

A. JOHNSTON.

Improvement in Gathering Attachment for Sewing Machines.

No. 123,995.

Patented Feb. 27, 1872.

Fig. 1

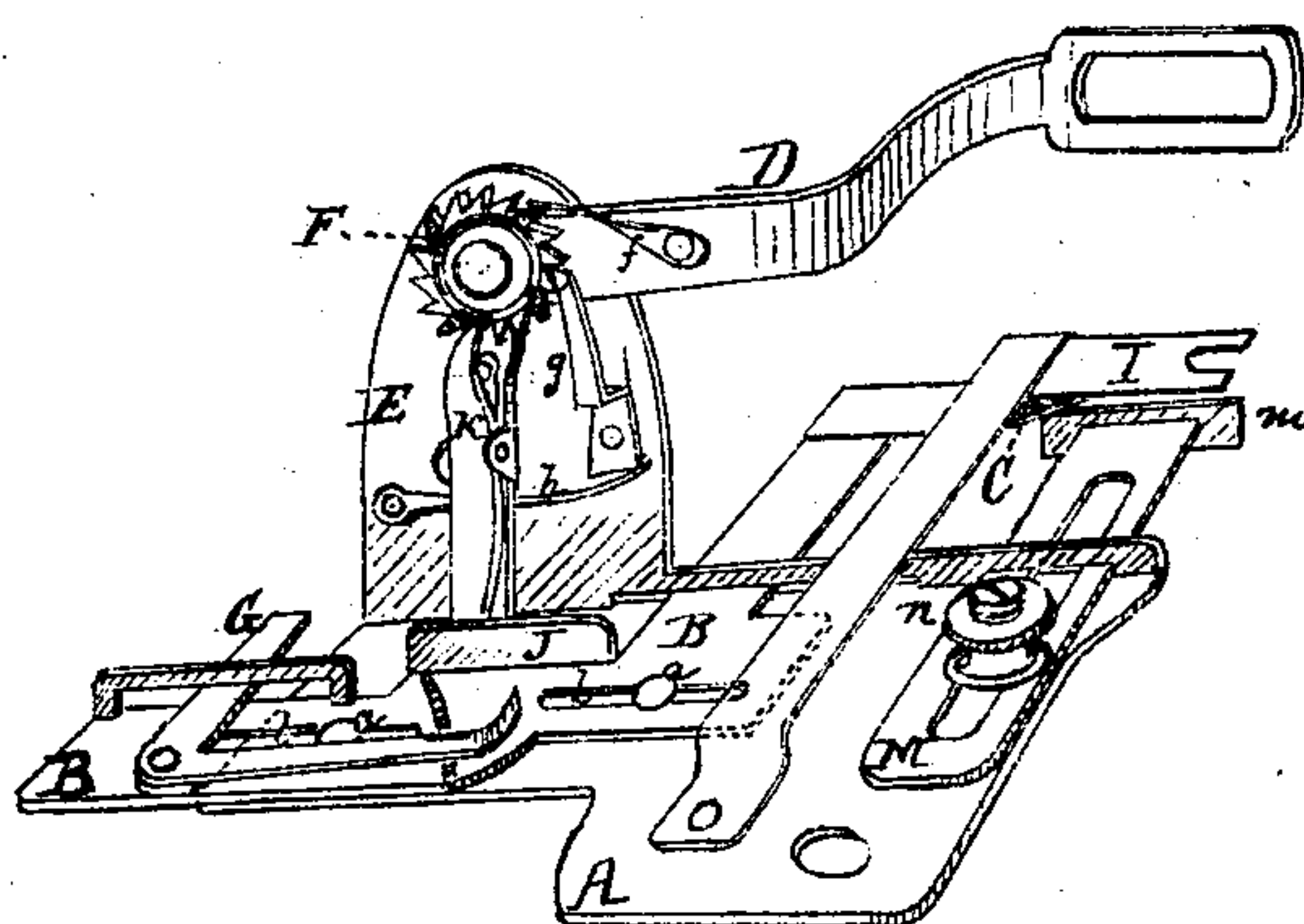


Fig. 2

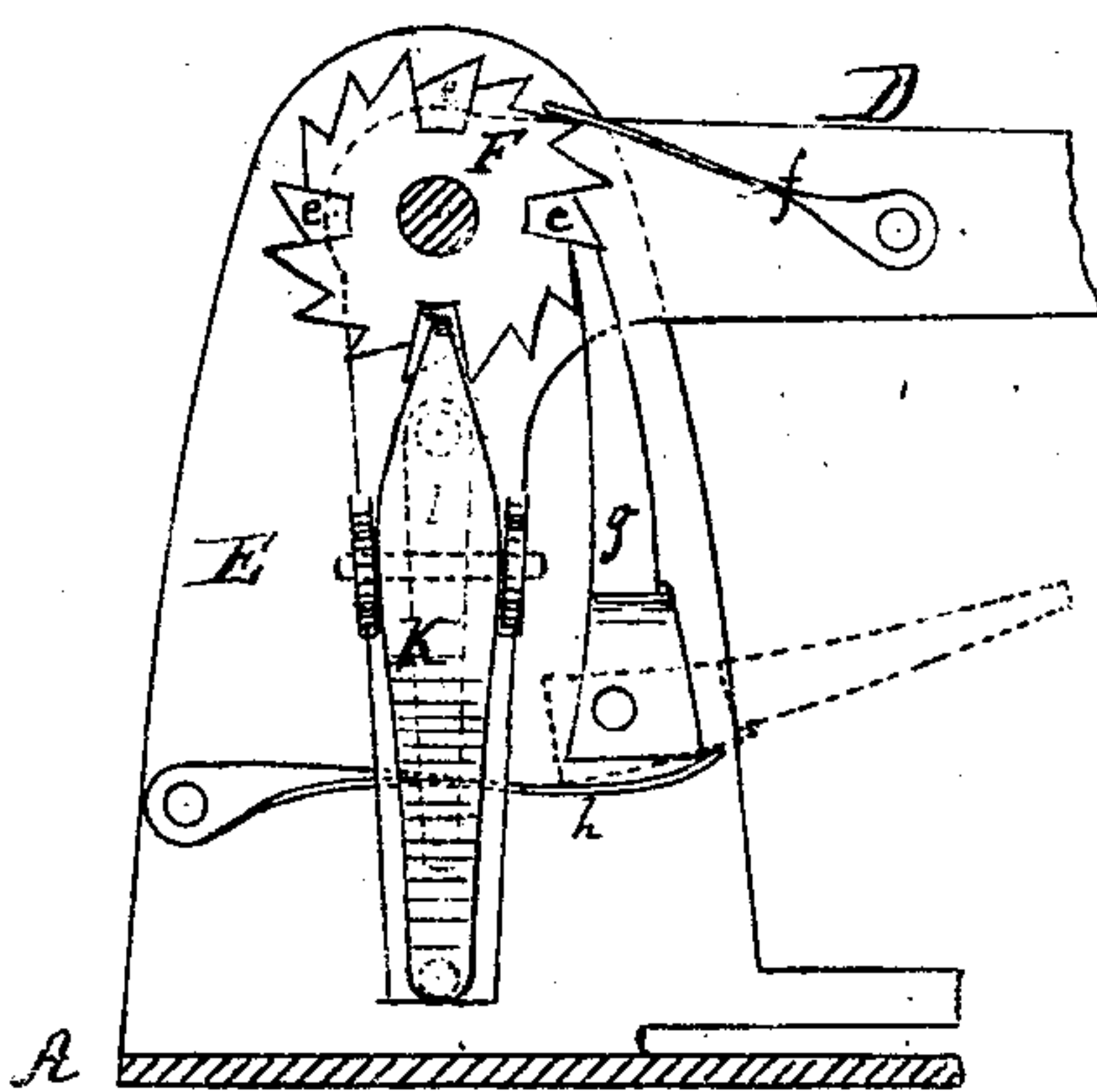
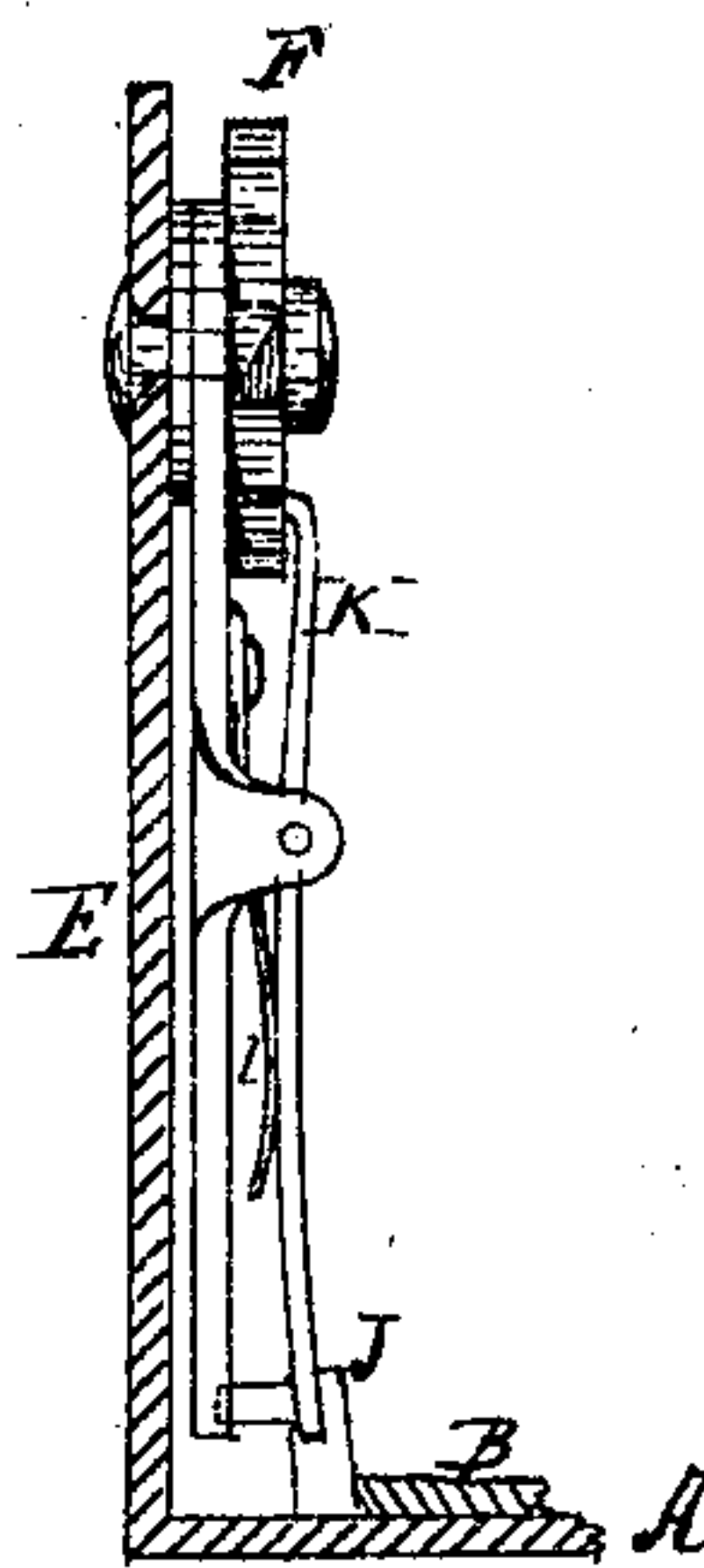


Fig. 3



Witnesses:

J. S. Johnston
Julius Wilcke

Inventor:
Allin Johnston
by Thos. S. Sprague
Atty

UNITED STATES PATENT OFFICE.

ALLEN JOHNSTON, OF WAPELLO COUNTY, IOWA.

IMPROVEMENT IN GATHERING ATTACHMENTS FOR SEWING-MACHINES.

Specification forming part of Letters Patent No. 123,995, dated February 27, 1872.*

SPECIFICATION.

To whom it may concern:

Be it known that I, ALLEN JOHNSTON, of the county of Wapello, in the State of Iowa, have invented certain Improvements in Plaiting Attachment for Sewing-Machines; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawing, which, together with the letters and figures marked thereon, forms part of this specification, and in which—

Figure 1 is a perspective view of my improved attachment. Fig. 2 is a front elevation of the ratchet device and standard enlarged. Fig. 3, upon the same scale as Fig. 2, is a side view of Fig. 2, looking from the right hand.

Like letters of reference made use of in the several figures indicate like parts.

Nature of the Invention.

This invention consists in the construction and arrangement of a plaiting attachment for sewing-machines, and is intended as an improvement upon the patent granted to Allen Johnston and William T. Johnston, January 31, 1871; and it especially consists in the arrangement of a ratchet device upon the vibrating arm of the plaiting or gathering mechanism, so that the gatherer will be caused to skip a certain number of stitches before operating to push forward the cloth.

To enable those skilled in the art to make and use my invention, I will proceed to describe the same with particularity, making use in so doing of the aforesaid drawing.

General Description.

A represents the bed-plate; and B, the sliding plate, which is held to the bed-plate by means of headed rivets or screws *a a* passing through slots *bb* in the plate B. C is the spring, having a turned-up slotted point. This spring operates, in connection with the stationary spring I immediately above it, in the same manner as in the patent to Allen and William T. Johnston above referred to, being so well known as to require no description here. D is a bent arm, pivoted to the standard E at or near the rear end of the bed-plate A. The end

of the arm D is slotted, as shown, to pass over the needle-screw, causing it to be carried up and down with the motion of the needle-bar. Upon the same pivot as the arm D is carried the loose ratchet-wheel F. A pawl, *f*, is carried upon the arm D, so that each time said arm rises the ratchet is carried forward in motion therewith. A second pawl, *g*, is pivoted to the standard E, and acts as a stop to prevent the down motion of the arm D from operating to return the ratchet. This latter pawl is held in place by a spring, *h*, and may be thrown out of gear, as seen at Fig. 2 in dotted lines. Upon the face of the ratchet-wheel F is cut a series of notches, *e e e e*, more or less in number, as the case may be; and to the vertical arm of the lever D is pivoted a lever, K, its upper extremity pressed against the face of the ratchet-wheel by means of a spring, *l*, and held into the notches *e*. These notches are made with an inclined side, like the teeth of a ratchet, so that a continued motion of the wheel throws the end of the lever out upon the face. A raised ledge or projection, J, upon the sliding plate B is so arranged as to stand in the path of the lever K when the arm D is moved, and the upper extremity of the lever K is in one of the notches *e*. Now, the teeth of the ratchet each stand for one stitch of the machine; that is to say, for each stitch of the machine the ratchet-wheel is moved forward one tooth. When it has been moved forward four teeth the end of the lever K drops into one of the notches *e*, and in the return motion of the arm D the said lever engages the projection J, and moves forward the sliding plate B, which operates the spring C, and causes a plait or gather to be formed on the cloth. The next down motion of the arm carries back the sliding plate by means of the bent arm G, which is engaged by the vertical portion of the arm D, as in the case of the patented device of Johnston above cited. The same motion operates to further turn the ratchet and disengage the lever K from the notch *e*. The interval between the plaits may be made any number of stitches desired by arranging the ratchet-wheel so that a greater or less number of teeth shall intervene between the notches *e*. When it is desired to gather or ruffle with this machine—or, in other words, to cause the spring C to push

forward the cloth at every stitch—it is only necessary to throw the pawl *g* out of gear into the position shown in dotted line at Fig. 2. The lever *K* will now remain in the notch *e*, and the sliding plate will be operated at every stitch. *M* is a slotted plate, with a guard, *m*, at the end, and attached to the bed-plate *A* by means of a fixed bolt and thumb-nut, *n*. This may be thrown in or out at pleasure, serving to align the edge of the fabric to be stitched to the ruffler, and to prevent the same from drawing to one side or the other.

Claims.

Having thus described my invention, what

I claim, and desire to secure by Letters Patent, is—

1. The ratchet-wheel *F*, provided with the notches *e*, in combination with the lever *K*, all constructed and arranged substantially as described and shown.

2. The combination of the arm *D*, ratchet *F*, pawls *f g*, lever *K*, and sliding plate *B*, substantially as specified.

ALLEN JOHNSTON.

Witnesses:

WILL T. MAJOR,

ALBERT G. HARROW.