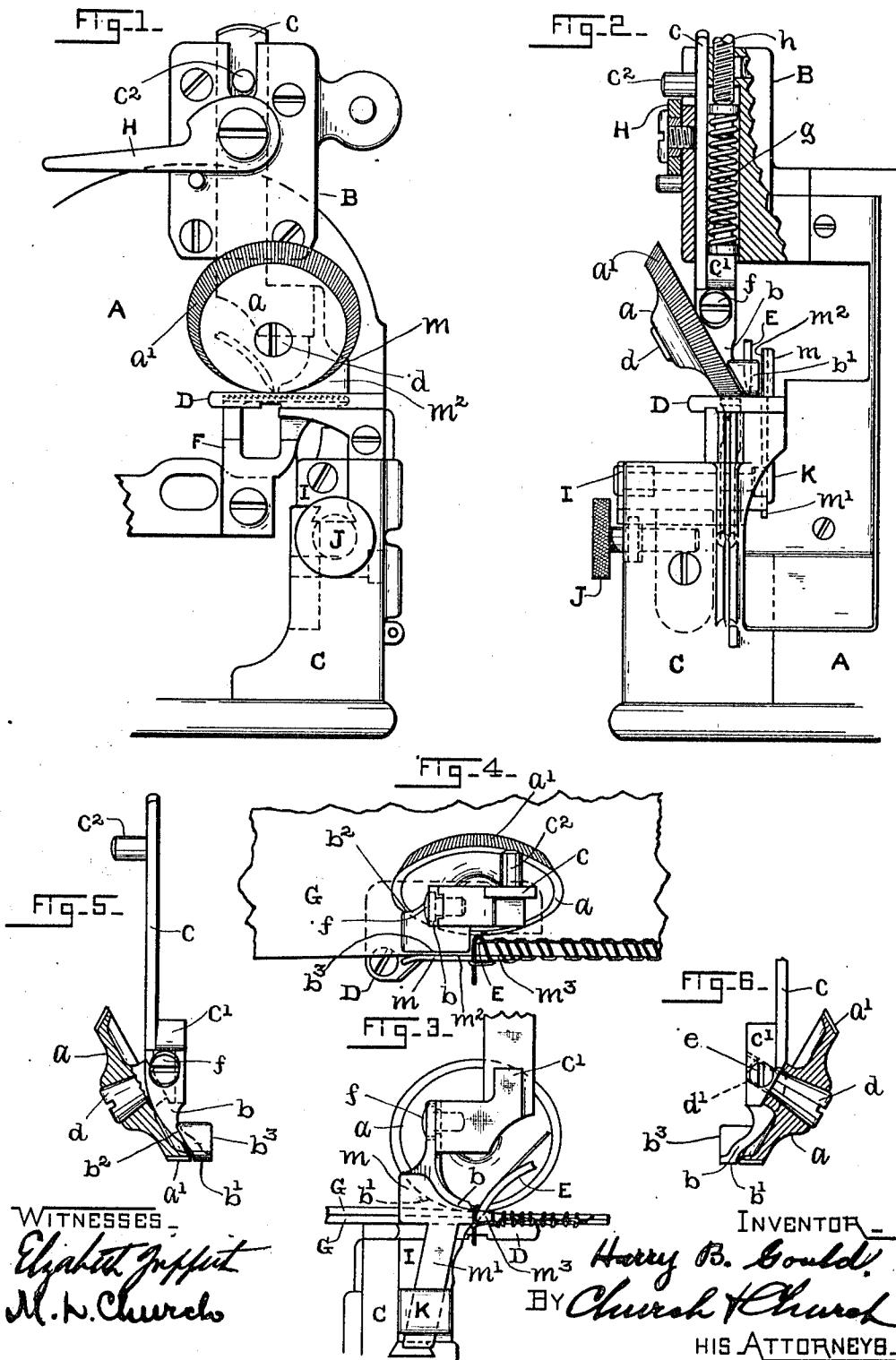


H. B. GOULD.
FEEDING DEVICE FOR SEWING MACHINES.
APPLICATION FILED NOV. 16, 1908.

1,001,388.

Patented Aug. 22, 1911.



UNITED STATES PATENT OFFICE.

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FEEDING DEVICE FOR SEWING-MACHINES.

1,001,388.

Specification of Letters Patent.

Patented Aug. 22, 1911.

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To all whom it may concern:

Be it known that I, HARRY B. GOULD, a citizen of the United States, residing in the city and county of Hartford, State of Connecticut, have invented certain new and useful Improvements in Feeding Devices for Sewing-Machines, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming a part of this specification, and to the figures and letters of reference thereon.

This invention is shown in the annexed drawings illustrating one embodiment of the same, in connection with an overseaming machine, inasmuch as the invention is particularly useful when overseaming the edges of heavy knit goods such as sweater goods and the like, or for sewing together by overseaming, the edges of superposed pieces of such goods.

The invention is also especially useful in overseaming together selvage edges of knit goods.

The object of the invention is to improve the feeding of the goods, to the ends that the goods shall feed freely through the machine, that there shall be no slipping of one layer of the goods upon another, that the goods shall be prevented from curling at their edges and that a desired width of seam may be readily maintained.

The invention includes a presser wheel, a cooperating foot and a guide.

In the accompanying drawings illustrating one embodiment of the invention, Figure 1 is an end elevation of a sufficient portion of an overseaming machine to which the invention is applied to properly illustrate the relation of the parts to the machine. Fig. 2 shows the improvements in front elevation, together with adjacent portions of the machine, the latter being partly in section. Fig. 3 is an elevation looking at the opposite side of some of the parts shown in Fig. 1. Fig. 4 is a plan view with parts of the machine omitted. Fig. 5 is a front elevation of the foot and its shank with the presser wheel partly in section. Fig. 6 is a view similar to Fig. 5 but looking in the opposite direction.

Throughout the several figures of the drawings, similar reference characters denote the same parts.

The letter A denotes the frame of the ma-

chine, B the head, C the needle plate support, D the needle plate or work support, E the needle and F the feed dog, these parts and the machine to which they are shown as applied being of a well known type need no detailed illustration or description.

There is provided in connection with the feed dog F or similar work feeding device which operates in the usual way through the needle plate D, a presser wheel or roller *a* and a foot *b*. The roller *a* and the foot *b* are carried upon a shank or support *c* common to them both, whereby their simultaneous movement toward and from the needle plate is effected. The presser wheel *a* turns upon an axial pin *d*, preferably of taper form, having a threaded end *d'* that is screwed into the lower enlarged shank end *e'* of the shank *c* and by means of a set screw *e* located in the shank end *e'* the accidental rotation of the taper pin is prevented. The periphery *a'* of the presser wheel *a* is serrated or roughened to better feed the goods G as is common in wheel presser feet and the face of the serrated periphery is at an angle to the axial line of the wheel, which latter is supported in an oblique position in order that the serrated periphery may properly engage the goods, as clearly shown in the drawings. Preferably the foot *b* is adjustably secured to the shank end *e'* (at the right of the presser wheel *a* as viewed from the front of the machine) by a screw *f* and there is a tongue and groove connection between the foot and the shank end to prevent rotation of the foot *b* upon the screw *f* as best shown in Figs. 3 and 4. The presser wheel and the foot are held normally downward by the usual compression spring *g* located in the head B of the machine and confined between the adjusting screw *h* and the shank end *e'*. The shank *c* is also provided with a pin *c²* to be acted upon by the lifting lever H. It has already been stated that these devices are for use particularly with overseaming mechanism and for that reason the sole or goods engaging surface *b'* of the foot *b* is entirely in advance of the needle E or the point at which the stitch is formed, and thus the needle and cooperating stitch forming implements (the latter not shown) are unobstructed in their movements and the completed stitches are not disturbed by being drawn under the foot, which latter, however, extends rear-

ward as nearly as practicable to the needle, to the more effectually prevent the curling or rolling over of the goods at their edges. The foot b curves upward toward its front or toe end and the edge b^2 adjacent to the side and periphery of the presser-wheel is in close proximity to the said wheel.

The letter m denotes a guide, having a shank m' clamped in a holder I adjustable at right angles to the line of the feed. The adjustable holder I is shown as having dovetail connection with the needle plate support C , and its adjustment thereon is attained by means of the screw J . The said holder is also provided with the clamp K , which clamps the guide m securely to the holder. The guide m is located at the right of the needle, as viewed from the front of the machine, and extends forward providing a portion having a face m^2 perpendicular to the plane of the top of the needle plate D against which face m^2 the edges of the goods slide and by which said edges are guided. The said guide also extends rearwardly serving to guide the abutting edges of the goods and also providing a chaining finger m^3 around which the overseam stitches are formed and off the end of which they slip as the work feeds through the machine. The guide m being adjustable as already explained, it will be understood that the distance between the needle and the chaining finger m^3 can be easily regulated to secure a desired depth of stitch.

The foot b engages the goods G intermediate the wheel a and the guide m , the sole b' at one edge b^2 following closely the edge of the wheel a as explained, while the opposite edge b^3 is substantially parallel with the perpendicular face m^2 of the guide m . It will therefore be readily seen that the foot will be considerably wider at its toe than at its heel end. It will also be observed that in the arrangement of parts shown, one edge (b^2) of the foot b fitting closely to the presser-wheel a and both the wheel and the foot being attached to the same shank, they may be raised and lowered together without changing their relation to each other so that there need be no opening between the two elements of sufficient width for threads or any portion of the fabric to pass through or be caught in or wedged into, which objectionable condition would at times occur if the foot of the wheel were not raised and lowered together, as in such cases there would be an opening of varying width between the edge of the foot and the wheel. Further it will be seen that the edge b^3 of the foot away from the presser wheel is parallel with the plane in which the foot moves and is adjusted and is also parallel with the side m^2 of the guide m for the same purpose of preventing the catching or clogging of the goods between the foot and the

guide, therefore, for the most accurate overseaming, the foot should be made of exactly the width to fill the space between the presser-wheel a and the guide m .

In utilizing this device the guide m may be adjusted with reference to the needle E to attain a desired width of stitch and the foot b is so adjusted upon the presser-shank end c' that it will engage the goods when the presser shank is lowered, but will not bear heavily enough upon them to retard or prevent their free feeding between the feed dog F and the presser-wheel a . The guide m serves as a gage whereby the goods are readily introduced for overseaming and whereby a stitch of desired depth is readily maintained during the overseaming operation.

By referring particularly to Fig. 4 it will be seen that the presser-wheel a engages the goods in close proximity to and at one side of the needle, while the guide m engages the goods at the opposite side of the needle and more or less closely thereto as determined by its adjustment, while the foot b , as before explained, engages the upper face of the goods in advance of the needle and so closely thereto that there is no opportunity for the curling or rolling over of the goods at their edges between the foot and the needle.

Having thus described my invention, what I claim as new and desire to secure by Letters-Patent, is:

1. In a sewing machine, the combination with the needle and the work feeding device, of a presser-wheel, a foot, a support for and common to both the wheel and the foot by which support the wheel and foot are moved in fixed relation only toward and from the work feeding device, the foot being located entirely in advance of the needle.

2. In a sewing machine, the combination with the needle and the work feeding device, of a presser wheel, a foot, a support for and common to both the wheel and the foot by which support the wheel and foot are moved in fixed relation only toward and from the work feeding device, the foot being adjustable on the support relatively to the wheel and the foot being located entirely in advance of the needle.

3. In a sewing machine, the combination with the needle-plate, the work feeding device and the needle, of a presser-wheel supported with its axis oblique to the plane of the top of the needle plate, a foot adjacent to the presser-wheel and entirely in front of the needle and a support for the presser wheel and the foot by which support the wheel and foot are held in fixed relation and moved toward and from the work feeding device.

4. In a sewing machine, the combination with the needle plate, the work feeding device and the needle, of a presser-wheel sup-

ported with its axis oblique to the plane of the top of the needle plate, a foot supported adjacent the presser-wheel and having a goods engaging surface or sole entirely in advance of the needle, the sole of the foot
5 being made to conform approximately with the periphery of the presser-wheel and a support on which the presser-wheel and the foot are mounted in fixed relation to each other and by which they are moved in uni-
10 son toward and from the work feeding device.

5. In a sewing machine, the combination with the needle-plate and the work feeding device, of a presser-wheel supported with
15 its axis oblique to the plane of the top of the needle-plate, an edge-guide having a surface perpendicular to the plane of the top of the needle-plate and a foot interme-

diate the presser-wheel and the guide, the edge of the foot next to the wheel being 20 parallel with the adjacent portion of the wheel and the edge of the foot next to the guide being parallel with the perpendicular face thereof and a support for the presser-wheel and the foot and a support for the 25 guide.

6. In an overseaming machine including a needle, work support and feeding device, a presser-wheel with its axis oblique to the movement of the needle, a foot conforming 30 to the edge of the presser-wheel and located entirely in front of the needle.

HARRY B. GOULD.

Witnesses:

CHAS. E. BOND,
E. W. MUZZY.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents,
Washington, D. C."
