

(No Model.)

W. MATTHEWS.

TUCK FOLDER FOR SEWING MACHINES.

No. 333,877.

Patented Jan. 5, 1886.

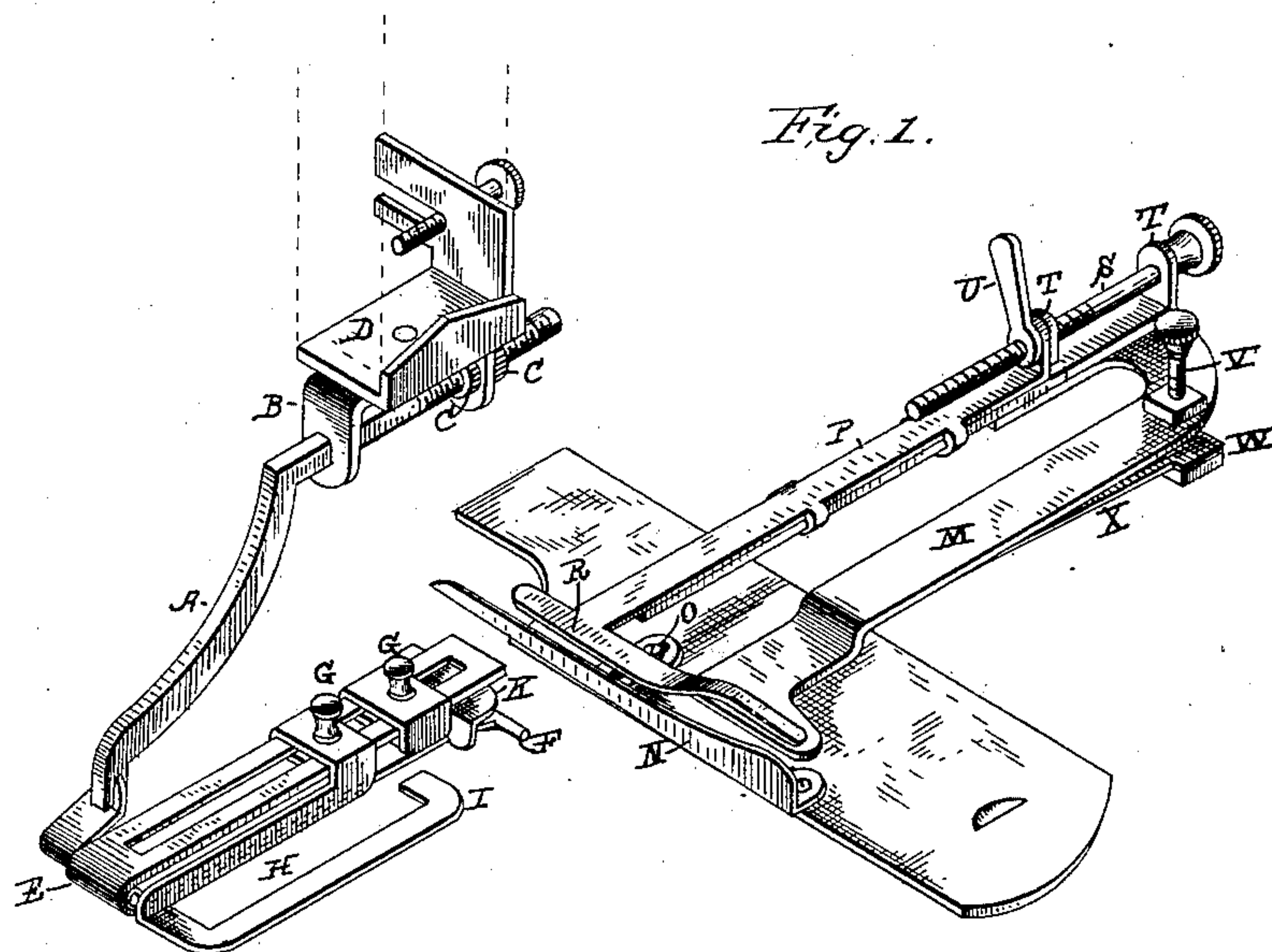


Fig. 3.

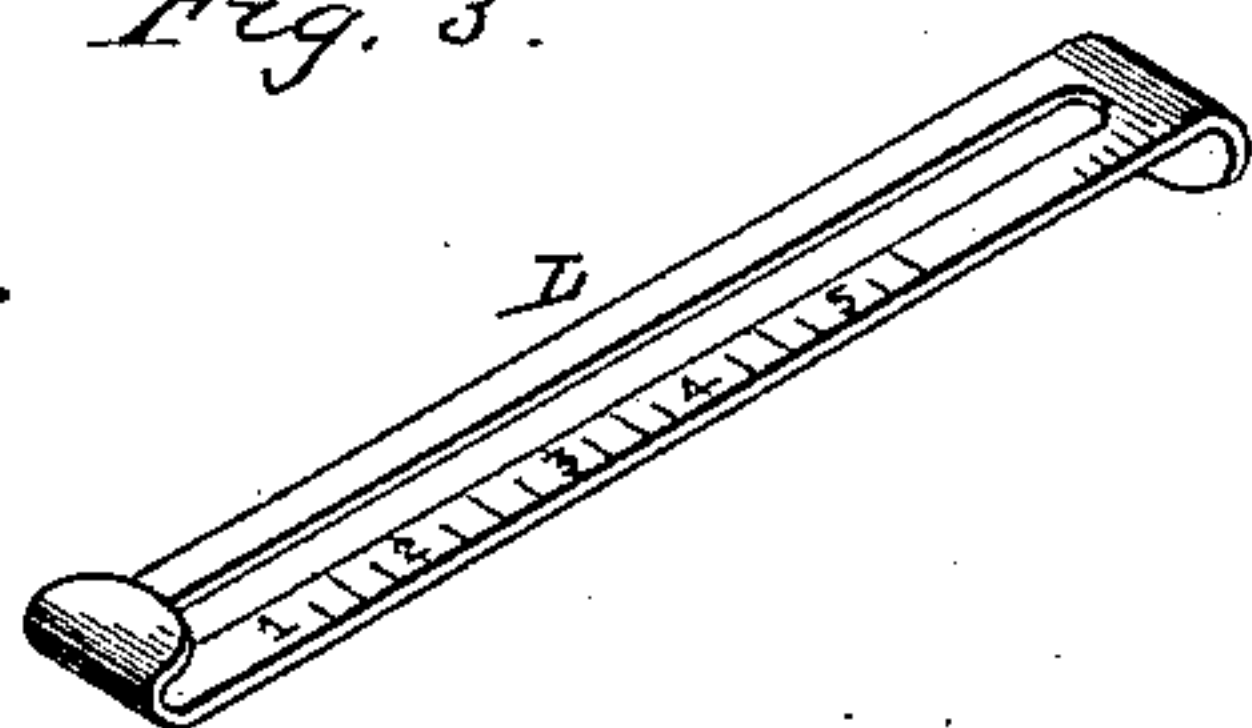
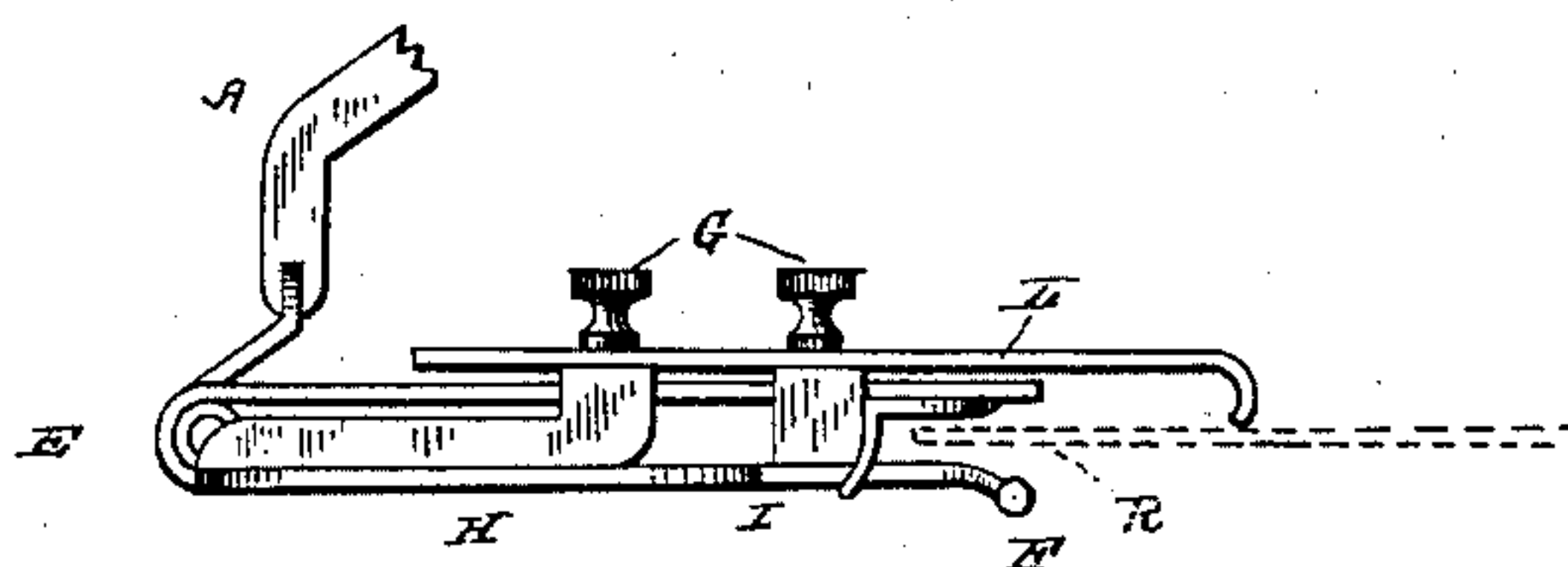


Fig. 2.



WITNESSES

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WILLIAM MATTHEWS, OF SEDALIA, MISSOURI, ASSIGNOR OF ONE-FOURTH
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TUCK-FOLDER FOR SEWING-MACHINES.

SPECIFICATION forming part of Letters Patent No. 333,877, dated January 5, 1886.

Application filed March 9, 1885. Serial No. 158,223. (No 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 to the accompanying drawings.

My invention relates to improvements in tuck-folders, and is designed to produce a device for forming tucks of any desired width or distance apart, that will yield easily and quickly to a seam or other obstruction in the cloth, that is adapted to either right or left hand machines or to operate either from the outside or under the arm, and that will deliver the folded cloth truly to the needle. These advantages or objects, as well as others hereinafter set forth, are accomplished in the device shown in the annexed drawings, in which—

Figure 1 represents a perspective view of the device; Fig. 2, a side elevation of the gage-carrier with the supplemental gage detached, and Fig. 3 a detail showing the supplemental gage detached.

The parts of the device are as follows: A hanger, A, projects through a hole (preferably square) in an angle-piece, B, and terminates in a threaded continuation which projects through the other side of the piece B, and is provided there with clamping and adjusting nuts C. The piece B is pivotally connected to a socket, D, which, by means of a thumb-screw, is fastened to the sewing-machine head, the said thumb-screw passing through a slot in one wing of the said socket, which may thus be removed by loosening the said screw. The pivot allows the turning of the hanger so as to depend from either the right or left. Hinged or pivoted to the lower end of the hanger is an arm or gage-carrier, E, formed of a lower part provided with a folding-head, F, and an upper part longitudinally slotted and parallel to the said lower part. On each side of the slot the part or arm may be graduated. Passing through this slot are thumb-screws G, engaging with plates under the said arm, and thus forming movable clamps. Se-

cured by one of the clamps is an indicator, H, in general shape that of a U, and terminating in a free arm with a head, I, about parallel to the line of feed of the machine. This indicator rests against the line of stitching on formed tucks, and in a manner hereinafter set forth indicates or regulates the distance between the tucks. The free end has spring enough to allow it to pass over seams or other obstructions in the cloth. A lipped head, K, is secured by the other clamp, and is adjustable on the arm E, as is also the indicator. A slotted strip, L, with graduations, and one end bent in the form of a hook and the other at an angle, forms a supplementary gage and rests on the arm E, both thumb-screws passing through the said slot and holding it in place.

Attached preferably to the slide-plate of the machine is a U-shaped arm, M, having the attached end adjacent to a guide, N, which reaches as near to the needle as possible. The guide may be made integral with the part M, in which case the attachment of the said part M to the machine is by means of the guide, in the manner below set forth. The end farthest from the needle is pivoted to the slide-plate, and a screw, O, passing through a slot in the said guide allows a lateral adjustment, so as to deliver the tuck to the needle guided until it reaches the same, and hence having no opportunity to spread or lose its shape before being sewed, the adjustment adapting it to be set true on any machine. A strip, P, having a folding-head, R, travels on the free end of the arm M, and is operated by a thumb-screw, S, which passes through ears T on the arm and on the strip, respectively. A locking-nut, U, is also provided. Through the arm M, at or near the curve, passes a thumb-screw, V, bearing against a padded plate, W, at the free end of a spring, X, the pad preventing the marring of the bed-plate.

The operation of the device is as follows: The cloth lies over the folder, (attached to the slide-plate,) the head of which rests under the lip on the head K, returned under it, around the head on the arm E, and thence under the said arm. The width of the tuck is determined by the distance of the head K from the headed end of the arm E, the said head K

being adjustable. To regulate the distance between the tucks, the head I of the indicator H is set to rest against the line of stitching, and under the loose portion or flap of a finished tuck at such a distance from the head K as may be desired. To insure a neat fold by the head R of the strip P, it is elevated or depressed by the thumb-screw V acting on the plate W. This adjustment is necessary for different widths of tucks, the head R being elevated to admit the free passage of the goods for wide tucks, and depressed for narrow tucks. Sometimes it is desirable to form tucks with the edges toward each other, or the reverse, in which case the cloth with finished tucks is turned around end for end and the above-described operation performed, the supplementary gage L being advanced, so that either the angular end rests against the line of stitching or the hooked end passes around the flap of the tuck on the opposite side of needle from tuck being formed, according as to whether the said tucks are edge to edge or the reverse. This gage regulates the distance between the series of tucks, and serves to make them parallel, as is evident, the said gage traveling on a fixed line, the formed tuck. The hinging of the arm to the hanger allows it to adjust itself for different thicknesses of cloth and to freely pass over seams—such as, for instance, are encountered in making tucks across each other—and by being elevated admits of the free passage of goods. The adjustment of the hanger in the angle-piece B allows it to be brought in perfect coincidence with the needle, so that the folding-head F will be on a line with the said needle.

The improvement consists, essentially, in the following points: The swiveling or pivoting of the hanger so that it may be swung horizontally without changing the relation of the folding-heads on the gage-carrier to the line of the feed and needle; the mechanism producing the lateral adjustment, the combined horizontal swiveling and lateral adjustment, the combined swiveling and lateral adjustment, and the vertical play of the gage-carrier; the indicator-gage having a spring-arm with a head about parallel to the line of feed for the purpose of presenting a smooth surface to the finished line of stitching; the headed gage-carrier with the lipped head, the indicator-gage on one side, and supplemental gage, all adjustable, as described, the gage being formed of two spring-arms, one slotted; the folder with the vertical adjustment and carrying a longitudinally-adjustable folding-head, and the guide on the slide-plate pivoted at one end and the other end having a restricted lateral adjustment.

Although the preferable mode of constructing the device is shown, the parts may be otherwise attached to the machine than to the slide-plate and to a hanger depending from the machine-head; nor is the invention confined to the minutiae of construction shown and described, but the right to vary the same

consistent with the spirit of the invention is reserved.

I claim—

1. As an improvement in tuck-folders, the combination, with means for folding goods, of a gage-carrier pivotally connected to a sewing-machine and swinging on said pivot either to the right or left of the line of delivery to the needle, the free end of said carrier remaining at all times at the same relative position to the said line of delivery, substantially as and for the purpose specified. 70 75

2. As an improvement in tuck-folders, the combination, with means for folding goods, of a gage-carrier pivotally connected to a sewing-machine and swinging to the right or left of the line of feed in a horizontal plane, the free end thereof retaining its relative position to the said line of feed, and also pivoted or hinged at one end to have a vertical play, substantially as and for the purpose specified. 80 85

3. As an improvement in tuck-folders, the combination, with means for folding goods, of a pivoted gage-carrier swinging to the right or left in a horizontal plane of the line of feed and having its free end retaining its relative position thereto, said carrier having a vertical play and being adjustable laterally, substantially as and for the purpose specified. 90 95

4. As an improvement in tuck-folders, the combination, with means for folding goods, of a pivoted gage-carrier swinging in a horizontal plane to the right or left of the line of feed, the free end retaining its relative position thereto, said carrier having a lateral adjustment relative to the said line of feed, substantially as and for the purpose specified. 100

5. In a tuck-folder, the combination, with means for folding goods, of a gage-carrier suspended from a sewing-machine head by means of a hanger, said hanger being pivotally connected to the said head and swinging in a horizontal plane to carry the gages to either the right or left of the line of delivery to the needle, substantially as and for the purpose specified. 105 110

6. In a tuck-folder, the combination, with a hanger pivoted to a sewing-machine head and swinging in a horizontal plane, of a gage-carrier pivotally supported by said hanger so as to have vertical play, substantially as and for the purpose specified. 115

7. In a tuck-folder, a hanger pivoted to a sewing-machine head to swing in a horizontal plane and adjustable laterally, in combination with a gage-carrier pivoted to the hanger and moving vertically on said pivot, substantially as and for the purpose specified. 120 125

8. In a tuck-folder, a hanger having one end of polygonal shape with a threaded continuation provided with thumb-nuts, in combination with an angle-piece having a hole in one side of polygonal shape and a round hole in the other and pivoted to a socket secured removably to the sewing-machine head, the whole combined substantially as and for the purpose specified. 130

9. In a tuck-folder, a gage-carrier consisting of a strip or plate with a folding-head at one end and a strip or plate with a longitudinal slot and graduations arranged above and parallel to the other plate, in combination with a gage having a lipped head and an indicator-gage with a headed spring-arm, the two gages having independent longitudinal adjustment on the said carrier, substantially as and for the purpose specified.

10. In a tuck-folder, the combination, with a hanger adjustable laterally and pivoted to swing in a horizontal plane, of a gage-carrier hinged or pivoted to the said hanger to swing vertically and carrying an indicator-gage, a lipped folding-gage, and a supplemental gage, all adjustable longitudinally on said carrier, substantially as and for the purpose specified.

11. In a tuck-folder, the combination of a gage-carrier supporting a lipped folding-gage, an indicator-gage having a headed spring-arm and placed on one side of the carrier, and a supplemental gage consisting of a slotted strip with one end turned at an angle and the other formed into a hook, substantially as and for the purpose specified.

12. As an improvement in tuck-folders, the combination, with means for folding goods, of a guide pivoted at one end to the slide-plate and having the other end nearly reaching to the needle, said guide having a restricted lateral adjustment, substantially as and for the purpose specified.

13. As an improvement in tuck-folders, the combination, with means for folding goods, of a guide pivoted at one end to the slide-plate and having the other end reaching nearly to the needle, said guide having a restricted lateral adjustment by means of a screw passing through a slot therein, substantially as and for the purpose specified.

14. In a tuck-folder, a folder proper formed of a main arm of general U shape, with one end secured and the other end free, in combination with an arm having a folding-head and

being longitudinally adjustable on the free end of the U-shaped arm, the said U-shaped arm being vertically adjustable, substantially as and for the purpose specified.

15. In a tuck-folder, the combination of a folder having one end secured and the other end free, a longitudinally-adjustable arm with a folding-head carried by said arm, and a spring-plate acted upon by a thumb-screw to vertically adjust the said folder, substantially as and for the purpose specified.

16. In a tuck-folder, the combination of a folder formed of a U-shaped arm having one end secured and the other end free, an arm with a folding-head, longitudinally adjustable by means of a thumb-screw and clamp-nut or lever, and a means for vertically adjusting said free end and arm thereon, consisting of a spring-plate acted upon by a thumb-screw, substantially as and for the purpose specified.

17. In a tuck-folder, the combination of a folder-arm with an adjustable guide formed at one end, a longitudinally-adjustable folding-head supported by the other end and actuated in the adjustment by a thumb-screw, and a spring-plate acted upon by a thumb-screw to adjust the folder-arm vertically, substantially as and for the purpose specified.

18. The combination, with a folder provided with an adjustable guide and a folding-head adjustable both vertically and longitudinally, of a hanger pivotally connected to a machine and adjustable relatively lateral to the plane of the feed and needle, said hanger carrying pivotally a carrier on which travels a lipped gage, an indicator-gage, and a supplementary gage, substantially as and for the purpose specified.

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

WILLIAM MATTHEWS.

Witnesses:

CHAS. D. DAVIS,
H. J. ENNIS.