

E. POWELL.

Ruffer.

Patented Feb. 16, 1875.

No. 159,963.

Fig. 1.

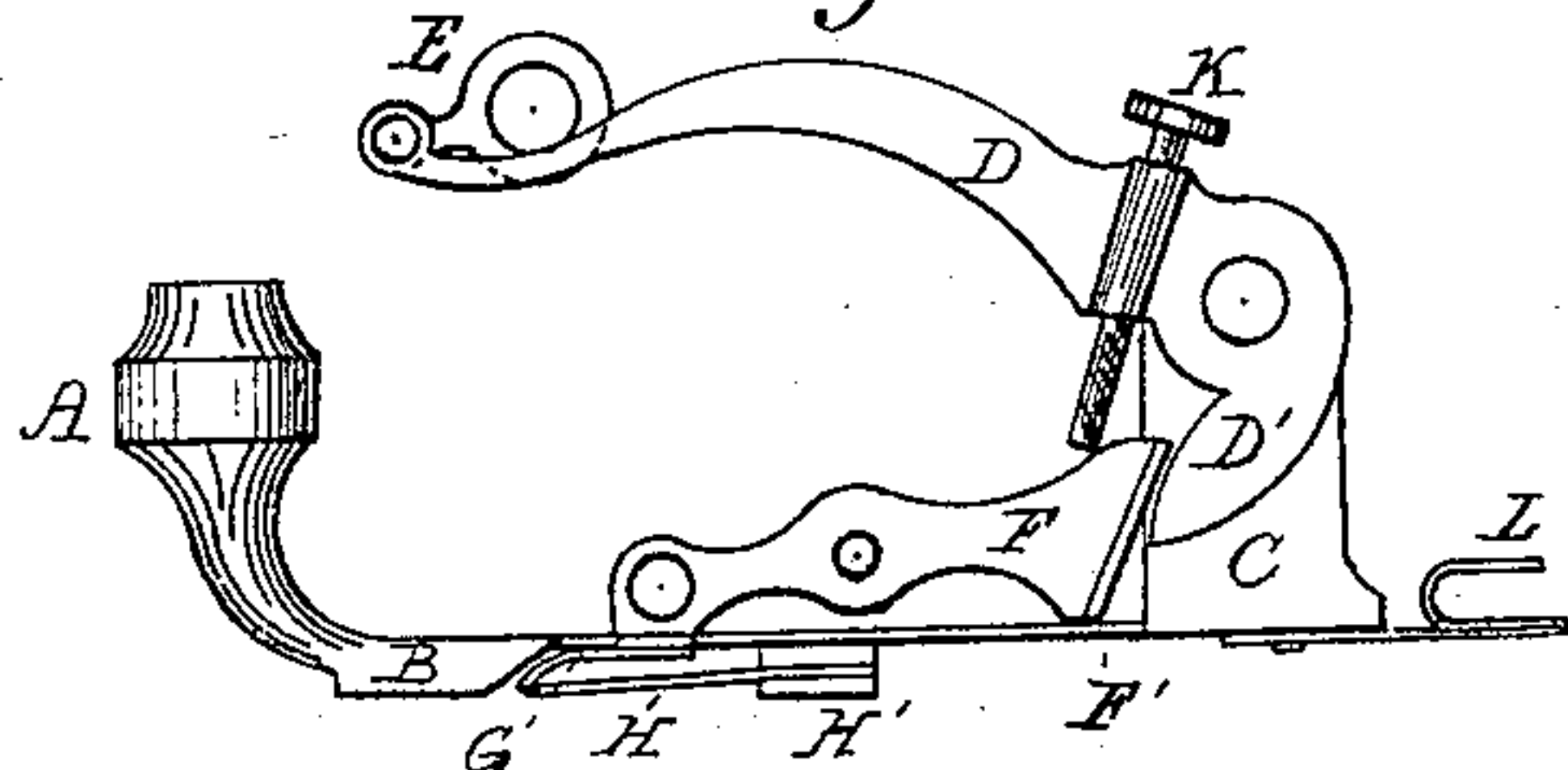


Fig. 2.

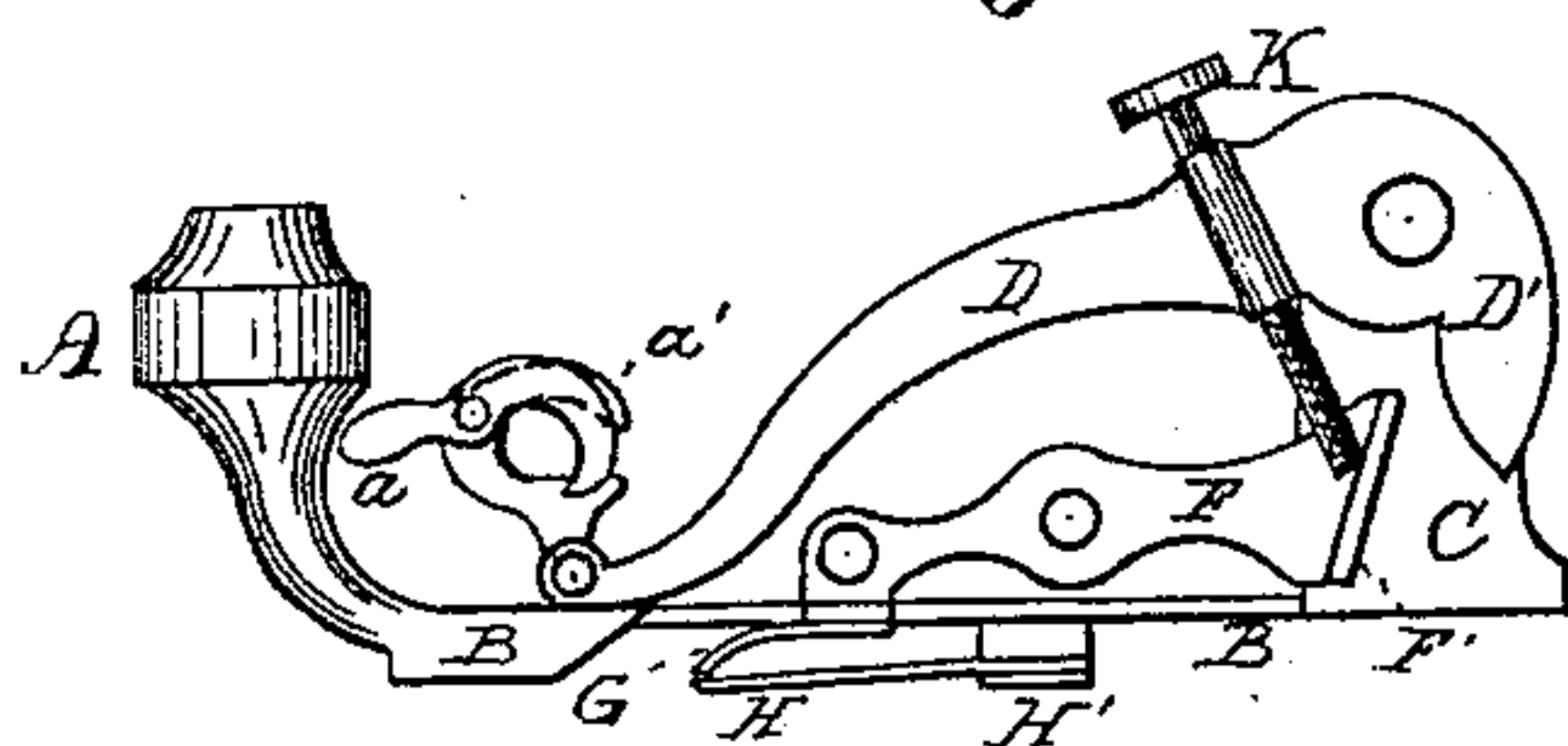


Fig. 5.

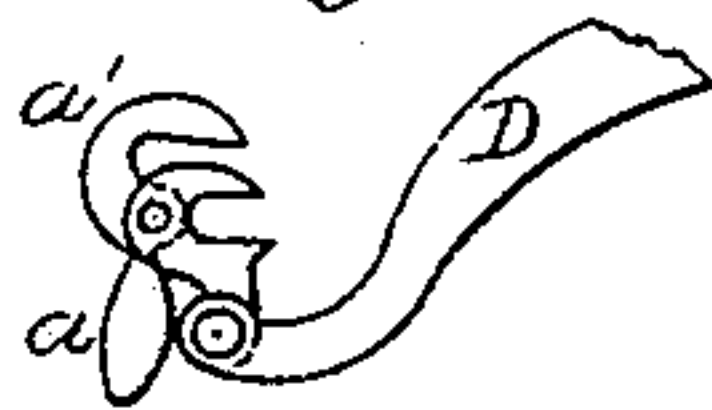


Fig. 4.

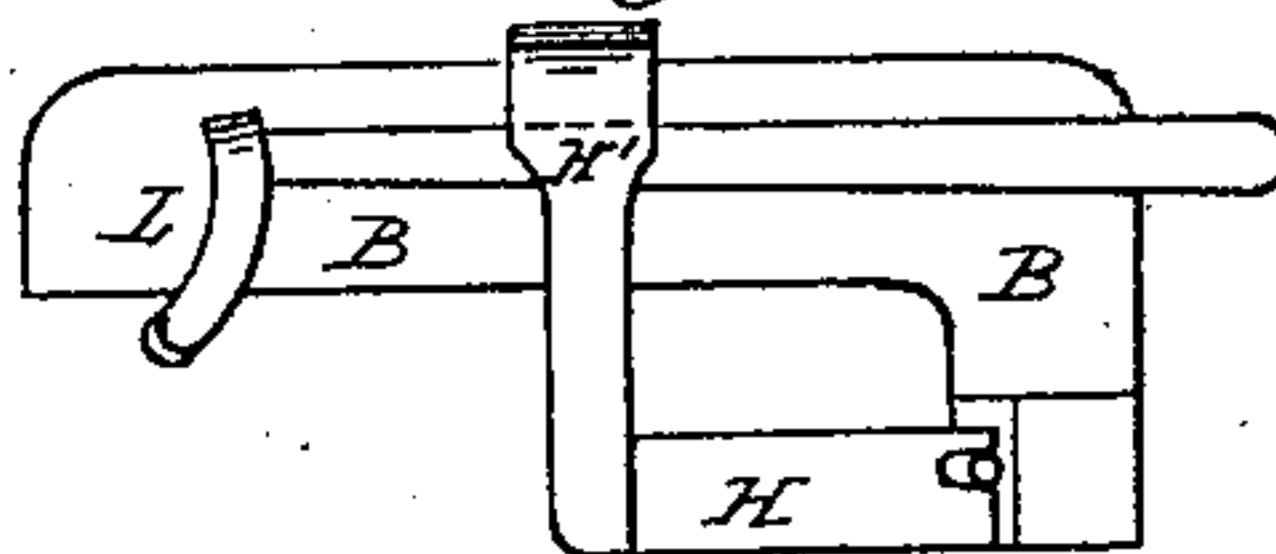
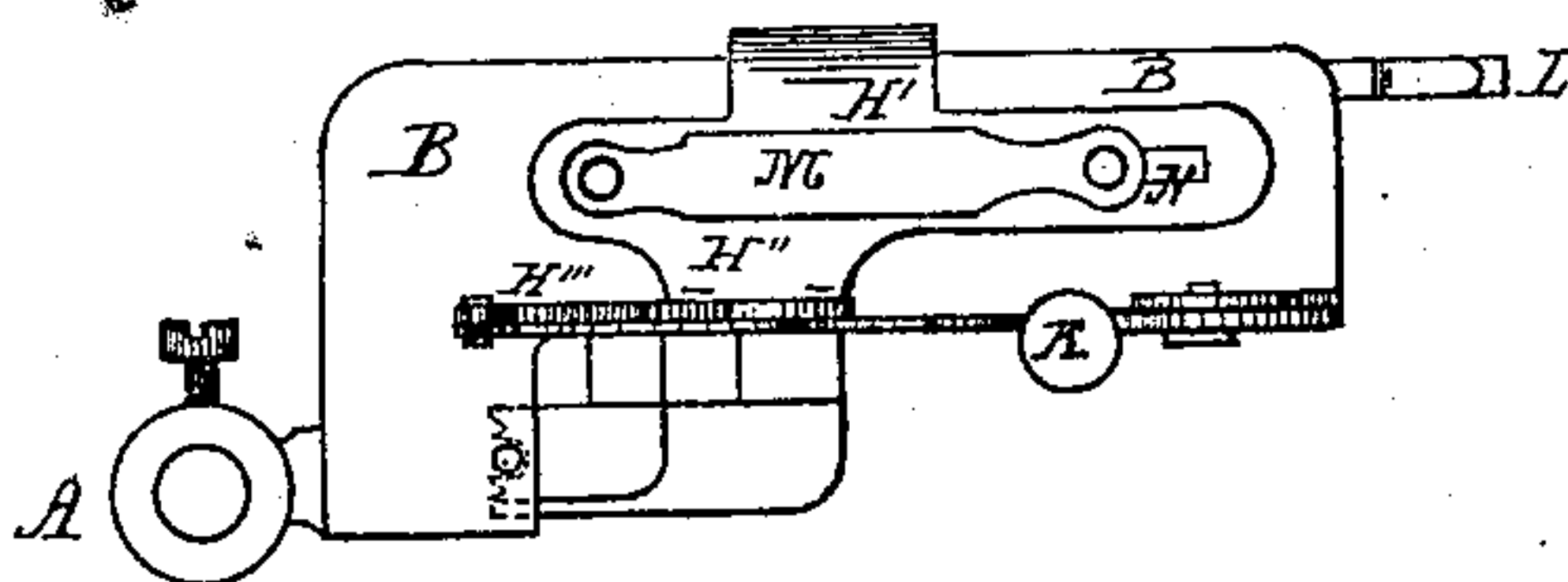


Fig. 3.



WITNESSES=

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# UNITED STATES PATENT OFFICE

EDWARD POWELL, OF NEW YORK, N. Y., ASSIGNOR TO DOMESTIC SEWING-MACHINE COMPANY.

## IMPROVEMENT IN RUFFLERS.

Specification forming part of Letters Patent No. **159,963**, dated February 16, 1875; application filed December 23, 1874.

*To all whom it may concern:*

Be it known that I, EDWARD POWELL, of the city of New York, in the county and State of New York, have invented new and useful Improvements in Ruffling Attachments; and I do hereby declare that the following specification, taken in connection with the drawings furnished, is a full, clear, and exact description thereof, which will enable others skilled in the art to make and use the same.

My invention relates to that class of ruffling attachments usually applied to the presser-foot of a sewing-machine, although it may be secured to the cloth-plate and actuated by the needle-bar, the same being an improvement on the patents to William A. Maik, No. 111,030, January, 1871, and No. 123,494, February 6, 1872, having a pair of clamps or nippers, moving and operating together for the purpose of gathering and carrying the material to form the desired fold, &c.

Referring to the drawings, Figure 1 represents a side elevation of my improved attachment, with clamps carried forward toward the presser-foot; Fig. 2, side view with the clamp open to receive the material and carry it forward; Fig. 3, top view of the attachment, exhibiting the arrangement and formation of parts; Fig. 4, bottom view of same, exhibiting the lower bar, to which the bottom clamps are attached.

A represents a socket for connecting with the presser-bar; B, foot or plate upon which most of the details are attached; C, upright, formed of and consisting of a part of the plate B; D, lever, connecting, through the medium of the eye or loop *a a*, with the needle-bar, by which it is actuated; D', curved part of the lever D, forming a foot to engage the angle F' of the carrier F, which operates the nippers; F, a centrally-pivoted lever, to which the upper jaw, forming one of the nippers, is attached. F' is a rib or projection extending in a line diagonally with the base, with which the lever D and D' and the adjusting-screw engage; G, upper clamp of the nippers, being a part of lever F; H, lower clamp, attached to or forming a part of the carrier H'; K, adjusting-screw for measuring the plaits or gathers; L, gage to control the material in posi-

tion for stitching; M, cap or guard to protect and support the slide or carrier H'; N, slot to allow the carrier H end action. The parts of my improved attachment consist of the plate B, so formed as to admit of being attached to the presser-foot of a sewing-machine, or to the cloth-plate, having a vertical projection, which serves as a post, to which the lever D is secured and oscillates.

The carrier or frame to which the working-lever F and the nippers are attached may be formed so as to surround the base-plate B, being secured to the latter by means of rivets or otherwise, and a cap or guard, represented at M, said carrier being provided with slots of a suitable length to allow the necessary traverse of the nippers to and fro toward the needle. The drawings represent suitable formation and arrangement of parts, both in combination and detached portions of my improved attachment.

Figs. 1 and 2 exhibit the lever D, which operates the carrying-nippers through the medium of the tilting lever F. This lever D is provided with an adjusting-screw, represented at K, acting in conjunction with the foot D' upon the flange F' of the lever F, for the purpose of controlling the traveling distance of the nippers G and H, which measures or regulates the widths of the folds or gathers.

An intermediate connection is represented in the drawing in Figs. 2 and 5, serving as a connection between the needle-bar and the lever D. This device is made to open and close over the screw of the needle-bar or clamp without removing the same. This enables the operator to apply and make the necessary connection quickly and readily, which is an improvement upon the ordinary or old method of loop-connection, which is represented at E in Fig. 1 of the drawing, which may be adopted when desired.

The lever F, which forms a part of the jaw or nipper G, is provided with a centrally-pivoted bearing at *c*, and is provided with a diagonally-arranged flange, F, projecting sideways sufficient to be engaged by the adjusting-screw K and the foot D' of the lever D, as shown in the drawing. The centrally-located pivot *c* secures the lever to the vertical projection of the carrier-frame H', while the head



of the rivet or screw *a* serves as a guide and stop for the lever F, which is slightly slotted to allow the nippers to open the proper distance to receive the material for ruffling.

To those skilled in the art the adaptation and action of my improved device will be readily understood.

My improvements upon the patents hereinbefore referred to consist in the construction and arrangement of parts for supporting the carrying-nippers, and for operating the same by the rise and fall of the needle-bar of a sewing-machine, through the medium of levers, &c.

Having thus set forth my invention, what I claim as new, and desire to secure Letters Patent of the United States for, is—

1. In a ruffling attachment, the combination, with the socket A, of the base-plate B, lever D, the centrally-pivoted lever F, and nippers G and H, substantially as and for the purposes set forth.

2. The automatic grasping and carrying nippers G and H, in combination with frame H' and levers D and F, substantially as and for the purposes set forth.

3. The combination of the socket A, with its base-plate B, projection or post C, lever D, with its curved arm D', rocking lever F, and frame H', for operating and carrying the nippers, substantially as and for the purposes set forth.

4. In a ruffling or gathering attachment, the hinged locking device, consisting of jaws *a a'*, for connecting the lever D with the needle-bar of a sewing-machine, substantially as set forth.

5. In a ruffling attachment, the combination of lever D, with its curved heel D', adjusting-screw K, rocking lever F, and nippers G H, substantially as and for the purposes set forth.

6. In a ruffling attachment for sewing-machines, the combination of the socket A, lever D, provided with a curved heel-carrying frame, H', cap M, and nippers G H, substantially as and for the purposes set forth.

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Witnesses:

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