

(No Model.)

C. W. GLIDDEN.

MODE OF ATTACHING HEELS AND TOP LIFTS TO BOOTS OR SHOES.

No. 388,553.

Patented Aug. 28, 1888.

Fig: 1.

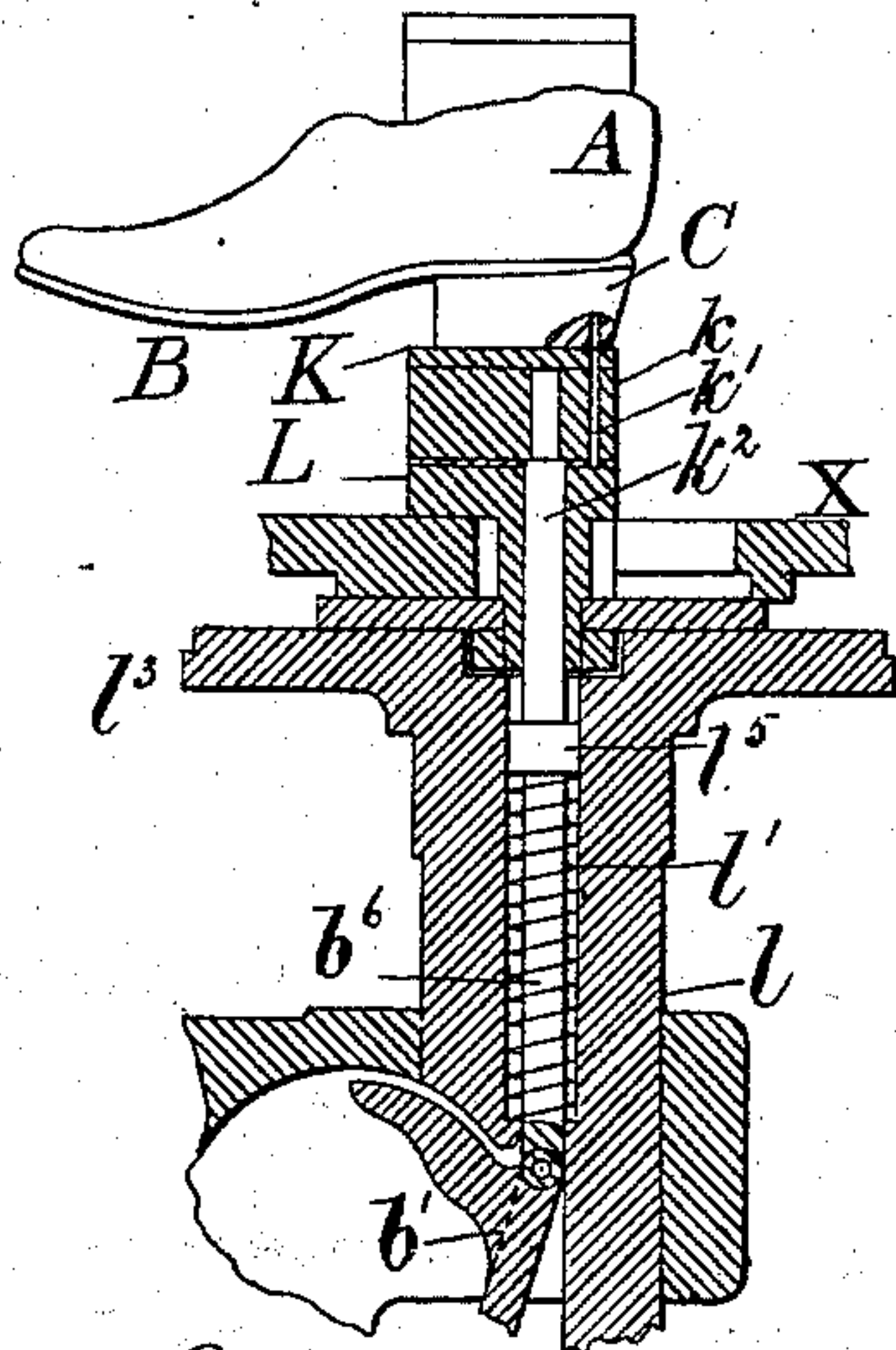


Fig: 4.

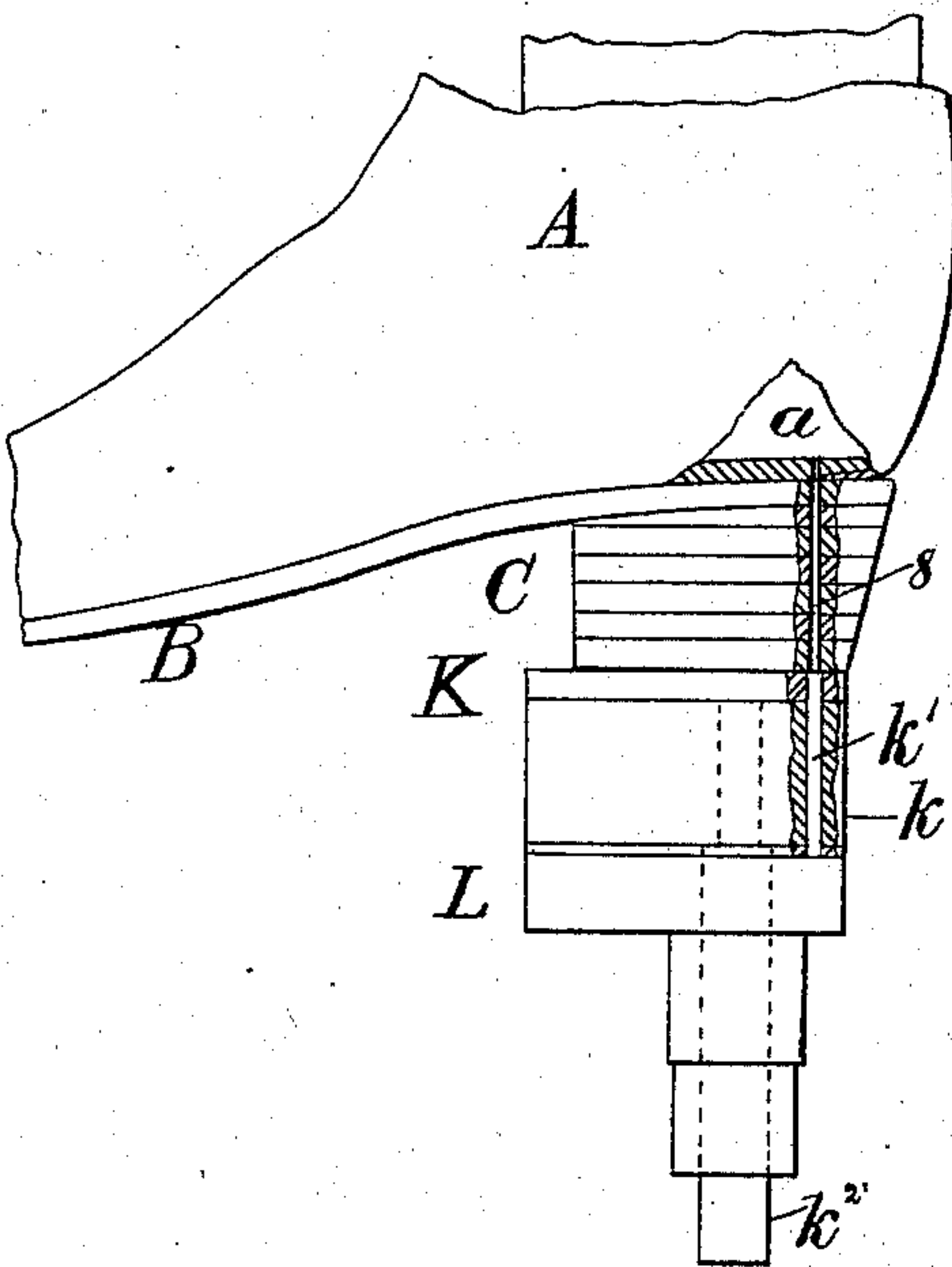


Fig: 2.

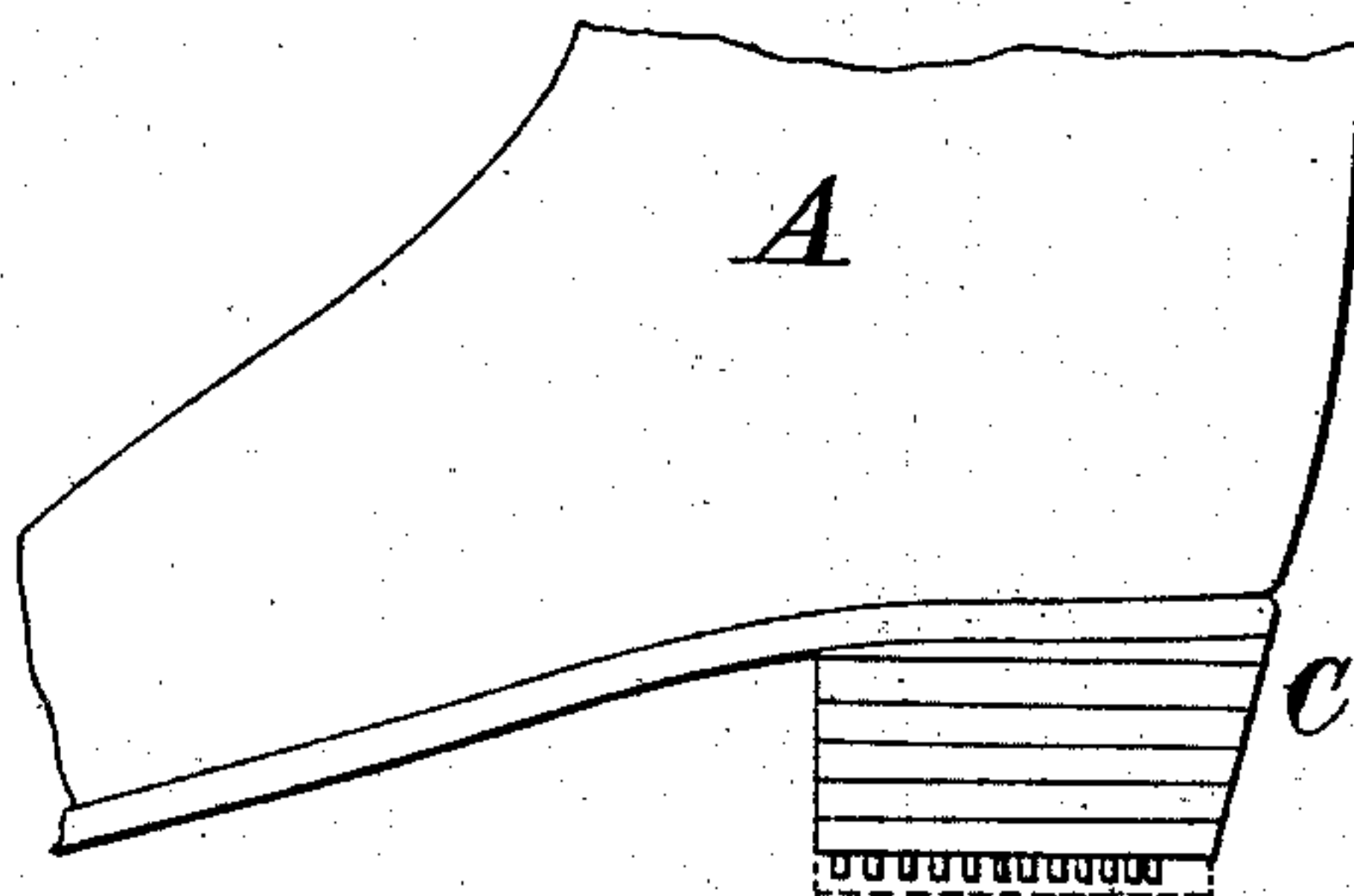
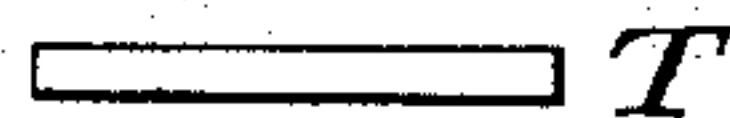


Fig: 3



Witnesses.

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UNITED STATES PATENT OFFICE.

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MODE OF ATTACHING HEELS AND TOP LIFTS TO BOOTS OR SHOES.

SPECIFICATION forming part of Letters Patent No. 388,553, dated August 28, 1888.

Application filed December 20, 1887. Serial No. 258,514. (No model.)

To all whom it may concern:

Be it known that I, CHARLES W. GLIDDEN, of Lynn, county of Essex, and State of Massachusetts, have invented an Improvement in the Method of Attaching Heels and Top Lifts to Boots or Shoes, of which the following description, in connection with the accompanying drawings, is a specification, like letters on the drawings representing like parts.

In nailing heels to soles in the manufacture of boots and shoes by machinery it is customary to leave the heads of the nails exposed at the outer end of the attached heel and to thereafter blind a top lift upon the protruding ends of the said nails. In some instances the heel-blank has been moderately compressed and nailed to the sole, leaving the heads of the nails flush, and thereafter a top lift has been applied to the protruding ends of the nails and it and the heel-blank subjected to pressure sufficiently to force the top lift upon the protruding ends of the nails and at the same time compress the entire blank.

In nailing heels upon soles in nailing-machines the nails are usually driven partially into the heel before the heel is applied to the machine employed to attach the heel to the sole.

Being desirous of improving the quality of the heel, especially as to its solidity, I have devised a method of attaching the heels to the soles, which consists in first driving the partially-driven nails through the heel far enough to enter the sole, leaving the heads of the nails flush with the outer end of the heel, and immediately thereafter the entire heel is subjected to such pressure as to compact and shorten the heel upon the driven nails, the compression being sufficient to leave the heads of the nails protruding from the end of the compressed heel, and thereafter the top lift is blinded in usual manner upon the heel. By subjecting the body of the heel to its maximum pressure before the top lift or leather is applied thereto it is possible to maintain for the top lift the shape given to it by the die used to cut out the top lift, excessive pressure of the top lift being objectionable, and so, also, by compressing the stock of the heel after the nails have been fully driven it is possible to make all the heels or the main bodies thereof

of substantially equal height and leave their exposed ends smooth and level before the top lift is applied, whereas if the pressure to consolidate the body of the heel is applied through the top lift, as has heretofore been done, the top lift cannot be as surely retained upon the heads of the nails as by the improved method herein described and claimed.

Figure 1 in elevation shows a heel and a sufficient portion of a heeling-machine, which, taken in connection with the machine shown in my application, Serial No. 252,995, filed October 21, 1887, will enable my invention to be understood. Fig. 2 shows the heel compressed or consolidated upon the nails after the same are driven into the sole. Fig. 3 shows the top lift which is blinded upon the protruding ends of the nails; and Fig. 4 is a detail on a larger scale of part of the mechanism shown in Fig. 1, the heel being broken out to show the inner sole and last, against which the nails are driven.

Referring to the drawings, A represents a shoe-upper; B, its sole, and C a heel to be applied to the said sole.

K represents the top plate of the nail-box k . k' represents one of a series of drivers acted upon by a driver-plate, L, said driver-plate having a hollow shank through which is extended the pin or post k^2 of the nail-box.

The trimmer-lever X, the die-bed spindle l , its head l^3 , the shouldered pin l^5 , the spring l' , the stud or rod b^6 , and the link b' are all common to my application referred to, wherein the same parts are designated by like letters, and in practice the parts referred to will be actuated as described in the said application, that application describing fully a machine for carrying out the method herein described for attaching heels to soles.

In practice the heel C, it having been provided with the usual series of nails partially driven into the heel, will be applied to the nail-box, the heads of the partially-driven nails entering holes in the nail-box, the drivers being then down. In this condition the lasted shoe, with a suitable last, a , of iron or other material within it, will be applied to the usual jack-spindle, and the usual die-bed spindle, l , common to the McKay or other nailing machine, and fully shown in the said application,

will be elevated, causing the drivers to ascend in the nail-box and act upon the heads of the nails 8 and drive the said nails through the heel C until the points of the nails pass through the soles, thus fastening the heel to the shoe, the heads of the nails being left flush with the outer end of the heel, as in Figs. 1 and 4. In this condition of the parts, and as described in the said application, the nail-box *k* will be given an additional lift, as by link *b'*, rod *b^c*, and shaft *k²*, while the shoe remains stationary, the lift being sufficient to compress the heel, or to cause it to move in the direction of its height upon the said nails, the latter remaining stationary, the compression of the heel being sufficient to leave the head ends of the nails projecting from the end of the heel, as in Fig. 2. In this condition the usual die-bed spindle will be lowered, and a top lift, as T, will be placed between the usual top lift plate carried by the nail-box, or upon the nail-box itself, and the nail-box will then be lifted, causing the top lift to be blinded in usual manner upon the protruding ends of the nails. (See dotted lines, Fig. 2.)

In Fig. 4 the heel is broken away to show

one of the nails, *a*, as fully driven through the heel by one of the drivers, *k'*.

Fig. 2 shows a number of nails left by consolidating the heel in the direction of its height.

I claim—

The herein described method of attaching a heel and top lift to a sole of a boot or shoe, which consists in driving the nail from the heel into the sole to secure the heel to the sole, and while the heel is yet under pressure and the nails at rest further compressing the heel bodily in the direction of its length and of the nails, leaving the heads of the nails projecting from the end of the consolidated heel, and thereafter blinding the top lift upon the protruding heads of the nails, substantially as set forth.

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

CHARLES W. GLIDDEN.

Witnesses:

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