

(No Model.)

A. A. WOOD.

TENSION DEVICE FOR SEWING MACHINES.

No. 428,990.

Patented May 27, 1890.

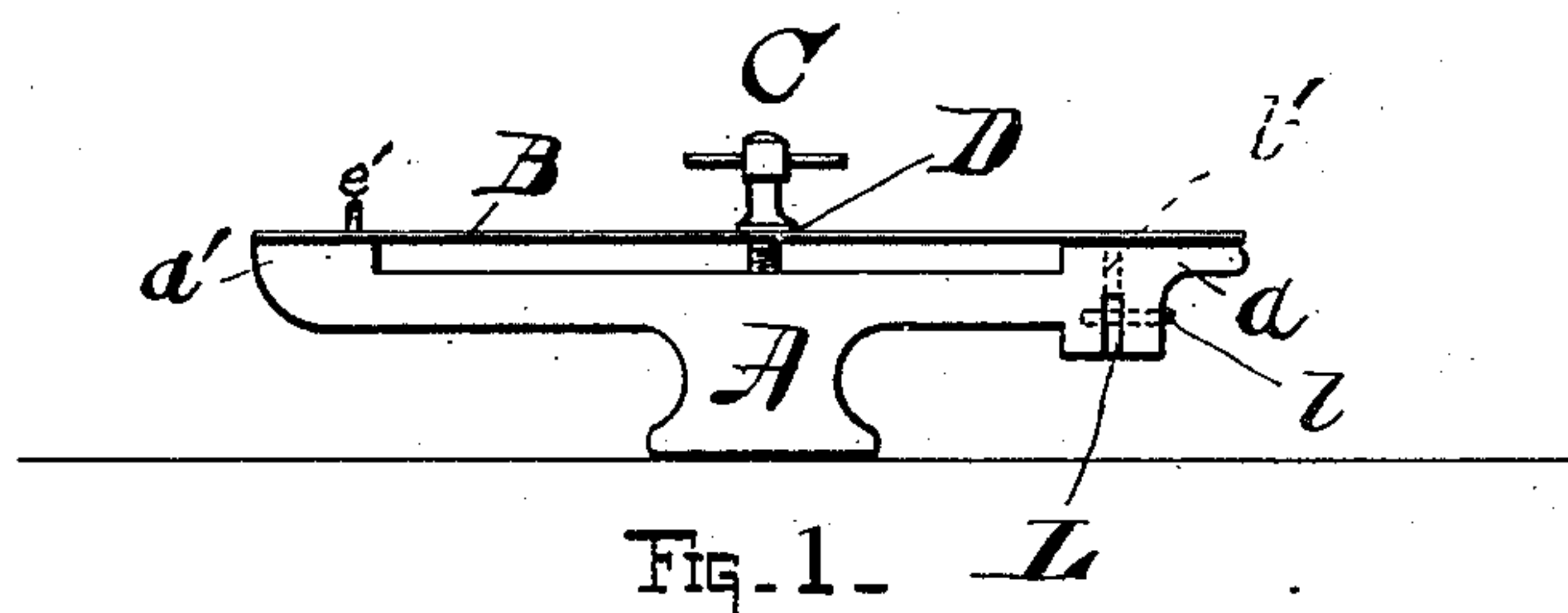


FIG. 1 - L

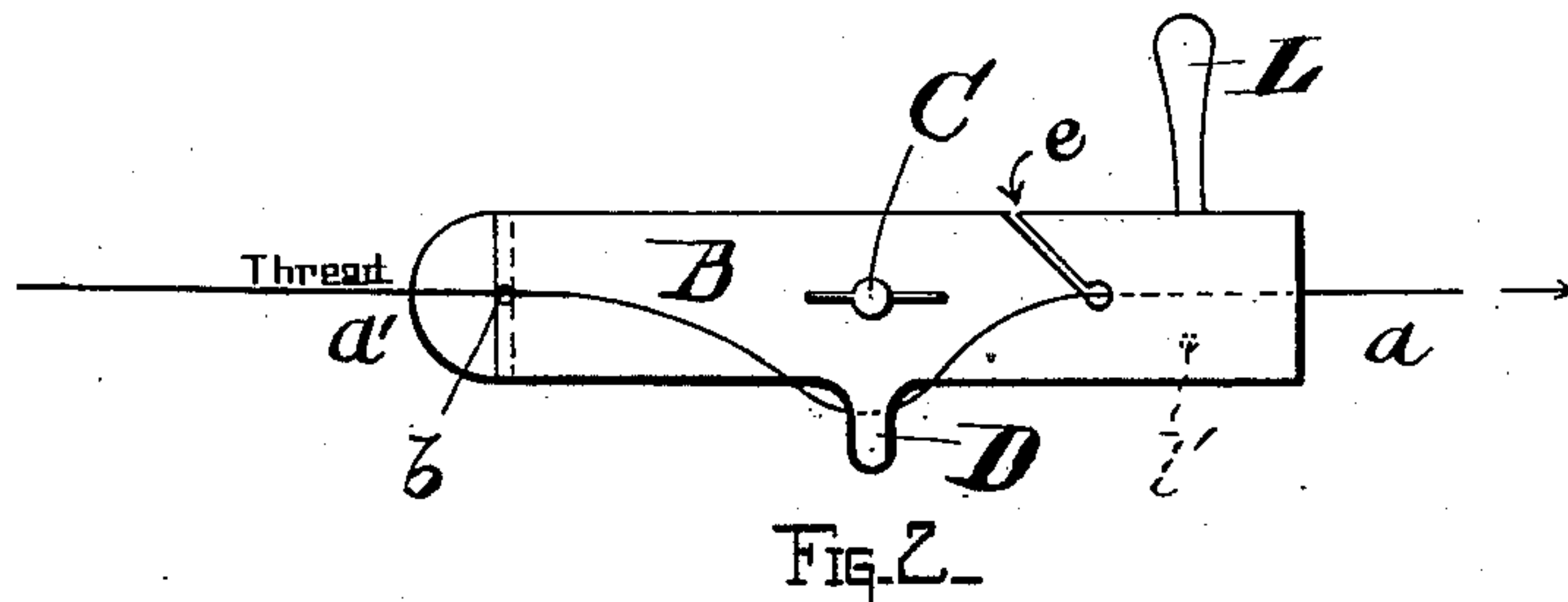


FIG. 2 -

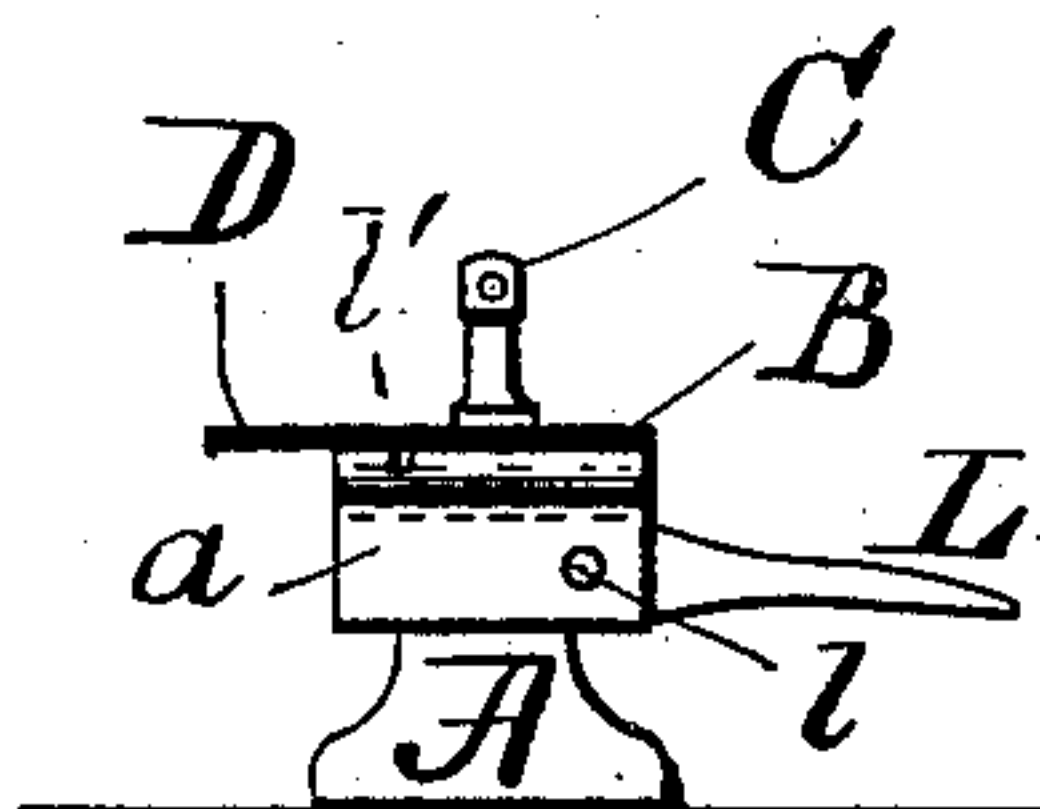


FIG. 3 -

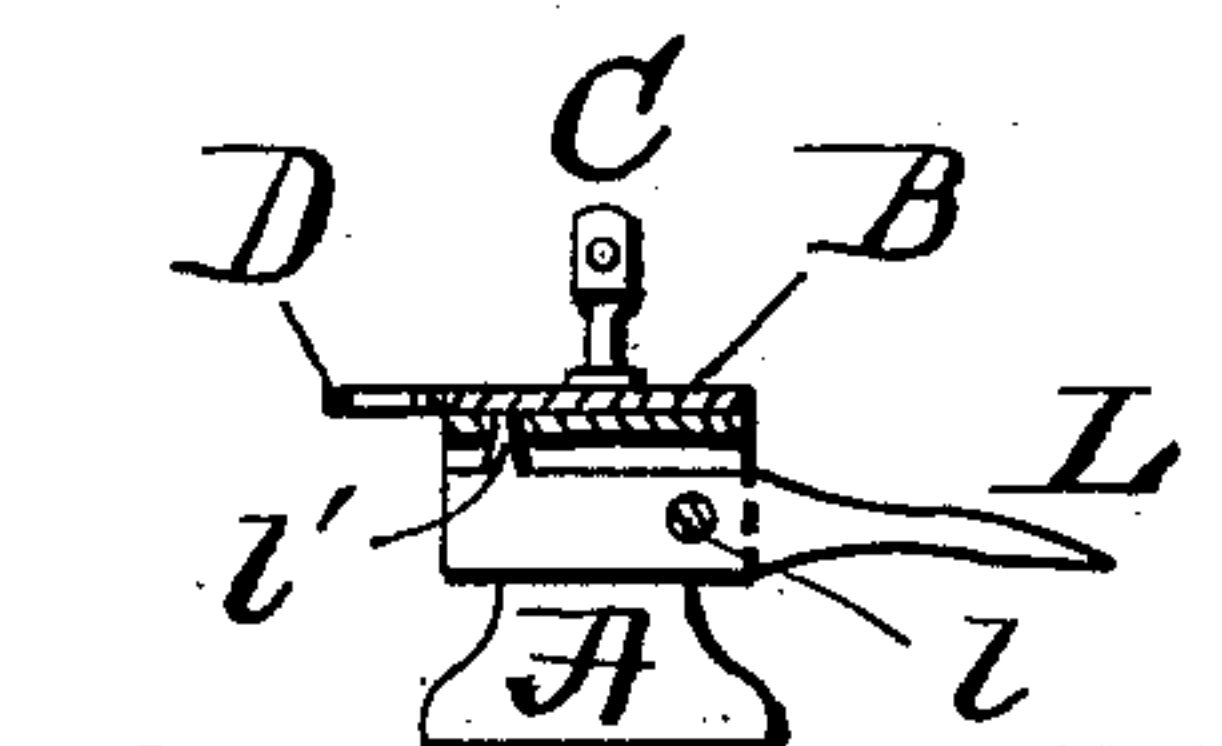


FIG. 4 -

Witnesses

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UNITED STATES PATENT OFFICE.

ALBERT A. WOOD, OF ATLANTA, GEORGIA, ASSIGNOR TO THE BROSIUS
MOTOR SEWING MACHINE COMPANY, OF SAME PLACE.

TENSION DEVICE FOR SEWING-MACHINES.

SPECIFICATION forming part of Letters Patent No. 428,990, dated May 27, 1890.

Application filed August 31, 1889. Serial No. 322,596. (No model.)

To all whom it may concern:

Be it known that I, ALBERT A. WOOD, a citizen of the United States, and a resident of Atlanta, in the county of Fulton and State of Georgia, have invented certain new and useful Improvements in Sewing-Machine Tensions; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to letters of reference marked thereon, which form part of this specification.

This invention relates to the kind of sewing-machine tension that applies friction to the needle-thread by pressing it between a flat spring and another flat surface, the object being to temporarily relieve the thread of the friction without changing the adjustment of the spring; and it consists of a lever attached to the tension-stand and operating on the spring, and, further, in an arm to control the thread, as will be hereinafter fully set forth.

In the accompanying drawings, Figure 1 is a rear elevation of a tension-stand that may be attached to the arm of any kind of a sewing-machine, showing also the spring, adjusting-screw, and the lever for raising the spring. Fig. 2 is a top plan view showing the thread-controlling arm, and further showing the form of the lever. Fig. 3 is an end view further showing the construction, and Fig. 4 is a vertical section of same.

In the figures, like reference-marks indicating corresponding parts in the several views, A is a stand adapted to be attached to an arm of a sewing-machine and having faces that are substantially in the same horizontal plane and form the seat for the spring B. The spring B rests permanently on its seat at the end of the stand (marked *a'*), lateral movement being prevented by the pin *b*, the head of which is a ring *e'* to carry the thread and the pressure-adjusting screw C, while the end resting on the end of the stand (marked *a*) may be raised for the purpose of passing the thread under it. The pressure of the

said spring on the thread may be regulated by the screw C.

So far as described the device is substantially the same as others in common use, in which, as heretofore constructed, difficulty has been experienced on account of the thread becoming entangled with the adjusting-screw, and especially under the shoulder of the said screw that bears on the spring B. To obviate the entanglement of the thread, I form an arm D, either integrally or otherwise, on the edge of the spring which is opposite the edge in which is the slit *e*, and pass the thread under this arm over the top of the spring and through the slit *e*, as shown in Fig. 2, and between the free end of the spring and the part *a* of the stand. It is necessary to have this arm D on the back side of the spring, and consequently the slit *e* in the front edge, for reasons that will be hereinafter explained. In the end *a* of the stand is a groove having parallel sides and adapted to receive the lever L, that is pivoted by the pin *l*. (Best shown in Fig. 3.) This lever has an upwardly-projecting part *l'* on its inner or rear end that passes through the stand and rests against the spring B, as shown in Figs. 3 and 4, the opposite end projecting outwardly or toward the operator. The outwardly-projecting end should be somewhat heavier than the end carrying the part *l'*, (see Fig. 2,) in order that the part *l'* may be kept in constant contact with the spring B.

In passing the thread between the spring B and the part *a* of the stand it should be passed in from the front, in order to avoid catching it on the part *l'* at a point near the back edge of the spring. Consequently the slit *e* should be on the front and the arm D on the back edges of the spring B, as shown. To relieve the pressure on the thread by the spring B, to allow the thread to run freely while work is being taken out of the machine, or for any other purpose, the outwardly-projecting end of the lever must be pressed down, which will cause the part *l'* to raise the spring. When the pressure is removed from the outer end of the lever, the spring will return to its original position and apply the pressure on the thread.

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

5 In a sewing-machine tension, the combination of the stand A, the spring B, slotted to receive the thread seated and secured upon said stand, the arm D, extending from the rear side of said spring, the screw C, passing
10 able opening in the stand A for regulating

the pressure of the spring, and the lever L, pivoted to the stand A beneath the free end of the spring, as set forth.

In testimony whereof I hereunto affix my signature in presence of two witnesses.

ALBERT A. WOOD.

Witnesses:

A. P. WOOD,

WILLIE KEITH.