R. BLAKE.

Tension Devices for Sewing-Machines.

No. 149,566. Patented April 14, 1874.

Fig. 1.

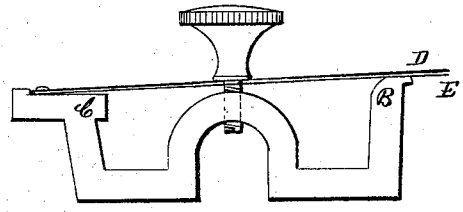


Fig. 2.

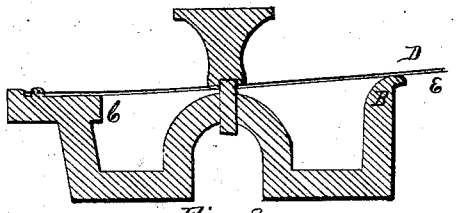


Fig. 3.

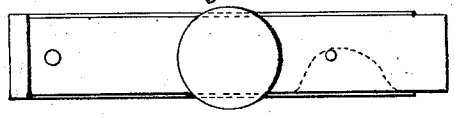
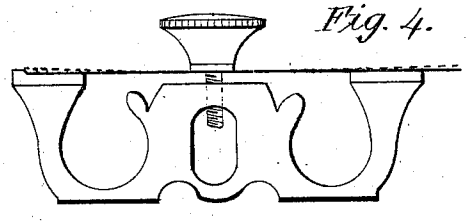


Fig. 4.



Witnesses;

Edw. W. Donn

M Gardner.

Inventor;

Robt Blake

his atty

L. D. Davis

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UNITED STATES PATENT OFFICE.

ROBERT BLAKE, OF NEWARK, NEW JERSEY.

IMPROVEMENT IN TENSION DEVICES FOR SEWING-MACHINES.

Specification forming part of Letters Patent No. **149,566**, dated April 14, 1874; application filed August 21, 1873.

To all whom it may concern:

Be it known that I, ROBERT BLAKE, of the city of Newark, Essex county, in the State of New Jersey, have invented new and useful Improvements in Tensions for Sewing-Machines, which I have assigned to the Domestic Sewing-Machine Company, a corporation organized under the laws of the State of Ohio; and I do hereby declare the following specification, taken in connection with the drawings furnished, is a full, clear, and exact description thereof, which will enable others skilled in the art to make and use the same.

My invention relates to that class of thread-tensions generally arranged upon the top or neck of a sewing-machine, between the spool and needle-bar. Its nature may be readily understood upon reference to the drawings. Said device consists of two narrow thin springs placed together, one upon the top of the other, resting upon projections at or near their ends, with a screw, centrally arranged, serving to draw the said springs together to embrace the thread which passes between them in its passage toward the needle, its object being to maintain, under any pressure, uniform bearing-surfaces.

When a single spring is adopted, resting upon rigid or non-yielding seats or bearings at its end, as the screw is tightened the spring takes the form of a curve, which diminishes the amount of bearing-surface in accordance with the amount of pressure applied to the spring; consequently a shorter and firmer hold upon the thread is caused than is desirable, as the unevenness of the thread destroys the uniformity of tension, and is often broken.

To enable others skilled in the art to make and apply my invention, I will describe it more fully in detail.

For convenience I form the part serving as the seat or end bearings B and C, upon which rests the spring D and E, separate from the machine, and attach the same afterward by screw or other suitable means. The drawing exhibits a suitable formation, although other formations, having two projections, upon which the springs may rest, either formed upon the neck of the machine or otherwise, will serve the desired purpose. The seat of the projections B should be slightly rounded to allow side tilting, should the spring be twisted or otherwise in hardening. The springs may be cut and formed by dies, of any suitable metal, of proper lengths and widths—say three and a half by five-eighths of an inch, more or less—with suitable holes or openings for the admission of thread, pressure-screw, and dowel-pin. The latter, together with the screw, serves to hold the said springs in position. The lower spring may be cut away, as shown by the dotted lines in Fig. 3 of the drawings, or may be provided with a large hole sufficient to leave unobstructed the eye or opening in the top spring, (see Fig. 3,) through which the thread passes. Said springs may be polished or otherwise, in the usual manner, assembled with these connecting parts, and arranged upon the top or neck of a sewing-machine, about midway between the spool and needle-bar.

Having thus fully described my invention, what I claim as new, and desire to secure Letters Patent of the United States for, is—

In combination with the projections B and C, the spring D, with or without its opening, spring E, and pressure-screw F, substantially as herein set forth.

In testimony that I claim the foregoing invention I have signed my name before two subscribing witnesses.

ROBT. BLAKE.

Witnesses:
J. M. CRANE,
GEO. BLAKE.