

J. McKAY.
FEEDING MECHANISM FOR SEWING MACHINES.
APPLICATION FILED OCT. 17, 1904.

970,847.

Patented Sept. 20, 1910.

2 SHEETS-SHEET 1.

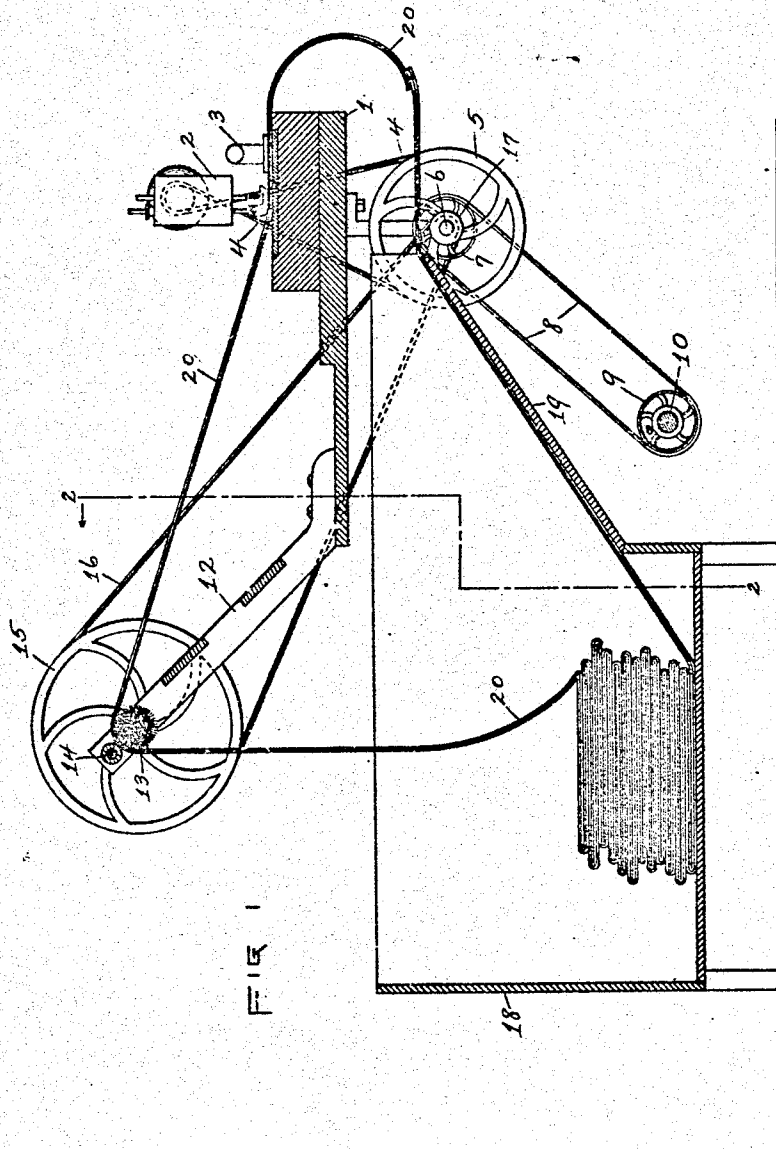


FIG. 1

WITNESSES

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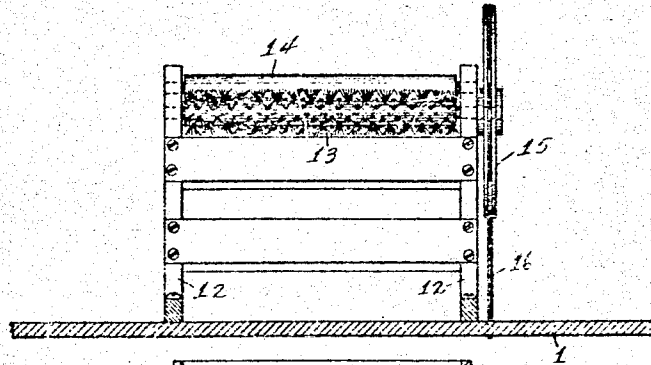


FIG 2

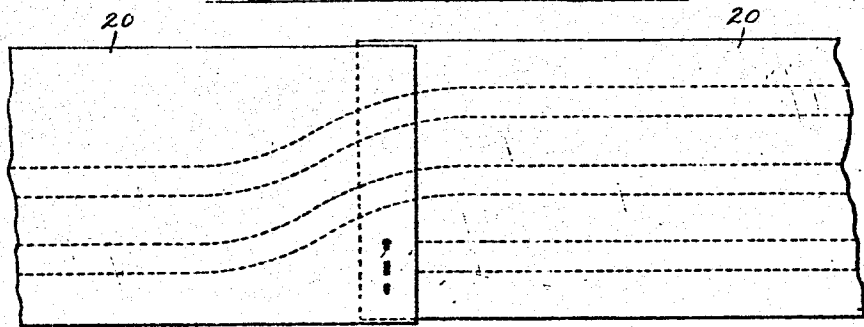
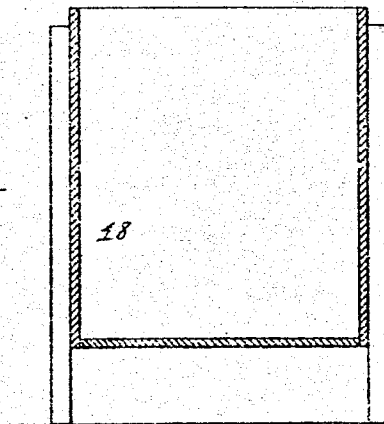


FIG 3

WITNESSES
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UNITED STATES PATENT OFFICE.

JOSEPH McKAY, OF TROY, NEW YORK, ASSIGNOR TO HALL, HARTWELL & CO., OF TROY, NEW YORK, A FIRM.

FEEDING MECHANISM FOR SEWING-MACHINES.

970,847.

Specification of Letters Patent. Patented Sept. 20, 1910.

Application filed October 17, 1904. Serial No. 228,823.

To all whom it may concern:

Be it known that I, JOSEPH McKAY, a citizen of the United States, residing at Troy, county of Rensselaer, and State of New York, have invented certain new and useful Improvements in Feeding Mechanism for Sewing-Machines, of which the following is a specification.

The invention relates to such improvements and consists of the novel construction and combination of parts hereinafter described and subsequently claimed.

Reference may be had to the accompanying drawings, and the reference characters marked thereon, which form a part of this specification.

Similar characters refer to similar parts in the several figures therein.

Figure 1 of the drawings is a view in cross-section taken transversely through a sewing machine table provided with my improved work-feeding mechanism, showing the sewing machine in end elevation. Fig. 2 is a cross-section of the same taken on the broken line 2—2 in Fig. 1. Fig. 3 is a plan view of the connected ends of a piece of fabric showing the manner in which the same is adapted for continuous lines of stitching side by side by means of my improved mechanism.

In the ornamentation of fabrics it is frequently desirable to provide the same with numerous parallel rows of stitching, plaits, or other ornamentation, which can be accomplished by repeatedly passing the fabric through a sewing machine adapted to produce at each passage thereof a line of such ornamentation; thus in the manufacture of fancy shirt bosoms, a bosom-strip may be provided with stitched plaits by passing the same through a sewing machine provided with a plaiting or folding attachment a number of times corresponding with the number of plaits desired. In the same way such a bosom strip may be provided with ornamental lines of stitching. In thus ornamenting short strips adapted for single bosoms much time is lost by the repeated removal of the strip from and its reinsertion in the machine. For this reason it is found that much time can be saved by ornamenting in this manner a long strip of fabric adapted to be cut up after ornamentation into nu-

merous short bosom lengths; and the object of this invention is to facilitate the ornamentation in this manner of long strips of fabric; and the invention consists in the provision of means whereby a long strip of fabric may be passed through a sewing machine repeatedly by a continuous operation permitting the insertion of such lines of ornamentation side by side without interrupting the continuity of the operation of the machine.

Referring to the drawings, 1, represents a sewing machine table, 2, a sewing machine mounted thereon, which sewing machine may be of any of the well known types.

3 is a folder or plaiter attachment which may be of any known type.

The machine is operated by a belt, 4, engaging the pulley, 5, fixed upon the shaft, 6, provided with a driving pulley, 7, connected by belt, 8, with a pulley, 9, on the main power-shaft 10.

The parts thus far described are of the usual type and well understood by those skilled in the art.

Mounted upon the table, 1, and extending upwardly and rearwardly therefrom, is a bracket, 12, upon which are rotatively mounted a pair of rollers, 13 and 14. Fixed upon one of the journals of the roller, 13, is a pulley, 15, connected by a belt, 16, with a pulley, 17, on the shaft, 6, whereby rotary movements are imparted to the roller, 13, when the sewing machine is operated. The roller, 14, is adapted to engage and be rotated by the roller, 13, or fabric interposed between said rollers. Beneath the rollers, 13 and 14, is located an open box, 18, having an upwardly inclined extension, 19, on its front end projecting beneath the sewing machine table and opening at the front above the cross-shafting and just beneath the underside of the table.

In the operation of the machine a long strip of fabric, 20, is employed, one end of which is inserted in the machine and operated upon until a sufficient length of the strip has been passed through the machine to reach to a point beyond the rollers, 13 and 14, whereupon said end is inserted between said rollers and the operation of the machine continued causing the fabric as the same leaves the machine to pass between the roll-

ers, 13 and 14, and thence downwardly into the open box, 18, being deposited upon the bottom thereof which forms a receptacle for the fabric.

5 As soon as a sufficient length of the fabric has been operated upon to permit of so doing, the end first operated upon is drawn forwardly from the box along the upwardly inclined guide, 19, to the front side of the machine table where it is retained by the operator until the other end of the fabric is about to enter the machine at which time the two ends of the strip are pinned or otherwise connected together to form the same into an endless belt. After the first inserted end of the strip has been drawn out of the box the strip is permitted to pile up in the box in irregular folds, as shown in Fig. 1, as the strip is delivered from the rollers, 13 and 14.

When the ends of the strip have been temporarily connected together, as above described, the operation upon the strip is proceeded with as a continuous operation, the stitching being continued past the joint where the ends are connected together the temporary connecting pins being removed if in line with the stitching to be inserted.

In the continuous operation of the apparatus the strip is continuously being drawn out from the bottom of the pile of folds in the box, 18, to be fed to the machine and is continuously being deposited on top of the pile of folds in said box as delivered from the machine. In this manner any desired number of lines of ornamentation may be applied to the strip without removing the same from the machine or interrupting the operation.

I prefer to make the roller, 13, of yielding material, and have shown the same in the form of a brush, but said roller as well as the roller, 14, may be made of any desired material and operated in any known manner.

When making the roller, 13, in the form of a rotary brush, the same may be made of any desired kind of brush-stock or brush-fiber, such as bristles or the like. The roller, 13, is preferably operated at a peripheral speed faster than the feed movements of the machine so that a tension or pull is exerted upon the fabric as the same leaves the machine. This is of material advantage in applying certain forms of ornamentation to the fabric, such as heavy plaits, the operation of forming and stitching which tends to somewhat pucker the fabric. In such cases I find that it is advantageous to apply a tension to the fabric as the same leaves the machine, a result which my improved apparatus is well adapted to secure.

What I claim as new and desire to secure by Letters Patent is—

1. In a machine of the class described, the

combination with a sewing machine: of a pair of draft-rolls rotatively mounted in rear of the sewing machine, one having a yielding surface and the other a cooperating smooth surface, said rolls being adapted to receive therebetween a strip of fabric from said machine; and means for rotating said roll having the yielding surface at a peripheral speed greater than the speed of the sewing machine feed whereby the fabric may slip relatively to said rolls, but is held taut between the sewing-machine and said rolls.

2. In a machine of the class described, the combination with a sewing machine table; a sewing machine mounted upon said table; shafting beneath said table; and operating connections between said shafting and sewing machine; of a pair of draft-rolls rotatively mounted in rear of said machine, adapted to receive therebetween a strip of fabric from said machine; means for rotating one of said rolls; and a fabric-guide extending beneath said table above said shafting, whereby a belt of fabric may by a continuous operation be repeatedly passed through said machine and between said rolls.

3. In a machine of the class described, the combination with a sewing-machine table and sewing-machine; and a cross-shafting beneath said table for operating said sewing-machine; of a pair of draft-rolls rotatively mounted in rear of said machine, one of said rolls being provided with a yielding surface, and the other with a cooperating smooth surface, said rolls being adapted to receive therebetween a strip of fabric from said machine; means for rotating one of said rolls at a peripheral speed greater than the speed of the sewing-machine feed; an open box beneath said draft-rolls having on its front end an upwardly and forwardly inclined guide extending beneath said sewing-machine table, to a point above the cross-shafting.

4. In a machine of the class described, the combination with a sewing machine table; a sewing machine mounted thereon; shafting beneath said table; and operating connections between said shafting and said sewing machine; of a pair of draft-rolls rotatively mounted in rear of said machine, one of said rolls being in the form of a rotary brush; means for rotating one of said rolls at a peripheral speed greater than the speed of the sewing machine feed; a receptacle beneath said draft-rolls adapted to receive fabric fed therebetween; and a guide extending beneath said sewing machine table, above said shafting, whereby a strip of fabric can be returned from said receptacle to the sewing machine.

5. In a machine of the class described, the combination with a sewing-machine table; a sewing-machine mounted upon said table;

and means for operating said sewing-machine; of a pair of draft-rolls rotatively mounted in rear of said machine adapted to receive therebetween a strip of fabric from said machine; means for rotating one of said rolls; and a fabric-guide extending from rear to front under said table, whereby a belt of fabric may, by a continuous oper-

ation, be repeatedly passed through said machine and between said rolls.

In testimony whereof, I have hereunto set my hand this 15th day of October, 1904.

JOSEPH McKAY.

Witnesses:

FRANK C. CURTIS,
E. M. O'REILLY.