

Feb. 11, 1947.

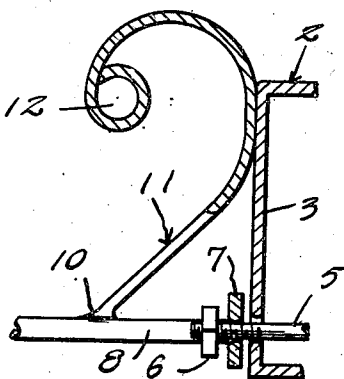
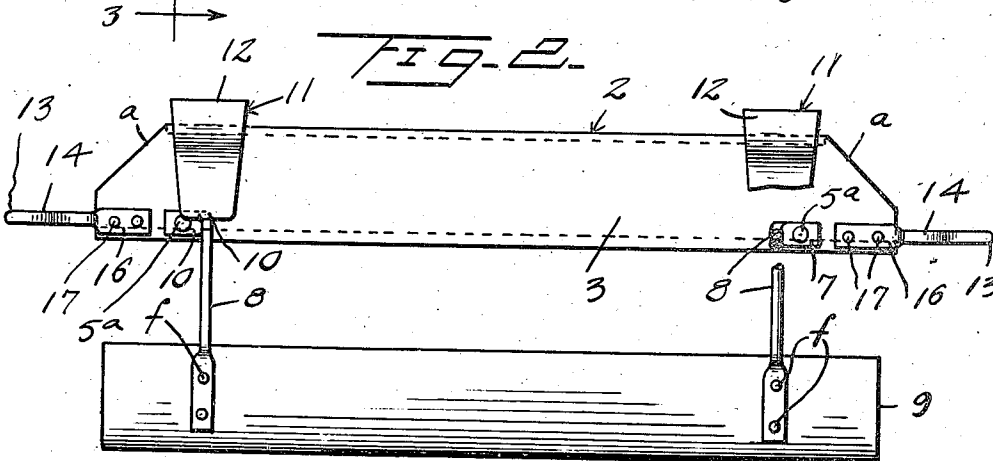
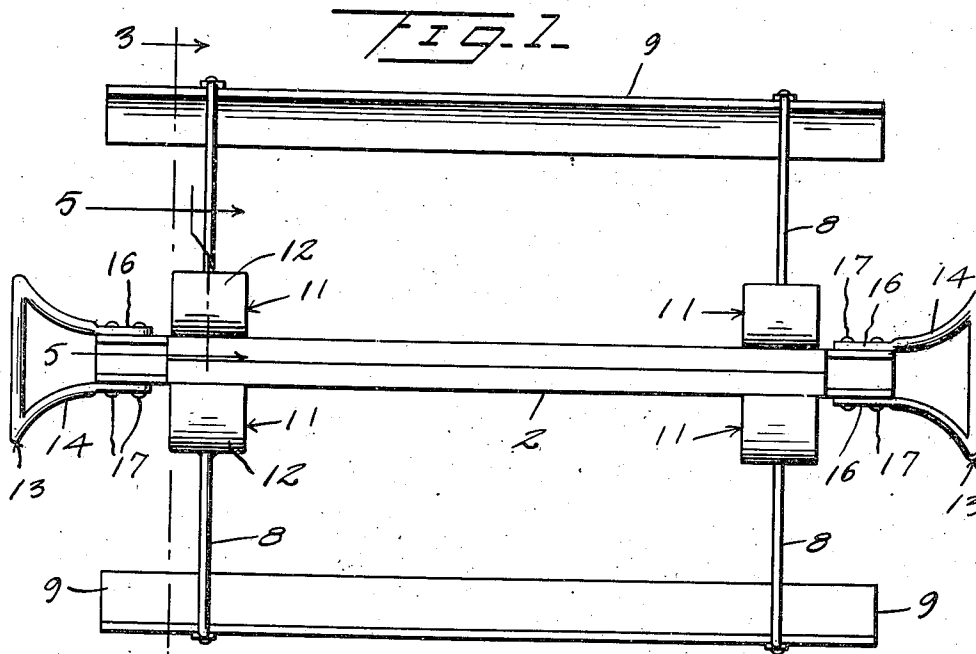
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2,415,547

GRAPPLE

Filed July 11, 1945

2 Sheets-Sheet 1



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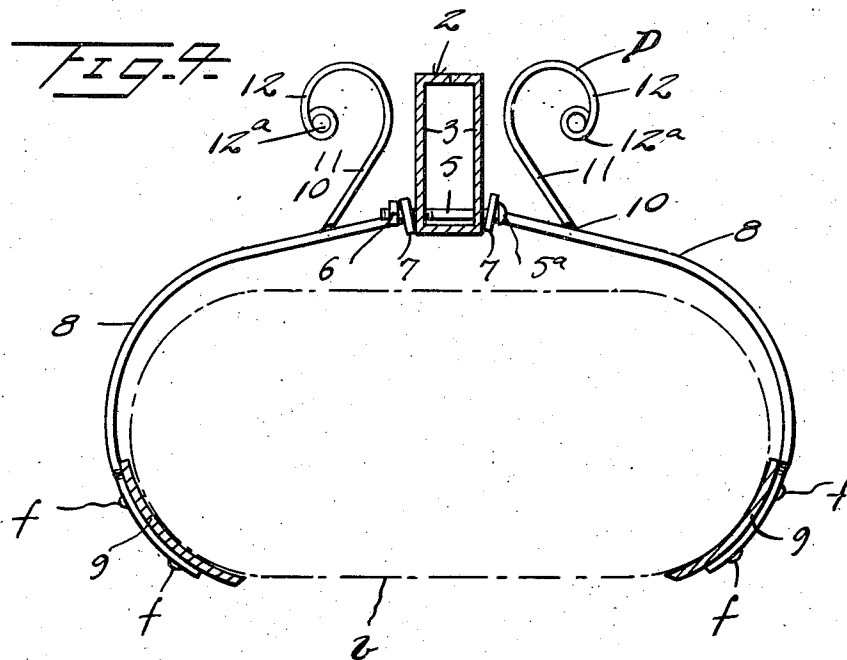
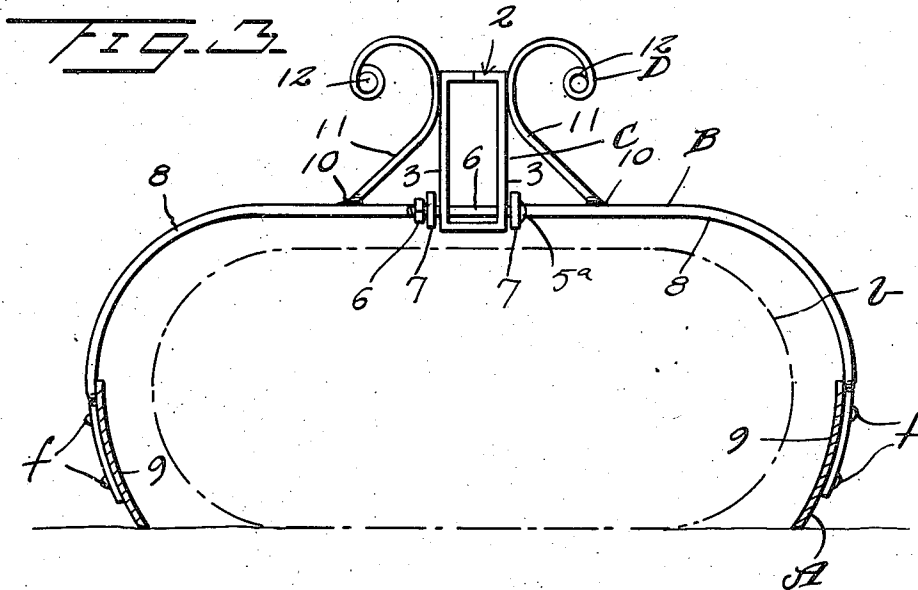
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2,415,547

GRAPPLE

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2 Sheets-Sheet 2



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UNITED STATES PATENT OFFICE

2,415,547

GRAPPLE

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3 Claims. (Cl. 294-16)

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This present invention relates to grapples and especially to grapples for lifting bags filled with cement or phosphate or other heavy material packed in paper bags.

The main object of the invention is the design of a grapple comprising a frame, load embracing and engaging members hinged to the frame and closing when a lifting effort is applied to the frames and also including manually operable means for opening the load engaging members.

It is a further object of the invention to construct a simple, sturdy load embracing lifting device at low cost.

A further object of the invention is the design of a bag engaging device whereby paper bags may be handled without tearing the paper, a frequent occurrence when such bags are lifted while embraced by human arms.

With these and other objects and advantages in view which will become apparent as the invention is understood, the same resides in the novel construction, combination and arrangement of parts described in detail in the following description and claims in the appended claims. The description should be read with the accompanying drawings in which:

Figure 1 is a top plan view of the preferred embodiment of my invention in position ready for grabbing an object;

Figure 2 is a side elevation in the same position;

Figure 3 is a transverse, vertical section on line 3-3 of Figure 1;

Figure 4 is a corresponding section of the device in grabbing position;

Figure 5 is an enlarged transverse and vertical detailed section on line 5-5 of Figure 1.

In the drawings wherein like numerals designate like parts, it can be seen, numeral 2 denotes an elongated bar of hollow and preferably rectangular cross-action and this may have its ends beveled as at *a*.

The end portions of the hollow bar 2 adjacent its bottom has openings in its side walls 3 and each pair of opposing openings has a bolt 5 disposed therethrough and through feet portions 7 of arms 8, the bolt 5 having a head 5*a* at one end and a nut 6 at its opposite end.

As is apparent in Figure 5, the feet 7 have enlarged openings or at least the wall of the openings is rounded as to permit a rocking motion of the foot on the corresponding end portion of the bolt 5.

Handles 11 project upwardly from the arms 8 at the upper end portions thereof, and are

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curved upwardly and downwardly as at 12 to terminate in rolled grip portions 12*a*. These handles 11*a* can be welded at 10 to the arms 8 or otherwise secured to the arms rigidly.

The lower end portions of the arms 8 at each side of the apparatus are connected by a sheet iron blade 9 secured in place by a rivet or like fastening means *f*.

Horizontally extending handles 14 project beyond the ends of the bar 2 and have attaching portions 16 which are welded to the end portions of the corresponding side walls 3 of the bar 2.

If a bag or other object, lying on the ground is to be lifted, the operator engages the handles 12, 12, thus expanding the blades 9, 9 as to the extent shown in Figure 3. The device is then lowered over the bag or the other object.

Now by lifting upwardly on the end handles 14, the blades 9, 9 will engage under the bag, embracing the same in such a manner that the same will sustain the load of the bag as the bag and the apparatus are carried by the handles 14.

While the foregoing description sets forth the invention in specific terms, it is to be understood that numerous changes in the shape, size, and materials may be resorted to without departing from the spirit scope of the invention as claimed hereinafter.

Having described the invention what it is claimed to do is:

1. A low lifting apparatus comprising an elongated member provided with handles at the ends thereof, a pair of parallelly elongated blades, arms attached to the blades, loose connections between the arms and the elongated member, said loose connections each consisting of a foot on the inner end of each of the arms having an opening therethrough and bolts disposed through the elongated member and loosely through the openings of the feet to loosely connect said feet and arms to the elongated member.

2. A low lifting apparatus comprising an elongated member provided with handles at the ends thereof, a pair of parallelly elongated blades, arms attached to the blades, loose connections between the arms and the elongated member, said loose connections each consisting of a foot on the inner end of each of the arms having an opening therethrough and bolts disposed through the elongated member and loosely through the openings of the feet to loosely connect said feet and arms to the elongated member, and upstanding handles on said arms.

3. A low lifting apparatus comprising an elongated member provided with handles at the ends

thereof, a pair of parallelly elongated blades, arms attached to the blades, loose connections between the arms and the elongated member, said loose connections each consisting of a foot on the inner end of each of the arms having an opening therethrough and bolts disposed through the elongated member and loosely through the openings of the feet to loosely connect said feet and arms to the elongated member, and up-
standing handles on said arms, said handles on the arms each consisting of an upwardly dis-
posed sheet metal element curved upwardly and rolled to provide a grasp portion.

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