

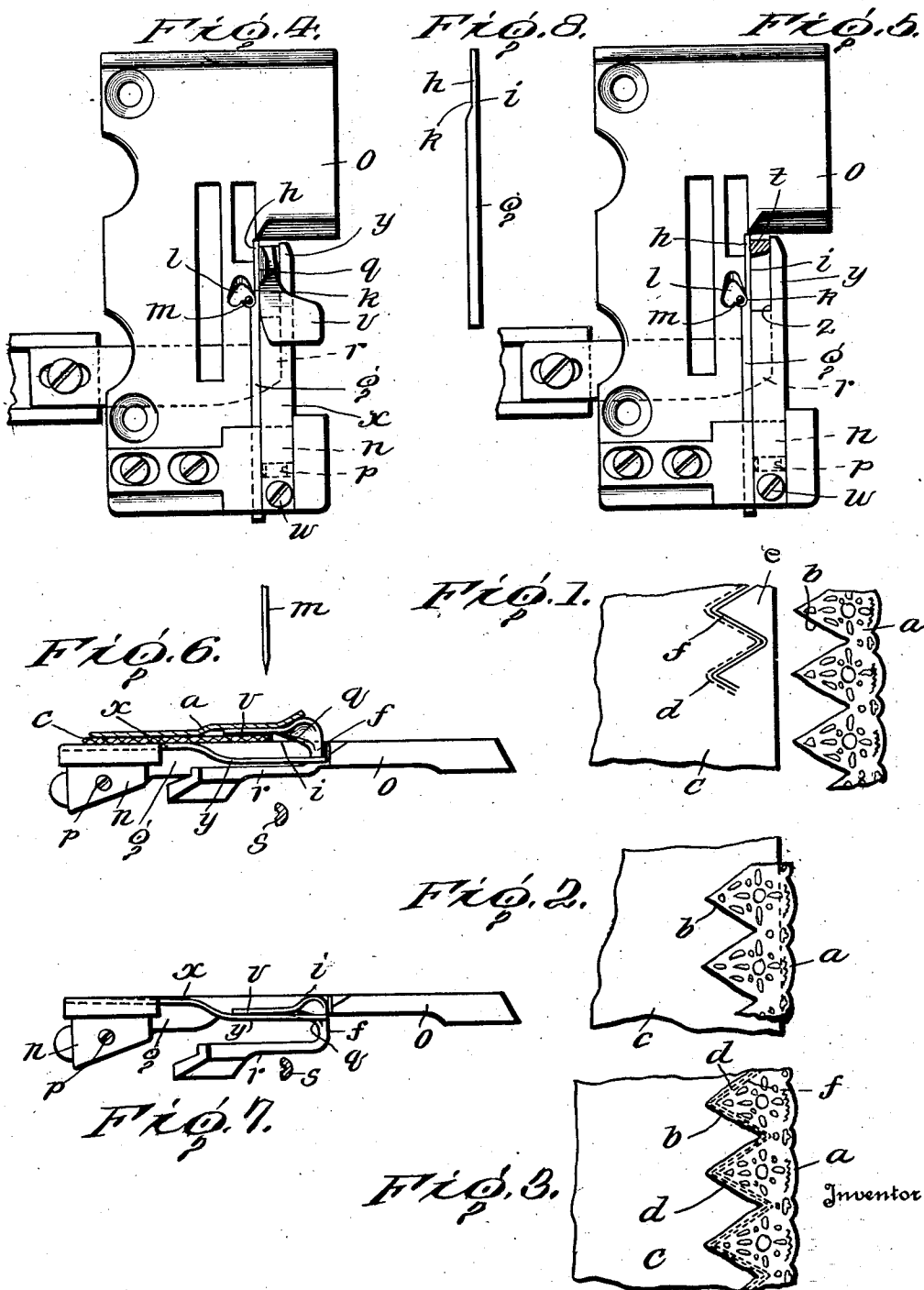
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TRIMMING DEVICE FOR SEWING MACHINES

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TRIMMING DEVICE FOR SEWING MACHINES

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The invention relates to new and useful improvements in a trimming device for sewing machines, and more particularly to a trimming device for severing one layer only of two fabric sections close to the line of stitching as the fabric sections are stitched.

An object of the invention is to provide a trimming device of the above character wherein the movable blade is mounted beneath the throat plate and is provided with an overhanging cutting portion for trimming the lower fabric section only, and wherein said movable trimming blade is provided with a guard for preventing the cutting into of the overlying fabric section.

A further object of the invention is to provide a trimming device of the above character wherein a stationary blade cooperates with the movable blade and said stationary blade forms one wall of the needle opening so that the lower fabric section may be trimmed or cut very close to the line of stitching.

A further object of the invention is to provide a trimming device of the above character wherein a guide plate is provided extending alongside of the stationary blade and the supporting loop portion of the movable blade for guiding and supporting said blades and also for preventing the trimmed off portion of the material from passing beneath the throat plate.

In the drawings:—

Figure 1 is a view showing a fabric with a portion thereof cut and stitched, and also showing an edging or point trimming which is secured by the line of stitching, the edging being shown detached in order to show the position of the line of stitching and cutting in the main fabric section.

Fig. 2 is a view showing the main fabric section and the edging or point trimming assembled and ready to be presented to the combined stitching and trimming mechanism.

Fig. 3 is a view showing the edging attached to the main fabric section and the portion of the main fabric section beneath the edging cut away.

Fig. 4 is a plan view of a portion of a machine embodying the improvements.

Fig. 5 is a similar view with the movable blade sectioned in order to show the structure of the guide plate beneath the overhanging part of the movable blade.

Fig. 6 is a side view of the parts shown in Fig. 4, the needle being up and the looper forward and in section.

Fig. 7 is a view similar to Fig. 6, omitting the needle and showing the movable trimming blade as shifted to an inoperative position.

Fig. 8 is a plan view of the stationary trimming blade.

The invention is directed to a sewing machine for stitching and trimming fabric sections. The machine is particularly designed for the sewing of an edging or point trimming to a main fabric section and the cutting away of the main fabric section beneath the edging or trimming along a line parallel with the stitching. In Figs. 1 to 3 of the drawings the main fabric section is shown at *c*; the edging or point trimming at *a*. The edging has inclined portions *b* forming the points. The purpose of the machine is to stitch an edging or point trimming of this character to a fabric by a line of stitching which passes along and is parallel with the inclined edge portions *b*. The machine also trims the fabric section along a line forming inclined portions *f* as shown in Fig. 1, and thus cuts away a strip *e* leaving the main fabric section with the inclined portions *f* corresponding to the inclined portions *b*.

The line of stitching is indicated at *d*. This line of stitching is parallel with the line on which the fabric section *e* is cut and is also parallel with the inclined portions *b* forming the point of the trimming or edging *a*.

The sewing machine includes a needle *m* and a looper *s* which cooperates therewith in the forming of a line of stitching. Only a portion of the sewing machine is shown. The throat plate *o* is provided with a needle opening *l* through which the needle *m* reciprocates. Mounted on the throat plate is a stationary cutting blade *g*. This cutting blade *g* has a cut away portion *k* forming a narrow blade *h*. The face *i* is the cutting face of the blade. The needle opening *l* is closed by the trimming blade *g*, and there-

fore, the needle can pass very close to the cutting face of the stationary blade *g* and thus very close to the line of trimming or cutting of the fabric section which is being stitched.

5 The stationary blade *g* is mounted in a housing *n* carried by the throat plate *o* and is secured therein by means of a screw *p*.

Mounted beneath the throat plate *o* is a movable cutting blade *r*. This movable cutting blade *r* is mounted on a suitable supporting means which has an up and down movement for imparting vibrations to the movable cutting blade. The means for moving this cutting blade may be of any desired character. The cutting blade *r* has an upwardly projecting loop portion *t* and an overhanging portion *q* which overhangs the plane of the throat plate *o* during the normal cutting operation of the movable blade. The point of the movable blade is so disposed as to lie in between the main fabric section and the edging or trimming which is stitched to the main fabric section. There is also a guard *v* attached to the movable blade which extends forward of the cutting point and which is provided with a raised portion in rear of the cutting point. This guard is for the purpose of directing the edging or trimming, and aids in the separating of the edging or trimming from the main fabric section so that the point of the movable cutting blade will be shielded and prevented from penetrating the edging or trimming, while at the same time the movable trimming blade will cut the lower fabric section.

Alongside of the movable cutting blade *r* is a support or guide plate *x*. This support or guide plate *x* is attached to the cloth plate by a suitable screw *w*. Said support or guide plate has a forwardly projecting portion *y* which engages the movable trimming blade and aids in the supporting of the movable trimming blade in firm shearing contact with the stationary blade. The guide plate *x* is cut away at *z* directly in front of the movable trimming blade for a short distance and this provides a space in which the movable blade can operate. This support or guide plate *x* directs the trimmed off portion of the main fabric section up onto the throat plate *o* and over the top of the throat plate, thus preventing the trimmed off section from being deflected beneath the throat plate and interfering with the action of the feed or looper.

The forward edge of the throat plate is beveled in order to aid in the directing of the trimmed off strip up onto the throat plate. The support or guide plate *x* extends alongside of the stationary trimming blade *g* and aids in the supporting of this blade.

The operation of the device is thought to be apparent from the above description. The edging or point trimming to be attached to a fabric section is placed on the fabric section

as shown in Fig. 2. The parts thus assembled are fed to the needle so that the needle will stitch along one of the inclined edge portions *b* of the edging or point trimming and thus secure the same to the fabric section. At the same time the trimming blade operating directly in rear of the point of stitching will cut the lower section only along a line parallel with the line of stitching. When the inner point of the edging is reached, then the direction of feed is changed so that the stitching passes along the next adjacent inclined portion *b* next to the edge thereof. The line of trimming also changes its course and follows the line of stitching in the main fabric section, again cutting the main fabric section close to the line of stitching. Thus it is that the edging or trimming is attached to the main fabric section and the fabric section beneath the edging or point trimming is cut away close to the line of stitching.

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

1. A trimming device for sewing machines including a throat plate, a stationary trimming blade carried by said throat plate and located at one side of the needle and forming the wall of the needle opening between the needle and the movable trimming blade, a movable trimming blade mounted beneath the throat plate and projecting above and overhanging the throat plate and cooperating with said stationary blade in the trimming of the lower layer only of two fabric sections being stitched.

2. A trimming device for sewing machines including a throat plate, a stationary trimming blade carried by said throat plate and located at one side of the needle, a movable trimming blade mounted beneath the throat plate and projecting above and overhanging the throat plate and cooperating with said stationary blade in the trimming of the lower layer only of two fabric sections being stitched, a guard carried by and projecting in front of the overhanging portion of the movable trimming blade adapted to pass between fabric sections being stitched.

3. A trimming device for sewing machines including a throat plate, a stationary trimming blade carried by said throat plate and located at one side of the needle and forming the wall of the needle opening between the needle and the movable trimming blade, a movable trimming blade mounted beneath the throat plate and projecting above and overhanging the throat plate and cooperating with said stationary blade in the trimming of the lower layer only of two fabric sections being stitched; and a support or guide plate located beneath the overhanging portion of said movable trimming blade for directing the trimmed off edge portion onto and over the throat plate of the sewing machine.

4. A trimming device for sewing machines including a throat plate having a needle opening, a stationary trimming blade carried by the throat plate and having a reduced portion adjacent the trimming face of said blade forming the wall of the needle opening between the needle and the movable trimming blade, a movable trimming blade mounted beneath the throat plate and projecting above and overhanging the throat plate and cooperating with said stationary blade in the trimming of the lower layer only of two fabric sections being stitched.

5. A trimming device for sewing machines including a throat plate having a needle opening, a stationary trimming blade carried by the throat plate and having a reduced portion adjacent the trimming face of said blade forming one wall of the needle opening, a movable trimming blade mounted beneath the throat plate and projecting above and overhanging the throat plate and cooperating with said stationary blade in the trimming of the lower layer only of two fabric sections being stitched, and a guard carried by and projecting in front of the overhanging portion of the movable trimming blade adapted to pass between the fabric sections.

6. A trimming device for sewing machines including a throat plate having a needle opening, a stationary trimming blade carried by the throat plate and having a reduced portion adjacent the trimming face of said blade forming one wall of the needle opening, a movable trimming blade mounted beneath the throat plate and projecting above and overhanging the throat plate and cooperating with said stationary blade in the trimming of the lower layer only of two fabric sections being stitched, a guard carried by the overhanging portion of the movable trimming blade adapted to pass between the fabric sections, and a support and guide plate carried by the throat plate and disposed beneath the overhanging portion of the movable trimming blade, said support engaging the stationary blade and the movable blade for supporting the same and operating to direct the trimmed off strip onto and over the throat plate.

In testimony whereof, I affix my signature.
KARL MAIER.

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