle of this colorful figure, the Texas ranger, who is still the "law west of the Pecos" and likewise to the east of it when occasion demands.

His territory is a wide one. It begins at the Rio Grande river and covers the State of Texas in every direction, but the Texas ranger service is recognized

chiefly as a border patrol for the desolate country along the Rio Grande.

The service began in 1837 as a semi-official organization. Its primary duties were to guard the borders of the troubled young Republic of Texas which was beset on three sides by bitter, hostile enemies. To the south were the Mexicans and to the north and west were the warlike Indians.

The Texas ranger came into his own at once when he beat the Indian at his own game of mounted warfare. The six-shooter was coming into use and was quickly adopted by the ranger instead of the old style, single-shot, ball-and-powder gun which was clumsy and practically useless for mounted fighting. The Indian's skill with his bow and arrows and his expert horsemanship had long made him dreaded as a warrior on horseback. But the Texas ranger's facility with a six-gun quickly made him recognized as the Indian's deadly foe.

The old time West Texan made a good ranger for he greatly preferred loneliness and space and silence to anything civilization had to offer. The word "fear" was not in his vocabulary. He placed the feeling described by the word as belonging strictly to women and children and tiny, white rabbits, certainly not to men and not to many women, at least not to the type of pioneer woman who helped to make Texas.

There are men yet living who ride the border country year after year, sleeping in a tent, cooking over a campfire, rescuing tenderfoot hunters

Fear is Just a Word in the Dictionary to a Texas Ranger

A Group of Old-Time Policemen of the Texas Range

BROWN BROS.



from wildernesses, pursuing cattle thieves, murderers, petty thieves and liking it all immensely.

Now, as always, the ranger's integrity must be above question. He is more or less a free agent, often "ranging" far from headquarters and from the directions of his superiors. He is forced to act on his own initiative and he must keep a cool head and act wisely in all cases.

He must, above all, be unafraid, he must like outdoor life, adventure, and the monotone of earth and sky that is West Texas. In short, to be a good ranger he should be a Texan. There is something a Texan feels for his native state that is a bit more than pride and affectionate ownership. It is still something of the feeling that stirred those Texans at the Alamo and at Goliad and San Jacinto. You sense the sort of feeling it is when a Texan instead of saying, "I'm from Texas," says, "I'm a *Texan*."

Certainly the life of a Texas ranger offers little enough in the way of financial returns and it is a life that the average person would reckon as being filled with hardships and nothing else. But many of Texas' finest old citizens have served as rangers. In the swift, moving years of the state's youth the ranger service knew at various times men who became famous as lawmakers and as brilliant directors of the state's destinies.

A party of geologists making a survey for an eastern oil corporation tell the story of one day at Benevides, down in the V-shaped, American strip that lies on the southern border near Corpus Christi.

It was 1916, the year of General Pershing's punitive expedition to Mexico. The tense, high feeling that ran among the border population flared suddenly and menacingly one night in Benevides when an American in that town struck a Mexican over the head and laid him unconscious. Quick as electricity, the bitter words inciting revenge began to run from Mexican to Mexican. Next morning each son of old Mexico had armed himself to the teeth with weapons ranging from butcher knives to bayonets.

The 11 American inhabitants of the town and the surveying party, believing discretion to be the better part of valor, had barricaded themselves in the one hotel in the town which was kept by an American woman. When groups of Mexicans began to surge up and down the narrow streets that morning the landlady telephoned to the ranger station 20 miles away in San Diego for help. She was assured that rangers would be dispatched immediately. Five minutes after the call to the ranger station was completed the telephone wires were cut.

Excited Mexicans gathered about the little hotel in a threatening mob. Every person in the hotel

stood waiting tensely, gun in hand, for action to begin. It was not expected that the thin, pine walls of the hotel would stand a long-drawn-out assault. A rifle or so had been smuggled in. Each member of the surveying party had a revolver. There was a shot-gun. The landlady clenched a small automatic in a determined fist. Each side waited. The volley of Spanish words meant little to the listeners in the hotel but the black looks, the hisses, and the weapons meant a great deal. The Americans were outnumbered 10 to one and the outlook was far from happy.

Then, like the moment when the movie hero comes galloping in on the scene of distress followed by his henchmen, the rangers came. They did not arrive in any romantic, movie-hero fashion. They came bumpety, bumpety, bump, rattling along in a wheezing, protesting, tin "flivver" and drew up in front of the hotel. The bronzed Texan at the wheel bit a chew off his plug and spat expertly at the sidewalk. The ranger beside him swung one long leg over the door of the car and dismounted. The three rangers in the back seat climbed out with deliberate ease, stretched themselves, and looked interestedly about. And lo! all that met their gaze were the white faces of the tense-nerved Americans peering out of the hotel windows. The Mexicans had disappeared like mist. The combat had ended without a shot. It is a saying in the border country that one thing a Mexican outlaw fears more than his satanic majesty is the Texas ranger.

The ranger is steady of nerve, keen of eye, and an incredibly expert marksman. The oil company's surveying party who participated in the "battle of Benevides" hired as a guide a ranch hand who had once been in the ranger service and who had such a penchant for silence that speech was practically wasted on him.

One day, while riding across the country, one of the surveyors took careful aim at a circling hawk and fired. The bird swept majestically on, apparently undisturbed by the shot. Another of the party raised his gun and as steadily as possible in a car traveling over rough country aimed, fired, and missed. The ex-ranger, whose conversation consisted of the words "yes" and "no," and these strictly in answer to questions asked, sat impassively in the back seat, arms folded, eyes set ahead, stolid, Indian-like. If he saw the efforts to bring down the hawk, he gave no sign. Then another black-winged denizen of the air circled into view. The cowboy slipped his gun from its holster and brought down the hawk before either of the amazed oil men had had time to raise a gun. They exchanged glances, put their guns down, and returned to the business of surveying.



EWING GALLOWAY

The unpardonable sin of a ranger is cowardice. If a ranger, under any circumstances, refuses to go into danger, he is curtly dismissed from the service and his name is synonymous with shame from one end of the lonely country to the other.

A late law requires that rangers travel and go to every emergency in pairs. Lone rangers have been killed so frequently in the desolate country of the Trans-Pecos and in the Big Bend that the new ruling was passed. They travel on horseback, in cars, and by airplane, whichever mode of travel best fits the case.

Their duties are varied: One week at Alpine two rangers who patrol the territory reported the rescue of a party of lost hunters in the Big Bend. They had likewise answered a distress call from a terrified ranchwoman who thought there were thieves in her home one night, they had dragged a kitten out of a well (this was not reported) and had shot a mountain lion that had killed more than 400 sheep.

Since the discovery of oil and the rush of oil field gunmen to every boom town, the ranger is called upon to deal with a new type of outlaw. In towns of mile-long streets that grow overnight in

desolate, untouched country, the ranger precedes the established law of counties and towns. Counties are organized, court-houses and justices of the peace arrive in due season but the lawless element must reckon with the Texas ranger from the time the first well blows in until the peace of permanency and organization—or of oblivion—have descended upon the town. The ugly days at Borger and Mexia were speedily ended by the Texas rangers. The oil field town of Ranger, Texas, seeing the approach of trouble when shifty-eyed, hard-mouthed individuals began to arrive with plans for gambling halls and oil field speakeasies, called for the Texas mounted police. Two days after the rangers had arrived in the town the undesirable element had been ousted from it with not a pistol removed from its holster, nor any more serious injury than that received by a hard-boiled citizen who was assisted aboard a train by a ranger's big-booted foot after he had turned and hissed a stream of profane abuse into the Texan's face.

Unquestionably, the Texas ranger is still one of the most outstanding of the romantic figures of modern Texas.



*The Modern Texas
Ranger is a Worthy
Successor to the
Men Who Founded
the Organization*



★
Globe-
Trotting
with
Texaco

★
XXIV

★



*A Quiet Moment on the Strand, Looking Toward Trafalgar Square
—Texaco Headquarters in Background, Marked by Texaco Sign*

ENGLAND

By W. H. ELLIOTT

Managing Director, The Texas Oil Company, Limited

SOME 3,091 miles across the North Atlantic from New York City is Southampton, one of the leading ports of entry to the United Kingdom and one of the largest shipping centers in the world. Two hours by train from Southampton is London with all its picturesqueness. Traffic (made up of horse-drawn vehicles, taxicabs of early and later models, motor lorries [trucks], double-decked buses, and private automobiles of all kinds) passes to the left through streets that twist and turn among buildings both old and new, none more than 10 stories in height.

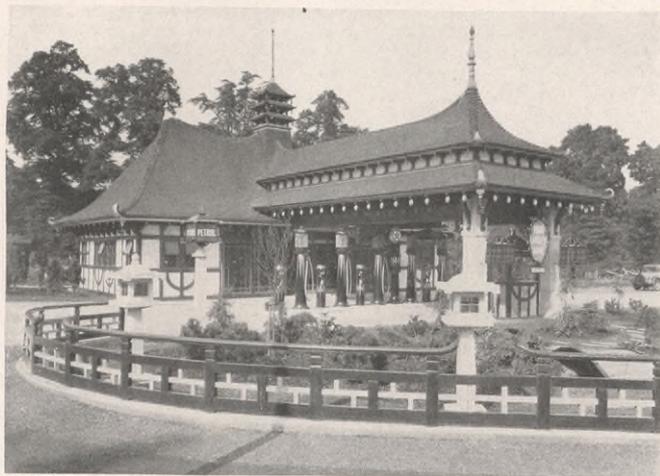
A northern country, warmed by the Gulf Stream, England occupies a unique position in world geography. Changing weather conditions afford a constant topic of conversation, and the stranger who arrives, perhaps, in one of London's "pea soup" fogs, with all street lights and flares burning at noon to guide traffic, is certain to be impressed. On the other hand, if the fog strikes him unfavorably he has but to see Spring and Summer come to England to get an idea of the delightful days that make city dwellers flock to the commons and the countryside.

The Romans came to England 55 B.C. and withdrew 420 A.D. Picts and Scots ravaged the Britons until they called upon their continental neighbors, the Angles, Saxons, and Jutes to help them. These

conquered the people they had come to aid and divided the territory among themselves. A period of religious upheaval followed, and in 1004 King Edward the Confessor received the homage of all Britons. The Northmen, established in France after having hammered upon both English and French shores, looked jealously toward England, and by means of trickery Harold, Edward's successor, was induced to swear away his right to the throne in favor of William, Duke of Normandy.

William might never have become "the Conqueror" had not some of his nobles decided he should claim that which had been sworn to him. The ships and fighting men they gathered for him gave William confidence, and he landed at Senlac to win England from Harold in the encounter now known as the Battle of Hastings. Soon came the Crusades, then the wars with France, other wars and upheavals, and so down through history to the present day, with the British Empire flung so far over the face of the globe that the sun never sets upon its flag.

The schoolboy becomes familiar with these events in English history when the printed page brings him pictures of Alfred the Great, Richard Cœur de Lion, Sir Walter Raleigh and Bonnie Prince Charlie. He reads of Stonehenge, monument of a race ancient when swarthy legions bore their



★

A Modern English Service Station Which Recently Won a Prize in a Competition for the Most Attractive Station in England: Note Texaco Pump in Center

★

eagles into its domain; of the granting of Magna Charta on the meadow of Runnymede, and of the return of English noblemen from the Crusades with Oriental luxuries that contributed to the standard of living almost as much as the introduction of petroleum products raised the efficiency of manufacturing and transportation centuries later.

In every way England bears witness to the surge of population from other countries, and England's importance as a nation has passed her cultural influence along. Into the island called *Angleterre*, or Angle-land, the Normans, who had become "more French than the French themselves," brought intricate and musical southern continental syllables with adhering fragments of language from northern and eastern Europe and Asia. The noble spoke Norman-French in his castle and the courts of law; the Anglo-Saxon peasant spoke his accustomed tongue in hovel and hut. The English language evolved gradually, as the dividing line between villen and nobleman became less distinct.

A Celtic name that the Romans translated into *Londinium* became London. *Eboracum*, the chief Roman town in Britain, was changed when the conquering Danes called it *Iorvik*. As York, this town gave its name to the settlement that was to become the foremost city of the New World—New York. *Deoraby*, which the Danes knew as "the place of the deer," is the modern Derby. Suffixes *by*, *thorp*, *thorp*, and *thwaite*, on the names of so many English towns show the influence of times when the Britons prayed "From the fury of the Northmen, good Lord, deliver us!" Many a Roman *castra*, or camp, has had its name preserved in places such as

Lancaster and Dorchester. Essex, Wessex and Sussex were the kingdoms of the East, West and South Saxons. The Vikings, or creekers of Scandinavia, so named from the *viks* or *wics* in which their ships anchored, were partly responsible for the naming of such localities as Hartwick and Greenwich.

The four first great roads in England, built during Roman occupation, are now called Watling Street, Ermine Street, Fossieway and Icknield Street. The first of these runs from London to Wroxeter near Shrewsbury; the second from London to Lincoln by way of Colchester and Cambridge; Fossieway from Cornwall to Lincoln, and Icknield Street from Bury St. Edmunds to Salisbury and Southampton. Later generations used these for a nucleus from which to extend roads to all other parts of the country.

As a result of the many good roads and the decrease in the price of motor cars, highway transportation has begun to play an important part in the development of the country. The motor car industry, within recent years, has taken a place as a leader in manufacturing, so that there is approximately one car to every 44 persons.

England is comparatively small in area, yet some 45,700,000 persons populate its 90,000 square miles. Many of them are grouped around large cities and industrial centers. The chief natural resources of the country are coal and iron. Wheat, cotton, oil, and a large quantity of foodstuffs are wholly or in part imported. It is therefore apparent that England must be chiefly a manufacturing country and depend upon a large export business to maintain a trade balance. Because of the vastness of the British Em-



★
*Many an English Road
Owes Its Fine Surface
to Texaco Asphalt:
This is Portsmouth
Main Road, Paved with
a Single Coat of Tex-
aco Bituminous Mac-
adam*
★

★
*The Tower of London,
Grim-Visaged Symbol
of Medieval England,
Rich in Historic Tra-
dition, Provides an In-
teresting Background
for this Texaco Truck*
★



pire, much of the business and political activities in England are in connection with dominions and colonies.

The export and import business of England, joined with the many excellent natural harbors along the coast, has made shipping and ship building a major industry, with Glasgow, Scotland, and Newcastle the chief ship building centers. Texaco Marine Lubricants are available in leading ports.

The north of England boasts quantities of textile mills in which thousands of workmen make the noted English tweeds and cloths of other kinds. Originally, the home of this industry was Wiltshire in the south of England, where it was introduced by the Belgian Walloons, but the cottage weaver transferred his home and family to Lancashire or Yorkshire when textile-making machinery found favor.

Steel mills, many of them running smoothly

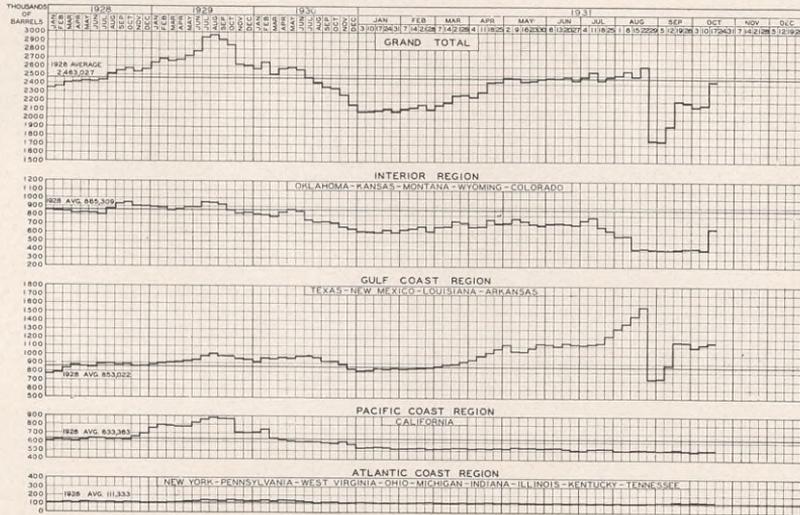
upon Texaco lubricants, are the backbone of another major industry, and the making of pottery has its place among various other important manufacturing enterprises.

These great industrial outlets, with the marine and railway transportation systems that link them with other countries, give England the distinction of being the second largest oil consuming country in the world. Recognizing this, The Texas Oil Company, Limited, during recent years has constructed ocean terminals at Dagenham (London) and Trafford Park (Manchester), where lubricating oils in bulk are pumped ashore from tankers. Inland depots may be found at advantageous points throughout the country, and from these Texaco Golden Motor Oils, Industrial Oils and Asphalts are available for distribution from one end of the country to the other.



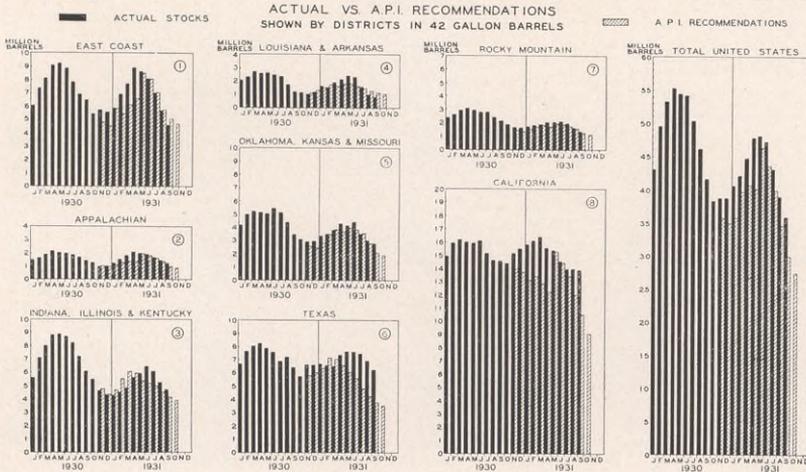
DAILY AVERAGE CRUDE OIL PRODUCTION TOTAL UNITED STATES

Up to and including October 17



GASOLINE STOCKS FIRST OF EACH MONTH IN UNITED STATES

As of September 1



OUR WHO'S WHO



W. L. HEINZ, who is responsible for the article, "Have You Any Wool?" which appears in this issue of the STAR, graduated from Georgia Tech in 1911 and after five years in the mechanical department of the New York Central Railroad, entered the employ of the American Brake Shoe and Foundry Company as Sales Engineer. Two years of foreign service in the Railway Engineers followed, and upon his discharge from the service with the rank of Captain, he began work with The Texas Company as Lubricating Engineer with headquarters in Youngstown, Ohio. Later he was transferred to Atlanta District where he served as Representative and Lubrication Engineer, being promoted to his present position about a year ago.

R. P. HOPSON, who tells you about corn-cob pipes and Missouri in this issue of THE TEXACO STAR, migrated from the northern part of the "Show Me" state to Oklahoma in 1910 and entered the service of The Texas Company at Tulsa in 1917. On January 1, 1929 he was transferred to The Texas-Empire Pipe Line Company and since that time has assisted with details in the office of the General Superintendent.

Other articles by Mr. Hopson, dealing with historic sections of old Missouri, will appear in forthcoming issues of this publication.

TAX EVASION RACKET

(Continued from page 5)

the tax will doubtless grow larger and more oppressive.

Tax evasion is one of the most important questions before the oil industry today. Everyone interested in the industry, whether as officers, employees or stockholders of law-abiding, tax-paying units of the industry should support the efforts being made through legislative and other channels to suppress this rapidly growing racket. Furthermore, every tax-payer, whether interested in the industry or not, is individually concerned by reason of the large loss to the state of the tax revenue. Our demands must be insistent and aggressive; the law is no respecter of persons and the gasoline tax laws must be vigorously enforced without discrimination.



OIL MEN

ONCE BELIEVED

THAT having obtained all the kerosene they could from their crude oil, the remainder, including gasoline, should be dumped into a creek. Today even the volatile gases in a barrel of crude oil and the residue from bottoms of stills are turned to commercial use.

PETROLEUM AND THE LAW

(Continued from page 12)

harmony between the law and the welfare of an industry. Yet the welfare of the petroleum industry is hindered instead of helped by the law. There is insufficient restraint upon the production of crude oil and excessive restraint upon the distribution of the products. The individual is permitted to threaten the welfare of the entire group by unrestrained drilling, but the group is not permitted by concert of action to protect itself against this threat. This maladjustment between the law and the facts is worthy of the serious attention of our lawmakers.

AN OPTIMIST SPEAKS

"**YOUTH**," says Paul Brehm, General Manager of the Twin Coach Company, Kent, Ohio, "is not a time in life. It is a state of mind; it is the temper of the will; a quality of the imagination and ambition; an expression of enthusiasm and faith.

"Youth means the predominance of courage over timidity; the appetite for adventure over love of ease. Nobody grows old by merely living a number of years. We grow old by deserting our ideals.

"Enthusiastic initiative is the greatest asset in the world. It beats money, power and influence. The enthusiast convinces and dominates—single handed—where accumulated wealth would scarcely raise a tremor of interest.

"Enthusiasm tramples over prejudice and opposition; spurns inaction; storms the barriers of its objects and, like an avalanche, overwhelms and engulfs all obstacles.

"Faith and determination, rightly combined, remove mountainous barriers and achieve the unheard-of and miraculous.

"If we keep the germ of enthusiasm and ambition afloat in our organization and in our homes, carry it in our attitude and manner, it will spread like contagion and influence every fiber of our industry before we realize it. It means increase in production and decrease in costs. It means joy, pleasure and satisfaction for all of us. It means life, success and immediate results in

THE SOONER STATE

THERE is no reproach at present in the nickname of Oklahoma, the "Sooner" State, says *The Pathfinder*. The people of the state are generally proud of their "sooner" fathers who were enterprising enough to violate a law in order to stake off a claim and build a home within the state's borders.

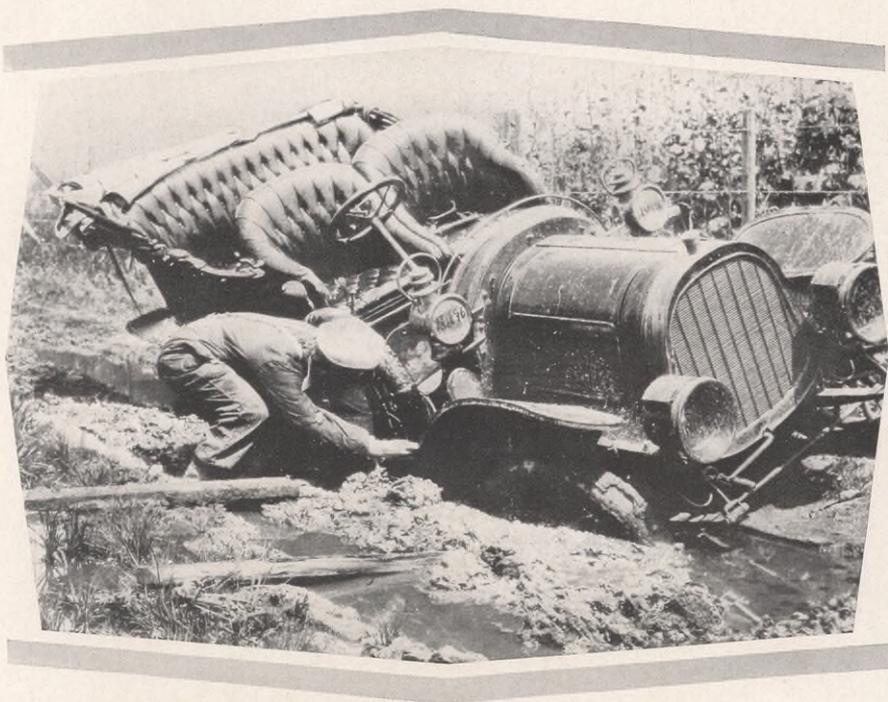
"Sooner" is an American slang name for a person who acts prematurely, especially a homesteader who occupies public land before the time appointed for its settlement," says *The Pathfinder*. "The term came into general use in 1889. On March 23 of that year President Benjamin Harrison issued a proclamation opening a large tract of land for settlement in what is now Oklahoma 'at and after the hour of 12 o'clock, noon, of the twenty-second day of April, next, and not before.' This proclamation expressly stated that persons occupying homesteads in the territory before the day and hour would never be permitted to acquire any rights in such land. All law-abiding citizens who wished to enter upon the land were supposed to wait at the edge of the district until a signal was given by the soldiers on guard.

"Many enterprising people, however, were so anxious to secure choice quarter sections of land that they secretly slipped in ahead of the appointed time. Usually they went in at night and hid themselves in timber, brush or other out-of-the-way places, whence they could quickly reach the desired tract and effect a settlement without making a long, hard journey from the border. These surreptitious settlers were called 'sooners' because they arrived sooner than the others, and from this circumstance Oklahoma received the nickname Sooner state. According to the Oklahoma Historical Society, there were scores, if not hundreds of people who thus entered the promised land ahead of the time prescribed by the president's proclamation. Many of them were bound together by oath to stand by one another in protecting their titles. The result was that a number of the original sooners were later sent to the penitentiary for giving perjured testimony in the courts or in the Government land offices."

The Mississippi River carries about four hundred million tons of mud toward the Gulf of Mexico each year, according to the United States Department of Agriculture. Possibly one hundred times as much is washed annually from farms along the banks of the Mississippi and its tributaries.

the things that are necessary to bring back prosperity."

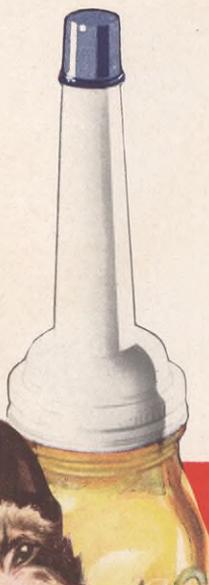
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"GET A HORSE!"—A FAMILIAR SIGHT BACK
IN THE DAYS WHEN MOTORING WAS A NOT SO
GLORIOUS ADVENTURE AND PROPERLY PAVED
AUTOMOBILE HIGHWAYS WERE SOMETHING TO
BE LOOKED FOR RATHER THAN FOUND



IT PAYS



**DRAIN
FILL-**
then

LISTEN



THE NEW

TEXACO MOTOR OIL

"CRACK-PROOF"...LASTS LONGER

THE TEXAS COMPANY

Refiners of a complete line of Texaco Petroleum Products, including Gasoline, Motor Oil, Industrial, Railroad, Marine and Farm Lubricants, Road Asphalts and Asphalt Roofing

