Aug. 20, 1929. A. A. GLIDDEN ET AL 1,725,347

RUBBER BOOT

Filed Sept. 4, 1928

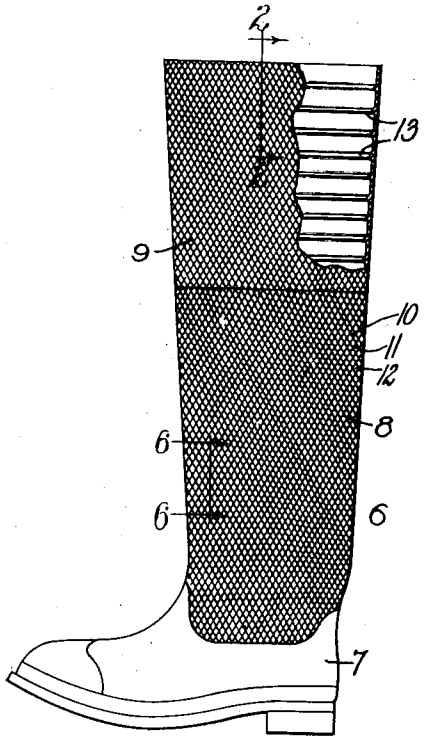


Fig. 1.

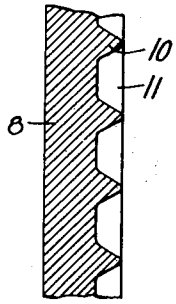


Fig. 6.

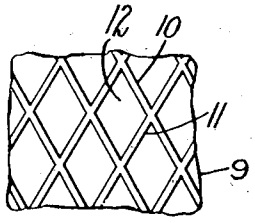


Fig. 3.

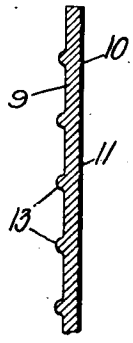


Fig. 2.

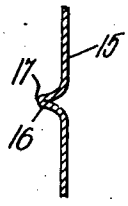


Fig. 4.

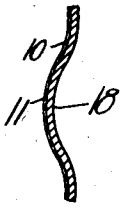


Fig. 5.

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Patented Aug. 20, 1929. 1,725,347

UNITED STATES PATENT OFFICE.

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RUBBER BOOT.

Application filed September 4, 1928. Serial No. 303,665.

This invention relates to an improved rubber boot, and is especially adapted for use in rubber top boots.

The object of the invention is to prevent the boot leg or the top from becoming cracked by bending, and furthermore, the invention relates to a construction whereby in a top boot the top will stay in position on the leg of the wearer without any means for connecting it to a belt to prevent it from slipping down on the leg.

These results are attained by providing on the outer surface of the leg, and/or top portion of the boot, corrugations, preferably oppositely inclined to each other and intersecting each other at an acute angle, thus forming diamond-shaped sections of a greater length longitudinally than circumferentially of the leg of the boot. The top portion of the boot is also provided with circumferentially extending ribs on its inner face, preferably these circumferentially extending ribs are annular ribs.

The invention consists in a rubber boot of the construction hereinafter set forth in the specification and particularly as pointed out in the claims.

Referring to the drawings:

Figure 1 is a side elevation of a rubber top boot embodying our invention, the same being broken away to illustrate the interior construction.

Fig. 2 is a section on an enlarged scale taken on line 2—2, Fig. 1.

Fig. 3 is a detail view of a portion of the top or leg of the boot illustrating the diamond-shaped corrugations on the outer face thereof.

Fig. 4 is a detail section illustrating a vertical section of a portion of the leg of a boot without corrugations.

Fig. 5 is a detail section of a portion of the leg of a boot with corrugations. Fig. 6 is an enlarged detail section taken on line 6—6, Fig. 1.

Like numerals refer to like parts in the several views of the drawings.

In the drawings, 6 is a rubber boot embodying a foot portion 7, a leg portion 8 and a top portion 9. The outer surface of the leg and top portion of this embodiment of our invention is provided with corrugations 10 and 11 which are inclined to each other and intersect each other, forming diamond-shaped sections 12. The inner face of the top portion 9 is provided with circumferentially extending or annular ribs 13.

In Fig. 4 a portion 15 of the leg of a boot is illustrated which is not provided with corrugations, the result being that when bent at any portion, such as back of the knee or above the instep on the front, it will form abrupt bends 16, and these bends will eventually cause the rubber to crack along the portion 17.

In Fig. 5 a section of the portion of a leg of a boot is shown which is provided with the corrugations 10 and 11, and it will be seen that the rubber of the leg portion of the boot in this case bends along an arc of greater radius as at 18, so that no abrupt line causing the rubber to crack is formed in the boot leg when the same is bent as at the throat or at the rear of the knee. The abrupt bends and cracking strains illustrated in Fig. 4 are prevented, as shown in Fig. 5, by the corrugations 10 and 11 crossing each other preferably at an acute angle, thus lending strength to the material of which the leg or top portion of the boot is constructed and preventing its depreciating by reason of the bending stresses brought to bear at 17, Fig. 4.

The additional strength referred to as being added to the material of which the leg or top portion of the boot is constructed is due to the following facts. The degree of flexing to which a boot leg is subjected depends on the angularity or sharpness of the bend. It is well known that the angularity or radius of curvature of the bend is influenced by the thickness of the material comprising the leg portion, so that the angular bending may be reduced by making the leg portion of the boot very thick. This results, however, in a heavy article with a high merchandise cost, and this can be avoided by means of the rib structure previously described. This structure is such that when the boot leg is bent the ribs are compelled to stretch and the same result attained with a comparatively thin sheet material forming the leg with the ribs superimposed thereon, as would be attained by a comparatively thick sheet material without the ribs. In other words, the boot leg is

strongly reinforced out of proportion to the thickness or weight of merchandise that is employed.

In order to prevent the top portion 9 of the boot from slipping down on the leg of the wearer, circumferentially extending or annular ribs 13 are provided on the inner face of the top portion. This causes the top portion to cling to the leg of the wearer in such a manner that it remains in position and does not slip down on the leg of the wearer and does away with the necessity for straps or other contrivances connecting the top portion with a belt.

We claim:

1. A rubber boot embodying a foot and leg portion, the leg portion having on its outer face oppositely inclined corrugations intersecting each other.

2. A rubber boot embodying a foot and leg portion, the leg portion having on its outer face oppositely inclined corrugations intersecting each other, at an acute angle.

3. A rubber boot embodying a foot and leg portion, the leg portion having on its outer face oppositely inclined corrugations intersecting each other at an acute angle and forming diamond-shaped sections of a greater length longitudinally than circumferentially of said leg portion.

4. A rubber top boot embodying a foot portion, a leg portion and a top portion, the top portion having circumferentially extending ribs on its inner face.

5. A rubber top boot embodying a foot portion, a leg portion and a top portion, the top portion having annular ribs on its inner face.

6. A rubber top boot embodying a foot portion, a leg portion and a top portion, the top portion having circumferentially extending ribs on its inner face and corrugations on its outer face.

7. A rubber top boot embodying a foot portion, a leg portion and a top portion, the top portion having circumferentially extending ribs on its inner face and oppositely inclined corrugations intersecting each other on its outer face.

In testimony whereof we have hereunto set our hands.

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