

R. F. McFEELY.
 WORK SUPPORT.
 APPLICATION FILED JULY 26, 1909.

1,042,460.

Patented Oct. 29, 1912.

2 SHEETS—SHEET 1.

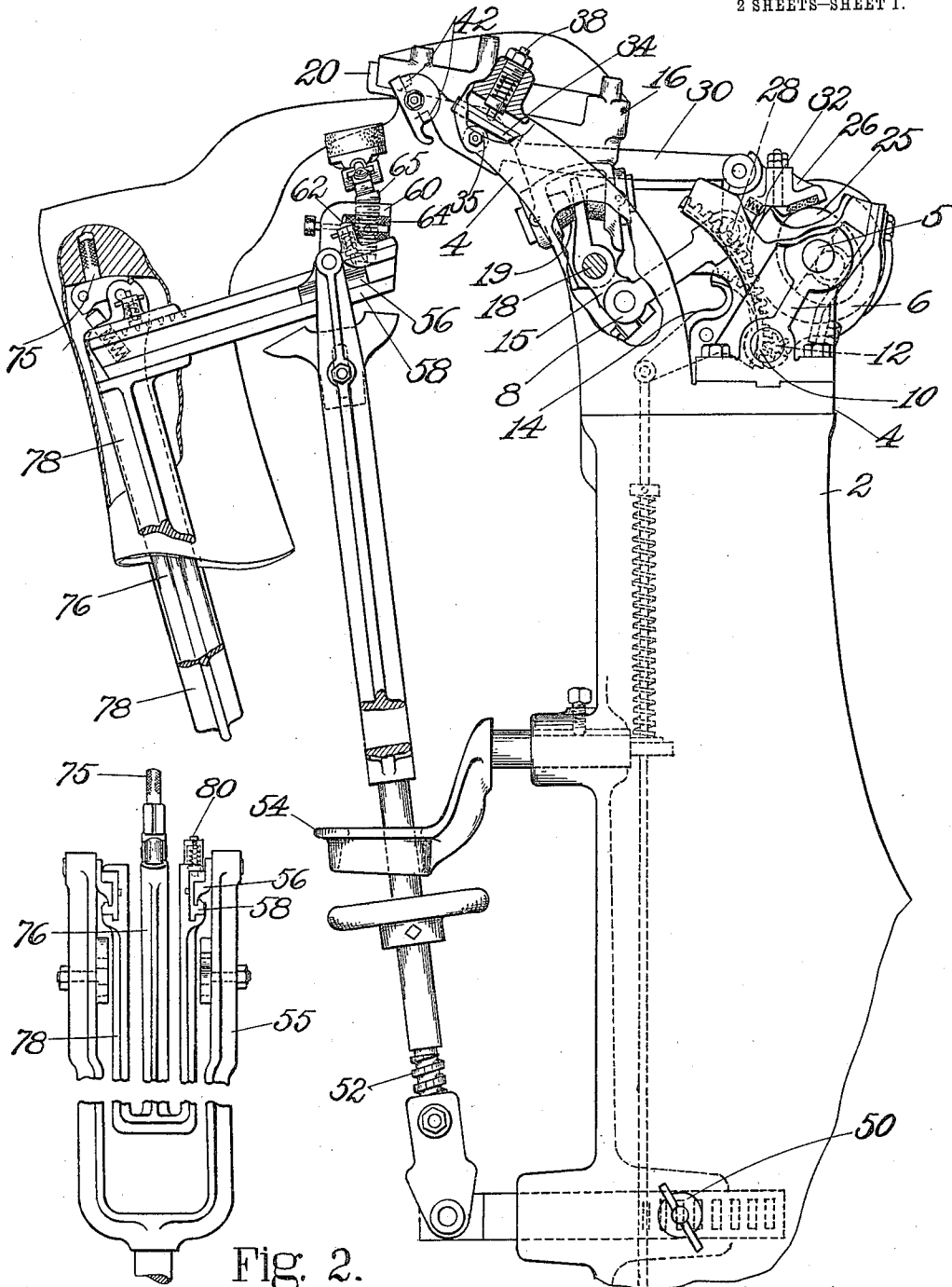


Fig. 2.

Fig. 1.

WITNESSES.

Herbert W. Kenway,
 Charles H. Hoyt.

INVENTOR.
 Ronald F. McFeely

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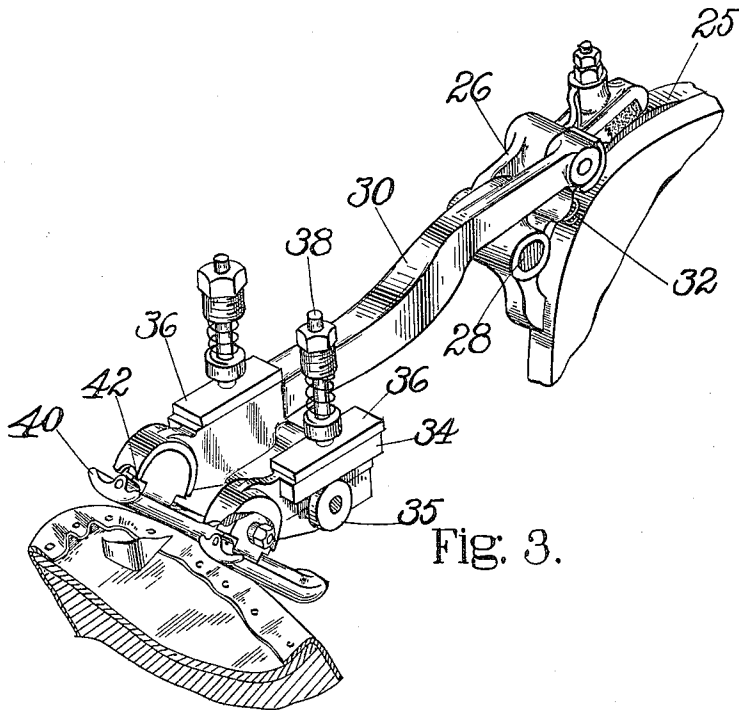


Fig. 3.

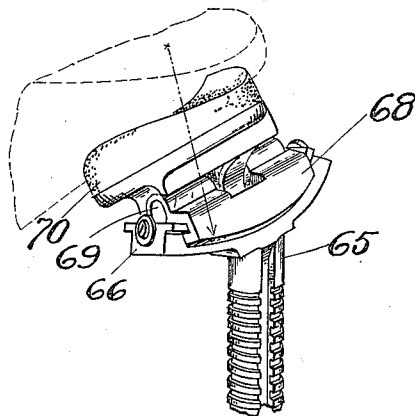


Fig. 4.

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UNITED STATES PATENT OFFICE.

RONALD F. McFEELY, OF BEVERLY, MASSACHUSETTS, ASSIGNOR TO UNITED SHOE MACHINERY COMPANY, OF PATERSON, NEW JERSEY, A CORPORATION OF NEW JERSEY.

WORK-SUPPORT.

1,042,460.

Specification of Letters Patent.

Patented Oct. 29, 1912.

Application filed July 26, 1909. Serial No. 509,684.

To all whom it may concern:

Be it known that I, RONALD F. McFEELY, a citizen of the United States, residing at Beverly, in the county of Essex and State of Massachusetts, have invented certain Improvements in Work-Supports, of which the following description, in connection with the accompanying drawings, is a specification, like reference characters on the drawings indicating like parts in the several figures.

This invention relates to shoe supports or jacks and is shown as embodied in a machine for shaping a lasted shoe to prepare it for the reception of an outer sole.

Features of this invention include novel characteristics of the mounting for the forepart support for the shoe.

Another feature of this invention is found in the construction and arrangement of the shoe support to adapt it to receive a boot or long legged shoe without bending or crumpling the leg portion.

These and other features of the invention will be more fully explained in connection with the description of the machine in which they are herein shown and embodied and will then be pointed out in the claims.

Figure 1 is a side elevation of the jack and of the machine which is of the same general type as that shown in my earlier Patent No. 1,019,067, granted March 5, 1912. Fig. 2 is a front view of the jack; Fig. 3 is a perspective view for the purpose of illustrating the side beater, and Fig. 4 is a perspective view of the forepart support.

The column 2 of the machine has a head 4 provided with bearings in which is mounted a shaft 5 which drives, by means of an eccentric stud, a V-shaped rocker 6. In the front face of the rocker is formed a groove by which is made a sliding connection with a link 8, having formed upon it, or upon a block connected with it, a segment rack by means of which the link can be moved toward and from the center of oscillation of the rocker which is at 10. The rack is engaged for this purpose by a pinion 12 meshing with a segment lever 14 connected with a foot treadle which, as in the machine of the prior application, is a starting treadle and is arranged to be first depressed for throwing in a clutch that drives the shaft 5, and then to be further depressed for adjusting

the link relatively to the rocker to vary the length of the stroke imparted to the link.

The link 8 is joined at its front end to a vibrator 15 for the tool carrier 16 in which is mounted the bottom pounding tool 20. The vibrator and the carrier are both mounted on the same pivot or fulcrum 18 and the upper arm of the vibrator extends into an inclosed space in the tool carrier where it is located between two cushions 19, which preferably will be rubber blocks. The arrangement of these cushions within an inclosure in the tool carrier is an improvement over my prior construction in that it protects the rubber blocks from the oil and dust which would otherwise deteriorate the rubber. The bottom pounding tool will preferably be mounted in its carrier and actuated to operate substantially as in the earlier machine.

The shaft 5 is provided with a cam adapted to operate a vibrator 26 which is fulcrumed in the machine at 28 and connected to a tool carrier 30 on which the side beating tools are mounted. A spring 32 normally holds the vibrator and the tool carrier forwardly with relation to the fulcrum 28 and maintains the vibrator out of contact with the cam 25. The tool carrier 30 is at its forward end forked to extend under the bottom pounder and has laterally projecting ledges 34 arranged between a supporting member 35 on the head 4 and a plate 36 at the lower end of a spring pressed plunger 38. The ledges 34 are inclined as appears clearly in Fig. 1, so that as the tool carrier is moved forwardly, the side beaters are given a component of upward movement which causes them to work the upper toward the edge of the last. The side beating tools 40, of which one is arranged on each side of the bottom pounder, are swiveled upon the tool carrier 30 to turn about horizontal and upright axes, as shown, to enable them to adapt themselves to the contour of the shoe. The tool carrier has stop faces at 42 which limit the tipping movement of the side beaters about their horizontal axes and the beaters are formed with downwardly and backwardly receding faces.

The shoe support is mounted for inward and outward adjustment at 50 and for vertical adjustment at 52. The post extends through an eye 54 which limits the move-

ment of the shoe support away from the machine. The post terminates in a fork 55 to the outer ends of which are pivoted hangers 56 with which the side plates 58 of the jack carriage have sliding engagement. The side plates support a front cross-bar 60 which is held in adjusted position thereon by a locking pin 62 taking into one of several recesses in one of the plates 58. The cross-bar 60 is forked or laterally recessed in its front side to receive an adjusting nut 64 upon the toe post 65. The upper end of the toe post is provided, as shown in Fig. 4, with a head having an arc-shaped guiding portion 66 curved about a center located in substantially the plane of the bottom of a shoe rested upon the shoe support. Upon this guiding surface is mounted a block 68 with which the toe pad 70 is connected by a transverse pivot 69. This mounting for the toe pad permits the pad to adjust itself angularly in two directions to adapt itself to the shape and position of the shoe being supported, and enables the pad to give firm support to shoes made on lasts of widely varying shapes. The forepart rest is arranged relatively to the heel rest to support the shoe with its forepart in a substantially higher plane than the shank so that, as the shank is reached in the progress of the pounding-up operation, the side of the shank engages a lower portion of the receding face of the side beater and permits the beater to move under the influence of spring 32 forwardly away from and out of operative relation to its actuator 25 so that the beating operation is discontinued at the shank without special attention from the operator. Of course the beating operation can be continued if desired, by pressing the shoe further in under the bottom pounding tool. The side beating operation can be resumed at any time, as for example when the heel is reached, by such an inward movement of the shoe.

The heel rest comprises a pin 75 to enter the usual pin hole in the last. The pin is pivotally supported upon a post 76 which rises from a yoke 78, see Fig. 2. The upper ends of the arms of this yoke are formed to have sliding engagement with the side bars 58 of the jack and the yoke is provided on one of said end portions with the locking pin 80 to engage a hole in the side bars for securing the heel support in adjusted relation to the forepart rest. The arrangement by which the heel post is connected to the side bars by a yoke enables the boot to be applied with the leg extending between the arms of the yoke and the post without crumpling the leg portion of the boot.

The novel features of the machine herein shown for operating upon the shoe carried by this work support are not claimed in this application but are claimed in another application filed by me, Ser. No. 523,072, filed

Oct. 16, 1909, for improvements in shoe forming machines which is a continuation of this present application as to subject matter which is common to the two applications.

Having explained the nature of this invention and fully described a machine embodying the same in the best form now known to me, and having indicated in connection with this description the way in which it is contemplated the machine may be used, I claim as new and desire to secure by Letters Patent of the United States:—

1. A machine of the class described, having, in combination, a support for the heel end of a last, and a forepart support comprising a pad arranged to swing about an axis parallel with the plane of the shoe bottom, and also to slide in a curved path about a center located substantially in the plane of the shoe bottom.

2. A machine of the class described, having, in combination, a forepart support and a heel support comprising a post arranged within a yoke to permit the leg portion of a boot to extend between the post and the sides of the yoke, and an adjustable connection between the upper ends of the yoke and the forepart support.

3. In a last support, a forked jack post, hangers carried on the ends of the fork, side plates mounted to slide on said hangers, a toe rest support connecting said side plates, a yoke sliding upon said side plates, and a last spindle supported on the bight of the yoke.

4. In a last support a forked jack post, hangers on said forked jack, plates mounted to slide on said hangers, a toe rest support on said plates, a U-shaped member mounted for movement upon said plates and a last spindle connected to the loop of the U-shaped member.

5. In a last support, a toe rest, means for adjusting the rest vertically, means for permitting adjustment of the rest about an axis extending transversely of the longitudinal axis of the last, means for permitting adjustment of the rest upon an arc struck substantially from a point in the plane of the last bottom, a spindle and means for adjusting the spindle toward and from the toe rest.

6. In a last support, a toe rest mounted for rotation about an axis at right angles to the longitudinal axis of the shoe and parallel with the plane of the sole and also for oscillation upon an arc struck from a point substantially in the plane of the sole, said first mentioned axis lying in the plane of the said arc.

7. In a last jack, a jack post, a U-shaped yoke upon said jack post, slides pivoted to the ends of the yoke, ways mounted upon said slides, a second U-shaped yoke mounted to slide upon the inside of said ways, a spin-

dle connected to the bight of the last mentioned yoke and means to retain said yoke and said slides in adjusted position upon said ways.

5 8. In a last support a jack carriage, a toe rest mounted on the carriage to permit adjustment thereof about a plurality of axes relatively to the said support, a spindle, a downwardly bent yoke depending from the carriage and supporting said spindle, and means connecting the ends of the yoke to the carriage and permitting adjustment of the spindle toward and from the toe rest.

15 9. In a last support, a spindle, supporting ways, a yoke supporting said spindle, and depending from said ways, hangers supporting said ways, and a jack post provided with a bifurcation to which said hangers are pivoted, the forks thereof being longer than the arms of the yoke.

20 10. In a last support, a spindle, a downwardly directed yoke supporting said spindle, ways supporting said yoke for movement thereupon, hangers supporting said ways, a jack post provided with a bifurcation to which said hangers are pivoted and which is adapted to embrace said yoke and an adjustable toe rest supported on said ways.

25 11. In a last support, a toe rest, means for adjusting said rest vertically, means for permitting adjustive movement thereof about a horizontal axis, means permitting oscillation thereof in an arc struck from a point approximate to the last bottom, a yoke, a spindle supported at the bight of the yoke, and means supporting the yoke for movement to and from the toe rest.

30 12. In a last support, a toe rest, means for adjusting said rest vertically, means for permitting adjustment thereof about a horizontal axis, means for permitting oscillation thereof in an arc struck from a point ap-

proximate to the last bottom, a yoke, a spindle supported at the bight of the yoke, ways upon which the ends of the yoke are adapted to slide, hangers slidably engaging said ways and means supporting said hangers.

13. In a last support, a toe rest, means whereby said toe rest may be oscillated on an arc lying across the longitudinal axis of the last, a yoke, a spindle supported at the loop of the yoke, plates supporting the ends of said yoke for sliding movement thereupon, hangers slidably engaging said plates and means supporting said hangers for pivotal movement.

14. In a last support, a jack post having a bifurcation, hangers on the ends of the prongs of the bifurcation, plates mounted to slide on the hangers, a yoke mounted to slide on said plates, and a spindle supported by said yoke.

15. In a last support, a jack post, having a bifurcation, hangers on the ends of the prongs of the bifurcation, plates mounted to slide on the hangers, a yoke mounted to slide on said plates, a spindle supported on said yoke and a toe rest mounted on said plates.

16. In a last support, a jack post, a spindle supported thereon for horizontal movement, a vertically adjustable toe rest support mounted to swing on an axis and to oscillate on an arc, both axis and arc extending transversely of the last bottom and the center of said arc lying substantially in the plane of the shoe bottom.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

RONALD F. McFEELY.

Witnesses:

CHARLES H. HOYT,
LEONARD M. JOHNSON.