(No Model.)

T. H. ROSS.

GRIPPING DEVICE FOR CABLES.

No. 412,671. Patented Oct. 8, 1889.

Fig. 1.

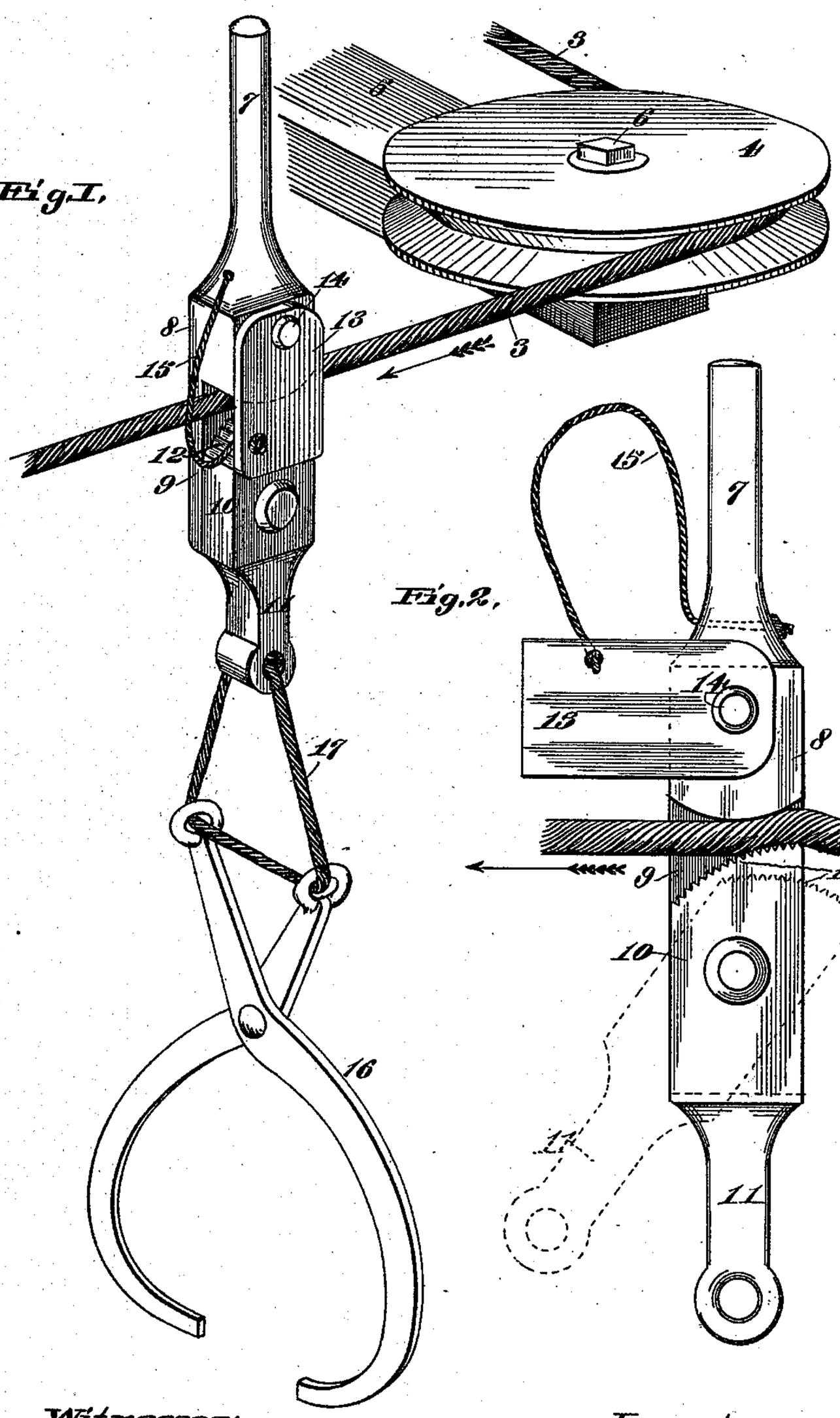

Fig. 2.

Witnesses;
Charles Pickles
G. H. Hinchman Jr;

Inventor;
Thos. H. Ross
By Howlett & Howlett
Attorneys.

UNITED STATES PATENT OFFICE.

THOMAS H. ROSS, OF ST. LOUIS, MISSOURI.

GRIPPING DEVICE FOR CABLES.

SPECIFICATION forming part of Letters Patent No. 412,671, dated October 8, 1889.

Application filed May 9, 1889. Serial No. 310,123. (No model.)

To all whom it may concern:

Be it known that I, THOMAS H. ROSS, a citizen of the United States, residing at St. Louis, in the State of Missouri, have invented certain new and useful Improvements in Gripping Devices for Cables, of which the following is such a full, clear, and exact description as will enable any one skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, forming part of this specification.

My invention relates to improvements in devices for transporting freight from one point to another by means of an endless cable. The invention appertains more especially to gripping devices by which the freight is secured to the cable.

The object of the said invention is to construct such gripping devices so that they can be readily applied to the cable, and so that they may pass around grooved sheaves or pulleys with either side toward the same without being thrown from the cable.

The invention consists in a gripping device having an independently-movable gripping-jaw for automatically grasping the cable when the weight of the article to be transported is applied thereto, and in providing such gripping device with a plate which may be thrown down in position so as to keep the said gripping device from being thrown from the cable when passing around the pulleys in either direction.

Figure 1 is an isometric projection of a gripping device made in accordance with my invention, showing the same applied to a cable passing around a grooved pulley; and Fig. 2 is a side elevation of said gripping device.

The same numerals of reference indicate the same parts in the two views.

3 is an endless cable, which may pass over a grooved pulley 4, that is secured to a timber 5 by a pin 6, about which said pulley rotates.

The gripping device is made at its upper end in the form of a handle 7, which terminates at its base preferably in a quadrangular part 8, from which depends a flat downward extension 9. To the lower part of this flat extension is pivoted a gripping-jaw 10, that has a downward projection 11, to which the articles of freight may be directly or indirectly secured in any preferred way. The said gripping-jaw 10 is made longer at one side than at the other side, and has a curved top provided with teeth 12, which are adapted to take against the cable 3. The space between the quadrangular part 8, the top of the gripping-jaw 10, and the downward extension 9 forms in effect a groove open at one side, in which groove the cable takes. The gist of my invention lies in the construction which permits the widening and contracting of this groove, so as to more readily apply and remove the gripping device from the cable.

Before applying the device to the cable the gripping-jaw 10 is brought in the position shown by dotted lines in Fig. 2, so as to open wide the groove. When weight is applied to the extension 11 of the gripping-jaw 10, it automatically throws said gripping-jaw in the position shown by full lines in Fig. 2 and causes the teeth thereof to be forced against the cable and secures the device to the cable, whereupon said device is carried along by said cable until liberated therefrom. This movable gripping-jaw also permits the device to more readily and positively grasp the cable.

To loosen the gripping device from the cable the handle 7 is pushed forward in the direction that the cable is going. This widens the groove in which the cable takes, the same as before, and allows said cable to pass freely through said groove without carrying the gripping device with it. The lower side of the quadrangular part 8 is curved, as shown in the drawings, so as to allow the handle 7 to be pushed forward and to facilitate the operation of the device.

It is sometimes necessary or desirable for the gripper to be able to pass around the sheaves or pulleys over which the cable passes, no matter whether one or the other side of the same is next to said pulleys. The cable also often passes around first one side of one pulley and then around the other side of another pulley. Consequently some means must be devised to prevent the gripper from being pushed from the cable by the pulleys

when the groove in the gripper comes next to the pulley. For the accomplishment of this purpose I provide a plate 13, which is pivoted preferably to the quadrangular part 8 of the gripping device by a pin 14. Said plate may have connected to it a cord 15, the other end of which is secured to any part of the gripping device. Said plate is adapted to be swung down in the position shown in Fig. 1, so as to close the open side of the gripping device opposite the extension 9. The gripper can then pass with either side next to a pulley without being pushed from the cable by said pulley, which would ordinarily happen when the open side was next to the pulley.

When it is desired to remove the gripping device from the cable, the handle 7 is manipulated as before described and the cord 15 grasped so as to throw the plate 13 in the position indicated in Fig. 2. This leaves the side of the gripper opposite the extension 9 open, so that the gripping device may be removed from the cable.

Before applying the gripping device to the cable the plate 13 is in the position shown in Fig. 2.

Any other means can be devised to move the plate 13 in one or the other direction, and I do not wish to be understood as limiting myself to a cord for this purpose.

Various changes may also be made in the device without departing from the spirit of my invention.

I have shown in the drawings, in Fig. 1, the gripping device carrying at its lower end a pair of tongs 16, which are secured to the downward projection 11 by a cord 17 passing through a hole in said downward projection. I make no claim to this, and merely illustrate it to show a convenient way of applying the articles of freight to the gripping device.

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

1. A gripping device for cables, consisting of a handle, a groove therein in which the cable takes, and an independently-movable gripping-jaw for automatically grasping said cable when weight of the article to be transported is applied to the same.

2. A gripping device for cables, consisting of a handle 7, a downward extension 9, and a gripping-jaw 10, pivoted to said downward extension, to which the articles of freight are adapted to be secured.

3. A gripping device for cables, consisting of a handle 7, having a groove extending from one side thereof, in which groove the cable takes, and a plate 13, pivoted to said handle, adapted to close the open side of said gripping device, for the purpose described.

4. The combination, as hereinbefore set forth, to form a gripping device for cables, consisting of a handle 7, a downward extension 9, a gripping-jaw 10, pivoted to said downward extension, to the lower end of which the articles of freight are adapted to be secured, and a plate 13, pivoted to said handle 7, and having cord 15 for manipulating said plate.

In testimony whereof I have hereunto set my hand and affixed my seal, this 6th day of May, 1889, in the presence of the two subscribing witnesses.

THOMAS H. ROSS. [L. S.]

Witnesses:
A. C. FOWLER,
M. S. REEDER.