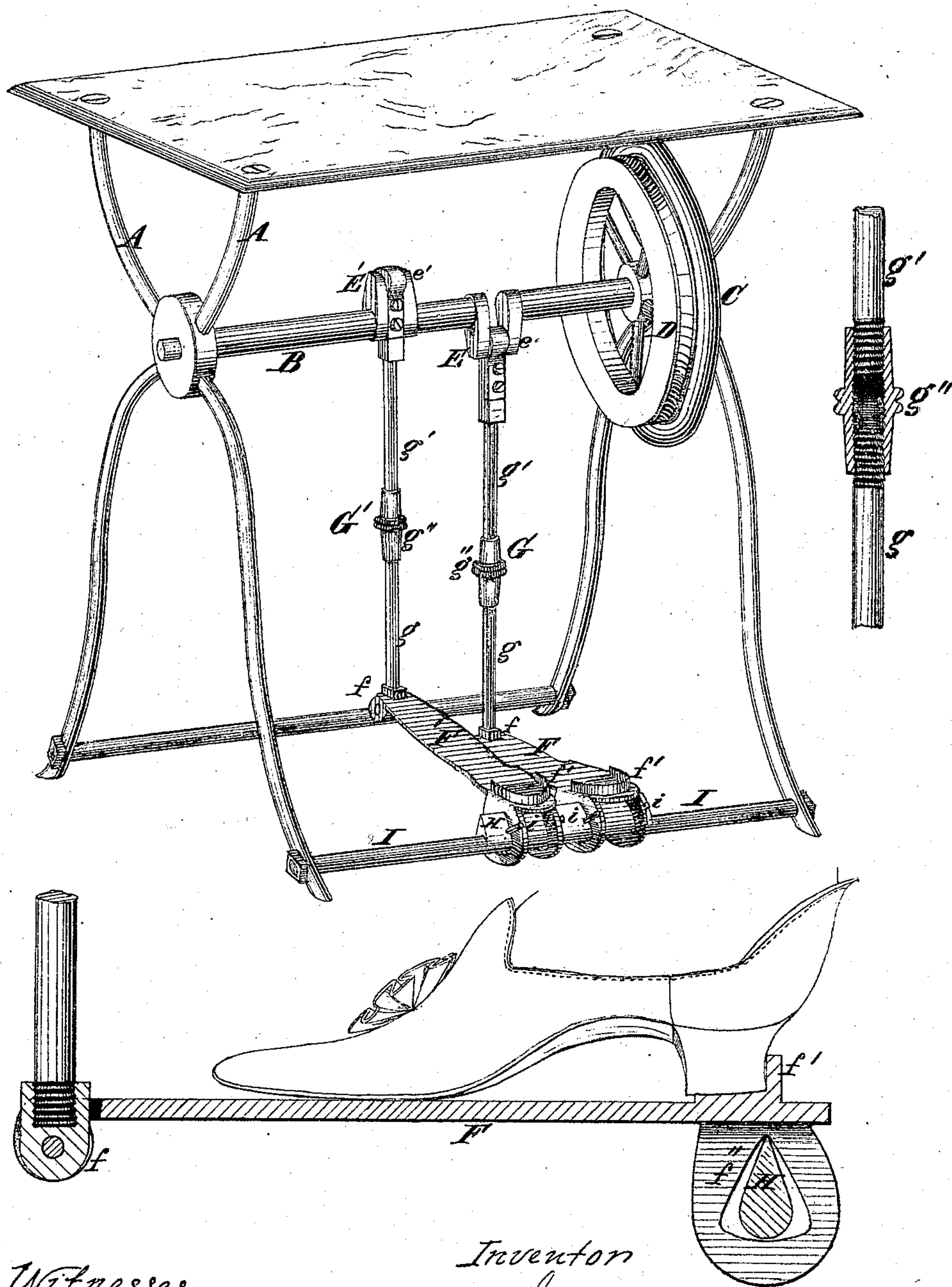


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Improvement in Treadles for Sewing-Machines.

No. 130,799.

Patented Aug. 27, 1872.



Witnesses
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ISAAC P. FISHBURN, OF CINCINNATI, OHIO.

IMPROVEMENT IN TREADLES FOR SEWING-MACHINES.

Specification forming part of Letters Patent No. 130,799, dated August 27, 1872.

I, ISAAC P. FISHBURN, of Cincinnati, Hamilton county, State of Ohio, have invented a certain new and useful Improvement in Driving Mechanism for Sewing-Machines, of which the following is a specification:

Nature and Objects of Invention.

My invention consists, in the first part, of a combination of two treadles, two pitmen, and two driving-cranks, the treadles being so connected to the frame of the machine, and so arranged to operate that the rear edges of the heels of the operator will be immediately over the points of vibration or fulcrums of the treadles, and the cranks will be diametrically opposite to each other upon the driving-shaft; the object of this part of the invention being to provide an easy motion for the feet analogous to the motion of the feet in walking, and calling into play such muscles only as are used in walking, thus obviating the injurious effects upon females in the propulsion of sewing-machines, dispensing, as this invention does, with the heel-and-toe-treadle motion which calls upon muscles to perform labor to which they are not naturally adapted, producing, in many instances, diseases to females by unnatural tension upon the abdominal muscles and irritation of the viscera of the abdomen and pelvis. The second part of my invention consists in the peculiar construction of the treadle and bearing-bar for the same, by which a V-shaped bearing is secured, which has but little if any friction in the operation of the machine, and by which the rear edge of the heel of the operator is preserved at a point immediately over the fulcrum.

Description of the Accompanying Drawing.

Figure 1 is a perspective view of a sewing-machine frame and driving-shaft, with my invention attached thereto and forming a part thereof. Fig. 2 is a section of the treadle and bearing-bar. Fig. 3 is a section of the adjustable pitman.

General Description.

A is the frame of an ordinary sewing-machine, and B the driving-shaft journaled within it. C is the fly-wheel, and D the driving-

pulley, of the machine. The driving-shaft B I construct with double cranks, E E', located upon the shaft with such relation to each other that the wrist *e* of one is diametrically opposite to the wrist *e'* of the other. The treadles F F' are provided at one end with joint-jaws *f*, for connection with the lower ends of the pitmen G G', and at the opposite ends with heel-rests and guides *f'*. The treadles have also triangular holes *f''* cut through them, the upper angles of which form the fulcrum rests, on which the treadles vibrate. The treadles rest, at the fulcrum end, upon the knife-edged projection H of the bar I, being confined upon the same laterally by the pins *i*. The bottom sides of the holes *f''* are curved to a circle having a radius a trifle greater than the depth of the projection H, to prevent in any position of the treadles any vertical play of the heel ends of the treadles, and sufficient space is provided in the holes *f''* to not only give room for the vibration of the treadles, in accordance with the motion of the cranks, but also to allow of the same extent of motion when the treadles are changed in position, as hereinafter explained. The inside rear faces of the heel-guides *f'*, against which the heels of the operator rest or press, are immediately over the knife-edges of the projections H; consequently that point of the operator's foot—to wit, the rear edge of the heel—has no motion practically, and all the motion of the feet is in advance of the rear edge of the heel. When both feet are in motion, the cranks being, as stated, at opposite points, the motion of the feet is analogous to and as easy and natural as that of walking, and owing to the provision of the knife-edged fulcrum at a point where there is the least pressure of the foot, the friction attending the motion of the treadles is but slight. The pitmen G G' are both adjustable in length to permit either to be elevated or depressed more than the other to suit the requirements of the operator, or to permit both to be elevated and depressed for adjustability equally to suit different operators. For this purpose I make each pitman in three parts, two half rods, *g g'*, and a sleeve, *g''*, the sleeve being tapped with right-and-left-hand threads, to fit

corresponding threads on the rods $g\ g'$. Simply turning the sleeve with the fingers serves to lengthen or shorten the pitman.

Claims.

1. The combination, in a sewing-machine, of cranks $E\ e\ E'\ e'$, set diametrically opposite, pitmen F , and treadles FF' , when the the heel-rests of the treadles are in front of the fulcrums, as and for the purpose set forth.

2. In combination with the elements of the preceding clause, the triangular bearings f'' and knife-edged projection H of bar I , as and for the purpose stated.

In testimony of which invention I hereunto set my hand.

ISAAC P. FISHBURN.

Witnesses:

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