

S. Samuels.

Laying Telegraph Cable.

N^o 21,629.

Patented, Sept. 28, 1858.

Fig. 2.

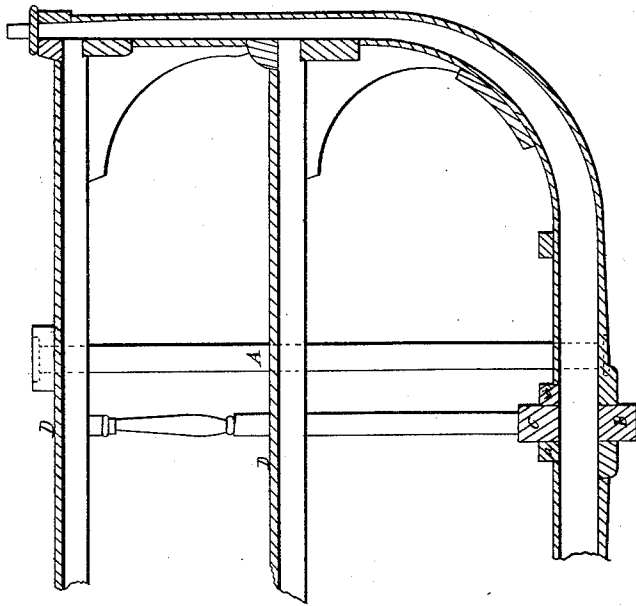


Fig. 1.

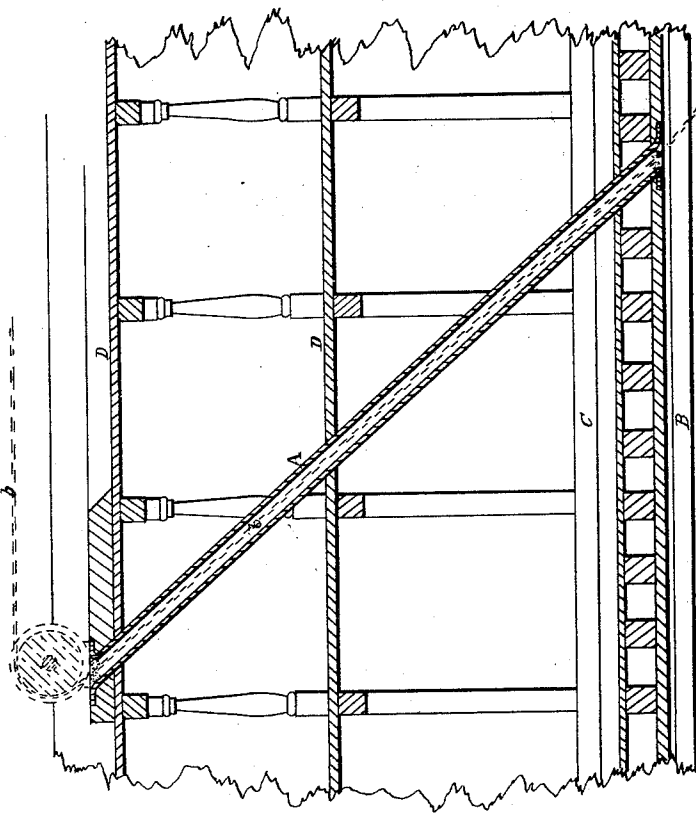
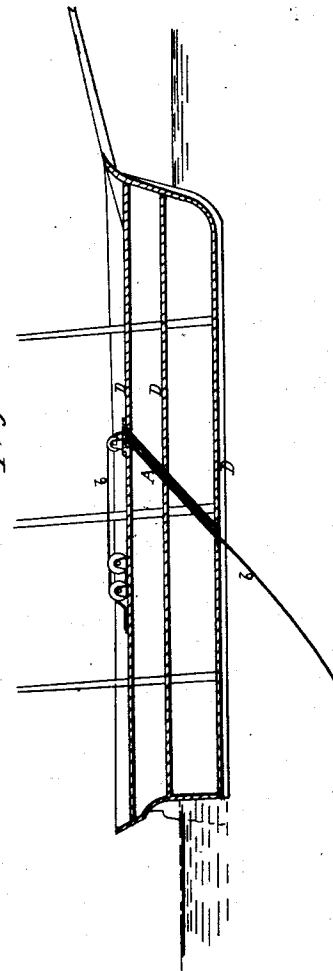


Fig. 3.



UNITED STATES PATENT OFFICE.

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IMPROVEMENT IN METHODS OF LAYING SUBMARINE-TELEGRAPH CABLES.

Specification forming part of Letters Patent No. **21,629**, dated September 28, 1858.

To all whom it may concern:

Be it known that I, SAMUEL SAMUELS, of the city of Brooklyn, in the county of Kings and State of New York, have invented certain new and useful Improvements in the Laying of Submarine-Telegraph Cables; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the annexed drawings, making part of this specification, in which—

Figure 1 is a longitudinal vertical section of part of a ship, illustrating my invention. Fig. 2 is a transverse vertical section of the same. Fig. 3 is a longitudinal section of the whole vessel on a smaller scale.

Similar letters of reference indicate corresponding parts in the several figures.

This invention consists in passing a submarine-telegraph cable from the ship or other vessel from which it is paid out through an opening in the bottom thereof as near as convenient or practicable midway between the stem and stern, at or near the point where the least motion is produced by the pitching of the vessel. By this means the liability to break the cable is very much reduced, if not entirely obviated, as at a certain point near the center of a vessel's length, and at the bottom thereof, there is comparatively little, if any, motion produced by pitching, which, by the excessive strain or jerk which it produces on the cable when paid out over the stern is the cause from which, when the cable is paid out from that part, the greatest danger of rupture is to be apprehended.

In paying out the cable from the bottom of the vessel it is necessary to provide for the passage of the cable a tube extending from the bottom of the vessel up some distance above the water-line. This tube should preferably extend upward to the main or upper deck, or that deck on which the paying-out apparatus is placed, and must be made perfectly water-tight at its junction with the vessel's bottom, as its object is to exclude the water from the opening in the vessel's bottom through which the cable passes. This tube may be straight or curved; but I at present

consider it best that it be straight and inclined, with its lowest end nearest the stern of the vessel, in order that the bend, if any be formed in the cable where it leaves the vessel's bottom, shall be as slight as possible. If the tube be curved, the lower part should have a similar inclination. This form and arrangement are illustrated in Figs. 1 and 3, where, as well as in Fig. 2, the letter A indicates the tube, which is shown in section in Figs. 1 and 3. *b* represents the cable. The tube should have its interior fitted with rollers arranged in pairs at its entrance and exit, and at one or more intervals throughout its length to prevent any chafing of the cable. It should be arranged as near as possible amidships of the vessel; but, as it must not interfere with the keelsons, I propose to arrange it just outside the garboard-strakes *a*, on either side of the keelsons, as shown in Fig. 2.

The paying-out apparatus may be such as has been heretofore employed, or of any suitable kind, and arranged either forward or aft of the entrance to the tube, but preferably in the latter position, and a roller or pulley of considerable size should be arranged near the entrance to the tube to prevent a short bend at that point.

B in the several views of the drawings represents the keel, and C is the main keelson, and D D are the decks.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. Passing the cable from the ship or vessel through the bottom thereof, at or near the point herein specified, substantially as and for the purpose herein set forth.

2. The employment, to conduct the cable to the bottom of the vessel, and to exclude the water from the opening in the bottom where the cable leaves it, of a tube, the whole or the lower part of which has a downward inclination toward the stern of the vessel, substantially as and for the purpose specified.

S. SAMUELS.

Witnesses:

S. ADKINS,
HENRY T. BROWN.