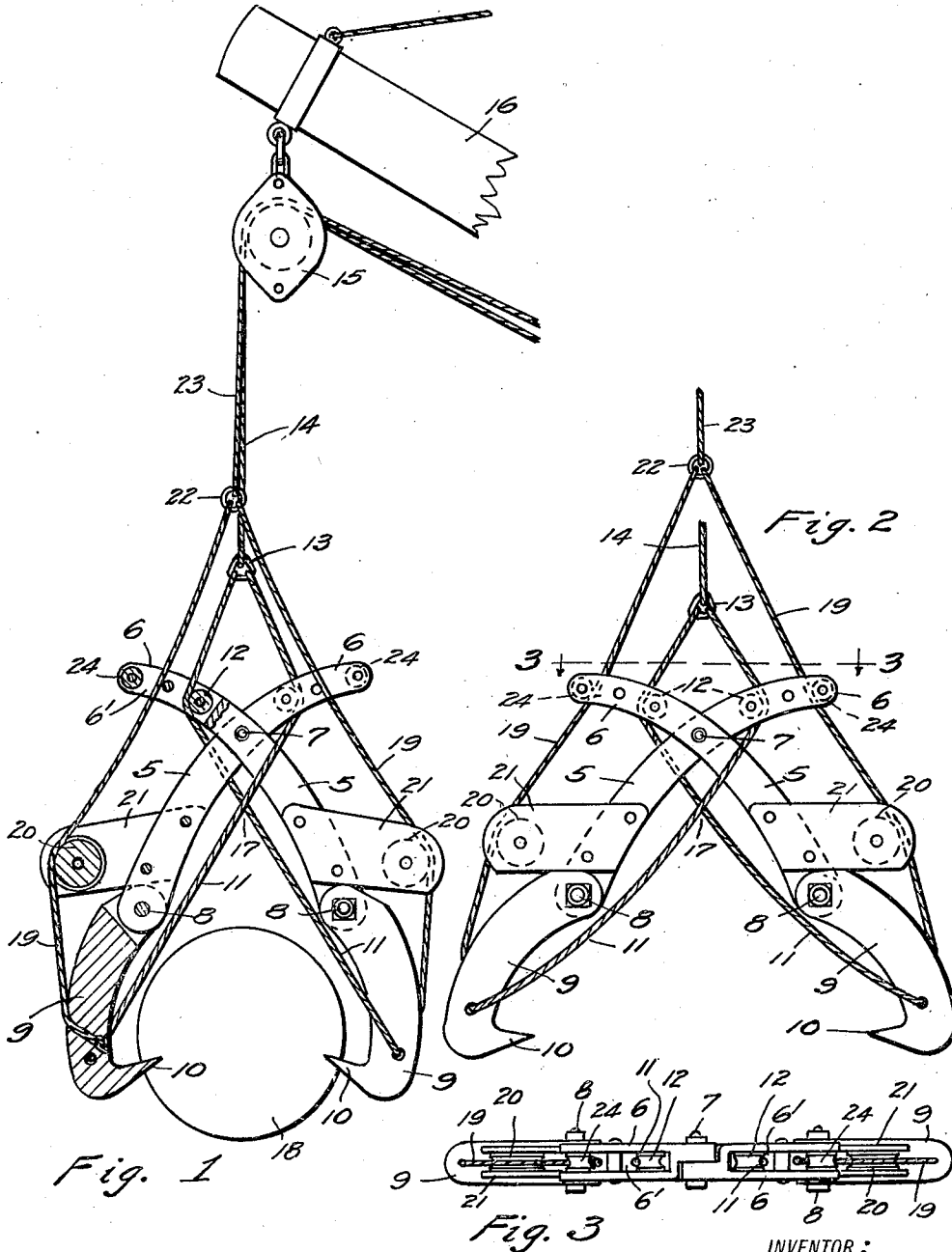


T. CARLSON.
HOISTING DEVICE.
APPLICATION FILED JUNE 1, 1920.

1,369,963.

Patented Mar. 1, 1921.



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HOISTING DEVICE.

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Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, THEODORE CARLSON, a citizen of the United States, residing at Stillwater, in the county of King and State of Washington, have invented certain new and useful Improvements in Hoisting Devices, of which the following is a specification.

This invention relates to hoisting devices which are designed for use in hoisting logs, timbers, and other similar articles. Its object is to provide a device in the nature of lifting grapple which is suspended from and connected in such a manner to hoisting and controlling lines whereby the latter may be utilized to effect the engaging and disengaging of the grapple with and from the load.

The invention consists in the novel construction, arrangement and combination of parts as will be hereinafter described and claimed.

In the accompanying drawings, Figure 1 is a side elevation and part section of devices embodying the present invention shown applied. Fig. 2 is a side elevational view of the devices with parts thereof in different relations from those in which they are shown in Fig. 1. Fig. 3 is a sectional view through 3—3 of Fig. 2.

In said drawings the reference numerals 5 and 6 designate arms of levers which are pivotally connected together by means of a bolt 7 to afford a tongs-like structure. Pivotally connected by bolts 8 to the lower ends of the respective arms 5 and 6 are hook members 9 terminating at their lower ends in bills 10 which are opposed to each other as shown. Connected to the lower portion of the hook member 9 of each lever is a rope 11 which extends upwardly and about a guide sheave 12 provided in the arm 6 of the respective lever. The upper ends of both of the ropes 11 are connected to a link 13 which, in turn, is secured to the end of a hoisting cable 14 extending through a pulley 15 and thence to a winding drum, not shown. As illustrated the pulley 15 depends from a derrick boom 16. It is to be noted that the ropes 11 cross each other as at 17 and accordingly when the cable 14 is actuated to elevate the grappling devices, the ropes 11 primarily effect the drawing of the hook members 9 toward each other to engage the load which is represented by 18 in

Fig. 1. Also connected to lower portions of said hook members are ropes 19 leading upwardly about guide sheaves 20 in brackets 21 provided on the respective lever arms 5 and through apertures 6¹ in the arms 6 of the levers for the opposite hook members. Both of the ropes 19 are connected to a link 22 which is secured to an end of a cable 23, hereinafter designated as the releasing cable, which extends through the pulley 15 to a winding drum, not shown, which drum is adapted to be operated independently of the first mentioned drum.

24 represent guide sheaves provided in the arms 6 for the ropes 19.

The sheaves 20, moreover, are disposed at a distance outwardly from the pivot bolts 8 of the adjacent hook members 9 so that when a pull is applied from the releasing cable 23 the ropes 19 serve to swing the respective hook members to disengage the same from a load or to space said members to clear the load when the grapple is being brought into engageable position.

In Fig. 1 the apparatus is represented with the grappling devices applied to sustain the load 18 and in such condition the latter may be raised or lowered through the medium of the hoisting cable 14 and also when being swung horizontally through the agency of the boom 16. To disengage the load the releasing cable 23 is actuated and the hoisting cable slackened to enable the ropes 19 to withdraw the hooks from the load and cause the parts of the grappling devices to be brought into the relative positions in which they are shown in Fig. 2.

By raising or lowering the grappling devices by means of the releasing cable 23 and associated ropes 19 the grappling devices are maintained in their open Fig. 2 positions, but by employing the hoisting cable 14 the devices may be rendered operative for engaging and conveying loads.

What I claim is:—

1. A hoisting device consisting of a grapple comprising a pair of levers pivotally connected to afford a tongs-like structure, and hook members pivotally connected to corresponding arms of said levers, a hoisting cable connected with both of said hook members for causing the latter to be drawn toward each other when said cable is utilized to support the grapple, and a releasing cable connected with both of said

hook members whereby the latter are swung outwardly when the releasing cable is utilized to support the grapple.

2. In hoisting apparatus, a grappling device consisting of two levers pivotally connected in the form of a pair of tongs, and a hook member pivotally connected to the lower arm of each of said levers, a hoisting cable, a releasing cable, and ropes extending
10 through ways provided in the upper arms of said levers and connecting the respective

cables with both of the hook members whereby the latter are caused to be swung into and from their operative positions respectively by employing the hoisting cable 15 and the releasing cable.

Signed at Seattle, Washington, this 14th day of May, 1920.

THEODORE CARLSON.

Witnesses:

PIERRE BARNES,
EVA JEFFRIES.