(No Model.) 2 Sheets—Sheet 1.

E. A. BUCK.

SEAM PROTECTOR FOR MOCCASIN BOOTS OR SHOES.

No. 307,744. Patented Nov. 11, 1884.

Fig. 1.

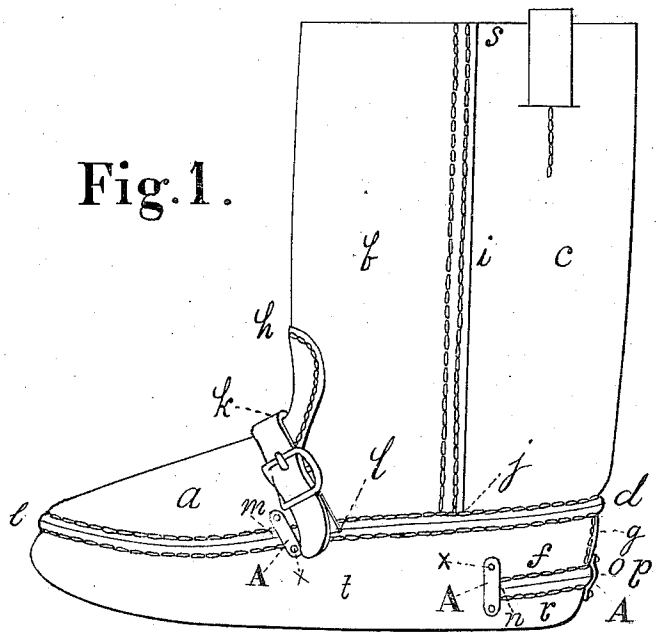


Fig. 2.

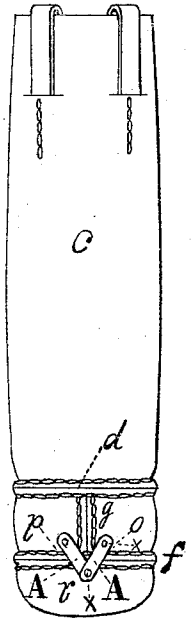


Fig. 3.

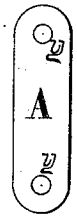
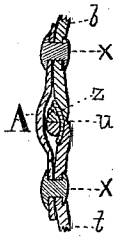


Fig. 4.



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(No Model.) 2 Sheets—Sheet 2.

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SEAM PROTECTOR FOR MOCCASIN BOOTS OR SHOES.

No. 307,744. Patented Nov. 11, 1884.

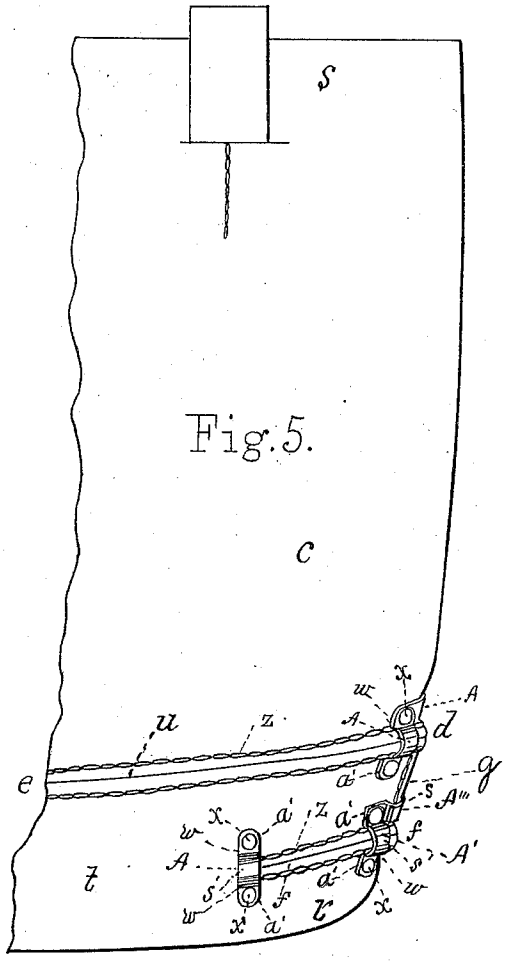
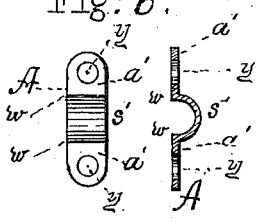


Fig. 5.

Fig. 6.



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UNITED STATES PATENT OFFICE.

EDWARD A. BUCK, OF BANGOR, MAINE, ASSIGNOR TO MARTHA A. BUCK, OF SAME PLACE.

SEAM-PROTECTOR FOR MOCCASIN BOOTS OR SHOES.

SPECIFICATION forming part of Letters Patent No. 307,744, dated November 11, 1884.

Application filed June 25, 1884. (No model.)

To all whom it may concern:

Be it known that I, EDWARD A. BUCK, a citizen of the United States, residing at Bangor, in the county of Penobscot and State of Maine, have invented a new and useful Brace and Protector for the Seams of Moccasin Boots and Shoes; and I do hereby declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to the manufacture of moccasin boots and shoes or pacs. The object of my device is to strengthen the weak points in the seams by which the different parts of the moccasins or pacs are joined together and prevent them from ripping. I accomplish this object by forming short strips of metal which are sufficiently strong for the purpose and riveting them to the leather of the boot or shoe moccasin or pac across the seams, as shown and described in the accompanying drawings.

In the accompanying drawings, Figure 1 is a side view of my invention applied to the manufacture of a moccasin or pac boot. Fig. 2 is a view of the back part of a moccasin boot with my invention applied to the seams. Fig. 3 is a top view of my invention. Fig. 4 is a longitudinal sectional view of my invention through the rivets and leather, as when applied in practice to a seam. Fig. 5 is a side view of the heel and back part of the leg of a moccasin-boot, showing my invention applied to the seams. Fig. 6 is a top and sectional view of my invention.

Similar letters refer to corresponding parts throughout the several figures.

A is the flat thin plate of which my brace is formed. *a' a'* are the flat ends of my brace. *c* is the back of a leg to a moccasin boot or pac. *d e* are the seam connecting the leg with the bottom. *f* is a seam across the heel of the boot. *g* is a vertical seam in the back of the heel. *r* is the heel of the boot. *s'* is a clasp or clamp formed by crimping or bending the brace A so that it shall pass over and properly clamp and support the seam. *t* is the bottom and sole combined. *w w* are the shoulders formed by crimping or bending the brace A to form the clamp or clasp *s'*. *u* is the point of contact of the edges forming the seam. *x x* are rivets passing through the braces and leather. *y y* are rivet-holes. *z* is the thread of the stitch.

In the manufacture of moccasin boots and shoes, or boot and shoe pacs, or "laragans," the leather of which they are made is all pliable, there being no hard, stiff sole-leather used about them, and therefore all the seams are sewed, and even when they are cut so that the sole and quarter are separate the soles are cut from the same pliable tawed leather, and the same thorough flexibility is maintained, and consequently all pegged joints or seams are avoided and all the seams are sewed.

In constructing an article cut in so many pieces it becomes necessary to employ several different seams running in different directions, and where these seams come together and form a joint the necessary sewing one seam into another induces more or less increased stiffness to the crossing seams, and in so comprehensively flexible an article any unequal stiffness or rigidity causes an increased strain upon that part, and consequently renders the seam more liable to rip at that spot. There are also several parts of the seams in which the leather is bent more than in the rest of the seam, and there is more local friction and strain to those parts when the wearer is walking, and consequently the seams are more liable to rip at those points than in other seams and in other parts of the same seams. Again, the leather from which moccasin boots and shoes, or pacs, or laragans are made is a tawed leather, intentionally soft and yielding in substance, as well as flexible, and the important seams in moccasin-manufacture are butting seams, and in wearing the inclination of the two adjoining pieces is to work longitudinally opposite to each other, thereby causing a constant lateral strain upon the thread forming the stitches of the seam. Now, when the leather becomes wet and thoroughly soaked, it is very much more soft and yielding than when dry, and this constant strain and working of the stitches enlarges the holes made by sewing, and as the leather has not the body or firmness of tanned leather it does not close

up the enlargement of the holes in drying, but leaves the hole permanently enlarged, and the thread of the stitch is very much like a shoe-string in an eyelet-hole, and, of course, being very loose, the seam rips easily unless securely fastened or braced in the more important parts.

My brace may be used on any part of the seam in such a way as to prevent any longitudinal strain or working of the parts. There is no way in which the points of unequal wear can be properly and certainly strengthened and re-enforced during the process of sewing, and therefore, in order properly to strengthen and protect the seams in the most exposed parts, I have invented a strengthening-brace consisting of a thin narrow strip of copper, galvanized iron, or other suitable metal or material, formed with the ends flat and the middle bent or crimped convexly outward in such a manner as to form the clamp or clasp *s'*, which shall pass over the seam and clasp it and clamp it together. In order to accomplish this object, I form the crimp or clamp part *s'* in the middle, crimping it about semi-circularly, and large enough to afford sufficient room to inclose a butting seam, and bend the flat ends *a' a'*, so as to form the sharp angles or shoulders *w w* at their junction with the clamp *s'* at each side, and bring the inner faces of the flat ends *a' a'* on the same longitudinal plane. This formation allows the flat ends to fit down close onto the leather at each side of the seam without bringing the clamp or clasp *s'* down to bear on the top of the seam. I form rivet-holes *y y* in the ends *a' a'* and rivet them to the leather at each side of the seam. The ends *a' a'*, being riveted firmly to the leather, hold the shoulders formed by the sharp angles *w w* solidly against the sides of the seam and keep it in shape, and help to sustain the clasp *s'* and prevent its spreading and flattening down onto the seam, and so pressing the seam inward and forming a bunch protruding on the inside of the moccasin or pac. This brace answers a second purpose in covering and protecting the stitches at the weak points from wear by outside friction.

I do not intend my brace to be used as a longitudinal stay or re-enforcement parallel to and flat upon a flat seam lengthwise and riveted through the leather, so that each rivet passes through the brace and the edges of both pieces of leather forming the seam; but my brace is formed to use across a butting seam, strengthen it, and preserve its shape and protect the edges and stitches from outside wear, each end *a' a'* being riveted, respectively, through one piece of the two pieces united by the seam. Neither is my brace similar to a broad metallic brace covering the joints of crossing seams the sides of which it would be impossible to fit down to clasp the seams, and which are a constant strain upon the seams; but whenever two seams meet at right angles or divergent angles which may vary more or less from right angles, and thus form a point exposed to greatly-increased strain, as at the juncture of the seam *g* with the seam *f f*, two braces, A' A'', may be placed across the seam *f f* and connected by a third brace, A''', across the seam *g*, the ends being fitted onto and riveted with the same rivets as the ends of A' A'', respectively, thus forming a very strong junction and clasping both seams and holding them in shape and in place and greatly protecting them. The butting seams for which these braces are intended are formed by butting the edges of the leather together, as at *u*, and then sewing the stitches Z more or less obliquely through the leather from each side outside and drawing the edges together, forming a raised outside seam, leaving the seam and stitching all on the outside and the inside of the seam smooth. Such a seam is particularly adapted to the manufacture of moccasin boots and shoes, or pacs, or laragans, which are virtually all one article of manufacture known by different local names, and sometimes varying slightly, according to locality of manufacture. This butting seam is not a practicable seam for general use in ordinary boots and shoes made of the harder tanned leather, but is only applicable to the soft, pliable, elastic tawed leather of which moccasins are manufactured, and my braces are therefore designed exclusively for use in the manufacture of moccasins. Ordinary boots and shoes are made with soles and counters to stiffen them and keep them in shape, and are much more rigid than moccasins, which are formed and intended to be thoroughly elastic in every part and to yield and follow and accommodate every movement of the human foot, and therefore the strain is greater on every seam in all its parts and more liable to get out of shape, and when my braces are applied, as shown at A' A'' A''', Fig. 6, they not only serve to strengthen the seams, but to keep them in place, thereby assisting materially in preserving the general shape of the whole moccasin.

In making my specification and claims for special application to seams of moccasins or pacs it is perhaps in place here to call particular attention to the fact that the manufacture of moccasins and pacs is so entirely a different branch of manufacture from that of ordinary boots and shoes that the two manufactures are seldom carried on in the same building, even when one man or concern is interested in both.

I am aware that braces and stays have been heretofore used in different ways and on different parts of ordinary boots and shoes on such seams as are common to that class of manufactures, and therefore I do not claim a brace, broadly, for any and every seam or manufacture; but

What I do claim as my invention, and desire to secure by Letters Patent, is—

1. The metallic seam-protector A, made of a thin plate or strip of metal crimped or formed with the bow, clamp or clasp *s'*, and the flat ends *a' a'*, the ends *a' a'* being so bent rela-

tively to the bow or clasp *s'* as to make the sharp corners or shoulders *w w*, and the ends *a' a'* being formed with the rivet-holes *y y*, intended to clasp, protect, and strengthen a raised or ridged sewed seam when used in combination with a moccasin boot, shoe, or pac, as shown and described.

2. In the manufacture of moccasin boots, shoes, or pacs, a moccasin provided with one or more of the seam-protectors, A, as shown and described.

EDWARD A. BUCK.

Witnesses:
S. L. ROGERS,
G. B. LEACH.