

T. B. BISHOP.

Ruffler for Sewing-Machines.

No. 129,087.

Patented July 16, 1872.

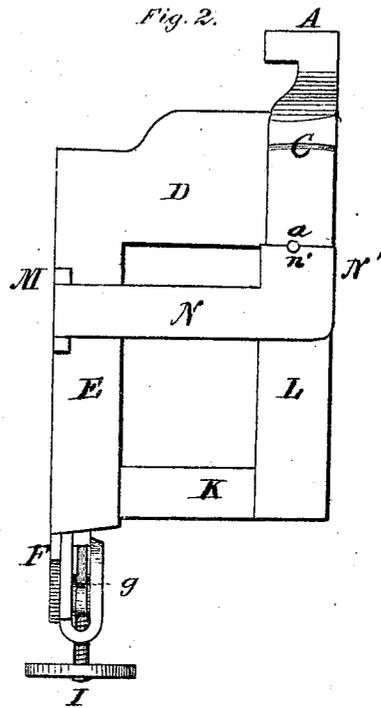
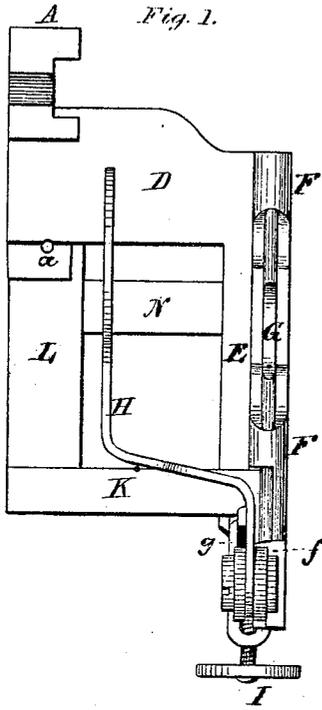
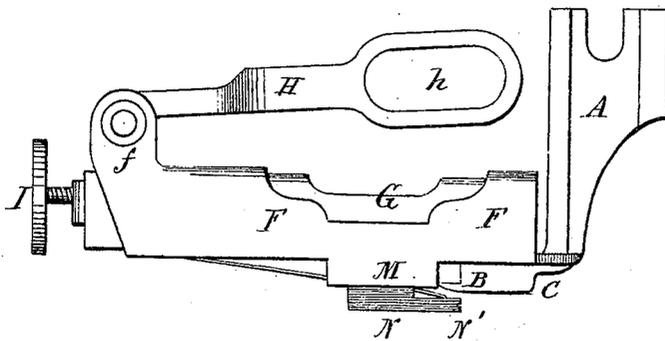


Fig. 3.



Witnesses,

*Chas. Boole,
John R. Young*

Inventor,

*Thos. B. Bishop, by
Prindle and Co. his
attys.*

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Fig. 4.

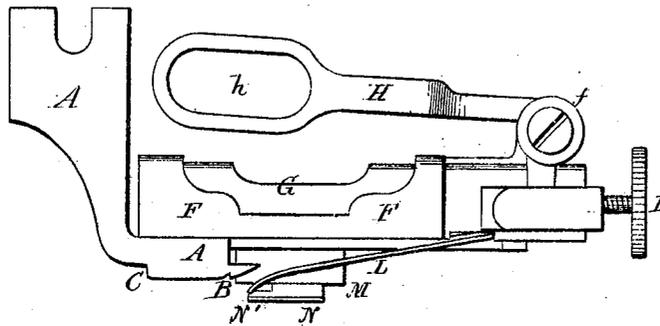


Fig. 5.

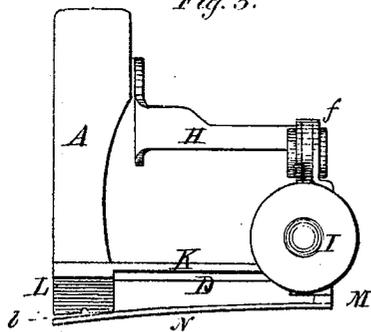
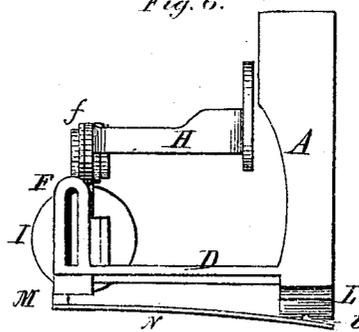


Fig. 6.



Witnesses,

W. H. Coole
John R. Young

Inventor,

Thos. B. Bishop, by
Prindle & Co. his
attys.

UNITED STATES PATENT OFFICE.

THOMAS B. BISHOP, OF PHILADELPHIA, PENNSYLVANIA, ASSIGNOR OF ONE-HALF OF HIS RIGHT TO JOHN A. GUILLE, OF SAME PLACE.

IMPROVEMENT IN RUFFLERS FOR SEWING-MACHINES.

Specification forming part of Letters Patent No. 129,057, dated July 16, 1872.

To all whom it may concern:

Be it known that I, T. B. BISHOP, of Philadelphia, in the county of Philadelphia and in the State of Pennsylvania, have invented certain new and useful Improvements in Ruffling Attachment for Sewing-Machines; and do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawing making a part of this specification, in which—

Figure 1 is a plan view of the upper side of my improved ruffling attachment. Fig. 2 is a like view of the lower side of the same. Fig. 3 is an elevation of the rear side of said device. Fig. 4 is an elevation of its front side, and Figs. 5 and 6 are elevations, respectively, of the front and rear ends of the same.

Letters of like name and kind refer to like parts in each of the figures.

The object of my invention is the production of a ruffling attachment that can be adjusted to position easily and without especial skill, and which shall be capable of use upon work having any desired width; and it consists, principally, in the construction of the presser-foot forming a part of the ruffler, substantially as and for the purpose hereinafter specified. It consists, further, in the combination of the presser-foot, gathering-blade, and separator, substantially as and for the purpose hereinafter shown.

In the annexed drawing, A represents the foot, having the usual form, except upon its lower or bearing side, which has a slight upward curve toward its front end, and is provided with an angular notch, B, which extends transversely across said lower side at or slightly in rear of the needle-opening *a*, and has its front side vertical or slightly inclined toward the heel of the foot. At a point about one-fourth of an inch in rear of said needle-opening the lower side of said foot is cut away so as to form a heel, C. Secured upon and extending latterly outward from one side of the foot is a plate, D, which at its outer end is provided with an arm, E, that extends forward in a line with the feed, and has secured to or upon its upper side a suitable housing, F, for the reception of a sliding bar, G, said housing being so arranged as to cause said bar to rest edgewise upon said arm. Within the outer

end of the bar G is formed a vertical slot, *g*, having a line parallel to the line of said bar, which slot receives one end of a lever, H, that is pivoted to or upon a lug, *f*, which extends vertically upward from the housing F. From its pivotal bearing the lever H extends horizontally forward and outward so as to bring its end immediately beside the needle-bar, the screw of which is contained within a slot, *h*, formed within the end of said lever, so that the vertically-vibratory motion of said needle-bar is, through the medium of said lever, communicated to the bar G, so as to cause the same to move in a longitudinal direction and horizontal plane. A set-screw, I, passing inward through the end of the bar G and into the slot *g*, enables the practical length of the same to be varied at will, so as thereby to vary correspondingly the motion of said bar, it being evident that the nearer the length of said slot approaches the horizontal dimensions of said lever end the greater will be the motion communicated by the latter to said bar. Extending outward from the side of the bar G, near its forward end, is an arm, K, the outer end of which is upon a line with the side of the foot, and has attached to its lower side a strip of thin sheet metal, L, that from thence extends forward and downward beneath said foot, and has its forward end curved slightly downward, and provided with a notch, *l*, which coincides with the needle-opening *a* when said strip or ruffling-plate is moved forward to its furthest point. Secured upon, and extending downward from, the lower rear side of the arm E is a lug, M, to which in turn is attached one end of a strip of thin sheet metal, N, that from thence extends horizontally outward to the outer side of the foot, and is provided with an arm, N', which extends forward beneath the same, the end of said arm being upon a line with the forward edge of notch B, and having a notch, *n*, which coincides with the needle-opening *a* of the foot, the whole forming a separator.

The device is now complete, and is operated as follows: The piece of cloth to be ruffled is placed between the separator and ruffler, and the part to which the ruffle is to be attached below said separator, the foot lowered to position and the machine started. The lower

piece of cloth is moved along by the machine-feed, while the upper piece is moved by the ruffler, the downward curved end of which engages with the fabric upon each forward stroke, and carries a fold or gather of the same beneath the foot, where it is held by the combined action of the notch B and the end of the separator while said ruffler is withdrawn. As the machine-feed and ruffler operate upon the cloth simultaneously, it will be seen that the fullness of the gather or ruffle will represent the exact distance between the motions of said parts, and can be readily varied by increasing or diminishing the feed, while the fineness of the gathered portion will depend upon the length of stroke given to the ruffler. When a ruffle is to be formed between, and attached upon, two pieces or bands, the upper band is placed above the ruffler, and is moved forward by means of the feed working through the lower band and completed portion of the ruffle, to which said upper band is attached. When ruffling between two bands, the upper band is not in the slightest degree affected by the motions of the ruffler, but moves forward with the feed as if nothing intervened, while each gather or fold of the ruffle is so firmly held by the end of the separator as to prevent its withdrawal by the backward motion of the ruffler, so that in thus using this device it is not necessary that said upper band should be held back, but only that the same and the other pieces of cloth should be suitably guided as they enter the attachment. The object sought by the forward and upward curve of the foot is to afford

space for the free movement of the ruffler between the same and the plate, and as the downward pressure upon the fabrics is confined to a short space between the heel C and the needle the action of the feed-bar is limited. The office of the angular heel C is to prevent the cloth from being moved or drawn backward by the return motion of the ruffler.

It will be seen that as this attachment is secured upon and entirely supported by means of the presser-bar, a clear space is left between said attachment and machine-plate, by which means cloth of any width can be operated upon as readily as when ordinary sewing is done.

Having thus fully set forth the nature and merits of my invention, what I claim as new is—

1. In a ruffling attachment, a presser-foot provided with an angular notch or groove extending transversely across its lower side and intersecting the needle-opening, and so arranged that its front edge inclines toward the heel of the foot, substantially as and for the purpose shown.

2. The foot A, provided with the transverse angular slot, the gathering-blade L, and the separator N, when said parts are constructed and combined substantially as and for the purpose shown.

In testimony that I claim the foregoing I have hereunto set my hand this 1st day of April, 1872.

THOS. B. BISHOP.

HORACE P. WILBER,
ALBERT S. L. SHIELDS.