

(No Model.)

E. I. BROWN.

SHOE OR BOOT.

No. 342,679.

Patented May 25, 1886.

Fig. 1.

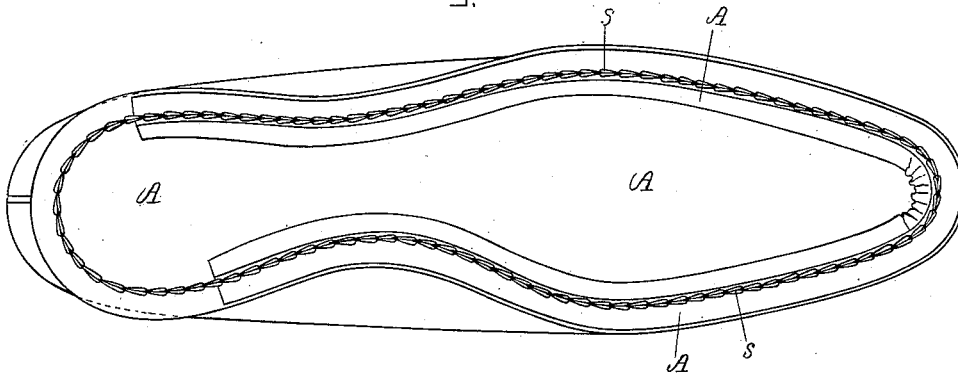


Fig. 2.

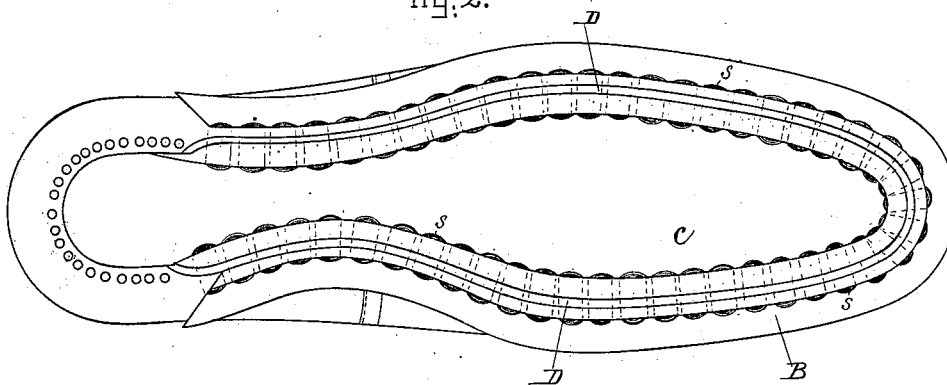


Fig. 3.

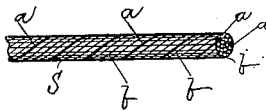
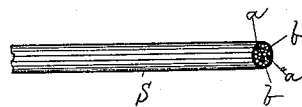


Fig. 4.



Witnesses.

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# UNITED STATES PATENT OFFICE.

EDWARD IRVING BROWN, OF ROCKLAND, ASSIGNOR, BY MESNE ASSIGNMENTS, TO JOSEPH R. LEESON, OF NEWTON, AND WILLIAM BENNETT ARNOLD AND GEORGE AUGUSTUS CHAMBERLAIN, BOTH OF NORTH ABINGTON, MASSACHUSETTS.

## SHOE OR BOOT.

SPECIFICATION forming part of Letters Patent No. 342,679, dated May 25, 1886.

Application filed March 17, 1886. Serial No. 195,513. (No model.)

*To all whom it may concern:*

Be it known that I, EDWARD IRVING BROWN, of Rockland, in the county of Plymouth, of the Commonwealth of Massachusetts, have invented a new and useful Improvement in Shoes or Boots, &c.; and I do hereby declare the same to be described in the following specification and represented in the accompanying drawings, of which—

10 Figure 1 is a bottom view of a shoe or boot having its outer sole sewed to the insole and upper by thread of my improved kind to be described. Fig. 2 is similar view of a shoe or boot having its welt, for connecting its  
15 outer sole to the inner sole and upper, sewed to such insole and upper by the said thread. Fig. 3 is a side view of the thread as it appears before being covered with shoe-makers' wax, Fig. 4 being a side view of it as so covered, such Figs. 3 and 4 being on an enlarged  
20 scale.

The object of my improvement, the nature of which is defined in the claims hereinafter presented, is to combine with the shoe or boot  
25 and the waxed flaxen or vegetable thread used in connecting together parts thereof a metallic wire or wires, either braided or twisted into the said vegetable thread, and with it covered with shoe-makers' wax.

30 It has been found very difficult, if not practically impossible, to sew by a sewing-machine, especially of the kind known as the "McKay Sewing-Machine," a metallic wire into the parts of a shoe or other article of leather to be connected by sewing, owing to the difficulty of  
35 looping the wire and drawing it into the work. I have found that by combining with the waxed thread of flax or other vegetable or animal material—as silk, for instance—a fine wire or  
40 wires braided or twisted into the said thread, and with it subsequently waxed, I not only can re-enforce and greatly improve and strengthen the thread of animal or vegetable matter, but can use it in a sewing-machine with advantage, and without any or scarcely any of the  
45 difficulties attending on the use of a single

wire, or a cord composed of wires either twisted or braided together. The shoe or article in which my improved manufacture of thread is used in sewing together parts thereof becomes much stronger, more durable, and not  
50 nearly so liable to rip in the parts connected by such compound thread than would be the case were an ordinary waxed thread composed of a vegetable or animal material only used. 55

The improved thread consists of one or more strands, *a*, of flax, cotton, or silk, or other suitable vegetable or animal material, and one or more fine wires, *b*, either twisted or braided together, and subsequently saturated  
60 or covered with shoe-makers' wax *S*.

In Fig. 1 the sewing of the outer sole, *A*, to the insole and upper is shown at *s*, the improved thread used in effecting such being of a strand or strands of wire and another or others of a vegetable or animal material twisted  
65 or braided together, and covered with and permeated by shoe-makers' wax. So in Fig. 2 the sewing of the welt *B* to the insole *c* and the upper *D* is represented at *s*, such being  
70 supposed to be accomplished with the compound thread, as described.

In sewing by hand with my improved thread, which I purpose to term "Metalin Thread," to distinguish it from the ordinary flaxen or vegetable thread used in shoe-making, no bristles  
75 need in most, if not all, cases be used with the thread to get it into and through the awl-holes, the inherent rigidity of the thread sufficing to admit of the thread being inserted through the  
80 said holes.

The wax by covering the wire not only enables it to be easily drawn into the awl-holes of the work, but covers it therein, so as to prevent it, in a great degree, from oxidating, thereby causing the work or shoe to last much longer,  
85 and be less liable to "rip" or become ripped than would be the case were the wire omitted from the thread and wax.

I claim—

1. As an improved manufacture, a boot or shoe having its outer sole or the welt thereof

secured to the insole and upper with thread composed of shoe-makers' wax, a metallic wire or wires, and one or more strands of flax or a vegetable or animal material, all being substantially as set forth.

5 2. The described improved sewing-thread, composed of shoe-makers' wax, a wire or wires,

and one or more strands of flax or a vegetable or animal material, combined substantially as described.

EDWARD IRVING BROWN.

Witnesses:

'BETH C. HOWLAND,  
MARY H. BLACKMAN.