

G. Scott.

Laying Telegraph Cables.

N^o 21,371.

Patented Aug. 31, 1858.

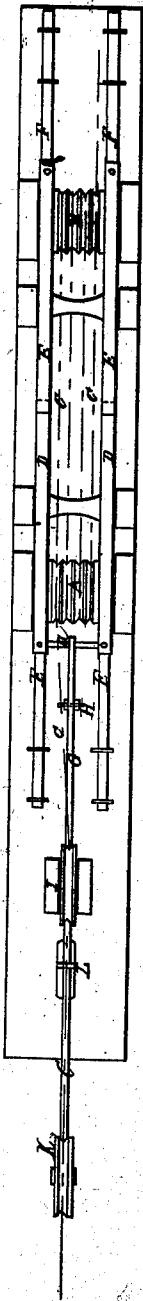
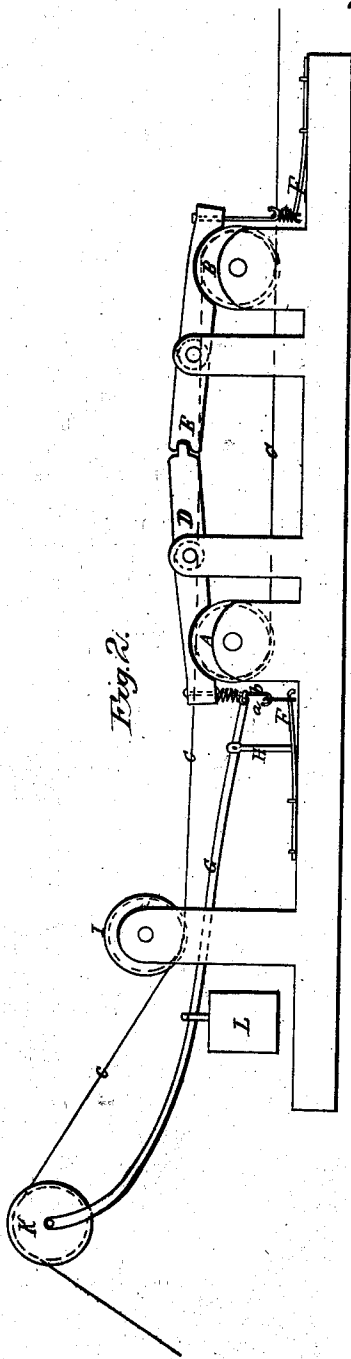


Fig. 2.



UNITED STATES PATENT OFFICE.

GEORGE SCOTT, OF WISCASSET, MAINE.

APPARATUS FOR PAYING OUT TELEGRAPH-CABLES.

Specification forming part of Letters Patent No. 21,371, dated August 31, 1858.

To all whom it may concern:

Be it known that I, GEORGE SCOTT, of Wiscasset, in the county of Lincoln and State of Maine, have invented an Apparatus to be used on-Shipboard and in Laying Telegraph-Cables in a Sea or Ocean; and I do hereby declare that the same is fully described and represented in the following specification and the accompanying drawings, of which—

Figure 1 is a top view of such apparatus or mechanism; Fig. 2, a side elevation of it.

It is well known that during the process of laying a telegraph-cable in the ocean or on the bed thereof, and from a ship or steam-vessel while the latter is in motion, there is more or less danger of rupture of the cable, such arising from sudden increase of strain on it, caused either by undue velocity or movement of the vessel.

The object of my invention is to prevent an accident of such nature.

In the drawings, A and B are two grooved rollers or drums, around which a telegraph-cable, C, may be supposed to be wound or carried in its passage from the hold to and over the stern of a vessel or ship. Each of these drums has a set of brakes, D D or E E, applied to it and operating as levers, and hinged or placed or jointed together, as seen in the drawings. These lever-brakes are borne down upon their respective drums by means of springs F F F F or some other suitable method of applying power to them, the pressure of the springs on the brakes being regulated by any suitable means, so as to produce the necessary degree of tension on the cable while it is being laid. Connected with the rearmost set of springs by a cross-bar, *a*, extending from one to the other of these stirrup-hangers *b*, is a lever, G, turning vertically on a fulcrum at the top of a standard, H. This lever is carried directly underneath a guide-pulley, I, and carries at its outer end another guide-pulley or sheave, K. Furthermore, the outer end of the lever G may be made elastic, as a spring, so as to spring up and down, and it may carry a weight, L, which I term the "inertia-weight." The cable C passes from the grooved drums to and under the guide-pulley I, and from thence to and over the guide-pulley K and into the sea. It is intended that the position of the pulley K with respect to the pulley I shall be such as shown in the drawings, or so that the cable, in passing over it, shall be bent at an obtuse angle, in order that when any undue strain or

draft on the cable may occur such may produce a downward pressure on the guide-roller K sufficient to move the lever on its fulcrum in a manner to relieve the brakes from the pressure of their springs. Thus when the drums are relieved from the pressure of the brakes the cable will run out with more freedom, and consequently not liable to be ruptured. The object of the spring-arm of the lever is also to aid in preventing breakage of the cable during the resistance which results from inertia of the working parts of the mechanism connected with the lever, as the spring of the arm, under a sudden movement of draft on the cable, will cause the arm to yield or bend downward in a manner to prevent rupture of the cable prior to the elevation of the brakes from the drums. Furthermore, it frequently happens that the stern of a ship will rise suddenly on a sea, and in this way a great increase of strain on the cable may be produced. To prevent the injurious effects of such strain is the object of the inertia-weight hung on the spring-arm of the lever, the inertia of the weight during the sudden rise of the ship's stern being employed to depress the spring-arm of the lever, so as to prevent undue strain on the cable.

I claim—

1. In combination with a delivering-roller or a system of delivering-rollers, A B, a tilting lever, G, or its equivalent, and a brake mechanism (or any equivalent therefor) for arresting or controlling the revolutions of the delivery roller or rollers, the whole being made to operate in such manner as to increase the paying out or delivery of the cable under increase of tension of it, as described.

2. When the lever is applied to a brake apparatus and a guide-roller, K, essentially as described, combining the guide-roller with it by means of a spring, or making the outer arm of the lever as a spring, for the purpose of enabling such spring to operate the lever in manner and under circumstances as set forth.

3. Combining the inertia-weight with the spring-lever, so as to cause such to operate as specified under a sudden upheaval of the stern of the vessel.

In testimony whereof I have hereunto set my signature.

GEORGE SCOTT

Witnesses.

ERASTUS FOOTE,
EDWD. B. NEAL.