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American Telegraph Inventor in Europe.

On the 9th ult. a grand banquet was given to Prof. Morse in London by the English telegraph companies which have their head quarters in that city. Cyrus W. Field, of this city, who is the active agent of the New York and Atlantic Telegraph Co., and who is now in London on business relating to the laying of the great cable, was one of the guests.—Many compliments were paid to Prof. M., as the inventor of the electro-magnet telegraph—the most simple of all. Quite a number of distinguished guests were present, and Prof. M. stated he had telegraphed over the united wires which from London crossed the Irish Channel, and were 2,000 miles long, and had produced 210 signals per minute. He was of opinion that this proved the perfect practicability of working the proposed telegraph across the Atlantic ocean.

Sounding Guard for Vessels.

Any one reading the daily list of marine disasters, occasioned by vessels running ashore, must be convinced of the necessity of some means of preventing said accidents as far as possible.

It was such considerations as these that led to the invention of the Sounding Guard, of which the following is a description. Referring to the engraving, A is a movable vertical rod passing through the bottom close to the side of the keel, enclosed in a pipe, 1, 1, which pipe is bolted to guides at K K. With the lower end of the vertical rod are connected two others, B B, one leading forward and the other aft, the ends working freely in two castings, R, fixed on the garboard streak, so that they may slip as the center rod rises vertically.

By this arrangement, when a vessel passes over a rock or shoal, the inclined rods, B, being touched, causes the vertical rod to rise to the point at which it can pass over the obstacle, indicating on deck the actual clearance or number of feet under the bottom of the ship. The upper part of the rod is marked in feet or inches, and an alarm bell attached, so that when the guard touches bottom the bell is rung, and attention being thus called to the indicator, the depth of water may be accurately measured.

When in deep water, or in port, the machine is triced up alonside the keel, and a pin put through the vertical rod, at the spar deck. A bolt is put through the garboard plank at the after end of the forward grove to act as a *stop* for the forward bar, B. The head of the bolt is inside the ship, so that the stop may be raised when it is desired to detach the guard.

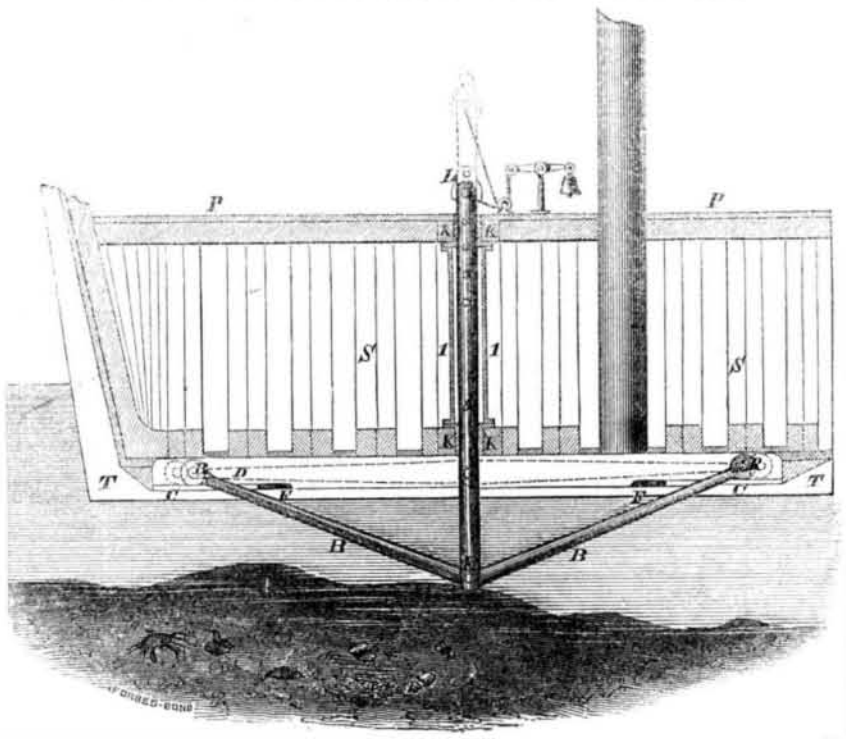
The proportion of the length of the inclined rods to the vertical one below the bottom are as 3 to 1, and it is believed that a a depth of two fathoms under the keel may be reached, the long rods then being put together with a joint and sleeve.

The advantages beside being a safe guard, are alleged to be, in part, as follows:—It will, in a great measure, dispense with the lead and leadsmen; it is constant in its action by day or night, and thus avoids the danger of going on shore between the casts of the lead, and also the uncertainty which always attends the use of the lead when the vessel is going fast, and at night when leadsmen so frequently make mistakes. In working up a channel it can be set to a safe depth, and the alarm given at the moment to tack. As in a sea way it goes down with the vessel, it always shows the least depth of water. At night, and in unknown channels, it will give a feeling of confidence to the navigator, which he cannot derive from lead and leadsmen.

If anchored in an open roadstead, blowing fresh, the vessel drags at night, the alarm will be given in time to save the vessel by letting go another anchor. For our lake and river steamers, sailing, and coasting vessels, which would require but a small machine that would be very easily managed, the Sounding Guard, it is believed, would be found very useful.

Address the inventor, Lieut. Jno. Guest, U. S.N., Washington D. C., for further information. Patented J 8, 1856.

NEW SOUNDING GUARD FOR VESSELS.



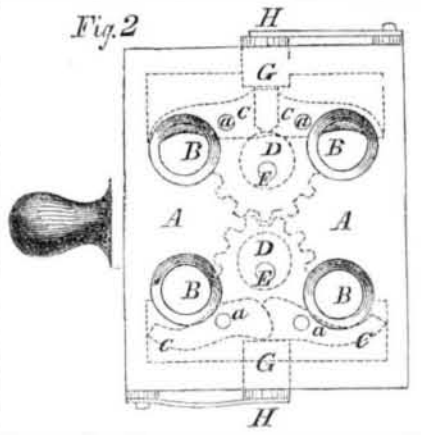
APPARATUS FOR MILKING COWS.

Fig. 1

Cow Milking Apparatus.

The contrivance illustrated by our engraving consists of a small box, A, which is held up to the cow by means of a handle on one side. The box contains four tubes, B, which receive the cows teats, as shown.—The requisite pressure to cause the milk to flow, is obtained by means of a series of fingers, C, which work out aud in upon the teats, though slots in tubes, B. The fingers, C, are operated by means of cams, D, on shafts, E. The latter are caused to revolve by the crank, F, and gear wheels, as shown. Figure 2 is an enlarged horizontal section, showing the arrangement and operation of the fingers, cams, &c. G are pins which at one end, bear against the cams, and at the other receive the force of springs, H. The latter serve to withdraw the fingers, C, after they have been pressed against the teats of the cows

Fig. 2



by cams, D. The bottoms of the tubes, B, all meet at a common center, B′, which terminates in a discharge pipe, H, through which the milk escapes into a pail or other receptacle below. *a* are the pivots of the fingers, C.

The inventor states that this contrivance will milk cows about twice as fast as the work can be done by hand, is more convenient, more cleanly, &c. For further information address the patentee, Wm. H. Whitman, Bailey Hollow, Pa., Patented Aug. 26, 1856.

A Manufacturing City.

The *Providence Journal* says:—"The city of Providence, R. I., contains 73 steam engines, and within a hundred rods of the city line 12 or 15 more, that for all practical purposes belong here; 56 jewelry establishments, employing 1,400 hands, and yielding an annual product of $2,771,600; three bleaching and dyeing works, employing 350 hands, and finishing 50,980,000 yards of goods: 22 manufactories of machinery, steam engines, boilers, castings, &c., employing 2,062 hands; 9,450 tuns of coal, 11,095 tuns of pig iron, 9,801 tuns of other iron, and producing annually 33,800 stoves, 900,000 pounds of nails and spikes, 80 steam engines, 220 boilers, 3,584,000 pounds of nuts, &c., and other articles, to the total value of $2,561,000; two screw factories that yield an annual product of $1,086,000; two butt factories that produce $235,000, and a great variety of smaller manufactories, yielding together an annual product of $17,415,840."

Waterproof Emery Paper.

Common emery paper is made by dusting fine emery on paper which has been covered with a coat of glue. When dry it is fit for use. This paper cannot be used to polish articles in water, because the glue is soluble. To prepare emery paper that can be used in water, the paper should be coated with copal varnish which has been dissolved in hot linseed oil, and to which has been added (when cold) some turpentine containing a little india rubber dissolved in it. The paper is first coated with this composition, then the emery dusted on, in the same manner as on glue then it is dipped in a solution of the sulphate of lead, and afterwards dried in a warm place. The reason for dipping this paper in a solution of the sulphate of lead before drying, is to remove stickiness from the varnish. This kind of emery paper, of course, is more expensive to manufacture than the glue paper.