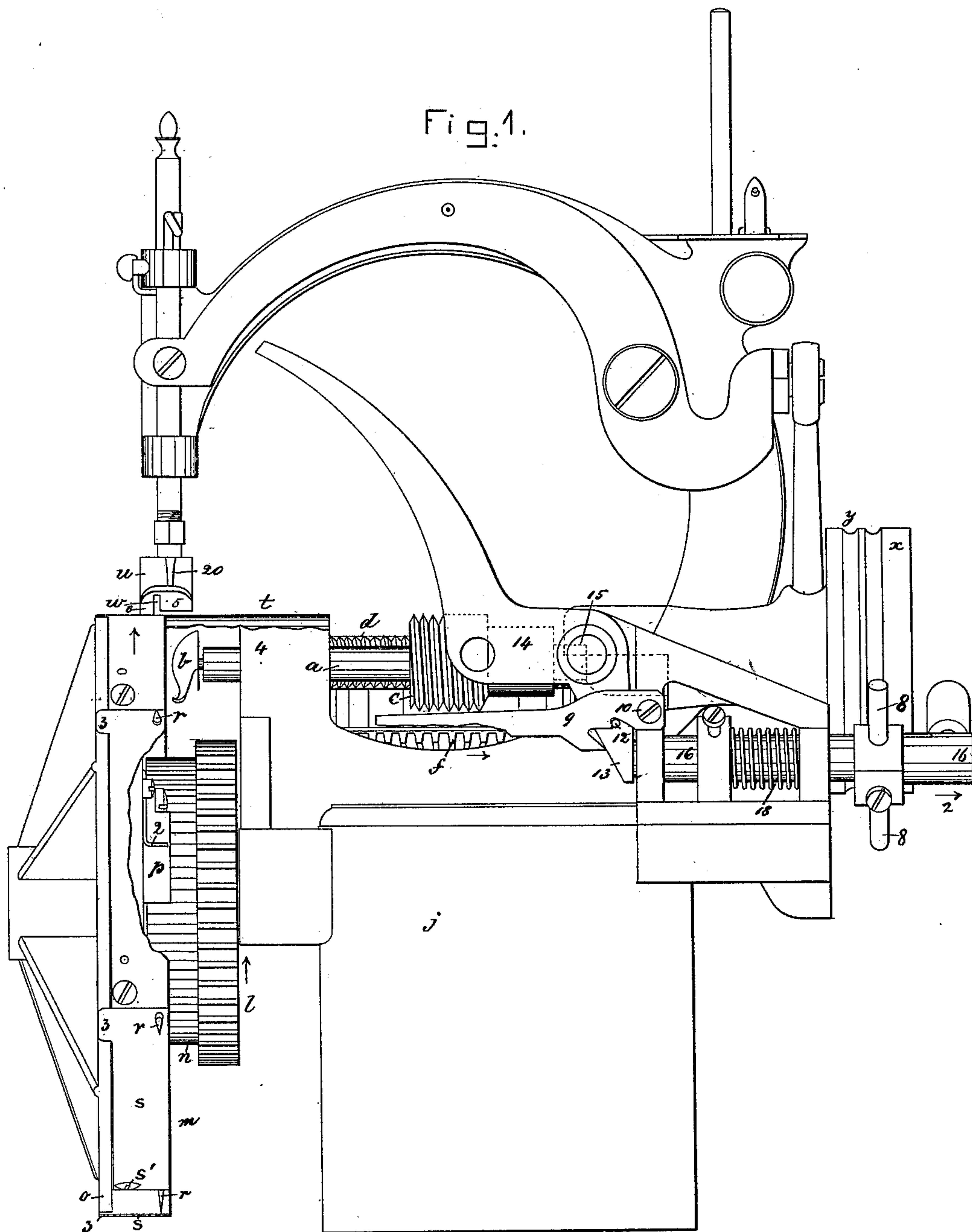


A. S. DINSMORE.  
Sewing Machine.

No. 231,155.

Patented Aug. 17, 1880.



Witnesses.

Lawrence P. Connor.

Jos. P. Livermore

Inventor.

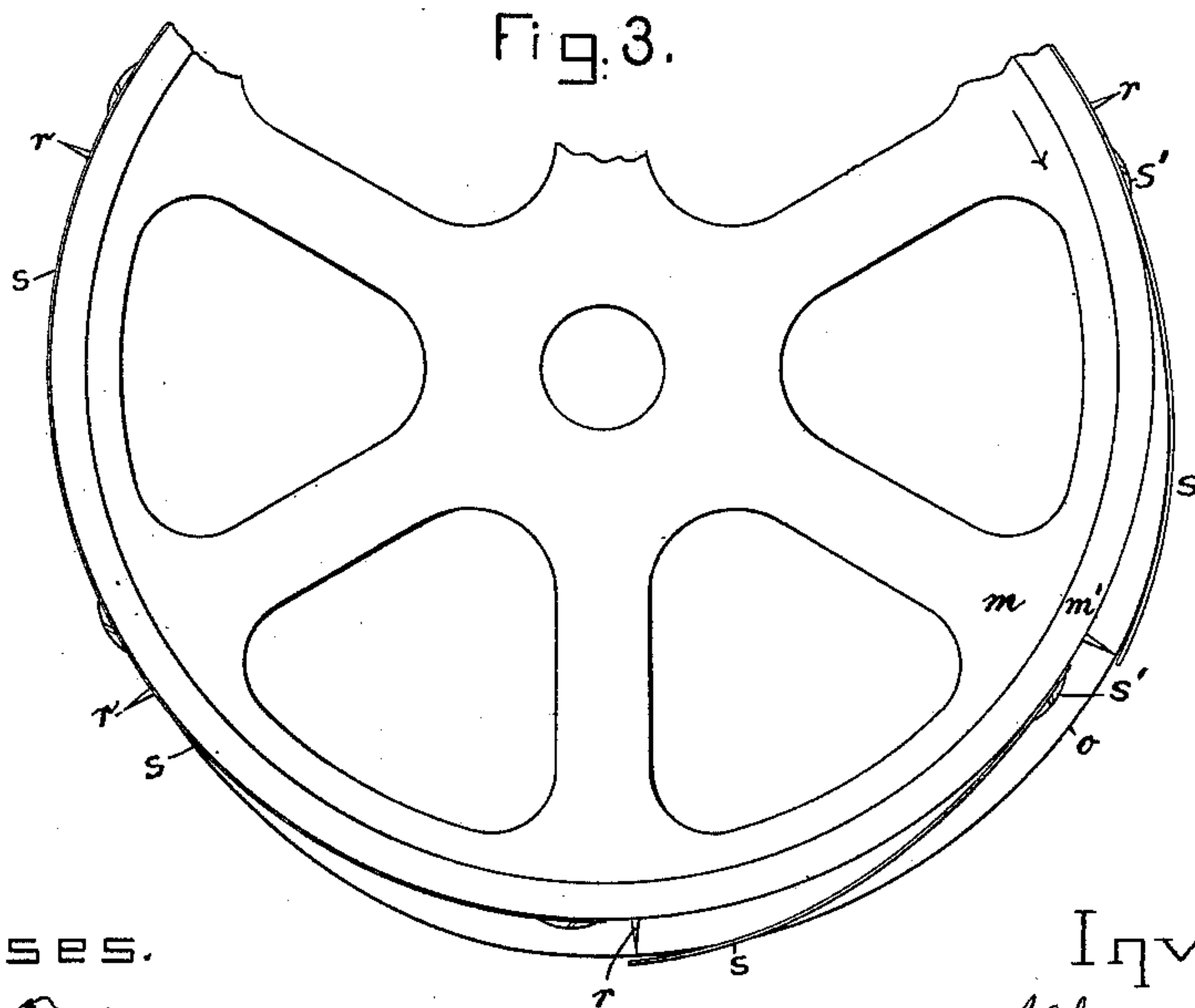
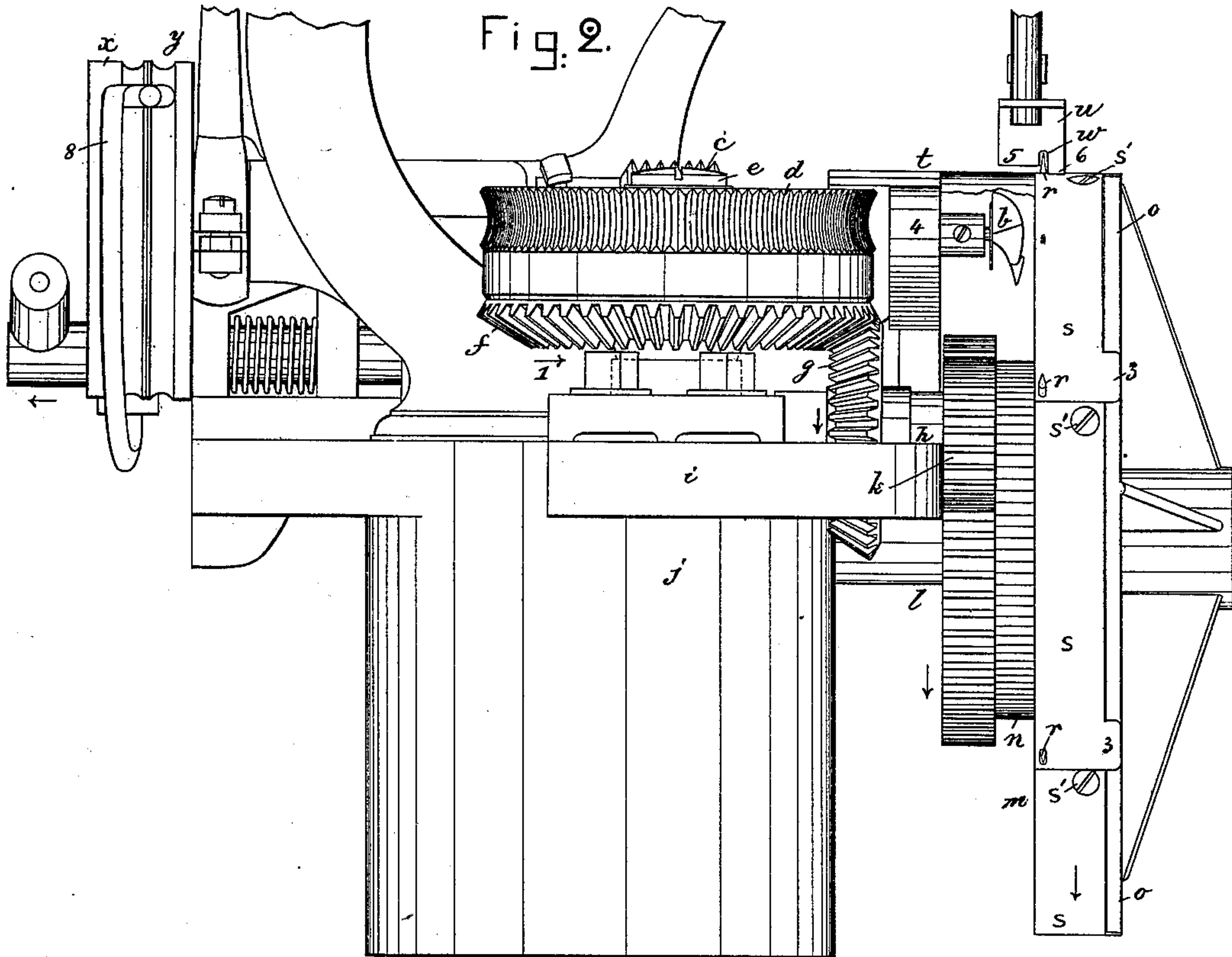
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# UNITED STATES PATENT OFFICE.

ALFRED S. DINSMORE, OF BOSTON, MASSACHUSETTS.

## SEWING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 231,155, dated August 17, 1880.

Application filed June 9, 1879.

*To all whom it may concern:*

Be it known that I, ALFRED S. DINSMORE, of Boston, county of Suffolk, State of Massachusetts, have invented an Improvement in Sewing-Machines, of which the following description, in connection with the accompanying drawings, is a specification.

This invention in sewing-machines relates chiefly to that class of machines employed for uniting the ends of pieces of fabric to be dyed, printed, &c., in mills, and is an improvement, in the particulars hereinafter specified and claimed, on the machine described in United States Patent granted to me March 9, 1875, and numbered 160,512, to which reference may be had.

It may here be remarked that in that machine the baster-wheel, or the wheel which holds and carries the fabric past the needle, was adapted to turn about a vertical axis, and the hook and shaft of the sewing-machine were placed in vertical position; but in this my present machine the baster-wheel, provided with the usual pins, is arranged to turn about a horizontal axis or stud carried by a standard which supports the base of the sewing-machine, the said standard also supporting a vertical axis, upon which is placed a gear or gears adapted to so connect the hook-shaft of the machine and the baster-wheel that they will always be moved together regularly and in unison.

This baster-wheel is herein shown with its surface arranged to form a horizontal continuance of the usual supporting-surface for the fabric, and it is provided with a series of pins and strippers actuated by a stationary cam-plate arranged at one side of the said wheel, one part of the presser-foot bearing over the wheel and the other over the supporting-plate.

This form of machine is more in appearance like an ordinary sewing-machine, and takes up less room, and may be made more cheaply, than the machine having the baster-wheel placed to turn about a vertical pivot.

Figure 1 represents, in side elevation, a sewing-machine embodying these my present improvements, a part of the work-support and baster-wheel being broken away; Fig. 2, a partial view of the opposite side of the machine,

and Fig. 3 a partial inner side view of the baster-wheel, and the stationary cam or disk to lift the stripping-plates.

The sewing-machine herein shown is the well-known Willcox & Gibbs single-thread machine, employing the regular hook-shaft *a* and rotary hook *b*.

In this instance of my invention I have placed upon the said hook-shaft a worm, *c*, which engages a worm-toothed gear, *d*, mounted on a stud, *e*, and connected with a bevel-gear, *f*, the said gear engaging a bevel-gear, *g*, on a short shaft having its bearing at *h* on the frame-work *i*, which projects from the standard *j*, the said shaft having at its opposite end the pinion *k*, which engages and drives the toothed gear *l*, loosely placed upon the stud or axis which supports the baster-wheel *m*, the same stud also holding the loose ratchet-toothed gear *n* and the fixed cam plate or wheel *o*.

At the rear of the wheel *m*, and pivoted upon it, are one or more pawls, *p*, the free ends of which are held in engagement with the teeth of the ratchet-gear *n* by suitable springs 2, the teeth of the ratchet-gear being inclined in such direction that when the gear *f* is driven in the direction of the arrow 1 the ratchet-wheel teeth, acting on the pawls, will turn the baster-wheel in the direction of the arrows on said baster-wheel. Under this construction it is obvious the baster-wheel may be turned by hand in the same direction without actuating its usual gearing, for in so doing the pawls will snap over the teeth of the ratchet-gear *n*. This is of advantage when applying a piece of fabric to the baster-wheel, permitting the operator to turn the wheel freely in its forward direction to bring the end of the material in proper position for the sewing to be commenced.

The baster-wheel has its rim *m'* provided with a series of sharp pins, *r*, to enter and carry along the two thicknesses of fabric to be sewed together, and also a series of steel-spring stripping-plates, *s*, connected with the said rim by screws *s'*, each of the said stripping-plates having an opening for the passage of a pin, *r*, and a lifting-projection, 3, to bear upon the edge of the cam-shaped stationary wheel or disk *o*, the said cam-wheel acting to lift the said stripping-plates as the projection 3 rides



over the lower edge of the said cam wheel or disk, as shown in Figs. 1 and 3, and strip the fabric from the said pins.

Upon the frame part 4, common to the Willcox & Gibbs machine, by suitable screws, I have attached a work-support, *t*, the front edges of which I have bent or curved to conform with the curve of the baster-wheel, the said plate being preferably long enough to extend, say, one-third the distance about the periphery of the said wheel.

The curved front edge of the supporting-plate is flush with the periphery of the baster-wheel and its stripper-springs when the said springs are close down upon the said wheel, as shown in Figs. 1 and 2.

The presser-foot *u* has its under surface in two planes, the part 6 extending over the fabric which rests upon the wheel, the part 5 (shown slightly higher than the part 6) extending over the support *t*, the pins *r* passing through the long slot *w* in the said foot.

The shaft *a* has the fast pulley *x* and the loose pulley *y*, to be driven by a belt, as usual.

The driving-belt will be under the control of a belt-shipper, 8, and the belt will be held upon the fast pulley when the shipper-holder 9 (shown as a hook pivoted at 10) is permitted to drop, as in Fig. 1, and engage the pin 12 on the short arm 13 of the shipper-lever 14, pivoted at 15, the short end of the said lever then acting to hold the shipper-rod 16 pressed outward in the direction of the arrow 2; but when the hook is lifted the spring 18 on the said rod moves it in the reverse direction and throws the belt upon the loose pulley.

The baster or feeding wheel is driven continuously, whereas the feeding-wheels common to so-called "family machines" have an intermitting movement. The principal portion of the said feeding-wheel is outside of the presser-foot and the supporting-plate does not inclose it.

To start the machine it is only necessary to depress the long end of the shipper-lever to

move the rod 16 backward, and the holder 9 will catch the pin of the lever and retain it, as in Fig. 1.

The needle 20 is of usual eye-pointed form and carries a thread, all as usual.

The shaft which carries the bevel-pinion *g* and pinion *k* for communicating motion to the baster-wheel from the main or hook-shaft may be extended backward, and instead of the bevel-pinion *g*, I may substitute a belt-pulley and drive it from the same source from which I drive the fast and loose pulley, or from a suitable pulley on the hook-shaft. In either event I would then omit the parts *c d f*.

Instead of the pawl-and-ratchet mechanism to hold the baster-wheel upon the shaft, I may employ any usual friction devices which shall have sufficient power to cause the wheel to travel with the shaft when the machine is being run to sew.

I claim—

1. The continuously-driven baster or feed wheel, its attached stripping-plates, a cam-disk to operate said plates, and a rotary hook and its shaft, in combination with gearing for connecting said baster or feed wheel and rotary hook, substantially as shown and described.

2. The baster or feeding wheel and its attached stripping-plates, combined with the cam-disk to lift the said plates, substantially as described.

3. The combination of a rod, 16, having belt-shipping device thereon, spring 18, lever 14, having depending arm 13, provided with pin 12, with a pivoted shipper-holder, 9, adapted to engage said lever, substantially as shown and described.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

ALFRED S. DINSMORE.

Witnesses:

G. W. GREGORY,

JOS. P. LIVERMORE.