(Model.)

D. S. VAN WYCK.

Treadle Mechanism.

No. 228,424. Patented June 1, 1880.

Fig. 1

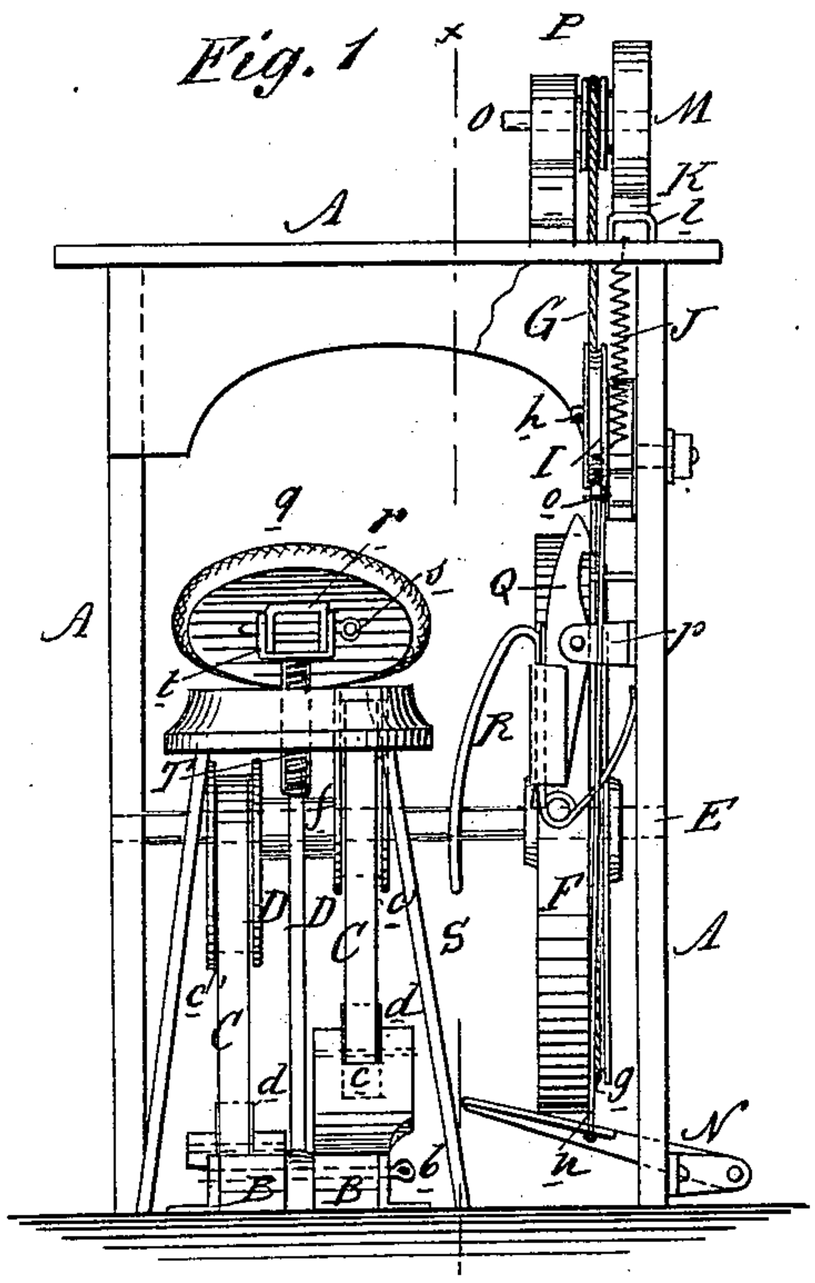


Fig. 2

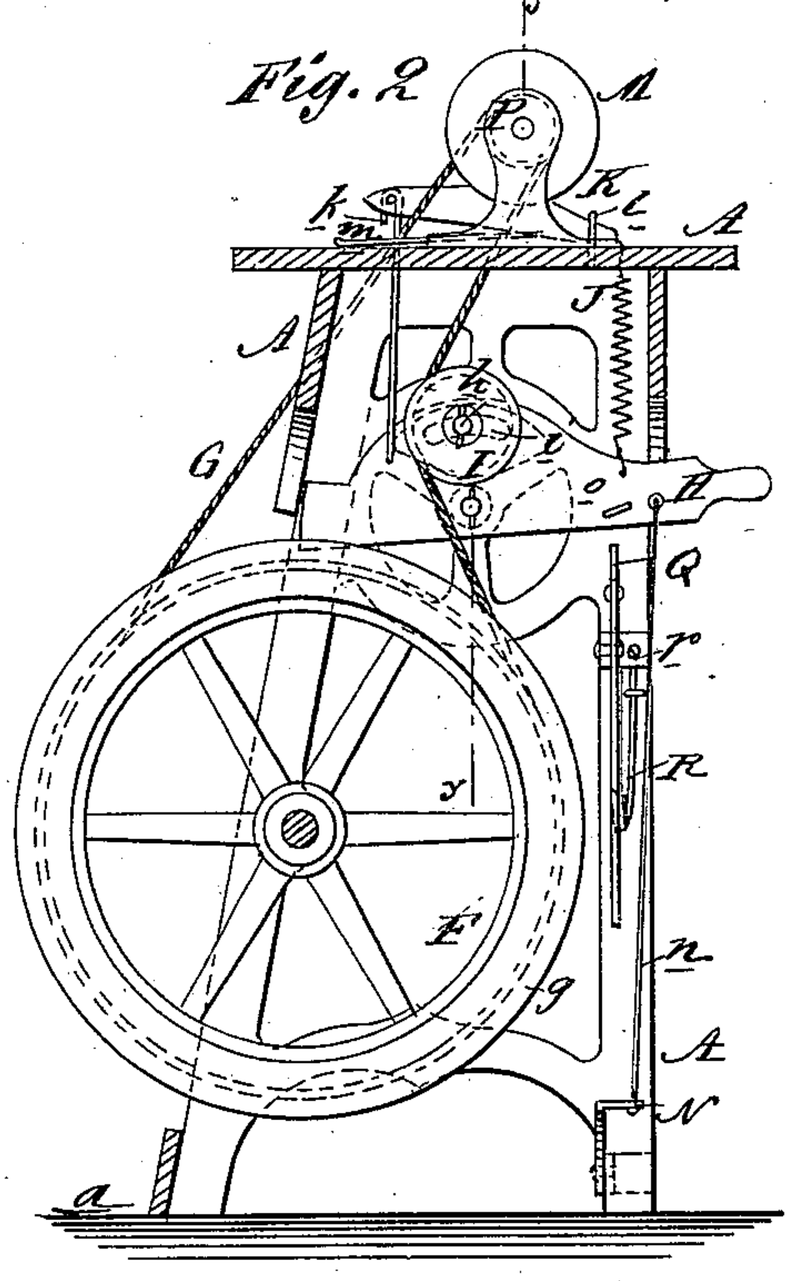


Fig. 3

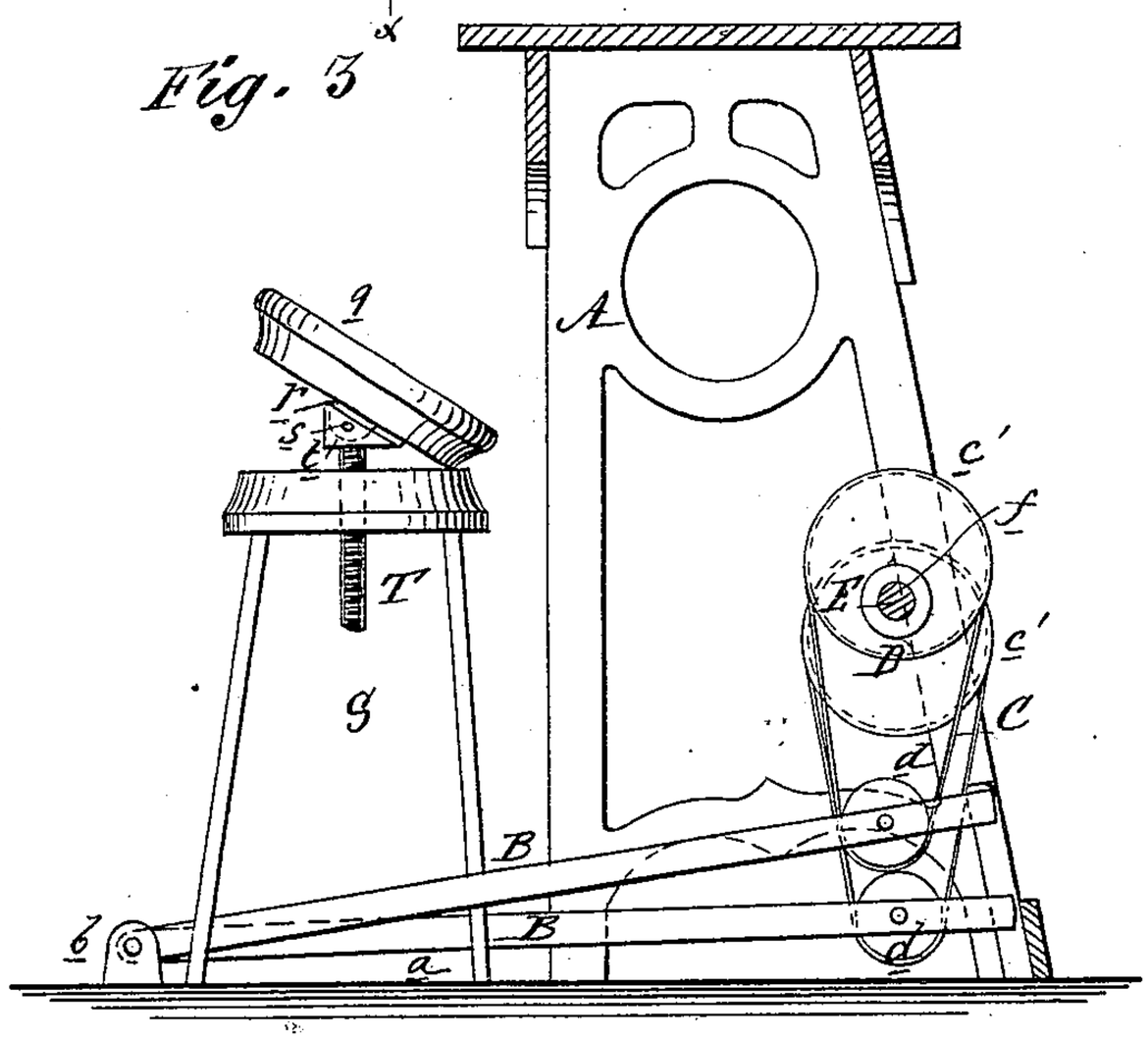
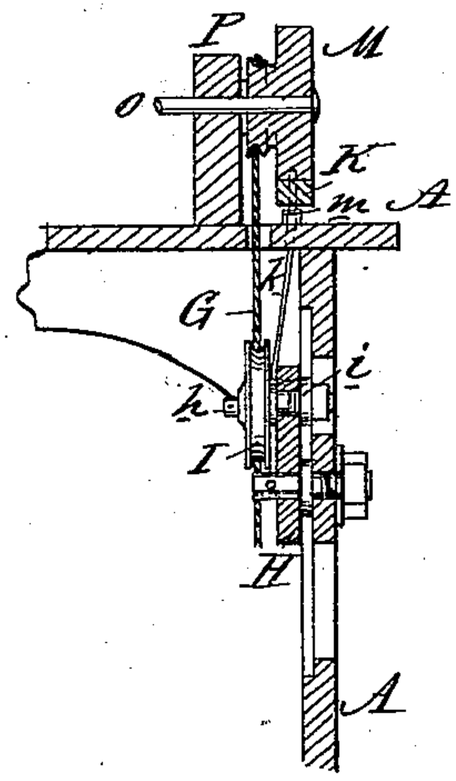


Fig. 4



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TREADLE MECHANISM.

SPECIFICATION forming part of Letters Patent No. 228,424, dated June 1, 1880.

Application filed March 18, 1880. (Model.)

To all whom it may concern:

Be it known that I, DURYEA S. VAN WYCK, of Fishkill Plains, in the county of Dutchess and State of New York, have invented a new and Improved Treadle Mechanism, of which the following is a specification.

The object of this invention is to provide a device whereby power can be more conveniently applied to a sewing-machine, and whereby the motion of the needle-bar may be checked at will without arresting the motion of the treadles or the momentum of the balane el.

The invention consists of a seat and treadles arranged so that the operator can easily apply the weight of the body upon the latter, of novel attachments for slackening and tightening the driving-belt, and for arresting and restoring motion to the needle-bar, all of which are hereinafter fully described.

Figure 1 is a front elevation, showing the devices in position on a sewing-machine frame. Fig. 2 is a side elevation of the same, partly in section. Fig. 3 is a sectional side elevation on line *x x*, Fig. 1. Fig. 4 is a vertical sectional elevation on line *y y*, Fig. 2.

Similar letters of reference indicate corresponding parts.

In the drawings, A represents the frame of a sewing-machine, having its foot-board *a* extending forward more than usual for the convenient pivotal attachment at *b* of the long treadles B B. In the rear ends of these treadles are formed the slots *c*, in which are journaled the sheaves *d d*, around which are passed the belts C C, that transmit motion to the eccentrics D D, having peripheral grooves *c' c'*, which are fixed on the driving-shaft E. These eccentrics D D are preferably cast together with their connecting-sleeve *f*, for the sake of economy and convenience of fitting.

F is the combined driving and balance wheel, keyed, as usual, on the driving-shaft E, and provided with a deep peripheral groove, *g*, on one side of the driving-belt G.

Pivoted on the inside of the frame, above the periphery of the driving-wheel F, is the lever H, whose handle or long arm extends forward within easy reach of the operator. A tightening-pulley or "idler," I, is adjustably secured to the inner face of this lever H by means of a bolt, *h*, that passes through the curved slot *i* in the said lever and is secured therein by a nut. The long arm of this lever H is held up by a spring, J, that is made fast to the top of the frame A, while from the opposite end of said lever H the rod *k* projects upward through the top of the frame A and engages with one end of the brake-shoe K, whose other end is secured by a staple, *l*, to the top of the frame A, and which brake-shoe K rests upon a spring, *m*, that operates to force said shoe upward against the friction-pulley M, which is keyed on the end of the needle-bar O, for the purpose of arresting the motion of the said needle-bar O.

A treadle, N, pivoted at the bottom of the frame A within easy reach of the foot of the operator, is connected by means of the rod *n* with the long arm of the lever H, as shown, so that by pressure of the foot the operator may, by means of said rod *n* and lever H and rod *k*, force the shoe K against the pulley M, and thus arrest the motion of the needle-bar of the machine; and by the same movement of the lever H the tightening-pulley I is withdrawn from contact with the driving-belt G, which belt consequently will run freely and loosely on the pulley P of the needle-bar O while the motion of the treadles and driving or balance wheel of the machine continues.

When running the sewing-machine and giving motion to the needle-bar O, the tightening-pulley I is so adjusted in the slot of the lever H and said lever H is in such a position that said pulley I presses against the driving-belt G, to give said belt a proper operative hold upon its pulleys, as shown in Fig. 2; but should it be desired at any time to arrest the motion of the needle while arranging the work beneath it, the operator has but to reach a foot to the treadle N and press slightly upon it in order to apply, as before stated, the brake-shoe K to the pulley M, and to withdraw the tightening-pulley I from the belt G. When the lever H is thus pulled down by the treadle N and rod *n*, the stud *o* on the face of the said lever H engages with the spring-catch Q, which is pivoted in a lug, *p*, on the legs of the sewing-machine, and the lever H is thereby held in its retracted position. This catch Q is operated by the spring R, one end of which spring R is in contact with a leg of the sewing-machine, while the free end extends to within reach of the operator, who sits on the stool S, so that said operator may, by simple sidewise motion of his knee against said spring R, withdraw the catch Q from the lug *p* of the lever

H, so that the spring J shall operate to elevate the lug-handle of said lever, and thereby cause the motion of the needle-bar to be resumed.

The stool S, which is fixed on the foot-board *a*, has an adjustable seat, *q*, which is pivoted, by means of the lug *r*, secured on the under side of said seat *q*, and pin *s*, to the beveled head *t* of the screw T, that turns in the top of the stool-frame. Sitting on this stool S, when its seat *q* is tipped forward in the position shown in Figs. 1 and 3, the operator can press with nearly the whole weight of the body upon the treadles B B and move his feet, and thereby operate the mechanism herein shown with much less fatigue and with a more extended and free motion than would otherwise be possible.

It will be observed that a special feature of this device is the continuous motion of the balance-wheel and driving-shaft, while the motion of the needle-bar is checked.

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

1. The lever H, adjustable tightening-pulley I, and spring J, in combination with the driving-belt G and fly-wheel, substantially as herein shown and described, whereby the said driving-belt is made to operate the driving-pulley of the needle-bar, as set forth.

2. The lever H, rod *k*, brake-shoe K, spring *m*, and friction-pulley M, in combination with the needle-bar O, substantially as herein shown and described, whereby the motion of the said needle-bar O is arrested, as set forth.

3. The combination of the lever H, spring J, tightening-pulley I, rod *k*, brake-shoe K, and friction-pulley M, and the devices giving motion to said pulley, substantially as herein shown, for the purpose described.

4. The combination, with the lever H, pulley I, rod *k*, and brake-shoe K, of the rod *n* and treadle N, substantially as herein shown and described.

5. The combination, with the lever H, of the pivoted spring-catch Q and the spring R, substantially as herein shown and described, whereby the said lever H is held retracted, so that the motion of the needle-bar is arrested, as set forth.

6. The combination, with the foot-board *a*, of the stool S, provided with an adjustable seat, *q*, pivoted on the beveled head of the screw T, substantially as herein shown, and for the purpose described.

7. The combination, with the driving-shaft E, of the balance-wheel F, substantially as herein shown and described, whereby the motion of the said shaft is made continuous, while the motion of the needle-bar is arrested, as set forth.

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