D. R. PROCTOR.

Tap Sole for Boots and Shoes.

No. 202,191. Patented April 9, 1878.

Fig. 1

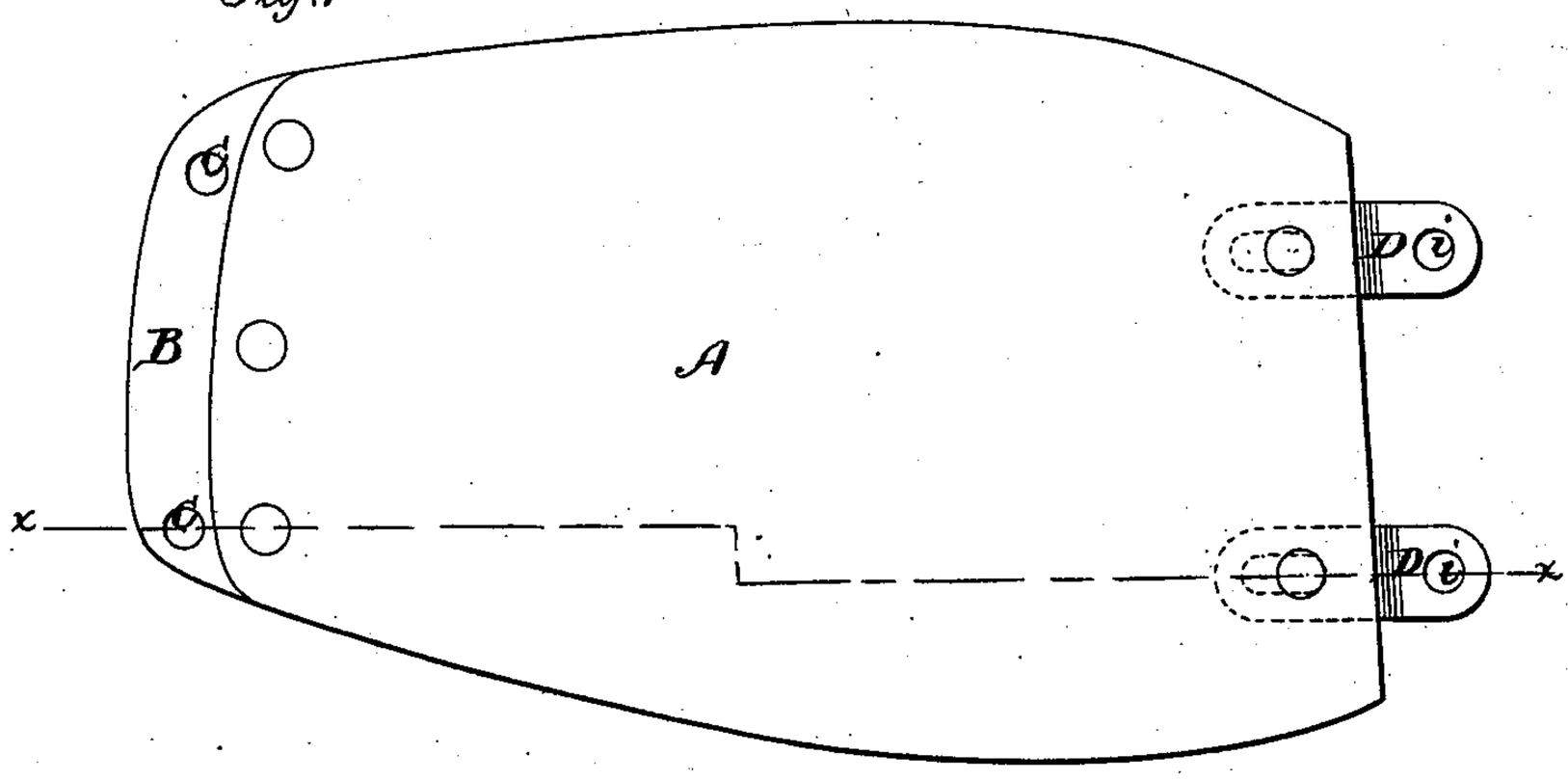


Fig. 2.

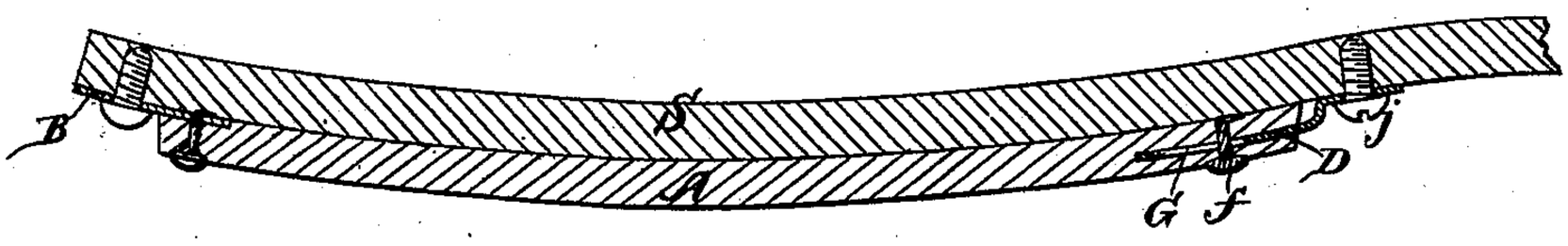
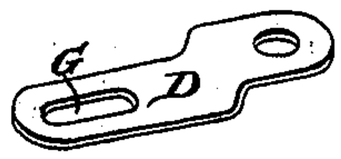


Fig. 3.



Witnesses.

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DAVID R. PROCTOR, OF GLOUCESTER, ASSIGNOR TO ALFRED C. HILL, OF EAST SAUGUS, AND EMMA F. PERKINS AND ALICE F. PROCTOR, OF GLOUCESTER, MASSACHUSETTS.

IMPROVEMENT IN TAP-SOLES FOR BOOTS AND SHOES.

Specification forming part of Letters Patent No. **202,191**, dated April 9, 1878; application filed February 18, 1878.

To all whom it may concern:

Be it known that I, DAVID R. PROCTOR, of Gloucester, in the county of Essex and State of Massachusetts, have invented certain Improvements in Taps for Boots and Shoes, of which the following is a specification:

This invention relates generally to boot and shoe bottoms, and in particular to taps or half-soles for boots and shoes, which are adapted to be applied by any person of ordinary mechanical skill, not necessarily a practical shoemaker or cobbler. Taps of this class are usually made of leather or metal, and sometimes of rubber, and are attached to the permanent soles of boots and shoes by screws, the taps as ordinarily prepared for the market being provided with screw-holes, so that the person who applies them has only to drive the screws through the holes provided into the permanent soles, the taps being thus rigidly attached.

It is well known that when one layer or piece of leather or other material is laid against another, as a tap is laid against the bottom of a permanent sole, the flexure of the layers, such as is caused by the bending of the foot in the act of walking, will cause the proximate surfaces of the layers to move or slide longitudinally one upon the other. In the layers of a boot or shoe bottom this movement occurs almost entirely at the rear end of the tap, the forward ends of the permanent sole and tap being held together and prevented from moving on each other by the weight of the wearer, which is always thrown upon the forward portion of the foot when the latter is bent in walking. This movement of the layers is the cause of the severing of the stitches in sewed bottoms; and when rigid fastenings, such as pegs or tacks, are employed to connect the tap to the permanent sole, it is well known that unless a large number of fastenings are employed, set closely together, the fastenings at the rear end of the tap will become loosened and useless in consequence of the described movement of the layers at the rear end of the tap. It is desirable, however, that the smallest practicable number of fastenings be employed when the tap is to be attached by one who is not skilled in shoe-making or cobbling, in order that the operation may be performed easily and simply.

My invention has for its object, mainly, to enable a tap to be secured by a small number of fastenings, two at each end being the preferred number; and to this end it consists in providing the rear end of the tap with means whereby it may be attached to the permanent sole in such manner that the tap will be held with sufficient firmness against the sole, and at the same time be permitted to slide or move longitudinally on the sole without straining or loosening its fastenings, as I will now proceed to describe.

Of the accompanying drawings, Figure 1 represents a bottom view of a tap provided with my improvements. Fig. 2 represents a section on line *x x*, Fig. 1, showing the tap applied to a sole. Fig. 3 represents a perspective view of one of the fastening-plates detached.

Similar letters of reference refer to corresponding parts.

In the drawings, A represents a tap or half-sole, of leather or other suitable material. I adapt the forward end of the tap A for rigid attachment to the sole S of a boot or shoe, and for this purpose I employ, preferably, a plate of sheet metal, B, riveted or otherwise securely attached to the toe of the tap on the upper side thereof, and projecting forward beyond the tap, and provided in its projecting portion with screw-holes C C, through which pass the screws which attach the forward end of the tap rigidly to the sole. The rear end of the tap A I adapt for attachment to the sole in such manner that the tap and sole can slide or move on each other. To accomplish this I prefer to employ two plates or links, D D, each of which is inserted in a longitudinal cavity formed in the sole, and is adapted to slide partially in and out of said cavity, the inclosed portions of each plate D being provided with a slot, G, through which passes a pin, *f*, driven into the tap, and acting as a stop to limit the sliding movement of the plate D.

The outer or projecting end of each plate is offset, so as to be about flush with the upper surface of the tap, and is provided with a

hole, *i*, for the passage of a screw, *j*, to attach it to the sole.

It will be seen that when the tap is applied to the sole its forward end is rigidly connected thereto, while its rear end is held by the plates D in contact with the sole, and at the same time enabled to have the necessary independent movement caused by the bending of the foot without straining the fastenings which attach its rear end. The plates D being attached rigidly to the sole at the rear ends, and adapted to slide in the tap at their forward ends, offer no resistance to the movement of the tap on the sole.

I do not limit myself to the precise construction of the plates D, nor the described connection of said plates to the tap and sole, as the construction and mode of attachment may be varied without departing from the spirit of my invention. For instance, the plates D may be rigidly attached to the tap and adapted to slide on the sole, suitable means being employed to hold them in contact with the sole.

By reference to Fig. 2 it will be seen that the arrangement of the plates B and D is such that the heads of the screws which attach the tap to the sole are not allowed to project below the bottom of the tap, and are consequently protected from wear. This arrangement enables me to use round-headed screws, which can be operated by any screw-driver, and obviates the necessity of counter-sinking for the heads of the screws, so that their slots are always accessible.

I claim as my invention—

1. As an article of manufacture, a tap for boots and shoes, adapted to be rigidly attached to the sole at its forward end, and provided with means, substantially as described, whereby its rear end is held in contact with and permitted to slide on the sole, as set forth.

2. The combination, in the bottom of a boot or shoe, of the sole S and the tap A, rigidly connected at their forward ends, and connected at their rear ends by plates D D, secured, as described, to the tap and sole, whereby the rear end of the tap is adapted to slide lengthwise on the sole in both directions, substantially as and for the purpose specified.

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

DAVID R. PROCTOR.

Witnesses:
C. F. BROWN,
GEO. W. PIERCE.