

J. HAYES, JR. & J. BERGER, JR.
TAPE REEL FOR SEWING MACHINES.
APPLICATION FILED AUG. 11, 1908.

1,124,735.

Patented Jan. 12, 1915.

3 SHEETS-SHEET 1.

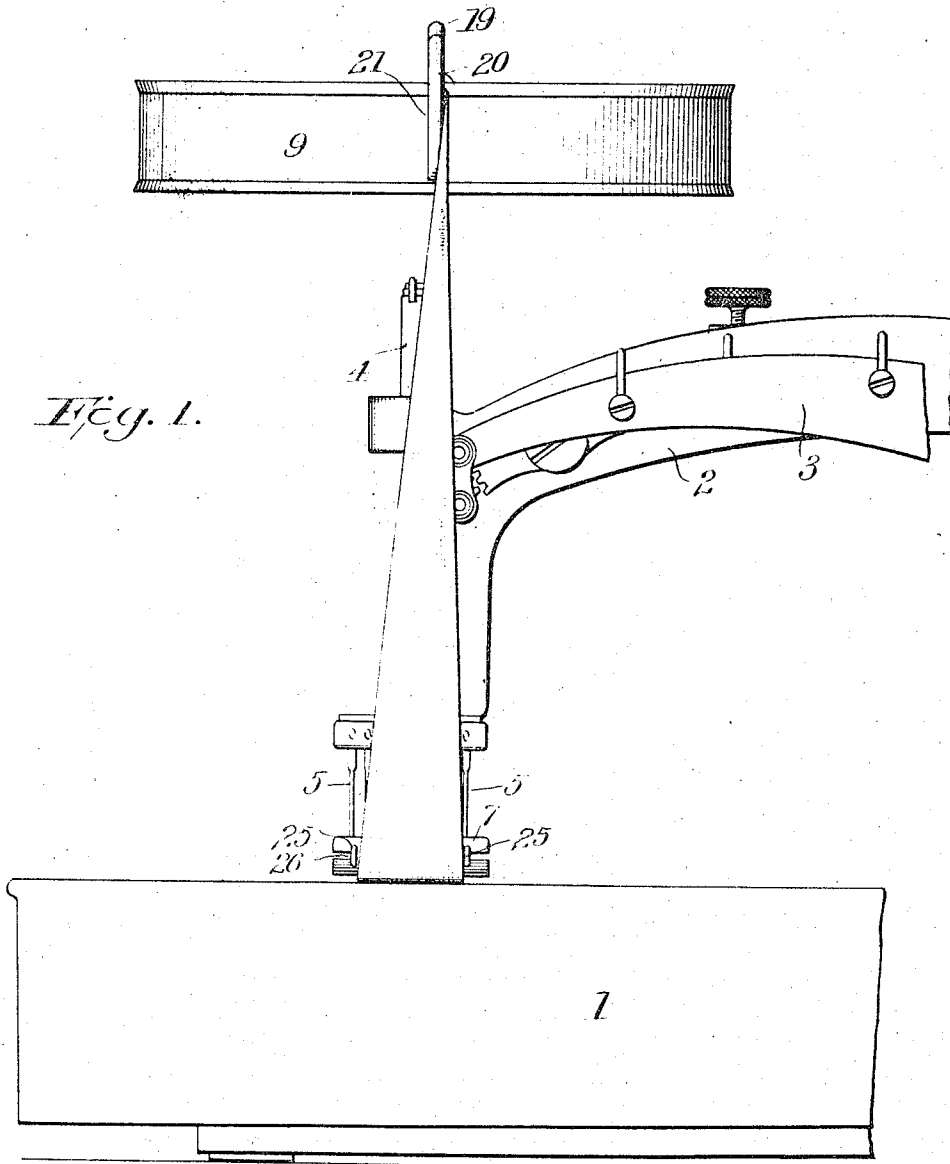


Fig. 1.

Witnesses

E. H. Walker
Albert Hopkins

Inventors

John Hayes Jr.
Joseph Berger Jr.

By

Shindler & Mason

Attorneys

APPLICATION FILED AUG. 11, 1908.

3 SHEETS-SHEET 2.



Fig. 7.

C. H. Walker.
Albert Hopkins

John Hayes Jr
Joseph Beezer Jr

Stewart & Mason

Attorneys

J. HAYES, JR. & J. BERGER, JR.
TAPE REEL FOR SEWING MACHINES.
APPLICATION FILED AUG. 11, 1908.

1,124,735.

Patented Jan. 12, 1915.

3 SHEETS-SHEET 3.

Fig. 3.

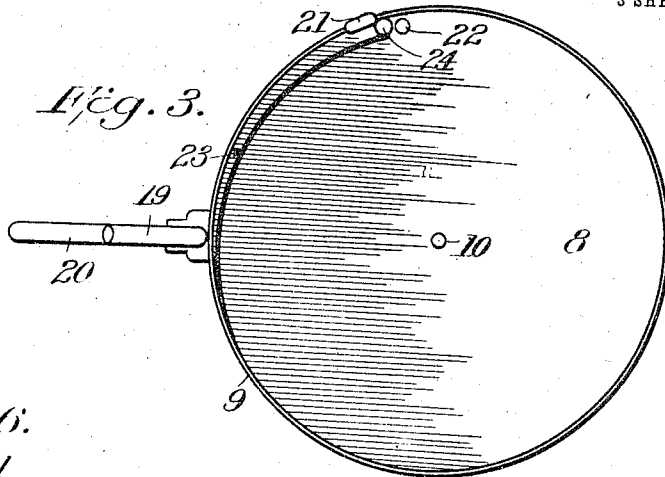


Fig. 6.

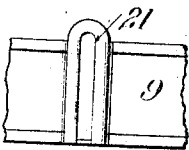


Fig. 4.

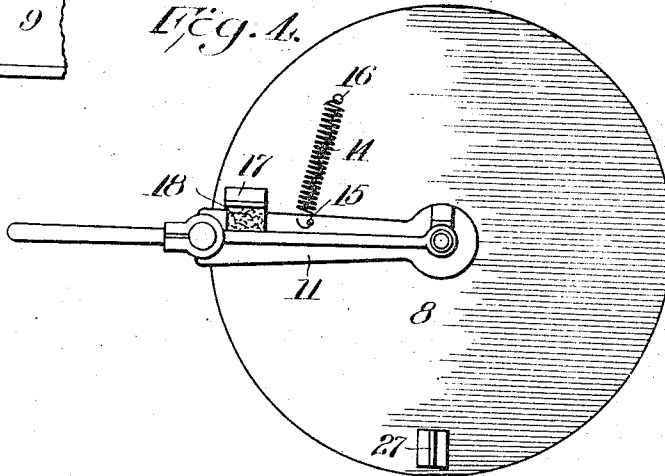
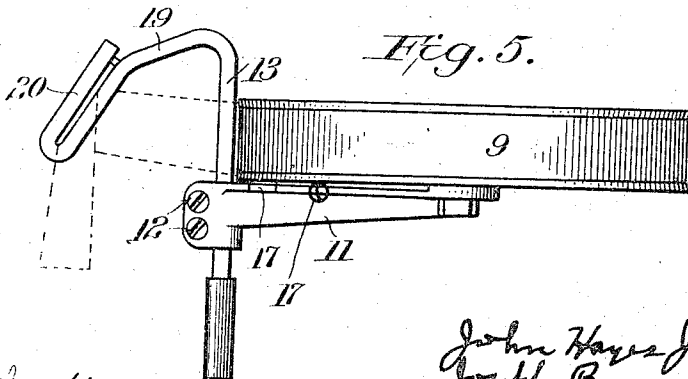


Fig. 5.



Witnesses

G. H. Walker,
Albert Popkin

Inventors

John Hayes Jr.
Joseph Berger Jr.

By

Stewart & Mason

Attorneys

UNITED STATES PATENT OFFICE.

JOHN HAYES, JR., AND JOSEPH BERGER, JR., OF AMSTERDAM, NEW YORK, ASSIGNORS
TO UNION SPECIAL MACHINE COMPANY, OF CHICAGO, ILLINOIS, A CORPORATION OF
ILLINOIS.

TAPE-REEL FOR SEWING-MACHINES.

1,124,735.

Specification of Letters Patent.

Patented Jan. 12, 1915.

Application filed August 11, 1908. Serial No. 447,956.

To all whom it may concern:

Be it known that we, JOHN HAYES, JR., and JOSEPH BERGER, JR., citizens of the United States, residing at Amsterdam, in the county of Montgomery, State of New York, have invented certain new and useful Improvements in Tape-Reels for Sewing-Machines, of which the following is a description, reference being had to the accompanying drawing, and to the letters and figures of reference marked thereon.

The invention relates to new and useful improvements in machines for stitching facing strips on garments, such as knit shirts, although it is obvious from certain aspects that the invention may be used in connection with machines for feeding strips of any character.

An object of the invention is to provide a carrier for the tape or strip which shall support said tape, so that it may be readily fed to the stitching mechanism.

A further object of the invention is to provide a support for the tape or strip, which shall operate to take up the end of the tape after the same is severed from the garment.

These and other objects will in part be obvious, and will in part be hereinafter more fully described.

In the drawings which show by way of illustration one embodiment of the invention,—Figure 1 is a front view of a sewing machine having the improved tape reel applied thereto, and showing the tape passing down to the stitching point; Fig. 2 is a similar view, showing the manner of taking up the end of the tape after the same has been severed from the garment; Fig. 3 is a top plan view of the improved tape reel detached; Fig. 4 is a bottom plan view of the same; Fig. 5 is a side view of the same; and Fig. 6 is a detail, showing the slot in the tape reel. Fig. 7 is a detail showing the presser foot and the feed dog cooperating therewith in side elevation.

The sewing machine to which the invention is shown applied, may be of any desired character. We have, however, illustrated a sewing machine of the multiple needle type, which comprises a bed plate 1 having the usual work support, an overhanging arm 2, a needle lever 3, which reciprocates a needle bar 4 carrying a plurality of needles 5, 5. A presser bar 6, is

mounted in the head of the machine and carries a presser foot 7. Coöperating with the presser foot is a feeding mechanism which includes a feed dog 7^a, see Fig. 7. These parts are of the usual construction, and will not need further description in this connection.

The tape reel comprises a supporting plate 8, from which rises a rim or ledge 9. A pin 10 passes centrally through the supporting plate 8 and serves as a means for centrally locating the roll of tape, which rests upon the supporting plate 8. The supporting plate 8 is carried by a bracket arm 11, which is secured by means of screws 12, 12, to a standard 13, which as herein illustrated, is mounted in a vertical socket in the head of the machine. The pin 10 passes down into the bracket arm, and supports the plate 8, so that said plate may rotate upon the bracket arm 11. A spring 14 is secured at 15 to the bracket arm 11, and is secured at its other end to a lug 16 carried by the underside of the supporting plate 8. Said spring normally holds the supporting plate 8, so that the lug 17 carried thereby is in contact with the bracket arm 11. A felt cushion 18 may be used if desired, to absorb the shock when the lug 17 is brought into contact with the bracket arm 11. The standard 13 is provided with a downwardly projecting arm 19, which is bent downward and thence back upon itself at 20, to form a guiding channel for the tape. The rim 9 of the tape reel is slotted at 21, (see Fig. 6).

A post 22 (see Fig. 3) is mounted inside of the tape reel, and the tape as it passes from the roll, passes in front of the post 22, and thence through the slot 21. As a means for causing a tension upon the tape as it passes from the tape reel, we have provided a spring arm 23, which is secured to the rim or ledge 9 of the tape reel at one end, and carries a short rod 24 at its other end, which bears upon the tape between the post 22 and the slot 21. The tape, after passing from the slot 21 in the tape reel passes through the guide in the outer end of the arm 19, and thence down in front of the machine underneath the presser foot. The presser foot may be provided with adjustable guides 25 and 26, which will operate to properly guide the tape to the stitching mechanism. A lug 27 may be provided on the under side of the supporting plate 8,

to limit the movement of the tape reel. In the operation of our device, the tape as it is drawn from the tape reel will cause the reel to be rotated until the slot 21 is practically opposite the standard 13, so that the tape passes directly from the tape reel to the guide in the outer end of the arm 19, carried by the standard. The reel takes this position owing to the fact that the tape passing from the reel is placed under tension by the arm 23. When the reel is in the above position, the spring 14 is under tension, and the lug 17 has been moved away from the bracket arm 11. The spring 14 will hold the tape running from the reel to the feed of the machine under a predetermined tension, depending upon the tension of the spring, and this serves to maintain an even tension on the tape, and thus regulate or control the slack in the tape between the tape reel and feed of the machine. The feed of the machine will hold the reel in this position and gradually draw from the reel the necessary amount of tape. When the operator has finished the garment, the tape is severed close to the stitching point, and the end of the tape when released, is drawn up to the position shown in Fig. 2' by the spring 14 rotating the tape reel, so as to bring the lug 17 into contact with the bracket arm 11. This takes the end of the tape up out of the way of the operator, and prevents the same from becoming soiled or in any way interfering with the operator in properly threading and adjusting the stitching mechanism.

Having thus described our invention, what we claim as new and desire to secure by Letters Patent, is:—

1. The combination with a stitch forming mechanism, of means for supporting a tape whereby the same may be fed to the stitching mechanism, and means for automatically taking up the loose end of the tape after the same has been severed.

2. The combination with stitch forming mechanism, of a tape reel for supporting a roll of tape, whereby the same may be fed to the stitching mechanism, means for placing a tension on the tape, whereby a pull on the tape will cause a limited movement of the tape reel, means for limiting the movement of the tape reel, and means for rotating the tape reel to take up the end of the tape after the same has been severed and released.

3. The combination with stitch forming

mechanism, of means for supporting a roll of tape, including a rotatable supporting member, a bracket on which said supporting member is mounted, means for limiting the rotation of said support on said bracket, said support having means for supporting a roll of tape, devices carried by said support for placing a tension on the tape, whereby a pull on the tape will rotate said support, and a spring operating to rotate the support in the opposite direction, whereby when said tape is severed and released the end of the tape will be taken up.

4. The combination with stitch forming mechanism, of a tape reel including a support, a bracket on which said support is rotatably mounted, spaced stops carried by said support and cooperating with said bracket, whereby said support has a limited rotation, a spring for holding said support with one of said stops in engagement with the bracket, means for supporting a roll of tape on said support, and means carried by said support for placing sufficient tension on said tape so as to cause said tape when pulled to rotate the support against the tension of the spring until the other stop engages the bracket.

5. The combination with stitch forming mechanism, of a tape reel for supporting a roll of tape, including a horizontally rotating support, a bracket carrying said support, said support having an upwardly projecting rim or ledge formed with a slot through which the tape passes, a pin centrally of the support for holding the roll of tape, means carried by the support for placing a tension on said tape as it passes through said slot, spaced stops carried by said support and cooperating with said bracket for limiting the rotation of said support, a spring for normally holding one of said stops in engagement with the bracket, said spring being so disposed that a pull on the tape will rotate the support against the tension of the spring until the other stop engages the bracket, a guiding arm carried by the bracket for guiding the tape from the reel to the stitch forming mechanism.

In testimony whereof we affix our signatures, in presence of two witnesses.

JOHN HAYES, JR.
JOSEPH BERGER, JR.

Witnesses:

JAMES F. KELLY,
LLOYD H. HAYES.