(No Model.)

F. H. BURROWS.

TREADLE.

No. 267,998. Patented Nov. 28, 1882.

Fig. 1.

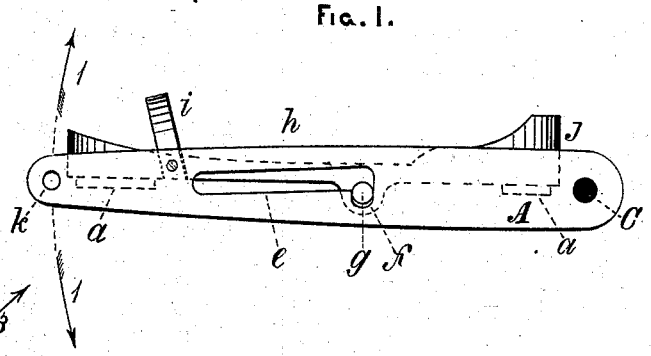


Fig. 2.

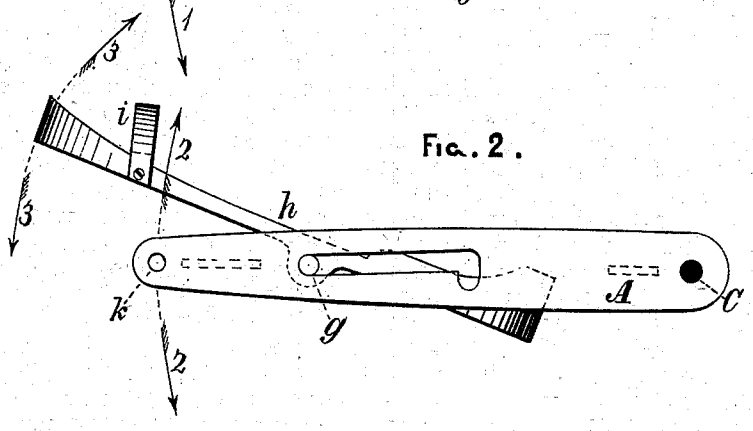
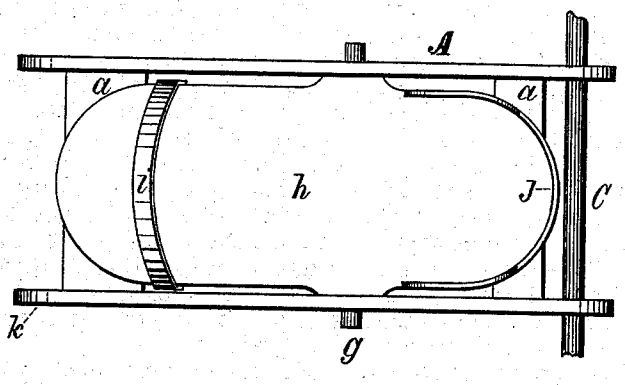


Fig. 3.



WITNESSES.

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UNITED STATES PATENT OFFICE.

FRANCIS H. BURROWS, OF SPRINGFIELD, ILLINOIS.

TREADLE.

SPECIFICATION forming part of Letters Patent No. 267,998, dated November 28, 1882.

Application filed September 9, 1882. (No model.)

To all whom it may concern:

Be it known that I, FRANCIS H. BURROWS, of Springfield, in the county of Sangamon and State of Illinois, have invented a new and Improved Treadle; and I do hereby declare that the following is a full and exact description of the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon.

My invention relates to an improvement in treadles designed chiefly for sewing-machines, but also intended for other light machines operated by foot-power, and differs from the treadles heretofore in use in being provided with a movable shoe, fully described hereinafter, adapted to admit of the machine being actuated by either of two different movements, each bringing into play a different set of muscles, thus affording rest to first one and then the other at the will of the operator.

In the accompanying drawings, Figure 1 is a side view of the treadle, exhibiting the shoe in position to vibrate in unison with the treadle-frame. Fig. 2 is a side view of the treadle, exhibiting the shoe in position free to move upon its own axis; and Fig. 3 is a plan view of the treadle, exhibiting the shoe in the position shown in Fig. 1.

A represents the frame of the treadle, rectangular in form, and fulcrumed at C, so as to vibrate, as indicated by the arrows 1 1. In each of the sides of this frame is a longitudinal slot, *l*, provided at that end nearest the fulcrum with a notch, *f*. Each of these notched slots is adapted to receive the end of an axis, *g*, to which is secured a foot-rest or shoe, *h*, designed to receive the foot of the operator and to oscillate upon said axis, as indicated by arrows 2 2. Across the fore part of the shoe *h* is a strap, *i*, to hold the foot of the operator down, and round the heel is a rim, J, to prevent the foot slipping back. By reference to Fig. 3 it will be seen that the two sides of the frame A are secured together by cross-bars *a a*, which serve also as supports for the heel and toe of the shoe *h* when in the position shown in Fig. 1, and that when in the latter position the shoe will necessarily have the same motion about the fulcrum C as the frame A. It will also be noticed that when in this position the shoe cannot slip forward so long as it rests upon the cross-bars *a a* in consequence of the axis *g* being in the notches *f f*, which are designed to retain the shoe in this position, from which it can be easily lifted by the foot of the operator, the latter being secured to the shoe by the strap *i*.

The operation of my device is as follows: The foot of the operator being placed upon the shoe *h* so that the heel falls within the rim J and the fore part of the foot is thrust under the strap *i*, the under side of the shoe resting on the cross-bars *a a*, the front of the treadle, which is connected at K by means of a pitman or any other convenient medium with the machine to be driven, is then made to vibrate by the action of the fore part of the foot. Now, the heel having but little up-and-down motion, it will be observed that the fatigue falls mainly upon the ankle-joint, and to relieve the latter it is only necessary to lift the shoe by the action of the foot from the notches *f f* and slide it forward to the front ends of the slots *l l*, as shown in Fig. 2. In the latter position the parallelism of the foot may be preserved, notwithstanding the vibratory motion of the frame A, to a degree suitable to the convenience of the operator, the action being almost entirely removed from the ankle and transferred to the knee and hip joints, the knee rising and falling with the treadle-frame A. The change is so easily effected from one position to the other as not even to necessitate a moment's stoppage of the machine. It therefore follows that my device, which is both simple and inexpensive, affords a means of rest to the operator without necessitating any suspension of work.

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

The treadle described, consisting of a shoe, *h*, adapted to oscillate upon an axis, *g*, in combination with a vibrating frame, A, provided with slots *l l*, adapted to receive the ends of the axis *g*, and terminating rearward in notches *f f*, said frame A having cross-bars *a a* to support the shoe when the axis *g* is drawn back into the notches *f f*, so that when in the latter position the shoe and frame A may vibrate

together as if made in one piece, and when in the forward position said shoe shall be clear of the supports *a a* and be free to vibrate upon the axis *g*, all the above parts being constructed and combined for united operation, substantially in the manner and for the purpose herein set forth.

This specification signed and witnessed this 29th day of August, 1882.

FRANCIS H. BURROWS.

Witnesses:
R. NEWTON,
G. C. CARROLL.