

(No Model.)

H. T. MORSE.
JACK FOR BOOTS OR SHOES.

No. 343,964.

Patented June 15, 1886.

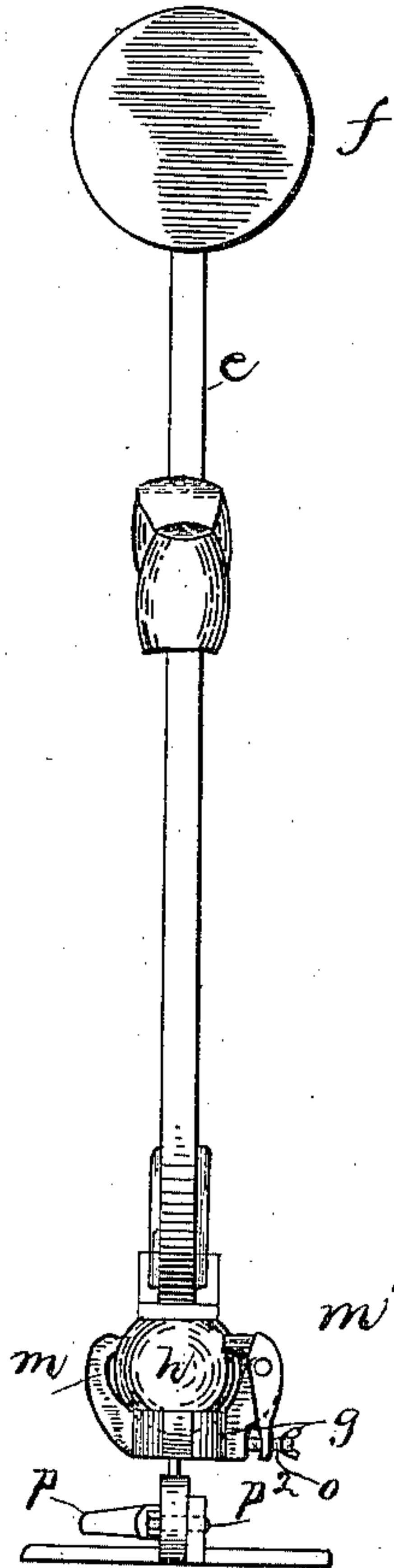


Fig. 2.

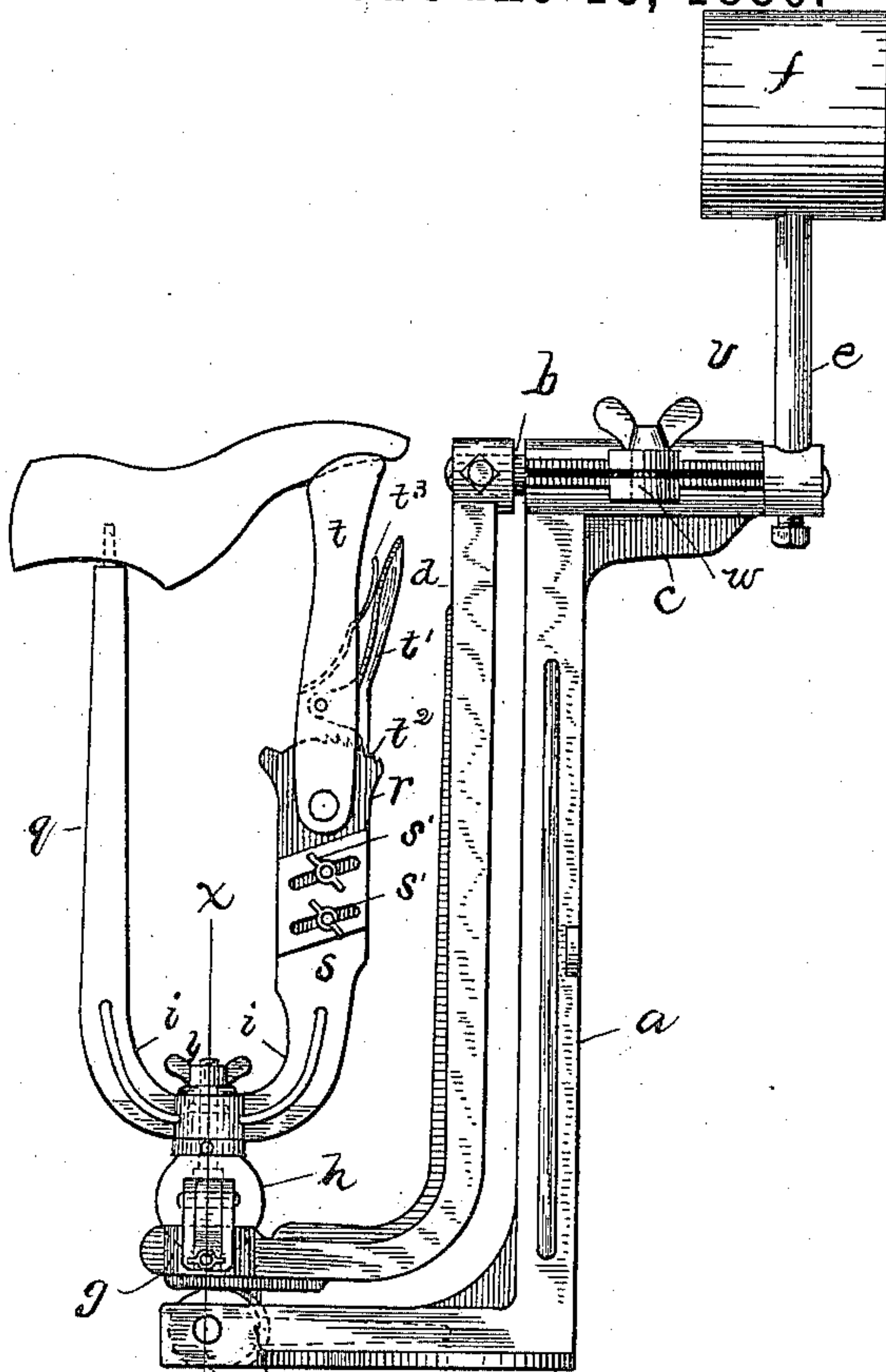


Fig. 1.

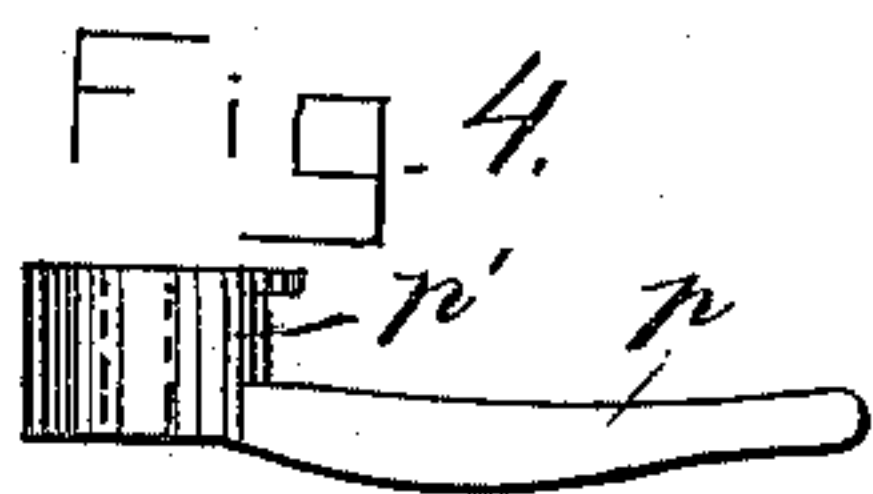


Fig. 4.

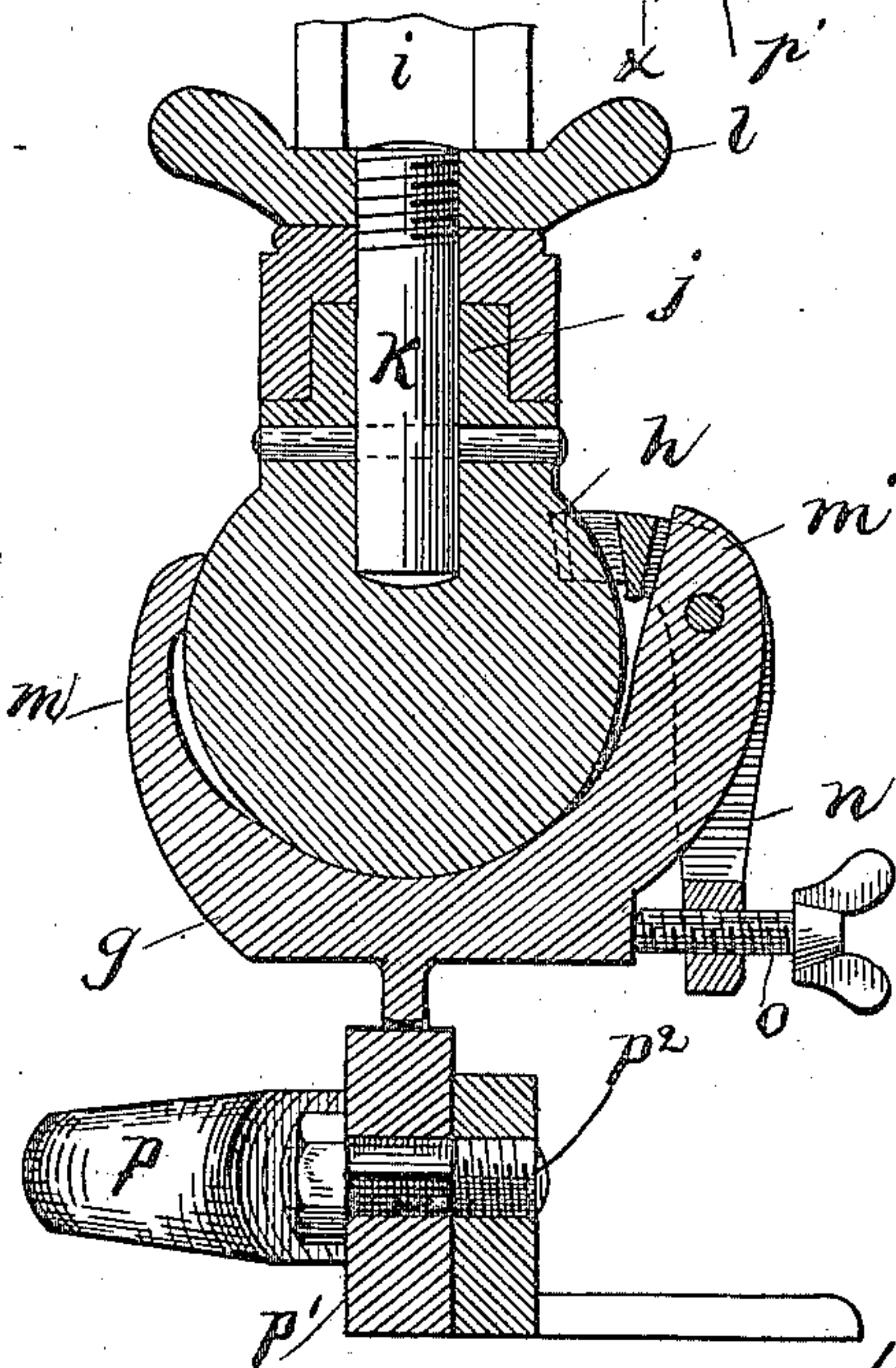


Fig. 3.

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UNITED STATES PATENT OFFICE.

HENRY T. MORSE, OF BOSTON, MASSACHUSETTS.

JACK FOR BOOTS OR SHOES.

SPECIFICATION forming part of Letters Patent No. 343,964, dated June 15, 1886.

Application filed February 1, 1886. Serial No. 190,457. (No model.)

To all whom it may concern:

Be it known that I, HENRY T. MORSE, of Boston, in the county of Suffolk and State of Massachusetts, have invented certain new and
5 useful Improvements in Jacks for the Manufacture of Boots or Shoes, of which the following is a specification.

My invention relates to jacks employed in the manufacture of boots and shoes.

10 It is the object of my invention to provide a jack which shall be adapted to be employed in every step in which a jack is used followed in the process of manufacturing a boot or shoe, and thus save the time consumed by frequent
15 removals from and replacements upon the jack of the boot or shoe and its last.

It is also the object of the invention to so improve a jack as that perfect solidity and rigidity of the parts may be secured during
20 the pegging operation and at other times when this condition of the jack is desirable.

It is also the object of the invention to improve the several parts of a jack, by which it is rendered movable to and adjustable in any
25 desired position, so that in finishing the boot or shoe, or in like operations, the part being operated upon may be brought and held directly upward.

It is also the object of the invention to provide improved means by which the jack is made adjustable to boots or shoes of different
30 sizes.

To the foregoing ends my invention consists in the improvements hereinafter described,
35 and subsequently pointed out in the claims.

In the drawings hereto annexed and forming a part of this specification, Figure 1 represents a side elevation of my improved jack. Fig. 2 is a front elevation thereof. Fig. 3
40 represents a section on the line *x x* of the lower portion of Fig. 1; and Fig. 4 represents a detail view of the lever for locking the swinging standard to the vertical standard.

Similar letters of reference refer to similar
45 parts in all of the figures.

a represents the stationary standard by which the supporting bracket and frame of the jack is supported, and on which it is mounted so as to swing thereon, this construction being accomplished by means of a shaft, *b*, having
50 its bearings in a groove formed in the upper

extended end, *c*, of the standard, said shaft having the upper end of the supporting-bracket *d* rigidly affixed to its forward end, and the lower end of an upright rod, *e*, supporting a
55 balancing-weight, *f*, in like manner secured to its rear end, as represented in Fig. 1. The lower end of bracket *d* is curved forward, so that a portion thereof extends at a right angle to the main or body portion. On this
60 right-angled or horizontal portion, and preferably integral with it, I form the socket *g* for the ball or sphere *h*, to which the frame *i* is swiveled by means of a stud, *j*, projecting upward from the upper end of the ball into a
65 corresponding recess in the bottom of the frame. A pin, *k*, secured in said stud *j* in any suitable manner, passes up through the base of the frame, and is provided at its upper end with a thumb-screw, *l*, by which
70 means the frame *i* may be rigidly clamped to the ball or sphere, or it may be left free to turn thereon. The socket *g* has two ears, *m* *m'*, extending up from opposite sides thereof, and to the ear *m'* is pivoted a clamping-lever,
75 *n*, having its upper end constructed to rest against the surface of the ball *h*, above its center, and an adjusting-screw, *o*, passing through its lower end and bearing against the base of the socket, by which means the frame may
80 be turned to any position from a vertical to a horizontal and the ball firmly clamped in its socket.

The construction just described is similar to that shown and described in my application
85 for a patent for an improvement in jacks, filed in the United States Patent Office November 5, 1885, Serial No. 181,893.

A lever, *p*, having a rounded cam-shaped end, *p'*, is rigidly secured to a stud or bolt, *p²*,
90 passing through the stationary standard and screw-tapped therein, as clearly shown in Fig. 3. The form or construction of the lever *p* is clearly represented in detail in Fig. 4, by reference to which figure it will be seen that when
95 the lever *p* is in a horizontal position, as shown in Figs. 1, 2, and 3, the base *g* being supported by the swinging standard or bracket *d*, may be swung to a position which will bring the rib depending from the base *g* directly over
100 the round or concentric portion of the rounded end *p'* of lever *p*, as clearly shown in Fig. 3.

If, now, the free end of lever *p* be raised, the eccentric or cam portion of the rounded end *p'* of lever *p* will be made to press upward against the under side of said rib on the bottom of the base *g*, the flanges on the sides of the cam-shaped portion of the rounded end being also brought alongside of the rib, thus firmly and securely locking the base *g*, carried by the swinging standard or bracket *d*, to the base of the stationary standard *a*. At the same time the side of the cam-shaped end or head of the lever will, by means of the screw-threaded connection of its pivoting-bolt with the base of the frame, or a rib or extension formed thereon, as shown, be firmly drawn up against said base, so as to be for all intents and purposes as rigidly connected therewith as though it were an integral part thereof, this construction insuring perfect firmness and solidity of the jack—a matter of great importance during the pegging and like operations in the manufacture of the boot or shoe.

The standard *q* of the frame is provided at its upper end with the usual pin to support the last, and the upper end, *r*, of the toe-supporting arm *s* is made as a separate piece, and is adjustable on said arm *s* by means of studs secured thereto and passing through inclined slots in said arm *s*. Thumb-screws *s'* on said studs provide means for clamping adjustable end *r* in any position within the limit of its movement, thus adapting the jack to boots or shoes of varying sizes, and securing a perpendicular position of the toe-support in its various adjusted positions, which position at all times renders the jack firm, in that the blows upon the last, being almost entirely in a direct vertical line, will be received by the support arranged in the same line.

The toe-support *t* is pivoted at its lower end to the upper end of arm *r*, and has a dog, *t'*, pivoted thereto and adapted to engage the ratchet-teeth *t''*, formed on the upper end of adjustable arm *r*. A spring, *t'''*, secured at one of its ends to the toe-support, bears with its free end against the upper end of said dog, thus holding the lower end of said dog in engagement with the ratchet-teeth *t''*.

By the construction and arrangement of the devices just described, when it is desired to remove the last from the frame, the operator presses back the upper end of the dog *t'* against spring *t'''*, by which operation the dog is disengaged from the ratchet-teeth of adjustable arm *r* and the toe-support is permitted to rock on its pivot, its upper end falling back, leaving the last free to be removed, and when a last is placed in position on the support *q* the toe-support *t* and its connected parts are brought into the position represented in Fig. 1 of the drawings, by which means it is secured in position.

A cap, *u*, shaped on its under side to fit shaft *b*, is placed thereover on its support *c*, and is adapted to be clamped thereon, so as to firmly hold said shaft from turning, by means of thumb clamping-screws *v*, turning on studs

secured to ears *w*, formed on said support, and passing through corresponding ears formed on said cap. By this means the frame balanced by weight *f* may be rocked or swung on shaft *b* to any desired position, and there firmly held by cap *u* and its clamping-screws *v*.

It will be seen that while my improved machine is exceedingly simple in construction, the last-bearing frame is capable of being moved to and clamped in any position it is desired to have the shoe being operated upon. The construction is also such as to form a firm and solid support for the last, when this condition is desired—an important feature in jacks of this description.

What I claim is—

1. The improved jack consisting of a stationary standard, *a*, a swinging standard, *d*, supported at its upper end by the upper end of the stationary standard, and adapted to be rigidly clamped at its base or lower end, *g*, to the base of said stationary standard, and having the last-supporting frame *i*, swiveled at its base to the base of said swinging standard, and adapted to be rigidly clamped thereto, the toe-support *t* being adjustable on the last-supporting frame to adapt the jack to boots or shoes of different sizes, as set forth.

2. The improved jack consisting of a stationary standard, *a*, a swinging standard, *d*, supported at its upper end by the upper end of the stationary standard, and adapted to be rigidly clamped thereto at said point, and also at its base or lower end to the base of the stationary standard, and having the last-supporting frame *i*, swiveled at its base to the base of the swinging standard *d*, and adapted to be clamped thereto, the toe-support being adjustable on the last-supporting frame to adapt the jack to boots or shoes of different sizes, the construction and arrangement of the latter contrivances being such that the toe-support will be at all times held in vertical position, as set forth.

3. The combination, with the stationary standard, of the swinging standard hinged at its upper end to the upper end of the stationary standard, the last-supporting frame supported by said swinging standard, and mechanism, substantially as described, for rigidly clamping said swinging standard at its base to the base of the stationary standard, as set forth.

4. The combination, with the stationary standard, of the swinging standard hinged thereto, the last-supporting frame supported by said swinging standard, a lever provided with a cam-shaped end pivoted to said stationary standard and adapted to clamp itself firmly thereto, and to clamp the swinging standard at its base firmly to the base of the stationary standard, as set forth.

5. The last-supporting frame provided with the heel and toe supporting-arms, the upper part of the latter arm, *s*, being made as a separate piece and provided with studs, the upper part of arm *s* having inclined slots formed

therein adapted to receive said studs there-
through, and set-screws s', adapted to be
screwed on said studs, whereby said jack is
adapted to boots or shoes of varying sizes, and
5 the toe-support at all times to be held in ver-
tical position, as set forth.

In testimony whereof I have signed my

name to this specification, in the presence of
two subscribing witnesses, this 15th day of
January, 1886.

HENRY T. MORSE.

Witnesses:

ARTHUR W. CROSSLEY,
CHAS. S. GOODING.