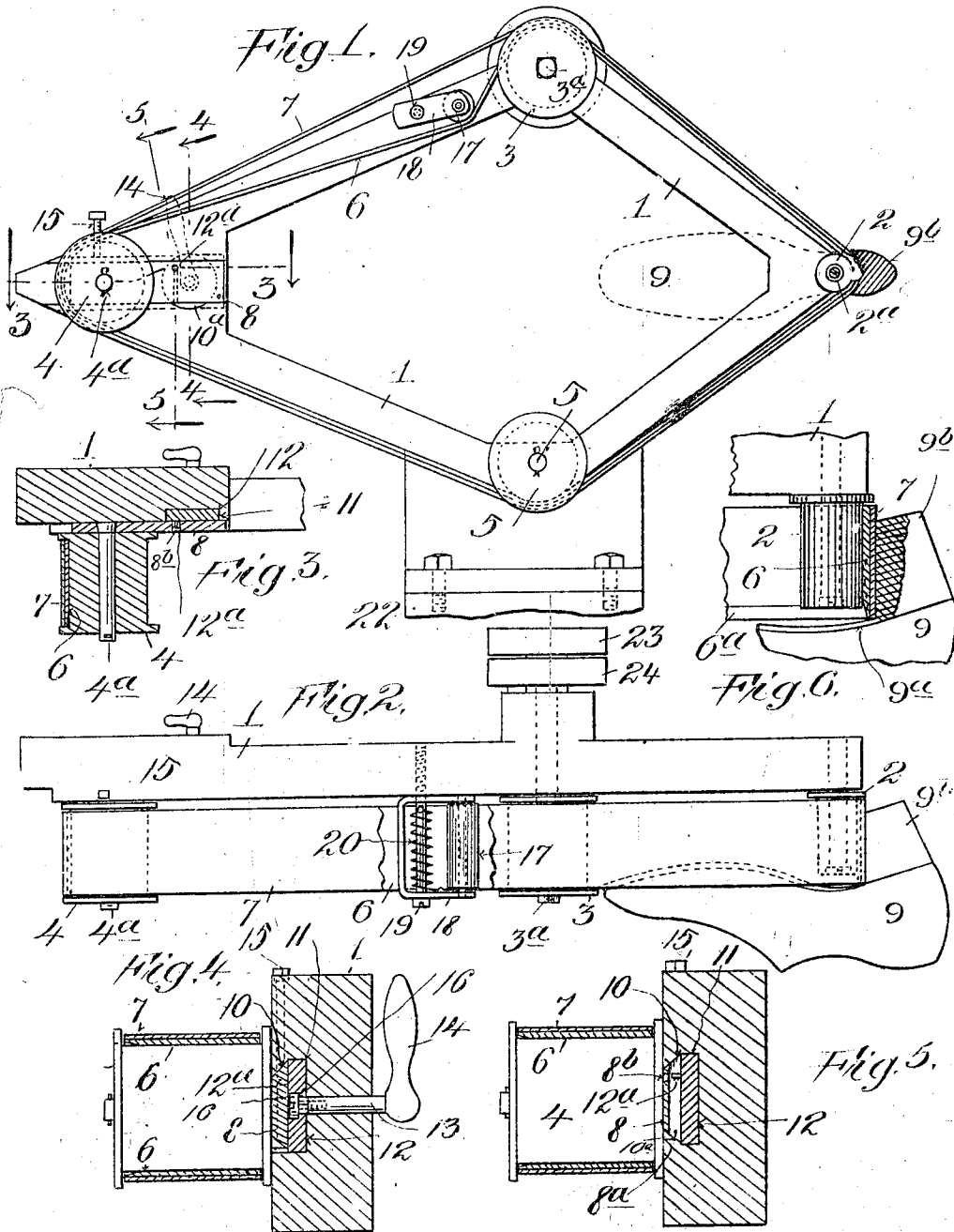


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HEEL BREAST SCOURING MACHINE.
APPLICATION FILED OCT. 4, 1911.

1,160,099.

Patented Nov. 9, 1915.



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UNITED STATES PATENT OFFICE.

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HEEL-BREAST-SCOURING MACHINE.

1,160,099.

Specification of Letters Patent.

Patented Nov. 9, 1915.

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To all whom it may concern:

Be it known that I, ALFRED H. McNALLEY, a citizen of the United States, and resident of New York city, borough of Brooklyn, in the county of Kings and State of New York, have invented certain new and useful Improvements in Heel-Breast-Scouring Machines, of which the following is a specification.

The object of my invention is to provide improved means for scouring or abrading the breasts of boot and shoe heels, to the end that such heel breasts having considerable concavity may be cut expeditiously and without cutting or defacing the shoe shank.

My invention comprises novel details of improvement and combinations of parts that will be more fully hereinafter set forth and then pointed out in the claims.

Reference is to be had to the accompanying drawings forming part hereof, wherein,

Figure 1 is a side view of a heel breast scouring machine embodying my invention; Fig. 2 is a plan view partly broken; Fig. 3 is a section on the line 3, 3, in Fig. 1; Fig. 4 is a section on the line 4, 4, in Fig. 1; Fig. 5 is a section on the line 5, 5, in Fig. 1, and Fig. 6 is a sectional detail illustrating the shoe heel in operating position.

Similar numerals of reference indicate corresponding parts in the several views.

The numeral 1 indicates a suitable frame, preferably open at the center, and at the corners or angles are rollers or pulleys 2, 3, 4, 5, over which passes an endless belt 6, around which belt is a sand-paper or cutting belt 7, which is supported by and carried along with belt 6. The rollers 3, 4, 5, are shown provided with flanges for guiding the belts, and said rollers are mounted upon spindles 3^a, 4^a and 5^a carried by the frame. Roller 2 is shown provided with a flange at its inner end but has no flange at its outer end, and is mounted to revolve upon spindle 2^a, upon which it may be held by a screw. Spindles 2^a, 3^a and 5^a are secured upon frame 1, but spindle 4 is adjustably carried by frame 1, for which purpose said spindle is secured upon a slide 8 for adjusting the tension of the belts and to take up slack thereof. Roller 2 does not project through the belts and is shown of less length than the width of the belts so as not to come in contact with the shank 9^a of the shoe 9 when

the heel 9^b is applied upon belt 7. Roller 2 is of relatively small diameter so that the belts will pass around the outer side of the same with a relatively sharp turn, such roller corresponding in circumference to the shape of the breast of the heel to be dressed or scoured. Slide 8 may be adjusted and held in such position in any desired manner. For this purpose slide 8 is shown beveled at its marginal edges, and slidably fitting a beveled guideway 10 in the front side of frame 1, and within a seat 11 behind slide 8 in a rotative member 12 connected with a spindle 13 having a handle 14. Member 12 is shown provided with a pin 12^a adapted to enter a transversely disposed groove 8^a in slide 8, whereby when member 12 is rotated said pin acting in groove 8^a will move slide 8 to adjust roller 4 to take up slack in the belts. Slide 8 may be held in adjusted position by a set screw 15 carried by frame 1. Slide 8 opposite groove 8^a is shown provided with a hole 8^b (Fig. 5) through which pin 12^a may be passed to secure the same in member 12. To assemble these parts the lower portion of guideway 10 is cut away at 10^a opposite seat 11 and member 12 may be slipped into its seat 11, then spindle 13 may be passed through frame 1 into a squared hole in member 12 and held by a screw 16 entering said spindle, and then slide 8 is placed in guideway 10 and its hole 8^b is alined with the hole in member 12 that receives pin 12^a, so that said pin can be pushed through said holes and thus be secured in said member to operate in the groove 8^a.

To maintain desired tension upon belt 6 I have shown a belt tightener comprising a roller 17 carried by a yoke 18 fitted upon a stud or the like 19, secured on frame 1, a spring 20 wound on and secured to said stud and acting upon yoke 18 serving to press roller 17 against belt 6. The belt tightener is shown between belts 6 and 7 so as not to interfere with the latter, and thus while the tightener operates upon belt 6 it does not operate upon the abrading surface of belt 7, thereby not injuring or wearing the same.

The belts may be driven in any suitable manner, and for this purpose I have shown spindle 3^a provided with fast and loose pulleys 23, 24 on the side of the frame opposite the belts (Fig. 2). The machine may

be supported in any suitable manner upon a base 22, which may rest upon the floor or be secured to a bench.

When the breast of the shoe heel is to be scoured, the shoe is held (in the position shown in Figs. 1, 2 and 6) with the breast of the heel against the sandpaper or abrading belt 7 alined with the outer portion of the roller 2, so that the shank of the shoe at the junction of the heel may be pressed close against the outer edge of the belts, and thus as the breast of the heel is held against the curved abrading belt the heel will be scoured, but as the belts are relatively thin they will not injure the shank 9^a. By preference the inner edge of belt 6 is beveled at 6^a so as not to engage the shank 9^a (see Fig. 6). By this means the heel breast may be quickly and conveniently scoured and the sole may be set within the belts, as illustrated, and the shoe may be moved in various positions as required according to the shape of the heel being scoured.

By means of my improvements it will be understood that the heel may be quickly and properly scoured without danger of injury to other parts of the shoe. As the sandpaper belt 7 is detachably applied upon the permanent belt 6 the sandpaper belt may be readily removed and replaced and the belt 6 will carry the belt 7 along so that strain on belt 7 is materially reduced, enabling a relatively weak abrasive belt to be used.

Having now described my invention what I claim is:—

1. The combination of a frame, a plurality of rollers carried thereby and disposed at oblique angles to one another, a plurality of belts passing over said rollers, one belt being within the other, the outer belt having abrasive material, and means for operating said belts, one of said rollers terminating within the belts, an edge of the latter projecting beyond said roller.

2. The combination of a frame; a plurality of rollers carried thereby, a plurality of belts passing over said rollers, one belt being within the other, the outer belt having abrasive material, and means for operating said belts, the inner belt being beveled inwardly along its outer edge.

3. The combination of a frame having arms at oblique angles to one another, a plurality of flanged rollers carried thereby adjacent to the angles of said arms, one of said rollers being unflanged at its outer end, an abrasive belt carried by said rollers, and having an edge projecting unobstructed beyond the adjacent unflanged end of the roller to operate at the joint of a heel and shank, and means for operating said belt.

4. The combination of a frame, a plurality of flanged rollers carried thereby, one of said rollers being unflanged at its outer end, and located at the apex of a triangle with respect to two other rollers, an abrasive belt carried by said rollers, and means for operating said belt, said last named roller terminating at its unflanged end within the belt, an edge of the latter projecting beyond said roller.

5. In a heel breast scouring machine, the combination with a frame, of a plurality of rollers mounted in angular formation thereon, endless belts adapted to engage the rollers, one belt overlying the other, and the outer belt being composed of abrasive material, means for driving one of the rollers to actuate the belts, one of said rollers having a flanged rim and being longitudinally smaller than the width of the belts for coaction with a heel breast.

6. The combination of a frame having its central portion open, a plurality of rollers projecting from one side of said frame and disposed at angles to one another, a plurality of belts passing over said rollers, one belt being located within the other, the outer belt having abrasive material upon its outer surface, and means to operate said belts, the space within said belts being free and unobstructed adjacent one of said rollers to admit a shoe when its heel is applied to the abrasive belt adjacent one of said rollers.

7. The combination of a frame of angular form, rollers located at the angles of said frame, an abrasive belt passing over said rollers, and means to operate said belt, the space within said belt being free and unobstructed adjacent one of said rollers to admit a shoe when its heel is applied to the abrasive belt adjacent one of said rollers.

8. In a heel breast scouring machine, the combination with a frame, of a plurality of rollers mounted in angular formation thereon, endless belts adapted to engage the rollers, one belt overlying the other, and the outer belt having abrasive material, means for driving one of the rollers to actuate the belts, one of said rollers having a flanged rim with a cylinder of smaller diameter than the other rollers and of less length than the width of the belts, said inner belt having a beveled edge for engagement with the joint of a heel and shank.

Signed at New York city, in the county of New York, and State of New York, this 2d day of October, A. D. 1911.

ALFRED H. McNALLEY.

Witnesses:

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