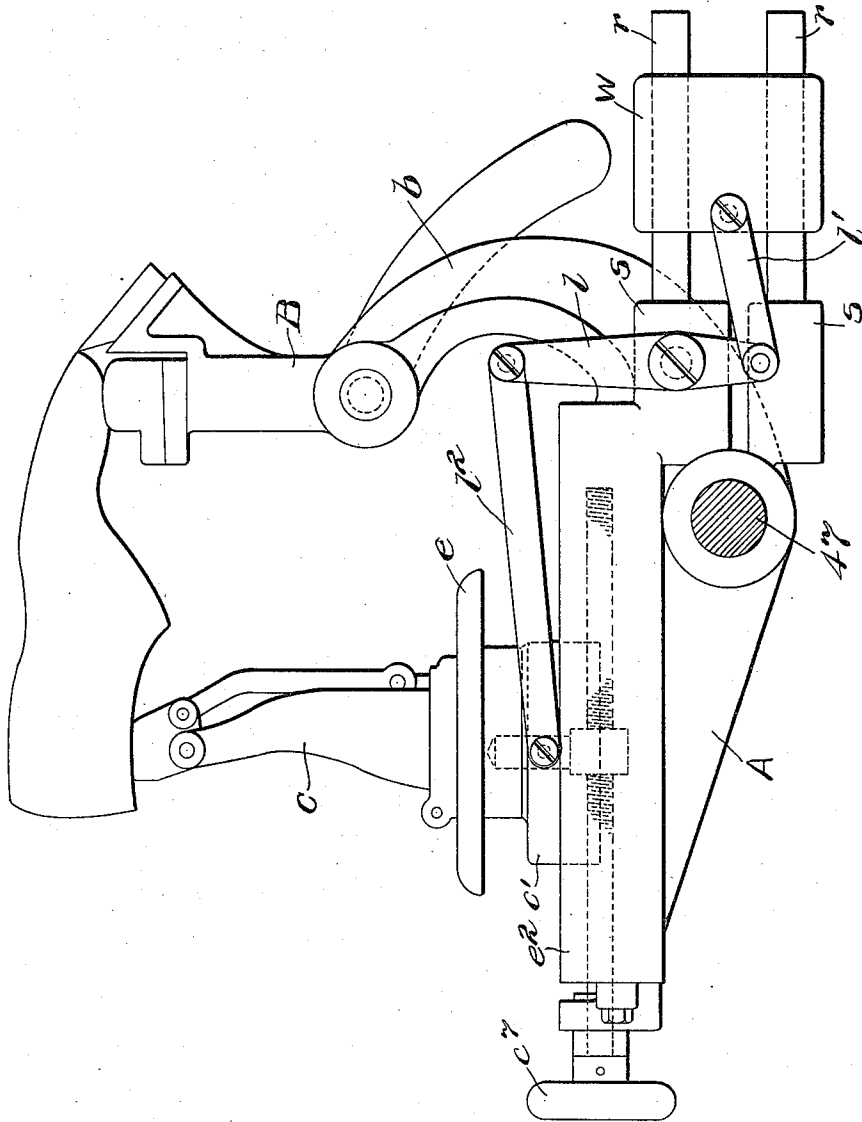


E. E. WINKLEY.
SHOE JACK.
APPLICATION FILED JULY 18, 1910.

1,015,112.

Patented Jan. 16, 1912.



Witnesses:
Roswell F. Hatch.
Warren G. Ogden.

Inventor:
Erastus E. Winkley
by his Attorneys
Phillips Van Coven & Fish

UNITED STATES PATENT OFFICE.

ERASTUS EDWIN WINKLEY, OF LYNN, MASSACHUSETTS, ASSIGNOR TO UNITED SHOE MACHINERY COMPANY, OF PATERSON, NEW JERSEY, A CORPORATION OF NEW JERSEY.

SHOE-JACK.

1,015,112.

Specification of Letters Patent.

Patented Jan. 16, 1912.

Application filed July 18, 1910. Serial No. 572,412.

To all whom it may concern:

Be it known that I, ERASTUS E. WINKLEY, a citizen of the United States, residing at Lynn, in the county of Essex and State of Massachusetts, have invented certain new and useful Improvements in Shoe-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 appertains to make and use the same.

This invention relates generally to improvements in jacks for holding boots and shoes while being operated upon, being especially adapted for use on a sole leveling machine although the jack may be used for any other purpose.

The jack of the present invention is shown as adapted to be used on a sole leveling machine of the type illustrated in the United States patent to Winkley and Phillips, No. 540,223, May 28, 1895, as improved by the machine of the patent to the present inventor No. 848,713, April 2, 1907. In the class of sole leveling machines, illustrated by these patents, the shoe is placed upon the jack of the machine while on its last and it is of the greatest importance that such machines be provided with a jack which can readily be adjusted for shoes of any size or style. To this end such jacks ordinarily are provided with a toe support and a heel support, one of which is made adjustable toward the other, the toe support being adapted to receive the toe of the last having a boot or shoe thereon and the heel support having means for engaging the heel end of the last. In the type of leveling machines shown in the patents referred to, the jack is pivotally mounted and a shoe is placed thereon while the jack is in its inoperative position, that is, turned outward about its pivot to the front of the machine. After the shoe to be operated upon has been jacked, the jack is lifted by the operative about its pivot into operating position and the jack is then latched in place and held from dropping back into its inoperative position during the leveling operation. At the end of the leveling operation the latch is automatically

released and the jack drops outwardly by force of gravity. As these jacks, as at present constructed, are quite heavy, it requires some exertion on the part of the operative and also entails somewhat of a strain upon him to lift the jack as many times as is necessary during his day's work in operating the machine. It has also been found that when the latch which holds the jack in its operative position is released and the jack is allowed to drop outwardly by gravity, its weight causes it to fall with a considerable amount of speed and force which sometimes is injurious not only to the jack itself but to the entire machine.

The object of the present invention is to provide a jack so balanced that it will relieve the strain upon the operative when lifting it into operative position and which furthermore will provide for a gradual and easy return of the jack to its inoperative position after the leveling operation has been completed. To the accomplishment of these objects, the present invention contemplates the provision, in a jack of the character described, of means for effecting a substantially even distribution of weight about the pivotal point of the jack. Such an even distribution is preferably obtained by the provision of a counter-balance weight at the side of the pivot opposed to the jack. It is obvious that as the toe and heel supports are adjusted relatively to each other for different sizes of shoes, the center of gravity of the jack will be altered and, therefore, in the present invention a preferred arrangement is to connect the counter-balance weight with the adjustable support in such a manner that the weight is caused to move oppositely to the direction of movement of the adjustable support whenever an adjustment is made. In the preferred embodiment of the invention, the toe support is stationary, the heel support being movable toward and from it, and suitable connections with the weight are provided whereby when the heel support is moved toward the toe support and pivotal point, for smaller shoes, bringing the center of gravity nearer to the pivotal point of the jack, the counter-balance

weight is moved inward, while, when the heel support is moved away from the toe support and the pivotal point, for larger shoes, the counter-balance weight is also moved away from the pivotal point, or outward.

The preferred form of the invention is shown as applied to a jack of the type illustrated in the United States Letters Patent to William C. Meyer No. 677,550, July 2, 1901, the accompanying drawing showing the invention in side elevation.

In the embodiment of the invention illustrated in the drawing, the jack is pivotally mounted upon a transverse stud 47 which is the same as the stud bearing the same reference character in the Patent No. 540,223, hereinbefore referred to. The jack comprises a base portion A freely pivoted on the stud 47 having rising therefrom a toe support, or post, generally designated by B and a heel support, or post, generally designated by C. These supports are similar in their details of construction to the toe and heel supports illustrated in the Patent No. 677,550, hereinbefore referred to, with the exception that the supporting shank of the toe support is curved outwardly at *b* to make room for the hand nut *e* of the heel support when said heel support is placed very close to the toe support to adapt the jack for "cack" work. While this form and arrangement of the parts form no part of the present invention, it is illustrated and described so as to afford a full disclosure of the jack as it is built for use in connection with the present invention. The heel support C is mounted upon a sliding block *c'* which is adjusted toward and from the toe support in a dove-tail guideway *e*² by means of a hand wheel *c'*, all as in said Patent No. 677,550 hereinbefore referred to.

At the forward side of the pivot 47 the supporting frame A is provided with a pair of sockets *s* within which are secured a pair of forwardly projecting guide rods *r* on which a counter-balance weight W is slidably mounted. Between the heel support and the counter-balance weight there is pivoted to the supporting frame A a lever *l* of the first class, the lower end of which is connected by means of a link *l'* to the counter weight and the upper end of which is connected by a link *l*² to the sliding block *c'* which carries the heel support.

It is obvious that with a construction such as has been described, the counter weight W will balance the weight of the jack which is upon the opposite side of the pivotal point and when properly positioned will, to a considerable extent, lighten the work of the operative in moving the jack into operating position. It is obvious also that even with substantially all of the weight of the jack at

one side of the pivot, if counter-balanced in the manner shown, the jack will not drop forward with the amount of speed and force which it otherwise would if its weight were not properly counter-balanced. Furthermore with the arrangement shown wherein the counter-balance weight is movable and its position is controlled by a movement of the adjustable support, any change in the position of the center of gravity of the jack, by reason of a movement of the adjustable support, will immediately be compensated for by a movement in the proper direction of the counter-balance weight for the reason that the movements of the adjustable support and counter-balance are both controlled by a single operating means.

Having described the invention and its mode of operation, what is claimed as new, is:—

1. A last supporting jack, having, in combination, a freely pivoted base portion having rising directly therefrom suitable heel and toe supports, one of said supports being adjustable relatively to the other, and means controlled by the movement of the adjustable support for effecting a substantially even distribution of the weight about the pivotal point for all positions of adjustment of said supports, substantially as described.

2. A pivotally mounted last supporting jack, having, in combination, heel and toe supports, said heel support being at one side of the pivotal point and adjustable toward and from the toe support, a movable counter-balance weight at the other side of the pivotal point, and suitable connections between the heel support and weight to cause the weight to move oppositely to the direction of movement of the heel support whenever it is adjusted, substantially as described.

3. A pivotally mounted last supporting jack, having, in combination, heel and toe supports, one of said supports being adjustable relatively to the other, a movable counter-balance weight, a lever of the first class between said adjustable support and weight, and separate links connecting one end of the lever to the support and its other end to the weight, substantially as described.

4. A pivotally mounted last supporting jack, having, in combination, a toe post, a heel post adjustable toward and from the toe post, a counter-balance weight also adjustable toward and from the toe post, and a single means for adjusting said heel post and weight both toward and away from said toe post, substantially as described.

5. A last supporting jack, having, in combination, a base portion freely pivoted on a transverse axis and having mounted directly thereon means to accommodate shoes of varying sizes, and means to counter-balance

the weight of the jack about the pivotal point whatever the size of shoe on the jack, substantially as described.

6. A pivotally mounted last supporting
5 jack, having, in combination, adjustable shoe supporting means, a counter-balance weight, and means for shifting the position

of the weight relative to the pivotal point in response to an adjustment of the shoe supporting means, substantially as described.

ERASTUS EDWIN WINKLEY.

Witnesses:

WARREN G. OGDEN,

RUTH A. SIMONDS.

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