

(Model.)

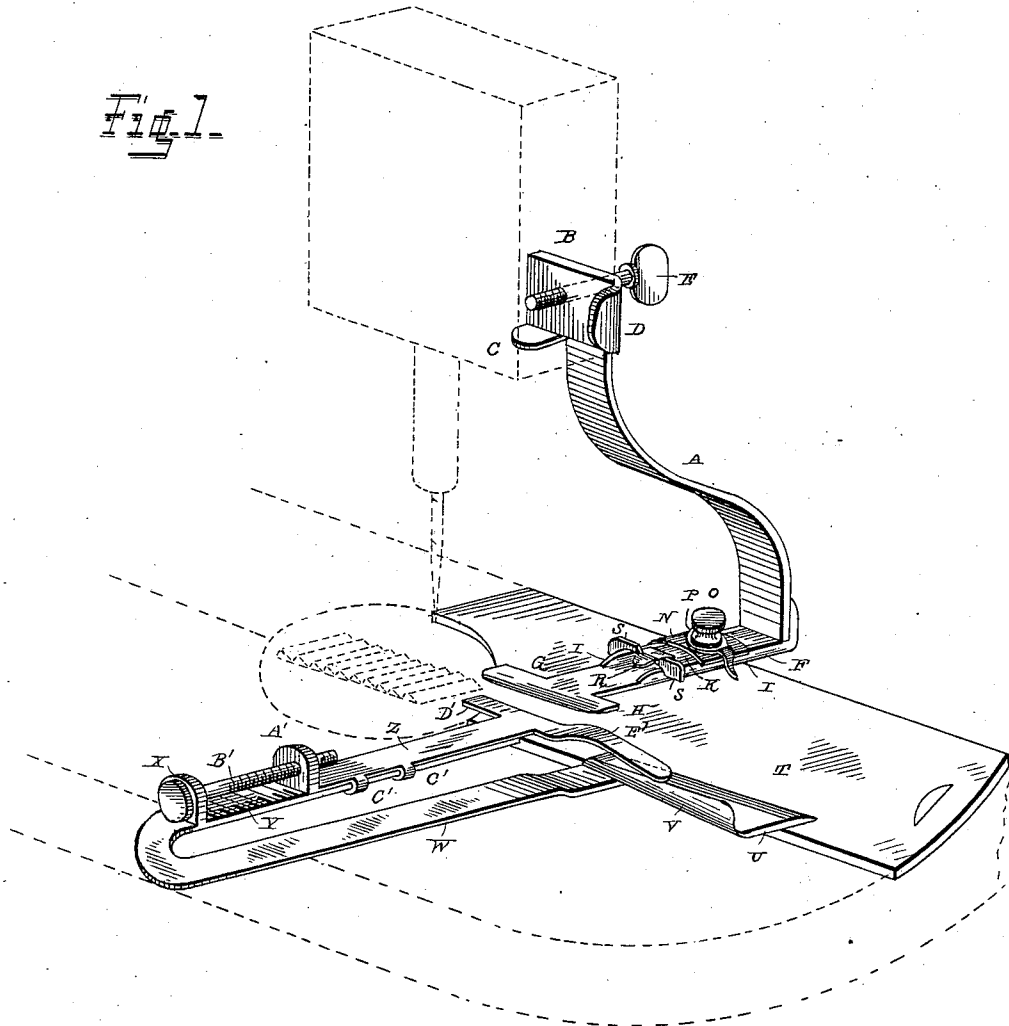
2 Sheets—Sheet 1.

W. MATTHEWS.

TUCK FOLDER FOR SEWING MACHINES.

No. 308,319.

Patented Nov. 18, 1884.



WITNESSES

Charles Davis
J. J. McCarthy

INVENTOR

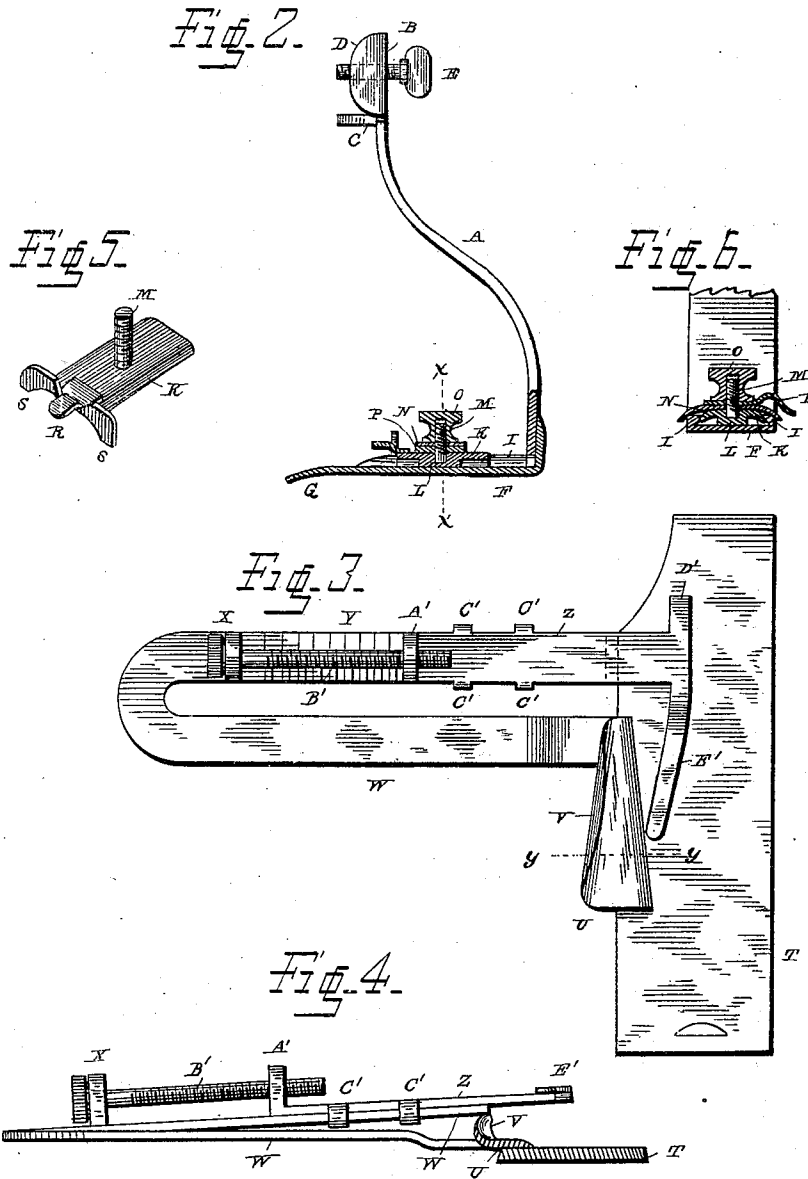
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UNITED STATES PATENT OFFICE.

WILLIAM MATTHEWS, OF SEDALIA, MISSOURI, ASSIGNOR OF ONE-FOURTH
TO WILLIAM CAMPBELL, OF SAME PLACE.

TUCK-FOLDER FOR SEWING-MACHINES.

SPECIFICATION forming part of Letters Patent No. 308,319, dated November 18, 1884.

Application filed May 8, 1884. (Model.)

To all whom it may concern:

Be it known that I, WILLIAM MATTHEWS, a citizen of the United States, residing at Sedalia, in the county of Pettis and State of Missouri, have invented certain new and useful Improvements in Tuck-Folders for Sewing-Machines, of which the following is a specification, reference being had therein to the accompanying drawings.

My invention relates to certain improvements in tuck-folders, and is designed to produce a device that shall fold tucks in cloth and pass it directly to the needle. The device will also make tucks of different widths, and can be set so as to vary the distance between them.

The operation and construction of the device will be hereinafter set forth, reference being made to the accompanying drawings, in which—

Figure 1 represents a perspective view of the device attached to a sewing-machine; Fig. 2, a side elevation, partly in section, of the "hanger," which is attached to the needle-bar casing; Fig. 3, a plan view of the slide-plate covering the shuttle and the adjustable guide attached thereto; Fig. 4, a section through the line *yy* of Fig. 3; Fig. 5, a detail perspective of a portion of the adjustable guide attached to the hanger, and Fig. 6 a cross-section through *xx* of Fig. 2.

A represents the hanger-supporting arm, which is bent into a compound curve, as shown. The top of the arm is laterally extended to one side, and the said extension B has two right-angle tongues, C and D, one under the extension and one to one side of the same. This enables the said arm to be fitted to the usual rectangular sewing-machine head and to be secured to said holder by a thumb-screw, E, which passes through the extension and into the holder. The lower end of the hanger-arm is either extended laterally or has an additional piece, F, secured to it, which piece extends so that the extremity of its free end is about on a line with the needle or a very little beyond it. This extremity G bends down somewhat and has a right-angle extension on each side, one, H, being rounded at the end, so as to offer no resistance to the passage of the cloth. For a distance on each

side the piece F are upward and inward projecting flanges I. On top the piece F is the sliding piece K, formed of a rectangular strip, with the edges turned down so as to enter under the flanges I and be retained and guided by them. The strip K has a lug, L, on its under side, forming a seat which retains the vertically-projecting screw-threaded post M. This post passes through two strips, one, N, engaging with the flanges I and clamping the strip K in place when the thumb-screw O on top the post is screwed down, and the other, P, having an extended indicator-point on one side. The purpose of these parts will be more fully hereinafter set forth. To the forward end of the strip K is fixed the projecting tongue R, on either side of which, at right angles to it, are the wings S. The purpose of all will be set forth hereinafter.

T represents the usual slide-plate covering the shuttle in machines of the class shown in the drawings, although the device being described is not necessarily confined to said class. To this plate is secured a plate, U, having its sides somewhat approaching and one edge, V, turned upward and slightly over the plate, as shown. From the narrower or rear end of the said plate V projects at right angles the U-shaped piece W, having its free end raised slightly above the other, and on the said free end, near the turn or curve in the piece or arm, is raised the lug or flange X. On the free end, from the flange outward, is a series of divisions, Y. Adapted to slide longitudinally on the said free end of the arm W is the piece Z, having at its inner end the lug A', similar in shape to the one, X, on the arm. The lug A' has through it a screw-threaded hole and the lug X a corresponding smooth one, and in and through these holes is adapted to operate the thumb-screw B', which adjusts the piece Z along the arm on which it rests. This piece has on each side tongues C', which are bent downward and inward, thus securing the said piece to the arm and allowing it to travel thereon. The piece Z has, at its outer or free end, two right-angle extensions—one, D', short and the other, E', on the opposite side long—and having a slight upward turn, as shown.

In Fig. 1 several parts of a common form of machine are shown in dotted lines, so as to

show the relation and position of the "tucker" to the said machine; also, in the same figure (1) the part G should be under the part D' E', but is placed a short distance out of position, so that its full shape may be clearly shown. The parts being in proper position—that is, the piece F of the hanger nearly touching the bed-plate of the sewing-machine, with the head G about on a line with the needle and opposite the piece Z—the cloth is passed over the piece W Z and under the hanger A F, the parts having been previously separated sufficiently to allow such manipulation. The gage represented in Figs. 5 and 6 of the drawings having been adjusted before the cloth is inserted, the folder Z is adjusted forward till its head rests under the lip R, carrying the cloth with it. The tuck thus being folded and resting on the piece W Z, around and under the head of the piece Z and over the piece F, and around the head G H and under the hanger A F, is passed under the needle and sewed. Then by carrying the finished tuck under the hanger A F till the line of sewing is at the point of the indicator P, as hereinafter described, the distance between it and the next tuck will be regulated. To arrange the cloth for each succeeding tuck, the parts are disengaged by slightly withdrawing the folder Z, the upward tendency of the arm W being sufficient to press the cloth against the said tongue, and so neatly fold it. The plate U serves as a guide for the edge of the fold of the cloth. The indicator on the piece P serves to a certain extent to regulate the distance between the tucks, as it will pass through a considerable distance, the post M being its pivot, before it engages with the edges of the plate F. The end of the indicator will reach to the edge of the wings S. A tuck having been formed, the edge of it is placed at the end of the indicator and the cloth folded around the "tucker," as described, and it thus indicates, and thereby regulates, the distance between the tucks, as stated, the width of the tuck being regulated by the other parts of the device, as before set forth. Having been properly folded by the tucker, the cloth immediately passes to the needle, where the tucks are sewed, the stitches passing through three thicknesses of the cloth, thus making the seam strong and durable under all circumstances.

Sewing-machines being of widely-different construction and operation, the right to vary the construction of the device, without departing from the spirit of the invention, is reserved. The tuck-folder U W Z may be otherwise attached to the machine than to the sliding plate, and other means used to secure it. Having described the invention, what I claim is—

1. A tucking attachment for sewing-machines, consisting in the combination of an adjustable folder secured to the slide-plate or other part of the bed-plate of a machine with a hanger secured to the sewing-machine head, the said hanger having an extension adapted

to fit under the end of the folder, the said extension carrying on it a gage and an adjustable indicator, substantially as and for the purpose specified.

2. In a tucking attachment for sewing-machines, the combination, with a folder secured to the machine, of a hanger attached to the arm of the machine by a thumb-screw or otherwise, and consisting of a dependent arm having on its lower end a right-angle extension, which has a head adapted to fold cloth, the said extension having on each side flanges for guiding and retaining a gage and indicator traveling on the same, the whole device being adapted to form tucks in cloth, substantially as and for the purpose specified.

3. In combination with the gage attached to the sliding plate or other part of the machine, and the hanger attached to the arm, the adjustable gage adapted to travel on the right-angle extension of the hanger, and consisting of a plate with its edges turned down so as to engage under the flanges on the extension, and having erected on it a screw-threaded post, which passes through a curved friction binding-plate, and a plate having on one side an extended indicator, and also carrying a thumb-screw, and the tongue and wings on the end of the said plate, all the parts being arranged substantially as and for the purpose specified.

4. In combination with the hanger and sliding gage and indicator thereon, the gage secured to the sliding plate or other part of the machine, and consisting of a guide having one edge turned upward to direct the cloth as it is folded, a U-shaped extension, the free end being somewhat elevated above the other, and an adjustable strip sliding on the said free end, and having on each side bent tongues for retaining the strip on the said end, the said strip having a head adapted to fold the cloth, one end of which is long and somewhat bent, all the parts arranged and adapted to operate substantially as described.

5. In combination with the hanger and sliding gage and indicator thereon, the adjustable gage secured to the sliding plate or other part of the machine, and consisting of a guiding-plate and a right-angle U-extension, the elevated free end of which carries a sliding strip, which is provided with a head having one end long and slightly curved, the said strip being adjustable by means of a thumb-screw operating in a tongue on the strip and one on the U-extension, the adjustment being regulated by a scale on the said extension, all the parts being adapted to operate substantially as and for the purpose described.

6. The combination of the hanger with its dependent arm and right-angle extension having on its sides retaining-flanges, and at its end a head laterally extended and adapted to fold the cloth, the gage and indicator consisting of a plate fitting under the said flanges, having at one end a projecting tongue and wings and centrally a screw-threaded post

carrying a friction binding-plate and an indicator, both of which are retained by a thumb-screw, and a gage consisting of a guiding-plate secured to the sliding plate or other part of the machine, and having a right-angle U-extension, the elevated free end of which has on it a flange and scale, and is adapted to carry the sliding tuck-folder with a laterally-elongated bent head, the said tuck-folder being adjustable by means of a thumb-screw pass-

ing through a flange at the end of the same, all the parts operating substantially as and for the purpose specified.

In testimony whereof I affix my signature in presence of two witnesses.

WILLIAM MATTHEWS.

Witnesses:

WILLIAM CAMPBELL,
S. G. NEEDLES.