

(No Model.)

E. B. ALLEN.
HEELING MACHINE.

No. 319,377.

Patented June 2, 1885.

Fig:1

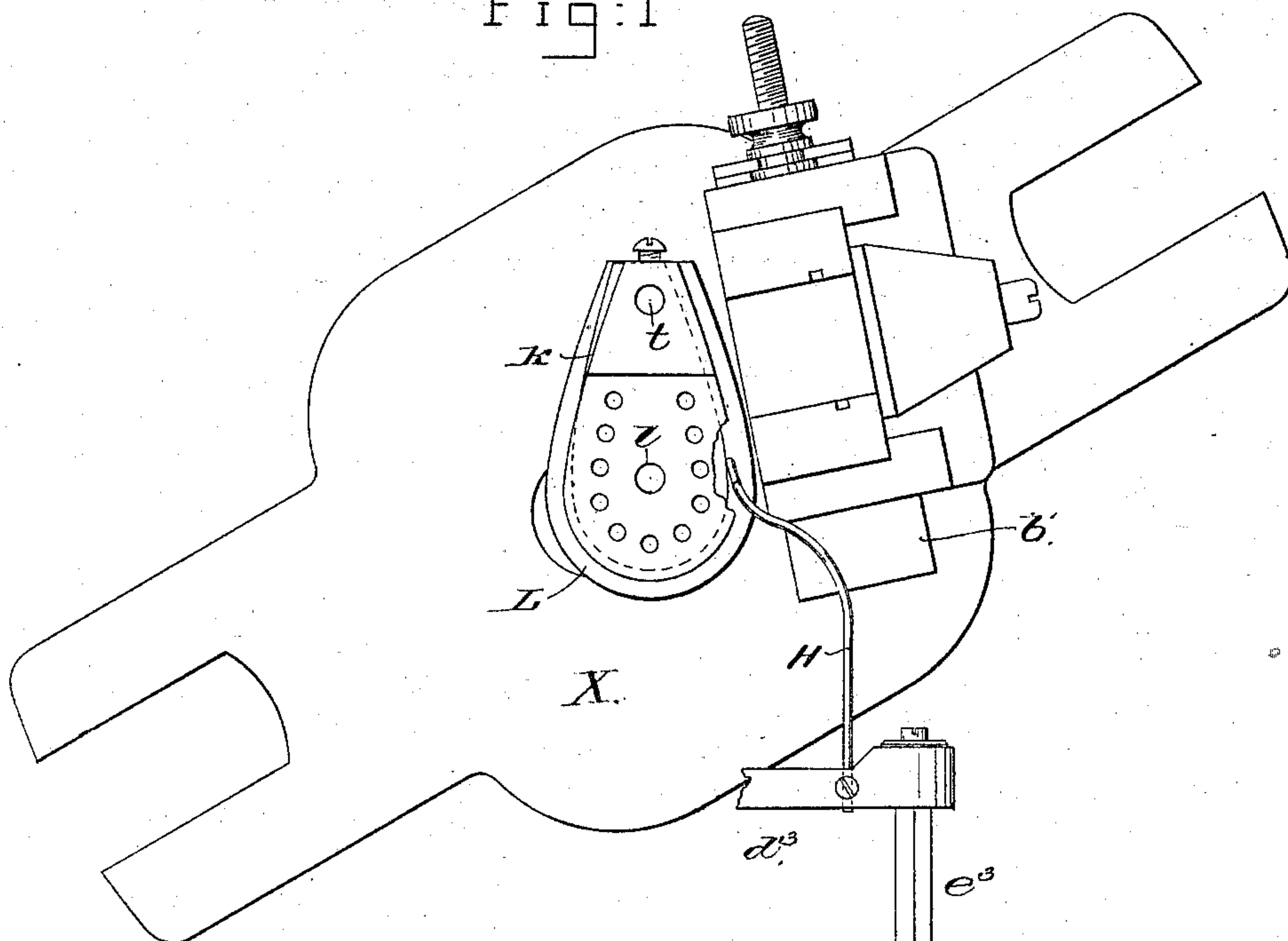


Fig:2.

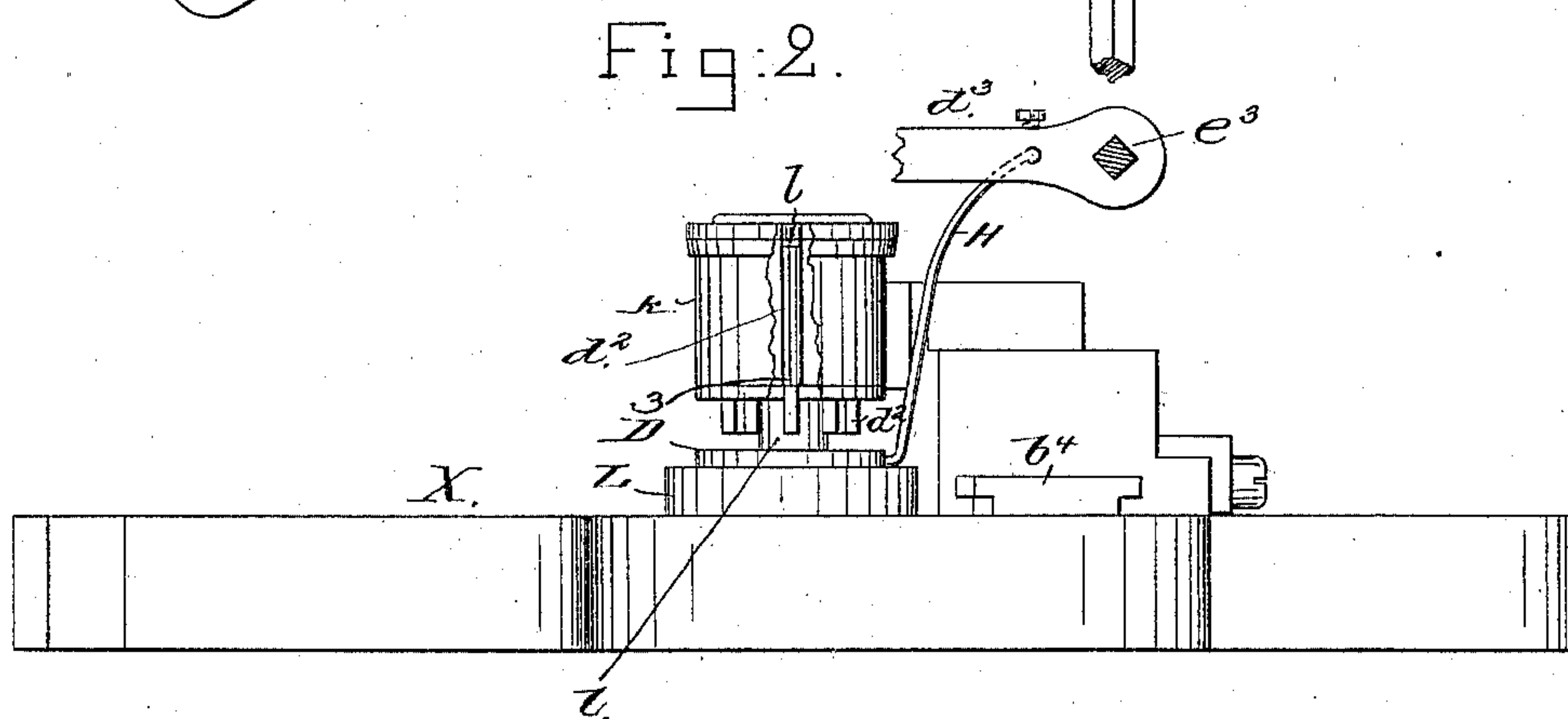
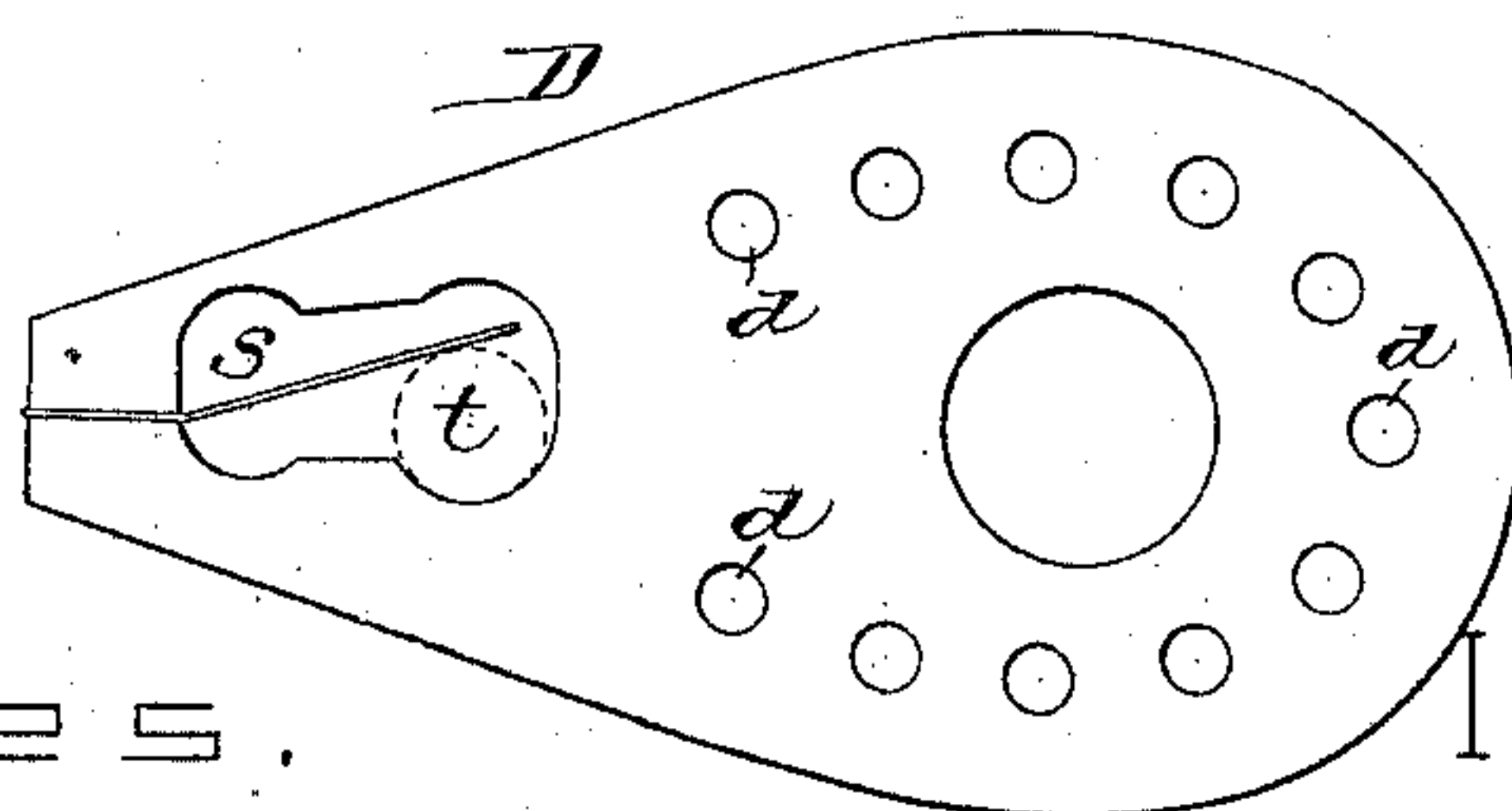


Fig:3.



Witnesses.
Frederic L. Emery.
Arthur Lipperlen.

Inventor.
Edward B. Allen
by Crosby & Gregory attys

UNITED STATES PATENT OFFICE.

EDWARD B. ALLEN, OF PORTLAND, MAINE, ASSIGNOR TO JAMES W. BROOKS,
TRUSTEE, OF CAMBRIDGE, MASSACHUSETTS.

HEELING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 319,377, dated June 2, 1885.

Application filed March 2, 1885. (No model.)

To all whom it may concern:

Be it known that I, EDWARD B. ALLEN, of Portland, county of Cumberland, State of Maine, have invented an Improvement in Heeling-Machines for Boots and Shoes, of which the following description, in connection with the accompanying drawings, is a specification, like letters on the drawings representing like parts.

10 This invention is an improvement on the machine represented in my application Serial No. 148,666, filed November 24, 1884, it being in turn an improvement on the well-known McKay and Bigelow machine.

15 The object of my present invention is to do away with the top-lift plate heretofore employed when blinding the top lift upon the heads of the nails left protruding from the heel attached to the boot or shoe; and this I have accomplished by combining with the usual driver-plate and nail-box a driver-supporting plate, the latter being interposed between the said nail-box and the driver-plate, the driver-supporting plate being provided with a series of holes corresponding in number and shape with those of the nail-box—one hole for each driver—whereby by partially turning the said driver-supporting plate on the rod to which the nail-box is attached the drivers may be permitted to drop through the holes of the driver-supporting plate to be directly acted upon by the driver-plate, to move the drivers to drive the nails into the main part of the heel, the heads of the nails being at such operation left protruding for the subsequent reception of the top lift which is to be blinded thereon, preparatory, however, to which operation the nail-block is lifted, carrying with it the drivers, the latter having shoulders a little above their lower ends, and while so elevated the driver-supporting plate is turned to one side, thus removing its holes out of the line of the drivers, so that as the nail-box is again depressed the lower ends of the drivers will strike the driver-supporting plate, and by the latter will be arrested while the nail-box descends, the upper ends of the drivers being thus lifted to fill snugly the holes in the top of the said nail-box and leave a substantially smooth surface as a support for the top

lift, which latter is therefore not marked or disfigured, as would be the case if the said holes were not filled flush. I have provided means for automatically turning the driver-supporting plate, as described, the said means consisting, as herein shown, of a spring or finger attached to or moved by the rod of the top-lift carrier—a device shown in my said application.

Figure 1 in top view represents a sufficient portion of a well-known heeling-machine to illustrate my invention. Fig. 2 is a side elevation of Fig. 1, the nail-box being partially broken out to show the construction of the drivers; and Fig. 3 is a top view of the driver-supporting plate detached from the other parts.

The carriage X, the turn-table ledge b^4 , mounted thereon, the rod l , the driver-plate L, and the nail-box k , are all substantially as in United States Patent No. 166,795, August 17, 1875. The slide-rod e^3 and the arm or block d^3 , attached to its forward end, are substantially as in my application Serial No. 148,666, where the said rod and arm are designated by like letters.

The drivers in the nail-box are provided with shoulders at a short distance above their lower ends, (see Fig. 2,) so that they rise with the nail-box when the latter rises under the action of the usual spring (not shown) in the die-bed spindle.

I have interposed between the lower end of the nail-box k and the upper side of the driver-plate L a driver-supporting plate, D, (shown separately in Fig. 3,) which has a hole to receive the rod l and a series of holes, d , corresponding in number with the drivers d^2 , and adapted, when the said holes are in line with the drivers d^2 , to let the lower ends of the drivers enter them and come to a bearing against the nail-driver plate L, at which time the usual working-spindle supporting the jacked shoe (not shown) is depressed, causing the nail-box to be forced down by the heel of the shoe, which results in causing the drivers to force the nails of the loaded heel into the heel end of the sole, the said nails, partially driven into the heels, being inserted in the holes of the nail-box, leaving, however, their

heads projecting beyond the small end of the heel. As the working-spindle is again lifted, the nail-box follows after it and lifts the drivers d^2 from the holes d in the driver-supporting plate, and thereafter, as the top-lift carrier is moved forward to place the top lift in position above the nail-box, the finger H, connected with the said slide-rod e^3 , is made to strike the edge of the driver-supporting plate D and turn it aside about its pivot—the rod l —the spring s , connected with the said plate D (see Fig. 3) and resting against the pin t , yielding as the said plate is turned to place its holes d out of line with relation to the drivers, so that as the working-spindle is again moved down to blind the top lift upon the ends of the nails left protruding from the heel the lower end of the drivers will strike against the upper side of the driver-supporting plate, instead of entering the said holes, as before, the said plate arresting the drivers with their upper ends flush with the top of the nail-box when in its lowest position, the said drivers filling the holes in the nail-box, and preventing them from marring the face of the top lift.

The pin t is employed in the usual McKay and Bigelow heeling machines.

I claim—

1. In a heeling-machine, a nail-box, drivers therein provided with shoulders, and driver-plate, combined with the driver-supporting

plate interposed between the nail-box and the driver-plate, the said driver-supporting plate being provided with holes for the passage of the drivers through them when the said plate is in one position, and adapted in its other position to act upon and hold the drivers with their ends up flush with the upper side of the top plate of the nail-box, substantially as described.

2. The nail-box and the driver-plate, combined with the driver-supporting plate interposed between the driver-plate and the nail-box, and with a spring to normally hold the driver-supporting plate in position, substantially as described.

3. The nail-box, the driver-plate, the interposed driver-supporting plate provided with holes, the spring, and the drivers, combined with the finger and means, substantially as described, to operate it to turn the driver-supporting plate and place its holes out of line with the ends of the drivers, to thus keep the upper end of the drivers flush with the upper side of the nail-box, substantially as set forth.

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

EDWARD B. ALLEN.

Witnesses:

G. W. GREGORY,
W. H. SIGSTON.