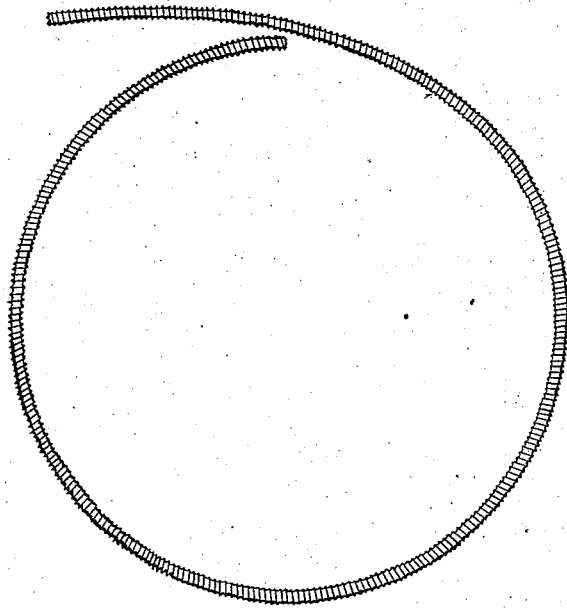


A. VAN WAGENEN.

Screw-Threaded Wire for use in Manufacture of  
Boots and Shoes.

No. 161,842.

Patented April 6, 1875.



Witnesses:

*Ewell & Co.*  
*H. Gardner*

Inventor

*Albert Van Wagenen* by  
*Lucretia Pollock Bailey*

# UNITED STATES PATENT OFFICE.

ALBERT VAN WAGENEN, OF BOSTON, MASSACHUSETTS.

IMPROVEMENT IN SCREW-THREADED WIRE FOR USE IN MANUFACTURE OF BOOTS AND SHOES.

Specification forming part of Letters Patent No. **161,842**, dated April 6, 1875; application filed February 11, 1875.

*To all whom it may concern :*

Be it known that I, ALBERT VAN WAGENEN, of Boston, Suffolk county, Massachusetts, have invented certain new and useful Improvements in Screw-Threaded Wire for Use in the Manufacture of Boots and Shoes, of which the following is a specification, reference being had to the accompanying drawing.

The article that I desire to secure by Letters Patent as a new manufacture is a screw-threaded wire of indefinite length, having a screw-thread of slight pitch and considerable depth, with the spaces between the spiral folds wider than the thread is thick.

The screw-thread is of slight pitch, so that when the wire is inserted in the sole it will not be liable thereafter to work its way into the interior of the shoe. It is of considerable depth, so that it may be inserted in place by screwing the wire into the sole, in contradistinction to driving it by direct impact or pressure. The object of spacing the spiral folds, as specified, is to give the wire more holding power.

The wire is intended to be used by taking it in the length, inserting one end in the sole, and screwing it into place, and then separating this inserted portion from the main length of wire by cutting off the wire close to the sole.

I am aware that machinery has heretofore been devised for cutting a thread upon short lengths of wire, which were screwed into the shoe progressively with the formation of the thread. This machinery at the best operated imperfectly, and the method of manufacture which it involved was open to many serious objections, which prevented its use to any appreciable extent.

Under my invention, wire in perfect condition for screwing into the sole is furnished in long lengths, which are adapted to be used, without any preliminary manipulation, in machinery for inserting screw-wire into boots or shoes.

I am also aware that twisted wire, with a spiral or annular burr on its exterior, and wire with a rounded thread of slight pitch and little depth, have been devised for use in the boot and shoe manufacture. But all these wires are formed to be driven, and their structure is such that they are practically unavailable for use in any other way. Experience has demonstrated that wire thus formed and driven has comparatively little holding power, while wire formed according to my invention has great holding power, unexcelled indeed by any other fastening, even including sewing.

A piece of wire made in accordance with my invention is represented in the accompanying drawing. Such wire is made in long lengths, and supplied to the market in coils.

What I claim, and desire to secure by Letters Patent, is—

As a new article of manufacture, for use in the boot and shoe manufacture, the herein-described screw-threaded wire, made in long lengths, having a thread of slight pitch and considerable depth, as set forth.

In testimony whereof I have hereunto signed my name this 20th day of January, A. D. 1875.

A. VAN WAGENEN.

Witnesses:

A. POLLOCK,  
EWELL A. DICK.