

A. F. COMINGS.

Attachments for Sewing-Machines.

No. 148,933.

Patented March 24, 1874.

Fig. 1.

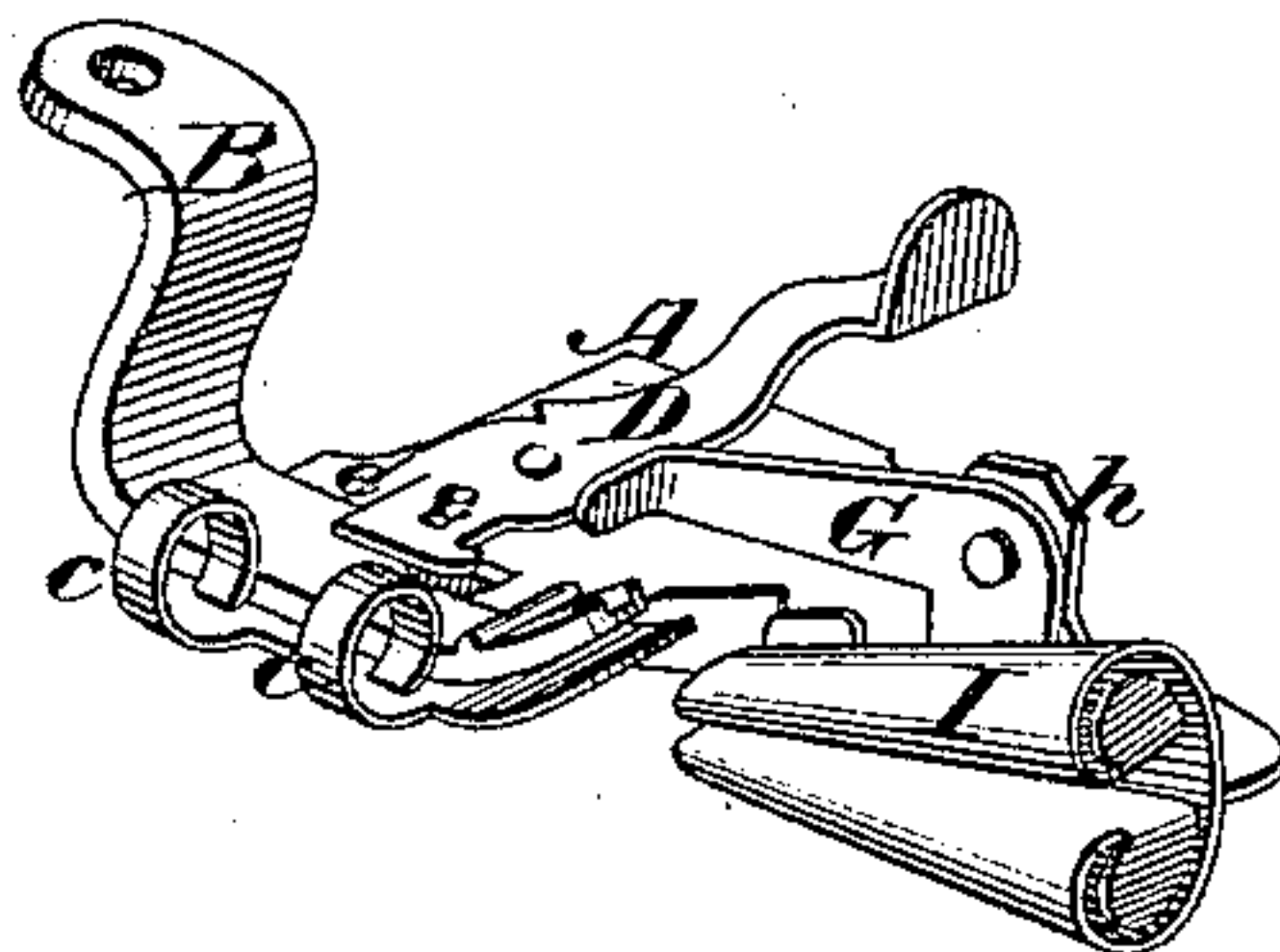


Fig. 2.

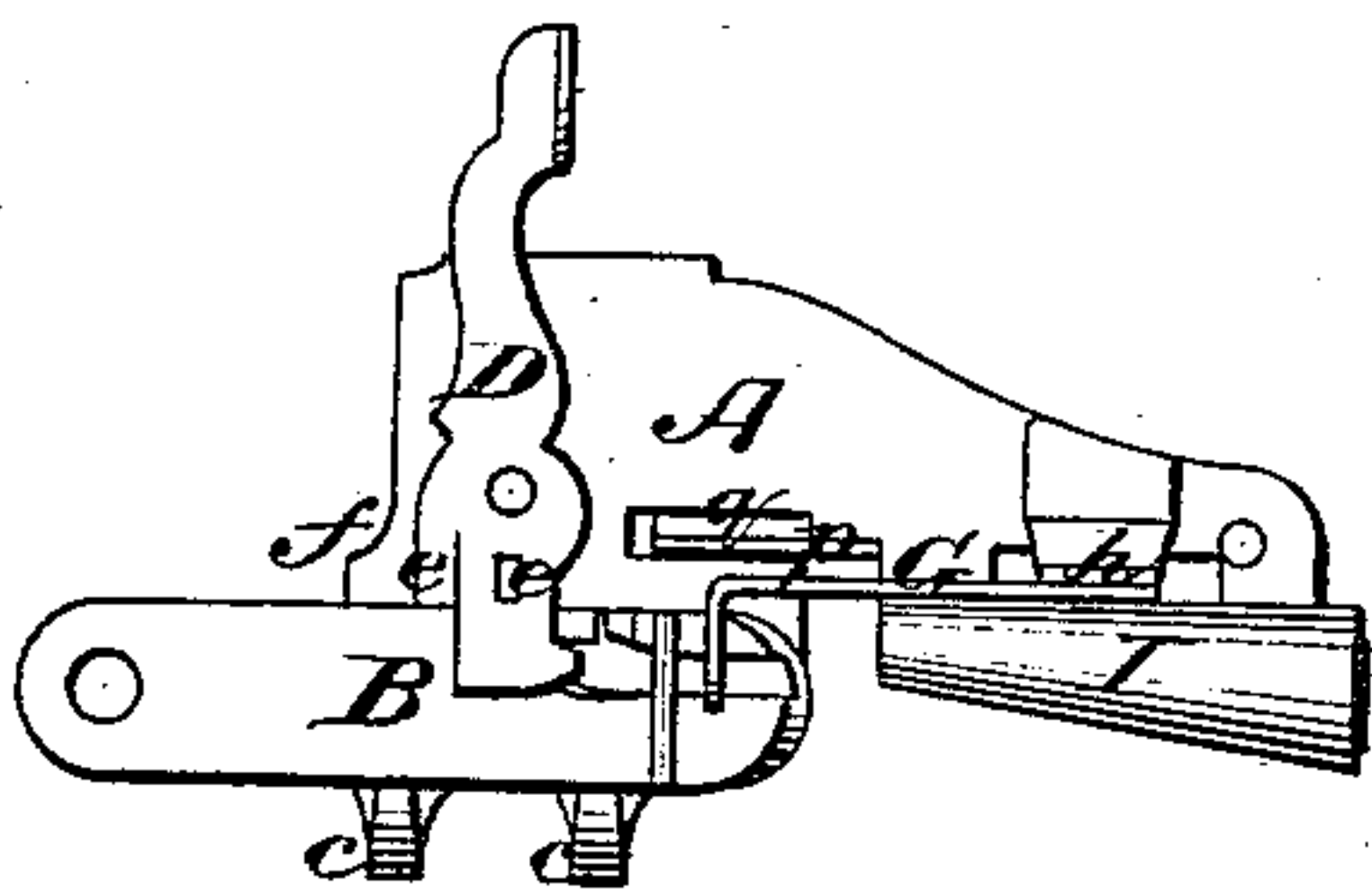


Fig. 4.

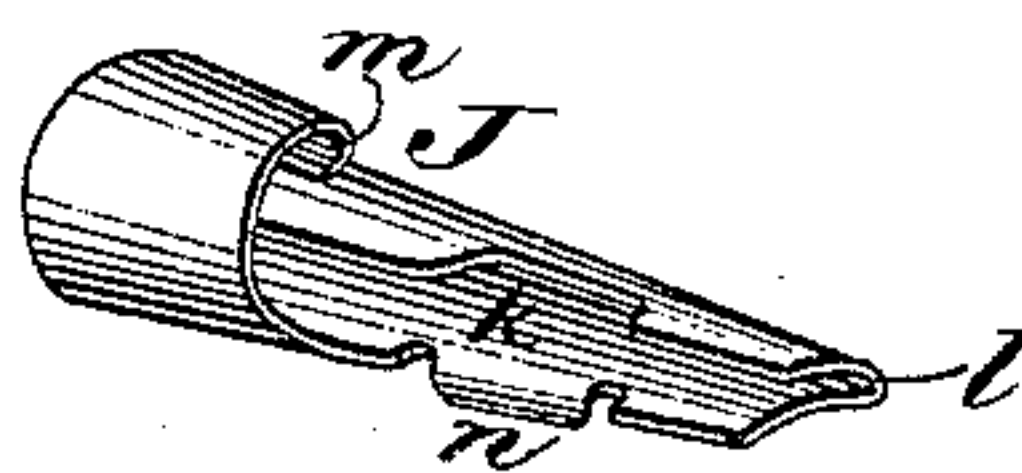
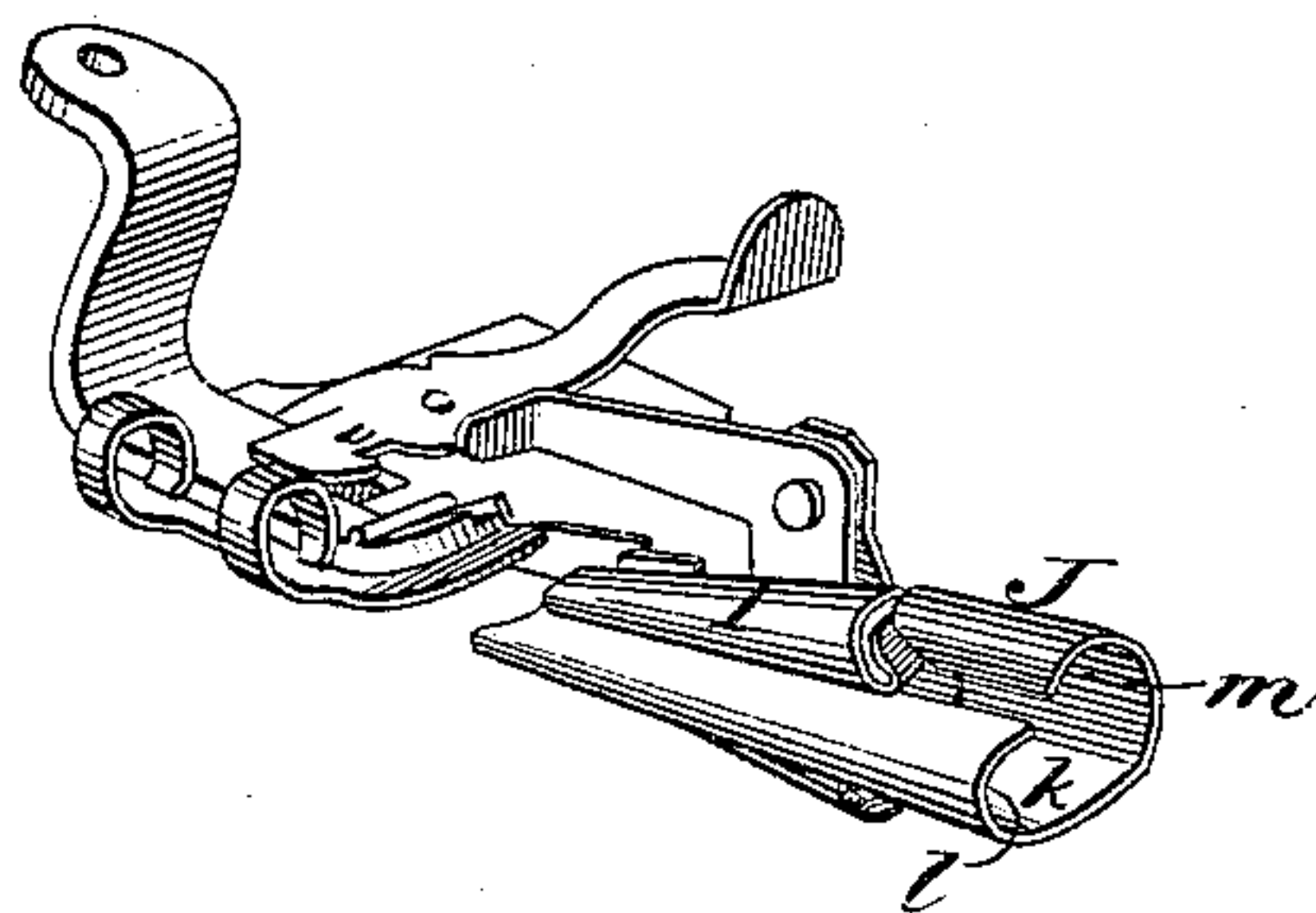


Fig. 3.



Fig. 5.



Witnesses.

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## IMPROVEMENT IN ATTACHMENTS FOR SEWING-MACHINES.

Specification forming part of Letters Patent No. 148,933, dated March 24, 1874; application filed January 11, 1873.

*To all whom it may concern:*

Be it known that I, ARTHUR F. COMINGS, of Chicago, in the county of Cook and State of Illinois, have invented a new and Improved Binding and Trimming Attachment for Sewing-Machines; and I do hereby declare the following to be a full, clear, and exact description of the same, reference being had to the accompanying drawings forming part of this specification, in which—

Figure 1 is a perspective view of my improved binder and trimmer. Fig. 2 is a top-plan view of the same. Fig. 3 is a side elevation with the scroll removed. Fig. 4 is a perspective view of the half-scroll for making milliners' folds. Fig. 5 is a similar view, showing its application to the binder and trimmer.

Similar letters of reference indicate corresponding parts in the several figures of the drawings.

The principal defect in the operation of that class of sewing-machine attachments known as binders and trimmers consists in the gathering or fulling of the fabric while it is being bound or trimmed. This is caused by the friction or resistance of the binding or trimming in passing through the scroll or folder, while the fabric is moved freely by the feed of the machine; the binding is, therefore, fed much slower than the fabric, thereby causing the latter to gather or full. This defect is so great that at present fine, soft, dress fabrics are invariably bound by hand, or are basted before the binding or trimming is stitched upon them by the machine.

The first part of my invention has for its object to produce for general use a binder and trimmer wherewith this class of work may be performed upon any kind of fabric without fulling or gathering the same; and to this end it consists in a reciprocating folder or scroll, operated in one or both directions by the mechanism of the sewing-machine, and so arranged that when the needle passes through the binding or trimming to sew it to the fabric the folder or scroll shall be moved backward upon such trimming or binding, and when the needle-bar rises the folder or scroll, and the material therein shall be moved forward with the fabric. Inasmuch as the binding or trimming does not move in but with the

scroll when the latter is carried forward, there is no more resistance or friction upon the binding than upon the fabric, and the latter, therefore, is not fulling or gathered.

In many trimming attachments adapted for the formation of that class of trimming known as milliners' folds, the ordinary folder or scroll is removed and another substituted in its place, thus forming an expensive and complicated attachment.

The second part of my invention has for its object to adapt the attachment for the production of milliners' folds without removing the scroll, thereby simplifying the device, and materially reducing its cost of manufacture. This part of my invention consists in a separate half-scroll adapted to be inserted between the lips of the permanent scroll or folder to close the lower part of the latter, and form the necessary folding-channel, as I will presently describe.

In describing the first part of my invention I shall treat the words binding and trimming as synonymous, using but one for convenience and simplicity of description.

In the accompanying drawings, A is the bottom or base plate of the device, adapted for attachment to the presser-foot B of a sewing-machine by means of the lateral ears *c*, bearing against one side of the foot, and the lever D, adapted to swing over the foot from the opposite side. It is prevented from lateral displacement upon the presser-foot by the ears *c* and the depressed points *e e* near the holding end of the lever. That portion of the base-plate upon which the foot rests is depressed from the longitudinal shoulder *f* under the lever, to permit the point of the latter to swing upon the foot, and to afford a small bearing-surface over the feed-dog of the sewing-machine. G is a bell-crank or angle lever, pivoted at its angle to an ear, *h*, at the front edge of the base-plate, so that its long arm shall extend within the path of the needle arm or bar. The short arm of the lever is pivoted to a scroll or folder, I, arranged in front of the presser-foot, as shown. The side of the folder may bear against guides *j*, if desired, or be simply suspended from the bell-crank lever without guides.

The binding being placed within the scroll



and the fabric to be bound upon the cloth-plate of the machine, the latter is set in motion. The needle, descending, passes through both binding and fabric, while the needle-bar strikes the long arm of the bell-crank lever and moves the scroll backward upon the binding, the latter, together with the fabric, being held by the needle. When the needle-bar rises it releases the lever, and the feed of the machine moves the scroll and the material therein freely forward with the fabric. As the binding at this time does not move in but with the scroll, there is no more resistance or friction upon the binding than there is upon the fabric, and the latter is, therefore, prevented from being fullered or gathered.

If necessary, the long arm of the lever may be thrown upward by a spring arranged beneath it or upon its pivot to assist the forward movement of the scroll; or the scroll may receive a positive movement in both directions by connecting the long arm of the lever to the needle bar or arm in any suitable manner.

I have described the attachment as connected to the presser-foot of a sewing-machine; but so far as the reciprocating scroll or folder is concerned, it is equally applicable to that class of binders and trimmers which are adapted for attachment to the cloth-plate of the sewing-machine or to the presser-bar. I therefore regard the invention as covering the reciprocating scroll or folder arranged upon either class of attachments.

Referring to the second part of my invention, J is the half-scroll, corresponding in general form to one half of the double scroll. The bottom *k* is flat, or nearly so, and its outer edge is turned over slightly to form a channel, *l*. The inner edge, at the mouth, is also turned over to form the folding-channel *m*, but below this turned part it is made straight, as shown, and provided with a narrow lip, *n*. The half-scroll is applied to the folder I by sliding it longitudinally into the channel between the upper and lower parts of the latter, and is held in place by the lip *n* catching behind the edge of said lower part, as shown. By this provision the ordinary trimmer and binder is adapted to the formation of that class of trimming known as milliners' folds without changing its construction or removing any of its parts. The

whole attachment is, therefore, greatly simplified, and its cost of manufacture materially reduced.

To apply the trimming, it is turned slightly upon the edge entering the half-scroll, and drawn well over the feed of the sewing-machine, as will be easily understood.

O is a spring-guide composed of a narrow metal strip, secured at its rear end to the under side of the base-plate A at the front end thereof. Its free end extends to or beyond the small end of the folder I, where it is rounded and bent upward to form a lateral flange, *p*, projecting through a slot, *q*, in the base-plate near the inner edge of the presser-foot. This spring serves to guide the trimming or binding to the needle, and renders the attachment applicable to all classes of sewing-machines, as described in my Letters Patent of July 30, 1872.

Having thus described my invention, what I claim is—

1. In a binding and trimming attachment for sewing-machines, a reciprocating scroll or folder moved by the needle bar or arm in one direction on the trimming, through the intermediary of an angle or bell-crank lever, and in the other direction by the moving trimming and fabric, moved only by the feed of the machine, substantially as described, for the purpose specified.

2. A supplemental half-scroll, J, adapted to be attached to the scroll or folder of a binding and trimming attachment for sewing-machines, for the purpose of forming milliners' folds, substantially as shown and set forth.

3. The supplemental half-scroll J, constructed, as described, with the lip *n*, and the turned edges forming the channels *l m*, substantially as shown and set forth, for the purpose specified.

4. The lever D, pivoted to the base-plate A, and constructed with the depressed points *e e*, combined with the ears *c c*, to hold the binding and trimming attachment upon the presser-foot of the sewing-machine, as herein shown and described.

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Witnesses:

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