

B. C. YOUNG.

Sewing-Machine Operating Mechanisms.

No. 158,821.

Patented Jan. 19, 1875.

Fig. 1

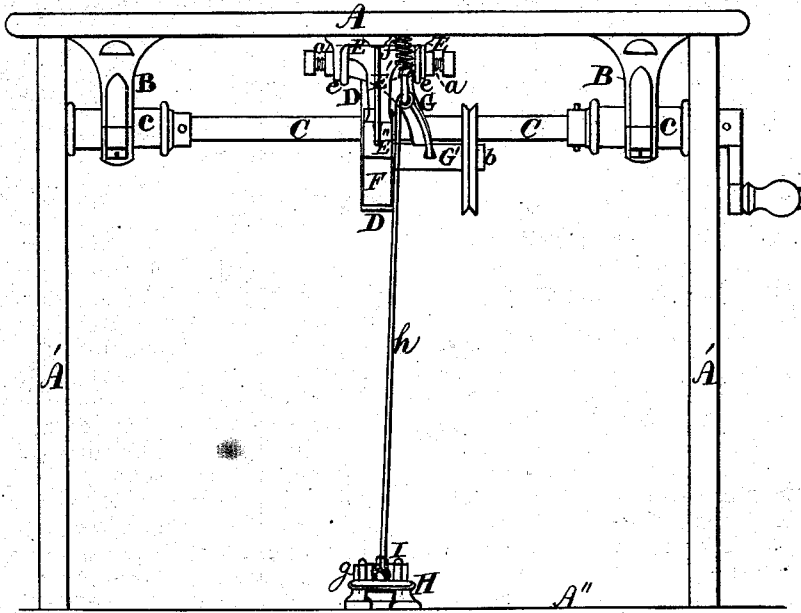


Fig. 2

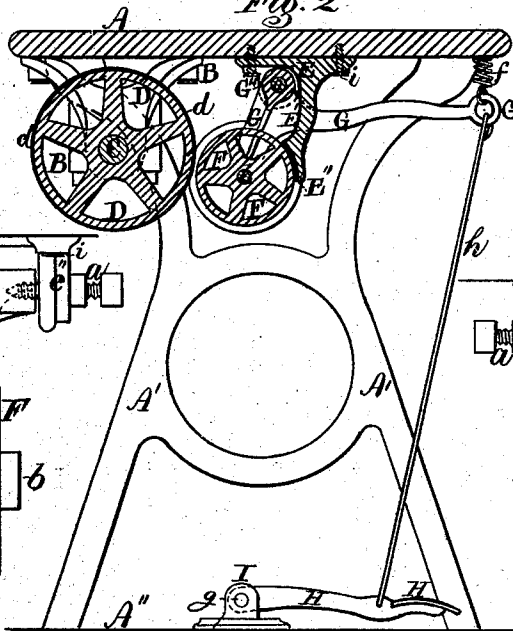


Fig. 4

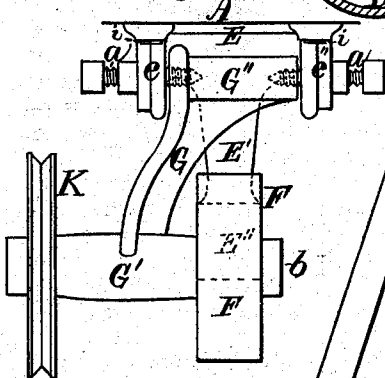
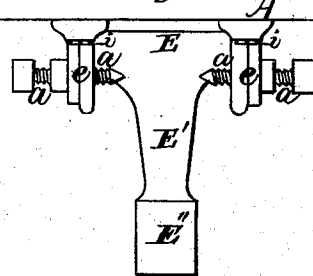


Fig. 3



Witnesses

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UNITED STATES PATENT OFFICE.

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IMPROVEMENT IN SEWING-MACHINE OPERATING MECHANISMS.

Specification forming part of Letters Patent No. **158,821**, dated January 19, 1875; application filed September 1, 1874.

To all whom it may concern:

Be it known that I, BARKER C. YOUNG, of Boston, in the county of Suffolk and State of Massachusetts, have invented certain Improvements in Sewing-Machine Attachments, of which the following is a specification:

Figure 1 of the accompanying drawings is a front view. Fig. 2 is a central transverse vertical section; and Figs. 3 and 4 are parts in detail, at an enlarged scale, of my invention.

The present invention relates to certain new and useful improvements in the means employed for operating sewing-machines, and is more particularly applicable to sewing-machines run by a shaft actuated by steam or other motive power.

The main object of this invention is to provide a simple, convenient, and efficacious method of controlling the driving mechanism of a sewing-machine, to allow the operator to instantaneously impart motion to the machine, or check the same, or to vary its velocity, and consequently power, at will by the mere action of his foot on a treadle; and to effect these ends my invention consists principally in a curved lever formed at the top to turn on a fulcrum or fulcrums, supported by a hanger attached to the under side of the top of the machine table or bench, having a depending arm or brake, the said lever having a bottom nave, to support and allow the turning of an axle, provided at one end with a belt-pulley, and at the other end with a friction-wheel carried to and from a friction-wheel rimmed with leather, or otherwise constructed to induce friction, and located on a driving-shaft suspended from the bottom of the table or bench top, the lever being connected by a rod with, so as to be operated by the action of, a treadle turning on a fulcrum at the bottom of the machine-frame or floor, to engage the lever friction-wheel with or disengage it from the shaft friction-wheel at the will of the operator whose foot actuates the treadle, all of which I will now proceed more particularly to describe.

In the drawings, A represents the top, A' the ends, and A'' the bottom, of a sewing-machine table or bench, constructed of any desired suitable material, and shaped as preferred. To the under side of the top A are attached, at proper distances apart, hangers B, support-

ing journal-boxes *c* of a longitudinal shaft, C, which may extend under a table or bench of any length to accommodate one or as many machines as desired, and is provided with a friction driving wheel or wheels, D, whose rim is covered with leather *d*, or other material or compound, or otherwise formed or arranged to produce friction. Forward of the wheel D is attached, to the under side of the table or bench top A, a stand, E, formed on either side with depending ears *e*, to receive a fulcrum or fulcrums, *a*, and at the front having a curved downward-extending arm, E', terminating in a curved brake or bunter, E'', lined with leather or other suitable sound-deadening material, to receive without noise, and prevent the passing beyond its desired position, of a friction-wheel, F, attached to one end of an axle, *b*, extending through and turning in a longitudinal nave, G', formed at the bottom of one end of a curved lever, G, which lever at the top is formed with a longitudinal nave, G'', that receives and turns on the fulcrum or fulcrums *a*. The lever G extends forward, and, if desired, is provided at the end with a spiral or other spring, *f*, attached to the table A. The forward end of the lever G is connected by a bar or rod, *h*, with a foot-treadle, H, turning on a fulcrum, *g*, of a stand, I, attached to the bottom of the frame or table, or to the floor. The stand E is attached, by screws *i* or otherwise, under the top A, so that the wheel F shall be in a longitudinal line with, but not touch, the wheel D when the treadle is at rest. On the other end of the axle *b* is located a belt-pulley, K, that is connected by a belt extending through the top A with the belt or operating wheel of the machine.

The lever G may be otherwise shaped and hung, as desired, and the stand E may also be varied in shape and construction, if preferred; and, if desired, the shaft C may be differently hung, and located nearer to or farther from the center of the table or bench, according to the width of the table and the arrangement of the machine or machines, and the position of the stand and wheels F K. One shaft-wheel, D, may be used to two machines located opposite each other, the shaft being located in the center, between two of my improved attach-

ments. The shaft may be provided with as many friction-wheels as desired, to operate as many pairs of machines as can be accommodated opposite one another in parallel rows on a long bench or table; or my improvement may be applied to operate a single machine.

The operation of my invention is as follows: Pressure on the treadle H operates the lever G, and carries the friction-wheel F in contact with, so as to be operated by, the friction-wheel D, the amount of pressure limiting the velocity, and consequently power, thereby produced. The rotation of the wheel F operates the wheel K, which imparts to the operating mechanism of the machine the necessary motion. The release of the pressure on the treadle instantly disconnects the wheel F from the wheel D, and the latter is left to run independently of the machine, which remains inoperative until the wheel F is again put in communication with the wheel D.

By the above description, reference being

had to the accompanying drawings, the simplicity, economy, and general advantages of my improvement will be apparent to any acquainted with the running of sewing-machines without further explanation.

Having thus described my improvements, what I claim as my invention, and desire to have secured to me by Letters Patent, is—

The combination of hanger E, attached to the under side of a sewing-machine table, and having ears *e e*, and shoe E'', shaft G'', swinging arm G, sleeve-bearing G', shaft *b*, wheel F, treadle H, rod *h*, and spring *f*, substantially as and for the purpose set forth.

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

BARKER C. YOUNG.

Witnesses:

SAML. M. BARTON,

GEO. H. LONG.