

(No Model.)

2 Sheets—Sheet 1.

DE LANA SHEPLIE.
SEWING MACHINE ATTACHMENT FOR MAKING FRINGE.
No. 253,775. Patented Feb. 14, 1882.

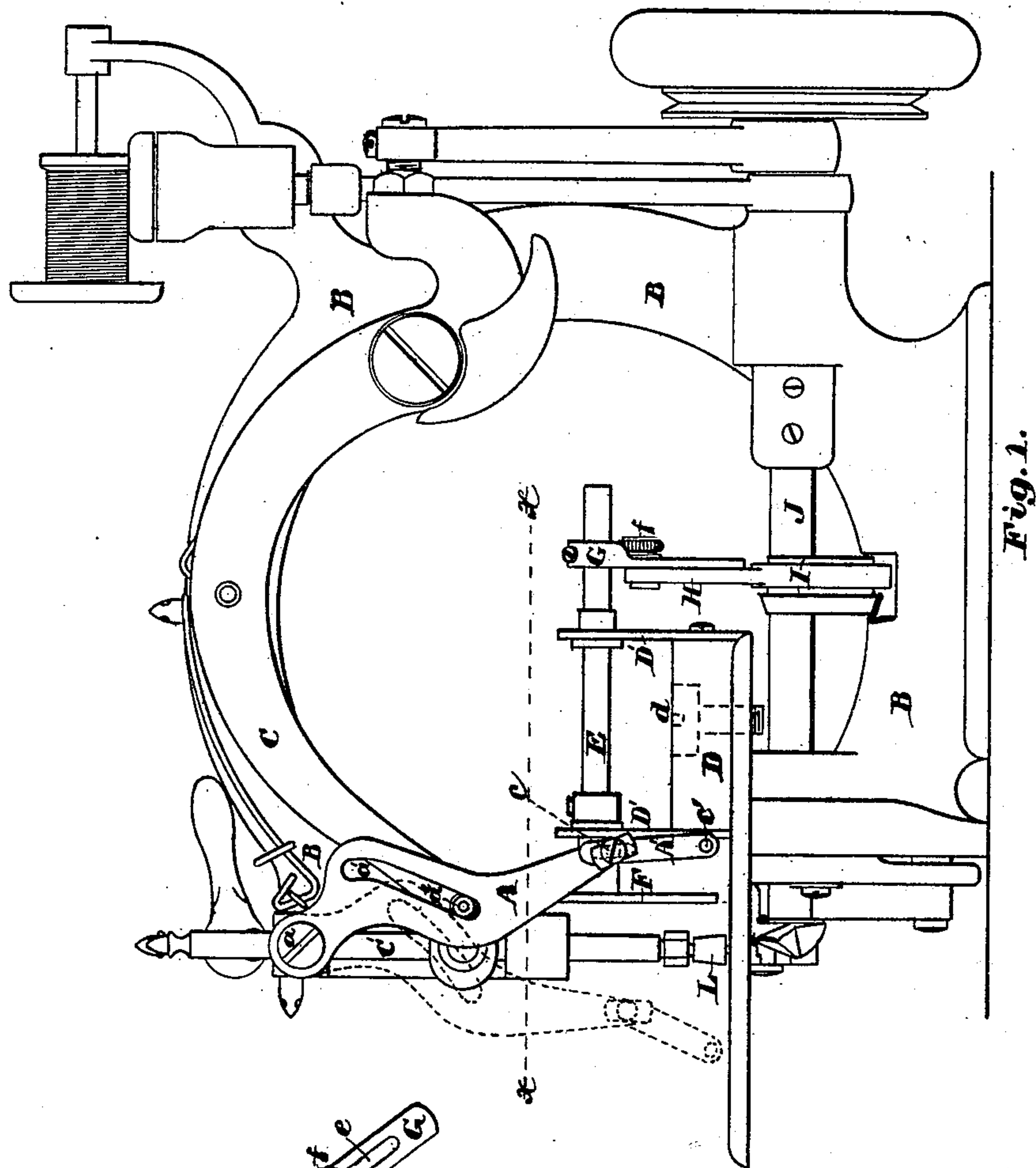


Fig. 1.

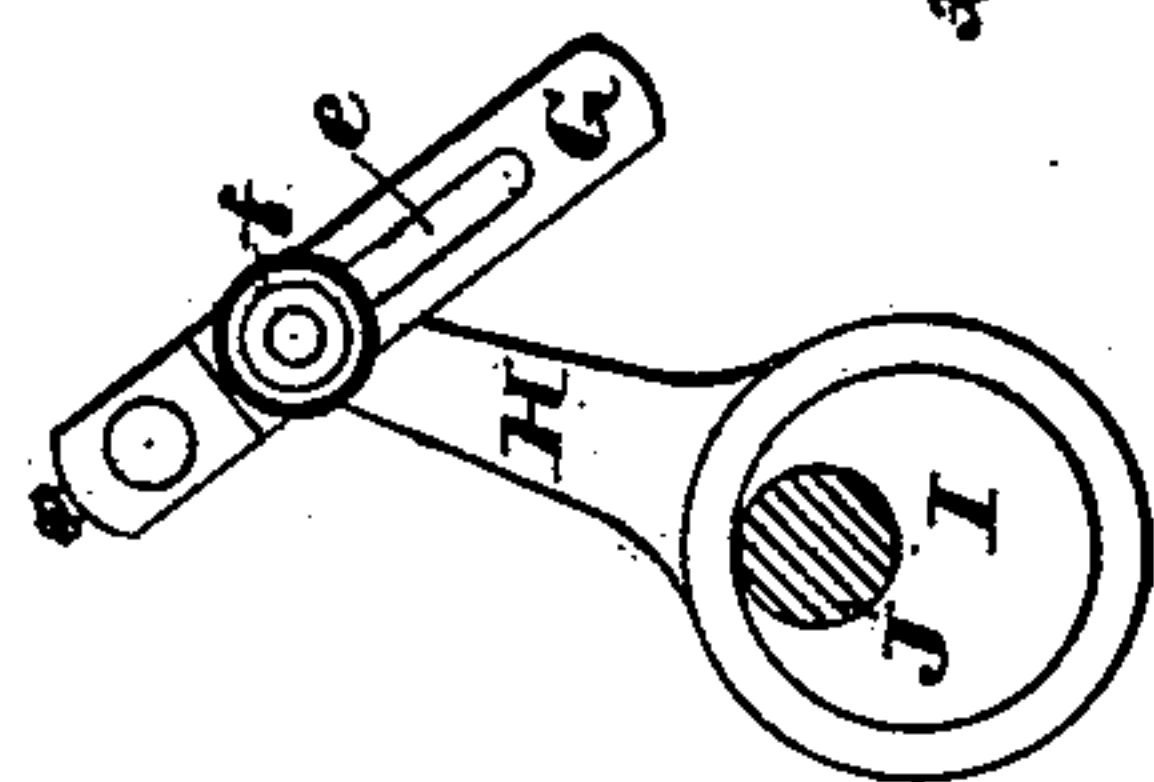


Fig. 3.

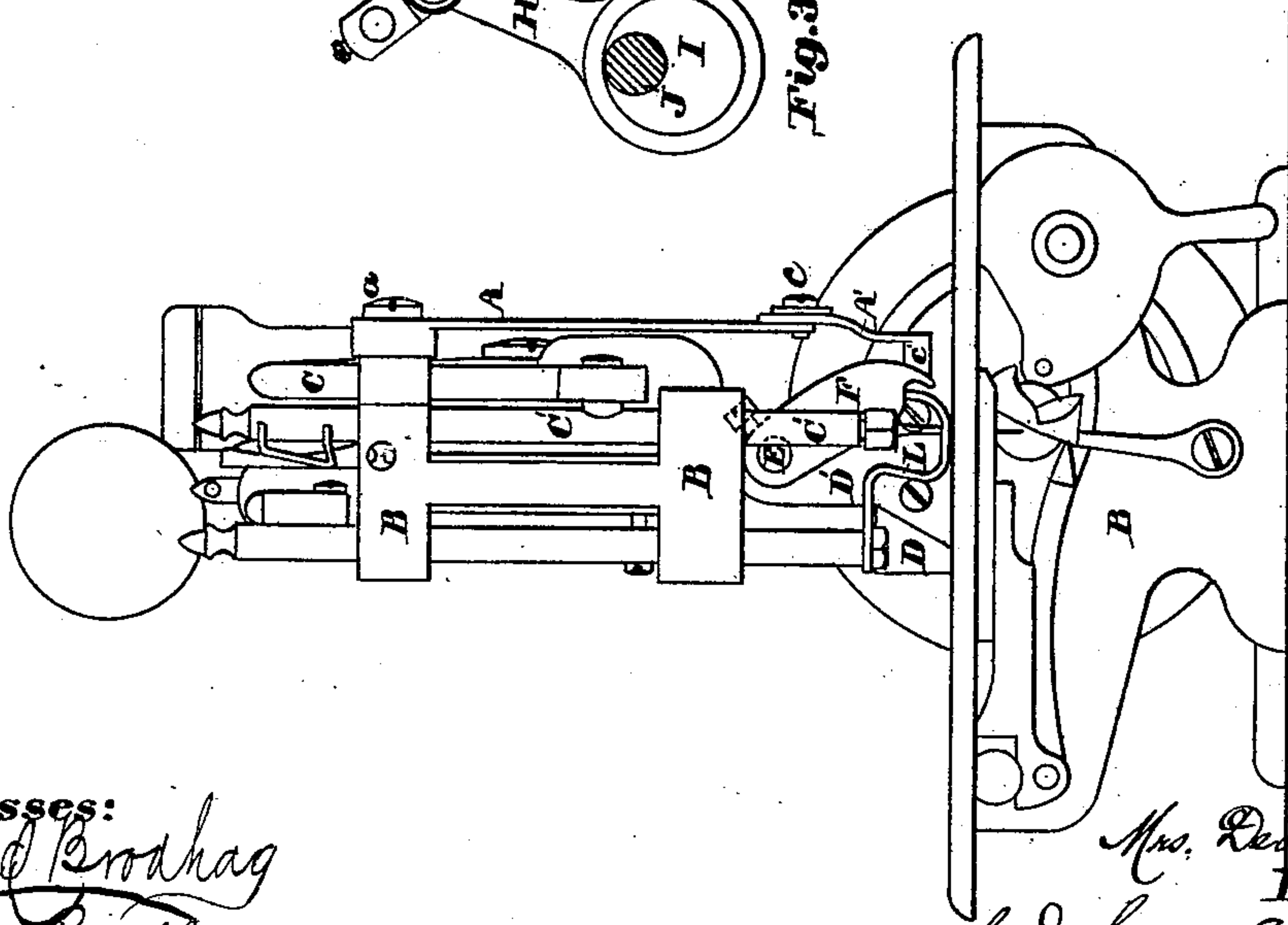


Fig. 2.

Witnesses:

Edmond Brodhag
H. C. Bartle.

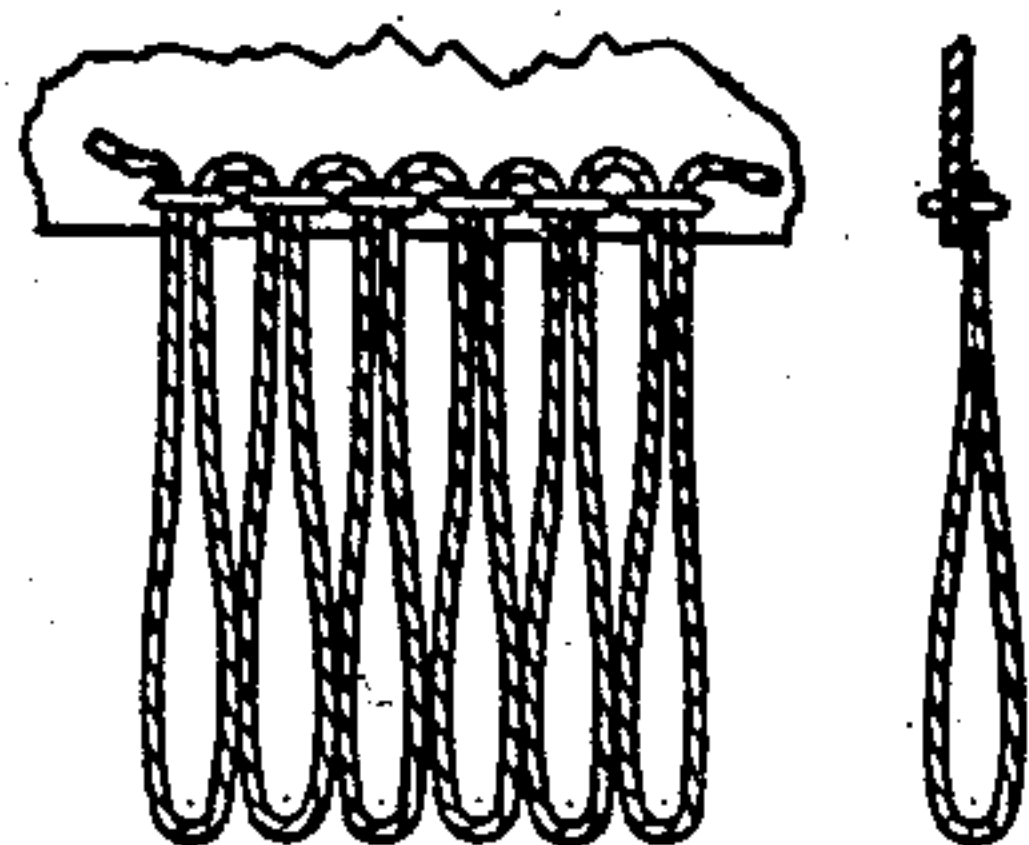
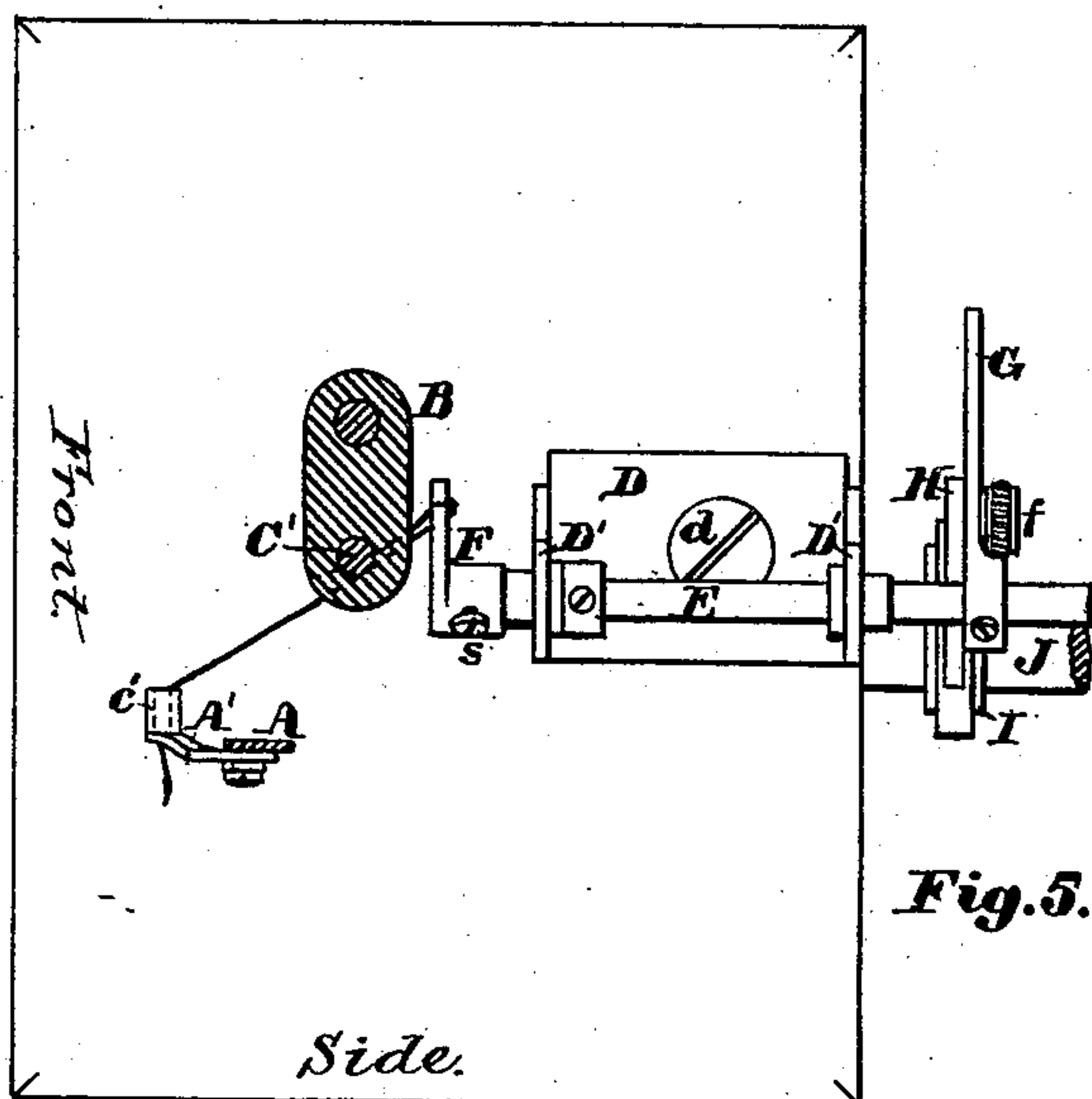
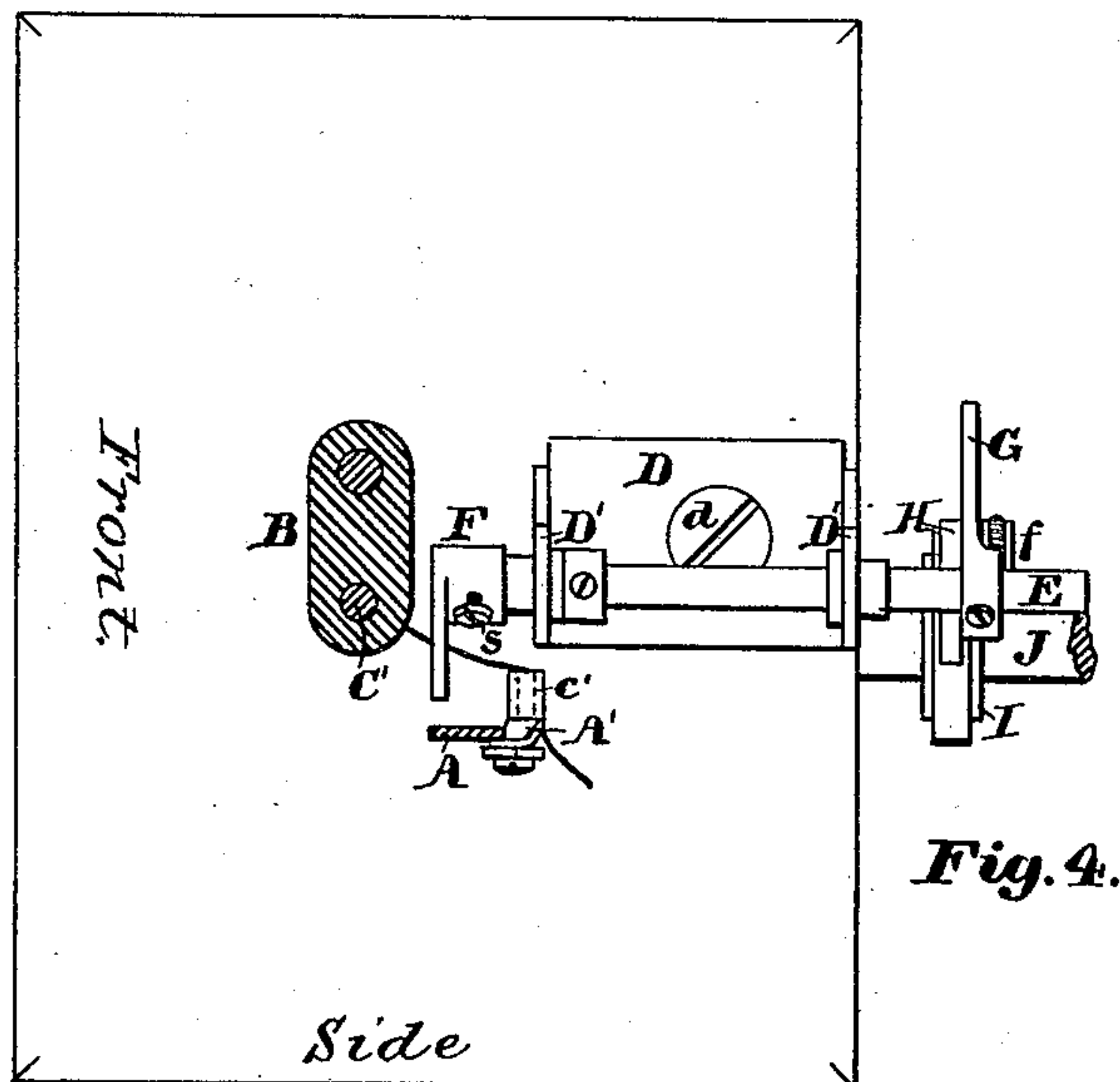
Mrs. De Lana Sheplie
Inventor:

by Johnson and Johnson
Attys

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2 Sheets—Sheet 2.

DE LANA SHEPLIE.
SEWING MACHINE ATTACHMENT FOR MAKING FRINGE.
No. 253,775. Patented Feb. 14, 1882.



Witnesses:

Edmond Brodhag.
Philip F. Larner.

Fig. 7.

Inventor:

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UNITED STATES PATENT OFFICE.

DE LANA SHEPLIE, OF BOSTON, MASSACHUSETTS.

SEWING-MACHINE ATTACHMENT FOR MAKING FRINGE.

SPECIFICATION forming part of Letters Patent No. 253,775, dated February 14, 1882.

Application filed October 8, 1881. (No model.)

To all whom it may concern:

Be it known that I, DE LANA SHEPLIE, of Boston, in the county of Suffolk and State of Massachusetts, have invented a new and useful Attachment to Sewing-Machines for Making Fringe, of which the following, taken in connection with the accompanying drawings, is a specification.

My invention relates to fringe-producing attachments for sewing-machines. The particular kind of fringe produced by my improved attachment consists of a series of back-and-forth folds of yarn or thread, which are secured to the fabric by a line of stitching at or near the folds forming one edge of the fringe. A pendent yarn-guiding lever pivoted to the head of the machine is vibrated in a vertical plane across the line of the feed by means of a direct connection with the needle-bar-operating lever, and is adapted for operation with a pendent loop-forming hook adapted to be vibrated parallel with the line of stitching. The fringing thread-guiding lever is formed of a pivoted and an adjustable thread-carrying part, the latter being adapted for adjustment vertically and to either side of a vertical line in relation to its pivoted part, while the loop-forming hook is adapted for adjustment so that the throw of its hook end will always be to a given point in front of the thread, notwithstanding the extent of the throw, and the length of the loop may be increased or diminished by the extent of vibration of said hook. The presser-foot co-operates with the pendent fringing-lever to hold the thread under the action of the pendent loop-forming hook, and these parts are therefore arranged to operate in conjoint relation to the sewing mechanism to produce the fringe. The particular matters of combination and of construction which distinguish my improved fringe-producing attachment from others will be specifically embraced in the claims.

Figure 1 is a side elevation of a Willcox & Gibbs sewing-machine with attachment applied thereto. Fig. 2 is a front elevation, and Fig. 3 is a detail illustrating the manner of operating the looper-hook. Fig. 4 represents a horizontal section taken on the line xx of Fig. 1, showing the relation of the thread-guiding eye of the fringing-lever to the needle-bar and the

relation of the loop-forming hook to the thread from the presser-foot when said lever is thrown to the right of the needle, looking toward the right side of the machine. Fig. 5 represents a similar section, showing the relation of the same parts when the fringing-lever is thrown to the left of the needle, a loop formed, and the thread held beneath the presser-foot until secured by the stitch formed by the sewing mechanism. Fig. 6 represents a detail view of the loop-forming hook, showing the manner of adjusting it upon its rock-shaft to limit the extent of its throw always to a given point in front of the fringe-thread leading from the presser-foot, as shown in Fig. 4; and Fig. 7 shows the fringe as formed.

A is a pendent arm or lever, pivoted at a to the frame B of the machine, and provided with the curved slot a' , into which projects the anti-friction roll a^2 , mounted upon the lever C, which operates the needle-bar C'.

To the lower end of the lever A is adjustably secured by the screw c the yarn-guide A' in such a manner that its eye c' may be raised or lowered or moved to the right or left relatively to the lever A, a slot being formed in the upper end of the yarn-guide A' for this purpose, as shown in dotted lines in Fig. 1.

A stand, D, provided with two upwardly-projecting ears, D' D', is secured to the work-supporting plate of the machine by a single screw, (shown in dotted lines at d in Fig. 1.)

E is a rocker-shaft, mounted in bearings in the ears D' D', and having adjustably secured to its front end, by means of a clamp-screw, s , (shown in Figs. 4, 5, and 6,) the loop-forming hook F, and firmly secured to its rear end the lever G, provided with the slot e , and connected by the bolt f to the eccentric-rod H, to which an endwise motion is imparted by the eccentric I, firmly secured upon the shaft J of the sewing-machine.

The eccentric-rod H may be secured to the lever G at a greater or less distance from the axis of the shaft E by moving the bolt f along the slot e , and thus increase or diminish the extent of vibration of the hook F, for the purpose of increasing or diminishing the length of the loops of the fringe. When this adjustment is made it is also necessary to adjust the hook F upon the shaft E, so that whatever the

throw of the hook F may be its forward movement shall always be to a given point—that is, just in front of the fringe-yarn leading from the presser-foot to the eye *c'* of the yarn-guide A—when said yarn-guide is thrown to the right of the needle, as shown in Fig. 1. This adjustment is effected by loosening the screw *s* and turning the hook F on the shaft E as required, and then securing it by the clamp-screw. The yarn or thread from which the fringe is to be formed is led from a spool or bobbin located at any convenient point on or above the machine to and through the eye *c'* of the yarn-guide A, from front to rear, and its end is inserted beneath the presser-foot L. When the needle-bar descends the yarn-guide A' is moved to the right of the needle into the position shown in Fig. 1, when the fringe-yarn will be drawn from the presser-foot to the inner end of the eye *c'*, just above the work-supporting table or plate, and at the same time the hook F is vibrated toward the front of the machine into the position shown in Fig. 2, with its point in front of the fringe-yarn, which lies between the presser-foot and the inner end of the eye *c'*. As the needle-bar ascends the loop-forming hook F is moved to the rear, its hook-shape point engaging with the fringe-forming yarn or thread at a point between the presser-foot and the thread-guide, as shown in Fig. 4, and carrying it toward the rear of the machine at the same time that the yarn-guide A is moved to the left side of the needle, thus forming a loop in the yarn of a predetermined length and drawing that portion of the yarn which extends from the loop-forming hook to the yarn-guide beneath the presser-foot, where it is firmly held during the return movement of the yarn-guide and until secured by the next stitch formed by the sewing mechanism. The fringe thus formed consists of a series of back-and-forth folds of yarn, silk, or thread, which are secured in position by a line of stitching in close proximity to one series of the folds or loops. The pendent position both of the fringing-lever and of the loop-forming hook allows the operating-shaft for the latter to be placed the hook to be operated a considerable distance above the table, and in a vertical plane by the side of the needle-bar, while the operation of the fringing-lever by direct connection with the needle-bar-operating lever is important as a simple provision for effecting such operation in exact harmony with the movements of the needle-bar.

What I claim as new, and desire to secure by Letters Patent of the United States, is—

1. In combination with a sewing-machine mechanism, the pendent thread-guiding lever A, the needle-bar-operating lever C, connected therewith, as described, and the pendent loop-forming hook F, constructed and arranged for operation as an attachment for making fringe, as herein set forth.
2. In combination with the driving-shaft and sewing mechanism of a sewing-machine, the yarn-guiding lever A A', the rocker-shaft E, the pendent loop-forming hook F, the lever G, the eccentric-rod H, and the eccentric I, all arranged and adapted to operate substantially as and for the purposes described.
3. In a mechanism for making fringe, the combination of the yarn-guiding lever A A', made in two parts adjustably secured together, and provided with the cam-slot *a'*, the loop-forming hook, the needle-bar-operating lever C, and the roll or stud *a*², all arranged and adapted to operate substantially as described.
4. The combination, with the needle-bar-operating lever C, of the pendent thread-guiding lever A, having its lower eyed part, A', adapted for vertical and lateral adjustment in relation to its pivoted part, the pendent loop-forming hook, and a sewing mechanism, substantially as herein set forth.
5. The combination, with a sewing mechanism, of the adjustable thread-guiding lever, with the loop forming hook F, means for increasing and diminishing the throw of said hook, and means for adjusting said hook in relation to its throw so that its forward movement will always be to a given point in taking the thread without regard to the length of the loops, substantially as described.
6. The combination, substantially hereinbefore set forth, of a sewing mechanism, a pendent thread-guiding lever, and a pendent loop-forming hook with the presser-foot and means for operating said thread guide and looper in relation to said presser-foot, substantially as described.

Executed at Boston, Massachusetts, this 6th day of October, A. D. 1881.

MRS. DE LANA SHEPLIE.

In presence of—

N. C. LOMBARD,
A. S. BARNES.