

W. Wickersham

Shoe Sole Fastening.

Nº 97,260.

Patented Nov. 23, 1869.



Witnesses.

C. P. Washburn.

Charles M. Heaton.

Inventor.

William Wickersham.

United States Patent Office.

WILLIAM WICKERSHAM, OF BOSTON, MASSACHUSETTS.

Letters Patent No. 97,260, dated November 23, 1869.

IMPROVEMENT IN WIRE FOR FASTENING SOLES TO SHOES, &c.

The Schedule referred to in these Letters Patent and making part of the same.

To all whom it may concern:

Be it known that I, WILLIAM WICKERSHAM, of Boston, in the county of Suffolk, and State of Massachusetts, have invented a new and useful Manufacture of Wire for Fastening Soles on Boots, Shoes, &c.; and I do hereby declare that the following is a full and exact description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon.

The nature of my invention consists in a manufacture of wire, of such form, and with such indentations in the sides thereof, (rounded on the prominent parts) as will not interfere with its ready passage into the leather, through two or more soles, when a suitable hole is punched, or, in some cases, without a hole, and yet, indentations so formed as will admit of the leather (when damp and in a partially plastic state,) to pass into them in such manner that when said leather becomes dry, the sole will adhere firmly and strongly, by means of said indentations.

Referring to my drawings—

h and *k* are cross-sections, showing the two forms of my wire.

n is a longitudinal section of the same, showing the rounded form of its projections or prominent parts on a large scale.

n' is a view of the same, proper size for use.

The advantage of this form of wire is in its prominent parts being nicely rounded, so that it can pass easily and smoothly into the leather by merely compressing the leather around its sides sufficient to admit of its larger diameters passing into said leather, without breaking, tearing, or grinding its fibres to powder, as is the case with other forms of wire for a similar purpose.

One of the other forms in which wire has been made consists of a series of frusta of cones, having the sharp angle at the base projecting against the leather. These projecting edges tend to cut up the fibres of the leather as the wire passes in, and break and grind them into powder, thereby making the hole larger, giving the wire less holding-power.

Another form of wire has sharp angular beards; another has fine angular notches, much like the teeth of a fine saw. Both of these reduce the leather coming in contact with the sharp angular points to powder or fine sawdust, as the wire passes into the leather, leaving little or nothing of said fibres to hold the wire in its place.

Then there is another form of wire, consisting of corrugations, or a series of short bends in the wire.

This would have a similar holding-power to my wire on the two sides in the plane of the corrugations, but the other two, at right angles to these, would probably have no more holding-power than a smooth wire.

There is still another form of wire, consisting of a screw, with a twist long enough to admit of its being driven into the leather, revolving at the same time. This might be a good arrangement were it not for the continual tendency of the wires, while the boot is being worn, to move up against the foot on account of the leather wearing faster than the wire, thereby causing the wires to project a little below the leather while one is walking on the pavement.

My wire is not liable to this difficulty, or to any of the difficulties above described, as, when it is driven in, the leather is compressed around it by being pressed outward to admit the passage of the larger diameter of the wire through it, but when the wire is fairly in, the pressure outside of the grooves around the smaller diameters, will be relaxed, allowing or causing it to press close to the wire around its smaller diameter.

Thus describing my invention,

I claim, as an article of manufacture, wire made round or oval in its cross-section, with a succession of indentations around it, having its prominent portions rounded, making its diameter successively larger and smaller, without angular projections, substantially in the manner and for the purpose set forth.

WILLIAM WICKERSHAM.

Witnesses:

A. D. PARKER,
JOHN R. BULLARD.