

G. W. ALLERTON & Z. M. POWERS.
Presser-Feet for Sewing-Machines.

No. 150,668.

Patented May 12, 1874.

Fig. 1.

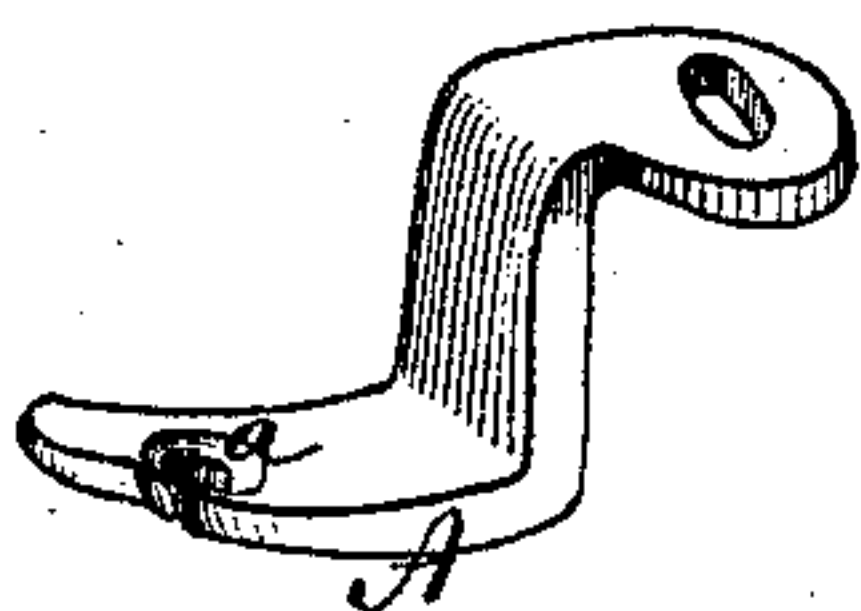


Fig. 2.

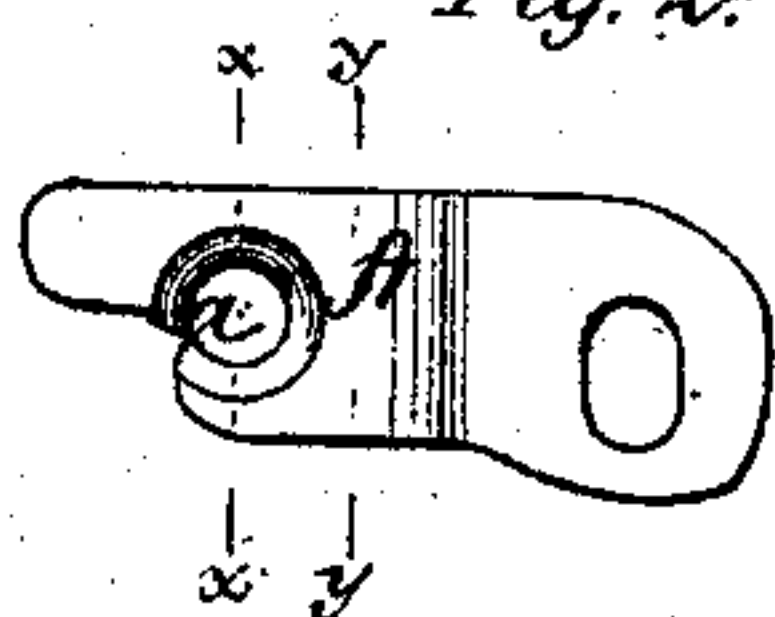


Fig. 3.

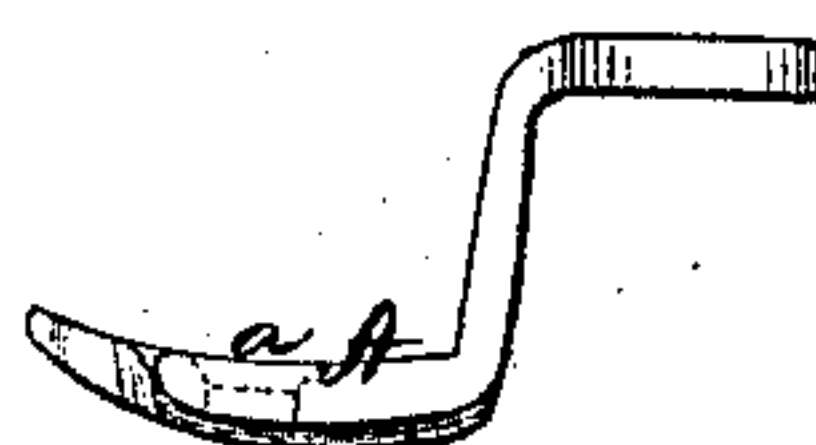


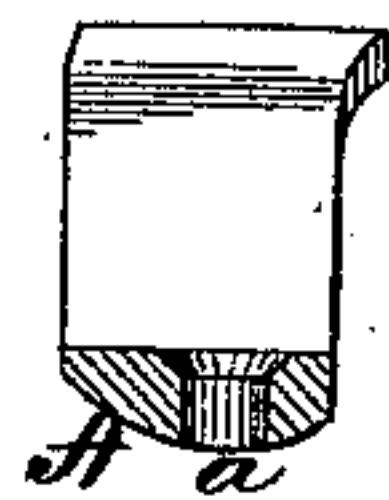
Fig. 4.



Fig. 5.



Fig. 6.



Witnesses.

Ch. Poole.
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George M. Allerton and
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By J. Mc. Perkins, Atty

UNITED STATES PATENT OFFICE.

GEORGE W. ALLERTON AND ZENAS M. POWERS, OF ROBINSON, ILLINOIS.

IMPROVEMENT IN PRESSER-FEET FOR SEWING-MACHINES.

Specification forming part of Letters Patent No. 150,668, dated May 12, 1874; application filed May 4, 1872.

To all whom it may concern:

Be it known that we, GEORGE W. ALLERTON and ZENAS M. POWERS, of Robinson, in the county of Crawford and State of Illinois, have invented certain new and useful Improvements in Presser-Feet for Sewing-Machines; and we do hereby declare the following to be a full, clear, and exact description thereof, reference being had to the accompanying drawing and to the letters of reference marked thereon.

Our invention relates especially to sewing-machines provided with the usual straight feed; and it consists in a presser-foot for sewing-machines having its under or pressing surface convex both longitudinally and transversely, as will be hereinafter more fully set forth.

In the annexed drawing forming part of this specification, Figure 1 is a perspective view, Fig. 2 a plan view, Fig. 3 a side view, and Fig. 4 a front view, of our presser-foot. Fig. 5 is a transverse vertical section taken through the line *y y*, Fig. 2; and Fig. 6, a similar section taken through the line *x x* of same figure.

A represents the lower part of a presser-foot with the needle hole or slot *a*, the upper part of the same being constructed in any suitable manner to fit the machine for which the presser-foot is intended. The under or pressing surface of the foot is convex, as shown, both longitudinally and transversely; or, in other words, the under surface is of oval form.

Heretofore in all machines using the straight feed, the under surface of the presser-foot bearing on said feed has been flat or convex longitudinally, and hence the said presser-foot bears equally upon the surface of the whole feed. In consequence of such bearing in running circular seams, as will be readily understood, the goods do not manage readily, the pressure being distributed over so large a surface. In running one way on the circular seam the feed is altogether on three sides of the needle, and in holding the goods, while moving in a line around one side of the circle, it has the effect of lengthening the stitch. While moving around the circle in an opposite direction, there being no feed on the one side of the needle, it has the effect of shortening the stitch. Then again, in making raised work, the flat

presser-foot pressing upon one side of the needle nearly altogether flattens that side, while leaving the other side properly elevated.

Our oval presser-foot operates on the straight feed upon an entirely different principle. The surface being oval, the bearing of the presser-foot is changed and thrown mainly to a point immediately behind the needle. It is also upon the seam, compressing it nicely, and, with its oval shape, in making raised work, equalizing the elevations. The bearing being mainly thrown to a point immediately behind the needle, the stitch, in running circular seams, is not affected in running either way around the circle, as the goods under our oval presser moves as if on a pivot, and the presser is not changed while running either way, or in straight lines, as the case may be.

While our improvement is intended more particularly for the benefit of manufacturers, yet it is a great improvement upon the working of any and all machines using the straight feed, in this, that it renders the machine much easier of operation, leaving the goods free to be moved in any direction without any crimping or drawing of any kind under the presser-foot.

Our presser-foot, in its manufacture, involves no additional machinery of any description, and no more expense necessary in its construction than for the ordinary presser-foot, and hence can be made and sold at the same price as the old one.

Though this presser-foot is especially intended to be used with the usual straight feed, it may also be used with any of the other well-known feeds.

Having thus fully described our invention what we claim as new, and desire to secure by Letters Patent, is—

A presser-foot for sewing-machines having its under or pressing surface oval or convex both longitudinally and transversely, substantially as and for the purposes herein set forth.

In testimony that we claim the foregoing, we have hereunto set our hands this 30th day of April, 1872.

GEORGE W. ALLERTON.
ZENAS M. POWERS.

Witnesses:

WILLIAM REAVILL,
PLEASANT SHAW.