

TO THROW LIFE LINES FROM VESSELS.

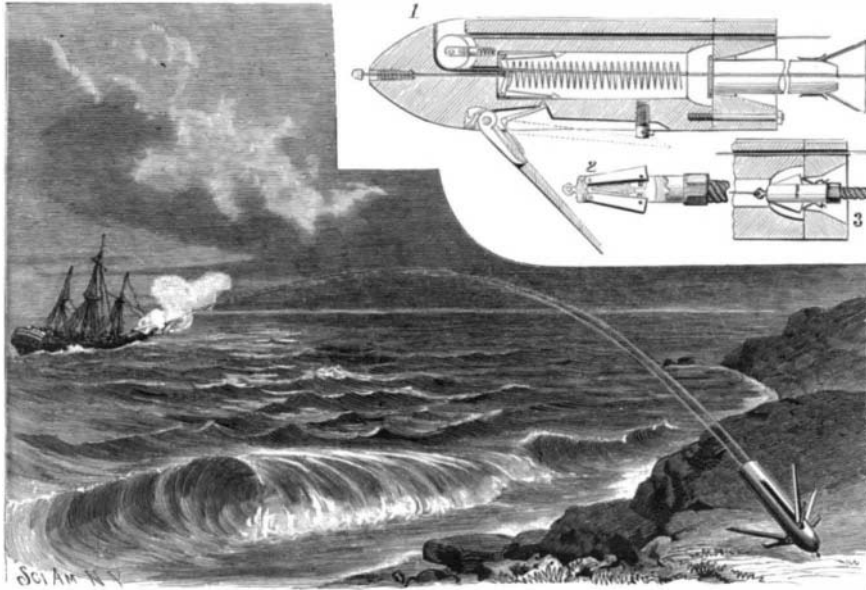
To facilitate establishing communication from a disabled or drifting ship with the shore, Mr. Anton Schmitt has patented the apparatus shown in the accompanying illustration, the introduction of which is being promoted by the Rev. Albert Stroebale, of Butler, N. J. On the vessel is carried a cannon adapted to fire a projectile in the form of an anchor having grapnel arms, to hold the anchor where it strikes, the anchor carrying a line having one end fastened on the carriage of the cannon while the other end unwinds from a drum on the carriage, and the two ends of the line thus remaining on board the vessel. One end of a line thus connected with the shore may then be attached to a heavy chain or cable, and the latter drawn out and fastened in the anchor, affording means, by the aid of a drum or winlass on shipboard, of drawing the vessel toward the shore. Fig. 1 is a sectional side view of the anchor, whose body has a bore registering with a conical bore in the base, through which passes one run of the line, which extends around a pulley in yielding bearings in the head, and through registering apertures in the body and base, to return to the drum on the carriage. A tube loosely held in the bore of the body is adapted to engage a funnel in the base to form a guideway for the head of the heavy chain or cable when the latter is to be connected with the anchor, as shown in Fig. 3. On the front of this tube is a flanged cap, on which presses a spring normally compressed by hooks which engage the flange, the hooks being pivoted at their rear end on links connected with a rod extending to the front end of the body. The head of this rod first strikes the ground when the anchor is fired, disengaging the hooks and permitting the spring to force the tube and funnel outward, as shown in Fig. 1. Pivoted in recesses in the sides of the body are three grapnel arms, each arm being recessed to receive a pivoted arm. Each arm is normally held in closed position by the wall of the barrel, but they are all forced outward by springs when the anchor is fired, the shorter arms being rigidly and the longer arms elastically held open. The head for the chain or cable to be connected with the anchor by means of the lines, after the anchor has been thrown ashore, has pivoted wings normally folded into a recess of the head, as shown in Fig. 2. These wings are spring-pressed, and are closed when drawn through the funnel in the base of the anchor, after which they swing outward and abut against the inner face of the base, whereby the head is securely connected with the anchor, and a strong connection is thus made between the anchor and the vessel.

Aliens May Become Engineers.

Aliens who have resided in the United States for six months or more, and who have declared their intention to become citizens of the United States, can be licensed as engineers or masters in the American merchant marine. Such was the decision of Attorney-General Olney in the question referred to him by Secretary Carlisle as to the legality of the action of Secretary Foster in granting licenses to the alien engineers who were serving on the American Line steamers New York and Paris at the time they were granted American registry under special act of Congress. General Olney decided that the action of Secretary Foster was valid, and that the act of 1874, under which he acted, was still in force, and unrepealed by the act of 1884, known as the Dingley act, notwithstanding the contention of the National Association of Marine Engineers of the United States that it had been repealed.—American Shipbuilder.

A New Use for the Bicycle.

The wheel is in use everywhere and for nearly every purpose. According to the Lancet, London, a new ambulance carriage has been invented by Dr. Honig, of Berlin. It is not drawn by horses or men in the ordinary way, but is propelled by cyclists, and consists of a kind of litter resting on a frame with five wheels, three in front in the form of an ordinary tricycle and two at the back. The drivers, accordingly, sit one at each end of the litter, which is covered by a removable roof with little windows and a pneumatic bell, so that the

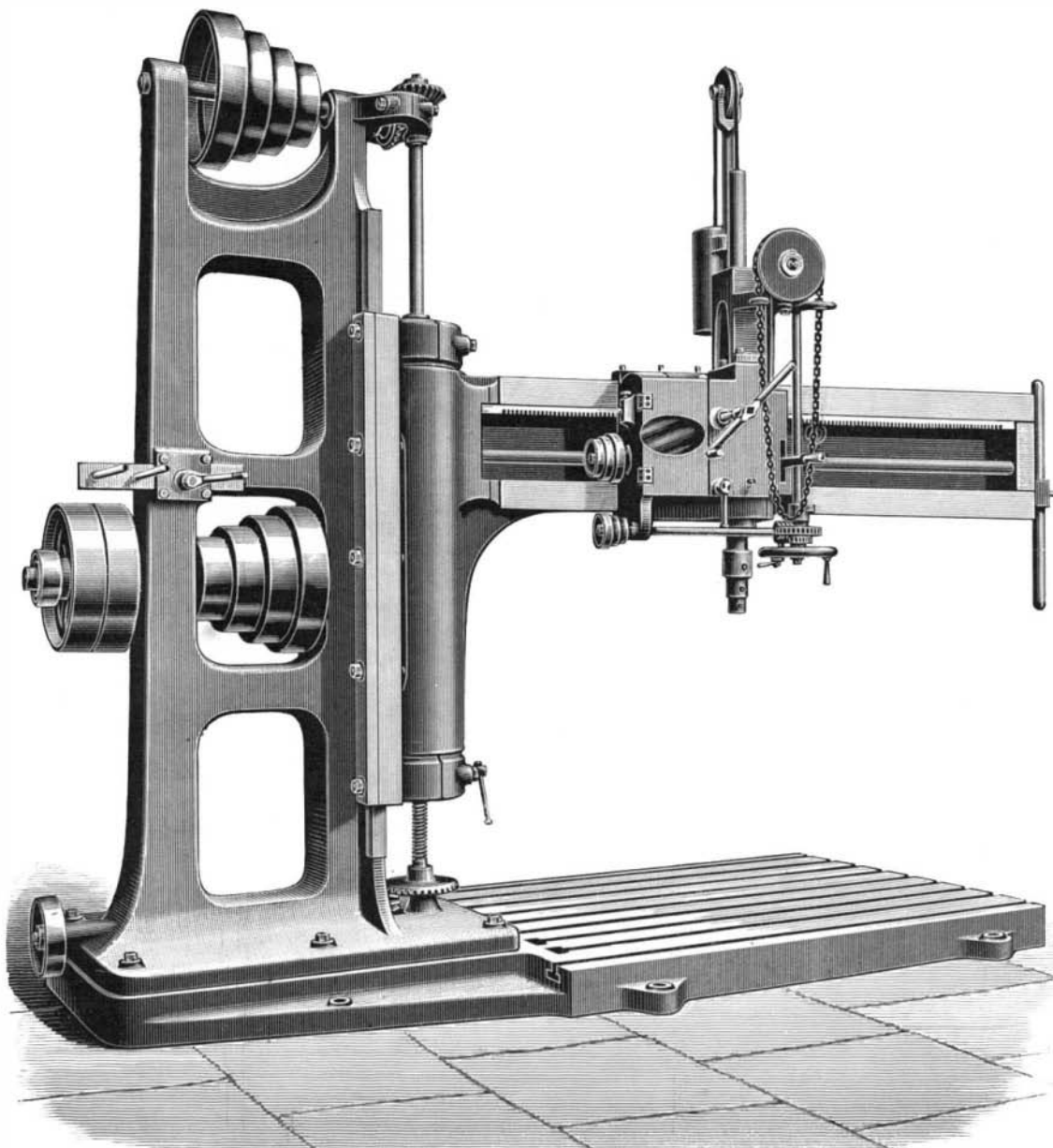


SCHMITT'S LIFE LINE THROWING APPARATUS.

patient can communicate with the drivers. Beneath the litter are boxes for dressing materials, instruments for first aid, etc. Dr. Honig suggests that his invention would be useful in small towns for which a horse ambulance is too expensive. It brings the surgeon and his assistant very quickly to the scene of an accident and enables them to remove the patient to a hospital.

IMPROVED RADIAL DRILLING MACHINE.

A radial drilling machine, by Messrs. Craven Brothers, London, makes short work of drilling, tapping and studding the upper flange of a crank chamber. The Engineer says, "So quickly does it get through its work that, as we look at it, we take a sort of childish pleasure in standing and watching it till the whole set of studs is dispatched—similar to the pleasure, which



RADIAL DRILLING, TAPPING, AND STUDDING MACHINE.

we all know at some period of our lives, of seeing an express train go by. It has been expressly designed to tap and bore holes up to 1 1/2 in. diameter. The radial arm is carried by two trunnions on a vertically adjustable slide, and admits 3 ft. 9 in. up to 6 ft. 3 in. high from the face of bed plate. The radial arm is fitted with a clutch motion actuated by a lever in front of the drill head to rotate the drill spindle in either direction or to stop it instantly. The spindle is balanced and fed down by a steel out rack, and is adjustable to drill from 2 ft. 4 in. to 7 ft. radius.

"Perhaps the speed at which we saw this machine doing the work, i. e., drilling the hole, tapping it, and driving home the stud, as we timed it, in one minute, should be in some measure attributed to the nimbleness of the operator, and again in some measure to small improvements made by Messrs. Willans and Robinson.

"In the first place they make their own taps with a special shoulder, which, on arriving at the surface of the flange, stops all further progress of the tap. Another little feature which, vulgarly speaking, is certainly 'a tip,' is in the section of the drill stock where the drill is held by it—only one half of the inner wall of which is turned true. The remaining semicircle is cut away, so that a drill can be hurriedly inserted without much chance of missing the hole. When once entered, however, it quickly finds its place under the influence of a set screw, which binds it hard to the true surface, as in the accompanying cut."

The Oleander.

The oleander is surely a thing of great beauty. No plant is easier to manage, the flowers are so pretty in both form and color and possess a fragrance of their own, therefore making it most desirable in every respect.

The plant will thrive and bloom in almost every kind of soil. The best results, however, are obtained by using good, rich leaf mould. While growing it requires an abundance of water, and when about to bloom should be given waterings of liquid manure occasionally. This will insure an abundance of large, perfect and brilliant flowers.

It may be set in the open ground in spring and in the fall dug up, carefully keeping as much dirt as possible about the roots; placed in a tub and then transferred to the cellar for the winter.

This plant is so easily grown that no flower lover should be without it, all they require being good soil and liberal watering when needed.

Grape Fruit as a Tonic.

Grape fruit, plump and juicy, is in market again, a harbinger of spring. This fruit is an admirable tonic, as well as a most appetizing breakfast or luncheon relish. A doctor says that the sharp stimulus of fruit is the best thing to set the digestive organs in order for the day, and the peculiar properties of the grape fruit give it marked medicinal value.

When eaten at luncheon it is prepared in a different way than for breakfast service. For the second meal the contents of two halves should be scraped out, the seeds and tough cone of dividing skin taken out and the pulp and juice thus obtained used to fill one of the halves, which it will just about do. A tablespoonful of sugar and one of rum or sherry mixed with the juicy pulp adds the perfecting flavor. At breakfast, with the long pointed orange spoon, the meat is eaten out as is that of an orange and very little sugar is used, many persons preferring none, on the ground that its full medicinal value is better obtained.—Popular Science News.