No. 876,105. PATENTED JAN. 7. 1908.

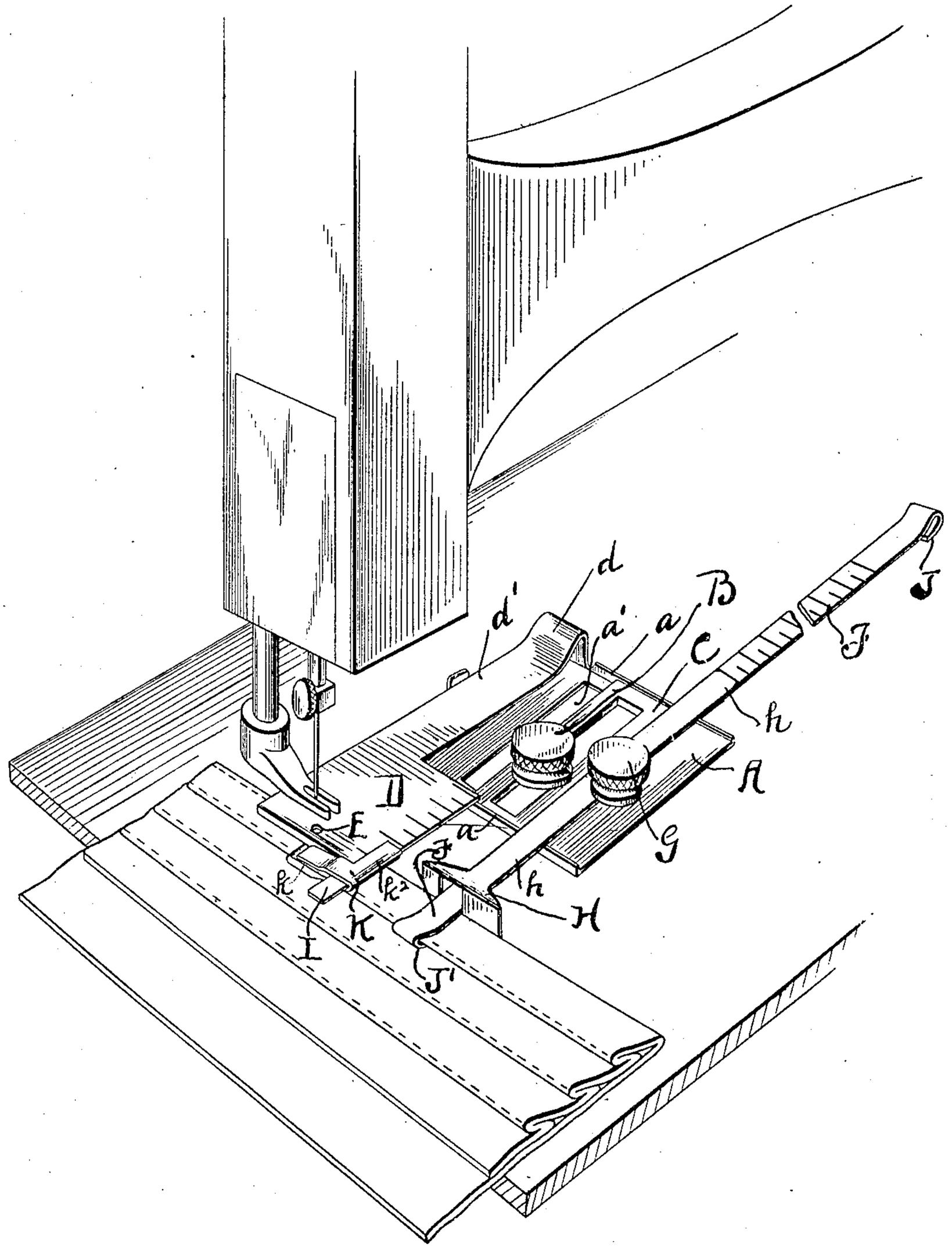
P. T. SMITH.

TUCKER AND GATHERER FOR SEWING MACHINES.

APPLICATION FILED DEC. 8, 1906.

2 SHEETS—SHEET 1.

FIG. 1



Witnesses
Max B. A. Döring.
Francine B. Dwight

Peter T. Smith, Inventor
By his Attorneys Henry & Gough

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2 SHEETS—SHEET 2.

FIG. 2

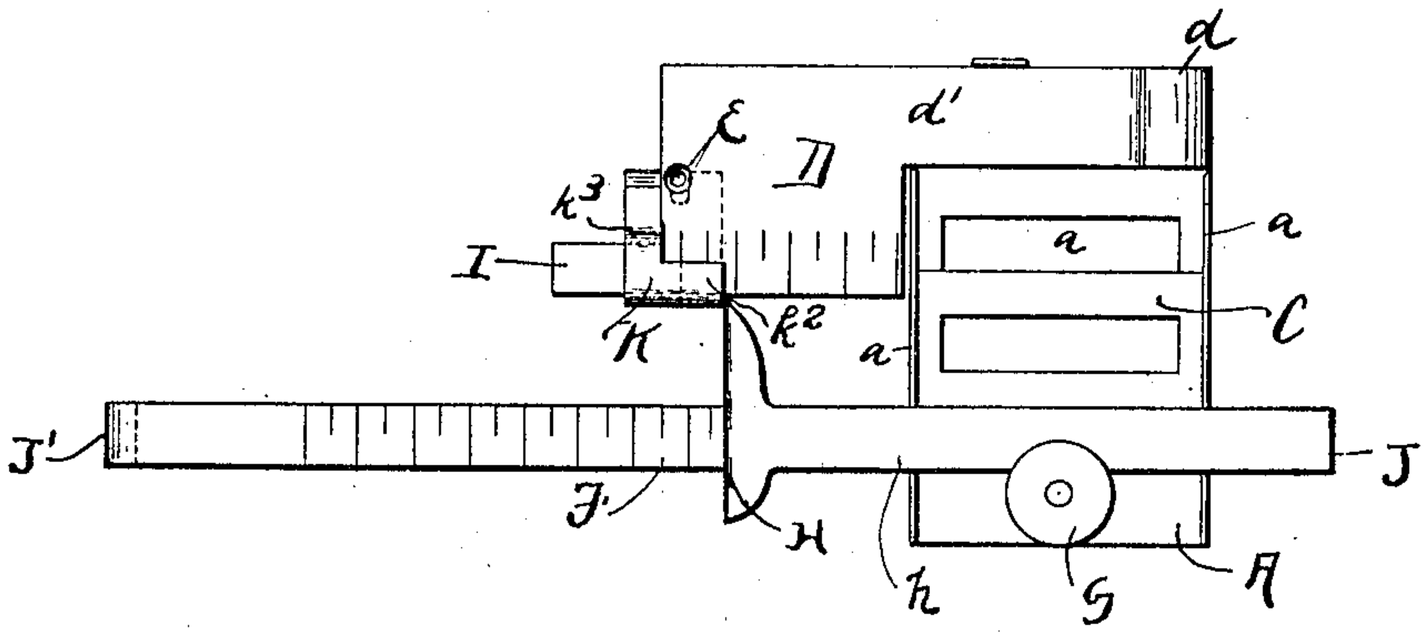


FIG. 3

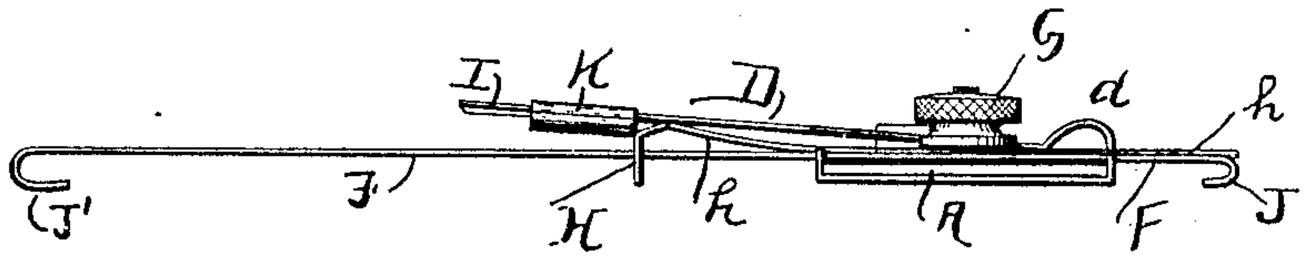


FIG. 4

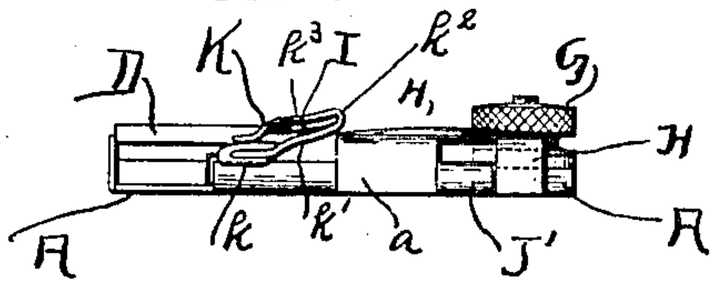
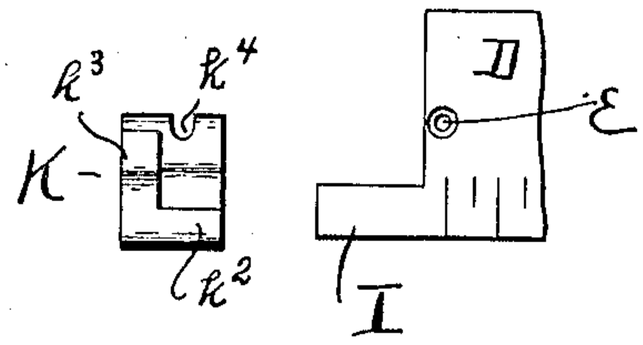


FIG. 5



Witnesses
Max B. A. Doring
Francis B. Dwight

Peter T. Smith, Inventor
By his Attorneys Hensey & Yonge

UNITED STATES PATENT OFFICE.

PETER T. SMITH, OF BANGOR, MAINE.

TUCKER AND GATHERER FOR SEWING-MACHINES.

No. 876,105. Specification of Letters Patent. Patented Jan. 7, 1908.

Application filed December 8, 1906. Serial No. 346,917.

To all whom it may concern:

Be it known that I, PETER T. SMITH, a citizen of the United States, residing at Bangor, in the county of Penobscot and State of Maine, have invented certain new and useful Improvements in Tuckers and Gatherers for Sewing-Machines, of which the following is a specification.

My invention relates to a new and useful improvement in sewing machines and sewing machine attachments used for tucking and gathering, and more particularly to an improvement on Patent No. 765,684, issued to me on the 26th day of July, 1904.

The object of my invention is to so construct the tucker shown and described in that patent that by the addition of a small and very simple attachment, the tucker may be used as a gatherer as well, said tucker being so made that it may be attached to any make of machine, and being adapted to so guide the material that the tucks will be made of uniform width and distance apart and that a straight line of stitching shall be made a uniform distance from the edge, and further to increase the resilience of the spring plate over the plate shown in said former patent. In furtherance of these objects my invention consists in the arrangement of parts and details of construction shown in the drawings and particularly set forth in the claims.

I have shown an embodiment of my invention in the accompanying drawings, wherein Figure 1 is a perspective view of my tucker and gatherer attached to a machine, Fig. 2 a plan view of the tucker with the gatherer attached thereto, Fig. 3 a side view of the same, Fig. 4 a front edge view of Fig. 2, and Fig. 5 a plan view of the end of the tucker with the gatherer removed therefrom.

In Fig. 1, I have shown the attachment with the gatherer applied to the end of the tucker and the device used as a tucker. It is to be understood, of course, that the gatherer and tucker will not ordinarily be used at the same time, but in order to show the construction completely I have shown the gatherer as well as the tucker. In order that the improvement may be understood in its relation to the patent formerly granted to me, I have used as far as possible the same reference characters in this application to denote like parts.

The body portion of the tucker consists of a plate A adapted to lie upon the bed of the sewing machine, but having forward and rear lateral upturned edges *a*. This plate has a comparatively wide slot *a'* across its face, and fitting between the turned up edges *a* and movable over this slot *a'* is a slotted plate C of comparatively thick material. The shank of a thumb nut B extends through the opening of the plate C and through the opening *a'* beneath, whereby the tucker may be adjusted in any desired position to suit various makes of machines.

The two side flanges *a* are cut out, for the passage of a gage bar F. This bar is adapted to slide longitudinally through the guides so formed in the flanges *a* and is held adjusted in any desired position by the thumb nut G. The ends of this gage bar are turned over into hook form as indicated at J in order to engage with the tucked material. The face of the gage bar is provided with any suitable scale whereby the width of the tuck may be properly measured. H is a guide for the inner edge of the tuck, which is adapted to fit over the gage bar and to be shifted longitudinally therealong to any desired position depending upon the width of the tuck to be formed. The shank *h* of the guide H is of the same width as the gage bar F and fits within the cut out portion of the flanges *a* and immediately above the gage bar. The guide H is cut out for the passage of the gage bar as shown. The gage bar and the shank *h* of the guide pass beneath the thumb nut G. By turning down this nut the gage bar and guide may be held in any position relative to each other desired. The guide H should be set on a line rearward of the needle and the distance between it and the plane of the needle determines the width of the tuck. The distance between the guide H and the end of the gage bar J determines the distance between the tucks. So far the construction described is practically that shown in my former patent with some slight simplification.

In my former patent the body A was provided with a spring plate D. This extended upward from the side edge of the body A and was so arranged as to come beneath the presser foot of the sewing machine. In my present construction I form the spring plate D by returning the metal of the body A upon itself as at *d* and extending it across the plate beyond the side edge thereof to form a shank *d'*. On a line with the side edge of the body A the shank *d'* is extended laterally to form

the plate D proper. This plate is provided with a scale upon its front edge whereby the guide H may be adjusted.

The plate D has near its edge the hole E for the passage of the needle. The forward end of the spring plate D is provided with a projecting finger I upon which the gatherer K is carried when in use. It will be noted from Fig. 1 and particularly Fig. 4 that the blade D at its front edge is thickened and that the under side of the finger I is above the under side of the thickened edge of the plate D. The object of this thickening of the front edge of the plate D will be stated later when considering the operation of the device when used as a tucker. It is to be understood of course, that usually when my device is to be used as a tucker, the gatherer K is removed and that when it is to be used as a gatherer the gage bar F is removed; the edge guide H, however, may be retained as a means of regulating the distance between the edge of the goods and the line of stitching. If desired, of course, as in the making of "headings" the device could be used as shown in Fig. 1.

The gatherer K consists of a relatively thick foot k, designed to bear against the cloth being sewed, an upwardly and laterally projecting shank k' which is bent over upon itself as at k^2, and a returned extension k^3 which is adapted to fit over the finger I as shown. At its end the extension k^3 is soldered to the upper face of foot k. The returned extension k^3 not only forms the sleeve to slip over finger I but it also forms an abutment which bears against the edge of plate D, thus holding the gatherer from lateral play.

On the edge of the foot k is a recess k^4 which, when the gatherer is in position and pressed home, registers with the needle opening E. I have shown the gage bar F as having two hooks J J'. These are of different sizes; the small hook J is to be used for thin material; and the large hook J' for heavier goods or when seams are crossed.

The operation of my attachment is as follows: In starting to tuck a piece of goods the material is folded at the point where it is desired to make the first tuck. The guide H is then set upon the bar F, and this guide comes in contact with the bed of the sewing-machine, and therefore forms a guide for the folded edge of the material and determines the distance of the stitching from this folded edge. After the first line of stitching is made the material is turned over, so as to form a tuck, and then is again folded, and the width of the tucks is regulated by placing the tuck first made in the hook-shaped end J of the bar and then folding the cloth so that the folded edge will come against the guide H, and in this way each tuck will be of a uniform width, and the stitching will be a uniform distance from the folded edge. By allowing the goods to pass underneath the spring-plate D the presser foot is prevented from coming in contact with the material, and as the hole E is in the extreme outer end of the plate D neither the presser foot nor plate D will come in contact with the tucks previously made when the presser foot descends. As shown in Fig. 1, the presser foot is elevated and the spring D is elevated. Hence the hole E is exposed to view. This is a great advantage in making narrow tucks, for if the presser foot descended upon a tuck previously made it would not come in solid contact with one portion of the goods being stitched, as the tucked portion would be four thicknesses and the other portion being stitched would be only two thicknesses. Therefore, on account of the uneven contact, an inaccurate line of stitching would result. With my improved tucker no matter what width tuck is made the body of the plate D descends only upon that portion of the goods being stitched. As before stated, the finger I is on a higher level than the lower surface of the thickened portion of the plate D. As a consequence, though the plate D is in contact with the tuck, the finger I is above the surface of the material. The operation then of my tucker, provided with the finger I is precisely the same as the operation of the tucker shown in my former patent, No. 765,684, before referred to. There is therefore a good solid backing for the feeder to act against, the material is fed properly, and an even line of stitching results.

When the gatherer is used the gage bar F is removed, and the foot K slipped into place on finger I, the guide H being adjusted in such relation to the needle hole E as to regulate the distance of the gathering stitches from the edge of the material. The gatherer K when in use is placed on the finger I and pushed back so that the needle hole in it and in the plate D are in register. The hooked bar F is removed and the guide bar H alone used. A long stitch is used and the upper tension is tightened if found necessary. The length of the stitch governs the fullness of the gathering. In operation the under feed moves the cloth forward while as the needle bar rises the thread is tightened, drawing the material slightly backward. When the needle descends it holds the gather in place. It will be seen that the elasticity of the plate D permits it to follow the movement of the presser foot of the machine and thus does not impede the proper feed of the material.

The improvement I have devised over my old construction provides for greater resilience in the spring plate D and also, of course, for its use as a gatherer.

Having described my invention what I claim is:

1. In a sewing machine attachment, a

body having means for clamping it to a sewing machine, a spring plate attached to the body and projecting beyond the same, said plate normally supported at an incline to the body plate and adapted to be depressed by the presser foot of the sewing machine, and having a needle hole therethrough, and a gathering foot adapted to be attached to said spring plate, said foot having a portion projecting down below the under surface of the spring plate.

2. In a sewing machine attachment, a body having means for clamping it to a sewing machine, a spring plate attached to the body and projecting beyond the same, said plate normally supported at an incline to the body plate and adapted to be depressed by the presser foot of the sewing machine, and having a needle hole therethrough, and a gathering foot having a folded over portion adapted to engage with the edge of said spring plate and to clasp the same, said gathering foot having a portion projecting down below the under surface of the spring plate.

3. In a sewing machine attachment, a body having means for clamping to a sewing machine, a spring plate attached thereto and projecting beyond the same, said plate normally supported at an incline to the body plate adapted to be depressed by the presser foot of the sewing machine and having a needle hole therethrough, a finger projecting from said spring plate, and a gathering foot having a clip portion adapted to fit over said finger, and a depressed portion projecting downward below the under surface of the spring plate.

4. In a sewing machine attachment, a body having means for clamping to a sewing machine, a spring plate attached thereto and projecting beyond the same, said plate normally supported at an incline to the body plate adapted to be depressed by the presser foot of the sewing machine and having a needle hole therethrough, a finger projecting from said spring plate, and a gatherer adapted for attachment to said plate, said gatherer comprising a foot portion having a needle opening therethrough and an upwardly extending inclined shank, a returned bend adapted to clasp the edge of the spring plate and finger and an extension from the forward end of said returned end, extending downward to the foot portion but of less width than said foot portion and forming an abutment adapted to fit against the side edge of the spring plate.

5. In an attachment for sewing machines, a body having means for clamping it to a sewing machine, a spring shank formed in one piece with the body bent over from its rear edge and across the upper face of said body, a plate attached to the end of said spring shank and having an opening therethrough for the passage of a needle, said shank and plate standing normally on an incline with relation to the body, and the said plate being adapted to be pressed by the presser foot of the machine, an edge guide attached to said body and longitudinally movable therealong in a line parallel with said spring shank, and a gage bar slidable in the guide, a hook on the end of the bar for forming the tuck, and means for adjusting the gage bar and the guide relatively to each other.

6. In an attachment for sewing machines, a body having means for clamping it to a sewing machine, a spring shank formed in one piece with the body, bent over from its rear edge across the upper face of said body, a plate attached to the end of said spring shank, said shank and plate standing normally on an incline with relation to the body and adapted to be pressed by the presser foot of a sewing machine, upright flanges on the side of said body having oppositely placed slots therein, a guide bar resting in said slots and movable therethrough in a direction parallel to the spring plate, a gage bar supported in said slots beneath the guide bar and movable in a direction parallel to the spring plate and having a foot at its extremity adapted to engage with a previously made tuck, and a clamping nut adapted to engage both the guide and gage bar to hold the same adjusted in any position to which they may be set.

7. In an attachment for sewing machines, a body having means for clamping it to a sewing machine, a spring shank formed in one piece with the body, bent over from its rear edge across the upper face of said body plate, a plate attached to the end of said spring shank, said shank and plate standing normally on an incline with relation to the body and adapted to be pressed by the presser foot of a sewing machine, upright flanges on the side of said body having oppositely placed slots therein, a guide bar resting in said slots and movable therethrough in a direction parallel to the spring plate, said guide bar having a slotted head at one end, a gage bar supported in said slots of the body plate and in the slotted head of the guide bar and movable in a direction parallel to the spring plate, and a clamping nut adapted to engage both the guide and gage bar to hold the same adjusted in any position to which they may be set.

8. In an attachment for sewing machines, a body having means for clamping it to a sewing machine, a spring shank formed in one piece with the body, bent over from its rear edge across the face of said body plate, a plate attached to the end of said spring shank, said shank and plate standing normally on an incline with relation to the body and adapted to be pressed by the presser

foot of a sewing machine, upright flanges on the side of said body having oppositely placed slots therein, a guide bar resting in said slots and movable therealong in a direction parallel to the spring plate, said guide bar having a slotted head at one end, a gage bar supported in said slots of the body plate and in the slotted head of the guide bar and movable in a direction parallel to the spring plate, a clamping nut adapted to engage both the guide and gage bar to hold the same adjusted in any position to which they may be set, said spring plate having a projecting finger on its end forward of the needle of the machine, and a gatherer having a clip adapted to engage with said finger, and a downwardly projecting portion forming a foot beneath the under face of the spring plate.

9. A combined tucker and gatherer comprising a body, adapted to be attached to a sewing machine, having a resilient plate formed therewith normally positioned above the general level of the body and adapted to be acted upon by the presser foot of the machine, said plate being provided with a hole for the passage of a needle and having a thickened portion at its outer edge to contact with the material being tucked under ordinary conditions, and having an outwardly projecting finger on the outer edge of said plate, the lower surface of said finger being higher than the lower surface of the thickened portion of the plate, and a detachable gatherer adapted to engage with said finger to project from one side of the said plate to the said needle hole, and having a foot projecting down below the general level of the said plate when the gatherer is in position.

In testimony whereof, I PETER T. SMITH have signed my name to this specification in the presence of two subscribing witnesses, this third day of December 1906.

PETER T. SMITH.

Witnesses:
CHARLES G. WHITE,
ERNEST E. CHAPLES.