

(No Model.)

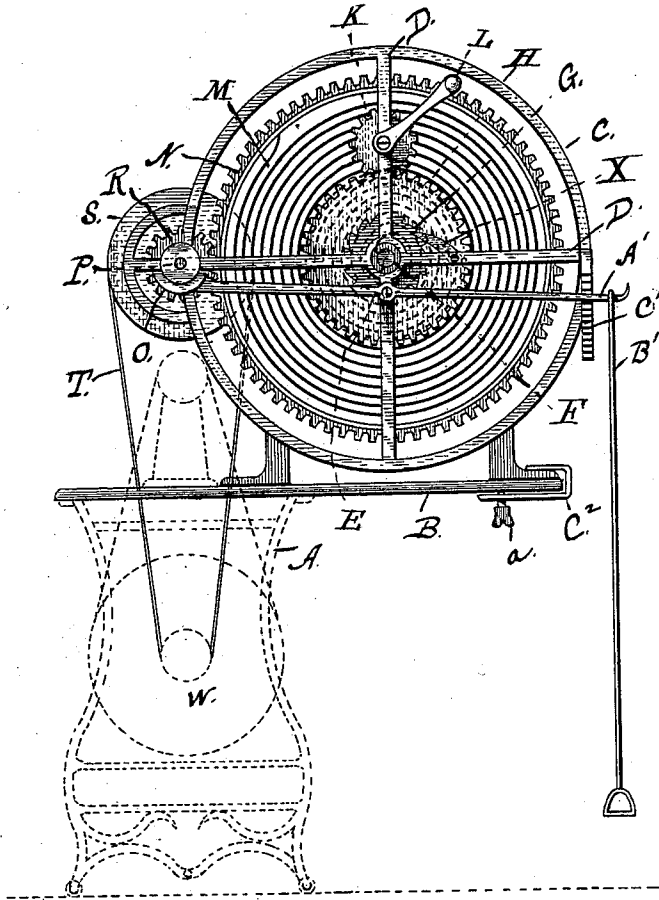
2 Sheets—Sheet 1.

W. H. CLAYTON & R. P. DUNCAN.  
MOTOR FOR SEWING MACHINES.

No. 463,596.

Patented Nov. 17, 1891.

Fig 1



Witnesses

*Joseph Blackwood*  
*W. Clayton*

Inventors  
*William H. Clayton*  
*Robert P. Duncan*  
By their Attorneys  
*Smith & Clayton*

(No Model.)

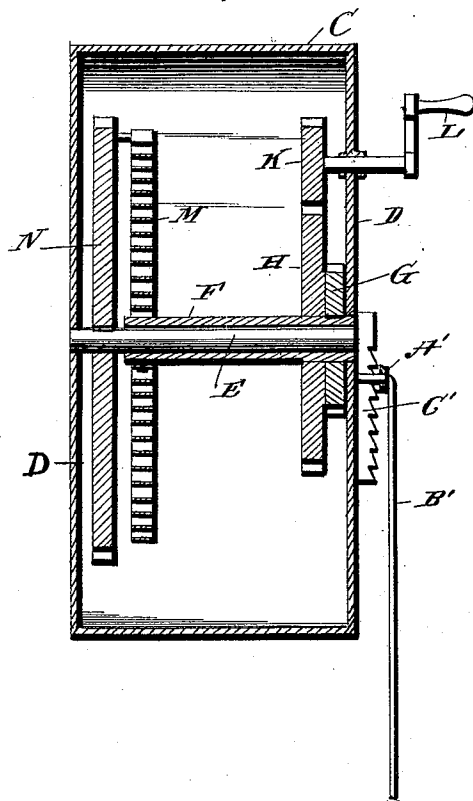
2 Sheets—Sheet 2.

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*Fig. 2.*



Witnesses:

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# UNITED STATES PATENT OFFICE.

WILLIAM H. CLAYTON AND ROBERT P. DUNCAN, OF LOUISVILLE, KENTUCKY; SAID CLAYTON ASSIGNOR TO CHARLES E. POWELL, OF SAME PLACE.

## MOTOR FOR SEWING-MACHINES.

SPECIFICATION forming part of Letters Patent No. 463,596, dated November 17, 1891.

Application filed October 23, 1889. Serial No. 327,878. (No model.)

*To all whom it may concern:*

Be it known that we, WILLIAM H. CLAYTON and ROBERT P. DUNCAN, citizens of the United States, residing at Louisville, in the county of Jefferson and State of Kentucky, have invented certain new and useful Improvements in Motors for Sewing-Machines; and we do 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.

Our invention relates to improvements in sewing-machine motors; and its construction and manner of operating will be understood from the following description, taken in connection with the accompanying drawings, in which—

Figure 1 is an elevation of our improved motor mounted in a position for use, and Fig. 2 is a vertical diametrical transverse section of the drum casing and gearing, &c., therein.

In the drawings, A represents the stand of a sewing-machine, (shown in dotted lines,) and B the table thereof. Upon table B is mounted a drum or casing C, held in place by means of clamp C<sup>2</sup> and set-screw *a*, the clamp passing over one foot of the drum. At each end this casing is provided with strips D, which are placed at right angles to each other, crossing at or about the center of the casing and forming bearings for a shaft E.

F represents a sleeve which fits loosely upon shaft E, and to which are keyed a ratchet G and pinion H. Pinion H is arranged to mesh with a second pinion K, mounted upon a shaft, which has bearings in the upper vertical strip D and projecting at one end sufficiently to receive a crank-handle L.

By means of the line of gearing described it will be seen that when the handle L is turned the sleeve F will be revolved. To this sleeve one end of a coil-spring M is secured, the other end of such spring being secured to a large gear-wheel N, which is journaled upon the shaft E and meshes with a pinion O, which latter is mounted upon a shaft P, mounted at the point shown in the drawings, this shaft also carrying a friction-pulley R

and belt-wheel S. A belt T is passed around wheel S and around belt-wheel W, mounted on the driving-shaft of the machine. We also provide a pawl X, which may be mounted at any suitable point on the casing, it being arranged to engage the ratchet G, before referred to, and prevent such ratchet and the sleeve to which it is keyed revolving in more than one direction.

A' represents an arm pivoted to one of the strips D, and provided at one end with a brake-block arranged to engage the friction-pulley R, the opposite end of this rod being preferably hook-shaped to receive a rod B', which is provided at its lower end with a loop or stirrup to receive the foot of the operator.

C' represents a rack secured to casing C, and with which the pivoted brake-rod A' engages.

By the construction and arrangement of parts as described it will be readily seen that the driving-spring of our improved motor may be wound up while the motor is in operation.

What we claim is—

In a sewing-machine motor, the combination of a drum or casing, the vertical and horizontal strips at each end of said casing crossing each other, as illustrated, the transverse shaft journaled in the said strips, a large gear-wheel fixed on said shaft, a sleeve loosely mounted on the shaft, a ratchet-wheel fixed on said sleeve, a pinion also fixed on the sleeve, a pawl pivotally connected to one of the horizontal strips of the casing and adapted to engage the ratchet-wheel of the sleeve, a pinion fixed on a shaft journaled in an upright strip of the casing and adapted to engage the pinion of the sleeve, a crank fixed on the end of said shaft, a pinion fixed on a shaft carrying a band-pulley and engaging the large gear in the casing, a friction-wheel fixed on the shaft carrying the latter pinion, a coiled metal spring having one of its ends connected to the loosely-mounted sleeve and its other end connected to the large gear-wheel in the casing, a lever fulcrumed on one of the upright strips of the casing and provided at its forward end

with a dished or curvilinear portion adapted  
to engage the friction-wheel on the end of the  
shaft carrying the band-pulley, and a depend-  
ing arm loosely connected to the opposite end  
5 of said lever and provided with a stirrup at  
its lower end, all adapted to operate substan-  
tially as specified.

In testimony whereof we affix our signatures  
in presence of two witnesses.

WILLIAM H. CLAYTON.  
ROBERT P. DUNCAN.

Witnesses:

CHAS. G. HULSEWEDE,  
JOHN T. CASEBY.