L. BULASKY.

WORK GUIDE OR GAGE FOR SEWING MACHINES.

APPLICATION FILED MAR. 29, 1909.

970,179.

Patented Sept. 13, 1910.

2 SHEETS—SHEET 1.

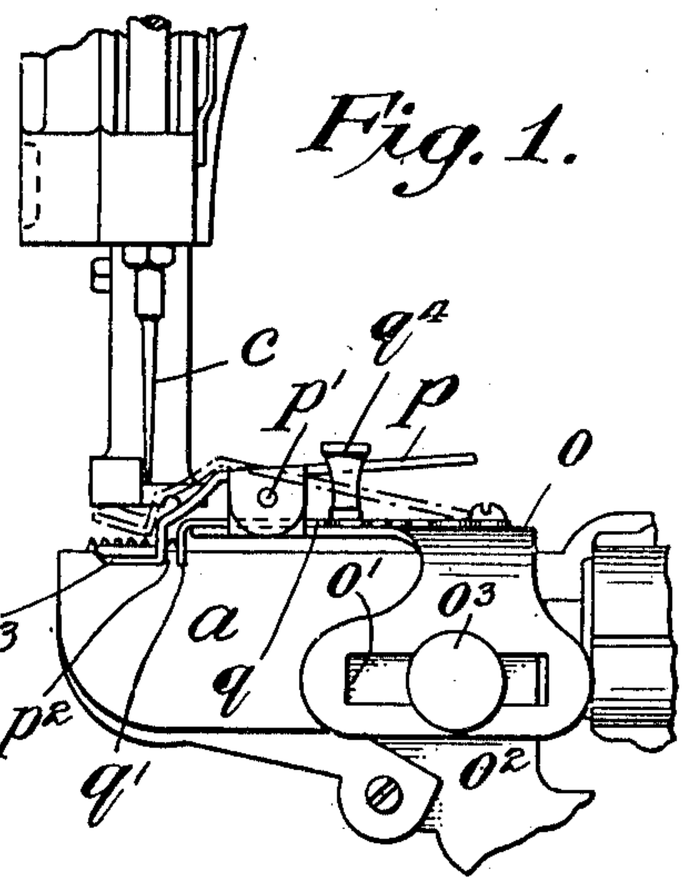


Fig. 1.

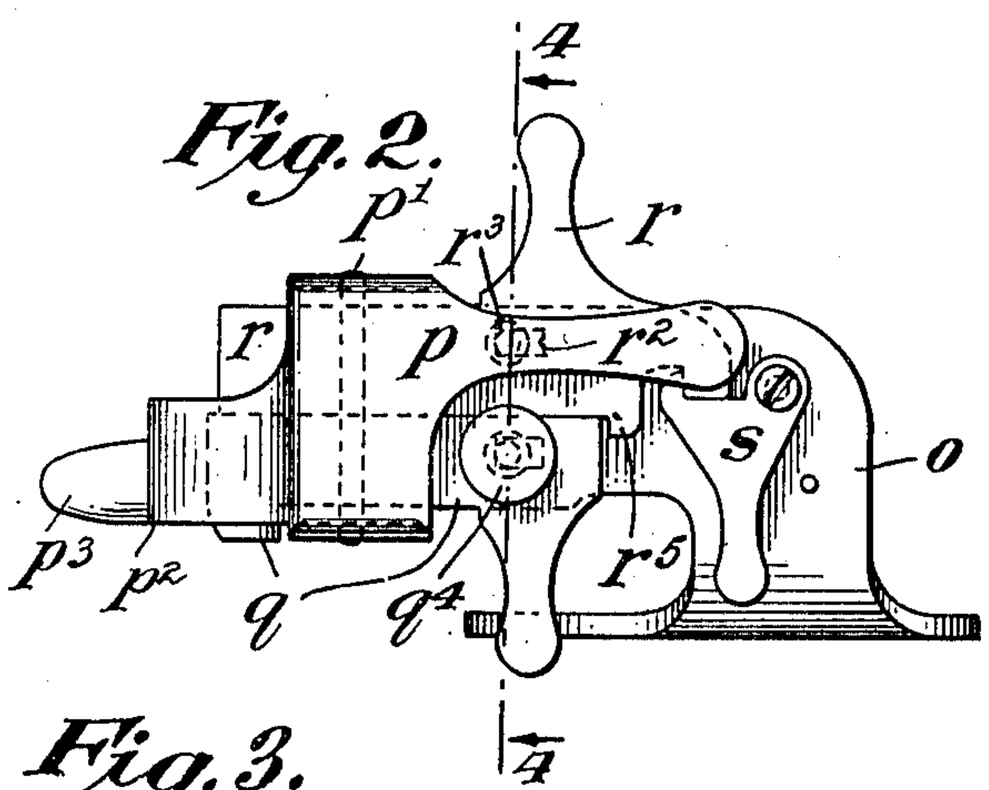
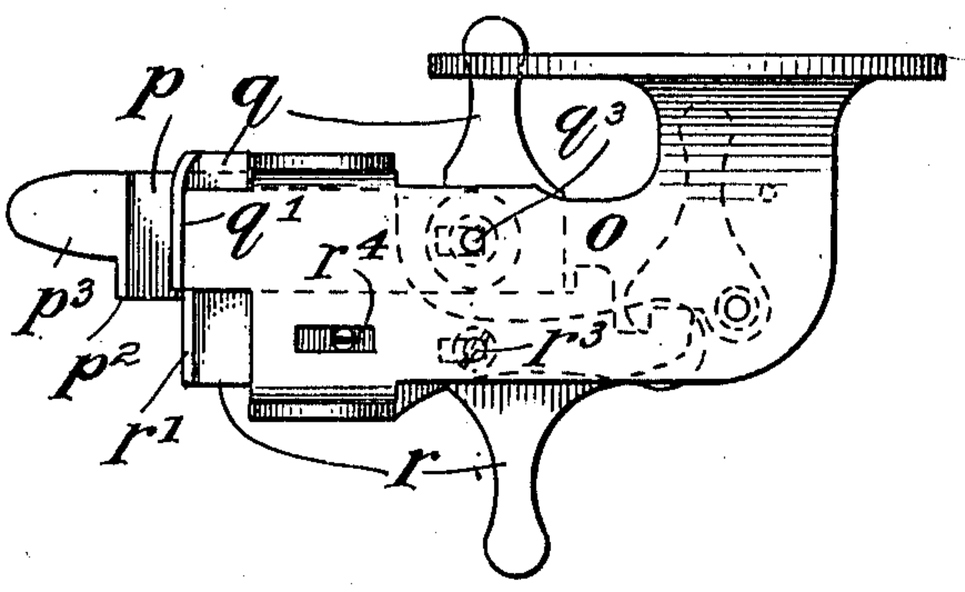


Fig. 2.

Fig. 3.



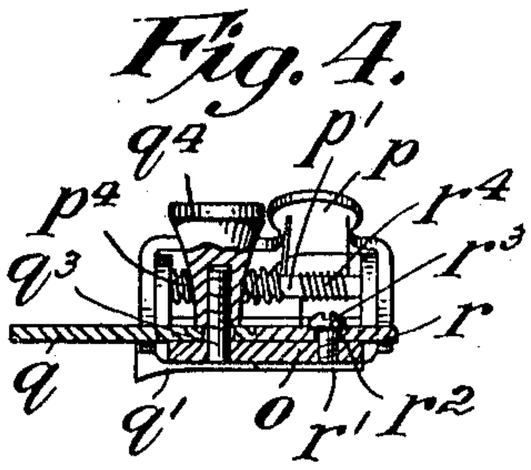


Fig. 4.

Attest:

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2 SHEETS—SHEET 2.

Fig. 5.

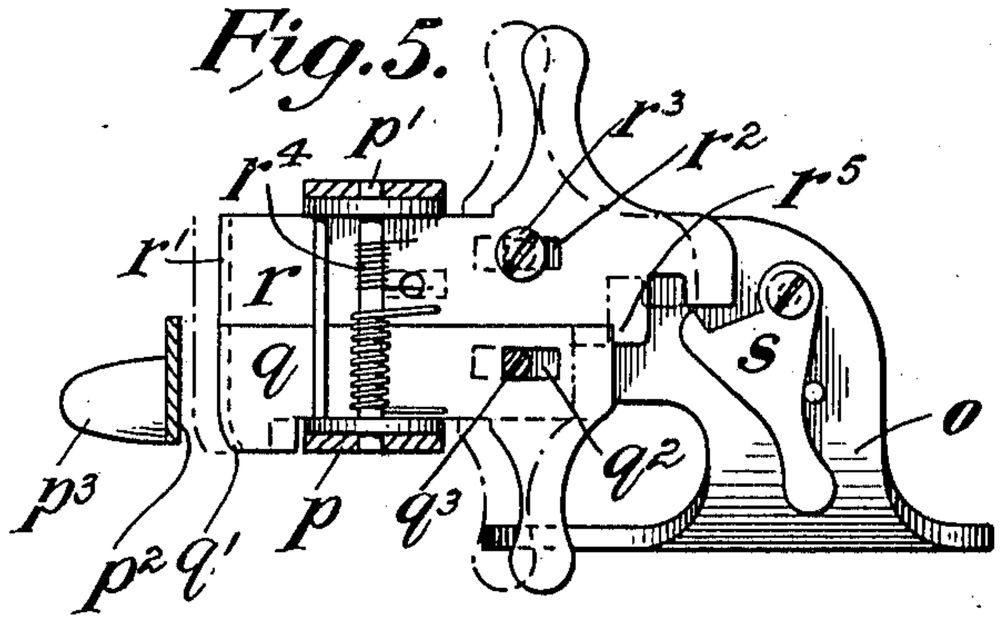


Fig. 6.

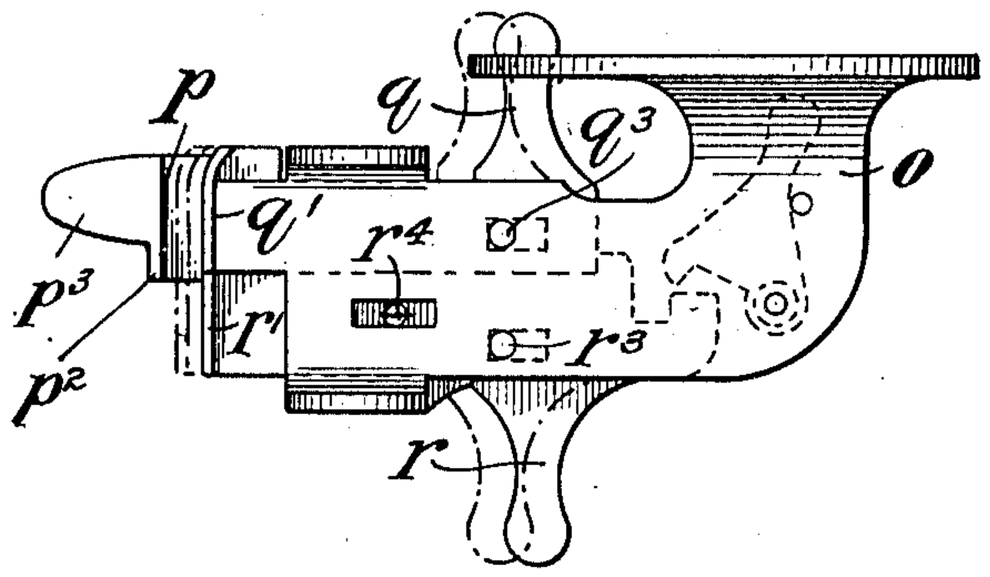


Fig. 7.

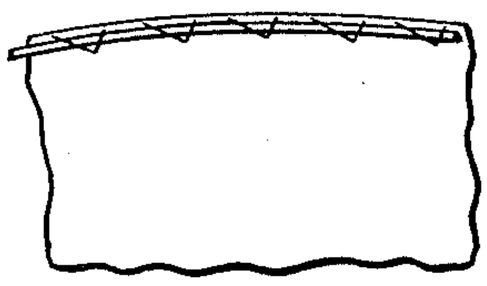


Fig. 9.

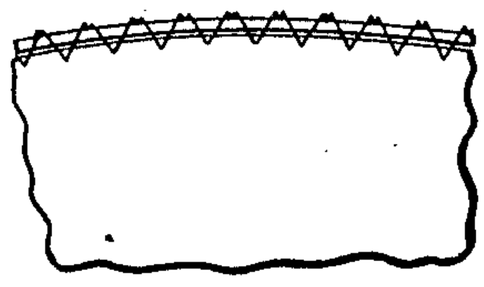
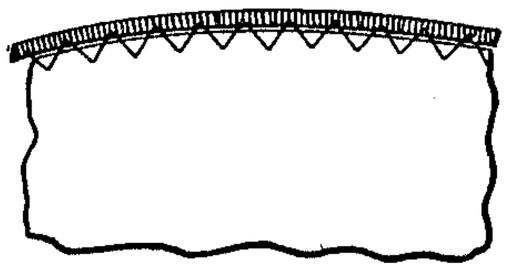


Fig. 8.



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UNITED STATES PATENT OFFICE.

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WORK GUIDE OR GAGE FOR SEWING-MACHINES.

970,179. Specification of Letters Patent. **Patented Sept. 13, 1910.**

Application filed March 29, 1909. Serial No. 486,507.

To all whom it may concern:

Be it known that I, LOUIS BULASKY, a citizen of the United States, residing in the borough of Manhattan of the city of New York, in the State of New York, have invented a new and Improved Work Guide or Gage for Sewing-Machines, of which the following is a specification, reference being had to the accompanying drawings, forming a part hereof.

This invention has for its object to produce an improved work guide or gage, especially applicable to machines for stitching wire to the edge of buckram hat frames and felt hats, but also applicable to other purposes, which shall hold the wire in proper relation to the hat frame or brim, shall be readily attachable for different classes of work, as, for example, when the stitches are to pass across the wire or are to engage the fabric casing of the wire, and shall be so constructed as to diminish the danger of breakage of the needle in work of this character.

The invention will be more fully explained hereinafter with reference to the accompanying drawings in which it is illustrated and in which—

Figure 1 is a view in front elevation of a portion of a sewing machine illustrating the application of the improved guide or gage to the work table and its relation to the needle and presser foot. Fig. 2 is a top view of the guide or gage. Fig. 3 is an underside view thereof. Fig. 4 is a detail view in section on the plane indicated by the line 4—4 of Fig. 2, looking in the direction of the arrow. Fig. 5 is a top view, partly in horizontal section. Fig. 6 is an underside view, similar to Fig. 3, but showing some of the parts in different positions. Figs. 7, 8 and 9 are detail views illustrating different modes of stitching wire on the edge of buckram hat frames and felt hats.

In Fig. 1 of the drawings, the improved guide or gage is shown as applied to the work table a in proper relation to the needle c which, in machines adapted for the particular kind of work referred to above, has not only a movement of vertical reciprocation but may have also a movement of lateral reciprocation for the formation of zig-zag stitches, and the improved gage or guide is designed with especial reference to the requirements of such a machine. It is so constructed as to be adapted for the different kinds of work which are ordinarily done on machines of this character, such as the sewing of paper or cotton covered wire upon the surface of buckram hat frames, near the edge, in which case the thread enters the material of the hat at each side of the wire, crossing to-and-fro over the wire, as shown in Fig. 7; or in sewing silk covered wire against the edge of felt hats, in which case the sewing thread first enters the material of the hat and then catches the covering of the wire adjacent to the edge of the hat, as shown in Fig. 8; or in sewing paper or cotton covered wire against the edge of felt hats, to be afterward bound over, in which case the sewing thread first enters the material of the hat and then passes outside of the wire, as shown in Fig. 9; and also so as to be adapted for wires of different thicknesses. The gage or guide comprises a supporting plate o which is suitably shaped and adapted to be secured adjustably to the base of the machine, having a longitudinal slot o' fitting upon a shorter rectangular projection o_2 of the base of the machine and held thereon by a thumb screw o^3.

Pivoted upon the plate o, as at p', is a plate or lever p which at its left hand end is bent to form a guide p^2, as shown most clearly in Figs. 1 and 5, for the edge of the hat or frame, and a thin finger p^3 to lie under the edge of the hat or frame to prevent it from working under the guide p^2. This guide also holds the wire from moving to the left and is not adjustable except as it is adjustable with the supporting plate o. A spring p^4 (see Figs. 4 and 5) coöperates with the plate or lever p to hold it in its working position, as shown in full lines in Fig. 1, but the plate or lever may be tilted into the position indicated by dotted lines in Fig. 1, to permit the release of the work at any time without requiring the cutting of the thread or the wire.

Mounted to slide on the supporting plate o are two outside guides q and r. The outside guide q is formed with a depending guide lip q' adapted to rest against the outer side of the wire, that is, against that side which is the outer with respect to the body of the hat, and to hold it against the body of the hat and prevent it from being pushed away by the needle or otherwise. To accommodate wires of different thicknesses the plate q is adjustable, being formed with an elongated slot q^2 to receive a screw stud

q^3, which is fixed in the plate o, and being held in adjusted position by a thumb nut q^4 on the stud q^3. The rear guide r is operative when the wire is to be stitched against the edge of the hat brim and is arranged to be held in an inoperative position when the wire is to be stitched upon the brim, as shown in Fig. 7. The rear guide r is also formed with a depending guide lip r' at its left hand end and has a limited sliding movement on the supporting plate o, being formed with an elongated slot r^2 to receive a holding and guide screw r^3. A spring r^4 which is coiled and slipped upon pin p', with one end bearing against the fixed abutment, and the other end extending through a slot in the supporting plate o as shown in Fig. 3 and entering a hole formed in the rear guide r and bearing against the side of the hole acts upon the rear guide r to press it normally to the left, but permits the guide to yield to the right in a horizontal plane away from the needle, after its point has entered the cover of the wire, and its thicker portion thrusts the wire farther to the right, thus preventing the bending of the needle and the throwing of the needle out of proper alinement with respect to the looper. This yielding, rear guide, is operative when the machine is used upon such work as is indicated in Fig. 8, but when the needle passes alternately on opposite sides of the wire, as in the character of work indicated in Figs. 7 and 9, then the rear guide must be drawn and held back out of the way so as to permit the needle to descend at the right hand side of the wire as well as at the left hand side of the wire. A latch s, properly formed to engage the guide plate r, is pivoted on the supporting plate o to hold the guide in its right hand or inoperative position. A lug r^5 on the rear guide r is adapted to engage the front guide q so as to limit the forward movement of the guide r with respect to the guide q, so that the guide lip r' cannot stand farther to the left than the guide lip q', no matter what the adjusted position of the guide q may be.

In Figs. 5 and 6 of the drawings the two guides are shown as having their lips q' and r' in line and as adapted for such work as is indicated in Fig. 8, the rear guide being released by the latch s and the lug r^5 standing in contact with the rear end of the guide q. In these figures, the adjustment of the two guides together, to accommodate wires of different diameters, is indicated by dotted lines. It will be seen that the rear guide r is free to yield to the right to prevent bending or breaking of the needle. In Figs. 2 and 3, the rear guide r is shown as engaged by the latch s to hold it out of the way of the needle so that the stitches can be carried entirely across the wire.

It will be understood that various changes in details of construction and arrangement can be made without departing from the spirit of the invention.

I claim as my invention:

1. In a sewing machine, a work table; a reciprocating needle; a supporting plate adapted to be secured to said work table; a front work guide carried by said supporting plate; and a rear work guide also carried by said supporting plate and located immediately to the rear of said front guide with reference to the direction of travel of the material operated upon, said rear guide being disposed to one side of or laterally of the path of travel of the needle and the said rear guide being yieldable in a direction transverse to the path of travel of the material operated upon; whereby lateral thrust resulting from contact of the needle with an unyielding part of the work operated upon will be transmitted to and will cause said rear guide to yield in the manner aforesaid.

2. A work gage for sewing machines comprising a work supporting plate adapted to be secured to the base of the machine, a front work guide mounted on the supporting plate with its end close to the machine base, a rear work guide mounted on the supporting plate with its end close to the machine base and in line laterally with the needle, said guide being mounted movably toward and away from the needle in a horizontal plane independently of the front guide, a spring to press the rear guide yieldingly toward the needle whereby the guide may yield laterally as the thicker portion of the needle passes through the work adjacent to the base plate and a latch independent of said rear guide but adapted to engage the same to hold it away from the work.

3. In a sewing machine, the combination of a work supporting plate, a front outside work guide mounted on the supporting plate, and a rear outside work guide mounted yieldingly in a horizontal plane from the needle, said rear guide being adapted to engage the front guide, whereby the rear guide is adjusted with the front guide and may yield independently thereof.

4. In a sewing machine, the combination of a work supporting plate, an outside work guide mounted adjustably on the supporting plate, and a spring pressed plate lever pivoted on the supporting plate above the work guide and having a lip to rest under the fabric and form a guide for the edge of the material.

This specification signed and witnessed this 27th day of March, A. D., 1909.

LOUIS BULASKY.

Signed in the presence of
W. B. GREELEY,
ELLA J. KRUGER.