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T. A. RICHARDS.

Walking Motion Treadle.

No. 122,910.

Patented Jan. 23, 1872.



Fig. 5.

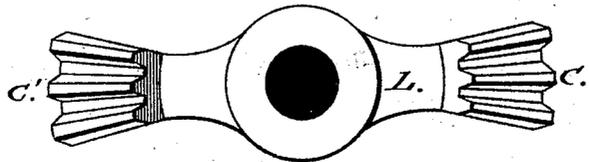


Fig. 4.

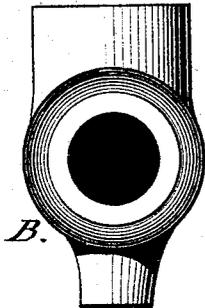


Fig. 3.

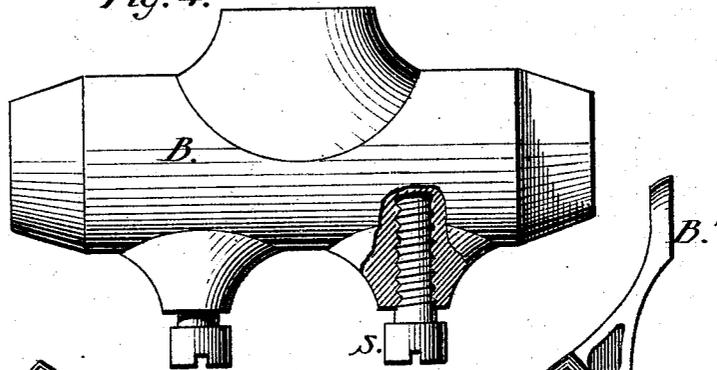


Fig. 2.

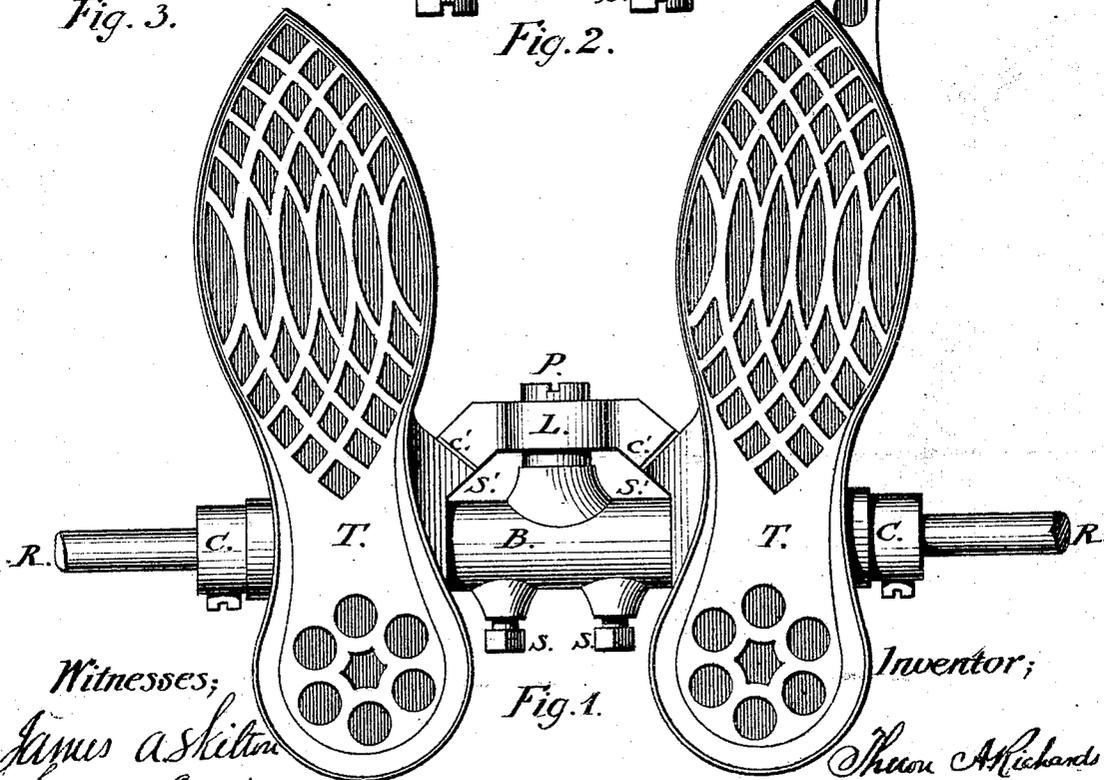


Fig. 1.

Witnesses;
James Askiton
George Lyons

Inventor;
Thos. A. Richards

UNITED STATES PATENT OFFICE.

THERON A. RICHARDS, OF BROOKLYN, NEW YORK, ASSIGNOR OF ONE-HALF HIS RIGHT TO BENJAMIN H. HADLEY, OF SAME PLACE.

IMPROVEMENT IN TREADLES FOR SEWING-MACHINES.

Specification forming part of Letters Patent No. 122,910, dated January 23, 1872.

Specification describing certain Improvements in Treadles for Sewing and other Machines, invented by THERON A. RICHARDS, of the city of Brooklyn, county of Kings and State of New York.

My invention relates to, descriptively speaking, a class of treadles in which there is alternate action or pressure by each foot, the downward pressure of each foot operating to drive the machine, and also to assist in elevating the other foot preparatory to its action in turn. My invention consists of a stationary rod or bar—preferably of a stationary bracket attached to the same—attached to the rod, which furnishes a fulcrum for a balanced lever terminating at each end in several cogs, forming a segment of a cog-wheel; of two shoes, balanced at the shanks, and provided on the inner side between the shank and the ball with cog-wheel segments corresponding to those on the balanced lever; and, finally, of a connecting-rod, intended to be attached to the toe of one shoe and to the crank of the machine.

Figure 1 is a view of the improved treadle with all the parts in place except the connecting-rod. Fig. 2 is a plan of the stationary bracket. Fig. 3 is an end plan of the same. Fig. 4 is a perspective interior end view of the balanced lever and its segments. Fig. 5 is a top plan of the same.

B is the stationary bracket provided with taper bearings for the inner sides of the treadle-shoes. C C are collars with taper bearings for the outer sides of the treadle-shoes, provided with set-screws. C' C' are the cog-wheel segments on the lever L. L is the balanced lever; P, the pivot-screw on which the lever L is balanced. R is the stationary rod or bar to which the parts are attached. S S are set-screws. S' S' are the cog-wheel segments attached to the treadle-shoes. T T are the treadle-shoes. B' is the connecting-rod bracket of the shoe.

The operation of my invention is as follows, viz.: The feet of the operator being placed one on each shoe T T, and pressure being made—say—by the right foot, and at the same time release of pressure being made by the left foot, the result will be a downward motion of the right shoe. This downward motion communicates motion, through the segment S' attached to the right shoe, to the balanced lever L, the cog-wheel segment C' of that side engaging the segment S' of that treadle. This lever L being balanced on the pivot-screw P, its opposite end is tilted upward thereby, through the segments C' and S' of that side, causing the toe of the left shoe to be elevated along with the foot resting upon the same. The connecting-rod being attached to the connecting-bracket B' and the crank of the sewing or other machine, we will suppose a half revolution or step of the machinery to have taken place. Now the action described is reversed by exerting the necessary pressure with the left foot and releasing the right; and the consequence is that the remaining half of the revolution or step of the machinery attached takes place, and the mechanism arrives again at the starting point.

What I claim is—

1. The treadle-shoes T T connected by a balanced lever, L, each provided with engaging cog-wheel segments.
2. The stationary bracket B forming, by the pivot-screw P, the fulcrum of a balanced lever of a walking-motion treadle.
3. The combination of the treadles T T, the lever L, and the stationary bracket B, operating as described.

THERON A. RICHARDS.

Witnesses:

JAMES A. SKILTON,
GEORGE LYONS.