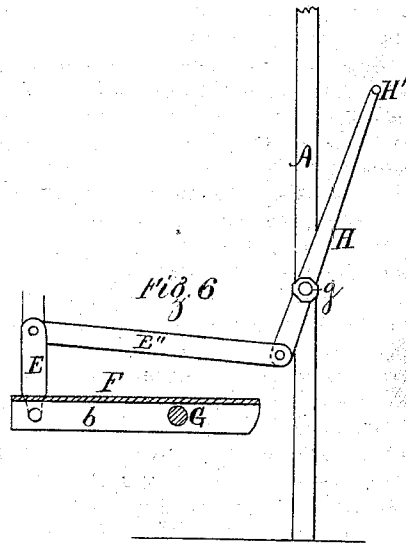
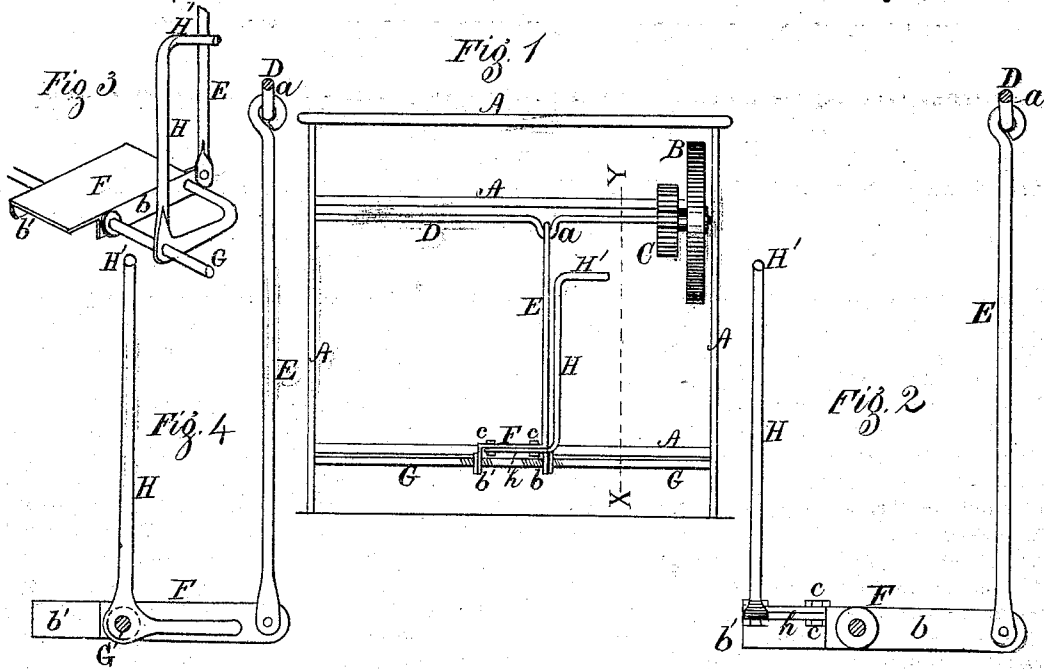


R. K. MACADAM.

Treadle-Attachments for Sewing-Machines.

No. 152,756.

Patented July 7, 1874.



Witnesses
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ROBERT K. MACADAM, OF MEDFORD, MASSACHUSETTS.

IMPROVEMENT IN TREADLE ATTACHMENTS FOR SEWING-MACHINES.

Specification forming part of Letters Patent No. **152,756**, dated July 7, 1874; application filed April 8, 1874.

To all whom it may concern:

Be it known that I, ROBERT K. MACADAM, of Medford, in the county of Middlesex and State of Massachusetts, have invented certain Improvements in Sewing-Machines, of which the following is a specification:

Figure 1 of the accompanying drawings is a front view of my improvement applied to a sewing-machine frame. Fig. 2 is a transverse section taken in line X Y, showing a side view of my improvement on an enlarged scale. Fig. 3 is a perspective view, and Fig. 4 is a transverse section, showing on an enlarged scale a side view of a modification embodying the general principles of my improvement. Fig. 6 is a transverse section through the treadle, and Fig. 7 is a transverse section through the driving-shaft, showing a side view of modifications embodying the general principles of my improvement.

The object of the present invention is to effect an improvement in the method of operating sewing-machines, whereby the use of foot-power heretofore required in operating the treadle and the consequent injury to the operator resulting therefrom are obviated; and to these ends my improvement consists mainly in a hand-lever arranged to connect with and operate the driving-shaft or axle of a sewing-machine, either by hand or foot power or by hand-power alone, as I will now proceed to describe.

In the drawings, A represents a sewing-machine stand, provided with a driving-wheel, B, gear-wheel C, and driving-shaft or axle D, the latter formed with a crank, *a*. Engaging with this crank, so as to operate it, is one end of an arm or rod, E, whose lower end is pivoted to the forward portion of a treadle, F, formed with downward flanges or sides *b b'*, or otherwise arranged to connect with a shaft or axle, G, supported in the sides of the machine-frame, or otherwise arranged to allow the up-and-down movement of the treadle, with which is connected, by screws *c* or otherwise, the bottom or bent portion *h* of a hand-lever, H, bent at the top to form a handle, H', by which the operator actuates the lever H,

so as to operate the treadle, and consequently the arm or rod E, and turn the crank *a* and rotate the driving-shaft D and machinery connected therewith.

By the arrangement above described it will be seen, reference being had to the drawings, that the treadle may be operated either by hand or foot power, as preferred.

Instead of the arrangement above described and shown in Figs. 1 and 2 of the drawings, various modifications embodying the same general principles of my improvement may be adopted, either for operating the driving-axle by hand-power alone, or in connection with the foot-treadle or treadle-axle. Some of these modifications are shown in Figs. 3, 4, 6, and 7 of the drawings, and I will now proceed to describe the arrangement and operation of each in course.

In Figs. 3 and 4 the rod or arm E is arranged as in Figs. 1 and 2, but the lever H is attached to the side at the rear of the treadle F, from which it projects laterally and extends forward to receive and turn on the treadle shaft or axle G, and extends uprightly, and is bent or formed at the top with a handle, H', by which the treadle and driving-axle are operated as in the previous example.

In Fig. 6 the treadle F is provided at the rear with a side upward-extending arm or rod, E, that connects at the top with the crank *a* of the driving-axle D, and has pivoted to its lower portion a horizontal arm or rod, E'', whose other end is pivoted to a hand-lever, H, which is pivoted at *g* to the side of the machine-frame, and operates the treadle and driving-axle as before.

In Fig. 7 the driving-axle is operated entirely independent of the treadle, which, in this modification, may, if desired, be dispensed with. In the present modification the lever H is pivoted at the bottom to the forward side portion of the machine-frame, and extends upward above the driving-axle, whose crank *a* extends through so as to turn in a slot, *f*, formed in the lever H, which, at the top, is bent to extend toward the operator, and is formed with a lateral handle, by which the

lever arm or rod H is operated, thus rotating the driving-shaft.

If desired, the handle portion of the hand-lever may be extended so as to be operated outside of the machine-frame, instead of within it, as shown, and may be otherwise bent or formed, as desired.

Heretofore, sewing-machines have been arranged to be operated by a handle connected with the wheel; but in this method of hand-power the wheel is located above the top of the stand, making it awkward and laborious for the operator to reach up and operate the wheel. In the present arrangements the hand-lever is conveniently arranged, and at a height to allow the operator's hand to rest in a natural and easy position, and may be easily op-

erated with very little exertion, so that even a child may operate it without fatigue, as has been proved by actual and frequent experience.

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

In combination with the treadle F, the lever H H', as and for the purpose described.

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

ROBERT K. MACADAM.

Witnesses:

CARROLL D. WRIGHT,
SAML. M. BARTON.