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W. A. BOCK.

HOISTING APPARATUS.

(Application filed Mar. 18, 1902.)

(No Model.)

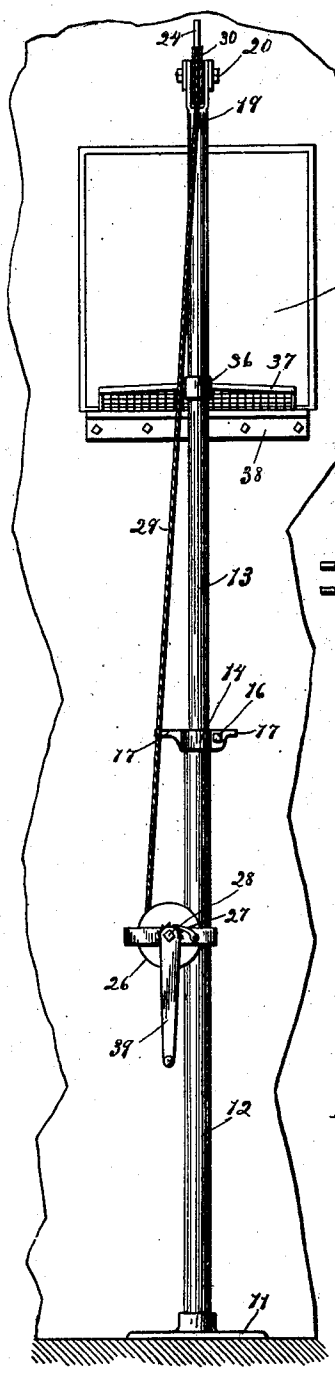

Fig. 1.

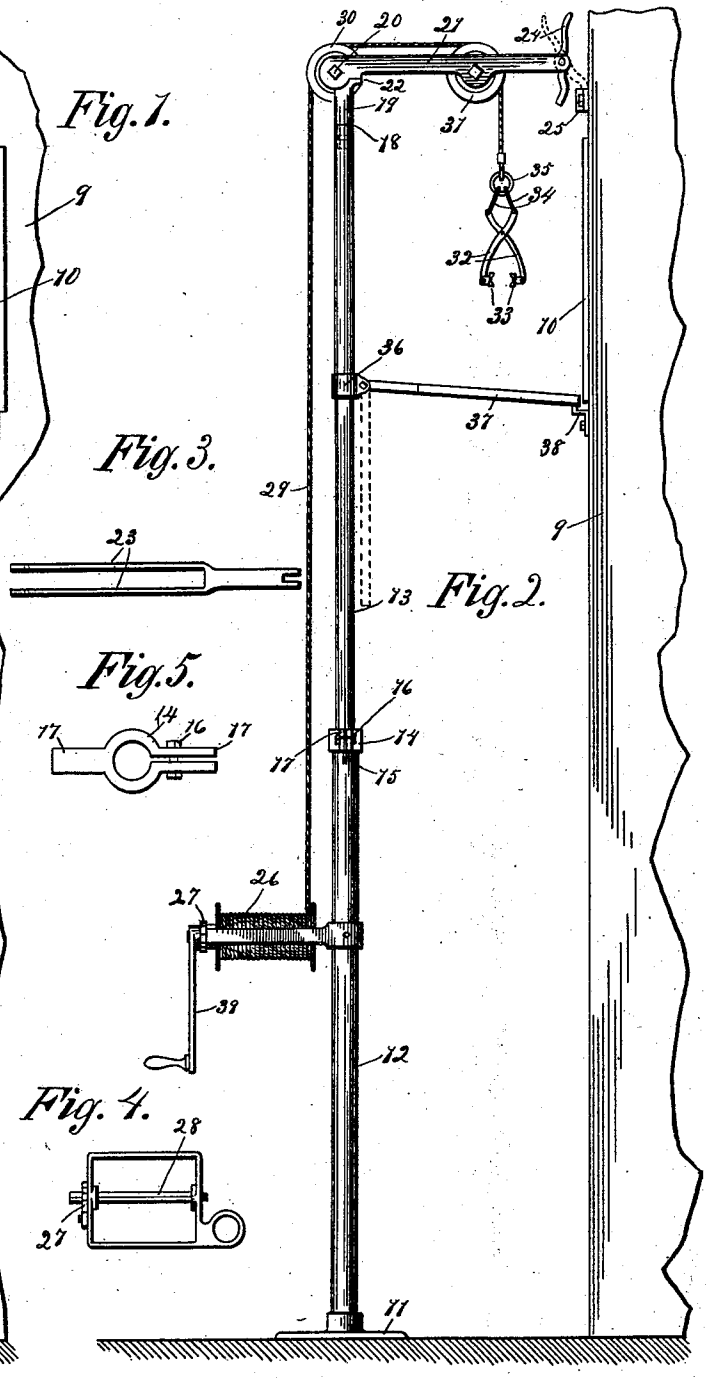

Fig. 2.

Fig. 3.

Fig. 5.

Fig. 4.

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UNITED STATES PATENT OFFICE.

WILLIAM A. BOCK, OF CHICAGO, ILLINOIS.

HOISTING APPARATUS.

SPECIFICATION forming part of Letters Patent No. 715,747, dated December 16, 1902.

Application filed March 18, 1902. Serial No. 98,835. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM A. BOCK, a citizen of the United States, and a resident of Chicago, county of Cook, and State of Illinois, have invented certain new and useful Improvements in Hoisting Apparatus, of which the following is a specification and which are illustrated in the accompanying drawings, forming a part thereof.

This invention relates to a hoisting apparatus which is particularly designed to be used for charging refrigerators with ice and for similar purposes.

The object of the invention is to provide an apparatus of this character which shall be simple in construction, which may be readily set up or erected for use, and which may be folded up in compact form, so as to be conveniently portable.

The invention consists of the combination and arrangement of parts hereinafter fully described, particularly designated in the claims, and illustrated in the accompanying drawings, in which—

Figure 1 is a view of the hoisting apparatus when set up or in operative position. Fig. 2 is a side elevation of the same. Figs. 3, 4, and 5 relate to details.

In the drawings I have shown the hoisting apparatus in connection with a refrigerator, a portion of which is shown and designated 9 and the door thereof 10, the invention being particularly adapted to elevating ice for filling refrigerators, although it is not restricted in its use to such purpose.

In carrying out the invention I provide a base 11, designed to rest upon the floor or ground and supporting a standard which is vertically telescopically adjustable. To this end a tubular section or member 12 is fixed in the base 11 and receives an upper section or member 13, which may be held at any desired elevation by a clamp 14. The upper end of the tubular member is split, as at 15, so that it may be compressed by the clamp 14, which encircles the said split end about the upper member. This clamp is in the form of a split ring and is secured by a bolt 16 and has extensions 17 at opposite sides thereof designed to serve as foot-rests, upon which the attendant or operator may stand in order to have better access to the door of the refrigerator when filling the latter.

The upper end of the member 13 is provided with a socket 18, in which is swiveled an extension 19, to which is connected on a horizontal pivot 20, so as to project at a right angle to the standard, an arm 21, provided with a lug 22, adapted to bear against the standard to prevent the arm from dropping down. The arm 21 is preferably made, as shown in Fig. 3, of parallel bars 23, connected at their free ends and provided with a grapple, preferably in the form of a pivoted hook 24, designed to engage under certain conditions with an eye 25, permanently attached to the front of the refrigerator.

A winch 26, having the usual pawl and ratchet 27, is secured to the lower member of the standard, and the cable or rope 29, wound upon the same, passes to and over a sheave 30, journaled on the pivot of the arm 21 at the upper end of the extension 19, and then over a second sheave 31, journaled between the bars 23 of the arm 21, and has connected to its end a pair of tongs of any suitable construction, but which preferably consists, as shown in Fig. 1, of a pair of arms 32, pivoted together and provided at their lower ends with gripping-pieces 33, provided with teeth and swiveled to the arms 32 in order that they may adjust themselves to the faces of the block of ice being elevated. The upper ends of the arms of the tongs are connected by links 34 to a ring 35 at the end of the cable or rope 29.

36 designates a collar secured to the upper member of the standard and having pivoted thereto a platform 37, which is designed to grapple or engage and rest upon a bracket 38, secured to the front of the refrigerator just below the door thereof, the collar 36 being adjustably secured on the member 13 by a bolt in order that the platform may be adjusted to the proper height with relation to the refrigerator-door.

In storing away small pieces of ice the platform 37 is not employed, but is left free, as shown in dotted lines, Fig. 2, the apparatus being held in position by the hook 24 of the

arm 21 and the operator standing on the foot-rest 17 then being able to push the blocks through the refrigerator-opening without difficulty. When handling large blocks of ice, however, the platform is engaged with the bracket 38 and the hook 24 disengaged from the eye 25, so as to permit of the swinging of the arm 21 in a horizontal plane. As shown in full lines in Fig. 2, when the hook 24 is disengaged from the eye 25 it hangs down out of the way of the eye 25, so as not to interfere with the movement of the arm 21, The ice being lifted to the platform, the attendant has but to slide the same into the opening of the refrigerator, as will be readily understood.

To fold up the apparatus, the platform is disengaged from the bracket 38 and the arm 21 swung over on its pivot, so as to fall back of and parallel to the standard. The clamp 14 is then unloosened and the upper member of the standard telescoped into the lower member, reducing the apparatus to a compact and conveniently-portable form. The crank 39 for operating the winch is removable and may also be used for loosening the nut securing the clamp 14.

I claim as my invention—

1. In a hoisting apparatus, in combination, a vertically-adjustable standard, an arm swiveled to the standard so as to be capable of movement in a horizontal plane, a platform pivoted to the standard, a winch carried by the standard, a sheave journaled on the arm, and a cable running from the winch over the sheave.

2. In a hoisting apparatus, in combination, a vertically-adjustable standard, an arm swiveled to the standard so as to be capable of movement in a horizontal plane and also pivoted to the standard so as to be adapted to be folded against the standard, a platform pivoted to the standard, a winch carried by the standard, a sheave journaled on the arm, and a cable running from the winch over the sheave.

3. In a hoisting apparatus, in combination, a vertically-adjustable standard, an extension swiveled in the upper end of the standard, an arm mounted on a horizontal pivot in the extension, a platform pivoted to the standard, a sheave journaled in the arm, a winch carried by the standard, and a cable running from the winch over the sheave.

4. In a hoisting apparatus, in combination, an extensible standard, a vertically and horizontally swinging arm secured to the standard, a stop for sustaining the arm in a horizontal position, a hook or catch at the end of the arm, a sheave carried by the arm, a winch mounted upon the standard, and a cable running from the winch over the sheave.

5. In a hoisting apparatus, in combination, an extensible standard, a swiveled extension of the standard, an arm pivoted to the extension, a supporting-stop for the arm, a sheave carried by the arm, a winch mounted on the standard, a cable running from the winch over the sheave, and a platform pivoted to the standard and having a grapple at its free end.

6. In a hoisting apparatus and in combination with a refrigerator, a vertically-adjustable standard comprising a lower tubular member and an upper member telescopically mounted in the lower member, a clamp for compressing the lower member about the upper member, the said clamp being provided with projecting foot-rests, an extension swiveled in the upper member, an arm mounted on a horizontal pivot in the extension so as to fold against the standard, a hook pivoted to the free end of the arm, an eye secured to the refrigerator with which the hook is adapted to engage, a platform pivoted to the standard and vertically adjustable thereon, a bracket secured to the refrigerator to support the platform, a winch carried by the lower member of the standard, a sheave journaled on the arm, and a cable passing from the winch over the sheave and carrying a pair of tongs at its end.

7. In a hoisting apparatus, in combination, a standard, a swinging arm secured to the standard, a vertically-adjustable platform pivoted to the standard, a winch mounted upon the standard, a sheave journaled on the arm, and a cable running from the winch over the sheave.

8. In a hoisting apparatus, in combination, a standard, a vertically-swinging arm pivoted to the standard whereby the arm may be swung over and folded against the standard, a stop for sustaining the arm in a horizontal position, a sheave carried by the arm, a winch mounted upon the standard, a cable running from the winch over the sheave, and an engaging hook or catch at the end of the arm.

9. In a hoisting apparatus, in combination, a standard, a horizontal pivot at the upper end of the standard, a sheave journaled on the pivot, an arm mounted on the same pivot and adapted to swing vertically over the pivot and be folded against the standard, a stop for sustaining the arm in a horizontal position, a second sheave pivoted on the arm, a winch mounted upon the standard, and a cable running from the winch over the sheaves.

10. In a hoisting apparatus, in combination, a standard, an arm, a horizontal pivot on the standard upon which the arm is mounted, a sheave also mounted on the pivot, means for sustaining the arm in a horizontal position, a winch mounted upon the standard, and a cable running from the winch over the sheave.

11. In a hoisting apparatus, in combination, an extensible standard socketed at its upper end, an extension rotatably mounted in the socket, a horizontal pivot on the extension, a sheave journaled on the pivot, an arm com-

prising a pair of bars mounted on the same pivot at opposite sides of the sheave, the said arm being adapted to swing vertically over the pivot and be folded against the standard, a stop for sustaining the arm in a horizontal position, a second sheave pivoted between the bars of the arm, a winch mounted upon the standard, and a cable running over the sheaves.

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