

G. V. SHEFFIELD.

MANUFACTURE OF BOOT AND SHOE SOLES, &c.

No. 178,385.

Patented June 6. 1876.

Fig. 1.

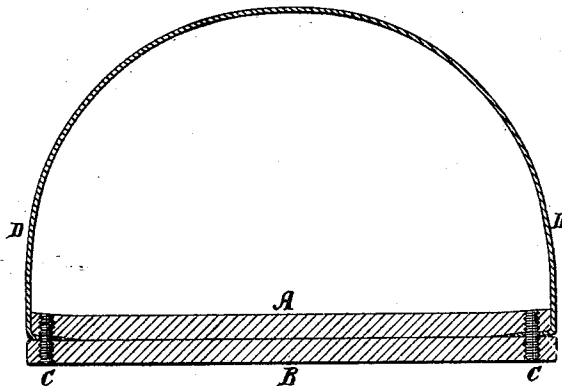


Fig. 2.



WITNESSES:

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GEORGE V. SHEFFIELD, OF NEW YORK, N. Y., ASSIGNOR TO SHEFFIELD
SCREW DRIVING MACHINE COMPANY, OF SAME PLACE.

IMPROVEMENT IN THE MANUFACTURE OF BOOT AND SHOE SOLES, &c.

Specification forming part of Letters Patent No. **178,385**, dated June 6, 1876; application filed
March 1, 1875.

To all whom it may concern :

Be it known that I, GEORGE V. SHEFFIELD, of the city, county, and State of New York, have invented a new and Improved Method of Attaching Boot and Shoe Soles, of which the following is a specification:

This invention relates to certain improvements in the mode of attaching leather or analogous material in the manufacture of boots and shoes, harness, belts, and other uses for which the same material is usually employed. It consists in the method of uniting the soles of boots and shoes, or the parts to be joined together, by means of threaded screws made of petrified rawhide, or other analogous fibrous material, which said screws are screwed into corresponding screw-tapped holes in the parts to be united.

Figure 1 is a transverse section of a shoe, showing the sole fastened on according to my improved method; and Fig. 2 represents a screw of petrified rawhide in side elevation.

Similar letters of reference indicate corresponding parts.

A is the insole, B the outsole, C the screws, and D the upper.

The screws will be made in considerable length, being cut in long strings from the skins, and threaded from end to end. The holes will be bored with an ordinary twist-drill or other suitable boring-tool, and threaded by a screw-cutting tap, and then the end of a long screw of hide will be screwed in and cut off, the screw being held in a chuck, which, before the screw is cut off, opens and runs back on the screw far enough for the end cut off to project sufficiently for the next screw, and then closes and holds onto it, ready for the next operation.

In practice the boring, tapping, and inserting tools, and a feeding mechanism, will be

contrived to operate automatically, in consecutive order, inserting the screws at certain predetermined distances apart, and the distances may be varied by varying the feed.

By means of my improved method the following advantages are secured: The material of which the screws are made is substantially the same as the leather fastened by them, and shrinks and swells and wears the same, so that the leather and fastening soon form one homogeneous whole, having no antagonistic properties, as in the case of other fastenings.

I am aware of the fact that compressed leather pegs have been used in the manufacture of shoes; but my method secures far greater advantages, in that the screws, being screwed entirely through the leather, and cut off at each side flush with the leather or slightly above it, will head a little at each end by the pressure of wear, and so have, in addition to the friction of the sides in the hole, heads to prevent them from working out. The fastening being a screw-threaded one, moreover, they are effectually prevented from becoming too loose, and, the holes being screw-tapped, it is not necessary that the leather should be softened, as it must be for other kinds of fastenings.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

The within-described method of attaching parts of leather or similar material, by forming screw-tapped holes, and inserting therein screw-threaded pegs or fastenings, made from rawhide or other analogous fibrous material, substantially as set forth.

GEORGE V. SHEFFIELD.

Witnesses:

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