UNITED STATES PATENT OFFICE.

JOHN HEBERLING, OF IOWA CITY, IOWA.

IMPROVEMENT IN RUNNING-STITCH SEWING-MACHINES.

Specification forming part of Letters Patent No. **204,604**, dated June 4, 1878; application filed May 9, 1878.

To all whom it may concern:

Be it known that I, JOHN HEBERLING, of Iowa City, in the county of Johnson, and in the State of Iowa, have invented certain new and useful Improvements in Shirring and Gathering Machines; and do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon, making a part of this specification:

My invention has for its object to furnish a device for running-stitch shirring, cording, and gathering, adapted to use for dress-makers, milliners, and others, but is not designed for general sewing; and it consists in the construction of a shirring, cording, and gathering machine provided with a device to which a cord or reed can be attached, to be run between two thicknesses of goods at the same time that a row of stitching is being run on each side of it.

In order to enable others skilled in the art to which my invention appertains to make and use the same, I will now proceed to describe its construction and operation, referring to the annexed drawings, in which—

Figure 1 is a perspective view of my shirring, cording, and gathering machine. Fig. 2 is a longitudinal section of the same. Fig. 3 is a detailed section of a part thereof. Fig. 4 shows a modification of the construction of the device. Fig. 5 shows the bodkin or corder.

A represents the base of the machine, on which is the frame B, supporting at one end the table C, and the other end of the frame extending upward and then inward, terminating in a head, D, over the table C, in the usual manner. In the table C is made a large opening, in which works a large cog or toothed wheel, F, placed upon a stud, *a*, as shown. The opening in the table C is wide enough to admit of the wheel F being slipped off from the stud *a* for the purpose of substituting another wheel of different-sized cogs. The wheel F is held in place on the stud by means of a latch, G, constructed as shown, and pivoted at one end to the table and closing against a rib or bar, G′, on said table, as shown. By throwing this latch G open the wheel can be removed from its stud.

I represents the main or driving shaft, provided at one end with the pulley or band-wheel H, to which power may be imparted by belt, crank, or other suitable means. On the inner end of the shaft I is secured a small pinion, *b*, which is located immediately above the rear portion of the wheel F, as shown.

In a groove in the head D is a vertically-adjustable bar, J, which is held in place by means of a thumb-screw, K. The bar J is on each side provided with grooves or cut-outs *x x*, to pass by the sides of screw-heads *y y*, or their equivalents, secured in the head D, and by moving the bar up or down from this point the bar may be forced against said heads *y* by the set-screw K, to be held at any point desired. In the lower end of the bar J are mounted two pinions, *d* and *e*, which, when the bar J is lowered down, mesh with the wheel F, and the pinion *d* in addition meshes with the pinion *b*, and motion is thus communicated from said pinion *b* through the pinion *d* to the wheel F, and from this wheel to the pinion *e*, the pinions *d* and *e* being on top of the wheel F and in front of the pinion *b*. The head D is further provided with an adjustable bar, L, held by a thumb-screw, M, and this bar carries in its lower end a pinion, *h*, which, when said bar is lowered, is made to mesh with the pinion *b*, above and in rear of the same.

All the pinions and the wheel F are cut with three circumferential grooves at suitable distances apart—that is to say, the cogs of the wheel and pinions have transverse slots cut through them, as shown; and in these grooves are placed two needles, *i i*, and a bodkin or corder, *m*. The bodkin or corder is placed in the center groove, which preferably is made larger than the others and the needles in the two side grooves, and all of them are curved to pass over the pinion *b*, the ends containing the eyes projecting a suitable distance in rear of said pinion. The points of the needles *i* are in a line drawn through the axis of the wheel F and that of the pinion *e*, while the end of the bodkin *m* extends forward in front of the wheel.

The needles being threaded and the bodkin having a cord or reed passed through or attached to its eye, the goods to be shirred are folded and passed into the machine, the end of the bodkin being inserted between the fold.

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Fig. 1.

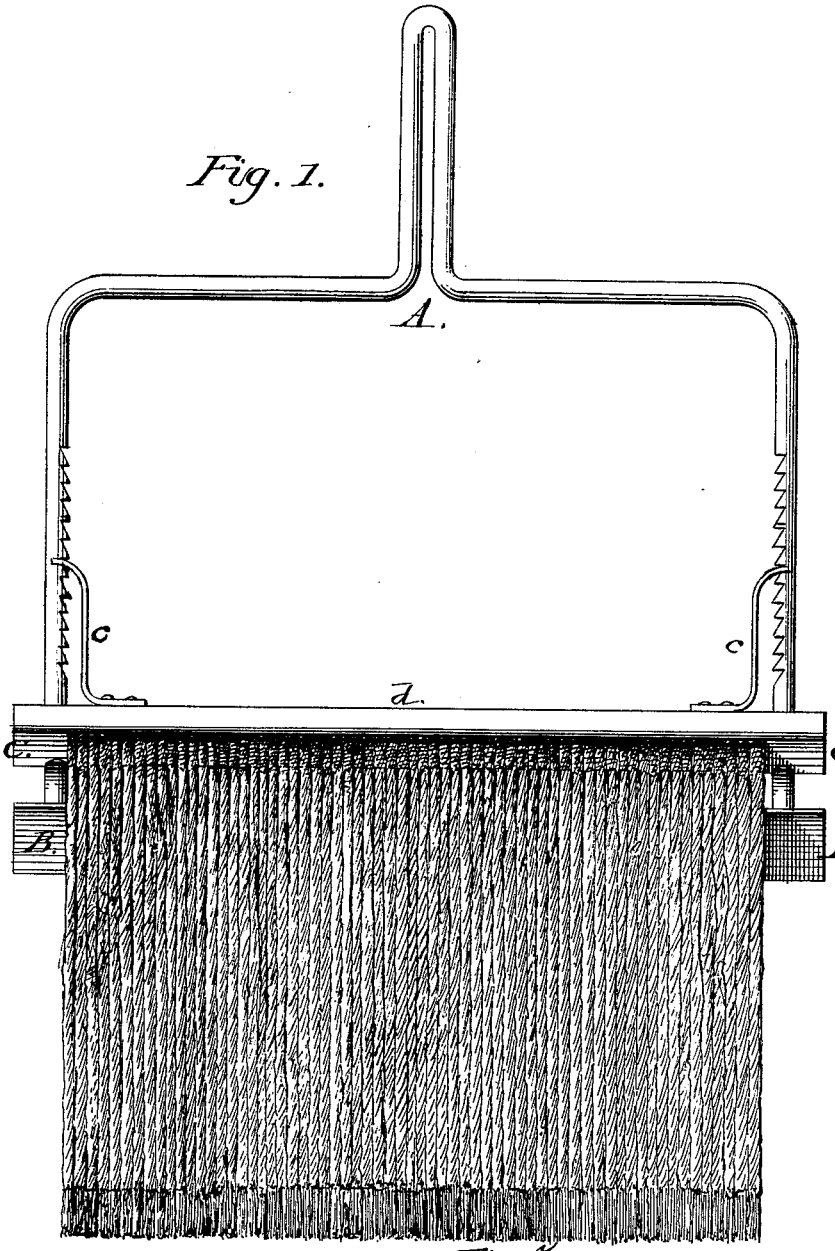

Fig. 2.

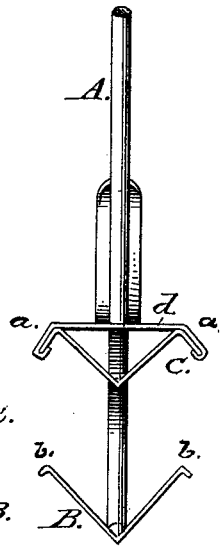

Fig. 3.

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