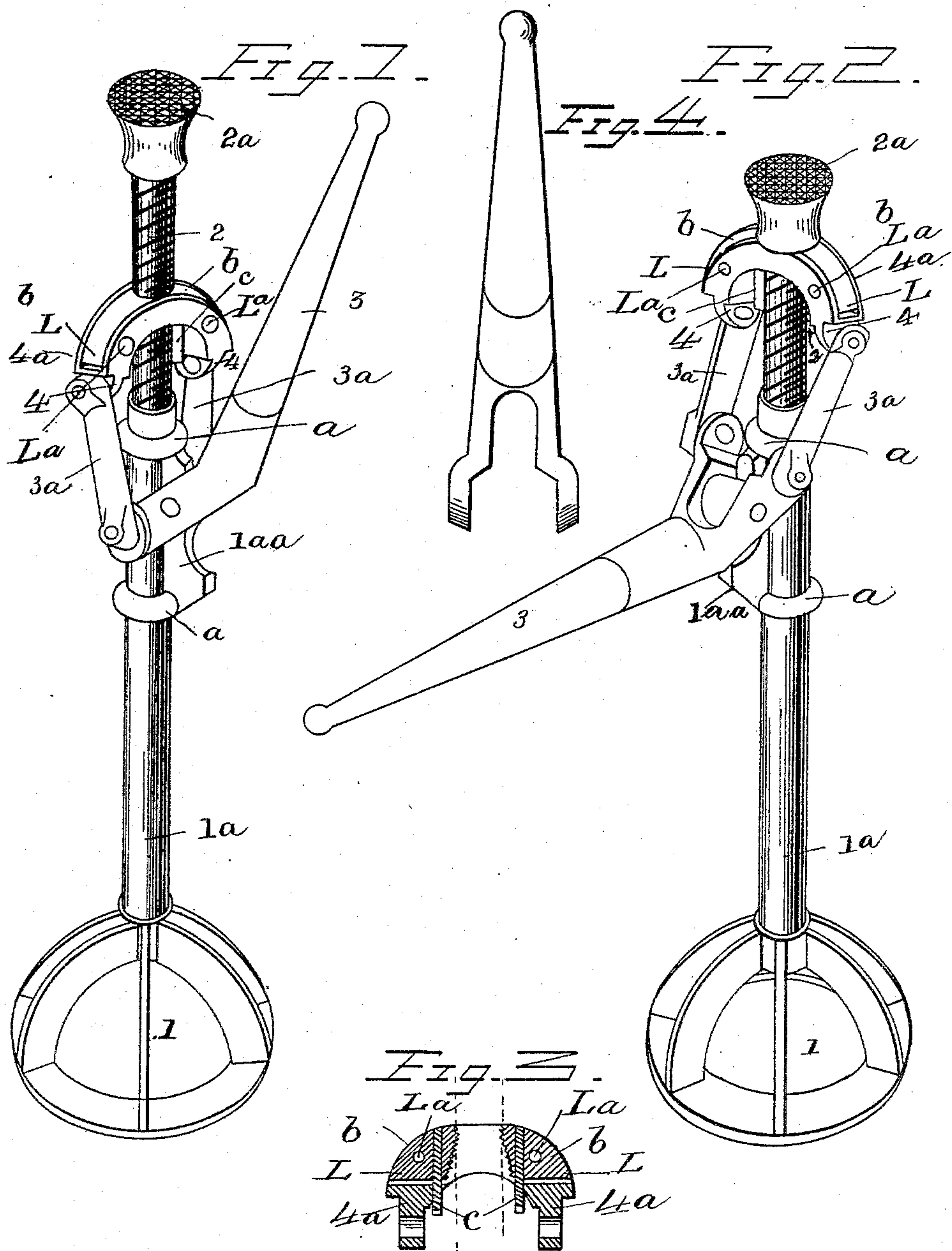


(No Model.)

L. MEEKER.
LIFTING JACK.

No. 411,897.

Patented Oct. 1, 1889.



WITNESSES
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LIFTING-JACK.

SPECIFICATION forming part of Letters Patent No. 411,897, dated October 1, 1889.

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To all whom it may concern:

Be it known that I, LORENZO MEEKER, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Lifting-Jacks; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it ap-
10 pertains to make and use the same.

My invention relates to certain novel features in the construction and arrangement of the parts necessary to construct a lifting implement, the object of which is to provide a
15 simple and effective means for hoisting, and this object I attain by means of the mechanism hereinafter described, and illustrated in the accompanying drawings, in which similar letters of reference refer to corresponding
20 parts in all the views.

Figure 1 is a perspective view of my invention, showing the lever raised. Fig. 2 is the same view with the lever depressed and shows the cylindrical screw-threaded shaft partly
25 withdrawn from the tubular standard. Fig. 3 is a perpendicular sectional view showing a transverse section of the dogs constituting the clutch. Fig. 4 is a perspective view showing the bifurcous lever detached.

30 Referring to the various parts of my invention, 1 indicates the base, securely attached to the center of which is the perpendicular tubular standard 1^a, which is intended to snugly, though freely, receive the screw-threaded cylindrical shaft 2. Standard 1^a is provided
35 near its top with the lateral projection 1^{aa}, the object of which is to provide a means for fulcruming the bifurcous lever 3. Lateral projection 1^{aa}, in addition to being secured to the side of the tubular shaft, is further attached thereto by collars *a a*, rigidly joined to the upper and lower end of said lateral projection and arranged to encircle and rigidly
40 adhere to said tubular shaft. Lever 3 is fulcrumed to lateral projection 1^{aa} by having said projection enter between the separated ends thereof, and pivotally connected near the fork. To the outside of each of the free
45 ends of the lever I pivotally attach arms 3^a, while to the upper ends of said arms are se-

cured in like manner the downwardly-reaching ends of clutch 4. This clutch consists of the frame or casing proper 4^a, on the inner side of which are pivotally secured the dogs *b b*, arranged upon opposite sides of said casing,
55 and provided on their inner faces with concave screw-threaded surfaces arranged to engage with the screw-threads upon the cylindrical shaft 2.

The construction of clutch 4 and the combination of its various parts constitute, mainly, the features of novelty of my invention; and I desire to further explain said construction by calling attention to Fig. 3 of the drawings, wherein it can be seen that when the
60 dogs are depressed so that their upper surfaces will be on a level with the frame or casing 4^a a top view of them will show a somewhat elliptical hole between them, and it will be understood that as their inner ends are
70 thus depressed they will automatically impinge or grasp securely the cylindrical shaft, when the load is upon the same. It will be further observed that the construction and arrangement of said dogs are such that a
75 pressure upon their outer ends will elevate their inner ends, thereby enlarging the hole between them, when the screw-threaded shaft 2 can be readily withdrawn therefrom or entered therein, and that when such pressure
80 on their outer ends is removed they will, by the weight of their inner ends, automatically close around said shaft and securely grasp the same upon its coinciding screw-threaded surface, securely holding the same at the point
85 grasped. In order to make this more clearly understood, I will say that by pressing by hand upon the lower and outer ends of the dogs at that point indicated by L such pressure will cause the upper and inner ends of
90 said dogs to be withdrawn from contact with the cylindrical shaft, for the reason that the lower part of the faces of said dogs does not come in contact with said shaft as they slant outward and downward. It will be seen that
95 the rivets L^a suspend the dogs slightly above the bottom of the casing, thus enabling such dogs to have a pivotal movement on said rivets, and as the upper part of the faces of the dogs is the only point thereof
100

coming in contact with the cylindrical shaft (see Fig. 3) it will be seen that a pressure upon that part of the dogs indicated by L will cause such part of the faces thereof to withdraw from contact with the shaft, thereby enlarging the hole between the faces of the dogs, so that the shaft may be readily withdrawn or entered. The screw-threads on shaft 2 are merely for the purpose of enabling the threaded faces of the dogs to readily grasp and hold such shaft, though, if preferred, cylindrical grooves may be placed on such shaft instead of screw-threads. The screw-threaded shaft 2 is provided upon its upper end with head 2^a, the upper surface of which is roughened or corrugated, so as to readily adhere to the object lifted. Extending from the lower side of the inner end of the dogs are clamps c c, the object of which is to prevent the inner ends of the dogs from rising higher than is necessary to enable the free entrance of the shaft 2 between them.

In operation the screw-threaded shaft 2 is pressed downward into the tubular standard 1^a until the lower side of head 2^a rests upon the clutch. The device is then placed under the object to be lifted, so that the same will rest upon said head, when by depressing the lever the weight is raised, and after such weight is properly secured at this height by placing a suitable support or chock under the same, when a new purchase can be taken, the lever is elevated, thereby depressing the head to the point of starting. The shaft is then

drawn upward by the hand from out of the tubular standard until the head again rests against the weight, when by depressing the lever the weight is again raised, where it may be again secured, and this operation may be repeated until the shaft is almost withdrawn from the standard.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. A lifting-jack consisting of the base A, to the center of the upper surface of which is secured the upright tubular standard 1^a, having the lateral projection 1^{aa}, such projection being secured thereon by collars a a, the bifurcous lever 3, to the ends of which are pivotally connected arms 3^a, which in like manner are joined to the clutch, the clutch 4, consisting of the frame 4^a and dogs b b, as shown, and the screw-threaded cylindrical shaft arranged to freely enter the tubular standard and to be secured at any point by the clutch and having on its upper end head 2^a.

2. The combination of the tubular standard 1^a, the base 1, the lateral projection 1^{aa}, collars a a, bifurcous lever 3, arms 3^a, clutch 4, and screw-threaded shaft 2, all as described, and for the purpose named.

In testimony whereof I affix my signature in presence of two witnesses.

LORENZO MEEKER.

Witnesses:

D. T. DUNCOMBE,
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