

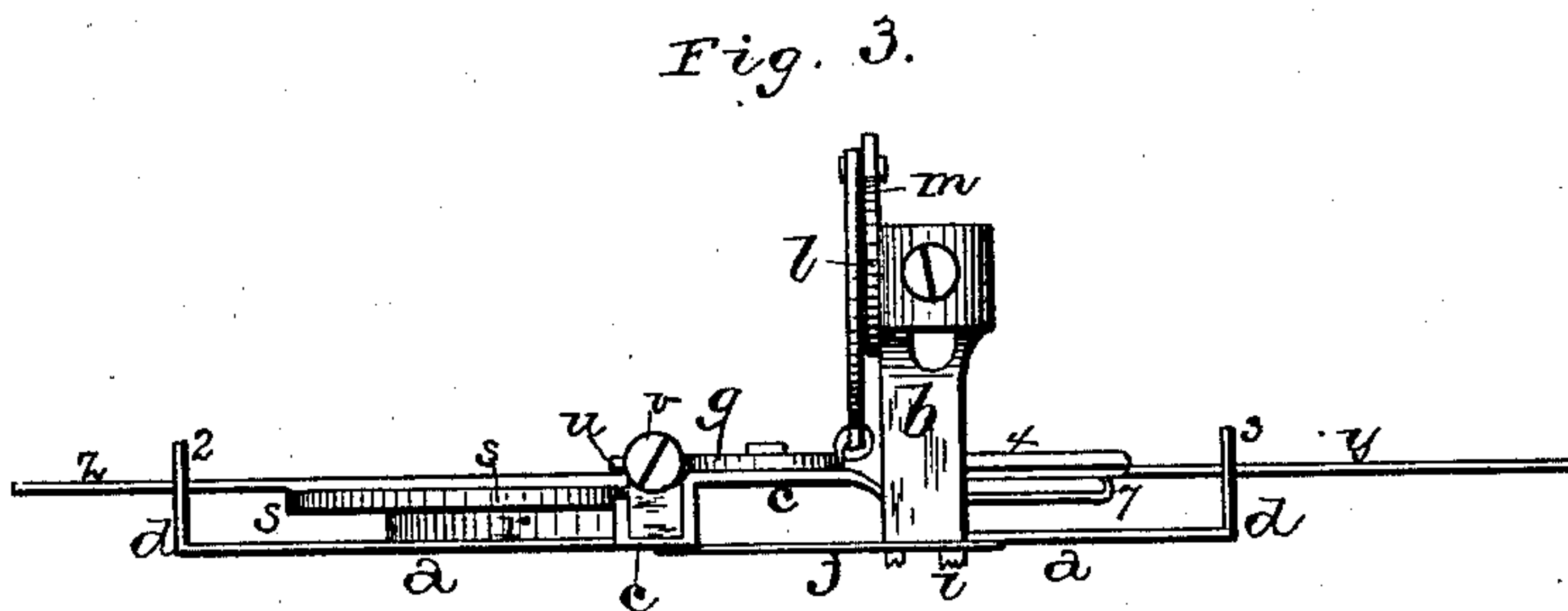
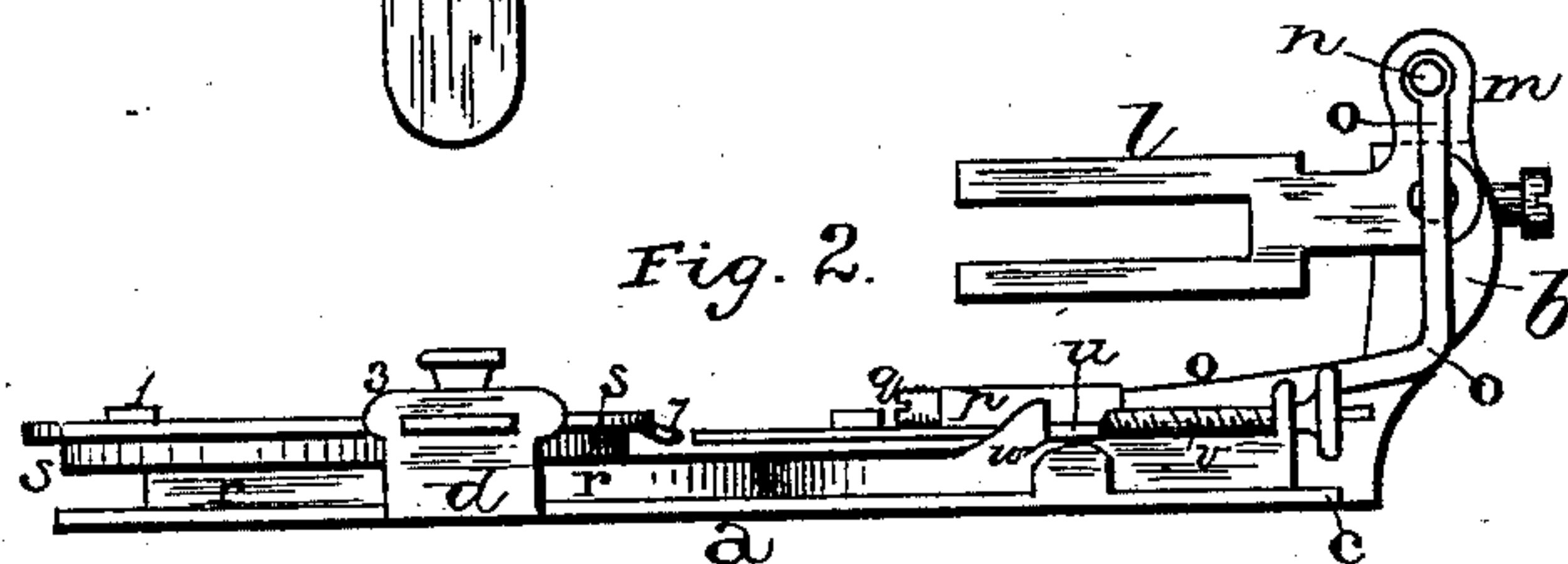
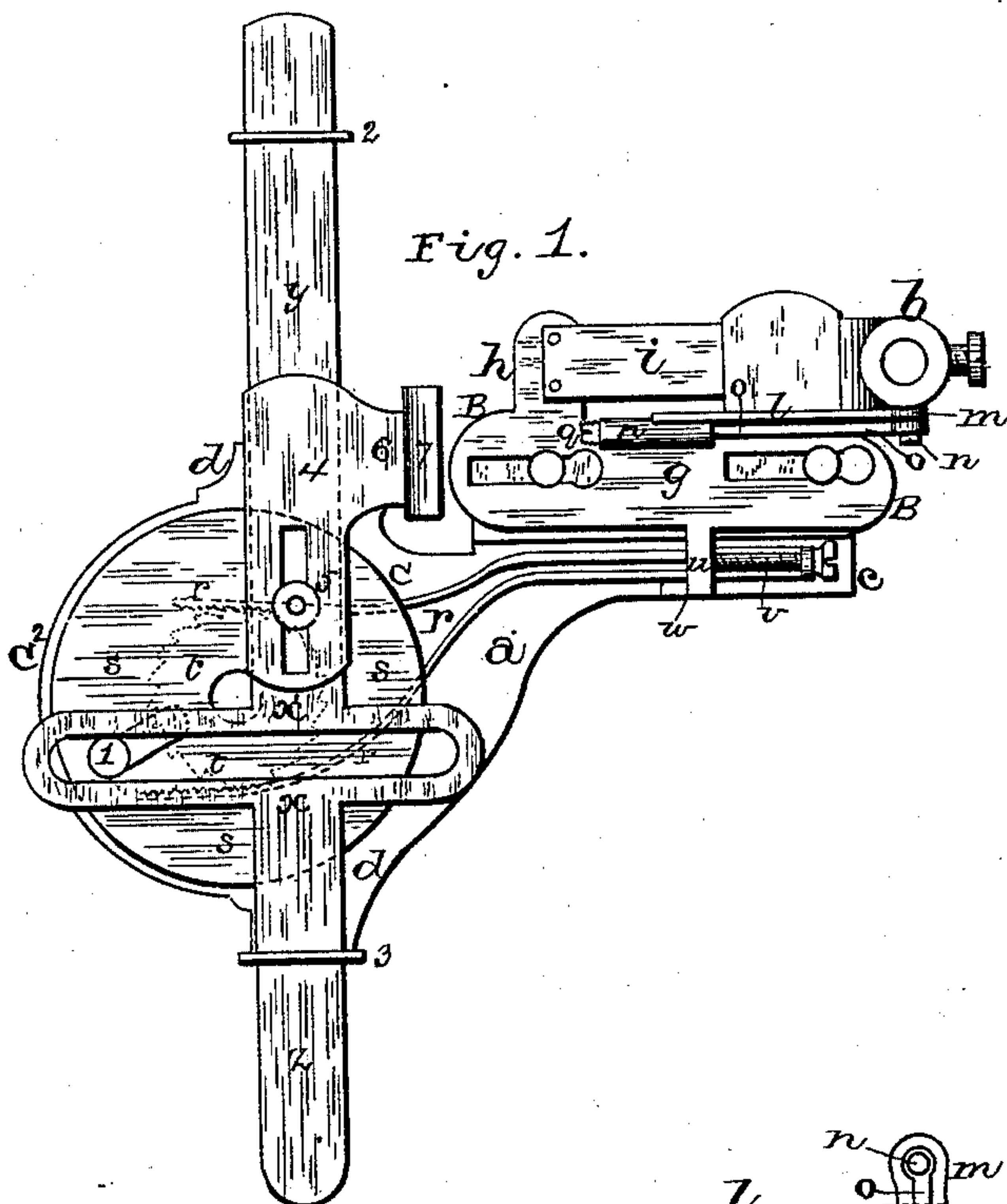
(No Model.)

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COMBINED PLAITING AND SCALLOPING DEVICE.

No. 279,820.

Patented June 19, 1883..



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COMBINED PLAITING AND SCALLOPING DEVICE.

SPECIFICATION forming part of Letters Patent No. 279,820, dated June 19, 1883.

Application filed June 20, 1882. (No 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 a Combined Plaiting and Scalloping Device; 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.

The first part of my invention relates to the combination of the two devices on a single bed-plate in such a manner that they may be most conveniently attached to the machine, and the second to so arrange the parts that both may be readily operated by a single movement, thereby obtaining a uniformity of motion common to both.

Figure 1 is a plan view of my invention. Fig. 2 is an edge view of the same. Fig. 3 is an end view.

a is the main bed-plate of the combined device. It is so made as to be readily attached to the machine by means of the presser-foot *b*. This bed-plate has the two arms or extensions *c* and *d*, which extend at right angles to each other. A portion of the extension *c* is raised upward next to the presser-foot, as shown in Fig. 3, so that it will pass immediately over the presser-foot, to which it is attached. The extension *d* forms the support for the plaiting devices. This device consists of the moving slide *g*, with an arm *h*, extending forward in front of the presser-foot, to which is attached the crimping-blade or dentated feed-plate *i*, of which it is the support. Directly beneath the blade *i* is the slotted separating-blade, which is supported by an arm to which it is attached, and which is an extension of the bed-plate *a*.

To the upper part of the presser-foot *b* is pivoted the slotted bell-crank lever *l*, with an arm, *m*, extending upward, to which is pivoted, at *n*, the rectangular pendulum-arm *o*, through which a horizontal movement is communicated to the plaiting device B, as well as to the scalloping device C². It gives a recip-

rocating motion to the slide *g* by its connection with and movement in the cylinder or chamber *p* of the slide. In the outer end of the cylinder *p* is an adjusting-screw, *q*, to regulate the play of the arm *o* in its forward motion. As the end of the arm *o* is enlarged to meet a shoulder in the cylinder, it carries in its backward stroke the cylinder and the slide, of which it is a part, along with it. Thus the reciprocating movement of the slide *g* is always equal to that of the arm *o*, less the play allowed in the cylinder *p*.

Upon the bed-plate *d* rests the scalloping device C², which consists of a double pawl, *r*, operating a crank-disk, *s*, through a ratchet-wheel, *t*, to which it is connected. To the double pawl *r* is communicated a reciprocating horizontal motion on the plate *c* by means of the arm *u*, which projects from the slide *g*, the extent of this movement being regulated by means of the adjustable screw *v*, which limits the size of the slot or groove *w*, in which the arm plays. The distance which the pawl moves is always equal to that of the slide *g*, less the play allowed the arm in the slot *w*. The object of the pawl is to revolve the ratchet-wheel *t*, carrying the crank-disk *s*, one of the arms being designed to push against and the other to draw upon the teeth of the ratchet-wheel on opposite sides as it moves forward and back. The ratchet-wheel, with crank-disk *s*, is pivoted on the main bed-plate *a*. A little to the right and in front of the plaiter is a slotted cross-head, *x*, with arms *y* and *z*, extending at right angles to the right and left. It rests upon the face of the disk *s*, and is operated by the adjustable pivot 1, which moves in the slot of the cross-head *x* as the disk revolves, thus giving to the arms *y* and *z*, held in place by loops near the extremities 2 and 3 of the extension *d*, an intermittent motion from left to right, and vice versa.

To regulate the transverse movement of the arms *y* and *z* of the cross-head *x*, the position of the pivot 1 can be readily changed with reference to the center of the disk.

A movable slotted guide, 4, is placed on the arm *y*, and is held in position by the set-burr 5. From the guide toward the needle projects an arm, 6, at the extremity of which is a spring-loop, 7, which receives the material to

be scalloped and carries it back and forth from side to side as the arm *y* moves. The guide can be graduated for convenience in setting.

In operation, the plate *c* being attached to the presser-bar of the machine in the manner and position described, the fabric to be scalloped and plaited is drawn through the spring-loop in the guide 4, and thence passed between the feed-plate *i* and the slotted separating-blade *j*. Then adjust the pivot 1 to the disk *s*, and at a greater or less distance from its center, according to the depth and shape of the scallop desired. The depth of the scallop will vary with the extent of the transverse movement of the arm *y*, and this is greater or less, according to the increase or decrease of the diameter of the circle circumscribed by the pivot. The object of the guide 4 is to change the depth of the scallop without altering its shape. By moving it on the arm *y* to the left the depth of the scallop is increased, and to the right it is decreased. The nearer to the needle the fabric is brought by the spring-loop 7 the greater will be the size of the scallop, if the movement of the cross-head remain the same. The movement of the double bell-crank *l*, caused by the perpendicular motion of the needle-bar, operates both the crimping or feed plate *i* of the plaiter through the arm, and also the guide 4 through the disk *s*, and the double pawl *r*, its action upon the pawl being regulated by the adjustable screw *v*, so that as the fabric is caught, carried forward, and plaited for the needle by the action of the crimping or feed plate *i*, the arm *y*, carrying the fabric in the guide 4, 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 the teeth in the ratchet-wheel *t*,

whenever, by the movement of the pawl *r* forward or back, the ratchet-wheel *t* revolves over a space equal to that taken up by a single ratchet. When the pawl moves over a space equal to two of the ratchets, the number of plaits in each scallop will be equal to one-half the number of the ratchets. As the space, through which the pawl *r* carries the ratchet-wheel *t*, increases, the number of plaits in each scallop will correspondingly decrease. By this simple and practical combination of my devices a uniform scallop-plaiting can be produced, and at the same time it is sewed to any material desired without the exercise of any more care or effort than is required in ordinary sewing. The scalloper, having been properly adjusted, guides the fabric automatically, so that the scallops of the desired number of plaits, shape, and depth are invariably carried by the plaiter under the needle with the utmost exactness, reliability, and regularity.

This invention is intended as an improvement upon Patents No. 257,518 and No. 257,519 heretofore granted to me.

I claim—

1. The combination of the presser-foot *b*, lever *l*, pivoted thereon, arm *o*, and slide *g*, having feed-plate *i* secured thereto, and provided with the projection *u* for operating the scalloping mechanism, substantially as shown.

2. The combination of the slide *g*, provided with the arm *u*, the double pawl, and the regulating-screw *v*, substantially as set forth.

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

JOSEPH S. SACKETT.

Witnesses:

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