

(Model.)

H. C. GOODRICH.

RUFFLING ATTACHMENT FOR SEWING MACHINES.

No. 296,740.

Patented Apr. 15, 1884.

Fig. 6.



Fig. 7.

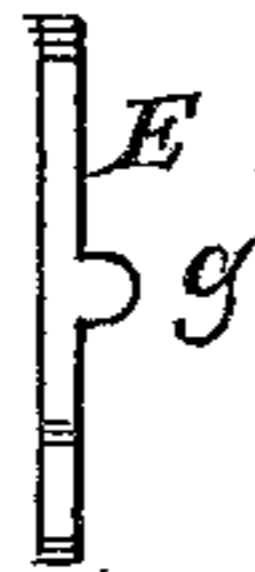


Fig. 1.

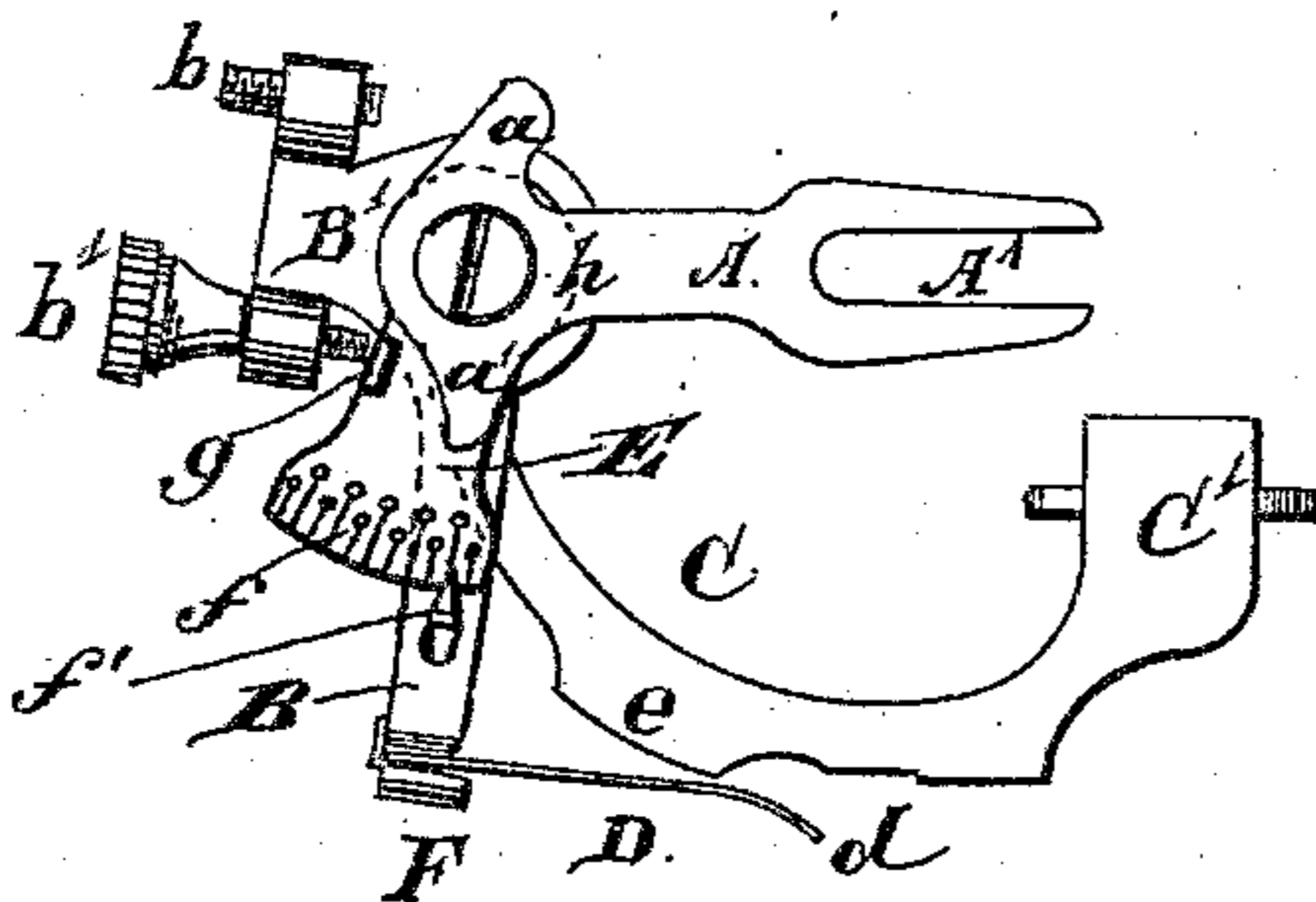


Fig. 4.

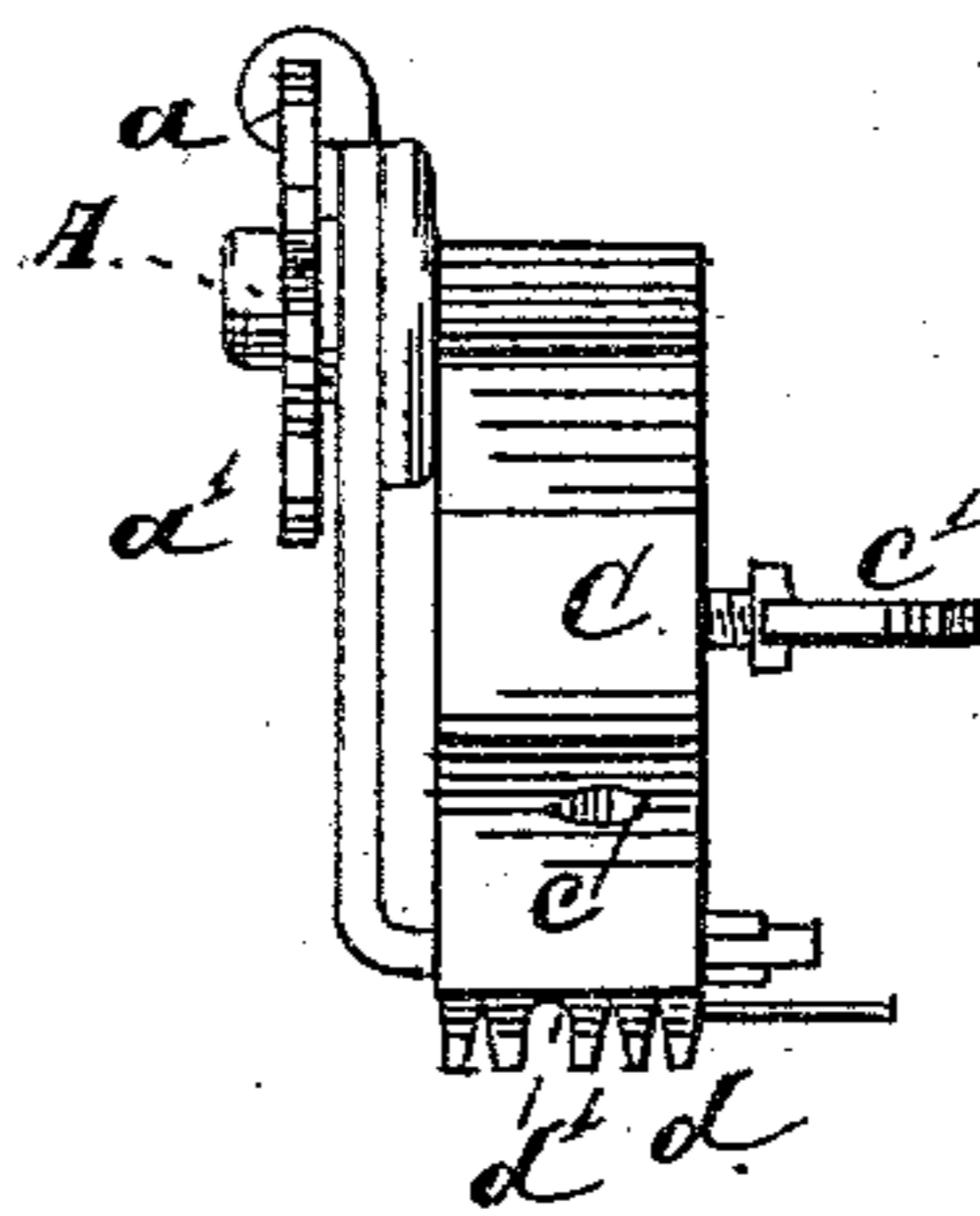


Fig. 2.

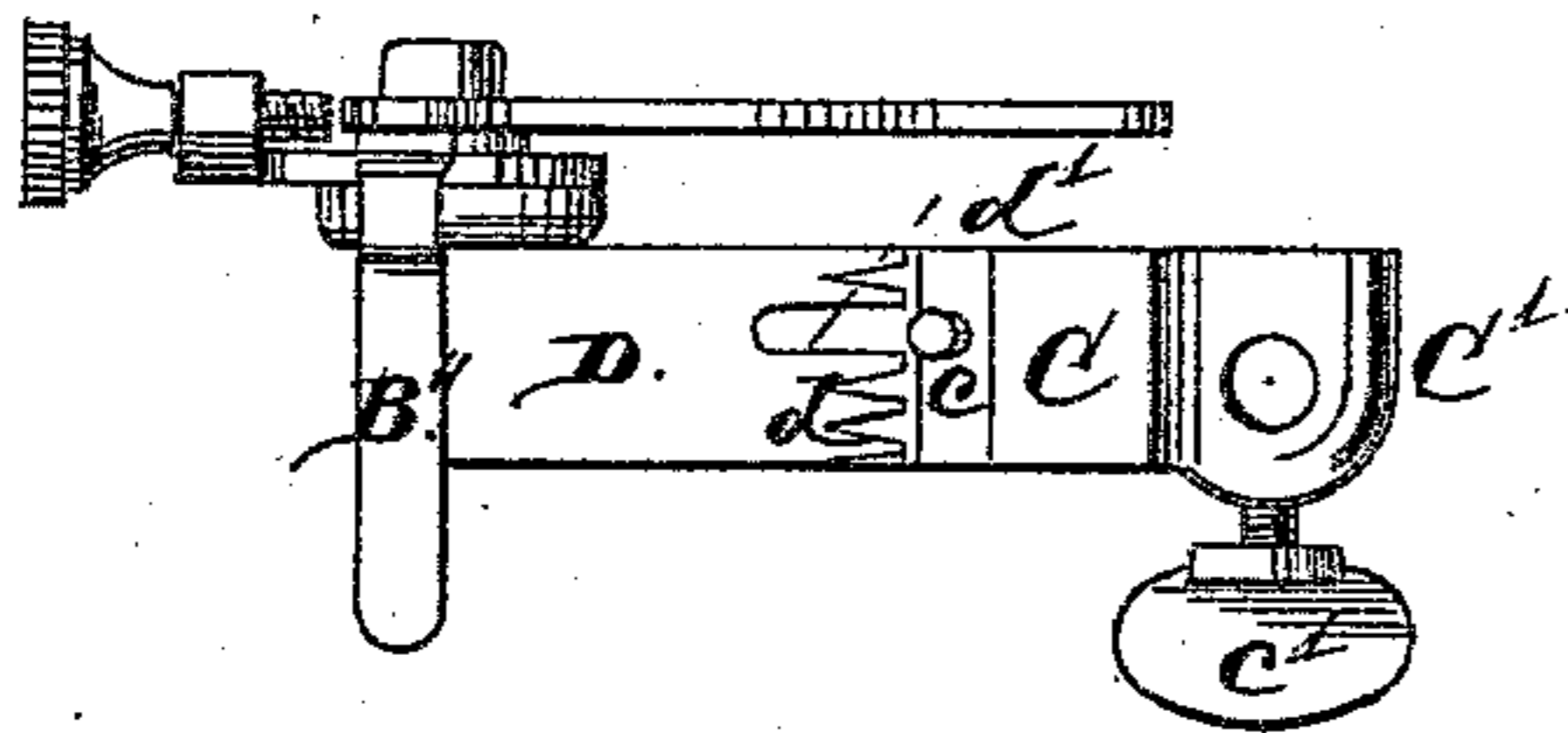


Fig. 5.

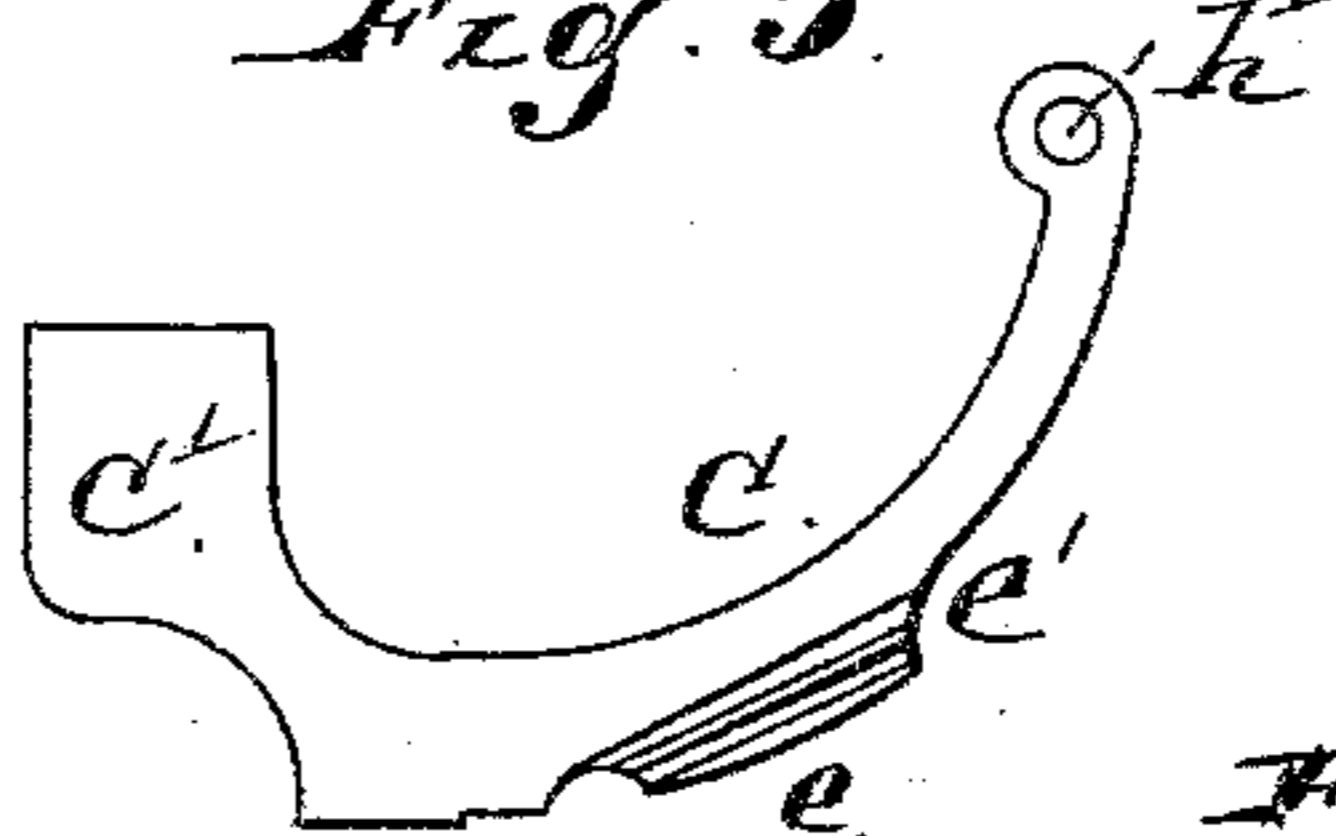


Fig. 3.



Fig. 8.

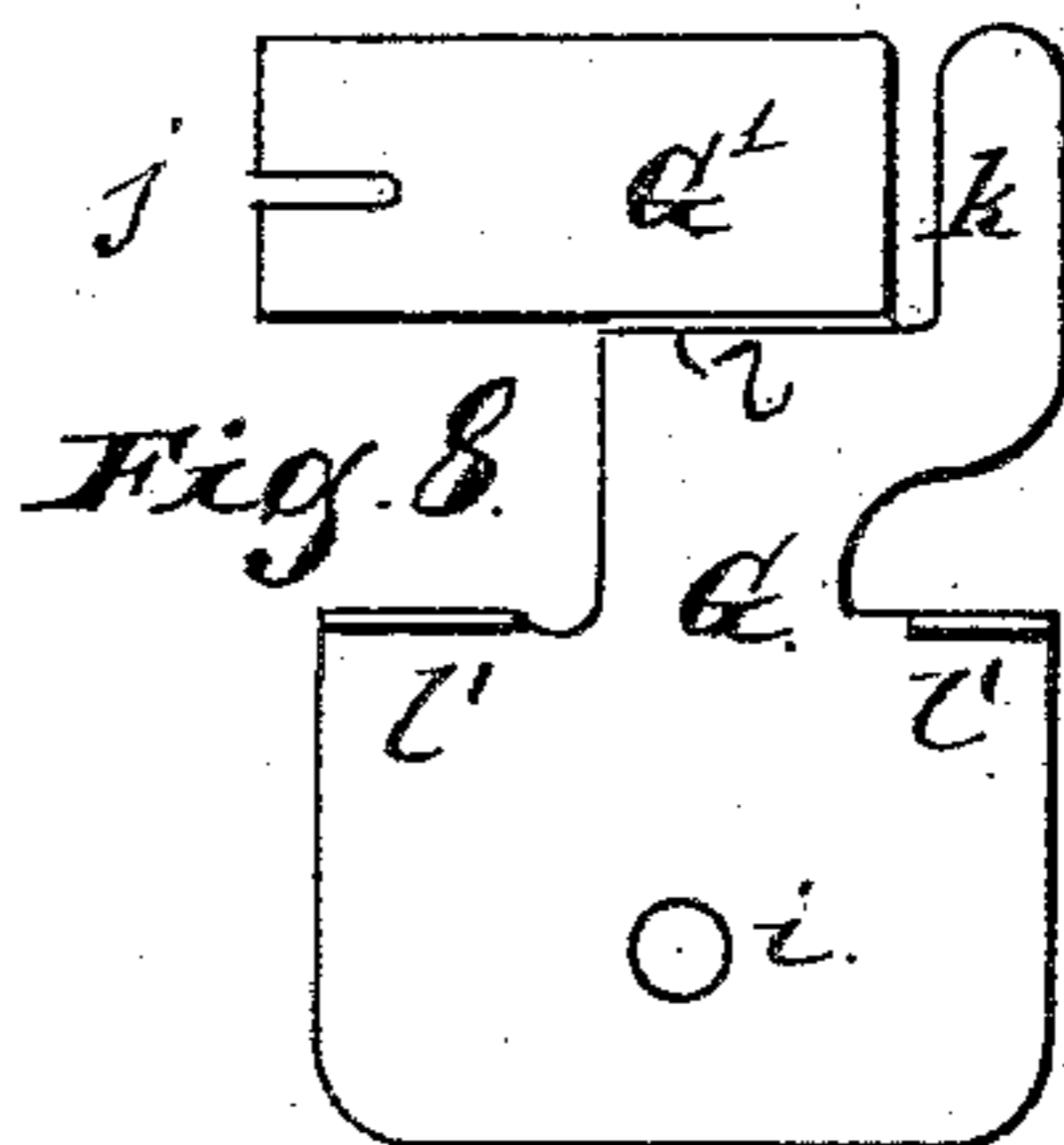


Fig. 9.



Witnesses:  
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# UNITED STATES PATENT OFFICE.

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## RUFFLING ATTACHMENT FOR SEWING-MACHINES.

SPECIFICATION forming part of Letters Patent No. 296,740, dated April 15, 1884.

Application filed August 11, 1883. (Model.)

*To all whom it may concern:*

Be it known that I, HARRY C. GOODRICH, residing at Chicago, in the county of Cook and State of Illinois, and a citizen of the United States, have invented a new and useful Improvement in Ruffling Attachments for Sewing-Machines, of which the following is a full description, reference being had to the accompanying drawings, in which—

Figure 1 is a side elevation; Fig. 2, a bottom view; Fig. 3, a bottom view of the frame, partly broken away; Fig. 4, an end elevation; Fig. 5, a side elevation of the frame with the other devices removed, showing the opposite side to that shown in Fig. 1; Figs. 6 and 7, a side and edge view, respectively, of the gage; Figs. 8 and 9, a bottom and an edge view, respectively, of the separator.

The objects of this invention are to simplify the construction and improve the operation of ruffling attachments for sewing-machines by employing in the construction of such devices a supporting frame or standard, a swinging arm carrying the ruffling-blade, and an actuating-arm by which, through the reciprocating movement of the needle-bar, the arm carrying the ruffling-blade is oscillated, the actuating-arm and the arm carrying the ruffling-blade having a common pivotal point, thereby reducing the amount of friction and rendering the device easier in operation, with less wear on the parts; and its nature consists in providing an actuating-arm having at its acting end, on opposite sides, lips or projections to engage with set-screws or other bearing-points carried by the arm which supports the ruffling-blade to oscillate such arm, and combined with a supporting frame or standard, all as hereinafter more specifically described, and pointed out in the claim.

In the drawings, A represents the actuating-arm, having at one end a slot, A', by means of which a connection is made with the needle-bar of a sewing-machine by engagement with the set-screw for the needle, or otherwise, and having at its opposite end lips or projections a a', located on opposite sides of the body of the arm, as shown in Fig. 1, one of which, a, has an inclined engaging-face, and the other a curved engaging-face, which faces, however, may be otherwise formed.

B is an arm having at its upper end an extension, B', provided with screw-threaded ears or sockets—one on each side of the projection B'—to receive, respectively, set-screws b b', and so arranged as to present the ends of the set-screws, when projected in line with the respective ears a a', to be engaged by such ears.

C is a frame or standard, curved as shown in Fig. 5, or in some other suitable manner, and having at one end a head or socket, C', in which is an opening of suitable dimensions and shape to receive the end of the presser-bar of the sewing-machine, to which the head or socket C' is securely clamped by a thumb or set screw, c'. The body of the frame or support C is provided at the proper point with an opening, c, for the passage of the needle. The under face of the body or main portion of the frame C has a portion, e, in the edge of which are formed slots e', through which the edges of a folded ribbon or strip of cloth or other material are passed, to be stitched to the piece acted on, for the purpose of forming a welt at a seam.

D is a ruffling-blade, made of a piece of sheet-steel or other suitable material, and having at its acting end teeth d to engage the material, and a slot or opening, d', for the passage of a needle, as usual, and attached by riveting or otherwise to a side extension, B'', on the lower end of the arm B, as shown in Fig. 2, so that the oscillations of the arm will move the blade forward and back, and the distance traveled by the blade in its forward and back movements is regulated by the set-screws b b', which can be made to project to a greater or less extent, as required, for the desired throw of the blade.

E is a gage located on the pivot for the arms A B, and between such arms, and having on its lower or free end gage-marks f, by means of which the desired width of ruffle can be determined, a pointer, f', being attached to the arm B below the edge of E, in line with which the marks on E for the desired width of tuck are brought, setting the arm B to give the blade D the required amount of throw. This gage E on one edge has an outwardly-turned lip or projection, g, to engage the end of the screw b' and set the gage E at the mark required for the width of ruf-

fle, and be engaged by the projection  $a'$  and  
 move the arm B back, the forward movement  
 being made by engagement of the projection  
 $a$  with the end of the screw  $b$ . When the gage  
 5 is not used, the projection  $a'$  engages directly  
 with the end of the screw  $b'$  to carry the blade  
 back, and when it is not desired to be very  
 precise as to the width of ruffle the gage E can  
 be dispensed with and the device operated in  
 10 a successful manner.

F is a guide slipped onto the extension B'  
 of the arm B, to guide and hold the material  
 operated on in its passage beneath the ruf-  
 fling-blade.

15 G is a separator formed of a piece of sheet  
 metal, having an opening,  $i$ , for the passage  
 of a set-screw, by which it is attached to the  
 bed-plate of a sewing-machine, and having its  
 acting end G' provided with a slot,  $j$ , which,  
 20 when the separator is in place, comes in line  
 with the slot  $d'$  in the blade D for the passage  
 of the needle, the opposite end of the acting  
 portion having a lip,  $k$ , which is struck up so  
 as to leave an opening between its under face  
 25 and the face of the end G' for the passage of  
 the material acted on, the lip or tongue  $k$  form-  
 ing the means for keeping the material down  
 to place. The form of this separator is shown  
 in Figs. 8 and 9, and, as shown, the separator  
 30 on its main or body portion is provided with  
 an edge or ledge,  $l$ , to form a guide for the  
 edge of the material and keep it in a straight  
 line of travel when the separator is used in  
 connection with the ruffling devices.

35 The arm A is pivotally connected with the  
 standard or frame C by a pin or screw,  $h$ , the  
 stem of which passes through an opening in  
 the end of the arm A, and enters an opening,  
 $h'$ , in the end of the frame or support C, and  
 40 the stem of this pin or screw  $h$  also forms the  
 pivot on which the arm B oscillates, the stem  
 passing through a suitable opening in the up-  
 per end of the arm, and when the gage E is  
 used it is hung or suspended from this same  
 45 pin or pivot  $h$ , the stem of which passes  
 through a suitable opening in the upper end  
 of the gage, by which construction it will be  
 seen that the parts are all connected together  
 by a single screw or pin, and this same screw  
 50 or pin also forms the pivot on which the arms  
 turn.

In operation, the frame or support C is at-  
 tached to the presser-bar of the machine by  
 the head or socket C', and takes the place of  
 the ordinary presser-foot, and the arm A is 55  
 connected by the slot A' with the needle-bar,  
 when the device is ready for use. The ascent  
 of the needle-bar raises the forward end of the  
 arm A and causes the projection  $a$  to engage  
 with the end of the screw  $b$ , and the descent 60  
 of the needle-bar depresses the arm A and  
 causes the projection  $a'$  to engage with the end  
 of the screw  $b'$ , producing a forward-and-back  
 movement of the ruffling-blade through the  
 vibration of the arm B from the engagement of 65  
 the projections  $a a'$  with the ends of the screws  
 $b b'$  when the gage is not used, and when the  
 gage is used the engagement of the projection  
 $a'$  is made with the lip  $g$ , producing the same  
 result. When the gage is used, the width of 70  
 the plait or ruffle is determined by the point  
 at which the gage-marks  $f$  on the plate E are  
 set. When the gage is not used, this width is  
 determined by adjusting the set-screw  $b'$  to  
 have its end engaged by the projection to pro- 75  
 duce the required size of ruffle.

By using a separator made independent of  
 the ruffling devices it will be seen that a piece  
 of material of any width can be ruffled, as  
 there is a clear space between the blade and 80  
 the separator for the passage of the material.

The body of the separator is to be formed  
 to adapt it to be attached to the bed-plate of  
 a sewing-machine and bring the acting por-  
 tion G' beneath the ruffling-blade and over 85  
 the feed-dog, and will vary from that shown  
 in order to suit different styles of machines,  
 and, as shown, lips  $l'$  are struck down from  
 the body or main portion to enter the slot be-  
 tween the throat-plate and bed-plate and form 90  
 a lock to hold the separator firmly in position.

What I claim as new, and desire to secure  
 by Letters Patent, is—

An arm, H, having its acting end provided  
 with projections  $a a'$ , in combination with an 95  
 arm, B, carrying a ruffling-blade and having  
 adjusting devices, gage E, and frame or sup-  
 port C, substantially as described.

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Witnesses:

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