

is too good for any but anglers, or very honest men; and I trust you will prove both, and therefore, I have trusted you with this secret.'

"A very old work in the heraldry of fish recounts that 'the Pike of the fisherman, the tyrant of the river, is the Luce of heraldry. There is no earlier example of fish borne in English heraldry than is afforded by Pike, in the arms of the family of Lucy, which was of Norman extraction.' This coat of arms bore three white pike on a red background.

"The true pike is a voracious fish, destroying everything within its reach and consuming other fish, water birds, and mammals. At times it attains a length of four feet and a weight of forty pounds or more. It is taken by trolling, skittering, with the fly, or by using live minnows for bait. In skittering a small frog or frog-leg, a minnow, or a piece of perch belly may be used.

"There are several other species belonging to the Pike family including the muskellunge, which reaches a weight of 100 pounds or more, and several smaller species commonly called pickerel. In Canadian waters, the pike perches, a wholly unrelated species, are termed pickerel. There are two commercially important species, the blue pike (perch) and the yellow, numbered among the most important food fishes of the Great Lakes."

WOULD RECOVER OIL BY MINING METHODS

Sinking mine shafts into oil-bearing rocks instead of merely drilling wells, is the method proposed for the more complete recovery of the precious liquid mineral by Leo Ranney, a New York engineer. A number of important oil companies have become interested in his process, and field tests on a large scale are a probable development for the near future.

The present method of sinking wells, Mr. Ranney explains, simply makes holes into the oil-bearing sandstone, and at best only about one-fifth of the oil flows or is pumped to the surface. The rest is trapped in the cavities of the porous rock. By going down to the oil-bearing stratum it is possible to tap it in a large number of places, and thus greatly cut down the distance necessary for the oil to flow through the sandstone before it finds an outlet.

Mr. Ranney's oil-mining system contemplates cutting tunnels not in the oil rock itself, but in the hard stone either above or below it, usually below. From these tunnels small holes would be bored into the oil stratum at close intervals. Through these holes pipe nipples would be inserted, and then connected to pipe lines leading to the shaft, where the oil would be allowed to collect in a tank or pool, to be pumped to the surface. The flow of the oil into the collecting pipe system could be hastened by the use of compressed air or other means.

A prominent government official has suggested that naval oil reserves could be converted virtually into underground storage tanks by rigging them with such a collection system and then leaving the field unexploited until necessity should arise to bring out the oil quickly for use in an emergency.
