J. C. MACKEY.

TREADLE-MECHANISM FOR SEWING-MACHINES.

No. 172,042. Patented Jan. 11, 1876.

Fig. 1.

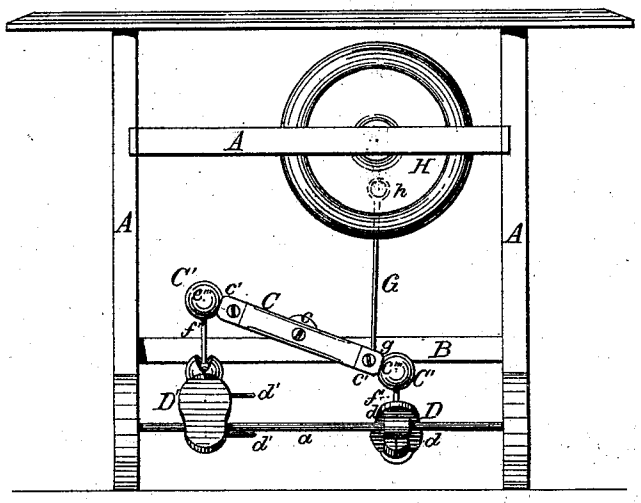


Fig. 2.

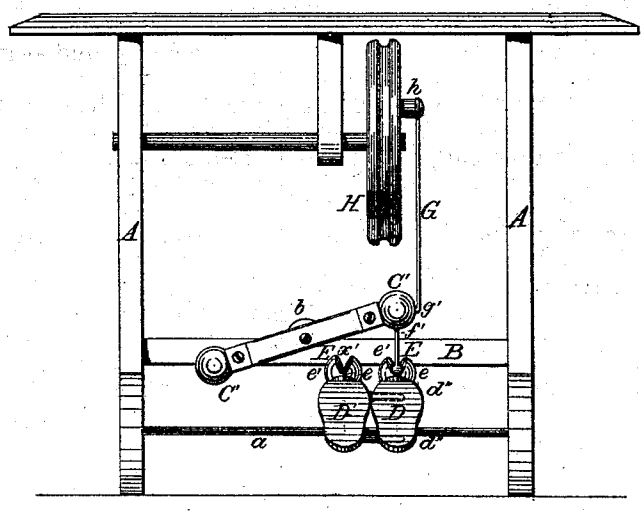
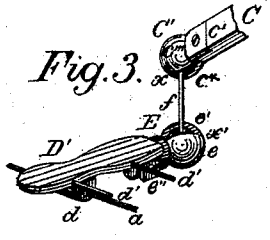


Fig. 3.



Attest:

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JOHN C. MACKEY, OF CHICAGO, ILLINOIS.

IMPROVEMENT IN TREADLE MECHANISMS FOR SEWING-MACHINES.

Specification forming part of Letters Patent No. **172,042**, dated January 11, 1876; application filed April 6, 1875.

To all whom it may concern:

Be it known that I, JOHN C. MACKEY, of Chicago, in the county of Cook, in the State of Illinois, have invented certain Improvements in Treadles for Operating Sewing-Machines, of which the following is a specification:

The object of this invention is to improve that kind of device where two treadles, acting alternately by the feet of the operator, are used to propel the machine and secure greater ease and freedom in operation, and also to change the two alternately-acting treadles into a single treadle, upon which both feet of the operator will act to propel the machine; and it consists in the construction of the parts that are used to perfect the object aimed at, as will be fully hereinafter described.

In the drawings, Figure 1 is a side view of a machine as improved; Fig. 2, a modification as applied to machines of differently-located driving parts, and Fig. 3 enlarged detail of parts.

A represents the frame of an ordinary sewing-machine; *a*, the longitudinal rock-shaft or rod upon which the treadles pivot, and either works in bearings at each end in frame A, or the treadles are made to move on the rods. B is a longitudinal bar, extending the length of the frame, and is attached to frame A at any convenient height to suit the construction of the machine. *b* is a projection, to which the treadle-beam is pivoted. C is an oscillating treadle beam or lever, pivoted centrally of its length to bar B at bar *b*, so as to freely oscillate thereon. C′ C′ are round sockets at each end of beam C, and are composed of two parts, *c″* and *c″*, the part *c‴* being removable from the beam by taking out the screw *c′*, while parts *c″* are fast to or a part of beam C. On the lower sides of sockets C′ is an opening, *x*, made by cutting away a portion of parts *c″* and *c‴*, to allow room for a connecting-rod to freely work thereon. D is the right foot, and D′ is the left foot, treadle, both centrally pivoted to work upon a shaft, *a*, by the pivot-blocks *d* on the under side of the treadles. *d′ d′* are pins projecting from the inner edge of treadle D′ to enter into corresponding holes in treadle D, to unite the two into a single or one-foot treadle, or into a treadle upon which both feet are simultaneously used, as seen in Fig. 2. E E are round sockets on the toe of each treadle, constructed the same as sockets C′, of two parts, *e* and *e′*, and a space or opening, *x′*, between them. Part *e* of the socket E is removable from part *e′* by turning out screw *e″*. *f f* are two balls, connected together by connecting-rod *f′*, and when such balls *f* are placed in the sockets C′ and E, and connected together by the rods *f′*, the treadles D and D′ will be connected with the treadle-beam C, and by bearing down the right foot will cause that end of the beam C to go down and the other end to rise, and with it the toe of the left-foot treadle, as seen in Fig. 1. G is a pitman, connected at its lower end with the treadle-beam at *g*, and at its upper end to crank-pin *h* of driving-wheel H, as seen in Fig. 1, when the driving-wheel is in the position there shown; or when the driving-wheel is located as seen in Fig. 2, it is pivoted into the end of the treadle-beam, as seen at *g′* in Fig. 2.

When it is desired to use the two treadles D and D′ as one, the removable parts of the sockets C′ and E are taken off of one end of beam C and treadle D′, and the balls *f* removed from the sockets, when treadle D′, with its protruding pins *d′*, are moved to the side of treadle D, and are connected together by the pins *d′* entering corresponding holes *d″* in the edge of treadle D.

The bar B being removable, together with the beam C and treadles D and D′, and their connections, it will be readily seen that my improvement can be attached to the driving-wheel of any machine, and used therewith.

By the use of the ball-and-socket joint in connecting the treadles with the treadle-beam, a universal freedom of parts is had in such connection; hence there will be no binding or clamping in such joints, but there will always be freedom in the joints, even if the treadles should vary in their location upon the shaft or rod *a;* and, further, the ball-and-socket joint wears longer, and keeps its position better, than other joints with which I am acquainted; hence, are preferable in this use.

Having thus described my invention, what I claim is—

1. The combination of the sockets C′ and

E, balls *f f*, and connecting-rods *f'*, with the oscillating lever C and treadles D and D', substantially as and for the purposes specified.

2. In a treadle mechanism of a sewing-machine, the combination of treadle D', having projecting pins *d'*, and treadle D, having holes *d''* to receive pins *d'*, with the necessary connecting parts, to operate substantially as and for the purposes described.

3. The combination, in a treadle mechanism of a sewing-machine, of the treadles D and D', ball-and-socket joints C' and E, and their connections, with the bar B and pitman G, substantially as and for the purposes described.

JOHN C. MACKEY.

Witnesses:

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NEWTON CRAWFORD.