J. McI. OGILVIE.

HALF SOLE FOR BOOTS AND SHOES.

APPLICATION FILED FEB. 27, 1918.

1,278,375. Patented Sept. 10, 1918.

Fig. 1.

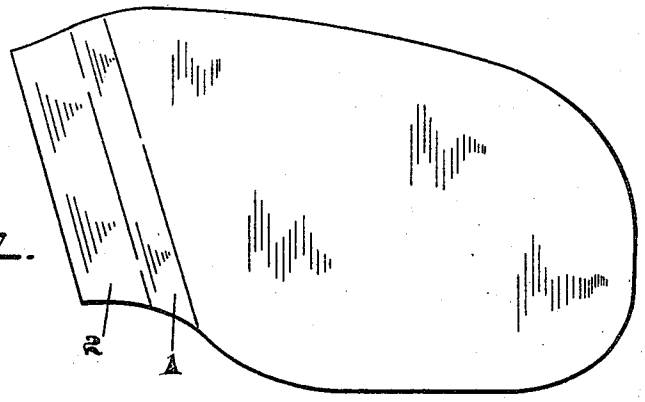


Fig. 2.

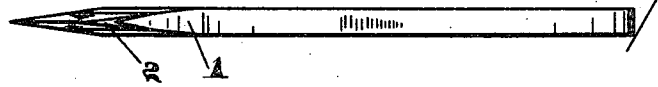
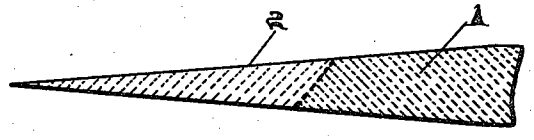


Fig. 3.



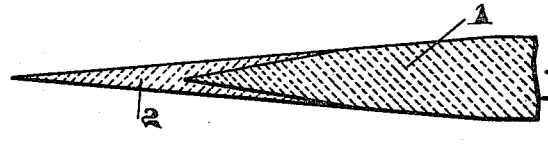
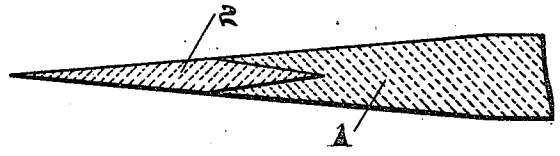


Fig. 4.

Fig. 5.



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HALF-SOLE FOR BOOTS AND SHOES.

1,278,375. Specification of Letters Patent. Patented Sept. 10, 1918.

Application filed February 27, 1918. Serial No. 219,397.

To all whom it may concern:

Be it known that I, JOHN McI. OGILVIE, of the city of Toronto, in the county of York, Province of Ontario, Canada, have invented certain new and useful Improvements in Half-Soles for Boots and Shoes, of which the following is a specification.

Half soles for boots and shoes are now commonly made of rubber and rubber containing compositions. To prevent cracking occurring consequent on the constant flexing of the sole in use, the filling materials employed in the composition must be of such a nature and be employed in such proportions that the flexibility of the sole remains fairly high. Such soles cannot be satisfactorily nailed to the upper, but must be sewn as the nail heads tend to pull through the composition. The sewing may be easily effected around the sides and toe of a half sole, but not under the shank of the shoe, and it has been customary to strengthen the shank portion of the half sole with fabric applied to or embedded therein.

This solution of the difficulty has not been entirely satisfactory, as in trimming the half soles the fabric becomes exposed at the edges, giving the soles an objectionable appearance and affording an opportunity for the fabric to absorb moisture, which ultimately rots the fabric. Further, if such fabric be applied to the under surface of the shank of the half sole, it is exposed to the attacks of moisture and also gives the sole a patchy appearance, and if it be embedded in the shank the heads of the nails must be punched down and sunk in the soft under surface of the shank, which also gives a bad appearance and tears and crushes the composition around the nail holes.

The ordinary leather half sole possesses none of the above objectionable features and my object is to devise a rubber composition half sole which will possess all the desirable characteristics of the leather sole together with the special advantages of the composition sole.

I attain my objects by forming integral with the shank portion of the half sole a nailing strip of special composition substantially as hereinafter described and illustrated in the accompanying drawings in which—

Figure 1 is a plan view of a sole constructed in accordance with my invention;

Fig. 2 is a side elevation of the same;

Fig. 3 a longitudinal section on an enlarged scale of the nailing strip and shank of the half sole;

Fig. 4 a similar view showing a slight modification; and

Fig. 5 a similar view showing another modification.

In the drawings like numerals of reference indicate corresponding parts in the different figures.

The main portion of the sole may be of any of the usual rubber compositions now commonly employed. Preferably a composition containing a considerable proportion of vegetable fiber will be employed, and this fiber will be preferably incorporated in the composition so that the fibers mainly run transversely of the sole. Such a composition, while possessing great durability, is comparatively flexible and elastic, bending readily, particularly on transverse lines. The shank portion 1 of the half sole has applied thereto a nailing strip 2 formed of a composition which, when cured, possesses less flexibility and elasticity than the main portion of the sole, so that it will resist penetration by a nail head much more effectively than the composition of which the main part of the sole is formed.

These differences in the physical characteristics of the nailing strip can be most readily attained by incorporating in the composition a considerably greater proportion of fiber or other equivalent material than in the main portion of the sole. This nailing strip is molded on the shank portion of the half sole and the complete sole thus formed is suitably vulcanized. The result is that there is formed integral with the shank portion of the half sole a nailing strip of homogeneous composition possessing the characteristics above set forth.

The coloring of the respective compositions of which the half sole and the nailing strip are formed is easily regulated so that there is no difference in color, so that despite the different physical properties of the two parts of the sole to the eye the appearance may be the same if so desired. Such a half sole may thus be easily trimmed on its edges without spoiling its appearance.

In uniting the nailing strip and the shank of the half sole, it is preferable to skive the end of the shank portion of the sole to a feather edge either as shown in Fig. 3 or Fig. 4, and to mold the composition form-

ing the nailing strip thereto so that the rear edge of the nailing strip comes very nearly to a feather edge and its upper and lower surfaces merge into the similar surfaces of the shank portion of the half sole without abrupt changes of direction.

From the above description it will be seen that I have devised a half sole which will satisfactorily attain the objects of my invention as set out in the preamble of this specification.

What I claim as my invention is:—

1. A half sole of a fiberized rubber-composition having an integral nailing strip formed in its shank portion by use therein of a larger proportion of fiber than in the remainder of the sole.

2. A half sole of rubber-composition having vulcanized to its shank portion a nailing strip of fiberized rubber composition containing a large proportion of fiber disseminated throughout its mass.

3. A half sole of rubber-composition having the end of its shank portion formed of a nailing strip of fiberized rubber composition vulcanized thereto and containing a large proportion of fiber disseminated throughout its mass.

4. A half sole of fiberized rubber-composition, in which the fibers mainly run transversely of the sole, having a nailing strip of fiberized rubber-composition vulcanized to its shank containing a larger proportion of fiber than the sole.

Signed at Toronto this 19th day of Feb., 1918.

JOHN McI. OGILVIE.