

(No Model.)

J. C. GOODWIN.

TENSION RELEASE FOR SEWING MACHINES.

No. 324,250.

Patented Aug. 11, 1885.

Fig. 3.

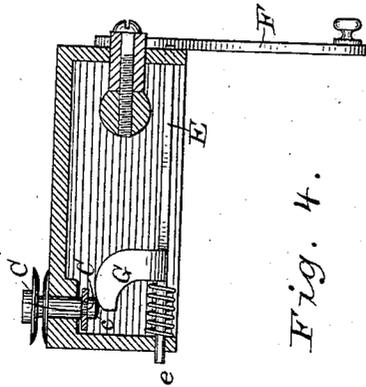


Fig. 4.

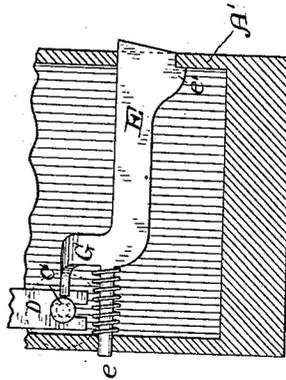


Fig. 2.

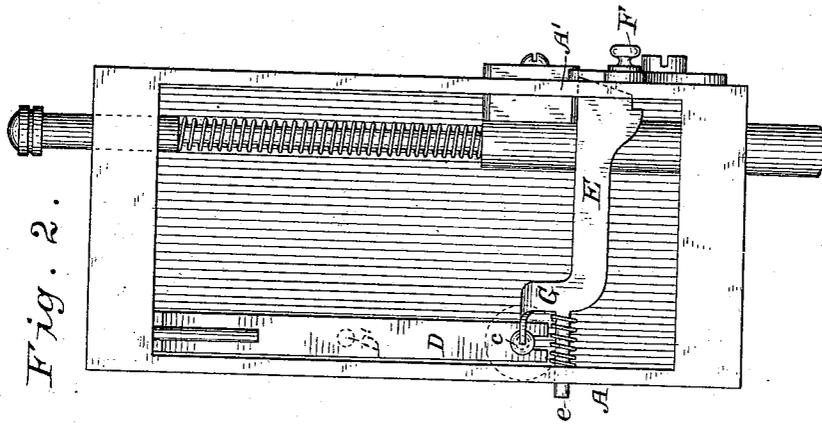
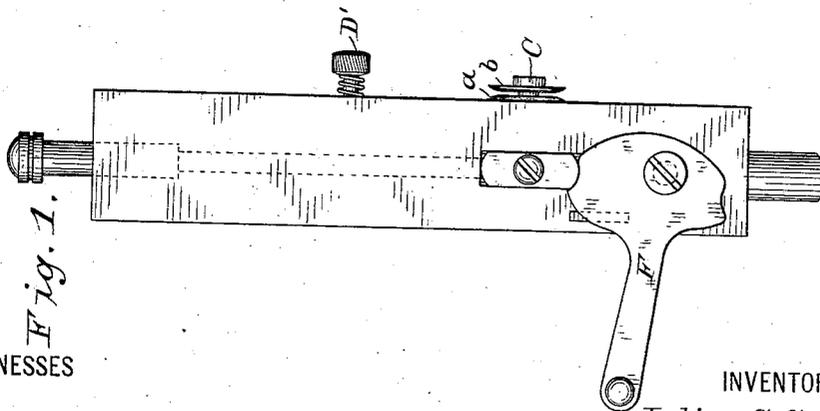


Fig. 1.



WITNESSES

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JULIUS C. GOODWIN, OF PHILADELPHIA, PENNSYLVANIA, ASSIGNOR TO
THE AMERICAN BUTTON HOLE, OVERSEAMING AND SEWING MACHINE
COMPANY, OF SAME PLACE.

TENSION-RELEASE FOR SEWING-MACHINES.

SPECIFICATION forming part of Letters Patent No. 324,250, dated August 11, 1885.

Application filed May 1, 1885. (No model.)

To all whom it may concern:

Be it known that I, JULIUS C. GOODWIN, of Philadelphia, Pennsylvania, have invented an Improved Tension-Release for Sewing-Machines, of which the following is a specification.

My invention relates to that class of tension-releases in which the release of the tension is effected by means of the presser-foot lifter instead of by the presser-foot bar. In those instruments in which the release is accomplished by the presser-foot bar the shoulder or incline on the bar might release the tension when sewing on very thick material, and thus impair the efficiency of the machine.

In the accompanying drawings, Figure 1 is a side view of a portion of a sewing-machine head looking at the presser-foot lifter. Fig. 2 is a view of the same with the face plate removed; Fig. 3, a transverse section there-through, and Fig. 4, a longitudinal sectional view of the lower part thereof.

a b are the tension-disks, which are loosely mounted on the pin *C*, which is connected with the tension-spring *D*. This spring may be adjusted by a thumb-nut, *D'*, so that it will draw the pin *C* inwardly, and thus press the disks together. This construction is common and well understood. The lower end of the spring *D* is preferably forked at the end to straddle the pin *C*, which is formed with a head, *c*, on its inner end.

The tension-release arm or plate *E* is shown as mounted in the side walls of the head of the machine, one end being formed with a projection or rod, *e*, which passes through a bearing in one side, *A*, of the head, and is surrounded by a coiled spring which normally tends to press the arm or plate *E* toward the opposite side, *A'*, of the head. On this latter side the plate projects through a slot in the head and is formed with an inclined edge against which the presser-foot lifter *F* works.

The projection of the plate *E* is limited by a shoulder, *e'*, thereon, which abuts against the side *A'* of the head. When, therefore, the presser-foot lifter *F* is thrown up, the tension-releasing arm or plate *E* will be pressed inwardly against the force of its spring. This movement effects the release of the tension-disks in the following manner: A bent or projecting arm, *G*, on the plate *E*, extends inwardly, as seen in the drawings, and is preferably curved on the inner edge, as clearly illustrated. When the plate *E* is pressed back by the elevation of the presser-foot lifter, the arm *G* rides against the head *c* of the pin *C* and presses the pin outwardly against the force of the tension-spring, thus releasing the tension on the thread. This construction is simple and well adapted for the purpose, and is preferred by me. I consider, however, that any mere variation of such details would be within the scope of my invention.

I claim as my invention—

1. The combination of the tension devices, the tension-spring, the tension-release bar or plate mounted in bearings in the head of the machine, its inclined edge against which the presser-foot lifter works, and its tension release arm *G*.

2. The combination, substantially as set forth, of the sewing-machine head, the presser-foot lifter pivoted and working on the outside of the sewing-machine head, the tension-disks, their spring, and the endwise-moving tension-release bar mounted in the head of the machine and having a projecting inclined edge or lip which projects from the head in the path of the presser-foot lifter.

In testimony whereof I have hereunto subscribed my name.

JULIUS C. GOODWIN.

Witnesses:

F. B. STACKHOUSE,
L. P. SIMPSON.