

## Safety-First in Mine-Sweeping

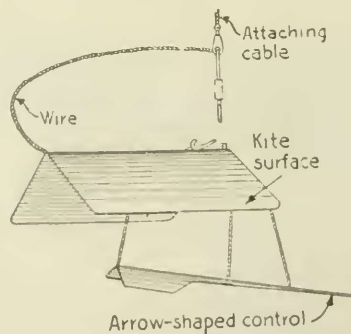
How it is secured with a recently invented Swedish under-water kite



The dangerous occupation of sweeping the sea for mines charged with from four hundred to nine hundred pounds of T. N. T. has been rendered less hazardous by the invention of an under-water kite which first gently touches a mine and signals to the officers on board the ship

**D**RAGGING the sea for mines, charged with from four hundred to nine hundred pounds of T. N. T. and liable to explode when a little glass tube of acid is broken, is probably the most dangerous occupation in which a brave man can engage. It has not even the redeeming feature of being romantically interesting. There is no chance to fight—only the chance to die an instantaneous death.

As might be supposed, the mine-sweeper drags the waters of the sea with a cable. But the

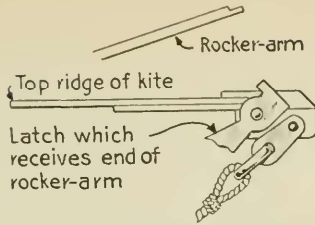
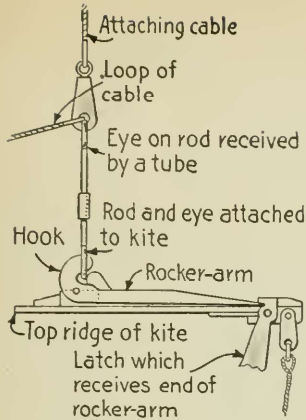


### The Under-Water Kite and How It Works

Beneath the roof-shaped kite, an arrow-shaped control is suspended by three small wires. When the two forward wires of the arrow-shaped control release a latch by which the attaching cable is secured to the kite, a bell is rung on board the ship, indicating that the entire apparatus has come in contact with a mine to be removed.

cable alone is not enough. An auxiliary signaling device is also found necessary, something which will indicate the presence of a mine before the actual dragging begins. To this end, a Swedish tell-tale, recently invented, is employed in nearly every navy and particularly in the German navy.

The tell-tale may be described in a general way as an under-water kite which is dragged by means of a steel cable which is paid out from a drum on the stern of a vessel. As the ac-



**Releasing Mechanism of the Under-Water Kite**  
 The hook of a rocker arm enters an eye in the end of a rod suspended from the attaching cable of the kite. When the arrow-shaped control strikes a mine, the latch by which the end of the rocker arm is held in place is released. Hence the hook is withdrawn from its eye and the attaching cable freed from the kite so that the kite is suspended only by the loop of cable. The sudden slackening of tension on the cable causes the bell on the ship to ring.

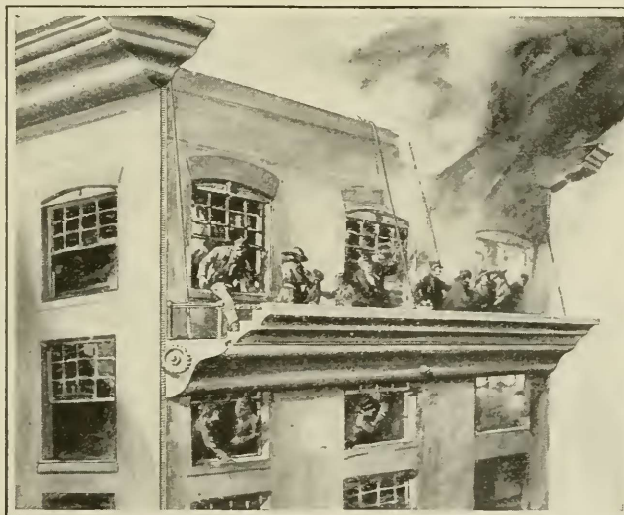
companioning illustrations show, this under-water kite consists of two pieces of sheet metal joined together in the form of a common barn roof. Suspended below the under-water kite by three ropes, is an arrow-shaped control which is guided by a roof-shaped piece. If the arrow-shaped control should touch a mine, a latch by which the under-water kite is attached to its cable is released, a bell is rung on board the mine-sweeping vessel, and the officer in charge is at once warned that the tell-tale below is in contact with a mine to be removed. Very slowly and very carefully the vessel approaches the mine, raises it to the surface and then steams away again to a safe distance. Thereupon the mine becomes a mark for the gunners until it explodes, tossing to a height of three hundred feet, a great geyser of water. So terrible is the explosion that the effect is felt in the water within a quarter of a mile.

### In Case of Fire, Take the Cornice Elevator

**W**HEN a fire occurs, why not use a cornice elevator instead of the usual fire-escape? Extending the entire width of the building, it could be lowered floor by floor, permitting persons to enter it through every window. Furthermore, a burning building could be emptied in one-half the time, and after the cornice elevator had discharged its human freight, it could be used by the firemen as a movable platform from which to fight the flames.

Such are the uses to which the fire-escape elevator may be put, according to the inventor, Bernhard Sussis, of New York City. In its usual position, it serves as the cornice of the building. The hoisting and lowering machinery which consists of steel cables and drums and an electric motor is all situated on the roof. The elevator is operated from a controlling lever on the platform, moving up and

down against an upright pair of rack-bars attached to the side of the building. It is equipped with guard-rails, side-chains and steps. As shown in the illustration, it looks almost too ideal to be practical.



The fire-escape elevator is nothing more than the cornice of the building, raised and lowered in the same manner as an elevator

