

cockpit aft. Into this the rudder head enters, so that the boat can be steered from this cockpit if the conning tower has to be deserted.

Along each side of the boat are coal bunkers, which, as far as their diminutive size permits, may be considered protective. Four heavy eyes are riveted to the sides along the waist by which the boat is to be hoisted bodily out of the water.

The crew includes the commander, engineer, firemen and two sailors. The Whitehead torpedo, which is used, weighs rather more than 2100 pounds, so that stability as well as a measure of protection to the machinery is secured by placing the weights as low as possible.

The boiler consists of two upper and two lower horizontal cylinders, connected by 440 one inch drawn steel tubes. To prevent corrosion, blocks of zinc are contained in the cylinders connected with each other and by means of a copper wire with the steel of the boiler.

The propeller is 3 feet in diameter and of 39 inches pitch, with an area on the screw faces of 4.1 square feet. There are two feed pumps for the boiler, and these can be connected so as to pump out the bilge. In conjunction with a steam ejector, which is connected to the bilge, a capacity of delivering 11 tons of water per hour is given, so that the little vessel may stand considerable injury and still be kept afloat.

As regards speed, it is hoped to get about 18 knots an hour at 200 horse power, and it is believed that this can be obtained upon the consumption of 1 1/2 lb. of coal per horse power. At this rate a ton of coal would last for six hours; so that if the little vessel was fully coaled she would have a high speed radius of over 100 miles, and at lower speed a considerably greater one.

The First Anesthetic.

The fiftieth anniversary of the first use of anesthesia for the purpose of relieving pain was commemorated recently in a fitting manner by the Connecticut State Dental Society, at Hartford, Conn.

A HORSESHOE to be affixed without nails has been invented.

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DELAYED CASES IN THE PATENT OFFICE. The United States Circuit Court, in the case of the Bell telephone patent of Berliner, filed 1877, and issued in 1891, fourteen years after the application was filed, held in effect that the applicant had purposely allowed the case to be delayed in the Patent Office until the original Bell patent had nearly expired; the object being to enable the Bell Company to have a continuance of its telephone monopoly for seventeen additional years.

We notice that Edison has lately obtained several patents which have for years been pending in the Patent Office. One is for the manufacture of carbons, filed in 1880, fourteen years ago. Another for dynamo regulator, filed in 1881, thirteen years ago. Another for plating metals, filed in 1884, ten years ago. Another for carbon filaments, another for electric distribution, both filed in 1886, eight years ago.

It is evident there is something wrong in the law which thus facilitates and apparently encourages these unconscionable delays. Preliminary litigations, it appears, may be carried on for half a generation before the Patent Office, prior to the grant of a patent. And, then, after the issue of the patent, battles in the courts are begun to settle the validity of the grant.

The remedy is plain. The duties of the Patent Office should be more strictly confined to the sphere specially provided for it by the constitution, namely, the grant of patents, not the determination of judicial questions. These latter should be relegated to the courts where they belong. Interference proceedings and questions of priority should have no place before the Patent Office. Its functions should be the issue of patents promptly to every applicant whose drawings and papers are properly prepared.

The Seal Industry.

An official report has been published by the Treasury Department recently, confirming the stories of the outrages of pelagic sealing as permitted by the Paris regulations. It appears that the pelagic fleet of the past year has comprised some sixty vessels, which is four less than the fleet of last year.

It has also been found that pelagic sealing is in large measure directed against the mother seals, which, under our laws, were carefully protected. If this destruction continues, it is estimated that the value of the Pribylov Islands will be practically destroyed within the next five years.

The revenue of the Canadian government from this source is rapidly increasing, while that of the United States is diminishing. The United States is moreover at a great expense to provide a large patrol fleet, and the British government, on the other hand, although owning the majority of the sealing vessels, expends very little for police patrol. This may be clearly seen from the following significant figures. The surviving seals represent a cash value to-day of \$7,000,000. During the year 1894 we have lost more than \$500,000 of the profits.

Lobster Laws.

The game laws of Massachusetts provide a heavy fine for any one who either catches or sells lobsters measuring less than 10 1/2 inches. Quite recently a large consignment of lobsters to a New York firm were seized in Boston, and the entire lot, consisting of 17 barrels or some 3,323 lobsters, were dumped in Boston Harbor.

It has been found that four hundred tons of top weight must be taken from the new French battle ship Brennus before she can be rendered seaworthy. It will be necessary to remove at least one of her fighting masts, and her upper deck will be almost completely dismantled.