(No Model.) 2 Sheets—Sheet 1.

J. TRIPP.

SEWING MACHINE.

No. 304,046. Patented Aug. 26, 1884.

Fig. 1.

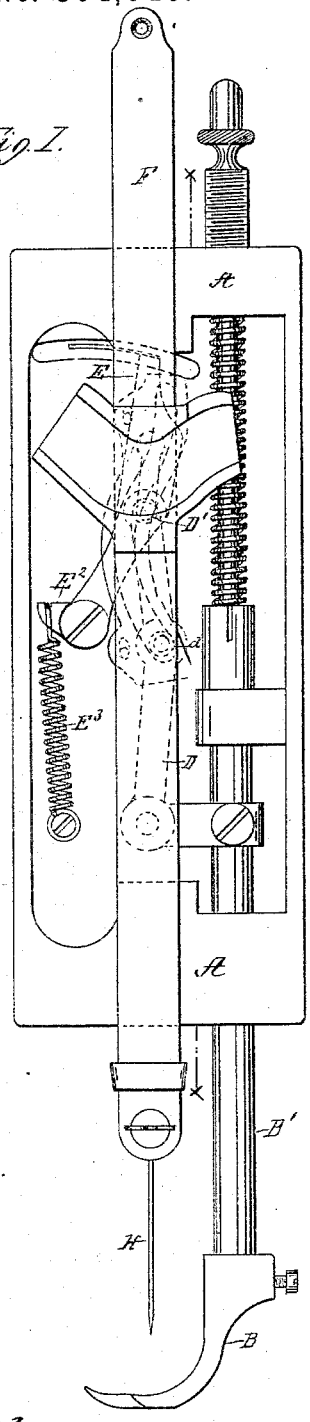


Fig. 2.

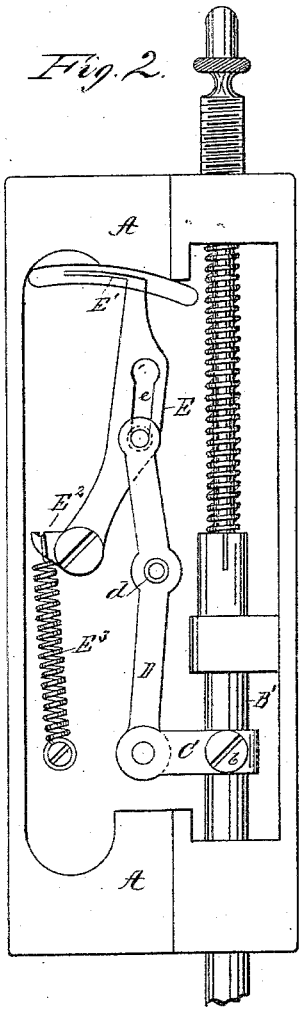
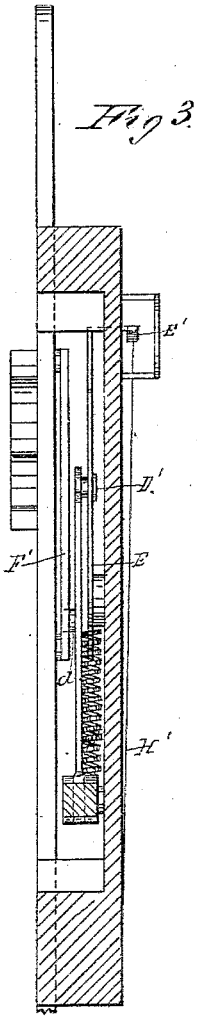


Fig. 3.



Witnesses.
Gabriel Galpin
Charles Lang.

Inventor
James Tripp
By Richards & Co
His attorneys

(No Model.) 2 Sheets—Sheet 2.

J. TRIPP.

SEWING MACHINE.

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Fig 4.

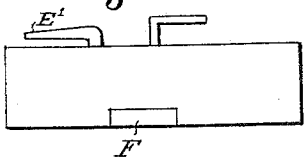


Fig 5.

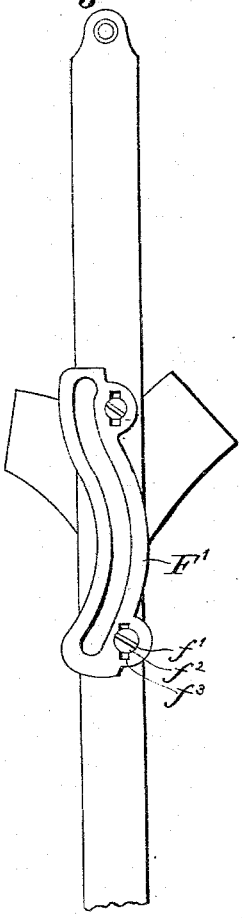


Fig 6.

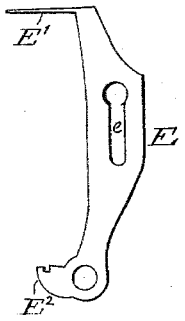


Fig 7.

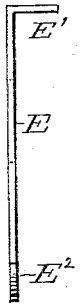


Fig 8.

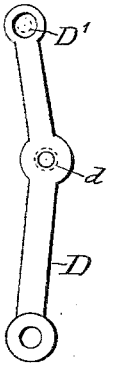
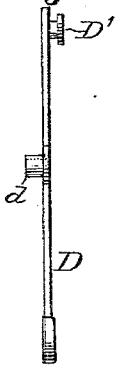


Fig 9.



WITNESSES:

K. M. Supple

Chas. Lang

INVENTOR

James Tripp

BY Richardson

ATTORNEYS.

UNITED STATES PATENT OFFICE.

JAMES TRIPP, OF NEW YORK, N. Y.

SEWING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 304,046, dated August 26, 1884.

Application filed August 7, 1883. (No model.)

To all whom it may concern:

Be it known that I, JAMES TRIPP, a citizen of the United States, residing in the city, county, and State of New York, have invented certain new and useful Improvements in Sewing-Machines, of which the following is a specification.

My invention relates to improvements in that part of sewing-machines which is commonly known as the "take-up;" and the object of my invention is to automatically regulate the take up of the thread to accord with the varying thicknesses of material to be sewed from time to time, and also to allow for sewing seams, laps, and other arrangements of material where an irregular and sudden increase or diminution of the thickness or number of layers of material to be sewed necessitates a variation in the amount of take up, in order to produce perfect work.

In carrying out my invention I mount upon the presser-foot shaft, by preference within the head, a short arm capable of vertical adjustment and secured in position by a set-screw, pin, or other equivalent means. To the outer end of this short arm is pivoted a vertical arm, to the upper end of which is connected a pin or friction-roller adapted to be received and work within a slot formed in a pivoted lever, on the upper end of which is formed or connected the take-up portion or arm. On the rear of the vertical arm I form or affix a pin or friction-roller adapted to engage with a cam course or surface, by preference formed on or affixed to the front face of the needle-bar. The cam course or surface I prefer to form in a plate of metal bolted to the needle-bar with capability of vertical adjustment.

The accompanying drawings form part of this specification, and illustrate what I consider the best means of carrying out my invention.

Figure 1 is a detached view of the head of a sewing-machine with my improvements applied thereto. Fig. 2 is a similar view with the needle-bar removed. Fig. 3 is a vertical section on the line *x x* of Figs. 1 and 2. Fig. 4 is a plan. Fig. 5 is a back view of part of the needle-bar with its cam-plate. Figs. 6, 7, 8, and 9 are detail views of parts.

In each of the views similar letters of reference are employed to indicate corresponding parts wherever they occur.

A represents the machine-head.

B is the presser-foot, and B′ is the presser-foot shaft, upon which is mounted or secured by means of a set-screw, *b*, a short arm, C, capable of vertical adjustment.

To the outer end of the short arm C is pivoted a vertical arm, D, to the upper end of which is connected a pin or friction-roller, D′, adapted to be received and work within a slot, *e*, formed in a pivoted lever, E, on the upper end of which is formed or connected the take-up portion or arm E′.

On the rear of the vertical arm D, I form or affix a pin or friction-roller, *d*, adapted to engage with a cam course or surface, *f*, which in the drawings is shown formed in a plate, F′, connected to the needle-bar F by means of bolts or screws *f*′. The bolts or screws *f*′ pass through slots f^2, formed in eyes or extensions f^3, forming part of the side of the plate F′. The slots f^2, I prefer to elongate in form, so as to allow of the adjustment of the plate F′.

The pivoted lever E, I prefer to form with an extension or arm, E^2, to the end of which is applied a coiled or other suitable spring, E^3, adapted to keep the cam course or surface *f* and the roller *d* in constant connection.

It will be evident that by the peculiar construction of the parts either the cam-course or surface *f* can be adjusted in relation to the pin or roller D′ or the position of the short arm C on the presser-foot shaft B′ can be changed, or both parts can be adjusted in relation to each other, so as to produce any desired variation in the take-up.

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

1. In a take-up mechanism for sewing-machines, the combination of a lever adjustably mounted on the presser-foot shaft, a cam-piece adjustably mounted on the needle-bar, and a spring-lever and take-up extension, all being constructed and adapted to operate substantially as shown and described.

2. In a take-up mechanism for sewing-machines, the combination, with the presser-foot shaft and needle-bar, of the adjustable cam-

piece F', means for adjusting the same, a pivoted lever, D, as described, spring-lever E, and means for connecting the said lever D with cam-piece F' and spring-lever E, substantially as and for the purpose set forth.

3. The combination, with the presser-foot shaft and needle-bar of a sewing-machine, of a cam-piece mounted on the needle-bar, a pivoted lever mounted on the presser-foot shaft, having a driving-pin formed on its upper end, pin or friction-roller *d*, a pivoted take-up lever having a course formed in its upper end, and a spring, all being constructed and adapted to operate substantially as shown and described.

4. The pivoted bent lever D, formed with a pin or projection, *d*, adapted to engage with a cam-piece, F', and provided with an anti-friction device, D', adapted to work in the course *e*, formed in the lever E, all being in combination with said cam-piece F', lever E, and the presser-foot shaft and needle-bar of a sewing-machine, substantially as and for the purpose set forth.

5. In combination with the take-up mechanism of a sewing-machine, the cam-piece F', adjustable on the needle-bar F by means of screws *f''*, and slots *f'*, formed in the plate F', all being constructed as described, and adapted to operate substantially as and for the purpose set forth.

In witness whereof I have hereunto set my hand this 12th day of June, 1883.

JAMES TRIPP.

Witnesses:
W. COLBORNE BROOKES,
GABRIEL J. W. GALSTER.