(No Model.)

A. JOHNSTON.

ATTACHMENT HOLDER OR MEANS FOR SECURING SEWING MACHINE ATTACHMENTS.

No. 321,817. Patented July 7, 1885.

FIG. 2.

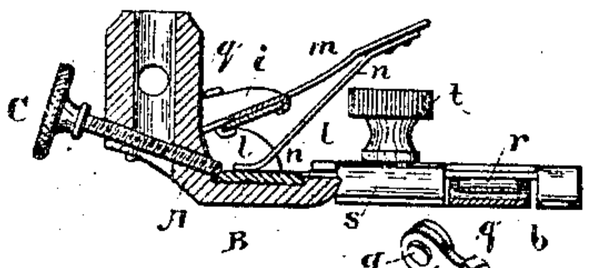


FIG. 1.

FIG. 3.

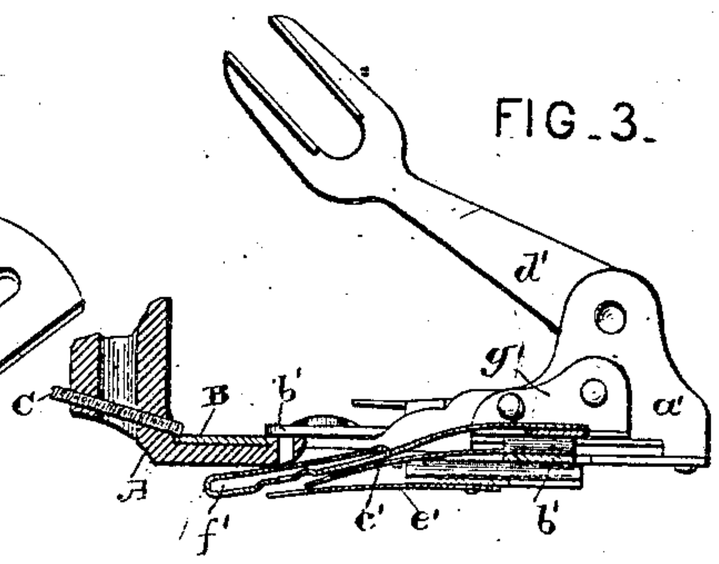


FIG. 4

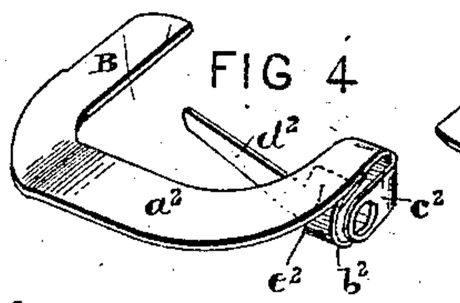


FIG. 5.

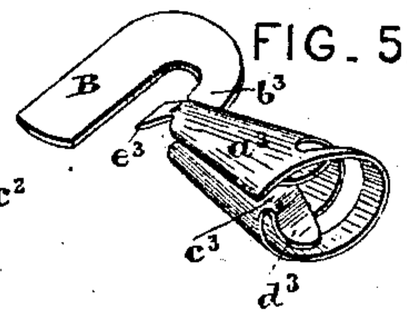


FIG. 6.

FIG. 7.

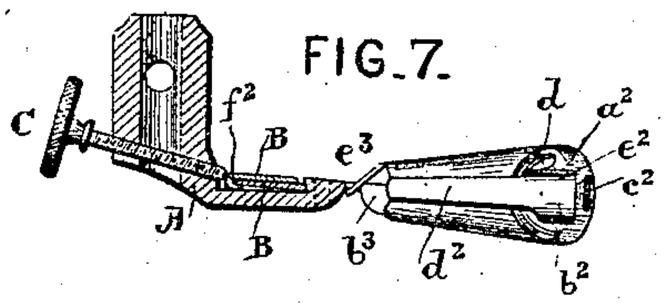


FIG. 8.

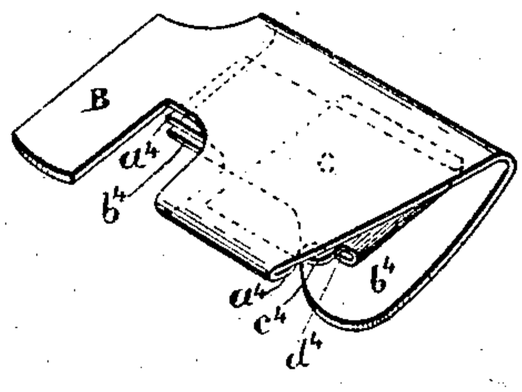


FIG. 9.

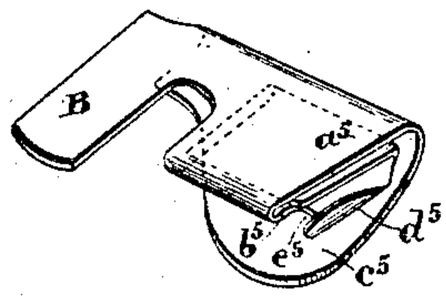


FIG. 10.

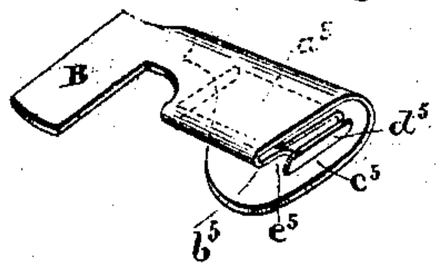
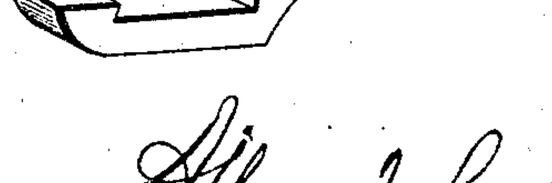


FIG. 11.

FIG. 12.



ATTEST

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J. Henry Kaiser

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Allen Johnston by

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UNITED STATES PATENT OFFICE.

ALLEN JOHNSTON, OF OTTUMWA, IOWA.

ATTACHMENT-HOLDER OR MEANS FOR SECURING SEWING-MACHINE ATTACHMENTS.

SPECIFICATION forming part of Letters Patent No. 321,817, dated July 7, 1885.

Application filed October 8, 1883. (No model.)

To all whom it may concern:

Be it known that I, ALLEN JOHNSTON, of Ottumwa, in the county of Wapello and State of Iowa, have invented a new and useful Improvement in Attachment-Holders or Means for Securing Sewing-Machine Attachments, which improvement is fully set forth in the following specification.

This invention has reference more particularly to the means for supporting attachments on the sewing-machine.

The invention comprises certain particular constructions and combinations of parts, hereinafter specified.

The drawings illustrate the best mode contemplated of applying the principle of the invention.

Figure 1 is a perspective view of a tuck-marker constructed in accordance with the invention; Fig. 2, a cross-section of the same; Fig. 3, a side view of a ruffler, also constructed in accordance with the invention; Fig. 4, a perspective of a binder and corder; Fig. 5, a perspective of a French fold; Fig. 6, a front view of the binder and corder and the French fold in position for conjoint operation; Fig. 7, a vertical section through the two attachments and the holder; Figs. 8, 9, 10, and 11, perspectives showing a set of four hemmers, and Fig. 12 a perspective of the holder.

The binder, French fold, and hemmers may be called, generally, "folding attachments," comprising as they do a guide or scroll for folding over the fabric.

In all the figures where they occur, A is the holder; B, the attaching-plate, and C a set-screw for securing the attachment to the holder.

The attaching-plate B fits in a groove or recess in the top of the horizontal or foot part of the holder behind the needle-hole, and is held firmly in said groove or recess by the set-screw C, which is tapped through the holder for the rear, and at its front end bears against the rear edge of the attaching-plate. The front wall of the groove or recess is undercut to render the hold upon the attaching-plate more secure. In the case of the tuck-marker, Figs. 1 and 2, the length of the attaching-plate B is such as to permit a large adjustment of the attachment across the presser-foot or holder A, so as to bring the creasing or marking devices *a c* nearer to or farther from the line of stitching, as may be desired. These creasing or marking devices consist of an upright edge, *a*, at the end of the stationary plate *b*, and a grooved wheel, *c*, carried by a vibrating arm, *d*, directly over the edge *a*. The stationary plate *b* is riveted at the end opposite the creasing-edge to the frame of the attachment, which is L-shaped, and is composed of the attaching-plate B and a projection, *e*. The arm *d* projects forward from a vibratory bar or plate, *f*, which is hinged at *g* to upright ears *h* of the attachment-frame. The bar *f* also has upright ears or lugs *i*, through which and the ears *h* the pivot-pins *g* pass. These ears are or may be formed integral with the parts to which they are attached by bending up projections of the proper shape left in stamping, or they may be otherwise formed and fastened.

A slide, *k*, is attached to the bar *f* by lips *l*, bent under the bar, (or it may be otherwise secured thereto,) and serves to communicate motion to the grooved creasing-wheel *c*. To this end the said slide is provided with an operating-arm, *m*, which is arranged in the path of the needle-screw or other projection on the lower part of the needle-bar, so as to be struck and forced downward at each descent of the needle-bar. At each ascent of the needle-bar the arm *m* is raised by a flat leaf-spring, *n*, fixed at the upper end to the said arm *m*, and bearing at the lower upon the attaching-plate. The device *k*, being a slide, permits the body of the attachment to be adjusted right and left without altering its own position. The fork *p* at the back of the slide embraces the presser-foot or holder A. A stationary lip, *q*, limits the upward movement of the bar *f* and the parts carried thereby. A spring-plate, *r*, is fixed at the end farthest from the creasing device to the attachment-frame, and an edge-guide, *s*, is adjustably secured to said frame by means of a slotted plate and a set-nut, *t*, which engages a fixed screw-pin passing through a slot in the guide-plate, and which bears down upon the said plate at the sides of the slot.

In operation the fabric to be marked is passed over the plate *b* and creasing-edge *a*, and under the spring-plate *r*, which, bearing

lightly upon the fabric, smooths out pucker and wrinkles, and also under the grooved creasing-wheel *c* and presser-foot or holder A. The creasing is effected by the downward pressure of the grooved wheel *c* upon the fabric while the latter is bent over or rests upon the creasing-edge *a*.

In the case of the ruffler, Fig. 3, since no lateral adjustment is ordinarily desirable, the attaching-plate B is equal in length to the width of the holder or presser-foot A. The frame-plate a', the slide b', the ruffler-blade c', carried by an arm of the slide b', the bent lever d', for imparting reciprocation to the slide from the needle screw or projection on the needle-bar, the adjusting means for regulating the throw of the slide, and the stationary blade or separator e', carried by an arm of the frame-plate, being of ordinary construction, need no particular description. As shown, they are such as commonly employed in the Johnston ruffler, manufactured by the Johnston Ruffler Company, at Ottumwa, Iowa. The presser-foot or holder A, being designed to accommodate a large range of work, is not well adapted to ruffling, being too short and not of proper shape on the bottom. To remedy this difficulty an auxiliary foot, f', is provided. This forms a permanent part of the attachment, being fastened by means of a bracket, g', to the frame-plate a'. It consists of an elastic strip bent upon itself, as shown in Fig. 3, the end which is brought back being soldered or otherwise fastened to the body of the strip. The under side of this auxiliary presser-foot is grooved and recessed above the end of the ruffler-blade, as customary with the foot of a Johnston ruffler, so as to accommodate the increased thickness of the fabric as it is folded over the end of the ruffler-blade. The auxiliary foot extends under the presser-foot or holder A, and is pierced with a needle-hole, which, when the attachment is in place, is in line with the needle in the part A.

The binder and corder, Fig. 4, is formed in one piece of sheet metal. An arm, a^2, extending forward from the attaching-plate B, and curving around in front of the latter, has the end bent in and soldered at c^2, to form a folding-guide, b^2. A tongue, c^2, is bent across the mouth of the guide. It is somewhat smaller than said mouth, so that a slot is left around three sides thereof for the passage of the strip to be folded. An eye in the end of the tongue serves as a cord-guide where it is desired to introduce a cord into the fold of the strip. A tongue, d^2, extending rearward in the direction of the attaching-plate, serves as a guide to the folded edge of the strip and to the cord. At the rear of the attaching-plate is a shallow groove, f^2, formed by bending the edge of said plate. This groove receives the rear edge of another attaching-plate when another attachment is to be used with the binder and corder.

The French fold, Fig. 5, consists of a folding-guide, a^3, attached by soldering or otherwise to an arm, b^3, of the attaching-plate B, directly in front of the latter. The guide is formed by bending a plate into semicircular or, more properly, semi-conical form, and turning the edges c^3 in for a short distance. The guide is largest at its front, where the fabric enters, and is gradually contracted toward the rear. At the mouth of the guide are the lips d^3, in one piece with the inwardly-bent edges c^3, which lips d^3 extend outwardly toward the inclosing-shell. At the rear of the guide is a downwardly-inclined lip, e^3. When the French fold is secured in the holder or presser-foot A, the bottom of it is about on a level with the under side of the presser-foot, and the lip e^3 bridges the space between the top of the guide and the front of the presser-foot. The small end of the guide terminates slightly in front of the presser-foot. In order to use the French fold with the binder and corder, (see Figs. 6 and 7,) the attaching-plate of the former is placed under that of the latter, with its rear edge in the groove f^2, and the folding-guide b^2 is placed in the mouth of the guides a^3, just in front of the lips d^3, the tongue d^2 closing one side of the space between the inwardly-bent edges c^3. In operation, a strip is introduced into the folding-guide b^2, around the free end of the tongue c^2, and a second strip is placed in the folding-guide a^3, around the lips d^3 and the inwardly-bent edges c^3, and also around the folding-guide b^2. The second strip incloses the edges of the first strip, leaving the folded edge exposed. The two strips are led under the presser-foot or holder A, and the seam is run through the four overlapping edges. If the folded strips are to be attached to a piece of goods, this is introduced below the guides. If a cord is to be inserted, it is passed through the eye in the tongue c^2.

The hemmers shown in Figs. 8 to 11 are of four sizes, and in all except the smallest, Fig. 11, the attaching-plate B is made in one piece with the folding-guide or scroll, and in all of them the attaching-plate is on a level with the top of the folding-guide or scroll. The scroll in Fig. 8 is formed by bending inward the two wings a^4 b^4 so that they overlap, as shown, having first bent back the end c^4 of the inner wing, a^4. A portion of the latter is cut away at d^4 to form a slot, which receives the edge of the fabric to be hemmed. The scrolls in Figs. 9 and 10 are substantially alike, except in point of size. The end a^5 of the wing b^5 is bent so as to overlap the body, and the wings b^5 and c^5 are then bent inward from opposite sides, so that the latter, c^5, overlaps the former. A lip, d^5, on the wing b^5 covers the space between the end a^5 and the body of the wing b^5, and is so shaped as to leave a slot, e^5, for receiving the edge of the fabric to be hemmed. In Fig. 11 the wings a^6 b^6 are bent inward from opposite sides, and the lip c^6 is turned up, being so shaped as to leave a slot, d^6, for the edge of the fabric to be hemmed. The scroll is soldered to an arm of the attaching-plate B.

It is obvious that the other hemmers, in-

stead of being made in one piece, could have the folding-guide separate from but soldered to the attaching-plate, like that last described.

Modifications may be made in the details without departing from the spirit of the invention, and portions of the invention may be used separately.

When a series of attachments is hereinafter referred to, a series of two or more such attachments is meant.

Having now fully described the invention, and the manner in which the same is or may be carried into effect, what I claim is—

1. The attachment-holder in the form of a presser-foot having a transverse groove therein behind the needle-hole, in combination with the series of attachments having each a flat attaching-plate of a shape and size to fit in said groove, and the holding-screw tapped through that part of the holder which lies behind the groove, and arranged to bear at the point against the rear edge of the attaching-plate, substantially as described.

2. The attachment-holder in the form of a presser-foot having a transverse groove behind the needle-hole, and the holding-screw for securing an attaching-plate in said groove, in combination with the series of folding attachments, each having a flat attaching-plate of a shape and size to fit in said groove, and a scroll or folding-guide fastened to an arm projecting forward from said attaching-plate, so that when secured in the holder said scroll or guide is in front of the presser-foot, said holding-screw being arranged to bear against the edge of said attaching-plates, substantially as described.

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

ALLEN JOHNSTON.

Witnesses:
J. T. HACKWORTH,
A. G. HARROW.