J. O. GARDELL.

Boot and Shoe Soles and Plugs.

No. 214,502. Patented April 22, 1879.

Fig. 1.

Fig. 2.

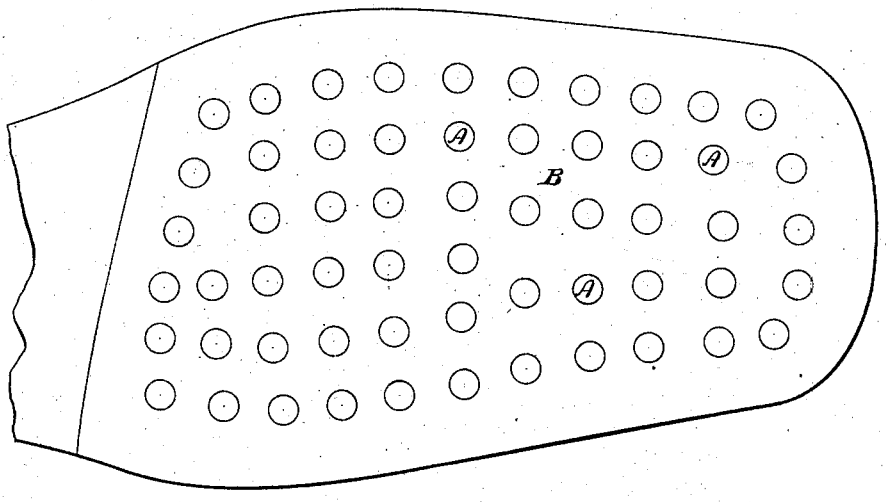
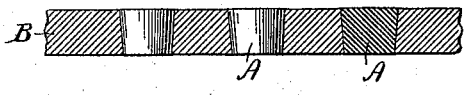


Fig. 3.



Witnesses:

C. Clarence Poole

R. T. Dyer.

Inventor:

John O. Gardell

by Geo. W. Dyer & Co

Attys

UNITED STATES PATENT OFFICE.

JOHN O. GARDELL, OF CHICAGO, ILLINOIS.

IMPROVEMENT IN BOOT AND SHOE SOLES AND PLUGS.

Specification forming part of Letters Patent No. **214,502**, dated April 22, 1879; application filed September 19, 1878.

To all whom it may concern:

Be it known that I, JOHN O. GARDELL, of Chicago, in the county of Cook and State of Illinois, have invented a new and useful Improvement in Plugs for Boots and Shoes; and I do hereby declare that the following is a full and exact description of the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon.

Heretofore, to prevent wear, the soles of boots and shoes have been provided with metallic plugs of the same length as the thickness of the soles and inserted at short intervals; but these metallic plugs, in use, rust and burn the leather around them and work loose, besides making the boot or shoe quite heavy.

My invention consists, mainly, in making plugs of compressed wood for this purpose, which will be light, will not work loose, and will be sufficiently hard to relieve the sole of most of the wear.

The invention further consists in making the compressed-wood plugs of tapering form, adapting them to be driven into the holes in the sole from the inside before it is fastened in position.

In the drawings, Figure 1 is a view of the preferred form of my plug; Fig. 2, a view of the sole of a boot or shoe having my plug applied thereto, and Fig. 3 a section of a portion of the same.

A is the plug, made of compressed wood, preferably some hard wood, or the plug may be compressed after being formed. The plugs are inserted at short distances apart in holes cut through the outer leather sole, B, of a boot or shoe, and, if longer than the sole is thick, are cut off flush with both sides of the same; or, if desired, may project a little on the outer face of the sole.

The plugs will retain the size to which they are compressed till the sole is wet, when they will expand and will not again shrink to their former size. Thus it will be seen that the plugs are tightened by the use of the boot or or shoe and cannot become loose.

The plugs are preferably made in the shape of a frustum of a cone, and are driven into the sole from the inside, Fig. 3, which, in connection with the expansion of the plugs, makes them absolutely secure and immovable; but it is evident that, without departing from the spirit of my invention, the plugs could be made angular in cross-section, or of any other shape, and still preserve the tapering form, or that they could be made either round or angular in cross-section, and with straight sides without taper. In the latter case the plugs might be provided with one or more grooves, into which the leather would jam when the plugs expand.

The wooden plugs being very hard will wear for a long time.

My compressed-wood plugs possess over the metal plugs other advantages than those of lightness and security, in that they can be made cheaper, and will prevent slipping when the wearer is walking on ice or other smooth surfaces.

Plugs of the same construction can be applied to the heels of boots and shoes, if desired, as well as to the soles.

I claim—

1. As an improved article, an outer sole for a boot or shoe, provided with a filling of tapering compressed wood plugs, as shown and described.

2. A compressed tapering wooden plug adapted to be inserted in the sole of a boot or shoe, substantially as described.

This specification signed and witnessed this 2d day of August, 1878.

JOHN O. GARDELL.

Witnesses:
GEO. R. LYON,
FRANK J. SALISBURY.