T. B. ELLIS.

Pegging Jack and Bench.

No. 237,434. Patented Feb. 8, 1881.

Fig. 1

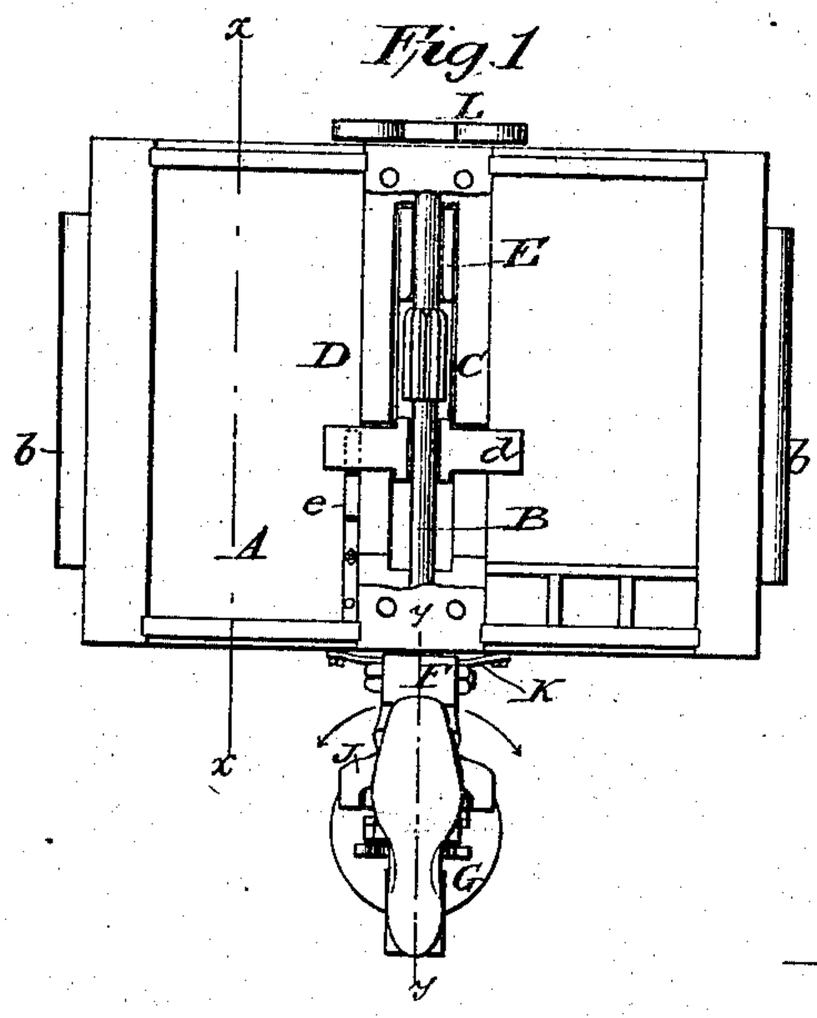


Fig. 3.

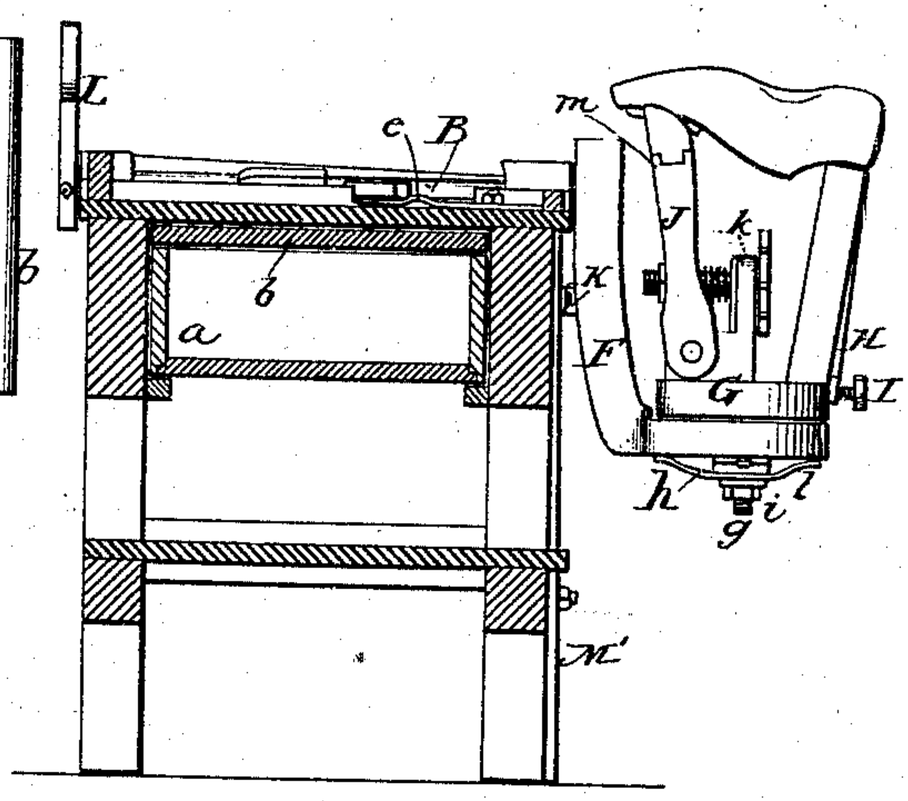


Fig. 2

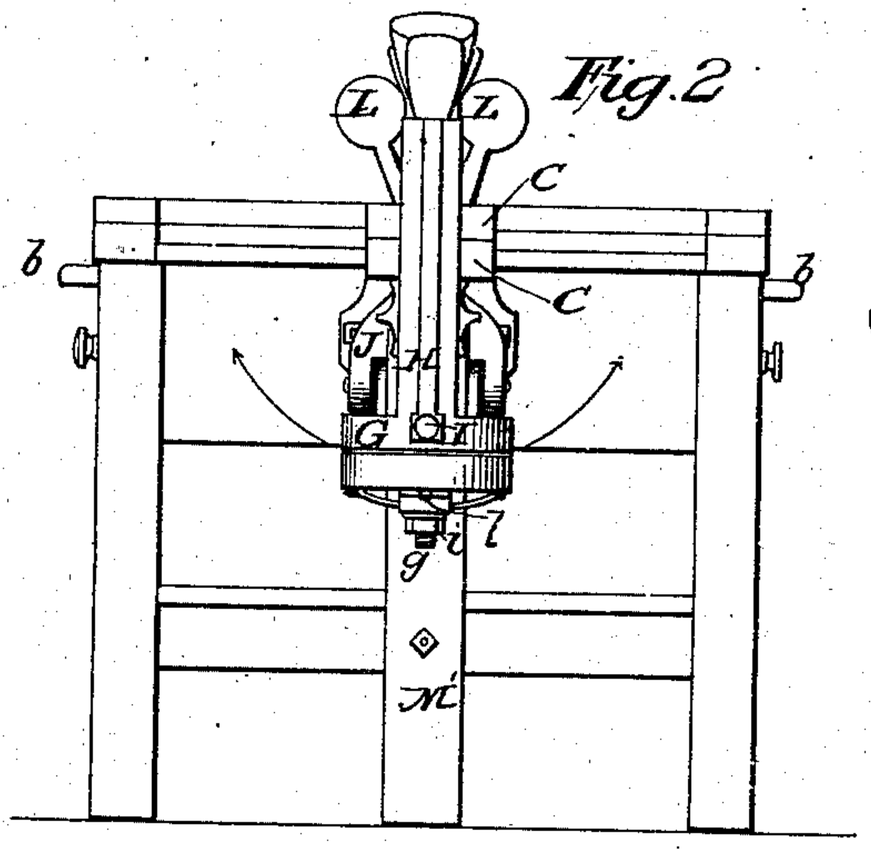


Fig. 4.

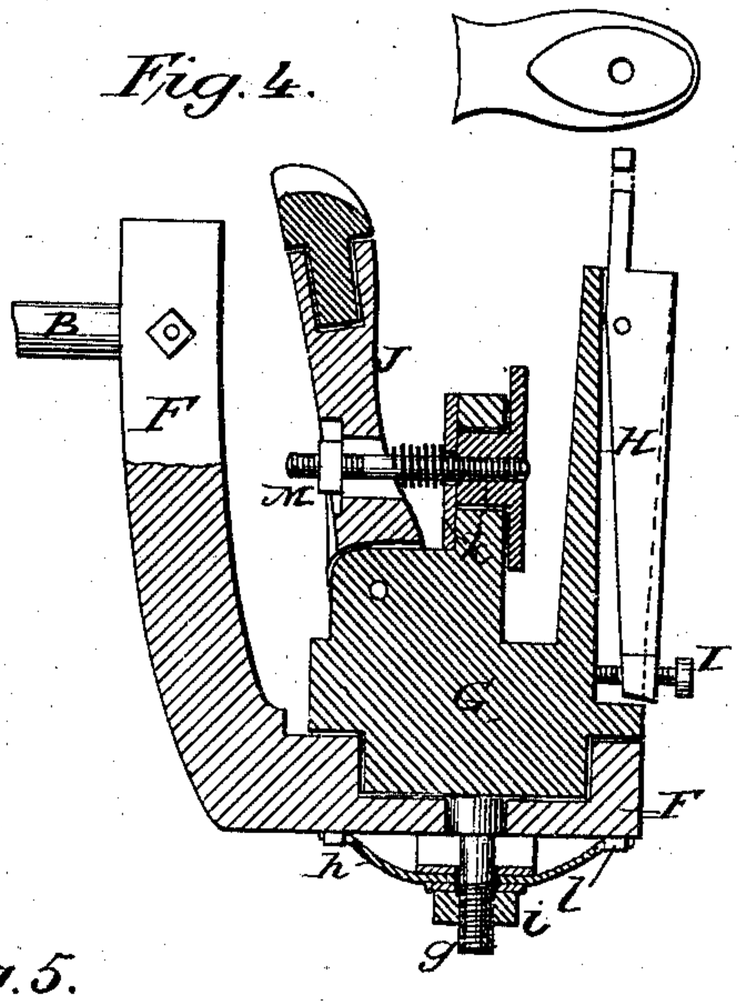
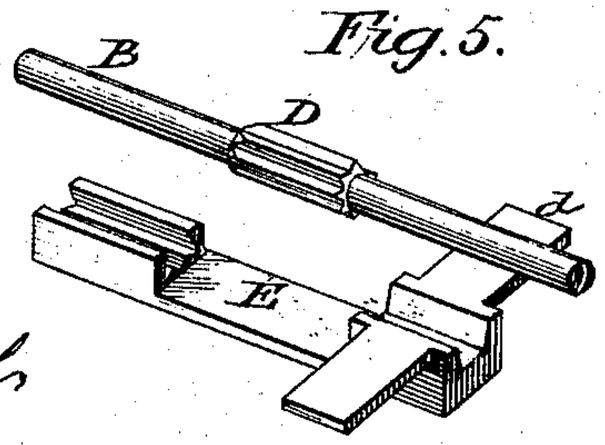


Fig. 5.



Witnesses:

Sidney P. Hollingsworth,

D. P. Howe.

Inventor:

T. B. Ellis,

By his attys,

Dodge & Lon.

UNITED STATES PATENT OFFICE.

THOMAS B. ELLIS, OF DAYTON, WISCONSIN.

PEGGING JACK AND BENCH.

SPECIFICATION forming part of Letters Patent No. 237,434, dated February 8, 1881.

Application filed January 16, 1880.

To all whom it may concern:

Be it known that I, THOMAS B. ELLIS, of Dayton, in the county of Green and State of Wisconsin, have invented certain Improvements in Pegging Jacks and Benches, of which the following is a specification.

My invention relates to a combination table and pegging-jack for the use of boot and shoe makers; and it consists in the construction and arrangement of parts hereinafter described in detail.

Figure 1 represents a top-plan view of my apparatus; Fig. 2, an elevation of the same, looking from the front backward; Fig. 3, a vertical section on the line *x x*, Fig. 1; Fig. 4, a section on the line *y y*, Fig. 1; Fig. 5, a perspective view of the shaft and locking device by which the jack is sustained and fastened.

A represents a strong rectangular frame or table, having in each end a sliding drawer, and an extensible cutting-board, *b*, located above the drawer. Across the middle of the frame, from front to rear, I mount a horizontal shaft, B, seating the same in and between two metallic bearing-plates, C C, which are bolted, one upon the other, solidly to the top of the frame, as shown in the various figures. This shaft is designed to sustain and adjust the jack, and in order that the jack may be held in different positions or inclinations I provide the shaft, as shown in Figs. 1, 2, and 5, with a central pinion, D, and mount in a space in the bearing-plates C a sliding plate, E, which may be engaged with or disengaged from the pinion by sliding it endwise. When the plate E is in one position it holds the pinion and shaft securely against rotary motion, and when in the other position it leaves them free to turn readily. The locking-plate E is provided at one end with arms or handles *d*, which protrude through slots in the plates C at the front of the table within convenient reach of the operator.

In order to prevent the locking plate from being moved accidentally—as, for example, by the shock and vibration produced by the pegging-hammer—a spring, *e*, is secured to the top of the frame, and arranged to press upward against one of the handles of the plate, as shown in Figs. 1 and 2. A raised portion on the middle of the spring engages against one side or the other of the handle and prevents the same from moving, except when a force is applied sufficient to depress the spring.

On the forward end of the shaft B, which projects in front of the frame, I secure a depending arm, F, the lower end of which is enlarged into a circular plate or foot having a large central recess and a smaller central hole. On this arm F, I mount a horizontally-revolving jack-base, G, the lower end of which has a broad bearing on the lower end of the arm, a neck fitting the recess in the same, and a central spindle, *g*, which is extended down through the central hole and provided with two springs, *h*, and a nut, *i*, as shown in Figs 2, 3, and 4. The two springs are of arched or semi-elliptical form, and are arranged at right angles to each other, and their ends are notched to embrace studs *l* on the under side of arm F, whereby the springs are prevented from turning. By giving the jack-base G the large flat bearing on the arm F, and combining therewith the round neck seated closely in the arm and the spindle and double springs, I am enabled to sustain the base firmly and rigidly under the severe strains, shocks, and blows to which it is subjected. The upper end of the jack-supporting arm F is flattened and fashioned into an anvil upon which to hammer leather and perform like operations. The formation of the jack upon this arm is advantageous, in that said arm may have its position changed, and in that, like the jack, it receives the support of the spring K.

On its outer side the base G has a rigid grooved standard containing an upright lever, H, the upper end of which is made of square form to enter the round hole in the heel of the last. The lower end of the lever H is provided with a set-screw, I, bearing against the standard, by which the lever may be moved and caused to tip the toe of the last down firmly upon the toe-rest, which will be used thereunder as usual. The lever H should be made somewhat elastic in order to avoid undue strain on the parts and lessen the danger of the parts working loose under the shocks of the hammer. The use of a square upper end on the lever, in combination with the round hole in the last, is advantageous in that it avoids the usual danger of splitting the last.

In practice it is found that when lasts having round holes in them are used upon jacks having a round shank to enter such holes, the round shank will in time wedge apart and split open the heel of the last. By making the shank of square form I am enabled, as practice has proven, to entirely overcome the danger of splitting the last. On the inner side of the base G, I hinge an upright toe-rest, J, to sustain the point of the last. In order to hold this rest up in place beneath the last I connect to the rest, in any suitable manner, a rod or stem, *k*, the rear end of which is threaded and extended through a small standard on the base and into a nut on the rear side of said standard, as clearly represented in Fig. 4.

It will be noticed that there is an open unobstructed space between the standard *k* and the large standard in which the last-supporting lever is mounted. This permits the leg of a boot to extend down smoothly behind the standard, and enables the operator to tighten up the toe-rest without interfering with the boot-leg, and without requiring the last-supports to be extended to an objectionable height. The toe-rest has its upper end removable, as usual, in order that end pieces may be applied suitable for use in connection with lasts of different forms. I provide the end piece with the usual neck, and also with a shouldered bearing-surface, *m*, located above the neck and seated in a corresponding recess in the rest. The shouldered bearing extends entirely across the rest and end piece from side to side, and relieves the small neck of nearly all the strain.

In order to counterbalance the jack-supporting arm and base and admit of their being revolved in a vertical plane with little labor, I secure to the opposite end of the main supporting-shaft B a counter-weight, L, consisting of two upright diverging arms with weighted ends, as represented in Figs. 1, 2, and 3.

In order to prevent the springing of the arm F, and the consequent rebound under the blows of the hammer, I attach to the frame a spring-plate, K, having its ends slotted and secured by bolts, said spring being arranged to bear firmly against the rear side of the arm when the jack stands in an upright, or approximately upright, position. The spring permits the arm F to swing readily around or with the shaft B, but as the arm returns to its normal position it rides upon and compresses the spring. When the spring is used the operator is enabled to strike a dead blow upon the boot, and the danger of breaking the castings is avoided.

In order the better to sustain the spring and shaft, I employ an upright metal leg, M, as shown in the drawings.

I am aware that in jacks of the same general construction as mine the horizontal shaft has been provided with a friction-clamp which required to be tightened and loosened each time that the jack was moved. In practice it was found that the clamp required to be fastened very tightly, and that the labor of operating the same many times each day was very tiresome. It was also found that the concussion produced by the workman's hammer would cause the parts to work loose and change the position of the jack. By my construction these difficulties are avoided. My locking device may be actuated quickly and by a very slight exertion, and, owing to the fact that its parts interlock positively, the jack is held immovably in place.

I am aware that a counter-balance has hitherto been employed to offset the weight of the jack, and I am also aware that a jack-supporting arm has been formed with an anvil upon which to pound leather. As above stated, however, the fact that the arm in my device is sustained and supported in a considerable degree by means of a spring renders the use of anvil thereon free from the danger of breakage of the arm, experienced where the arm is not so sustained.

Having described my invention, what I claim is—

1. In combination with the horizontal shaft having the jack mounted thereon, the locking device consisting of the pinion and movable plate, as described and shown.

2. In combination with the jack-supporting shaft, the pinion and the locking-slide, the spring, constructed and applied as shown, to hold the slide in position.

3. In combination with the swinging jack-supporting arm F, the spring K, as and for the purpose described.

THOMAS B. ELLIS.

Witnesses:
WILLIAM W. DODGE,
P. T. DODGE.