

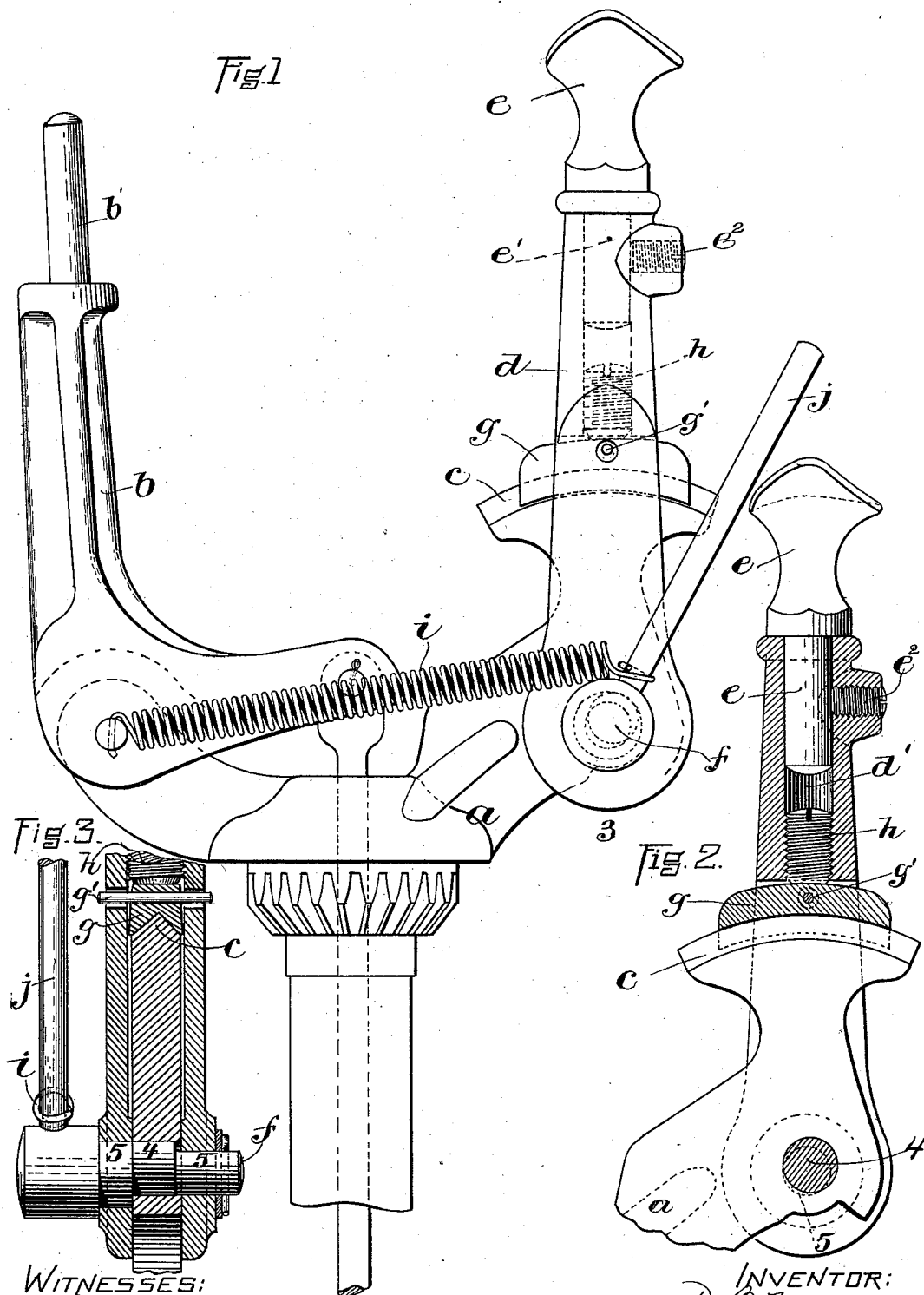
(No Model.)

D. B. NYE.  
LAST SUPPORTING JACK.

No. 540,869.

Patented June 11, 1895.

Fig. 1



WITNESSES:  
J. D. Harrison  
Rollin Abell.

INVENTOR:  
D. B. Nye  
by Knight, Brown & Dunsen

# UNITED STATES PATENT OFFICE.

DAVID B. NYE, OF CAMBRIDGE, ASSIGNOR TO THE BOSTON LASTING MACHINE COMPANY, OF BOSTON, MASSACHUSETTS.

## LAST-SUPPORTING JACK.

SPECIFICATION forming part of Letters Patent No. 540,869, dated June 11, 1895.

Application filed December 10, 1894. Serial No. 531,363. (No model.)

*To all whom it may concern:*

Be it known that I, DAVID B. NYE, of Cambridge, in the county of Middlesex and State of Massachusetts, have invented certain new and useful Improvements in Last-Supporting Jacks, of which the following is a specification.

This invention relates to jacks for supporting lasts for boots and shoes, and particularly to a jack comprising a standard having a heel-support or spindle adapted to enter the socket in the heel portion of an ordinary last, and a standard having a toe-rest adapted to support the toe portion of the last, said toe-rest standard being pivotally connected to the base-portion of the jack and adapted to swing toward and from the heel spindle to accommodate lasts of different sizes. A jack embodying the construction above indicated is now in general use, and is provided with certain devices for locking the swinging toe-rest standard in any position to which it may be adjusted, said devices comprising a fixed segmental clutch-member on the base of the jack, a clutch-member on the toe-rest standard adapted to co-operate with the fixed clutch-member, and a stud connecting the toe-rest standard with the base of the jack, said stud having an eccentric portion engaged with the toe-rest standard and adapted to move the said standard endwise and thus press its clutch-member against the fixed clutch-member or separate it therefrom, according to the direction of movement of the stud. Heretofore the clutch-member on the toe-rest standard has been a rigid part of said standard, and no provision has been made for taking up or compensating for the wear of the contacting surfaces of the clutch-members and of the eccentric portion of the stud and the part of the standard on which it bears, the result being that in time the clutch-members become inoperative and the toe-rest standard has to be discarded. My invention has for its object to obviate this objection and to provide simple and convenient means for compensating for the wear of the various working surfaces.

To this end the invention consists in a base or support having a fixed clutch-member, an oscillatory arm or standard on said support, and suitable means for imparting endwise

movements to said standard, combined with a clutch-member loosely connected with the said standard and arranged to be pressed against and separated from the fixed clutch-member by endwise movements of the standard, and an adjustable clutch-support or backing device on the standard whereby said loose clutch member may be adjusted from time to time to compensate for wear.

The invention also consists in certain incidental features, all of which I will now proceed to describe and claim.

Of the accompanying drawings, forming a part of this specification, Figure 1 represents a side elevation of a jack provided with my improvements. Fig. 2 represents a sectional elevation of the toe-rest standard and its loose clutch member and a side elevation of the fixed clutch member. Fig. 3 represents a section on the line 3 3 of Fig. 1.

In the drawings, *a* represents the base portion of the jack, and *b* represents the standard supporting the spindle *b'* which enters the socket in the heel portion of the last. As here shown, the standard *b* is pivotally connected to the base *a*, and the base is shown as mounted on a supporting standard which forms a part of a well-known type of lasting-machine; but as there is nothing new in the jack excepting in the toe-rest standard hereinafter described and the locking devices therefor, I do not deem it necessary to particularly describe the general construction of the jack, and remark that my improvements hereinafter described may be used with a jack of any desired construction and designed to support a last for any purpose.

The base *a* is provided with a fixed clutch-member *c*, which as here shown is an arm formed on the base and provided with a segmental face having beveled sides, as shown in Fig. 3.

*d* represents the oscillatory standard which supports the toe-rest *e*, said standard being supported by the base *a* and adapted to oscillate thereon. Means are provided for imparting an endwise movement to the standard *d* and thus cause the clutch-member thereon hereinafter described to approach and recede from the fixed clutch-member *c*. Any suitable means may be employed for accomplish-

ing this purpose, the simplest and best means of which I am at present aware being a stud *f* which serves to pivotally connect the standard *d* with the base *a* and is provided with a central portion 4 which closely fits a socket or bearing formed for its reception in the base *a* and is adapted to turn therein, and portions or sections 5 5 which are eccentric to the portion 4 and closely fit sockets formed for their reception in the side arms of the standard *d*, the lower portion of the latter being bifurcated to bestride the fixed clutch-member *c*. When the stud *f* is partially rotated in one direction, it raises the standard *d*, thereby separating its clutch-member from the fixed clutch-member *c*; and when the stud is rotated in the opposite direction it lowers the standard and presses the two clutch-members together, thus causing the locking of the standard to the base by the frictional contact of the clutch-member.

*g* represents the clutch-member which is connected with the standard *d* and co-operates with the fixed clutch-member *c*.

The clutch-member *g* is loosely connected with the standard *d*, so that it may be adjusted from time to time as hereinafter described, to compensate for wear either of the contacting surfaces of the clutch-members or of the surfaces of the stud *f* and the corresponding surfaces of the sockets in which the parts of said stud move.

The loose clutch-member *g* is provided with a pin *g'* the ends of which project through orifices *g''* in the arms of the standard *d*, said orifices being considerably larger than the diameter of the pin, so that the clutch-member *g*, while engaged with the standard so that it cannot be removed therefrom, has considerable freedom of adjustment.

*h* represents an adjustable support or backing engaged with the standard *d* and bearing upon the back of the loose clutch-member *g*, the said support or backing being preferably a screw-threaded stud or bolt engaged with a screw-threaded orifice in the standard *d*, the upper end of said bolt being slotted so that it may be engaged by a screw-driver and turned down to press the loose clutch-member against the fixed clutch-member *c*. The standard *d* is provided with a socket or orifice *d'* extending downward from its upper end, the lower portion of said socket being screw-threaded to engage the adjustable support *h*, while its upper portion receives the shank *e'* of the toe-rest *e*, said toe-rest and its shank being detachable from the standard and secured thereto by a set-screw *e''*. In removing the toe-rest, a screw-driver can be inserted in the socket *d'* to adjust the support *h* as described.

It will be seen that the loose clutch-member *g* and its adjustable support *h* enable wear of all the rubbing or wearing surfaces to be readily compensated for, so that the standard *d* and its locking devices may be kept in operative condition.

*i* represents a spring, which is connected

with the stud *f* and is arranged to normally hold said stud in the position it occupies when the clutch-members are pressed together, so that the standard *d* is normally locked by the action of said spring on the clutch-members.

*j* represents an operating handle or lever connected with the stud *f* whereby the stud may be readily turned by the operator to raise the standard *d* and separate the clutch-members, thus releasing the standard.

I claim—

1. A base or support having a fixed clutch-member, an oscillatory arm or standard on said support, and means for imparting endwise movements to said arm or standard, combined with a clutch-member loosely connected with said standard, and an adjustable support or backing on the standard for said loose clutch-member.

2. The combination of a base or support having a fixed clutch-member, an oscillatory arm or standard on said support, a stud pivotally connecting the standard with the support and provided with an eccentric portion engaged with the standard and adapted to move the latter endwise, a loose clutch-member on the standard adapted to be engaged with and separated from the fixed clutch-member by the endwise movements of the standard, and an adjustable support or backing on the standard for said loose clutch-member.

3. The combination of a base or support having a fixed clutch-member, an oscillatory arm or standard on said support having a clutch-member arranged to co-operate with said fixed clutch-member, a stud or pivot connecting the arm and standard and having an eccentric portion engaged with the arm whereby the arm may be moved endwise to engage and separate said clutch-members, a spring connected with said stud and adapted to normally hold it in its clutch-engaging position, and a lever or handle whereby the stud may be moved to its clutch-separating position.

4. A jack comprising a base having a suitable heel-supporting standard and a fixed clutch-member, a toe-rest standard, a stud connecting the toe-rest standard with the base and provided with an eccentric portion engaged with the toe-rest standard and adapted to move the latter endwise, a loose clutch-member on the toe-rest standard arranged to co-operate with the fixed clutch-member, and a screw engaged with the toe-rest standard and constituting an adjustable support or backing for the loose clutch member.

In testimony whereof I have signed my name to this specification, in the presence of two subscribing witnesses, this 8th day of December, A. D. 1894.

DAVID B. NYE.

Witnesses:

C. F. BROWN,  
A. D. HARRISON.