No. 827,653. PATENTED JULY 31, 1906.

L. ONDERDONK.

TAKE-UP FOR SEWING MACHINES.

APPLICATION FILED JULY 8, 1904.

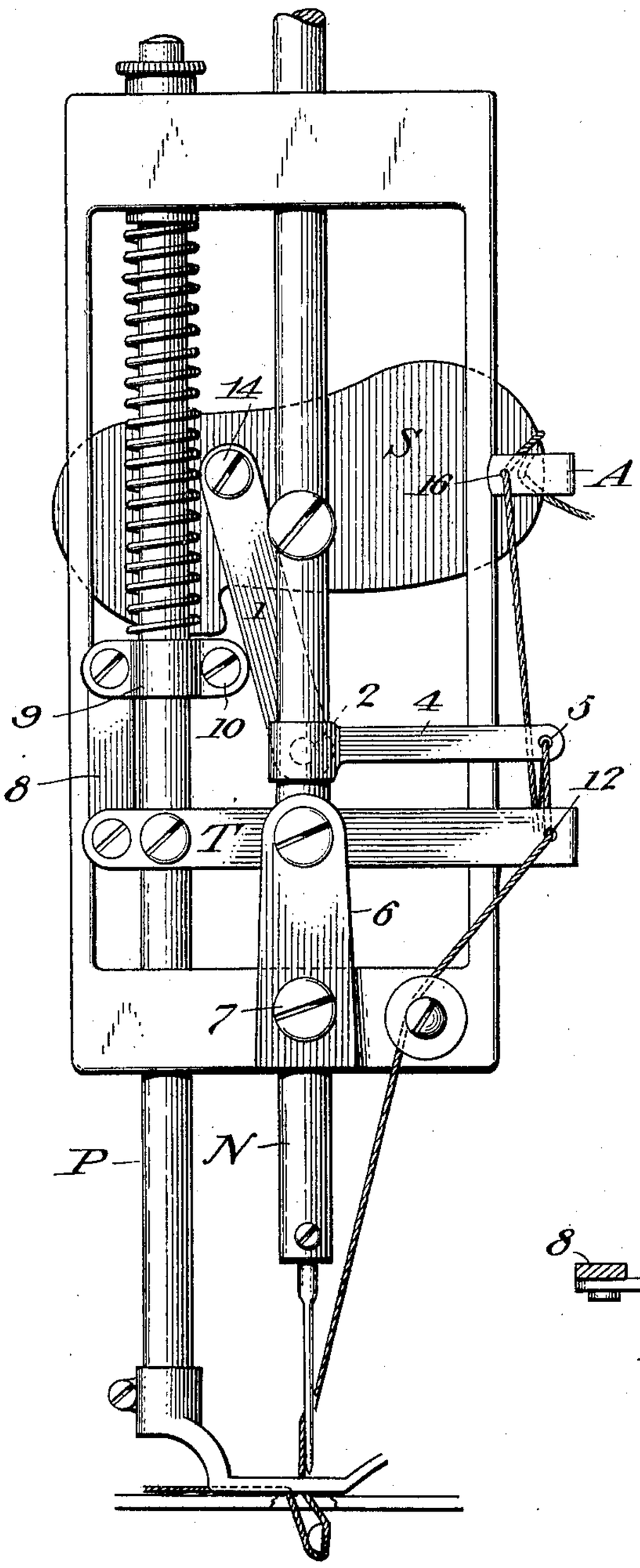
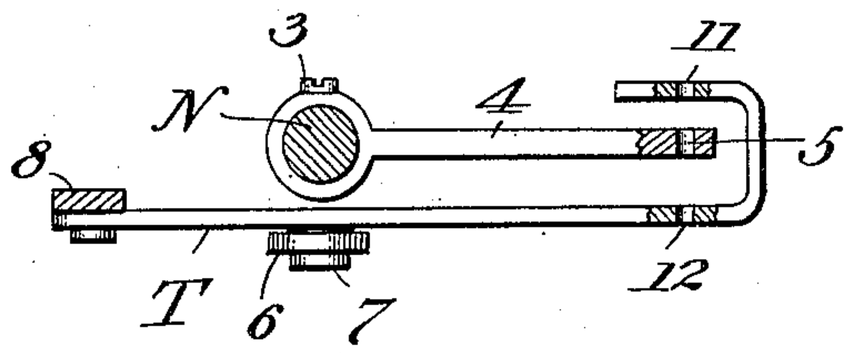


Fig. 1.

Fig. 2.



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UNITED STATES PATENT OFFICE.

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TAKE-UP FOR SEWING-MACHINES.

No. 827,653. Specification of Letters Patent. Patented July 31, 1906.

Original application filed July 8, 1904, Serial No. 215,788. Divided and this application filed July 8, 1904. Serial No. 215,789.

To all whom it may concern:

Be it known that I, LANSING ONDERDONK, a citizen of the United States, residing at New York, in the county of New York, State of New York, have invented certain new and useful Improvements in Take-Ups for Sewing-Machines, of which the following is a description, reference being had to the accompanying drawings and to the letters and figures of reference marked thereon.

This invention relates to automatic stitch-controller for sewing-machines, and has for its object to improve the arrangement of parts whereby the thread supplied for each stitch is regulated in accordance with the thickness of the material operated upon.

The invention consists in the combination of parts hereinafter set forth in the description and drawings, and particularly pointed out in the claims.

This application is a division of my copending application, Serial No. 215,788, filed of even date herewith.

In the drawings, Figure 1 is an end elevation of the sewing-machine head with the face-plate removed, and Fig. 2 is a plan view of the thread-controller and take-up.

In the arm of the machine is the usual rotary shaft carrying on the end thereof the slack-thread controller S, which coöperates with the thread-guide A in controlling the slack thread. A crank-pin 14 is carried by the controller and is connected by a link 1 to the usual needle-bar N. Adjustably secured on the needle-bar is a sleeve 2, which is held in place by a set-screw 3. Projecting from the sleeve 2 is the take-up arm 4, which has a suitable thread-eye 5 in its outer end.

Rigidly secured to the frame of the machine-head by a screw 7 is a bracket 6. Pivoted to the upper end of the bracket 6 is the thread-controller T. This thread-controller is pivoted intermediate its ends to the bracket and at its rear end is connected by a link 8 to a split collar 9, carried by the presser-bar P. Said collar 9 is adjustably secured to the bar by a clamping-screw 10. The opposite end of the thread-controller extends substantially parallel with the take-up arm and a little beyond the same where said controller-arm is bent back upon itself, but spaced from the main portion of the arm, so that the take-up arm can vibrate in the space between these parts. The free end of the controller T is provided with a thread-eye 11, and directly opposite the thread-eye 11 is a corresponding eye 12 in the main portion of the controller-arm.

The operation of my device is as follows: The take-up arm reciprocates with the needle-bar above and below the thread-controller T. In Fig. 1 the take-up is on its downward stroke and is giving up slack thread. Said arm moves a short distance below the arm T. On its upward movement the take-up moves above the controller-arm to a considerable extent. In this upward movement the take-up first sets the stitch and then pulls thread from the supply for the next stitch. It will therefore be obvious that the amount of thread pulled off depends upon the distance the take-up arm moves above the thread-controller T. The take-up arm has a constant movement, but the position of the arm T is changed in accordance with the position of the presser-bar, which in turn rises and falls with the varying thickness of the material operated upon. It will be noted that as the presser-bar moves up the thread-eyes 11 and 12 will move downward, and consequently with increase in thickness of material more thread is drawn from the supply. It will also be noted that the thread-controller T is substantially parallel to the take-up arm and that the thread-eyes 11 and 12 move in practically the same path or general direction as the take-up, and therefore very slight movements of presser-bar will effect a change in the thread pulled off.

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

1. The combination with a needle-bar, a take-up arm carried by the needle-bar and having a thread-guide, said take-up arm moving bodily in a right line with the needle-bar, of a thread-controller having one end operatively connected to the presser-bar, and its free end extending at an angle to the line of reciprocation of the take-up arm and substantially parallel with said take-up arm and having thread-eyes between which said take-up arm moves, substantially as described.

2. The combination with a needle-bar, a presser-bar, a take-up carried by said needle-bar, a thread-controller having one end opera-

tively connected to the presser-bar, and its free end extending substantially parallel to the take-up and having thread-eyes; substantially as described.

3. The combination with a needle-bar, a presser-bar, a take-up carried by said needle-bar, a thread-controller comprising a lever pivoted intermediate its ends, a link connecting one end of said lever to the presser-bar, and the free end of the lever extending substantially parallel with the take-up arm; substantially as described.

4. The combination with a needle-bar, a presser-bar, a take-up carried by said needle-bar, a thread-controller comprising a lever pivoted intermediate its ends, a link connecting one end of said lever to the presser-bar, and the free end of the lever extending beyond the take-up and bent upon itself to embrace the path of movement of the take-up, said free end being provided with thread-eyes 11 and 12; substantially as described.

5. The combination with a presser-bar, a needle-bar, a take-up carried thereby, a bracket secured to the machine-head, a lever pivoted on said bracket, a link connected to one end of the lever, and a collar adjustably secured to the presser-bar and connected to said link, the free end of said lever having thread-eyes coöperating with the take-up; substantially as described.

6. The combination with a presser-bar, a needle-bar, a take-up carried thereby, a bracket secured to the machine-head, a lever pivoted on said bracket, a link connected to one end of the lever, and a collar adjustably secured to the presser-bar and connected to said link, the free end of said lever extending beyond the take-up and bent to embrace the path of movement of said take-up and having thread-eyes; substantially as described.

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

LANSING ONDERDONK.

Witnesses:
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J. H. HOWELL.