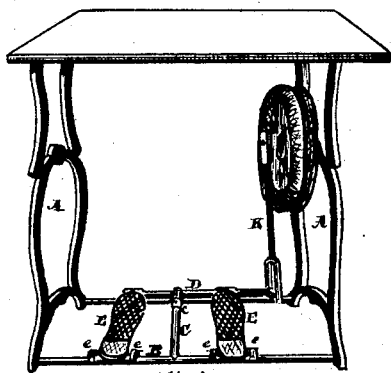


L. W. Smith,

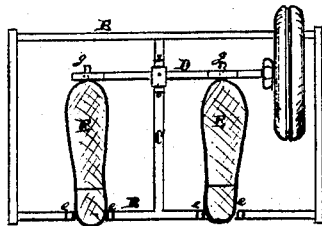
*Treadle.*

No. 112,184.

*Patented Feb. 28. 1871.*



*Fig. 1.*



*Fig. 2,*



Witnesses  
C. E. Hyman  
H. Hackinore

Inventor,  
Leo W. Sapp  
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Atty.

# UNITED STATES PATENT OFFICE.

LEO W. SAPP, OF CLEVELAND, OHIO.

## IMPROVEMENT IN SEWING-MACHINE TREADLES.

Specification forming part of Letters Patent No. **112,184**, dated February 28, 1871.

I, LEO W. SAPP, M. D., of Cleveland, in the county of Cuyaboga and State of Ohio, have invented a certain new and useful Sewing-Machine Treadle, of which the following is a specification:

Figure 1 is a front and perspective view of a sewing-machine table with my improved treadle attached. Fig. 2 is a plan view of the same.

The nature of this invention relates to a sewing-machine treadle, in which a reciprocating motion is given to a balanced lever by the feet of the operator, the foot-treadle having an alternate up-and-down motion, the said treadles being pivoted at the heel.

The object of this invention is to produce a treadle-movement in which none of the muscles of the legs above the knee-joints of the operator are employed to operate it, the center of motion of the treadle being at the point of the heel. The muscles that work the ankle-joint are all that are required to operate it.

By this method the injurious effects arising from the use of the old style of treadle upon the abdominal region in female operators is entirely overcome and avoided, as none of the abdominal muscles are called into requisition for operating my improved treadle.

Referring to the drawing, A represents the

legs of a sewing-machine table. B B are bars secured to the feet of the table and lying near the floor. C is a central cross-bar secured to the bars B B.

Near the rear of the bar C is a suitable bearing, *c*, in which is suspended a rocking-bar, D.

On the front bar B are bearings *e e*, in which the heels of the foot-treadle E are suspended. Their toes have a pin, *g*, upon them which play in openings in the bar D.

To the right-hand end of the bar D is secured the pitman *k* by means of a toggle-joint, which I construct as seen in detached view, which, like all the other bearings, should be constructed to have as little friction as possible.

I claim as my invention—

1. The rocking-lever D, in combination with the treadle pivoted at the heel, and operating substantially as and for the purpose described.

2. The arrangement of the foot-treadles E, as described—namely, pivoting them at the heel to the front bar B and connecting them at the toe to the rocking-lever D, as and for the purpose set forth.

LEO W. SAPP, M. D.

Witnesses:

GEO. W. TIBBITTS,

C. E. WYMAN.