No. 774,444. PATENTED NOV. 8, 1904.

W. J. & J. R. MITCHELL.

BURNISHING DEVICE.

APPLICATION FILED DEC. 18, 1902.

NO MODEL.

Fig. 1.

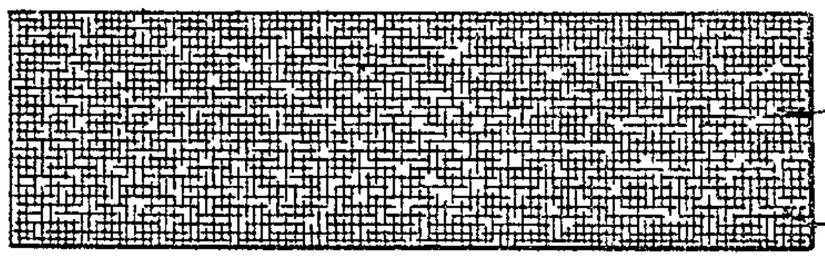


Fig. 2.

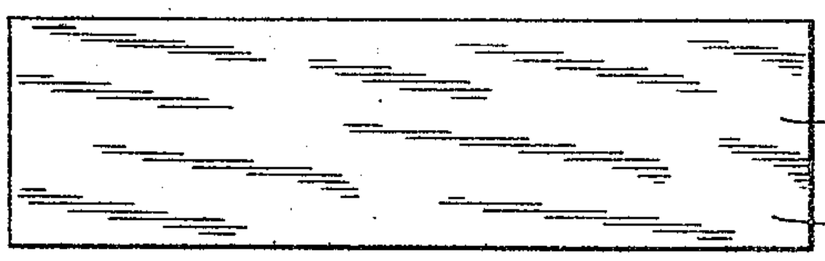


Fig. 3.

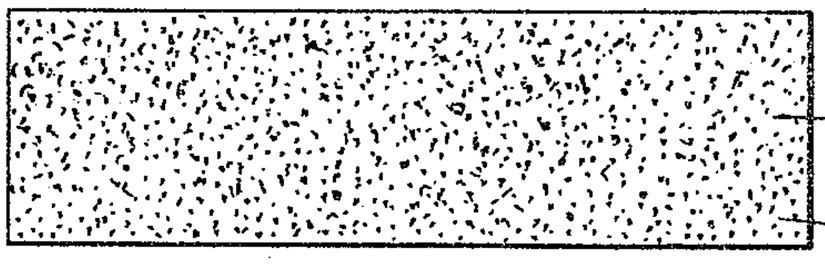


Fig. 4.

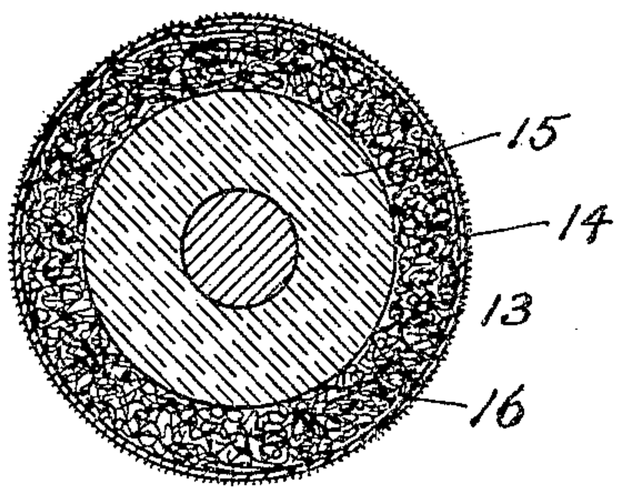


Fig. 5.

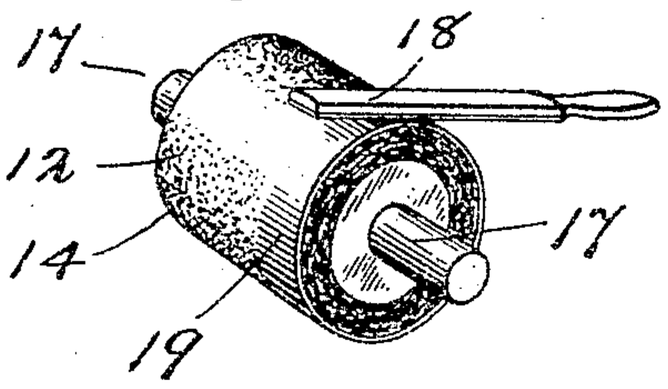


Fig. 6.

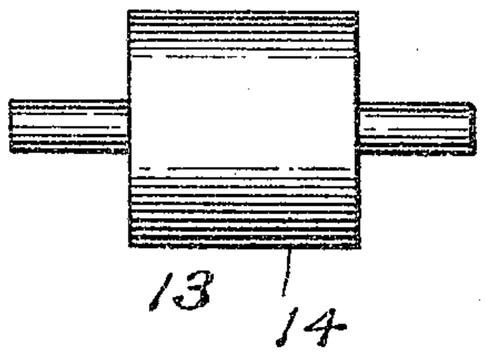
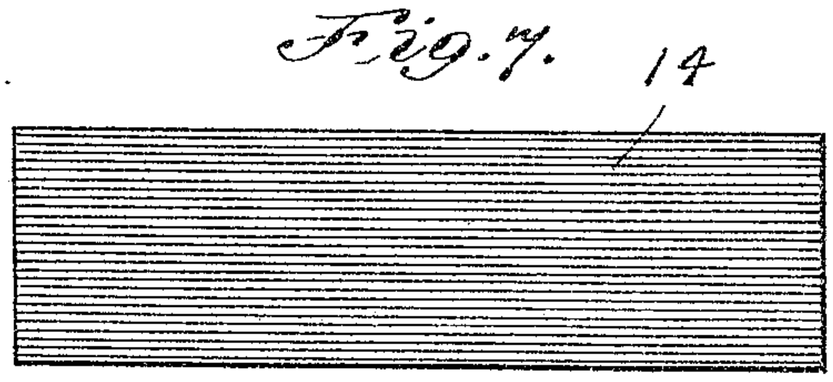


Fig. 7.



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No. 774,444. Patented November 8, 1904.

UNITED STATES PATENT OFFICE.

WINFIELD J. MITCHELL AND JAMES R. MITCHELL, OF LYNN, MASSACHUSETTS, ASSIGNORS, BY DIRECT AND MESNE ASSIGNMENTS, TO FLEXIBLE METAL MANUFACTURING COMPANY, OF LYNN, MASSACHUSETTS, A CORPORATION OF MASSACHUSETTS.

BURNISHING DEVICE.

SPECIFICATION forming part of Letters Patent No. 774,444, dated November 8, 1904.

Application filed December 18, 1902. Serial No. 135,666. (No model.)

To all whom it may concern:

Be it known that we, WINFIELD J. MITCHELL and JAMES R. MITCHELL, of Lynn, in the county of Essex and State of Massachusetts, have invented certain new and useful Improvements in Burnishing Devices, of which the following is a specification.

This invention relates to the manufacture of buffing or burnishing rolls for polishing boots and shoes or performing similar buffing or polishing operations; and it consists in the article of manufacture substantially as hereinafter described and claimed.

Of the accompanying drawings, Figure 1 represents a plan view showing the strip of cloth which goes to make up the periphery of the roll. Fig. 2 represents a plan view of said strip having a coating of glue applied thereto. Fig. 3 represents a plan view of said strip having a coating of iron-filings applied to the glue. Fig. 4 represents a transverse section of the roll with unsmoothed periphery. Fig. 5 represents a perspective view showing the method of smoothing the periphery of the roll. Fig. 6 represents an elevation showing the roll with a smoothed periphery. Fig. 7 represents a plan view of a strip brought to the condition shown in Fig. 3 and, further, having its surface smoothed by a process such as illustrated in Fig. 5.

The same reference characters indicate the same parts in all the figures.

In the preferred method of carrying out our invention we take a strip 10 of textile fabric, as shown in Fig. 1, and apply thereto a coating 11 of a suitable adhesive material, such as glue, as shown in Fig. 2. While the glue is in a wet or adhesive state we apply thereto a coating 12 of comminuted metal, such as iron-filings, in an even layer and in such quantity as the glue will retain, the said glue and iron-filings being applied in even thickness over such part of the fabric as it is desired to provide with a burnishing-surface. The strip in this state is indicated in Fig. 3, and the result of the operations described is such that the strip will have a comminuted or granular surface of very close texture. As above stated, the iron-filings are applied as a layer and in an even thickness. This results in forming a practically continuous metallic surface, the particles of iron being sufficiently soft to enable them to be worn down or spread so as to form such continuous surface. When this surface is continuous and smooth, it forms a burnishing-surface and not an abrading or cutting surface, as would be the case with particles of steel or emery or "titaniferous" iron-sand. When the glue is sufficiently dry, but preferably before it is so dry as to crack, the strip of coated cloth is turned up into cylindrical or other roll-shaped form and applied to the body of a roll 13, as indicated in Fig. 4, the peripheral strip of the roll being indicated in this figure by the numeral 14. The roll has a rigid hub or center 15, a layer 16 of elastic or resilient material, such as felt or rubber, and suitable trunnions or journals 17 17, adapted to be supported in bearings. The ends of the strip 14 may be brought together and lapped and glued, so as to secure said strip to the body of the roll, or the periphery of the roll may be secured in any other suitable manner. The article of manufacture is now a roll having a yielding comminuted or granular metallic periphery. The next stage of manufacture is indicated in Fig. 5 and consists in smoothing down or wearing away the surface of the roll in a suitable manner, as by means of an emery stick 18, held in the hands of an operator while the roll is being rotated in a lathe, this abrasive operation taking place over the whole surface of the roll until said surface has the smoothed character of the portion or zone indicated at 19. The roll is thereby brought to its finished stage, as represented in Fig. 6, and is characterized by a smooth comminuted or granular yielding metallic surface having superior polishing or burnishing qualities when applied to the leather surface of a boot or shoe or to a similar surface. After the peripheral strip 14 has been smoothed by the process described or an equivalent process it may, if desired, be furnished to the trade as a separate article of manufacture. (Indicated in Fig. 7.)

If desired, the cloth strip 10 may be applied to the roll before it is coated, the coating of glue and comminuted metal being applied to the cylindrical cloth surface and subsequently treated, as above described.

We claim—

1. A flexible strip having a surface composed of an adhesive and a layer of comminuted metal capable of burnishing.

2. A textile strip having a surface composed of an adhesive and a smooth-surfaced layer of comminuted metal capable of burnishing.

In testimony whereof we have affixed our signatures in presence of two witnesses.

WINFIELD J. MITCHELL.
JAMES R. MITCHELL.

Witnesses:
C. F. BROWN,
ADELINE C. RATIGAN.