

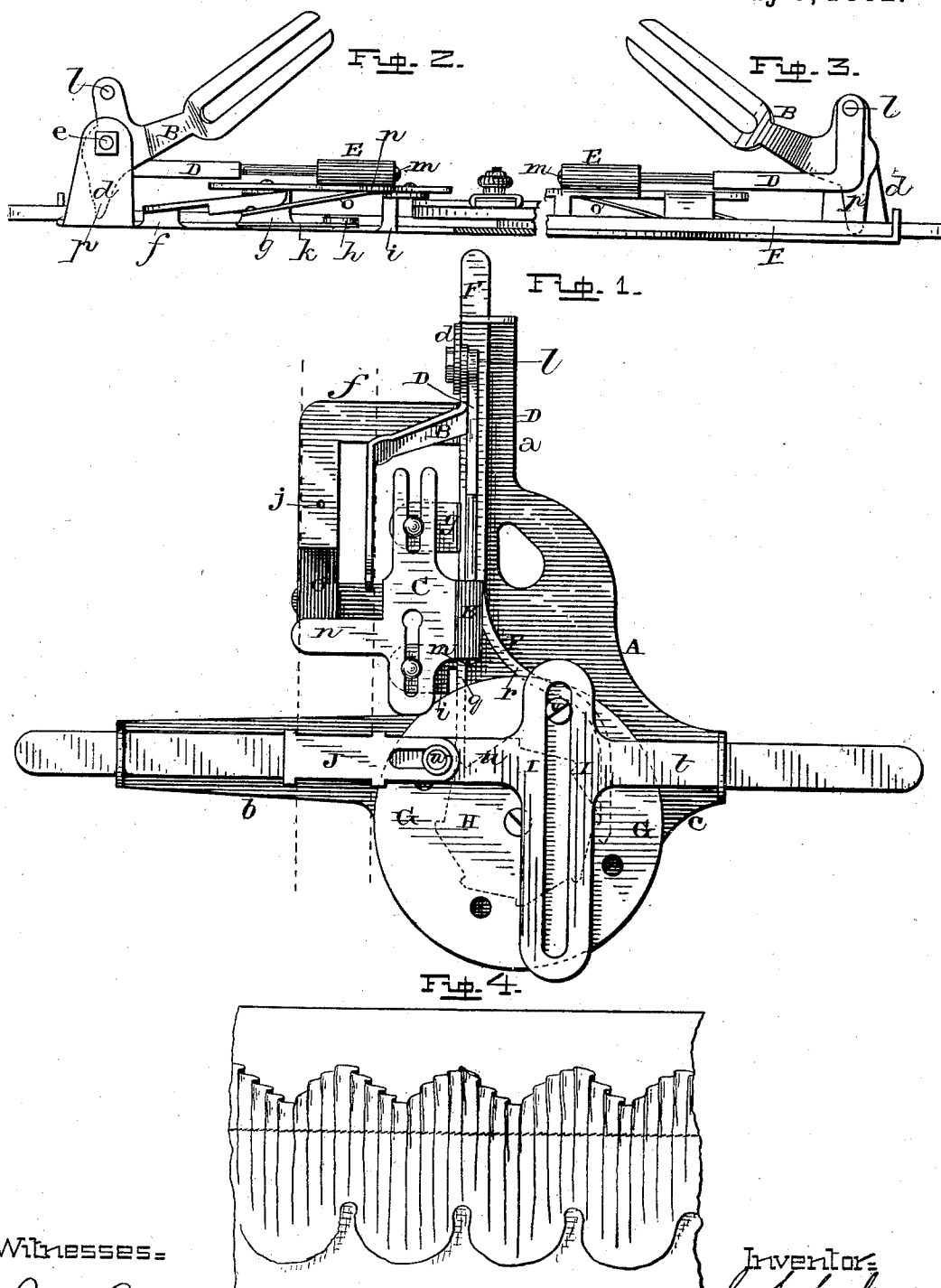
(Model.)

J. S. SACKETT.

RUFFLING OR PLAITING ATTACHMENT FOR SEWING MACHINES.

No. 257,519.

Patented May 9, 1882.



Witnesses.

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JOSEPH S. SACKETT, OF PLATTSBURG, NEW YORK.

RUFFLING OR PLAITING ATTACHMENT FOR SEWING-MACHINES.

SPECIFICATION forming part of Letters Patent No. 257,519, dated May 9, 1882.

Application filed August 26, 1881. (Model.)

To all whom it may concern:

Be it known that I, JOSEPH S. SACKETT, a citizen of the United States of America, residing at Plattsburg, in the county of Clinton and State of New York, have invented certain new and useful Improvements in Ruffling or Plaiting Attachments for Sewing-Machines; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to letters or figures of reference marked thereon, which form a part of this specification.

My invention relates to improvements in sewing-machine attachments by which plaiting and scalloping devices can be so readily and practically combined that work of great variety can be performed with ease and uniformity.

My invention consists in, first, the combination of a bell-crank lever, a double pawl, ratchet and crank wheel, a reciprocating head carrying a guide, and a ruffling device which is also operated by the bell-crank lever; second, the combination of the slide and the ruffling-blade with the lever, a rod for operating said slide, an arm, double pawl and ratchet-wheel, a crank-disk, a cross-head, and guide, all of which will be more fully described hereinafter. I attain these objects by the mechanism illustrated in the accompanying drawings, in which—

Figure 1 is a plan view of my invention complete. Figs. 2 and 3 are side elevations of the same, taken from opposite sides. Fig. 4 is a plan view of a sample of the work that is produced.

Similar letters refer to similar parts throughout the several views.

A is the main bed-plate of the combined devices, which is attached to the bed-plate of the machine by a thumb-screw or otherwise. It consists of a single metallic plate constructed so as to support each device in its respective position. The general form of this plate is that of a central arm, *a*, and two side arms, *b* and *c*. Near the extremity of the arm *a* rises a standard, *d*, to support the double bell-crank lever B, which is pivoted on the stud *e*, and imparts a common motion to both devices.

The plate A is located on the machine bed-plate, so that the needle set-screw shall be passed through the slot in the end of the crank-lever B, and so adjusted as to permit its free movement therein as the needle-bar rises and falls, care being taken that the arms *b* and *c* shall be in front of the needle and transverse to the line of feed of the machine. To the left of the arm *a*, and in front of the standard *d*, project the side arms, *f*, *g*, *h*, and *i*. The arm *f* is angular and extends forward, so as to come beneath the presser-foot of the machine. Its extremity is rounded underneath and is grooved transversely immediately in front of the hole *j*, through which the needle is designed to pass. The arms *g* and *i* are short, and are bent upward to form a support for the moving slide C, with which the ruffling-blade is connected. The arm *h* is intended to support the separator-plate *k*, which is, as usual, perforated or slotted to admit of the passage of the needle.

To the upper arm of the crank-lever B is pivoted, at *l*, the arm D, which is rectangular in form to give its movement direct motion when operated by the crank-lever B.

It is designed to give reciprocating motion to the slide C by its connection with the hollow cylinder or chamber E of that slide.

In the end of the hollow cylinder E opposite to which the arm D enters is an adjusting-screw, *m*, which limits the play of the arm D in its forward motion. The end of the arm D in the hollow cylinder is enlarged to meet a shoulder in the cylinder, so that in its backward stroke it shall carry the cylinder, and hence the slide C, along with it. Thus the reciprocating movement of the slide C is always equal to that of the arm D, less the play allowed in the hollow cylinder E. Projecting from the slide C is an arm, *n*, to which is attached the slotted ruffling-blade *o*, which is roughened or furcated, so as to catch and carry forward the fabric to be plaited, which is drawn between it and the slotted blade *k*. The lower arm, *p*, of the double bell-crank lever B is intended to operate the reciprocating double pawl F, which rests on the arm *a* and moves horizontally back and forth, alternating with the movement of and parallel with the slide C. It is held in place by a loop at the end of the arm *a* and by the crank-disk G. Its ob-

ject is to revolve the disk by acting upon the ratchet-wheel H, secured to the under side of the disk, one of its arms, *g*, being made to push against and the other arm, *r*, to draw upon the teeth of the ratchet-wheel H on opposite sides as it moves forward and back. The crank-disk G, which rests upon and is attached to the ratchet-wheel H, is pivoted on the main bed-plate A a little to the right and in front of the plaiter.

I is a slotted cross-head with arms *t* and *u* extending to the right and left and at right angles with it. It rests upon the face of the disk G, and is operated by the adjustable crank-pin *v*, which moves in the slot as the disk revolves, thus giving to the arms *t* and *u*, held in place by loops near their extremities, an intermittent motion from right to left, and vice versa.

To regulate the transverse movement of the arms *t* and *u* of the cross-head I, the position of the pin *v* can be readily changed with reference to the center of the disk by transferring the pin from one to another of the holes which are made in the disk G at different distances from the center.

A movable slotted guide, J, is placed on the left arm, *u*, and is held in position by the set-screw *w*. This arm can be graduated for convenience in setting the guide.

In operation the plate A is attached to the bed-plate of the machine in the manner and position described. The fabric to be scalloped and plaited is drawn through the guide J and carried between the ruffling-blade *o* and the separator-blade *k*. The crank-pin *v* in the disk G should then be adjusted in one of the holes provided in the disk at a greater or less distance from the center, according to the depth and shape of the scallop desired. As the transverse movement of the arm *u* varies with the change in the size of the circle described by the pin *v* in the revolving disk G, so will the depth of the scallop vary. The design of the guide J is to change the depth of the scallop without altering its shape, according as it is moved to the right or left on the

arm *u*. By moving the guide J to the left the depth of the scallop is increased, and to the right it is decreased. The movement of the double bell-crank lever B, caused by the perpendicular motion of the needle-bar, operates both the ruffling-blade *o* of the plaiter through the arm D and also the guide J through the disk G and the double pawl F, so that as the fabric is caught, carried forward, and plaited for the needle by the combined action of the ruffling-blade *o* and the grooved arm *f*, the arm *u*, carrying the fabric in the guide J, continues each intermittent motion to the right as each plait of one-half of the scallop is formed, and to the left until the other half of the scallop is completed. The number of the plaits is always equal to the number of teeth in the ratchet-wheel H. The scalloper having been properly adjusted invariably guides automatically the fabric, so that scallops of the desired number of plaits, shape, and depth are carried by the plaiter under the needle with the utmost exactness and regularity.

No claim is made in this application to the bell-crank lever, the double pawl, ratchet-wheel, cross-head, and guide, for all these parts form the subject of a separate and distinct application filed by me August 24, 1881, serial No. 40,587.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

1. The combination of a bell-crank lever, a double pawl, ratchet and crank wheel, a reciprocating head carrying a guide, and a ruffling device which is also operated by the bell-crank lever, substantially as shown.

2. The combination, with the slide C and the ruffling-blade, of the lever B, a rod for operating the said slide, arm *p*, double pawl F, ratchet-wheel H, crank-disk G, cross-head I, and guide J, substantially as described.

In testimony whereof I do affix my signature in presence of two witnesses.

JOSEPH S. SACKETT.

Witnesses:

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