(No Model.)

A. W. ROGERS.

BUFFER.

No. 421,763. Patented Feb. 18, 1890.

Fig. 2.

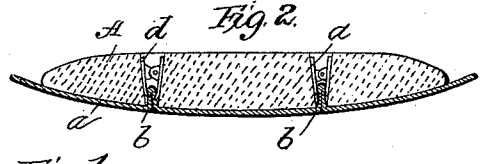


Fig. 1.

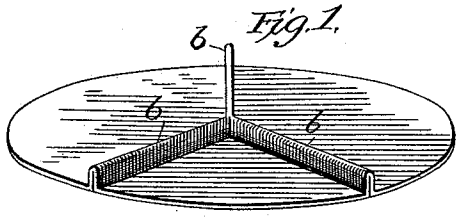


Fig. 3.

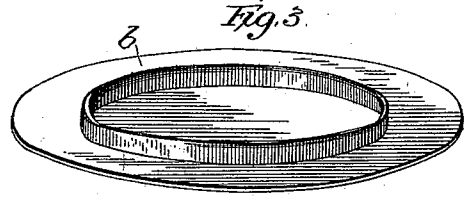
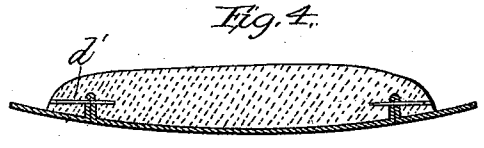


Fig. 4.



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UNITED STATES PATENT OFFICE.

ANDREW W. ROGERS, OF BEVERLY, MASSACHUSETTS, ASSIGNOR TO SIDNEY W. WINSLOW, TRUSTEE, OF SAME PLACE.

BUFFER.

SPECIFICATION forming part of Letters Patent No. 421,763, dated February 18, 1890.

Application filed December 7, 1888. Serial No. 292,928. (No model.)

To all whom it may concern:

Be it known that I, ANDREW W. ROGERS, of Beverly, in the county of Essex and State of Massachusetts, have invented a new and useful Improvement in Buffers for Finishing the Soles of Boots and Shoes; and I do hereby declare that the following is a full, clear, and exact description of the same.

My invention set forth hereinafter relates to buffers for finishing the soles of boots and shoes. It is of that class in which an abrading-cover capable of removal and replacing is used in connection with a foot of preferably yielding material—such as felt—and has projections by means of which it is attached to the foot. Such a covering is shown, for example, in the United States Patent of Stevens, No. 251,481, of 1881. In this patent the abrading-cover is removable and is held to the foot by means of the bolt, which holds the whole to the spindle. The head of this bolt bears in a recess or countersink in the face of the covering. This reduces the working-surface of the face and is besides liable to work down upon the surface of the sole and mar its appearance. At the same time a struck-up portion of the material of the abrading-covering affords an advantageous means of connecting this covering to the foot, and it is the object of my invention to utilize that means without the disadvantages arising from the underneath clamping-head, as in the Stevens patent aforesaid.

To secure the results indicated and avoid the special though by no means fatal defects in the patent referred to above, my invention is made, first, to consist of an abrading-covering of sand-paper, emery-cloth, or like material, having portions of its substance struck up or molded to project above the general surface of the back of the covering as a means of connection to the foot, the material being struck up or molded in such a manner that the abrading-surface is not thereby reduced.

It consists, secondly, of such a covering just described, with the parts struck up or molded, in combination with holding devices connected to the foot or its connections, which take hold of the upper part of these raised or struck-up portions, leaving part of the material of the covering interposed between the holding device and the working-face of the covering, whereby said holding devices are prevented from coming into contact with the working-face under any circumstances arising from the pressure or wear incidental to the use of the instrument.

My said invention is shown in the accompanying drawings, in which—

Figure 1 represents a form of the covering in which the raised portions are molded or otherwise formed out of the material of the covering, leaving the surface practically continuous. Fig. 2 shows a section of this covering in connection with the foot also in section. Fig. 3 illustrates a modified form in perspective. Fig. 4 shows this form with the foot and the holding devices interposed.

In the drawings, A represents the foot, which is of the ordinary form and material, and is attached to the spindle, by which it is revolved in any convenient manner. The covering *a* may be of the single thickness of sand-paper or emery-cloth, or any equivalent thereof having an abrading-surface; or it may be re-enforced on its upper or inner face by some stiffening material—such as paper glued thereto, as shown in Letters Patent No. 407,245, of July 16, 1889. Coverings formed of such materials have been heretofore, as already intimated, struck up or molded into shape, generally concavo-convex, and with parts molded also for the holding devices, as before explained, by forming the covering in a suitable mold when in a moist condition, and when glue is used with the glue soft. In this same manner I form the ribs *b*. These, as shown in Fig. 1, are molded into a solid rib of raised portions of the paper or fabric of the covering, which brings the margins of the abrading-surface bordering on the ribs closely together and in contact, leaving the abrading-surface continuous and unimpaired. These ribs may be radial, as shown in Fig. 1, or circular, as in Fig. 3, or in any form of projections. Whatever the form, the foot is grooved to correspond, so that the ribs on the covering will fit the grooves in the foot. So fitted, the covering is perfectly secure against any lateral movement on the foot in the rotation of the buffer on the sole, and requires only to be held against vertical displacement when

removed from the sole. This I may effect by means of holding devices, such as shown at *d*. This consists of a spring-clamp, which is inserted through a slot in the foot, the jaws of which grasp the rib and securely hold it, but detachably. The tendency of the upper part of the clamp to open may be utilized by its relation to the sides of the slot in the foot, so that the pressure thereon shall be sufficient for the purpose. Three of these clamps set at equal distances between the center and the edge of the buffer may be used, or any number found necessary. Instead of these clamps I may use pins *d'*, thrust through the foot horizontally, piercing the ribs and confining them in the grooves. These clamps or pins may be used with the same effect whether the ribs are formed on radial lines, as shown in Fig. 1, or are made in circular form, as shown in Fig. 3.

In either case the ribs strengthen or stiffen the covering and afford a means for connection with the foot or buffer without permitting the holding devices to work into contact with the abrading-face, as there is always some portion of the material between such holding devices and the abrading-surface.

I have shown the clamp and pin as representative devices for holding the ribbed projections of the covering. Equivalents of these may be selected from ordinary mechanical devices.

The pin or pins may be run through the felt after the covering has been applied on a line below the upper edge of the rib without difficulty.

My object has been to provide a covering in which the abrading-surface should not be interrupted by any of the connecting devices, but should always present some part of the abrading-disk between the connecting devices and the abrading-surface.

I claim—

1. An abrading-covering for buffers, having projections or ribs on its rear face struck up or molded out of the material of the covering, the face of the covering being made continuous, substantially as described.

2. An abrading-covering for buffers, having projections or ribs on its rear face formed out of the material of the covering, so as to render the front or abrading face practically continuous, in combination with a foot and holding means for securing the ribs to the foot from the rear, substantially as described.

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

ANDREW W. ROGERS.

Witnesses:
SIDNEY WINSLOW,
FREEMAN H. WINSLOW.