T. G. PLANT.

BOOT AND SHOE BUFFING MACHINE.

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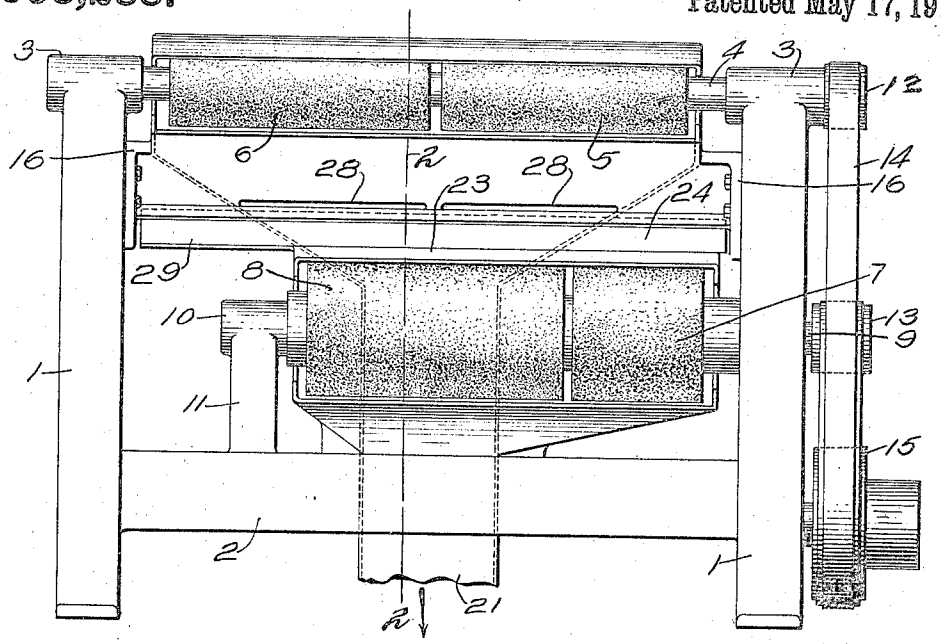

Fig. 1.

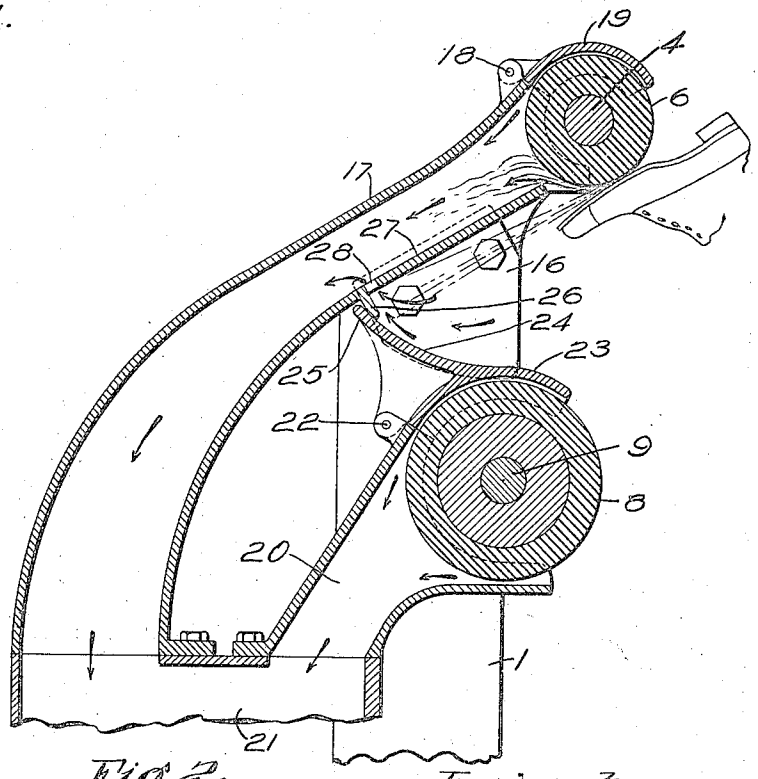

Fig. 2.

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UNITED STATES PATENT OFFICE.

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BOOT AND SHOE BUFFING MACHINE.

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To all whom it may concern:

Be it known that I, THOMAS G. PLANT, a citizen of the United States, and a resident of Boston, in the county of Suffolk and State of Massachusetts, have invented an Improvement in Boot and Shoe Buffing Machines, of which the following description, in connection with the accompanying drawings, is a specification, like numerals on the drawings representing like parts.

The invention to be hereinafter described relates to buffing machines for acting upon and finishing boots and shoes.

As well understood by those skilled in the art the buffing rolls have been usually covered by an abrading material for acting upon the sole portion of boots and shoes, and a hood has been employed for carrying away the dust and other particles detached from the shoe. Where the rolls have been disposed upon a supporting frame one above the other, some of the material detached from the shoe by the upper roll has been thrown downward away from the mouth of the dust trunk, and such material would either accumulate on and about the machine frame or fall onto the lower roll, thus introducing objections well understood by those skilled in the art.

The aims and purposes of the present invention are to provide a buffing machine of simple construction wherein the material detached from the shoe will be efficiently carried into the dust trunk, all as will be hereinafter more fully described in connection with the accompanying drawings which illustrate one form of means for carrying the invention into effect.

In the drawings: Figure 1 is a front elevation, with parts broken away, of a buffing machine embodying features of the present invention; and Fig. 2 is a section on the line 2—2 of Fig. 1.

The machine frame may be of any usual and desired character suitable to support the operating parts and their associated elements, and in the present form of the invention consists of suitable uprights 1 connected by cross ties 2, said uprights 1 having bearings 3 for a buffing shaft 4 on which may be mounted the roughing and finishing rolls 5 and 6.

Below the buffing rolls 5 and 6 may be disposed another pair of roughing and finishing rolls 7 and 8, said rolls 7 and 8 being suitably mounted on a shaft 9, one end of which finds a bearing in the upright 1 of the machine frame and the other end of which is mounted in a bearing 10 on a stand 11 extending upward from the cross ties 2.

It will be noted in Fig. 1 that the rolls 5 and 6, and the rolls 7 and 8 are preferably separated a short distance and that the rolls 5 and 6 may be preferably disposed above the rolls 7 and 8, the rolls 7 and 8 being preferably extended laterally to one side of the rolls 5 and 6, that is, the rolls 7 and 8 are not in the same vertical zone, nor are they of the same length, as clearly made apparent by Fig. 1.

The shafts 4 and 9 are extended to one side of the supporting frame and provided with the pulleys 12 and 13, respectively, over which passes a belt 14 from the driving pulley 15, which may be actuated from any suitable source of power, the construction being such that upon rotation of the pulley 15, the buffing rolls 5 and 6 and the buffing rolls 7 and 8 which are below them may be properly rotated as usual in this class of machines.

Suitably mounted on the machine frame, as by brackets 16 or otherwise, is the upper portion of a dust trunk 17, the mouth of which embraces the upper rolls 5 and 6 and has jointed thereto at 18 the cover 19 adapted when in operative position, as indicated in Figs. 1 and 2, to extend over the upper portion of the buffing rolls 5 and 6.

The dust trunk 17 extends downward and backward of the machine frame, as indicated in Figs. 1 and 2, and may be connected to any suitable source of power for creating a suction draft in the direction of the arrows, the construction being such that a shoe held, as in Fig. 2, against one of the upper rolls may be properly treated thereby and the particles detached therefrom be drawn more or less effectively into the dust trunk 17.

Suitably mounted upon the machine frame is the lower dust trunk 20 which at its lower portion joins the lower portion of the dust trunk 17, as indicated at 21, the said two dust trunks thus leading to a single suction creating means.

The lower dust trunk 20 has its mouth shaped to partially embrace the two buffing rolls 7 and 8, so that the particles detached from the shoe by said rolls may be drawn thereinto by the suction currents.

As hereinbefore indicated, some of the particles detached by the upper rolls 5 and 6 are liable to be thrown downward and consequently not get into the mouth of the dust trunk 17. To meet this condition the present invention contemplates means for intercepting these downwardly directed particles and causing them to be passed into the dust trunk at a point below the mouth thereof. As one form of convenient means to this end the lower dust trunk has pivoted thereto at 22 a cover plate 23 extending partially over the top of the lower buffing rolls, as indicated in Figs. 1 and 2. Extending backward from the cover 23 is the deflector 24, the end 25 of which is adapted to contact with a stop 26 when the cover 23 is in its operative position covering the lower rolls. The wall 27 of the dust trunk 17 has a series of openings 28 disposed below the mouth thereof toward which the deflector extends, the construction being such that particles thrown from the shoe and failing to enter the mouth of the dust trunk 17 will be received upon the deflector 24 and directed thereby into the openings 28 of the dust trunk 17 under the influence of the ingoing currents of air, as indicated by the arrows, Fig. 1.

From the described construction as one embodiment of the invention it will be noted that the buffing rolls, while arranged one above the other, are not disposed in the same vertical zone, nor are they of the same length, the upper rolls 5 and 6 being of a combined length greater than that of the lower rolls. In view of this fact the deflector 24, as indicated in Fig. 1, is carried laterally, as at 29, so that a portion of said deflector will extend under all portions of the upper buffing rolls and consequently all material falling on such deflector or from the upper rolls may be directed into the dust trunk 17.

In the described form of the invention the deflector 24 is made part of the cover 23 for the lower rolls, but obviously the invention is not limited in this respect, as the deflector and cover may be otherwise formed, and it will be understood of course that a similar deflector may be disposed below the lower roll if found desirable, but as such construction would be substantially identical with that illustrated by the deflector 24, further elucidation thereof seems unnecessary.

It will also be apparent that changes and variations may be made in the form and disposition of the buffing rolls with respect to each other, and that they may be supported otherwise than as shown within the true scope of the present invention.

What is claimed is:

1. In a buffing machine for treating boots and shoes, the combination of a buffing roll, a dust trunk having a mouth disposed adjacent said roll to receive particles detached from the shoe by said roll, said dust trunk having an opening through its wall remote from said roll, and a deflector to intercept particles failing to enter the mouth of the dust trunk and direct them through said opening into the dust trunk.

2. In a buffing machine for treating boots and shoes, the combination of a buffing roll, a dust trunk having a mouth disposed adjacent said roll to receive particles detached from the shoe by said roll, said dust trunk having an opening through its wall remote from said roll, and a movable deflector to intercept particles failing to enter the mouth of the dust trunk and direct them through said opening into the dust trunk.

3. In a buffing machine for treating boots and shoes, the combination of upper and lower buffing rolls, a dust trunk to receive and carry away particles detached from the shoe by said rolls, said dust trunk having an opening in one of its walls, and a deflector extending over the lower roll to intercept particles thrown from the shoe by the upper roll and direct them into the dust trunk.

4. In a buffing machine for treating boots and shoes, the combination of upper and lower buffing rolls, a dust trunk to receive and carry away particles detached from the shoe by said rolls, said dust trunk having an opening in one of its walls, and a hinged deflector extending over the lower roll to intercept particles thrown from the shoe by the upper roll and direct them into the dust trunk.

5. In a buffing machine for treating boots and shoes, the combination of a buffing roll, and a dust trunk having a mouth disposed adjacent said buffing roll to receive particles detached from the shoe by said roll, said dust trunk having another opening in the side wall of the trunk at a point remote from the buffing roll, said opening being disposed with reference to the roll that particles detached from the shoe and failing to enter the mouth of the dust trunk may pass through said opening into the dust trunk.

6. In a buffing machine for treating boots and shoes, the combination of an upper pair of buffing rolls, a lower pair of buffing rolls laterally disposed from vertical relation with the upper rolls, a dust trunk having a mouth adjacent each of said pair of rolls and provided with openings below the upper rolls, a hinged cover for each of said pairs of rolls, and a deflector disposed below the upper pair of rolls and extending outward from the dust trunk at a point adjacent said opening to deflect particles through said openings into the dust trunk.

7. In a buffing machine for treating boots and shoes, the combination of the buffing rolls 5 and 6, the buffing rolls 7 and 8 disposed below the buffing rolls 5 and 6 and

extending laterally beyond one end thereof, dust trunks 17 and 20 coöperating with said rolls, said dust trunk 17 having openings 28 below the upper rolls, and a deflector 24 extending longitudinally of and below both of the upper rolls to direct particles through said openings 28 into the dust trunk 17.

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

THOMAS G. PLANT.

Witnesses:

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