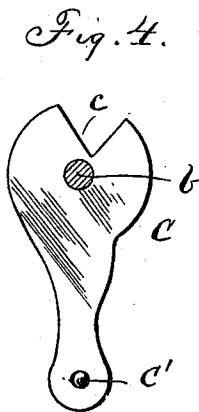
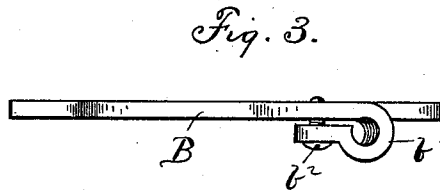
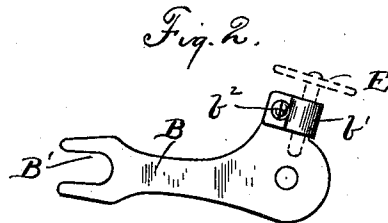
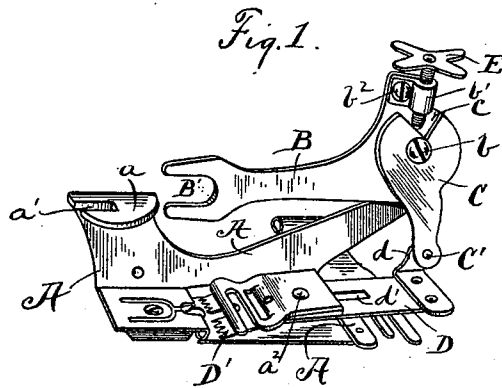


(No Model.)

R. W. WHITNEY.
RUFFLING ATTACHMENT FOR SEWING MACHINES.

No. 516,252.

Patented Mar. 13, 1894.



Witnesses.

E. Byron Gilchrist
[Signature]

Inventor.

Ruel W. Whitney
[Signature]
Attorneys

UNITED STATES PATENT OFFICE.

RUEL W. WHITNEY, OF CLEVELAND, OHIO, ASSIGNOR TO THE STANDARD SEWING MACHINE COMPANY, OF SAME PLACE.

RUFFLING ATTACHMENT FOR SEWING-MACHINES.

SPECIFICATION forming part of Letters Patent No. 516,252, dated March 13, 1894.

Application filed May 14, 1891. Serial No. 392,769. (No model.)

To all whom it may concern.

Be it known that I, RUEL W. WHITNEY, of Cleveland, in the county of Cuyahoga and State of Ohio, have invented certain new and useful Improvements in Ruffling Attachments for Sewing-Machines; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it pertains to make and use the same.

My invention relates to improvements in ruffling attachments for sewing machines; and it consists in certain features of construction and in combination of parts hereinafter described and pointed out in the claim.

In the accompanying drawings Figure 1 is a view in perspective of a ruffling attachment embodying my invention. Figs. 2 and 3 are, respectively, a side elevation and plan of the vibrating arm B, the plan being somewhat enlarged. Fig. 4 is an enlarged side elevation in detail of lever C.

A represents an angle-plate constituting the body of the device, the upright leg of the plate having a head *a* and this head having a slot *a'* for attaching the device to the presser-bar in the usual manner. The vibrating arm B and the depending vibrating lever C have an axial screw *b* in common, this screw engaging a threaded hole in the opposing section of the upright leg or plate A. Arm B at the free end thereof is forked or slotted as at B', the prongs whereof are supposed to extend astride a set-screw, pin or other laterally projecting member of the needle-bar, by means of which the reciprocations of the needle-bar impart a vibrating movement to arm B. The vibrations of arm B are in turn imparted to lever C and are regulated in a manner hereinafter described. Lever C has a lateral pin C' that operates in a vertically-elongated ear *d*, the latter being an attachment of the ruffling-slide D. This slide has the usual teeth at D' for engaging the work and the slide is provided with a longitudinal slot *d'* in which operates a steady-pin *a*², this pin connecting with plate A and by means of which the slide is held laterally.

For regulating the throw of the slide to make large or small ruffles I provide lever C with a notch *c* approximately V-shaped, the

walls whereof are alternately engaged by an abutment-screw E of arm B. It is evident that if the point of the screw engaged the bottom of the notch there would be no lost motion and lever C and the slide would in such case have their maximum throw. By backing the screw so that there will be more or less lost motion as between the point of the screw and the walls of the notch the throw of lever C and the slide will be correspondingly reduced. If, in shortening the throw of the slide the movement were shortened alike at either end of the throw, in such case in making small ruffles the slide would not move the goods forward far enough to cause the needle to engage the ruffle or fold of the goods. The shortening of the throw of the slide must therefore be done mainly on the rearward stroke thereof; although it is admissible to stitch nearer the edge of a short ruffle than of a long ruffle, and hence a limited amount of the shortening can, and should be done, on the forward throw of the slide. I therefore make the right hand wall of notch *c* say approximately radial with the axis of lever C while the left hand wall is more tangential as shown more clearly in Fig. 4. Hence, in elevating or depressing the screw the change in the throw of the lever is more radical when the screw engages the tangential wall that gives the back stroke to the lever and slide; hence the shortening of the throw of the slide is mainly on the rearward stroke, the arrangement being such that in making the shortest ruffle the needle will engage the forward end of the ruffle or fold of the goods.

The nut that engages screw E is of the split variety shown and is constructed by doubling back a section or finger *b'* of arm B, a clamping-screw *b*² being provided for more or less closing the nut to clamp the screw. Screw E having been adjusted as required by tightening screw *b*² screw E is held rigidly to its adjustment.

What I claim is—

In a ruffling attachment for sewing machines, the combination with a plate, an arm pivoted thereto and adapted to be vibrated by the needle bar, a lever pivoted to said plate and provided with a notch the said notch being approximately V-shaped, one side of said

notch being approximately radial with the
pivotal point of the lever and the other tan-
gential to said pivotal point, and a ruffling
slide actuated by said lever, of a screw car-
5 ried by the arm, the free end of said screw
resting in the notch in the lever, substan-
tially as set forth.

In testimony whereof I sign this specifica-
tion, in the presence of two witnesses, this 23d
day of April, 1891.

RUEL W. WHITNEY.

Witnesses:

C. H. DORER,
WARD HOOVER.