(No Model.)

G. H. JANTZ.

LEVER.

No. 445,558. Patented Feb. 3, 1891.

FIG. 1.

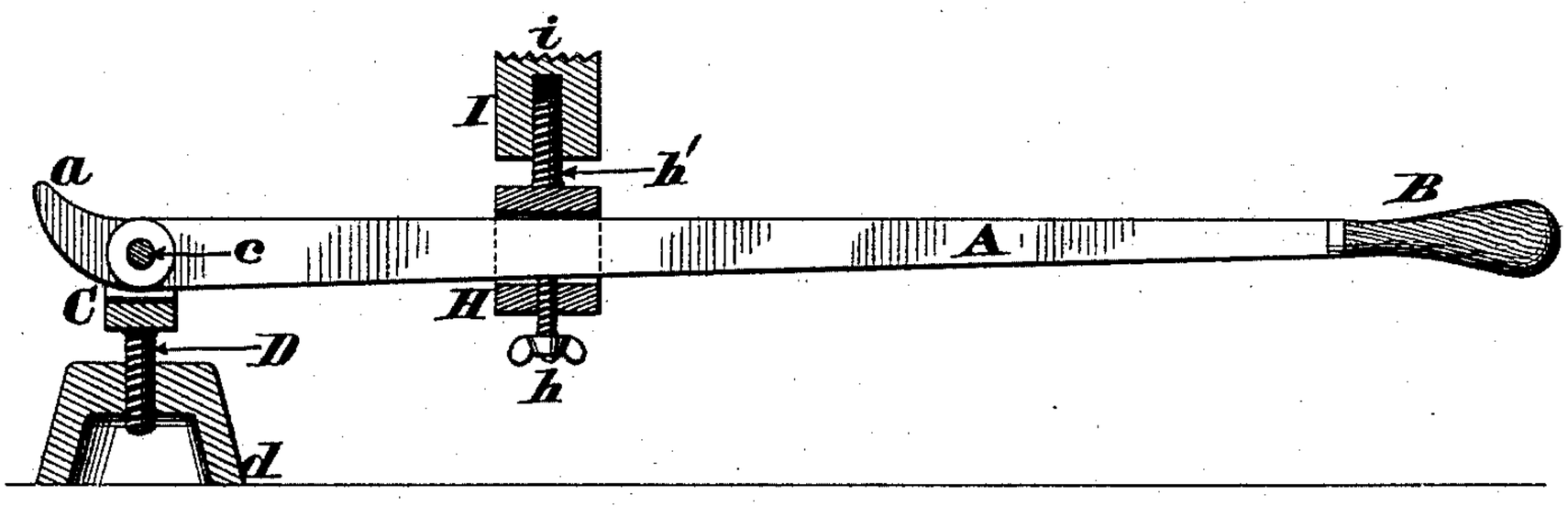

FIG. 2.

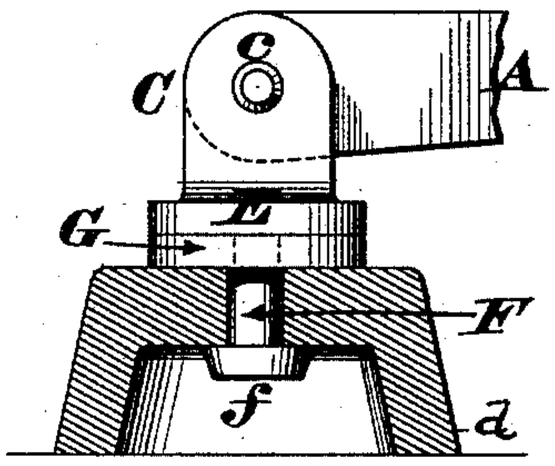

FIG. 3.

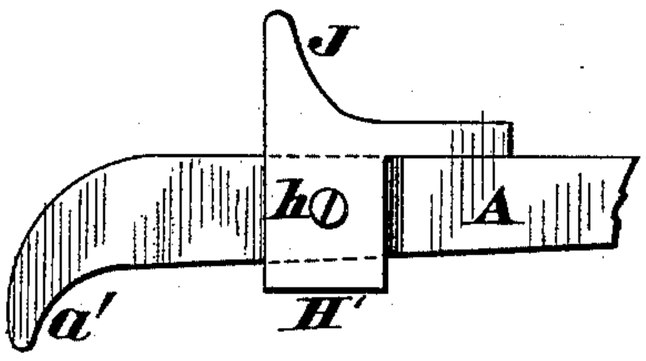

FIG. 4.

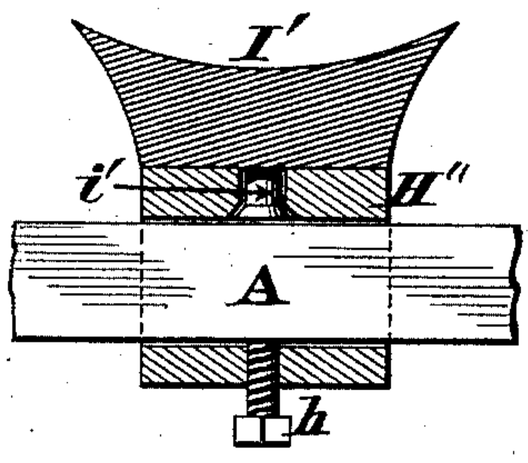

FIG. 5.

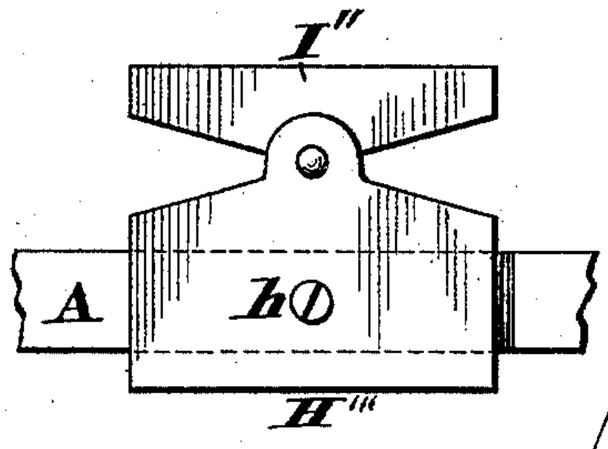

FIG. 6.

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UNITED STATES PATENT OFFICE.

GUSTAVE H. JANTZ, OF CINCINNATI, OHIO.

LEVER.

SPECIFICATION forming part of Letters Patent No. 445,558, dated February 3, 1891.

Application filed October 20, 1890. Serial No. 368,633. (No model.)

To all whom it may concern:

Be it known that I, GUSTAVE H. JANTZ, a citizen of the United States, residing at Cincinnati, in the county of Hamilton and State of Ohio, have invented certain new and useful Improvements in Levers; and I do hereby declare the following to be a full, clear, and exact description of the invention, reference being had to the annexed drawings, which form part of this specification.

This invention relates to those mechanical appliances commonly known as levers of the second class; and the first part of my improvements consists in providing such levers with a longitudinally-shiftable bearing that rests against the object to be moved, and said bearing has a clamp-screw or equivalent fastener wherewith it is retained at any specific adjustment, as hereinafter more fully described.

The second part of my improvements consists in rendering this shiftable bearing vertically adjustable, so as to be readily adapted to the object to be moved, as hereinafter more fully described.

The third part of my improvements consists in coupling the lever to a swivel-fulcrum, so as to facilitate handling the object to be moved, as hereinafter more fully described.

The fourth part of my improvements consists in rendering the swivel-fulcrum vertically adjustable, so as to adapt the lever to a greater variety of uses, as hereinafter more fully described.

In the annexed drawings, Figure 1 is a sectionized side elevation of a lever provided with a longitudinally and vertically adjustable swivel-bearing and a vertically-adjustable swivel-fulcrum. Fig. 2 is an enlarged vertical section of a modified form of the swivel-fulcrum. Fig. 3 is an enlarged side elevation of a modified form of the longitudinally-shiftable bearing. Fig. 4 is a vertical section of a modified form of this bearing. Fig. 5 is a side elevation of another form of this bearing. Fig. 6 shows the manner of using another modified form of my invention.

A represents any suitable form of bar or other rigid appliance capable of being used as a lever for lifting heavy weights or other objects, and B is a handle that may be attached to the free end of this lever. The fulcrum end of this lever may be bent upward, as represented at *a* in Fig. 1, or downward, as seen at *a'* in Fig. 3, to afford a very secure hold on rounded objects; but for many purposes it is preferred to couple said lever to a special fulcrum, the form generally preferred being seen in Fig. 1. Here the lever is coupled at *c* between a pair of ears C, the latter being provided with a screw-threaded shank D, that engages with a foot *d*, by which arrangement the fulcrum end of said lever can be adjusted vertically and turned around either to the right or left; but in Fig. 2 the ears C project from a disk-shaped base E, and have a central spindle F, whose lower end is headed up at *f* for the purpose of coupling said ears to the foot *d*.

G is a washer that may be interposed between the foot *d* and base E to diminish friction. This construction, like that seen in the preceding illustration, affords a swivel-fulcrum for the lever, but has no provision for vertical adjustment.

H in Fig. 1 is a slide capable of being shifted along the lever A and retained at any specific adjustment by a clamp-screw *h* or equivalent device, the upper side of said slide being furnished with a screw-threaded shank *h'*, that engages with a bearing I. *i* is a serrated or roughened upper surface of this bearing. It is apparent that this bearing I can be shifted longitudinally of lever A, so as to come directly under the object to be lifted, and then by adjusting the bearing I vertically and bringing it in contact with said object the latter will be lifted the instant said lever is operated. A modified form of the bearing is seen in Fig. 3, the slide H' being used alone, and having a spur J adapted to act against certain kinds of rounded objects. This illustration shows the clamp screw or bolt *h* on the side of said slide instead of under it. A more elaborate form of bearing is seen in Fig. 4, where it takes the shape of a saddle I', being concave at top and having at bottom a headed shank *i'*, wherewith said saddle is swiveled to the slide H'', thus enabling said bearing to revolve upon said slide. Fig. 5 shows the slide H''' with a rocking bearing I'' jointed thereto, which bearing will readily ad-

just itself to any inclined surface on the object to be lifted.

In the modification seen in Fig. 6 the lever is forked at its end to afford journal-bearings for a roller-fulcrum K, and the shiftable slide H'''' is engaged under a heavy object, such as a book-case or wardrobe L. By canting the case back and permitting the lever to bear against its front the case can be held in this inclined position, if desired, or it can be rolled along on the small wheel K. It is preferred to bend the handle of this form of lever, as seen at *b*.

From the above description it is apparent that all the modifications show the leading idea of the invention—that is to say, they include a bearing capable of being slid longitudinally of the lever and then fastened at whatever point will afford the best purchase against the object to be moved. It is also apparent that the swivel-fulcrum enables the lever to be readily swung around either to the right or left for the purpose of shifting the position of the object after it has been raised off the floor or other support. Finally, all the uses to which such an appliance is capable cannot be specified; but it is evident that the lever will be very serviceable in stores, factories, and for various domestic purposes.

I claim as my invention—

1. A lever of the second class provided with a longitudinally-shiftable weight-bearing having a device for securing it in position, substantially as herein described.

2. A lever of the second class provided with a longitudinally-shiftable weight and vertically-adjustable bearing and a device for securing it in position, substantially as herein described.

3. A lever of the second class provided with a longitudinally-shiftable weight-bearing and coupled to a vertically-adjustable swivel-fulcrum, substantially as herein described.

4. The combination of second-class lever A, slide H, clamp-screw *h*, screw-threaded shank *h'*, and bearing I, engaged with said shank, for the purpose described.

5. The combination of second-class lever A, pivot *c*, ears C, screw-threaded shank D, and foot *d*, engaged with said shank, for the purpose described.

6. The combination of second-class lever A, slide H, clamp-screw *h*, screw-threaded shank *h'*, bearing I, pivot *c*, ears C, screw-threaded shank D, and foot *d*, all as herein described, and for the purpose stated.

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

GUSTAVE H. JANTZ.

Witnesses:

JAMES H. LAYMAN,

SAMUEL M. QUINN.