

UNITED STATES PATENT OFFICE.

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TUCK-CREASER FOR SEWING-MACHINES.

SPECIFICATION forming part of Letters Patent No. 665,523, dated January 8, 1901.

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To all whom it may concern:

Be it known that I, JOHN M. GREIST, a citizen of the United States, residing at New Haven, in the county of New Haven and State of Connecticut, have invented certain new and useful Improvements in Sewing-Machine Tuck Creasers or Markers, of which the following is a specification, reference being had therein to the accompanying drawings.

This invention relates to that class of sewing-machine tuck-creasing or tuck-marking attachments adapted to be secured to the presser-bars of the machines and operated from the needle-bars thereof, the invention having for its object to provide a compact and attractive device of the class referred to in which the parts will be housed as far as possible, which will be convenient in use, and compact and solid in construction.

In the accompanying drawings, Figure 1 is a perspective view of my improved creaser. Fig. 2 is a plan view of the same with the cap or housing plate removed. Fig. 3 is a bottom view, and Fig. 4 a front end view looking from the left of Fig. 1. Fig. 5 is a cross-section on line 5 5 of Fig. 2 with the cap or housing plate in position, and Fig. 6 is a longitudinal section on line 6 6 of Fig. 2 also with the cap or housing plate in position. Fig. 7 is a detail view of the presser-foot and parts integral therewith, constituting the frame or support of the attachment. Fig. 8 is a detail view of the edge-guide. Fig. 9 is a detail view of the separating-plate interposed between the adjustable portions of the guide and creasing-frame. Fig. 10 is a detail view of the operating-lever, and Fig. 11 a detail rear end view of the creaser plate or frame.

Referring to the drawings, A denotes a presser-foot adapted for attachment to the presser-bar of a sewing-machine in substitution of an ordinary presser-foot, the said foot A being provided with a lateral extension or plate a , having upturned edges a^1 and a^2 , the latter being provided with an ear a^3 and the plate a being cut away at its bottom to form a deep notch or opening a^4 and a slot a^5 .

B is a plate constituting the creaser-frame, said plate being provided at its forward end with an upturned lip b and having formed integral with its rear end portion a rectangular hook b^1 . Attached to the rear end part

of the plate B by rivets b^2 is a work-holding spring or presser c , having a small ear c^1 , which overlies an arm b^3 of a vibrating creasing-lever b^4 , having at its forward end a downturned portion b^5 , notched at its under side for cooperation with the lip b of the plate B, the said downturned portion b^5 overhanging the said lip. The arm b^3 serves as a pivot for the creasing-lever b^4 , said lever being attached to the plate B by the said ear c^1 .

Secured to the plate a of the frame of the attachment is a plate D, formed of spring metal and forked at its forward end to form arms d d' , the arm d being provided with an ear or hook d^2 , engaging the vibrating creasing-lever b^4 . The plate D is secured at its rear end to the arm a , preferably by rivets d^3 , which loosely secure the said plate D in place, and interposed between the said plates a and D is a spring a^7 , which serves to lift the forked forward or free end of the plate D.

Pivotaly mounted on the ear a^3 of the frame is an operating-lever E, having a lug or projection e , which rests upon the arm d' of the plate D, so that the said lever, which is arranged to be engaged by a screw or projection on the needle-bar of the machine, will be lifted by the said arm d' after it has been depressed by the needle-bar. Attached to the plate a of the frame is a spring g , having a finger g' , which presses against a shoulder e^2 , formed at the bottom of the lever E in such a manner as normally to tend to retain the said lever in its operative position. The said lever E is provided with a second shoulder e^1 , also to be engaged by the said finger g' of the spring g , so as to hold the said lever in its inoperative position. (Denoted by dotted lines in Fig. 5.) When the said lever has been thrown up to the position shown by the dotted lines just referred to, it will be out of range of the operating screw or projection on the needle-bar, and thus the creasing devices can be thrown out of operation merely by lifting the said lever to its inoperative position, and in which position it will be held by the spring-finger g' until again turned down to its operative position.

H is the adjustable edge-guide to determine the width of the tuck being formed, the said edge-guide H being preferably integral with a plate h , having an opening h' , through

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which the plate B, provided with the creasing-lip, extends, so that the said plate *h* may serve to steady the said plate B on the frame or support of the attachment. To this end the plate *h* is provided with an arm *h*², having an overhanging lip *h*³, which rests upon the upturned edge *a*' of the plate or extension *a* of the foot A, said lip *h*³ thus serving to support the said plate *h* on the frame of the attachment, and the said plate *h* in turn steadying or partially supporting the plate B. The hook *b*' of the plate B also overhangs the upturned edge *a*' of the plate or extension *a*, and thus serves to support said plate or creasing-frame B on the frame or support of the attachment. The supports just described of the guide-supporting plate *h* and the creasing frame or plate B permit of an adjustment longitudinally of the attachment of the guide and of the creasing-frame to vary the positions of the said guide and of creasing devices carried by the creasing-frame relative to the needle of the sewing-machine, the adjustment of said guide determining the width of the tucks being formed and the adjustment of the creasing devices determining the distance apart of the tucks. In order that the adjustment of one of these two independently-adjustable devices may not accidentally disturb the adjustment of the other, I preferably interpose a separating-plate *i* between the arm *h*² and lip *h*³ of the guide-supporting plate and the under side of the hook *b*' of the plate *b*, said separating-plate *i* having a lip *i*' overlying the lip *h*³ and being in turn overlaid or inclosed by the hook *b*' of the plate B.

The guide-carrying plate *h* and the plate *b*, carrying the creasing devices, are secured in any desired position of adjustment by means of a clamping cap or housing plate K, which rests upon the hook *b*', the said plate K being secured in place by the set-screw *k*, tapped in the extension or plate *a*. The cap-plate K has at its front side a downturned lip or portion *k*', provided with graduated scales *k*² *k*³ to cooperate with index-fingers *h*⁴ and *b*⁷, preferably formed integral with the guide-carrying plate *h* and the creaser frame or plate B, respectively, these fingers being thus adjustable with the guide and with the creasing devices and denoting the positions of adjustment of these parts. The downturned lip *k*' serves as a housing for the vibrating creasing-lever *b*⁴ and the housing or cap plate K is provided at its rear end with a downturned lip *k*⁵, which serves as a closure for the rear end of the plate *a*, the said lip *k*⁵ extending between the upturned edges *a*' *a*² of the said plate *a*, so that these several parts form a neat box-like receptacle or housing for the devices inclosed therein.

The upward movements of the plate D, as the latter is lifted by the spring *a*⁷ placed beneath it, are limited by an inwardly-struck lug *a*⁸ on the upturned edge *a*² of the arm *a*.

In the operation of my improved creaser the screw or projection on the needle-bar

strikes against the operating-lever E at each downstroke of the needle-bar and, through the arm *d* of the plate D, causes the downturned forward end of the creasing-lever *b*² to be depressed upon the goods overlying the creasing-lip *b*. When the downward movement of the said creasing-lever has been arrested by the engagement of the said creasing-lever with the goods overlying the said creasing lip or projection *b* on the plate B, a further downward movement of the said lever E is permitted by the spring-arm *d*' of the plate D, the said arm yielding as the said lever is further depressed, so as to cushion the movements of the creasing-lever upon the work, and thus providing a yielding action of the said creasing-lever on the work, thereby avoiding any danger of injury to the goods being creased.

I do not desire to limit my invention to all of the details of construction herein shown and described or to a creasing attachment adapted to be secured to a sewing-machine presser-bar, as many features of my creasing device may be employed in a bed-plate creaser or marker.

Having thus described my invention, I claim and desire to secure by Letters Patent—

1. In a sewing-machine tuck creaser or marker, the combination with a supporting-frame having upturned edges, of a forked plate of spring metal secured at one end to said supporting-frame and having two arms at its opposite end, a creasing plate or frame adjustably mounted on said supporting-frame and provided with a vibrating creasing-lever and with a lower creasing member or lip cooperating with said creasing-lever, the latter being engaged by one of the arms of the said forked plate, an operating-lever engaging the other of said arms of said forked plate, and means for securing the said creasing plate or frame in any desired position of adjustment on the support or frame of the attachment.

2. In a sewing-machine tuck creaser or marker, the combination with a presser-foot adapted to be attached to the presser-bar of the sewing-machine and provided with a lateral extension having upturned edges, the said foot and extension forming the frame or support of the attachment, of a forked plate of spring metal secured at one end to said lateral extension and having two arms at its opposite end, a creasing plate or frame adjustably mounted on said lateral extension of said support and provided with a vibrating creasing-lever and with a lower creasing member or lip cooperating with said creasing-lever, the latter being engaged by one of the arms of the said forked plate, an operating-lever engaging the other of said arms of said forked plate, and means for securing the said creasing plate or frame in any desired position of adjustment on the support or frame of the attachment.

3. The combination with the foot A having

the lateral extension or plate *a* provided with the upturned lips *a'* *a*², the latter having the ear *a*³, of the operating-lever E pivotally mounted on the said ear, the creasing frame or plate B provided with the creasing-lip *b* and having a hook *b'* overhanging the said upturned edge *a'* of the extension or plate *a*, a vibrating creasing-lever pivotally mounted on the said plate B, the forked plate D attached to said extension or plate *a* at one end and having the arms *d* and *d'* at its other end, the said arm *d* engaging the said vibrating creasing-lever, to impart vertical movements thereto, and the said arm *d'* being engaged by said operating-lever, and means for holding the said plate B in any desired position of adjustment on the upturned portion *a'* of the extension or plate *a*.

4. The combination with the foot A having the lateral extension or plate *a* provided with the upturned lips *a'* *a*², the latter having the ear *a*³, of the operating-lever E pivotally mounted on the said ear, the creasing frame or plate B provided with the creasing-lip *b* and having a hook *b'* overhanging the said upturned edge *a'* of the extension or plate *a*, a vibrating creasing-lever pivotally mounted on the said plate B, the forked plate D attached to said extension or plate *a* at one end and having the arms *d* and *d'* at its other end, the said arm *d* engaging the said vibrating creasing-lever, to impart vertical movements thereto, and the said arm *b'* being supported by said operating-lever; an adjustable edge-guide supported on said upturned edge *a'* of the said extension or plate *a*, and means for holding said edge-guide and creasing frame or plate in any desired position of adjustment.

5. In a sewing-machine tuck creaser or marker, the combination with the foot A having the lateral extension or plate *a* provided with the upturned edge *a'*, of the plate *h* provided with the edge-guide H and with the arm *h'* having the lip *h*² overhanging the said upturned edge *a'*, the adjustable creasing frame or plate B having the hook *b'* also overhanging the said upturned edge *a'*, creasing devices carried by said creasing frame or plate B, means for operating said creasing devices, a clamping cap or housing plate serving to hold the said plates *h* and B in any desired position of adjustment, and a set-screw for securing the said clamping cap-plate in place.

6. In a sewing-machine tuck creaser or marker, the combination with the foot A having the lateral extension or plate *a* provided with the upturned edge *a'*, of the plate *h* provided with the edge-guide H and with the arm *h'* having the lip *h*² overhanging the said

upturned edge *a'*, the adjustable creasing frame or plate B having the hook *b'* also overhanging the said upturned edge *a'*, creasing devices carried by said creasing frame or plate B, means for operating said creasing device, a clamping cap or housing plate serving to hold the said plates *h* and B in any desired position of adjustment, a set-screw for securing the said clamping-plate in place, and theseparating-plate *i* interposed between the said lip *h*² and the said hook *b'*.

7. In a sewing-machine tuck creaser or marker, the combination with the foot A having the lateral extension or plate *a* provided with the upturned edge *a'*, of the plate *h* provided with the edge-guide H and with the arm *h'* having the lip *h*² overhanging the said upturned edge *a'*, the adjustable creasing frame or plate B having the hook *b'* also overhanging the said upturned edge *a'*, creasing devices carried by said creasing frame or plate, means for operating said creasing device, a clamping cap or housing plate serving to hold the said plates *h* and B in any desired position of adjustment, and a set-screw for securing the said clamping cap-plate in place, the said clamping cap-plate being provided with graduated scales and the said plates *h* and B being provided with index-fingers cooperating with said scales to indicate the position of adjustment of the said plates *h* and B.

8. In a sewing-machine tuck creaser or marker, the combination with the foot A having the lateral extension or plate *a* provided with the upturned lips or edges *a'*, *a*², of the forked plate D attached to said arm or extension *a*, a creasing-lever engaged by one arm of the said forked plate D, a lower creasing member or lip cooperating with said creasing-lever, an operating-lever engaging the other arm of the said forked plate B, and a cap or housing plate K having a downturned rear end portion forming, in connection with the upturned edges of the said extension or plate *a*, a box-like receptacle for the said plate D.

9. In a sewing-machine tuck creaser or marker, the combination with the foot A having the extension or plate *a*, provided with the upturned edges *a'* and *a*², the latter having the ear *a*³, the operating-lever *a* pivotally mounted on said ear, creasing devices actuated from said operating-lever, and the spring *g* serving to hold the said lever either in or out of operative position.

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

JOHN M. GREIST.

Witnesses:

W. C. GREIST,
DAVID C. MONSON.