DAVID A. CONSTABLE & J. F. RIGGS.

Improvement in Sewing-Machine Motors.

No. 115,436. Patented May 30, 1871.

Fig. 1.

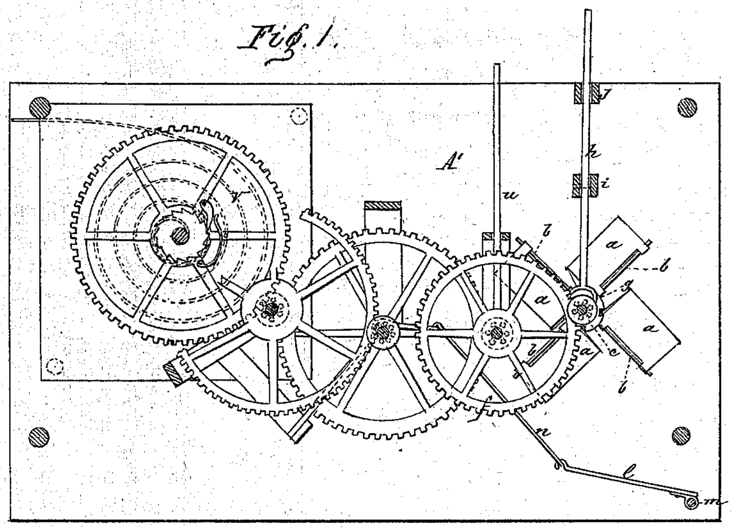
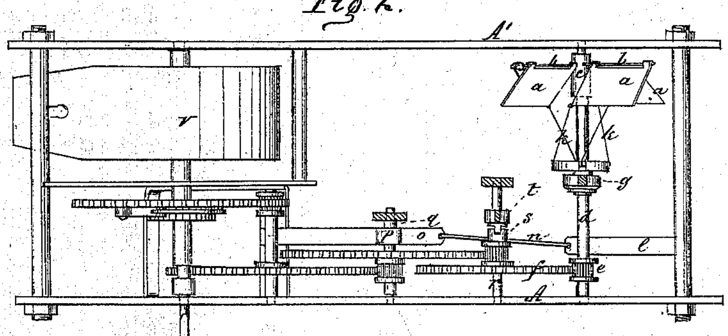


Fig. 2.



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UNITED STATES PATENT OFFICE.

DAVID A. CONSTABLE AND JOHN F. RIGGS, OF ST. JOSEPH, MISSOURI; SAID RIGGS ASSIGNS HIS RIGHT TO SAID CONSTABLE.

IMPROVEMENT IN SEWING-MACHINE MOTORS.

Specification forming part of Letters Patent No. 115,436, dated May 30, 1871.

To all whom it may concern:

Be it known that we, DAVID A. CONSTABLE and JOHN F. RIGGS, of St. Joseph, in the county of Buchanan and State of Missouri, have invented a new and Improved Sewing-Machine Motor; and we do hereby declare the following to be a full, clear, and exact description of the same, reference being had to the accompanying drawing making a part of this specification, in which—

Figure 1 is a sectional elevation, and Fig. 2 is a top view.

This invention has for its object to either accelerate or retard the speed of a sewing-machine motor by means of blades hinged to radial arms which project from a hub that is driven by the motor, the retardation of the speed of the latter being effected by opening the blades so as to cause them to present more of their surface to the air, and thus produce a greater resistance, and the acceleration of speed being effected by closing the blades so as to diminish that part of their surface against which the air acts.

Referring to the drawing, *a* are the blades aforesaid, they being hinged to arms *b* that project radially from a hub, *c*, which is affixed upon a shaft, *d*, that is mounted in the shield-plates A A′. A pinion, *e*, on the shaft *d* gears with the last cog-wheel *f* of the motor mechanism. A collar, *g*, slides on the shaft *d*, said collar being operated by a forked lever, *h*, that is pivoted in a horizontal stud, *i*, and inclosed by a slotted stud, *j*, both of which extend inwardly from the plate A. Rods *k* connect the collar *g* with the outer edges of the blades *a*, so that by vibrating the lever *h* the blades may be opened or closed for the purpose of either retarding or accelerating the speed of the motor, as desired. A treadle, *l*, pivoted at one end to a cross-bar, *m*, placed at the lower corners of the plates A A′, is connected at its other extremity by a rod, *n*, with a spring-brake, *o*, which is constructed with a concavity, *p*, that, when the brake is free, sits above the axle *q* of the third gear of the motor mechanism. By depressing the treadle *l* the brake *o* is brought down into contact with the axle *q*, for the purpose of retarding the rotation of the same. On releasing the treadle the brake flies up of itself. This apparatus is used for temporarily slowing the speed of the machine when turning the corners of the work, or whenever it may be desired. On the axle *r* of the wheel *f* is a fixed socket, *s*, and on the same axle is a sliding clutch, *t*, operated by a lever, *u*, said clutch being so connected with said lever as to be thereby prevented from turning with the axle *r*. Consequently, when the clutch *t* is slid into connection with the socket *s*, the wheel *f* and the whole motor mechanism are stopped. On disconnecting the socket and clutch the motor starts again by the operation of the spring *v*.

Having thus described our invention, what we claim as new, and desire to secure by Letters Patent, is—

1. The blades *a*, hinged and arranged in connection with the opening and closing apparatus, and combined with the motor mechanism for sewing, &c., as shown and described, whereby they are adapted to regulate the speed of the machine, as set forth.

2. The combination of the spring-brake *o*, link *n*, and treadle *l* with a motor mechanism, as described.

3. The apparatus herein described, constructed, arranged, and operating as explained.

DAVID A. CONSTABLE.
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Witnesses:
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