

Seek to Recover Oil Now Wasted

Bureau of Mines Survey in California Shows 2,359,100 Barrels Could Be Saved.

WOULD BE WORTH \$3,500,000

One Company Says Loss Between Well and Storage Tank Is 40,000 Barrels Monthly—Oil Lost in Seepage Along the Ditches.

Washington.—The great demand for petroleum, resulting chiefly from the increase of oil-burning devices and motor-driven vehicles, forces producers to take advantage of every opportunity to increase its production by seeking new sources of supply, and what is more important, to use new methods for saving more of the oil brought to the surface than has been retained heretofore. As in other kinds of mining, it is thought possible that a large additional recovery can be obtained at a profit by working over the wastes in certain fields and by using more economical methods of production in the future, says A. R. Elliott, assistant petroleum engineer, bureau of mines.

A survey of the oil districts of California was made by the bureau in order to ascertain whether the visible masses of wasted oil-bearing sands would be a profitable source of supply. From the data collected it is estimated that 2,359,100 barrels of oil valued at more than \$3,500,000, could be obtained from the sandpiles about producing wells and from the outcroppings in the vicinity of the fields. Also, many times that amount of oil scattered over nearly the total oil-producing area might be recovered from seepage.

Wasted Through Seepage.
A paper issued by the bureau of mines in 1914 said: "It is probable that 10 or 15 per cent of the total gross production of the state has been wasted through seepage or evaporation." This represents a loss of 15,000,000 barrels of oil yearly. Probably one-quarter to one-half of this amount seeps into the ground.

As a possible means of recovering a large amount of oil from these wastes, the following should be considered, says Mr. Elliott: (1) Recovering oil left in the sand that it produced with the oil; (2) reclaiming the oil that seeps into the ground through waste in production; and (3) mining and treating the material in oil-bearing outcrops and asphalt beds that occur in certain sections of the state.

In the early days of a productive field, the rush of gas into a new well frequently sucks oil and sand with it in large quantities. Oftentimes adequate means of holding in the well are not available, and the oil is per-

mitted to flow "wild" until the gas pressure diminishes enough to enable controlling the well. This may require days or even months, says Mr. Elliott. There being no commercial use for this oil-saturated sand, it is removed from the immediate vicinity of the well or otherwise disposed of as valueless.

Throughout many of the oil districts of California, particularly in the San Joaquin valley, a noticeable feature is the large cone-shaped mounds near each of the wells where sand is produced with the oil.

Sand Rises With Oil.
In wells where the sand is loose and fine-grained and agitated by a high gas pressure, naturally a greater amount rises to the surface with the oil. In the Sunset field, wells with high gas pressure have produced more than 5,100 tons of sand in two to four years, representing nearly two-thirds of their gross production. In the Midway field there is a well producing about 500 tons a month and wells near it with an output nearly as large. In the Kerne River and West Side Coalings fields the oil is of heavy gravity and, with the aid of an agitator such as air, large amounts of sand are lifted to the surface. Each well yields ten to twenty-five barrels of oil daily; the proportion of sand carried with it varies between 20 and 60 per cent, and probably averages 40 per cent of the gross production. The amount of sand per well, because of the small oil production, is small, but owing to the great number of wells in these districts the aggregate amount is large.

Where wells produce only a small amount of sand the so-called sand boxes are frequently used. The sand box is a long, narrow, open trough closed at the ends and fitted with baffles running crosswise to the flow. The oil flows slowly over the sharp baffles, the sand and emulsion settle

to the bottom of the box and are shoveled out as often as necessary.

Also in the districts that produce heavy gravity oils, a convenient way of separating the sand and oil is to permit the oil to flow through long open ditches to reservoirs, where the free oil is removed by a suction pump. Evidently, great quantities of oil can be wasted through seepage along the ditches and around the reservoir. If some accurate method could be used to compare the amount of oil as it came from the well with the amount actually recovered, the difference would be surprisingly large. It is reported that the loss between the well and the field storage tank of one large producing company is approximately 40,000 barrels a month. Other companies report a proportionate amount.

Works of Art, Stolen by German Army, Reappear

London.—Numerous works of art, heirlooms and jewels stolen during the war by the Germans in occupied territory are gradually coming to light and in many cases finding their way back to their owners. The Rumanian papers publish the story of a cache of stolen works of art which the police have found in the Transylvania home of the father of a onetime Hungarian officer.

Ninety-two well known paintings, eight vases and two onyx clocks were found at the home of a mine manager, who said they had been given him by his son on his return from the war. The son was an officer in the Hungarian artillery, and had fought on the Cambrai front.

The objects d'art were found to have been taken from the chateau of the Prince de Chimay, near Cambrai, and were returned to their owner. Some of the pictures, including works of Joseph Berger, Millet and Van der Helst had been hacked out of their frames and badly damaged.

Is Hard Place to Get an Education

United States Has Surprising Number of Illiterates, Say Congressional Investigators.

PAINT DISTURBING PICTURE

Millions of Immigrants in Country Can Neither Speak Nor Read English—Committee Finds American Teachers Are Incompetent.

Washington, D. C.—The United States of America is one of the hardest places in the civilized world in which to get a good education, in the opinion of a committee of the house which has been investigating the question.

A fourth of the men of fighting age in the United States are illiterates, many children never get adequate schooling, many of the teachers are incompetent. There are millions of immigrants in the country who can neither speak nor read English, and many negro children never see the inside of a schoolroom. Thousands of schools are closed because no teacher can be obtained for the miserable salaries offered.

This disturbing picture of education in America is contained in the report of the house committee on education on the Townier bill, and abundant proof of its truth is contained in the hearings which were held in connection with the bill.

This report is surely one of the most startling indictments of our civilization which has ever issued from Capitol hill.

Facts Which Convinced Them.
Here, briefly, are some of the facts which brought the congressmen to this frame of mind:

According to the census of 1910, there were in this country 5,500,000 persons ten years of age or older who could not read or write, and the committee does not believe that conditions have improved since then. In addition to these, there were 3,500,000 persons who could not read or write English, making a total of 9,000,000 in the land of the free who were no more qualified to exercise the right of the franchise than so many Australian bushmen. The surgeon general's report showed that of the men called to service between the ages of twenty-one and thirty-one, nearly 25 per cent were practically illiterate. This means that a fourth of the young manhood of the country, which is its main reliance in peace and in war, is to all intents and purposes in a state of barbarism. Former Secretary of the Interior Lane estimates that the annual cost of illiteracy to the United States is \$325,500,000. The director of the bureau of mines states that if all of the miners could read and speak English a thousand lives a year would be saved.

The committee emphatically refutes the idea that illiteracy is confined to the South, and to out-of-the-way sections. It shows that while Georgia has 83,000 illiterates, New York has 460,000, and that Pennsylvania has more of them than Alabama. Neither does the idea hold good that the illiterates are chiefly negroes. There are a million more white illiterates than colored.

Of the 15,000,000 foreign-born in the United States, the committee says that 5,000,000 cannot read or write English, and that 2,000,000 cannot read or write any language.

Luck Decides Education.
The committee says that getting an education in the United States is largely a matter of luck, that the opportunity is not equal.

"In the South a large number of the negro children never see the inside of a schoolhouse," it asserts. "In the North there is hardly a city that has adequate school facilities for all its children."

The committee finds that in physical education our schools have failed even worse than in mental education.

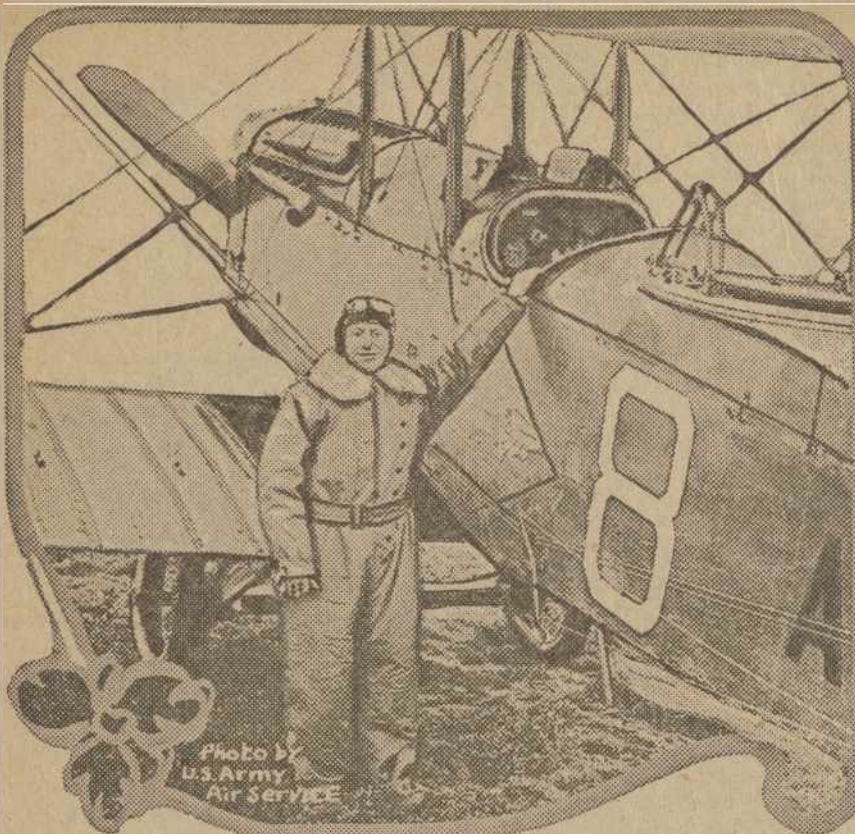
The "provost marshal general's report revealed the startling fact that more than one-third of the men examined for military service in the late war were disqualified by reason of physical disability," it reports. "It also stated that 90 per cent of these young men could have qualified had they been taught the simplest rules of hygiene and health. It was ignorance, gross ignorance, that in the vast majority of cases was the cause of their incompetence."

The committee finds that American teachers are utterly incompetent, that 100,000 of them are less than 20 years old, that 30,000 of them have no education beyond the eighth grade, that 200,000 of them have less than a high school education, and that 300,000 of them have no professional training whatever. It finds that the average salary paid teachers in this country is less than the wages paid scrub women or ditch diggers.—Frederic J. Haskin in Chicago Daily News.

Mr. Harding's Selections for His Cabinet



Lieut. Coney, Cross-Country Flier



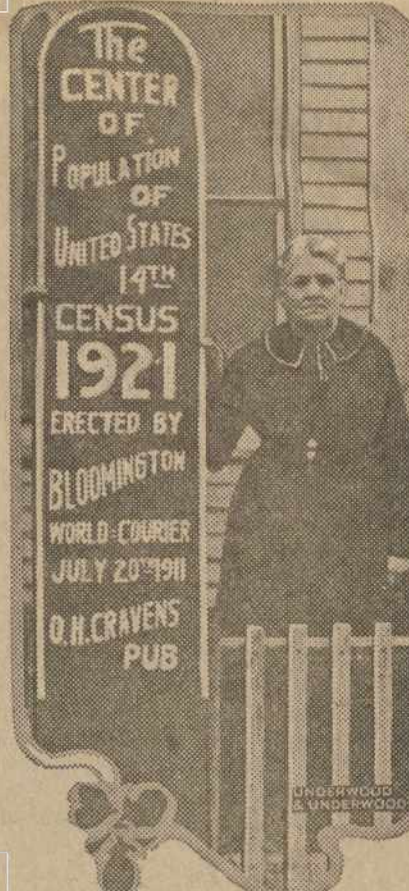
This is Lieut. W. D. Coney standing beside the army air service plane in which he started from San Diego, Cal., in the attempt to fly to Pablo Beach, Fla., with only one stop. Engine trouble forced him to land at Bronte, Tex.

Smallest Park in the World



What is said to be the smallest park in the world is located at the top of the famed Winter hill at Somerville, Mass. It is known as Paul Revere park. The tiny site set aside by the city is in the form of a triangle, two sides of which are 30 feet, and the other 20 feet long. This makes the area of the plot 300 square feet. The old road over which Paul Revere dashed on his famous midnight ride, runs along one side of the park.

CENTER OF POPULATION



Less than 300 yards west of the Monroe county line, in Owen county, Indiana, the center of the population of the United States under the 1920 census has been located on John E. Horron's farm of 60 acres. Mrs. Horron is shown standing beside the board marking the center.

OLDEST OF AVIATORS



Charles Dickinson, a retired millionaire of Chicago, and president of the Illinois Aero club, made his first solo flight in an airplane the other day. Mr. Dickinson, who is sixty-three, has made several air flights.

Long Chain of Family Grandmothers Broken

Arkadelphia, Ark.—A chain of grandmothers without parallel, in this section, at least, has been broken by the passing of Mrs. Emeline Eliza Riles, 82.

Before her death, two small children of Mrs. Eliza Hanson, her great-granddaughter, had six living grandmothers of whom two were great-great-grandmothers, two were great-grandmothers and two were just plain grandmothers. The oldest of the Hanson children is 3½ years of age. Thus there were at one time five living generations with less than seventy-two years separating the youngest from the eldest.

The Hanson children had beside their six grandmothers, nine uncles, four great uncles, two great-great uncles, four great aunts, two great-great aunts and forty second cousins, but no first cousins.

Town That Follows Nature's Path



Knoxville, Pa., a miner's colony on the outskirts of Pittsburgh, is a town built along the line of the least resistance, the houses being built in rows to follow the course of the hill. There are about one thousand houses in the group, all of one design. This photograph of the "winding town" was made from a near-by hill.