Alfred Nielson's,
Universal Jointed Treadle.
New York City
1870

108172

PATENTED OCT 11 1870

Fig. 1.

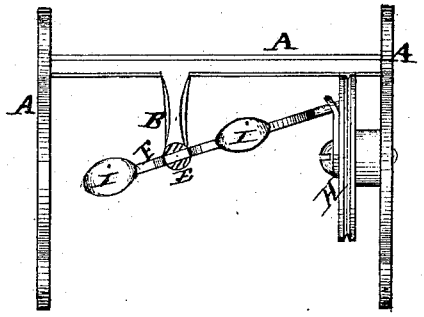


Fig. 3.

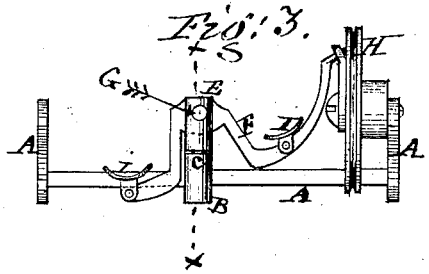


Fig. 2.

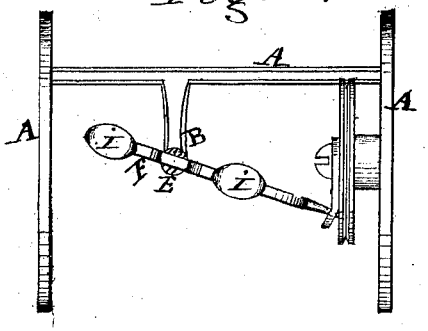


Fig. 4

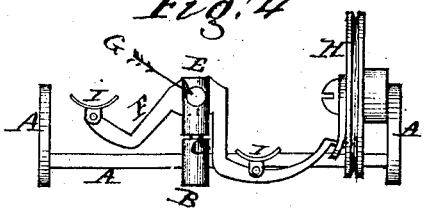


Fig. 6.

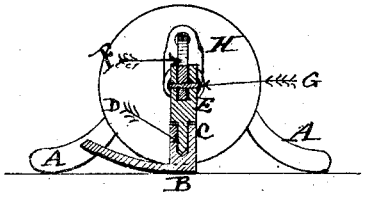
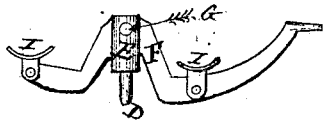


Fig. 5.



Witnesses

Charles L. Barrett
Franklin Barrett

Inventor

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United States Patent Office.

ALFRED NIELSON, OF NEW YORK, N. Y.

Letters Patent No. 108,172, dated October 11, 1870.

IMPROVEMENT IN UNIVERSAL-JOINTED TREADLES.

The Schedule referred to in these Letters Patent and making part of the same

To all whom it may concern:

Be it known that I, ALFRED NIELSON, of the city, county, and State of New York, have invented certain new and useful Improvements in Treadles for Sewing-Machines, Lathes, and other purposes; and I do hereby declare that the following is a full description of the same.

The nature of my invention consists in the method of constructing and arranging the treadle, and parts connected therewith, of a sewing or other machine, in such a way as to give the treadle a compound or universal motion parallel with the action of the pulley, whereby a constant rotary motion can be obtained, and the dead centers common to all other treadle motions overcome; but

To describe my invention more particularly, I will refer to the accompanying drawing forming a part of this specification, the same letters of reference, wherever they occur, referring to like parts.

Figures 1 and 2 are plan views, showing the positions of the treadle at quarter revolution of pulley.

Figures 3 and 4 are front views, showing the positions of the treadle at half revolution of the pulley.

Figure 5, detached view of the treadle.

Figure 6 is a vertical-cut section of the treadle, through the line *x x*, fig. 3, showing the end of the treadle connected with face of the pulley.

Letter A is the treadle-frame, composed of two end pieces, and a bar or rod to connect them together.

Attached to and forming a part of the connecting-rod is a projection or shoulder of metal, B.

In its upper end is formed a socket, C, into which a loosely-fitting pin, D, is inserted, so that it may freely rotate therein. This may be made as a ball-and-socket joint, if desired.

This pin is formed with a cylindrical head, E, of such diameter and length as to admit of its upper end being slotted down, so as to hold a treadle, F, therein.

The treadle is held in the slot by a center pin, G, which thus permits its ends to vibrate up and down freely, while, at the same time, it has a horizontal vibratory motion on the pin D.

By means of this compound motion of the treadle, it will readily be perceived that a rotatory motion will be given to the pulley H, when connected with one end of the treadle.

The shape of the treadle is somewhat like an inverted U, having its ends bent outward at right angles, or nearly so, to the sides of the U, so as to permit the feet of the operator to rest on the treadle below its center of motion.

For the purpose of connecting the treadle to the pulley or crank, as the case may be, one arm of the treadle is bent upward, and lengthened, so as to enter a hole in the pulley H, or make other suitable connection with the side of the same, to rotate it. The opposite end of the treadle forms a foot-rest to operate it through the other half of the revolution of the pulley.

It will be obvious that the exact shape of the treadle shown in the drawing may be modified, and, therefore, do not confine myself to the exact shape shown. So long as a curved treadle is used to operate a pulley on a line parallel with the axis of the pulley, I claim the right to the use of such a treadle.

Letters I are two stirrups or foot-rests, secured, by center pins, at convenient parts of the treadle, to enable the operator to retain at all times a firm and steady control of the motions of the treadle.

Having now described my invention, I will proceed to set forth what I claim and desire to secure by Letters Patent of the United States.

I claim—

1. The combination of the treadle F with the socket C and center pin D, or equivalents therefor, substantially as described, and for the purposes set forth.

2. The treadle F, working on a universal joint, as set forth, in combination with the pulley H, or equivalent device, for obtaining rotary motion, substantially as set forth.

3. The bent or curved form of the treadle F, substantially as set forth, when arranged to operate parallel with the axis of the pulley or crank-shaft, as a double-acting treadle, as hereinbefore described.

4. In combination with the treadle F, the stirrups I, substantially as described.

ALFRED NIELSON.

Witnesses:

CHARLES L. BARRITT,

FRANKLIN BARRITT.