

P. CAVALIER.  
SPRING MOTOR.

No. 195,795.

Patented Oct. 2, 1877.

Fig. 1.

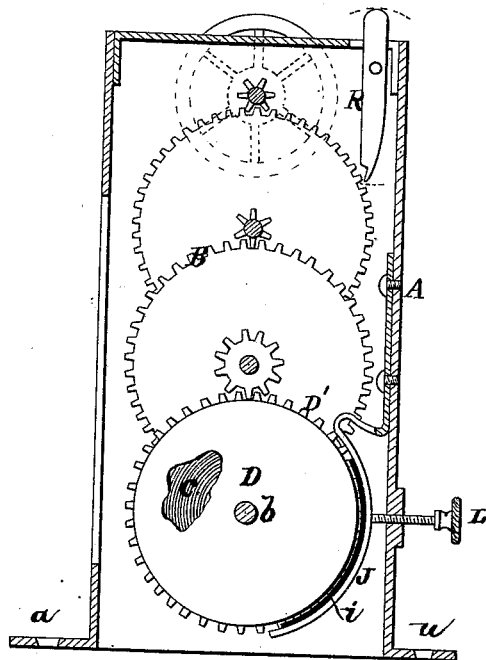
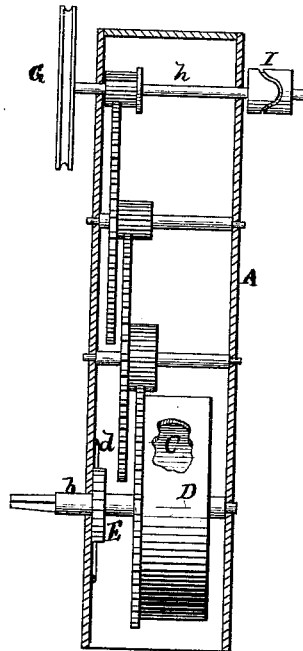


Fig. 2.



WITNESSES

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# UNITED STATES PATENT OFFICE.

PETER CAVALIER, OF YANKTON, DAKOTA TERRITORY.

## IMPROVEMENT IN SPRING-MOTORS.

Specification forming part of Letters Patent No. **195,795**, dated October 2, 1877; application filed June 26, 1877.

### *To all whom it may concern:*

Be it known that I, PETER CAVALIER, of Yankton, in the county of Yankton, and in the Territory of Dakota, have invented certain new and useful Improvements in Attachment for Sewing-Machine; 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.

The nature of my invention consists in the construction and arrangement of an attachment for sewing-machines for the purpose of running the sewing-machine by spring-power, as will be hereinafter more fully set forth.

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 drawing, in which—

Figure 1 is a side elevation of my invention with the side of the casing removed to show the interior mechanism. Fig. 2 is a transverse vertical section of the same.

A represents a case, of any suitable dimensions, provided at the bottom with projecting perforated ears or flanges *a a* for fastening to the floor or to the bottom of the machine.

Within this case is a train of gearing, B, operated by means of a coiled spring, C, inclosed within a drum, D, one end of said spring being attached to the drum, and the other end to the central shaft *b*, on which the drum is placed.

This shaft *b* forms the winding-arbor, and is provided with a ratchet-wheel, E, into which takes a pawl, *d*, to prevent the shaft from rotating with the spring. The shaft being thus held stationary, the expansion of the spring C rotates the drum D, and, this drum being formed on or provided with a cog-wheel, D', which forms the first wheel in the train, the gearing is thereby kept in motion.

By the arrangement of the shaft *b*, the drum, spring, ratchet, and pawl, as described, the

spring may, if necessary, be wound up even while the machine is running.

*h* is the last shaft in the train, and this shaft projects through both sides at the top of the casing A, and is upon one end provided with a fly-wheel, G, while upon the other end is attached a cam, I, for connecting with the sewing-machine; or, rather, said shaft *h* forms the driving-shaft of the sewing-machine with the driving-cam thereon.

This device may be attached to any kind of sewing-machine. Where the machine is not run by cam, a cog-wheel may be used instead of the cam I.

Within the casing A is attached an S-shaped spring, J, the free end of which is on its concave side lined with leather, rubber, or other suitable lining, *i*, and runs opposite the drum D. This spring is operated by a thumb-screw, L, through the front of the case, and acts as a brake to regulate the speed of the machine.

At the top, within the case, is pivoted a dog, R, one end of which projects up through the case. This dog is intended for use in stopping the machine, as by pulling it back its lower end catches in the cogs of the upper wheel and instantly stops the machine.

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

In combination with a train of gearing arranged on shafts, one above the other, and operated by a coiled spring, the vertical casing, provided with ears at its bottom, slotted at the top, and provided with a pivoted bar, R, which extends through the top of the casing and acts as a stop to control the gearing, as set forth.

In testimony that I claim the foregoing I have hereunto set my hand and seal this 16th day of June, 1877.

PETER CAVALIER. [L. s.]

Witnesses:

W. F. ELDRIDGE,  
JNO. O. BATES.