No. 758,773. PATENTED MAY 3, 1904.

D. W. PARKER & C. E. GINTER.

LIFTING APPARATUS.

APPLICATION FILED SEPT. 19, 1903.

NO MODEL.

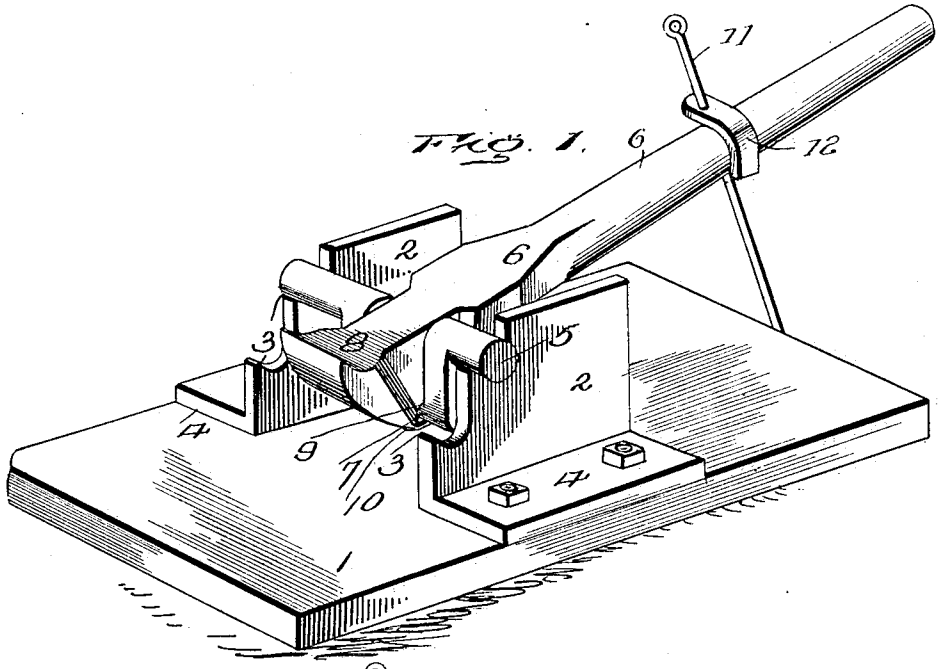

FIG. 1.

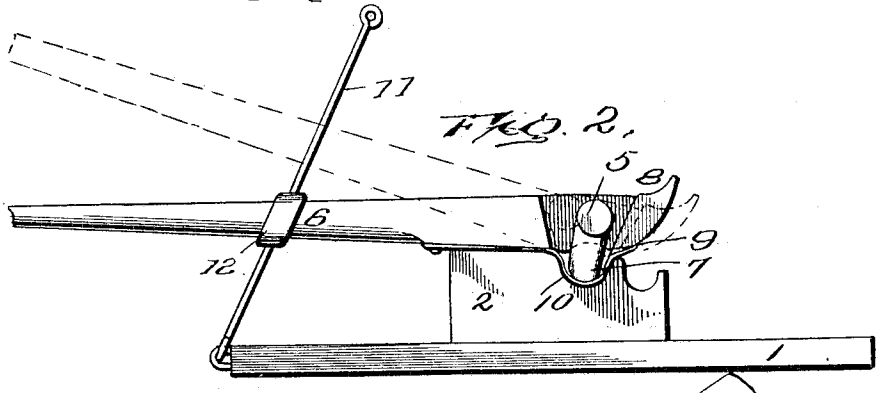

FIG. 2.

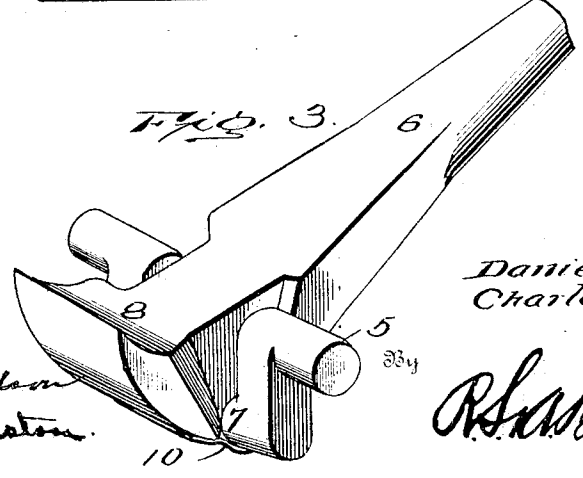

FIG. 3.

Witnesses
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No. 758,773. Patented May 3, 1904.

UNITED STATES PATENT OFFICE.

DANIEL W. PARKER AND CHARLES E. GINTER, OF COLO, IOWA.

LIFTING APPARATUS.

SPECIFICATION forming part of Letters Patent No. 758,773, dated May 3, 1904.

Application filed September 19, 1903. Serial No. 173,871. (No model.)

To all whom it may concern:

Be it known that we, DANIEL W. PARKER and CHARLES E. GINTER, citizens of the United States, residing at Colo, in the county of Story and State of Iowa, have invented certain new and useful Improvements in Lifting Apparatus, of which the following is a specification.

This invention relates to that class of devices commonly used for lifting heavy objects of the type embodying a suitable support having pivotally mounted thereon an operating-lever for lifting the bodies aforesaid.

The object of this invention is to produce a structure of the above character having an operating-lever peculiarly mounted so as to afford a maximum degree of leverage, said mounting also preventing slipping of the body which is being elevated by the carrying end of the lever.

For a full description of the invention and the merits thereof and also to acquire a knowledge of the details of construction of the means for effecting the result reference is to be had to the following description and drawings hereto attached.

While the essential and characteristic features of the invention are susceptible of modification, still the preferred embodiment of the invention is illustrated in the accompanying drawings, in which—

Figure 1 is a perspective view of our invention, parts being arranged in operative relation. Fig. 2 is a side elevation of the invention. Fig. 3 is a detail perspective view of the operating-lever and the crank-shaft to which the same is pivoted.

Corresponding and like parts are referred to in the following description and indicated in all the views of the drawings by the same reference characters.

The invention consists, essentially, of a base 1 of suitable size, depending upon the character of the work for which it is intended to use the apparatus. Supports 2 extend upwardly from the base 1 and are provided with stepped bearings 3. The supports 2 are removably secured to the base 1, being provided at their lower ends with angular extensions 4, which are secured by fastening means, such as bolts or the like, to the base 1. A crank-shaft 5 is mounted in corresponding bearings of the supports 2, being adapted to be adjusted in its elevation by the provision of the stepped arrangement of bearings 3. The operating-lever or lifting element (designated 6) is pivoted to the crank-arm 7 of the crank-shaft 5, being supported by the said crank-arm. The lever 6 is provided with the carrying-arm 8, upon which the load or object to be lifted is disposed in the operation of raising the same. The lever 6 is cut away upon its under side, as shown at 9, and a plate 10, secured to the under side of the lever, holds the cut-away portion 9 thereof in a position receiving the crank-arm of the shaft 5. The independent pivotal mountings of the lever and crank-shaft adapt these respective elements for an independent movement relative to each other, as will be readily comprehended. The crank-arm normally occupies the lowermost position, thereby increasing the leverage-power of the operating member 6. In other positions of the lever 6 the crank-shaft is actuated so as to cause the crank-arm to adjust itself relative to the lever.

In order that the load being elevated may be supported fixedly at a certain elevation, an arm 11 is pivoted to the rear portion of the base 1 and is provided with an engaging element 12 of approximately hook form, which is adapted to coöperate with the lever-arm 6 to hold the same in an ascertained position. The element 12 is slidably and rotatably mounted upon the arm 11 to permit engagement with the lever 6 at different elevations. An opening is provided in the element 12, which receives the arm 11, and pressure against the element 12 causes same to frictionally bind against the arm 11, this action fixing its position.

Having thus described the invention, what is claimed as new is—

1. In an apparatus of the class described and in combination with a support, a crank-shaft mounted upon the said support, and a lifting-lever pivoted to the crank-arm of the said shaft.

2. In a lifting apparatus, the combination with a support, a crank-shaft adapted to be mounted upon the said support at different

elevations, and a lifting-lever pivoted to the said crank-shaft.

3. In a lifting apparatus, the combination with a support, stepped bearings provided upon the said support, a crank-shaft adapted to be mounted in corresponding bearings of the support, and a lifting-lever comprising a lever-arm having a carrying-arm pivotally secured to the crank-arm of the said shaft.

4. In a lifting apparatus, the combination with a support, a crank-shaft mounted upon the said support, a lifting-lever pivoted to the crank-arm of the said shaft, and means coöperating with the said lever to fix the position of the same at an ascertained adjustment.

5. In a lifting apparatus, the combination with a support, a crank-shaft mounted upon the said support, a lifting-lever pivoted to the crank-arm of the shaft, an arm pivoted adjacent the support, and an engaging element carried by the said arm for coöperation with the lifting-lever to fix the same at an ascertained adjustment.

6. In a lifting apparatus, the combination with a support, a crank-shaft mounted upon the said support, a lifting-lever pivoted to the crank-arm of the crank-shaft, an arm pivoted adjacent the support aforesaid, and an engaging element slidably and rotatably mounted upon the aforesaid arm and adapted for engagement with the lever aforesaid to fix the adjustment of the same at different elevations.

In testimony whereof we affix our signatures in presence of two witnesses.

DANIEL W. PARKER. [L. S.]
CHARLES E. GINTER. [L. S.]

Witnesses:
MANLEY KELLEY,
LILLIAS M. KELLEY.