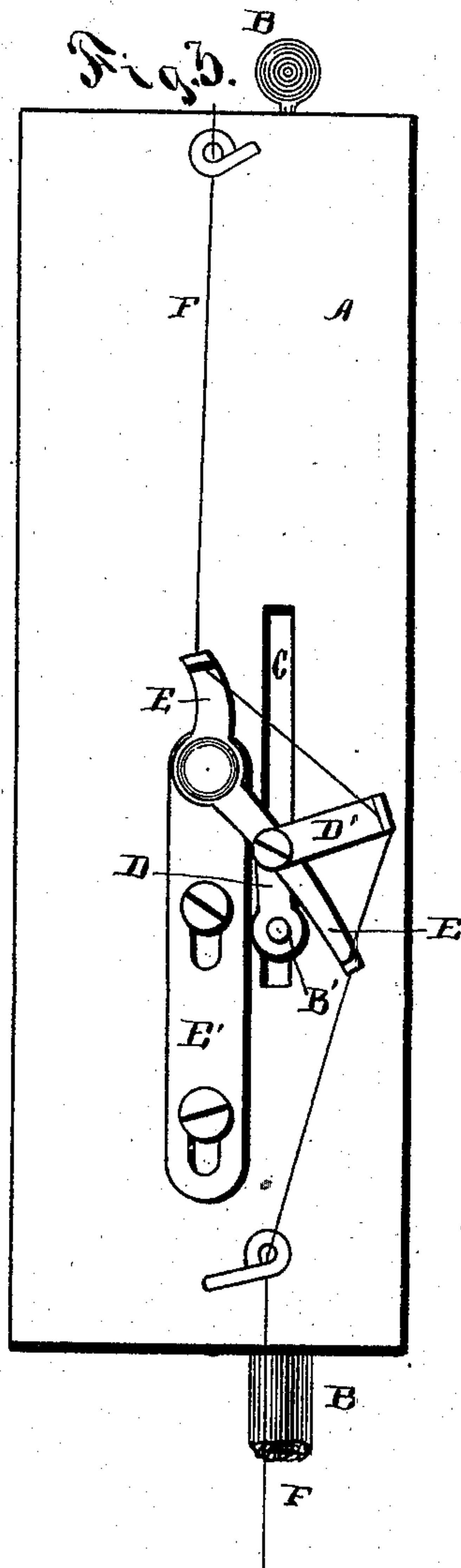
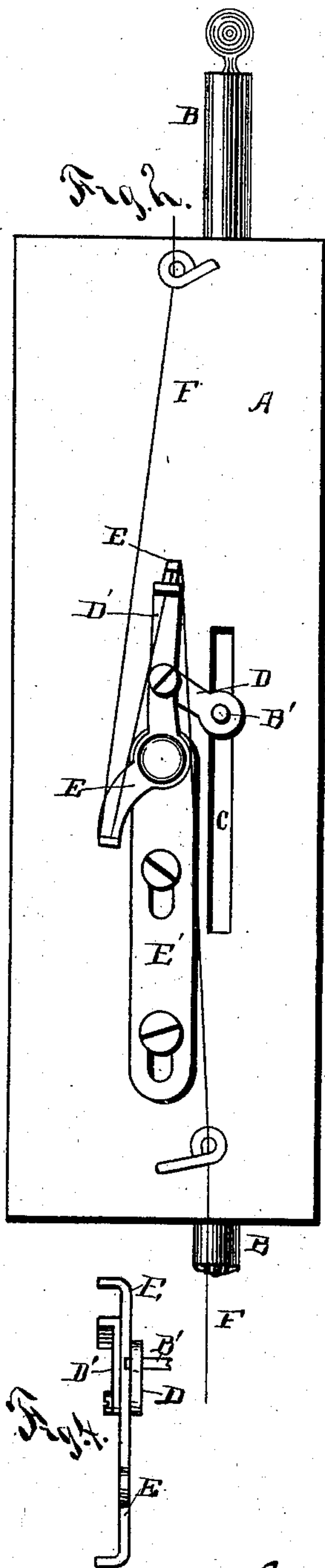
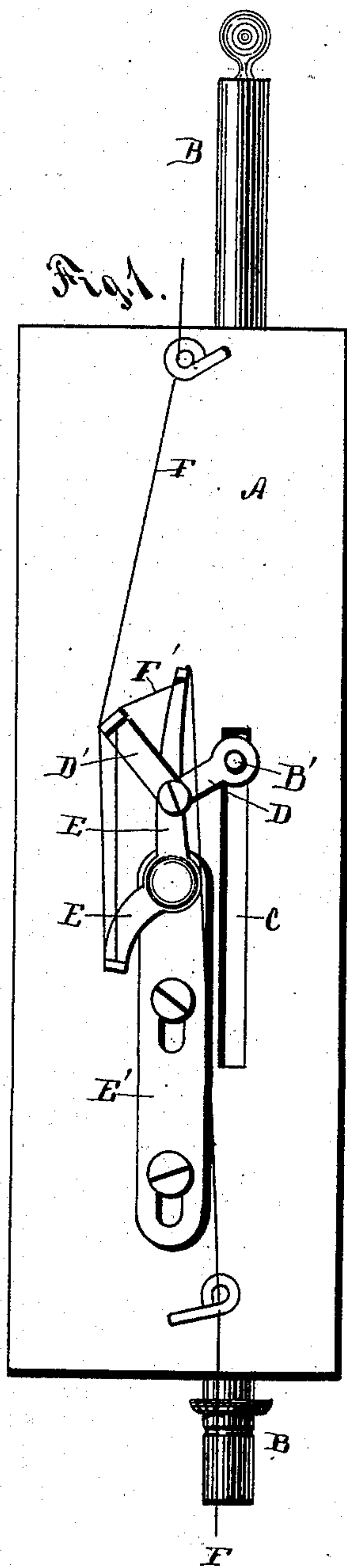


G. W. BAKER.  
Take-Up for Sewing-Machines.

No. 224,572.

Patented Feb. 17, 1880.



WITNESSES  
Frank M. Yalor.  
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# UNITED STATES PATENT OFFICE.

GEORGE W. BAKER, OF CLEVELAND, OHIO, ASSIGNOR TO WHITE SEWING MACHINE COMPANY, OF SAME PLACE.

## TAKE-UP FOR SEWING-MACHINES.

SPECIFICATION forming part of Letters Patent No. 224,572, dated February 17, 1880.

Application filed October 18, 1879.

*To all whom it may concern:*

Be it known that I, GEORGE W. BAKER, of Cleveland, in the county of Cuyahoga and State of Ohio, have invented certain new and useful Improvements in Take-Ups for Sewing-Machines; 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 pertains to make and use it, reference being had to the accompanying drawings, which form part of this specification.

My invention relates to sewing-machines, and more particularly to devices for regulating and taking up the slack of the thread between the needle and spool or tension device; and it consists of the following parts and the construction and combination of parts, as hereinafter specified and claimed.

In the drawings, Figures 1, 2, and 3 illustrate my device in the various stages of its operation, and Fig. 4 is a side elevation of my device.

In the said drawings, A is the face-plate of a sewing-machine; B, the needle-bar, and C a slot made through the face-plate for the accommodation of a lug or arm, B', which connects the needle-bar with my take-up device, whereby said device is actuated by the motions of said needle-bar. D D' is an angular lever pivoted to the rocking lever E. The angular rocking lever E is pivoted to a plate, E', adjustably attached, by suitable slot and set-screw connection or otherwise, to the face-plate A. Each end of the angular lever E and the free arm D' of the angular lever D D' are provided with holes, loops, or suitable passages for the thread F. This thread is led through my device as follows: From the spool it passes first through the short arm of the lever E, thence through the free arm D' of the angular lever D D', thence through the longer arm of the lever E and down to the needle. The angular lever D D' is loosely or pivotally attached both to the connection B' and to the angular lever E, the latter being pivoted to lever D D' at the junction of its two arms. It will therefore be seen that as the needle-bar moves up and down it will carry the lever D D' up and down with it by means of the

connection B'. It will also be noticed that by the construction already specified the free arm D' of the angular lever D D', at every complete movement of the needle-bar B, whether upward or downward, will be caused to twice pass over the face of the long arm of the lever E; and it will further be noticed that the arm D of the angular lever D D' serves as a link to connect the needle-bar B with the lever E, whereby these two parts may operate in proper concert and connection with each other.

The object of my device is to slacken the needle-thread during the passage of the needle downward through the fabric. If the thread is permitted to draw taut upon the needle during that time, it is liable not only to break itself, but by pulling the needle out of line it results in poor work and in a liability to break the needle. It is therefore desirable that the thread should be loose in the needle as it passes downward through the fabric; and to accomplish this is the principal object of my device, whose operation is as follows:

Referring to the drawings, Fig. 3 illustrates the parts as in the position assumed when the needle is at the limit of its downward movement. Fig. 2 represents the position of parts when the needle-bar is between its extreme up and down movement; and Fig. 1 shows the position of parts when the needle-bar is at its extreme upward movement.

As the needle-bar moves upward the thread is drawn taut from needle to spool until the parts assume the position shown in Fig. 2, where the arm D' is in position directly over the long arm of the lever E. The needle-bar has not yet reached the extreme of its upward movement, but in doing so (see Fig. 1) the arm D' is moved beyond the arm of lever E, and by this movement an additional length, F', of the thread F is drawn out. As the needle-bar now moves downward to make the next succeeding stitch this length F' of the thread becomes so much slack above the needle, and the needle is therefore freed from strain and permitted freely to pass downward through the fabric.

The degree of movement of the various parts



of my device is regulated and determined by adjusting the position of the plate E' upon the face-plate A. If more slack, F', is wanted, the plate E' should be adjusted to a lower position, and vice versa.

What I claim is—

1. The combination, with the face-plate and needle-bar of a sewing-machine and a lever, one arm of which is pivoted to the needle-bar, of a second lever, the fulcrum of which is connected to the face-plate and one arm of which is pivoted to the first lever, the extremities of the second lever being provided with thread-guides, substantially as set forth.

2. The combination, with the face-plate and needle-bar of a sewing-machine, of an angular lever, one arm of which is pivoted to the needle-bar, and a second lever, the fulcrum of which is connected to the face-plate and one arm of which is pivoted to the first lever, the free extremities of both said levers being provided with thread-guides, substantially as set forth.

3. The combination, with the slotted face-plate and needle-bar of a sewing-machine and a pivot projecting from the latter through the slot, of an angular lever, one arm of which is connected to said pivot, and a second lever, the fulcrum of which is connected to the face-plate and one arm of which is pivoted to said angular lever, substantially as set forth.

4. The combination, with the slotted face-plate and needle-bar of a sewing-machine and a pivot projecting from the latter through the

slot, of an angular lever, one arm of which is connected to said pivot, and a second angular lever, the fulcrum of which is adapted to be adjusted on the face-plate and one arm of which is pivoted to said first lever, the free extremities of both levers being provided with thread-guides, substantially as set forth.

5. The combination, with the face-plate and needle-bar of a sewing machine and an angular lever, one arm of which is pivoted to the needle-bar, of a second lever formed with a long arm and a short arm, the fulcrum of this second lever being connected to the face-plate and said long arm being pivoted to the first lever, the free extremities of both levers being provided with thread-guides, substantially as set forth.

6. The combination, with the face-plate and needle-bar of a sewing-machine and an angular lever, one arm of which is pivoted to the needle-bar, of a second angular lever, the fulcrum of which is connected to the face-plate, and one arm of which is pivoted to the first lever at the junction of its two arms, the free extremities of both levers being provided with thread-guides, substantially as set forth.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

GEORGE W. BAKER.

Witnesses:

JNO. CROWELL, Jr.,  
WILLARD FRACKER.