F. L. WEEDON & W. E. LEMON.

GRAPPLE.

APPLICATION FILED JAN. 22, 1917. RENEWED JAN. 3, 1918.

1,256,408. Patented Feb. 12, 1918.

Fig. 1.

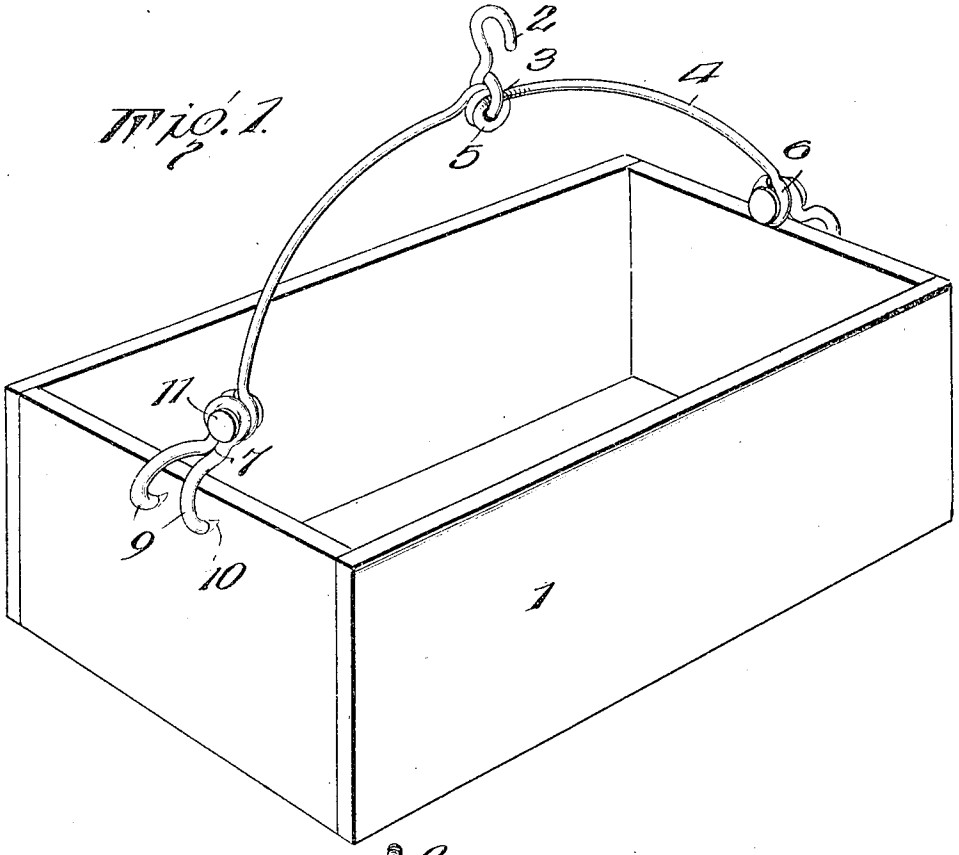
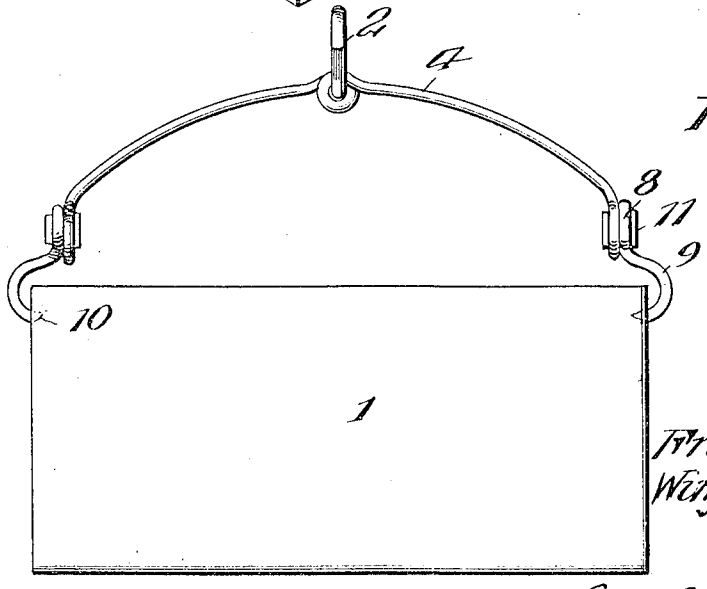


Fig. 2.



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FREDERICK L. WEEDON AND WINFRED E. LEMON, OF CORRALITOS, CALIFORNIA.

GRAPPLE.

1,256,408. Specification of Letters Patent. Patented Feb. 12, 1918.

Application filed January 22, 1917, Serial No. 143,620. Renewed January 3, 1918. Serial No. 210,233.

To all whom it may concern:

Be it known that we, FREDERICK L. WEEDON and WINFRED E. LEMON, citizens of the United States, and residents of Corralitos, in the county of Santa Cruz and State of California, have invented certain new and useful Improvements in Grapples, of which the following is a specification.

The present invention relates to improvements in grapples and especially to that kind of the class designated and intended for gripping, holding or engaging a box or other object to be raised, conveyed, or lowered.

The primary object of our invention is to provide a device of the class mentioned having means associated therewith to retain the object engaging fingers in the desired engaged position.

Another object of our invention is to provide means associated with a device of the class mentioned and permitting the device to be raised, lowered, or conveyed to attain a level position.

Other improvements and novel details in the construction and arrangement of the various parts of the apparatus may be brought out more in detail in the description to follow, which, for a clear understanding of the invention, should be considered in connection with the accompanying drawing, forming a part hereof, and wherein is disclosed, for the purpose of illustration, convenient and satisfactory embodiments of the invention. It is to be noted, in this connection, that minor changes in the construction and arrangement of the various parts may be made without departing from the spirit of the invention or the principle of operation of the various parts.

In the drawings:

Figure 1 is a perspective view of our invention in use, and

Fig. 2 is a side elevation of the same.

Referring now more particularly to the drawing wherein similar characters of reference designate like and corresponding parts throughout the various views, 1 indicates a box member which is the device to be raised in this particular instance. Of course we do not desire to limit ourselves to a box lifting device as any other object may be suitably raised, lowered, or conveyed.

In connection with our carrier we provide a hook member designated 2 having one end thereof coiled as at 3 for a purpose which will be hereinafter described. A substantially semi-circular arm member designated 4 is coiled as at 5 intermediate its end providing the necessary spring means. The said arm is pivotally connected to the hook member 2 and retained thereon by the coiled portion 3 thereof. The ends of the said arm 4 are coiled as at 6 to provide means for pivotally engaging the object engaging members 7.

The said object engaging members 7 comprise a body portion 8 having an opening therein centrally thereof to pivotally engage the spring arm 4. Curved divergent finger members 9 extend from said body portion and are adapted to engage the box or other object to be conveyed as indicated at 10. The means for pivotally engaging the object engaging members with the spring arm 4 in this instance is a rivet member 11 but it is of course obvious that any suitable connection means may be used.

In use when it is desired to raise the box member 1 the ends of the spring arm 4 are forced apart and the finger members 9 permitted to engage the sides thereof which when the arms 4 release will penetrate the same and secure a safe gripping. It is of course obvious that the pivot connections 11 provide means for the box 1 always attaining by gravity a perfect level. To release our grapple all that is necessary is to extend an outwardly exerting force on the arm 4 which will disengage the finger engaging members 9.

Having thus fully described our invention, what we claim as new and desire to secure by Letters Patent is:

1. In a device of the class described the combination of a spring arm having a terminal loop on each end disposed in a plane substantially at right angles to a vertical plane through said arm, object engaging members including loops adapted for alinement with the terminal loops of said arm, and rivet members positioned through said loops whereby the object engaging members are swingable on the longitudinal axis of the arm and are held fixedly engaged with said arm upon expansion or contraction of the same to clamp the members to the object engaged.

2. In a device of the character described the combination of a semi-circular spring arm member coiled intermediate its ends, the free ends of the arm member being coiled,

object engaging members comprising body portions having openings concentrically thereof, rivet members pivotally engaging the openings in the body portions and the coiled ends, curved divergent fingers extending from the body adapted to engage an object, and a hook member pivotally associated with the spring arm member for a purpose specified.

In testimony whereof, we affix our signatures hereto.

FREDERICK L. WEEDON.
WINFRED E. LEMON.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."