A. EVERISS.

Gatherer for Sewing Machines.

No. 93,979. Patented Aug. 24, 1869.

FIG. 1.

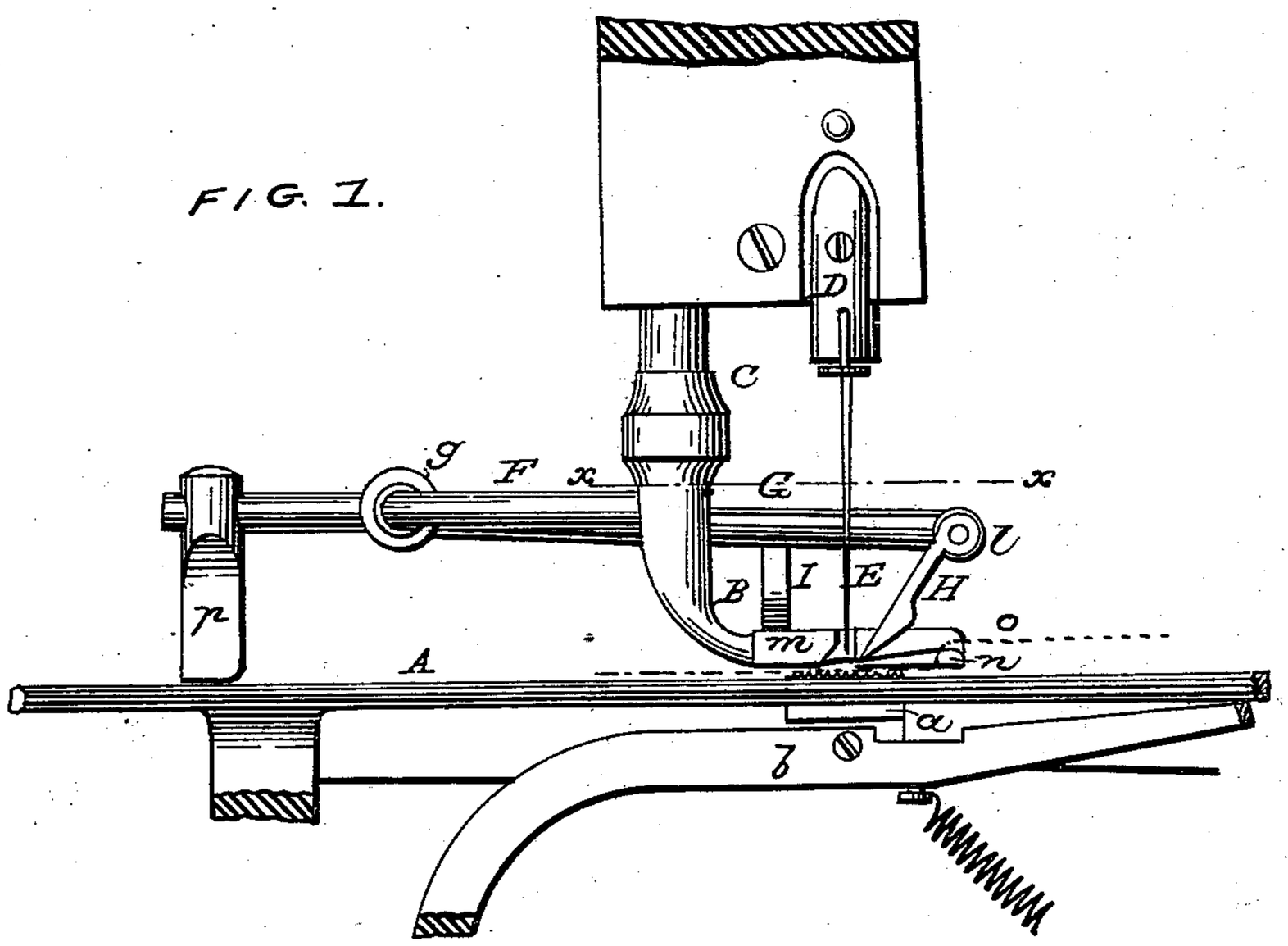
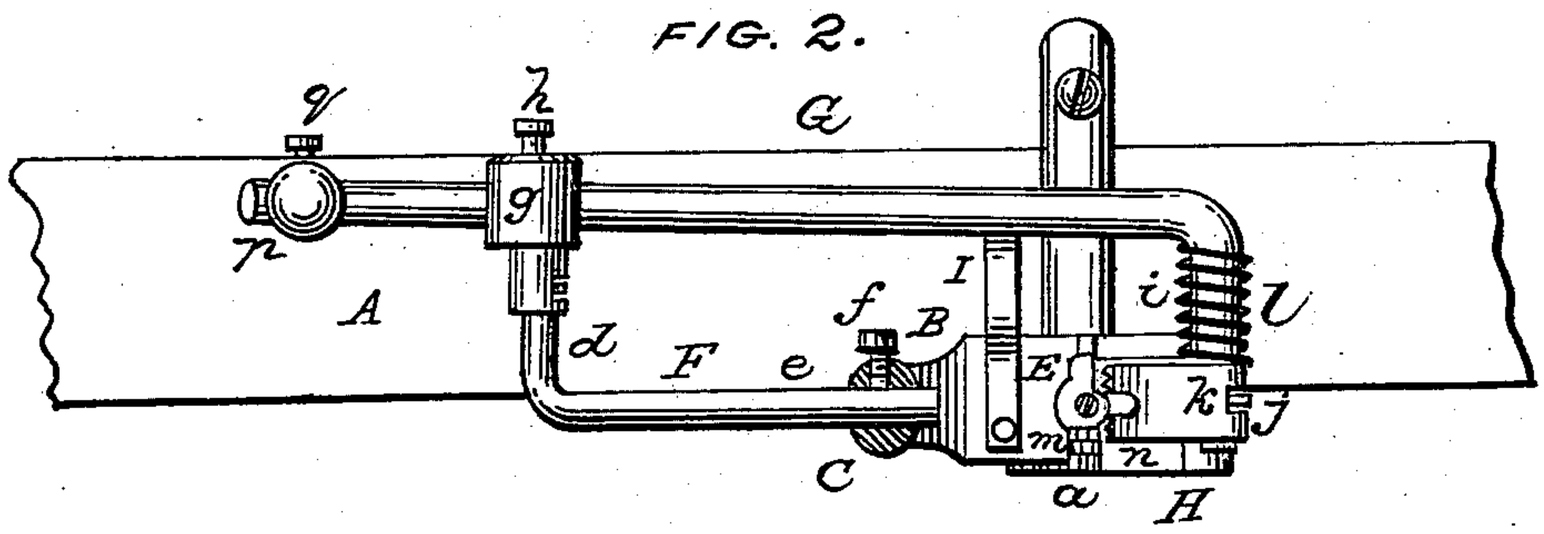


FIG. 2.



WITNESSES:

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93,979

United States Patent Office.

ALFRED EVERISS, OF NEW YORK, N. Y.

Letters Patent No. 93,979, *dated August* 24, 1869.

IMPROVEMENT IN GATHERING-ATTACHMENT FOR SEWING-MACHINES.

The Schedule referred to in these Letters Patent and making part of the same.

To all whom it may concern:

Be it known that I, ALFRED EVERISS, of the city and county of New York, in the State of New York, have invented a new and useful Gathering-Attachment for Sewing-Machines; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon, making a part of this specification.

This invention relates to a new and useful attachment to be applied to sewing-machines for the purpose of gathering, that is to say, crimping or drawing together in small plaits, or folds, the fabric during the time it is being stitched or sewed.

The object of the invention is to obtain a simple and economical device, which may be applied to any of the sewing-machines in use, which have what is termed a "step" or "drop"-feed, and which will operate automatically, and gather or crimp the fabric with a positive movement, so as to insure the work being done in an even or uniform manner.

In the accompanying sheet of drawings—

Figure 1 is a front view of my invention.

Figure 2, a horizontal section of the same, taken in the line *x x*, fig. 1.

Similar letters of reference indicate corresponding parts in the two figures.

To enable those skilled in the art to fully understand and construct my invention, I will proceed to describe it.

A represents the bed-plate of a sewing-machine, which has what is commonly termed a "step" or "drop"-feed, the serrated, or toothed plate, which engages with the fabric and moves it along, being designated by *a* and operated by a lever, *b*. This arrangement is the same as that used in the Howe sewing-machine, but my invention may be applied to any other machine which has a "step" or "drop"-feed.

B represents the "presser-foot," which is secured to the lower end of a vertical rod, C, by a set-screw, said rod being allowed to rise and fall freely in its bearings, and the "presser-foot" retained upon the fabric or work by a spiral spring, which is fitted upon the rod, but not shown in the drawings, as it does not form a part of my invention, and is common to many sewing-machines.

D is the needle-bar, and E the needle fitted in the lower end of the same. This needle-bar may be operated in any of the known ways.

None of the parts above described are claimed by me as belonging to my invention, but are drawn and referred to simply to show clearly the application of my invention, which is composed of the following parts:

F is a rod which is bent or curved so that one part, *d*, will be at right angles to the other part *e*.

The end of the part *e* passes through the shank of the "presser-foot" B, and is secured in position by a set-screw, *f*.

This rod F has a horizontal position, or is in a plane parallel with the bed-plate A, and at the end of the part *d* of said rod there is a swivel-head, or hub *g*, through which a hole is made to allow a rod, G, to pass through, which rod is secured in position by a set-screw, *h*.

The rod G is parallel with the part *e* of the rod F, as shown clearly in fig. 2.

On the end of the part *i* of rod G there is fitted loosely a plate, H, the extent of the movement or working of which, on *i*, is limited by a pin, *j*, which projects from *i*, and passes through a slot, *k*, in H, as shown in fig. 2.

This plate H has one end of a spiral spring, *l*, connected with it, and said spring has a tendency to keep the plate H in a downward position, or as near a vertical one as it is allowed to assume.

The "presser-foot" B is composed of two parts, *m n*, the part *m* performing the usual function of holding the work down upon the serrated, or toothed plate *a*, while the needle is passing through the fabric, the other part *n* serving as a bearing, or bed-piece for the fabric, the plate H acting upon the fabric directly over *n*.

The upper surface of the part *n* is somewhat inclined from a horizontal plane, as shown clearly in fig. 1, and the fabric *o* (indicated by a red line) passes over the inclined surface of *n*, and underneath the part *m*, as shown in red in fig. 1.

The part of the rod G which passes through the head, or hub *g* of the rod F, has a shifting or adjustable vertical bar, *p*, secured upon it by a set-screw, *q*, the lower end of which bar bears upon the upper surface of the bed-plate A of the sewing-machine, as shown clearly in fig. 1.

The lower end of the bar *p* serves as a fulcrum for the rod G, as will presently be seen.

I is a spring which is attached to the lower part of the "presser-foot" B, and bears against the under side of the rod G.

This spring serves to regulate the pressure of the lower edge of plate H upon the fabric *o*, over the part *n* of the "presser-foot," during the descent of the latter.

The operation is as follows:

The fabric being adjusted over the part *n* and under the part *m* of the "presser-foot," as previously stated, and the machine operated or power applied to it as usual, the fabric will be fed along by the action of the serrated, or toothed plate *a*, the latter rising and pressing up the "foot" B, and moving laterally to feed the fabric along when the needle E rises above and free from the fabric.

As the serrated plate *a* ascends and raises the foot B against the pressure of a spiral spring upon the rod C of said presser-foot, the plate H, which is kept in contact with the fabric *o* on the upper inclined part *n* of the presser-foot, passes down said incline toward the shank of the presser, and crimps or gathers the fabric, as shown in red in fig. 1, the fold being made directly under the needle, so that when the latter descends, it will pass through the fold.

The lateral movement of the serrated or feed-plate *a* takes place immediately after the termination of its upward movement, and said lateral or feed movement ceases just previous to the descending movement of the plate *a* and the "presser-foot," and as the fabric *o*, during this descending movement, is held between the part *m* of the "presser-foot" and the feed-plate *a*, and the plate H, in descending, moves inward or toward the part *m* of the "presser-foot," over the inclined surface of the part *n* of said "foot," the fabric is consequently gathered or crimped one fold or plait at each descent of the "presser-foot."

The plate H rises, of course, with the "presser-foot," as the rod F is connected to it, and the plate H may have the length of its upward movement, as well as its downward movement varied, increased or diminished, by shifting the position of the bar *p* on the rod G. The nearer said bar is adjusted to the head or hub *g* of the part *d* of the rod F, the greater length of movement the plate H will have.

This varying of the movement of the plate H admits of the folds or plaits comprising the gathers being made of greater or less width, as desired.

The operation of this gathering-attachment, it will be seen, is automatic and positive. No manipulation or assistance is required from the operator, so far as forming the folds or plaits is concerned, and hence the gathering of the fabric may be done by any one who can operate a machine for plain stitching.

The device may be readily applied to and detached from the machine, and constructed at a small cost, so as to be within the reach of all using a sewing-machine.

Having thus described my invention,

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

A gathering-attachment for sewing-machines, constructed, arranged, and operated automatically from the presser-foot, in the manner substantially as herein shown and described.

ALFRED EVERISS.

Witnesses:

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EDWARD LYON, Jr.