E. L. CRUMB.

Needle Holder and Tension Device for Sewing Machines.

No. 113,027. Patented March 28, 1871.

Fig. 1.

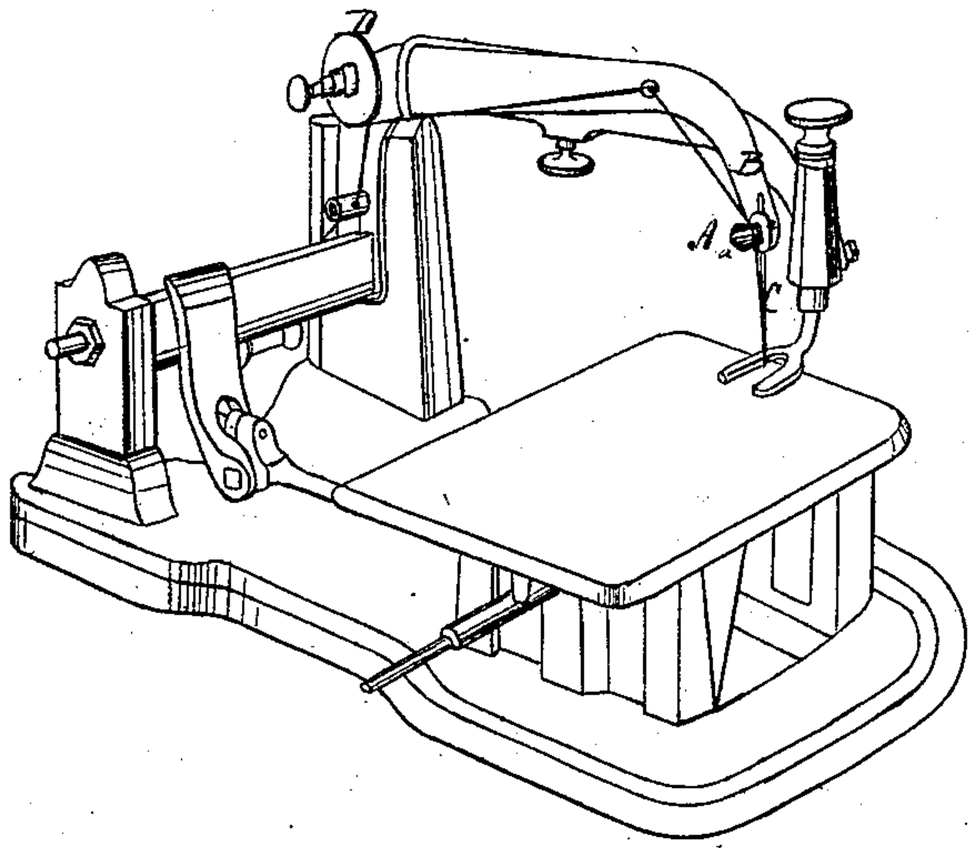


Fig. 2.

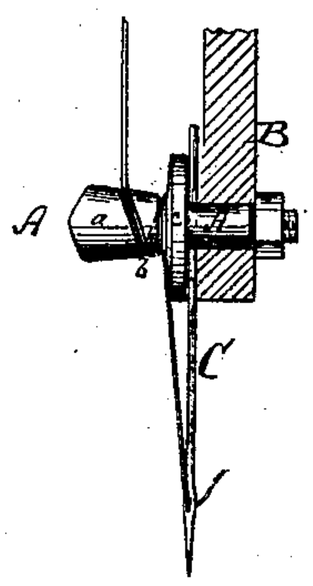
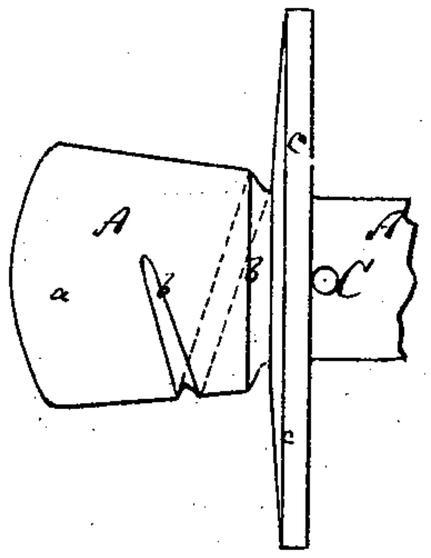


Fig. 3.



Witnesses:

A. Bennenkendorf
Wm. H. L. Smith.

Inventor:

E. L. Crumb.

per Munn & Co

Attorneys.

UNITED STATES PATENT OFFICE.

EDWIN L. CRUMB, OF SOUTH WEST, PENNSYLVANIA.

IMPROVEMENT IN NEEDLE-HOLDERS AND TENSION DEVICES FOR SEWING-MACHINES.

Specification forming part of Letters Patent No. **113,027**, dated March 28, 1871.

To all whom it may concern:

Be it known that I, EDWIN L. CRUMB, of South West, in the county of Warren and State of Pennsylvania, have invented a new and Improved Tension-Guide for Sewing-Machines; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to make and use the same, reference being had to the accompanying drawing, forming a part of this specification, in which—

Figure 1 represents a perspective view of a sewing-machine provided with my improved tension-guide. Fig. 2 is a side view of the same, showing it applied to the needle-bar. Fig. 3 is a detail top view of the same on an exaggerated scale.

Similar letters of reference indicate corresponding parts.

This invention relates to an improvement in the construction of the needle-confining or guide pin which is attached to the needle-bar of a sewing-machine for guiding the thread to and holding the needle. These pins, screwed into the lower end of the needle-bar, are usually perforated to receive the thread from the tension and guide it to the needle.

My invention consists in providing the head of said pin with a spiral groove, in which the thread is guided, said groove extending close to the head of the pin to carry the thread as near as possible to the side of the needle. Thereby I am enabled to bring the thread nearer the upper end of the needle, and avoid the friction and chafing whereby the threads are weakened in the perforated guides.

Furthermore, I make a tension device of said guide-pin, and distribute the strain more evenly upon the thread, as it permits the slacking of the upper or main tension.

A in the drawing represents the guide-pin secured to the needle-bar B, and perforated to receive the shank of the needle C in the ordinary manner.

The head *a* of the pin has a spiral groove, *b*, cut or formed in it, said groove extending close to the face of the flange *c*.

The needle fits close against the back of the flange *c*, as usually. Only the thickness of the flange *c* intervenes thus between the upper end of the needle and the thread, which is placed around the head within the groove in the manner indicated in Fig. 2.

The groove guides the thread from the line of the main tension D as near as possible to the needle, and serves also to produce tension of the thread. This tension I desire to utilize, together with the main tension D, being thus enabled to distribute the strain more evenly, instead of applying it all to one point, as heretofore.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

In combination with the needle-carrying arm B, the needle-holding pin A, provided with the spiral groove *b*, for the purpose of producing tension on the thread, as specified.

EDWIN L. CRUMB.

Witnesses:

GEO. W. MABEE,

C. L. TOPLIFF.