(No Model.)

C. H. WILLCOX.

TRIMMING ATTACHMENT FOR SEWING MACHINES.

No. 348,485. Patented Aug. 31, 1886.

Fig. 1.

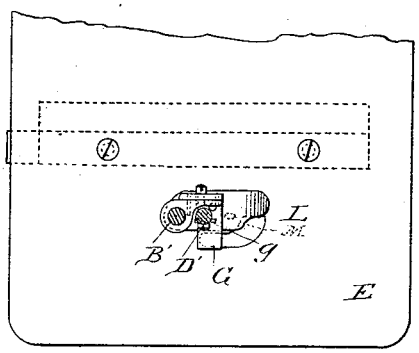


Fig. 4.

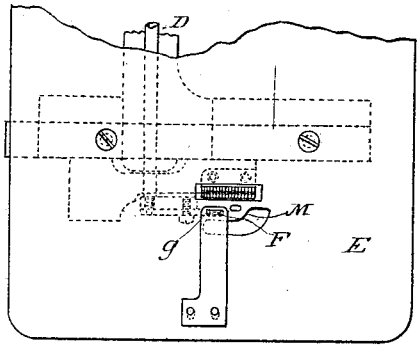


Fig. 2.

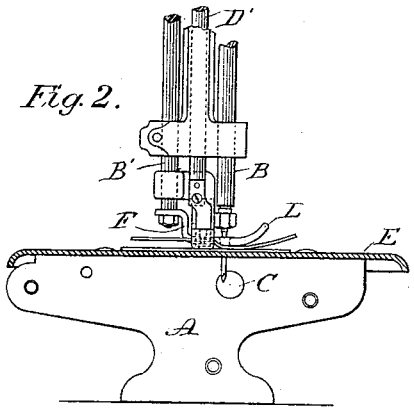


Fig. 5.

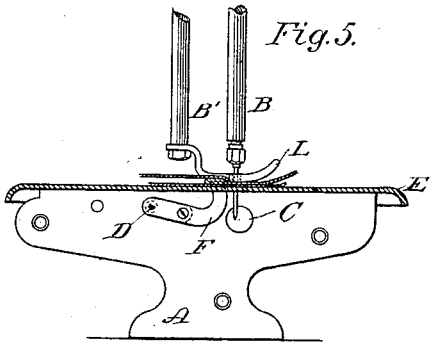


Fig. 3.

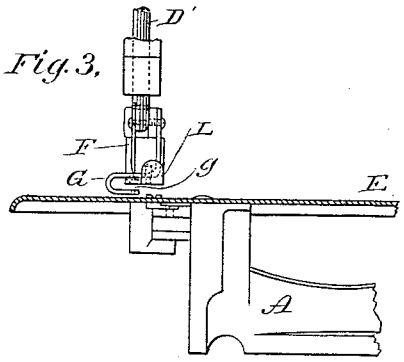


Fig. 6.

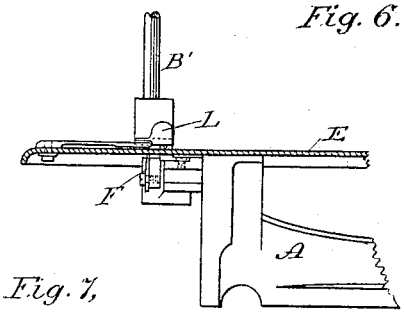
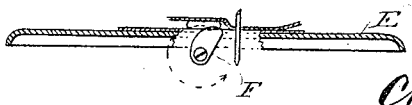


Fig. 7.



WITNESSES

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CHARLES H. WILLCOX, OF NEW YORK, N. Y.

TRIMMING ATTACHMENT FOR SEWING-MACHINES.

SPECIFICATION forming part of Letters Patent No. 348,485, dated August 31, 1886.

Application filed May 26, 1882. Serial No. 62,517. (No model.)

To all whom it may concern:

Be it known that I, CHARLES H. WILLCOX, of New York city, in the county and State of New York, have invented a new and useful Improvement in Trimming Attachments for Sewing-Machines, which improvement is fully set forth in the following specification.

This invention has reference to a trimming attachment for trimming one or more of a number (two or more) of superposed layers of fabric, leaving the others uncut, and more particularly to a trimmer for removing the surplus material on the folded-over layer in plain or single-turn hems or welts on knit goods.

It consists, mainly, in the combination of a suitable cutter with a separator bar or plate slotted at one end, which is adapted to enter between the superposed layers. This cutter is preferably a reciprocatory (either in an arc or in right lines) or a rotary knife, and it has its edge sheathed within the slotted body of the separator bar or plate, so that it will act upon the fabric on one side of said separator, but leave the layer or layers on the opposite side uncut.

For welts or hems the cutter is arranged on the side of the needle opposite from the goose-neck or stationary arm of the sewing-machine, so that the main body of the work lies outside of the goose-neck, and the latter does not interfere with the free manipulation thereof.

In the accompanying drawings three forms of trimmer are shown constructed in accordance with the present invention and applied to a sewing-machine of the Willcox & Gibbs type, which makes a chain-stitch with a single thread by means of an eye-pointed needle and a continuously-revolving looper.

Figure 1 is a plan view, partly in horizontal section, and Figs. 2 and 3 end and front elevations, respectively, and partly in vertical section, showing one form of trimmer. Figs. 4 to 6 are similar views of another form; and Fig. 7, a view in end elevation, partly in vertical section, illustrating the third form.

A is the machine-frame, B the needle and needle-bar, B′ the presser-bar, C the main shaft, E the cloth-plate, and L the presser-foot, all of the ordinary construction, except in the particulars hereinafter noted. The cutter or cutting knife F works through a slot, *g*, in the separator bar or plate G. This bar at the slotted end has sufficient thickness to sheath the cutting-edge of knife F, so that it will not extend entirely through the separator. The cutter or knife F in Figs. 4 to 6 is carried by a rock-shaft, D, to which motion is imparted from an eccentric on the main shaft through a link, pin, and arm attached to the rock-shaft, and the separator is attached at the outer end to the cloth-plate E, and is rendered flexible by hollowing out beneath, so that the slotted end can rise and fall with the feed. Instead of rendering the separator flexible in this way, it could be pivoted or hinged to the cloth-plate. The cloth-plate is cut away for the passage of the knife F, and the feed is recessed for the passage of rock-shaft D.

In Figs. 1 to 3 the cutter or knife F is attached to a bar, D′, which slides in ways of the head of the machine, and the separator is curved or bent, and is adjustably attached to the presser-bar B′, the adjustment being in a vertical direction. The knife-bar D′ can be reciprocated by any of the ordinary or suitable connections for imparting motion to knife-bars in the head of a sewing-machine. If desired, a separate knife-bar can be dispensed with and the cutter or knife F be attached directly to the needle-bar.

In Fig. 7 the construction is the same as in Figs. 4 to 6, except that the cutter F is a rotary knife having an eccentric cutting-edge. It is carried by a horizontal shaft journaled in bearings and geared to the main shaft of the machine, preferably so that the edge in cutting moves in the direction of the feed.

In all the figures the cutter is arranged on the side of the sewing-machine opposite from the goose-neck, and there is a share or device, M, for uncurling the edge of the fabric, such as knit goods which naturally curl at the edges, and of which the curled edge, without such device, would interfere or be liable to interfere with the sewing and trimming.

In order to sew a welt or hem, the fabric is folded upon itself, and is then introduced under the presser-foot with the slotted end of the separator G between the layers, the folded-over layer being up or down, as the cutter F is above or below the separator. The curled edge of the folded-over layer is smoothed out over or under share M, (as the share is on the

cloth-plate or presser-foot,) and is allowed to rest against the curved front edge of the said share. The machine being started, the welt or hem is sewed and trimmed simultaneously. When the folded-over layer is uppermost in sewing, the chain made by the looper will be visible on the right side of the article; but when it is below it will be on the wrong or inner side of the article. If the chain is not wanted to show, the cutter should be placed below the cloth-plate. With lock-stitch machines, however, to which this invention is applicable, as well as to chain, double-chain, and other sewing-machines, as the sewing is alike or very much alike on both sides, it will in general be immaterial whether the welt or hem is sewed with the fold up or down.

It is obvious that a vibratory, rotary, or other form of cutter or cutting-knife could be combined with a separator carried by the presser-bar or presser-foot, or even by the head of the machine, as well as with a separator carried by the cloth-plate.

Having now fully described my said invention and the manner of carrying the same into effect, what I claim is—

1. In a trimming attachment, the combination, with a slotted separator, of a cutter or cutter-knife adapted to sever the fabric on one side of said separator, and having the cutting-edge sheathed in said slot, so as not to sever the fabric upon the other side of the separator, substantially as described.

2. The combination of the adjustable slotted separator and the movable cutter having its cutting-edge sheathed in the slot, so as to sever the fabric only on one side of the separator, substantially as described.

3. The combination of the vertically-yielding slotted separator and the movable cutter having its cutting-edge sheathed in the slot, substantially as and for the purpose set forth.

4. The combination of the slotted separator and the movable cutter, both arranged on the side of the needle opposite the goose-neck, and the cutting-edge of the latter being sheathed in the slot in the former, substantially as described.

In testimony whereof I have signed this specification in presence of two subscribing witnesses.

CHAS. H. WILLCOX.

Witnesses:
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S. A. SWART.