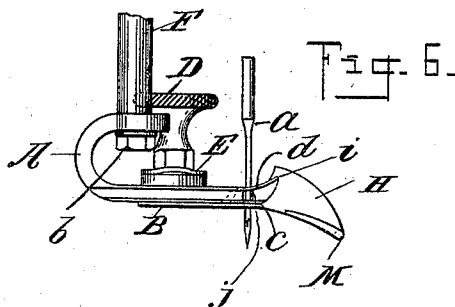
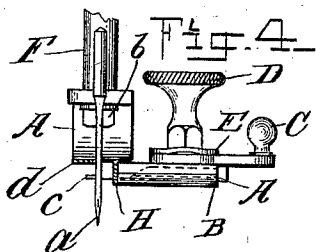
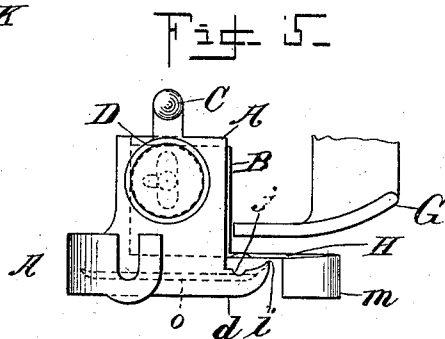
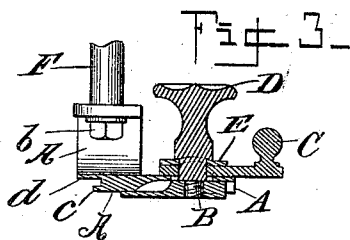
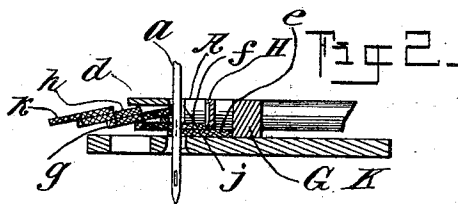
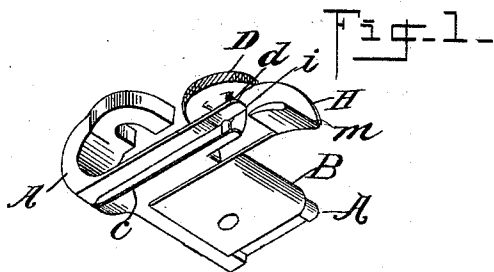


(No Model.)

I. H. GONYON.
STRAW BRAID SEWING MACHINE.

No. 513,500.

Patented Jan. 30, 1894.



Attest:
Arthur A. Erb
Per Lewis

Inventor:
Ira H. Gonyon
by John Mauro
his attorney.

UNITED STATES PATENT OFFICE.

IRA H. GONYON, OF WESTBOROUGH, MASSACHUSETTS, ASSIGNOR TO THE
WILCOX & GIBBS SEWING MACHINE COMPANY, OF NEW YORK.

STRAW-BRAID-SEWING MACHINE.

SPECIFICATION forming part of Letters Patent No. 513,500, dated January 30, 1894.

Application filed August 14, 1893. Serial No. 483,051. (No model.)

To all whom it may concern:

Be it known that I, IRA H. GONYON, of Westborough, Worcester county, Massachusetts, have invented a new and useful Improvement in Straw-Braid-Sewing Machines, which is fully set forth in the following specification.

The present invention has reference to mechanism employed in sewing straw-braid or other material in the form of strips, and particularly in machines of the same general character as described in Letters-Patent No. 246,700, granted September 6, 1881, to Charles H. Willcox, and No. 269,251, granted December 19, 1882, to the Willcox & Gibbs Sewing Machine Company as assignee of Charles E. Wilkinson.

The construction and operation of the machines described in the latter patent are such that the stitches uniting adjacent braids or strips are concealed under the edge of the overlying braid or strip, and do not appear on the right side of the article. This result is accomplished mainly by the action of a turning-up guide which bends or turns up the outer edge of the overlying or concealing braid permitting the needle to stitch the braid which is at the edge of the work to the underlying or entering braid in such manner that the stitches are concealed when the up-turned braid resumes its normal position. This turning-up guide has been attached in some instances to the work-plate and in others to the presser-foot. In either case, to insure its proper working, great care and fine workmanship were required to give its part the necessary shape.

The object of the present invention is to produce a similar result (to wit, a concealed stitch) by means different from those above referred to, and which have the advantage of simplicity in construction and somewhat greater ease and convenience in use.

Instead of employing a separate turning-up guide, for the purpose above stated, the presser-foot is, according to the present invention, provided with a groove extending horizontally along the side upon which the main body of the work lies, and which may appropriately be termed the "outer" side of the foot. This groove forms a horizontal lip along the lower edge of the side of the presser foot, which lip

in operation lies between the concealing braid and the middle braid (that at the outer edge of the work) and performs functions analogous to, but not identical with, those of the turning-up guide of the machines referred to. The bottom of the groove (that is the vertical side of the presser foot between the two lips) constitutes a guide for the edge of the concealing strip, which heretofore has been bent up, but not guided along its edge. The effect of the separating lip lying under the edge of this braid is to tilt the entire braid with reference to the middle braid (instead of bending or turning up the outer edge of the said concealing braid), the middle braid being held in a horizontal position while being stitched to the entering braid. The groove containing the concealing braid permits the edge of said braid to be brought very close to the needle, and as the latter descends it slightly compresses this edge, whose elasticity or spring permits its being pushed back a little while passing the needle. Thus the stitches are placed just far enough under the edge of the concealing braid to be hidden from view on the right side of the article.

The construction of the improved presser-foot and its operation in forming a hat or other article from a continuous strip or braid, can be more readily explained with the aid of the accompanying drawings, in which—

Figure 1, is a perspective view of the presser-foot tilted to expose the under side. Fig. 2 is a cross-section through the needle-hole, the parts being greatly enlarged to illustrate their operation. Fig. 3 is a cross-section taken behind the needle. Fig. 4 is a front elevation. Fig. 5 is a top plan view, and Fig. 6 is a side elevation.

The presser-foot A is designed as a whole to be secured by means of a clamp-screw *b*, in the usual way, to the presser-bar F of a suitable sewing-machine, such as a Willcox & Gibbs straw sewing-machine. Except as particularly pointed out herein, the presser-foot is constructed as described in Letters Patent No. 269,251, above referred to, so that the present description will be confined mainly to the improvements embraced in the invention claimed herein. The foot is provided along its outside edge with a horizontal groove

formed between the two lips or flanges *c d*. The upper lip *d* projects outwardly a greater distance than the lower lip *c*, so that while the former will overlie the greater part of the concealing braid, the latter will extend only a short distance beyond the edge thereof on its under side. These relative dimensions, however, are variable. The groove extends from the end of the toe *i* of the presser-foot backward past the needle-hole, terminating at the rear of the foot *A*. The needle-hole *j* intersects the bottom of the groove, the axis of the needle *a* being nearly in the plane of the bottom of the groove, so that the blade of the needle, in its descent, will slightly, but not injuriously, compress the outer edge of the concealing braid *g* (Fig. 2) which edge is guided by the bottom of the groove.

The other parts of the device shown in the drawings are or may be constructed substantially as described in Patent No. 269,251 above referred to.

H is the work-guide, against which bears the edge of the braid *f* last sewed to the main body of the work, and *M* is the separator extending horizontally from the forward end of guide *H*. The latter is carried by a plate *B* which makes a tongue-and-groove joint with presser-foot *A*.

D represents the set-screw, *E* the spring washer, and *C* the adjusting lever for moving the work-guide *H* toward and from the needle.

G represents the guide for the incoming braid, and is attached, as heretofore, to the throat plate *K*.

The operation will be readily understood from the foregoing explanation.

The article being begun, the work is placed under the presser-foot as shown in Fig. 2, in such manner that the middle braid *f* lies under the lip *c* with its edge against the work-guide *H*, the incoming braid *e* which is about to be stitched to braid *f* lies under plate *B* and guide *H*, with its edge against guide *G*, and the concealing braid *g* lies in the groove between lips *c* and *d* with its edge against the bottom of the groove. These dispositions secure perfect control of the work during the sewing. It will be observed that the middle

braid *f* lies in a horizontal position during the sewing and that the overlying braid *g* (as well as the braids *h* and *k*), is inclined upward at an angle with braid *f*, but is not bent or turned up at its outer edge.

The device shown and described is the best embodiment of the principle of the invention known to me, but it admits of modification in details of construction, and such modifications would not constitute a departure from the spirit of the invention.

I claim—

1. A presser-foot for a straw-sewing machine, having a groove along one of its sides forming a horizontal lip extending past the needle-hole in the line of feed and adapted to enter between two adjacent braids or strips, substantially as and for the purpose described.

2. A presser-foot having along its outer side or edge a horizontal groove whose bottom constitutes a guide for the edge of the concealing strip, and provided with a needle-hole whose axis is approximately in the plane of the bottom of said groove, substantially as described.

3. A presser-foot provided with a toe projecting forwardly in front of the needle-hole, and having a transverse groove along its outer side extending from the point of said toe backwardly past the needle-hole, substantially as described.

4. A presser-foot having along its outer side two lips forming between them a groove to receive the concealing strip, the upper lip projecting outwardly beyond the lower lip, substantially as described.

5. The combination with the presser foot having along its outer edge a horizontal groove, extending past the needle-hole and constituting a guide for the edge of the concealing braid, of a work-guide carried by and adjustable upon said presser foot, substantially as described.

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

IRA H. GONYON.

Witnesses:

W. A. REED,

O. K. NEWTON.