

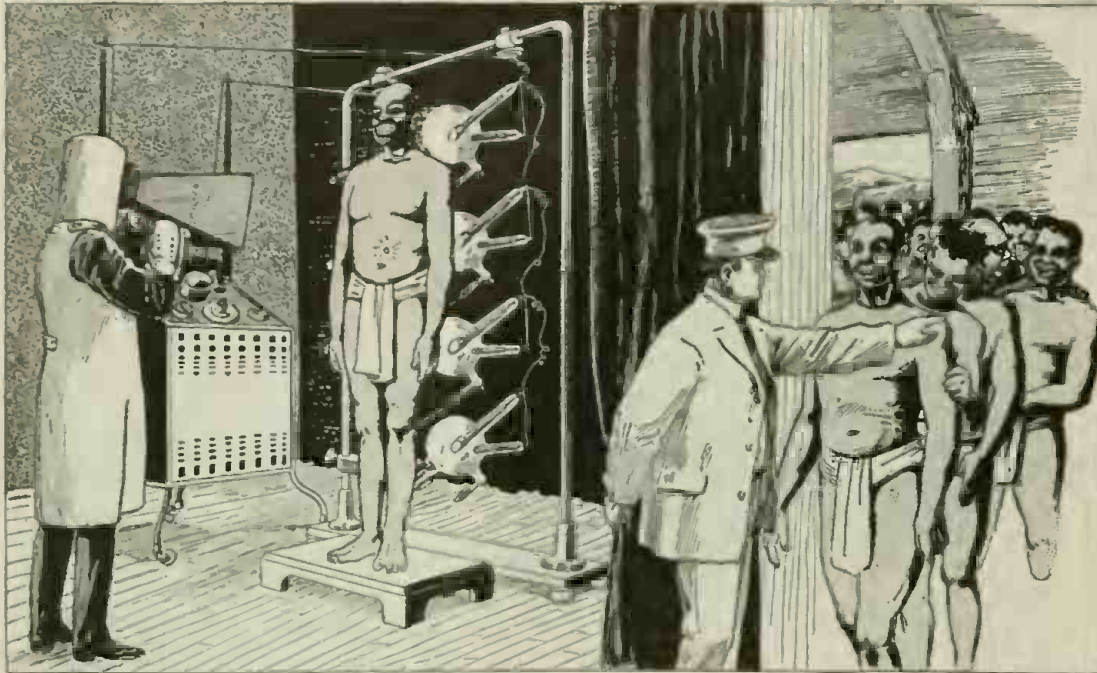
## Locating Stolen Diamonds by X-Rays

Possibly you will remember having read from time to time of the remarkable tricks resorted to by the native diamond miners in the great Kimberly diamond region in South Africa and other parts of the world. So great has the temptation often become

body in a few seconds. This system of detecting the presence of a diamond, no matter whether it is buried in the flesh, resting in a throat cavity, or even in the stomach—an almost unbelievable practise resorted to in several instances on record—the X-ray

stance, and it has certain fluorescent properties which render the facility of its detection all the more possible under an examination by X-ray, as it has a tendency to fluoresce or glow slightly when under the influence of X-rays, which phenomenon is readily detected on a sensitive fluoroscope or X-ray screen.

The X-ray machine here shown is connected to a battery of four powerful X-ray tubes of the latest Coolidge type, as otherwise if the tube had to be moved up and down behind the subject, considerable time would be lost in performing this operation, and where several hundred subjects have to be examined in a very short space of time, it can readily be imagined that such a device as here shown is imperative.



The Tricks Resorted to by the Native Diamond Miners in Kimberly, South Africa, and Other Mines, Pass All Human Belief and Imagination at Times. Cases Have Been Known Where the Lucky Finder of a Particularly Fine Specimen Even Swallowed the Stone, Intending Presumably to Regain the Diamond Later. In Some Instances Diamonds Have Been Secreted in Self-Inflicted Wounds or Incisions in the Leg. But the X-Ray Spoiled All These Clever Ruses as Soon as It Was Adopted for Examining the Miners Every Day, Before They left the Mines. The Eye of the X-Ray Sees All.

to steal diamonds, especially when an extra large one may have been suddenly unearthed, that these natives have been known to resort to the most unbelievable tactics in order to carry the diamonds out of the mine and to withstand inspection even when stripped, as practically all of them are, before they leave the mine at the end of the day's labor.

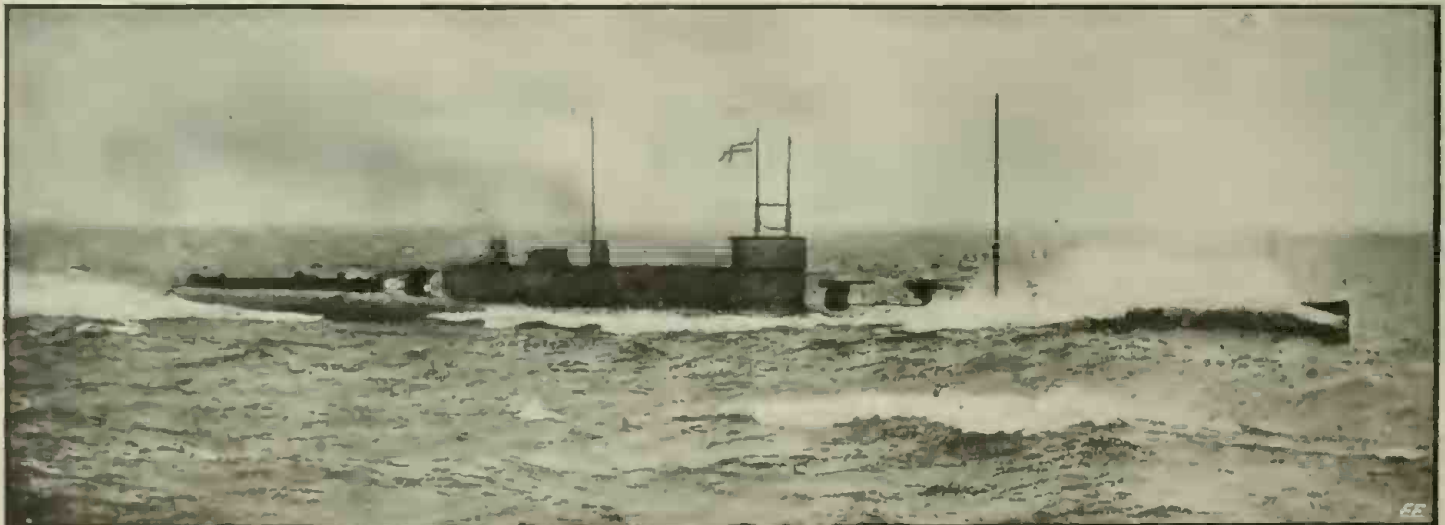
One of the successful schemes which has been worked out by the superintendent of a large South African diamond mine is shown in the accompanying illustration, and it involves the use of a powerful X-ray machine having several X-ray bulbs excited simultaneously. As each miner passes before the X-ray bulbs, the examiner looks thru his fluoroscope and rapidly swings it up and down, so as to take in the entire

examination quickly indicates the presence of the diamond.

Of course, the logical question that arises is—How can the X-ray detect the presence of a diamond inside of the body; especially when it may be temporarily lodged by the clever thief in proximity to large or fairly large bone structures, which would seem to preclude any possibility of detecting the precious stone? However, a perusal of a table showing the various transparencies of different materials under the X-ray will give the solution to the problem. It has been found that the diamond has a different transparency than any ordinary materials, including the bone and flesh of the body, which might happen to be in proximity to it at the time of such an X-ray examination. Also the diamond is a most peculiar sub-

face warship. One photo shows a British "K" class, two funnel submarine "steaming" on the surface at sea. This is the largest class submarine produced by any nation and is 340 feet in length. It out-classes any U-boat built by Germany. Great Britain has a whole fleet of these sea terrors. Storage batteries and motors are used while running submerged.

The other photo shows a new British monitor submarine with a 12-inch gun, capable of giving battle to most any class of armed ship under favorable conditions. So far as known this is the first photograph to be received in this country showing Great Britain's combination of the U-boat and coast defense vessel. The 12-inch gun is the largest that was ever mounted on a submarine.



The Latest British Style in Submarines. It Is Capable of a Speed of 24 Knots on the Surface, When Propelled by Its Steam Power Plant. The Two Smoke Stacks Fold Down When the Submarine Submerges, and It Is Then Propelled by Storage Batteries Previously Charged While Running Awash. This Giant Craft Is 340 Feet in Length, and Is Armed with Three 4-Inch Guns, Two Forward and One Aft, as the Photo Shows. The Displacement of This Boat When Submerged Is 2,700 Tons and the Speed 10 Knots.