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J. M. WASHBURN

2,017,382

TRIMMING MECHANISM FOR SEWING MACHINES

Filed Jan. 24, 1935

Fig. 1.

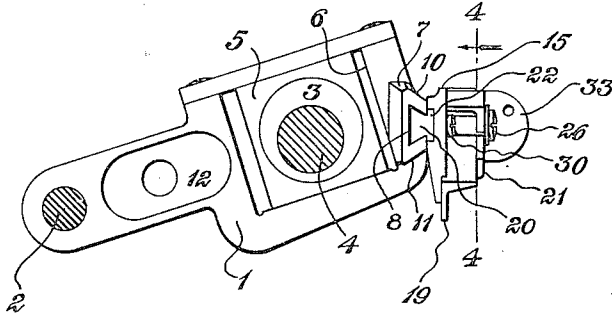


Fig. 2.

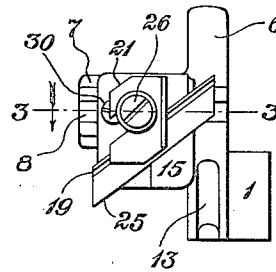


Fig. 3.

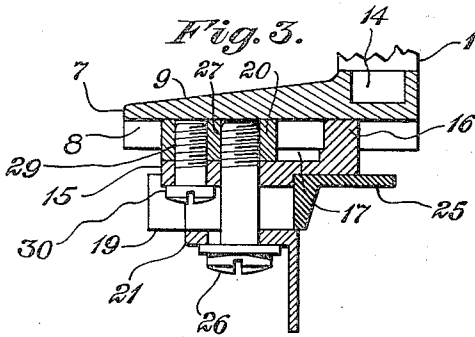


Fig. 4.

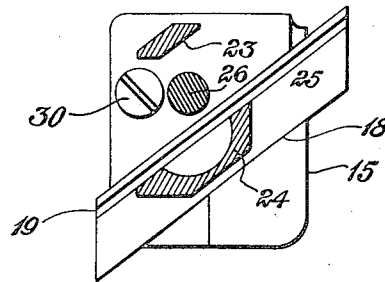


Fig. 5.

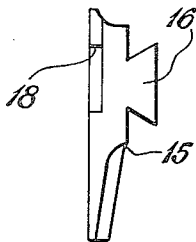


Fig. 6.

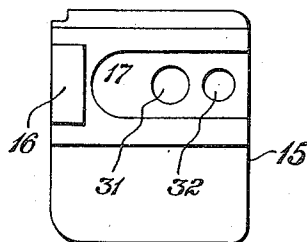


Fig. 7.

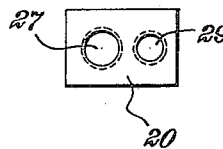


Fig. 8.

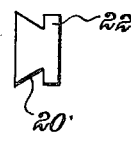


Fig. 9.

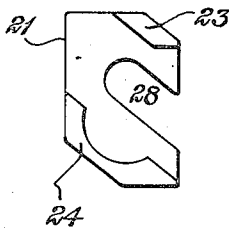
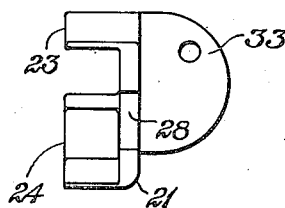


Fig. 10.



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UNITED STATES PATENT OFFICE

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TRIMMING MECHANISM FOR SEWING
MACHINES

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Hartford, Conn., a corporation of Connecticut

Application January 24, 1935, Serial No. 3,317

5 Claims. (Cl. 112—126)

This invention relates to trimming mechanism for sewing machines and is especially directed to improvement of means for supporting and permitting adjustment of a movable cutter in trimming mechanism of the type employed in the well known Merrow overseaming machines as illustrated and described in United States Patent No. 733,760, granted to William H. Stedman, July 14th, 1903, also in United States Patent No. 1,207,063, granted to Joseph M. Merrow, December 5th, 1916.

Primarily the object of the invention is the provision in trimming mechanism of parts which are of minimum weight consistent with required strength, combined in an efficient arrangement including a cutter supporting carriage, means for adjustably securing the carriage to a carrier, and a clamp for securing a cutter blade to the carriage.

In the accompanying drawing,—

Figure 1 is a side view of a cutter carrier and associated parts embodying my invention.

Figure 2 is a front view of the parts shown in Fig. 1.

Figure 3 is a sectional view on line 3—3 of Fig. 2.

Figure 4 is a sectional view on line 4—4 of Fig. 1.

Figures 5 and 6 are detail views of a cutter carriage.

Figures 7 and 8 are detail views of a cutter carriage clamping nut.

Figures 9 and 10 are detail views of a cutter clamping element.

It will be noted that Figs. 3 to 10 inclusive are drawn to an enlarged scale.

Referring to the drawing, a cutter carrier such as employed in a Merrow overseaming machine is designated by 1. It is supported for oscillatory movement on a rock shaft 2 and is actuated by an eccentric 3 driven by shaft 4. The eccentric is fitted with a block 5 which is engaged by the yoke portion 6 of the cutter carrier, the latter having at its free end a laterally extended arm 7 which is channeled throughout its length with an undercut groove 8. Converging toward its outer end, arm 7 is tapered on its rear side 9 to reduce bulk where it is not required for strength. For the same reason the edges of the arm are beveled as at 10 and 11. Also, as at 12, 13 and 14, the cutter carrier is recessed to reduce its weight without materially affecting its strength. The groove 8 forms in arm 7 a guideway in which the cutter carriage 15 may be adjustably secured. Carriage 15 is formed of a substantially flat plate

having a tongue 16 and recess 17 on its rear side and a diagonally extending channel 18 on its front side. Means serving to adjustably secure carriage 15 to the cutter carrier arm 7 and to adjustably secure cutter blade 19 in the diagonal channel 18, include a nut 20 and clamping element 21. Tongue 16 of the cutter carriage and nut 20 are each formed to engage the undercut groove 8 in arm 7, and the nut is provided with a head 22 to engage recess 17 in the cutter carriage 15. The clamp 21, formed to straddle the cutter blade 19, is of substantially U-shape having legs 23 and 24 adapted respectively to engage the surface of the cutter carriage and that flange 25 of the cutter blade which is formed to fit channel 18 in the carriage. A screw 26 is employed to impart thrust to clamp 21 to hold the cutter blade to the carriage and also to impart thrust to nut 20 to hold the carriage 15 to the carrier arm 7, the respective pressures involved being opposed to each other. The threaded end of screw 26 engages a tapped hole 27 in nut 20 and the head of the screw engages the clamp at its intermediate section which is recessed at 28 to receive the body of the screw. A second tapped hole 29 is provided in nut 20 to engage screw 30 which serves to clamp the carriage 15 upon its supporting arm and thus to maintain its position thereon while screw 26 is loosened to permit adjustment of the cutter blade. The carriage 15 is provided with holes 31 and 32 to receive the respective screws 26 and 30. Extended from the clamp 21 is a perforated wing 33 which serves for convenience in handling and for passage of a thread.

Having thus described my invention, what I claim is,—

1. A trimming mechanism for sewing machines including in combination, an oscillatory carrier having an arm extending transversely to its plane of movement and provided with a groove, a cutter holder and a nut, each having a tongue to match the groove in the arm of the carrier and slidable therein, and a screw extending through the holder to engage the nut whereby tightening of the screw will clamp the holder to the arm.

2. A trimming mechanism for sewing machines including in combination, an oscillatory carrier having an arm extending transversely to its plane of movement and provided with a groove, a cutter holder and a nut, each having a tongue to match the groove in the arm of the carrier and slidable therein, and a screw extending through the holder to engage the nut, the latter having a head to engage a recess in the holder.

3. A trimming mechanism for sewing machines including in combination, an oscillatory carrier having an arm extending transversely to its plane of movement and provided with a groove, a cutter holder comprising a substantially flat plate having a tongue on one side to match the groove in the arm of the carrier and a recess adjacent one end of the tongue, a nut also having a tongue to match the groove in the carrier and a head to match the recess in the holder, both the holder and the nut being slidably engageable with the carrier, and a screw extending through the holder to engage the nut.

4. A trimming mechanism for sewing machines including in combination, an oscillatory carrier having an arm extending transversely to its plane of movement and provided with an undercut groove, a cutter blade, a holder for the cutter blade comprising a substantially flat plate having on one side a tongue to match the groove in the arm of the carrier and a recess adjacent one end of the tongue and on the other side a channel to receive the cutter blade, a nut having a tongue to

match the groove in the carrier and a head to match the recess in the holder, a clamp of which respective portions engage the cutter holder and the cutter blade, and a screw engaging the clamp on one side of the holder and the nut on the other whereby the cutter blade may be clamped to the holder and the holder clamped to the carrier.

5. A trimming mechanism for sewing machines including in combination, an oscillatory carrier having an arm extending transversely to its plane of movement and provided with an undercut groove, a cutter blade, a holder for the cutter blade comprising a substantially flat plate having on one side a tongue to match the groove in the arm of the carrier and on the other side a channel to receive the cutter blade, a nut engaged with the groove of the carrier and slidable therein with the tongue on the holder, a clamp of which respective portions engage the cutter holder and the cutter blade, a screw engaging the clamp and the nut and a screw engaging the holder and the nut.

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