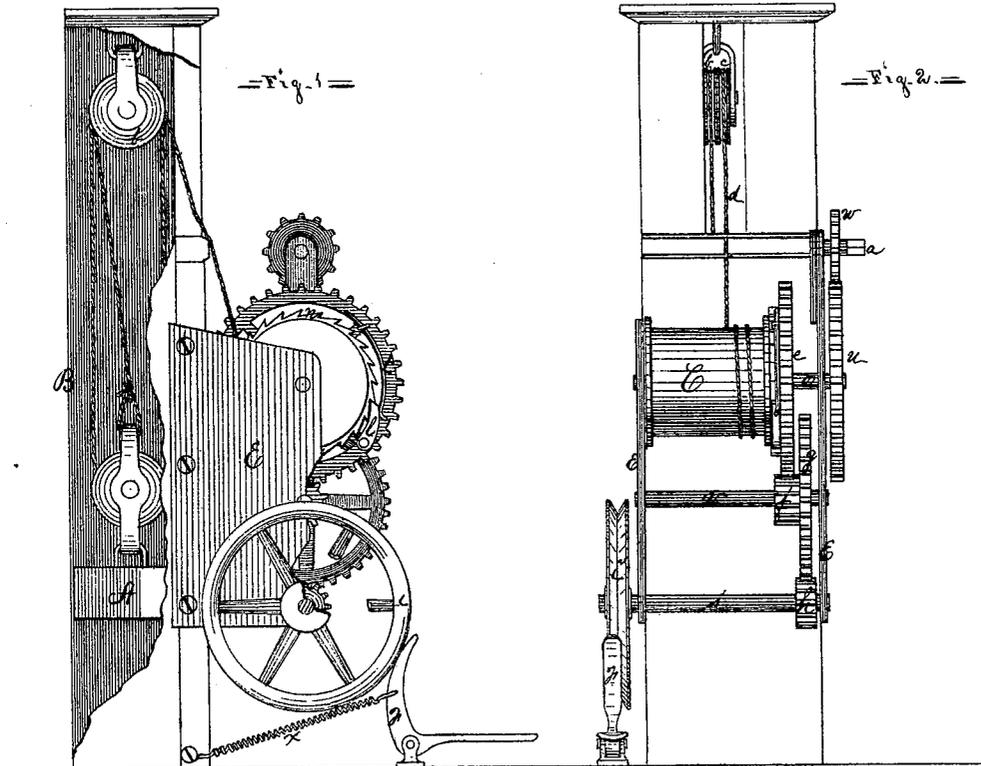


A. BOUCHARD.

Improvement in Motive-Power for Sewing-Machines.

No. 126,441.

Patented May 7, 1872.



Witnesses

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ADOLPH BOUCHARD, OF NEW ORLEANS, LOUISIANA.

IMPROVEMENT IN MOTIVE-POWER FOR SEWING-MACHINES.

Specification forming part of Letters Patent No. 126,441, dated May 7, 1872.

Be it known to whom it may concern that I, ADOLPH BOUCHARD, of the city of New Orleans, parish of Orleans and State of Louisiana, have made certain Improvements in a Motive-Power for Running Sewing-Machines; and I hereby declare the following to be a full, clear, and exact description thereof, reference being had to the accompanying drawing which constitutes a part of the said specification.

My invention—as hereinafter described and as illustrated by the annexed drawing, to which reference has already been made—is designed to be an improvement upon my improved motor for which Letters Patent of the United States were granted to me January 16, 1872, and is intended to be especially applicable to the attainment of the same objects for which the said Letters Patent were granted. While my present device may be rendered available for a variety of useful purposes for which a comparatively limited motor may be required, it is especially designed to be more particularly adapted as an economical and efficient motor for the operation of sewing-machines. To this end there are embodied in its mechanical construction certain features necessary to secure its operation, when wound up, independently of the operator at the sewing-machine to which the power developed by the motor is transmitted. In the production of work by the sewing-machine of very great delicacy and fineness it is amply demonstrated by experience that the physical effort expended by the foot-treadle-motor process exhausts the power of the operator and diverts his attention from the work in hand. To persons of feeble health and delicate physical organization the operation of the sewing-machine is well known to have resulted seriously. The application of my improvement for the purposes for which it is designed overcomes the objectionable difficulties above enumerated, diversifies the operation by requiring a change from the work of the machine to the occasional exercise of winding up the motor, so that when the operator again sits down his undivided attention may be devoted uninterruptedly to his work, and thus the whole operation becomes not only easy but pleasant—advantages which I have amply demonstrated by repeated experiments.

The mechanical agencies employed for the accomplishment of the above-indicated results will be more clearly understood by reference to the drawing, whereon it is amply illustrated and whereon, at—

Figure 1, is shown a side elevation, with portions thereof broken away the more clearly to expose to view certain important parts hereinafter specified; while Fig. 2 is a front elevation, whereon are more clearly exhibited the parts not plainly shown on Fig. 1.

By reference to the drawing it will readily be perceived that the moving power of my device consists of a heavy suspended weight, A, confined within an upright rectangular cylinder B, in which it loosely slides as it is elevated by the agency of hand-power applied to the crank *a*, or as it descends by its own gravity while operating any machine to which in practice it may be applied. The heavy weight A is suspended from the pulley-blocks *b* and *c*, which, in turn, are secured to the top of the said upright cylinder B; and through the said blocks the rope *d* is made to pass to the end of transmitting thereby the power developed by the descending weight to the drum C. As the weight A descends it is clearly obvious that the said drum C is made likewise to revolve, and with it the main cog-wheel *e*, which remains loosely upon the drum-shaft *o* as the weight is elevated, but when the weight descends it is rigidly connected to the drum C by means of the ratchet-wheel *u*, pawl *l*, and spring *t*. As will be perceived, the said cog-wheel *e* gears into the pinion *f* upon the shaft *r*, which is keyed thereto, as likewise the spur-wheel *g*, by which means motion is imparted to the pinion *h* upon the shaft *s*, and whereby the power is furthermore transmitted to the driving-belt wheel *i*, from which, by means of a cord or belt, motion may be imparted to a sewing-machine or any other machine or device requiring a mechanical motor of the character to which this relates. As will be perceived, I have placed upon the outer end of the drum-shaft the cog-wheel *u*, into which the crank-pinion *v* gears; but it will be plainly evident that the said wheel *u* may be omitted, in which case the pinion *w* would be made to gear into the cog-wheel *e* aforesaid. E is a frame, of metal, which is securely bolted to

the upright cylinder B, and furnishes the bearings for the shafts *o r s* and the gearing and drum therewith connected or thereon placed.

The attachment of the said frame E directly to the said upright cylinder B is one feature which distinguishes this my present device from my former patent, before mentioned, wherein said supporting-frame is separate from and independent of the cylinder B. This improvement is desirable as economizing space and first cost. Another distinguishing improvement in my present device consists in the addition of the treadle friction-brake F, which, when it is required to arrest the progress of the machine, is allowed to bear upon the face or side of the belt-wheel *i*. The pressure of the said treadle friction-brake against the said belt-wheel is effected by means of the spiral spring *x*. Pending the free operation

of the machine to which it may be applied, one foot of the operator will serve to keep the said friction-brake from bearing against the said belt-wheel, or its movement fast or slow may thereby be held under perfect control.

My device is simple, economical, and effective; and, having described it, what I desire to secure by Letters Patent is the following claim:

As an improvement upon my patent of January 16, 1872, for an improvement in motor power, the attachment of the frame E to the upright cylinder B and friction-brake F and spring *x*, as and for the purposes herein set forth and described.

A. BOUCHARD.

Witnesses:

L. J. OLMSTEAD,
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