

W. S. Coon,

Treadle.

No. 101,104.

Patented Mar. 22, 1870.

FIG. I.

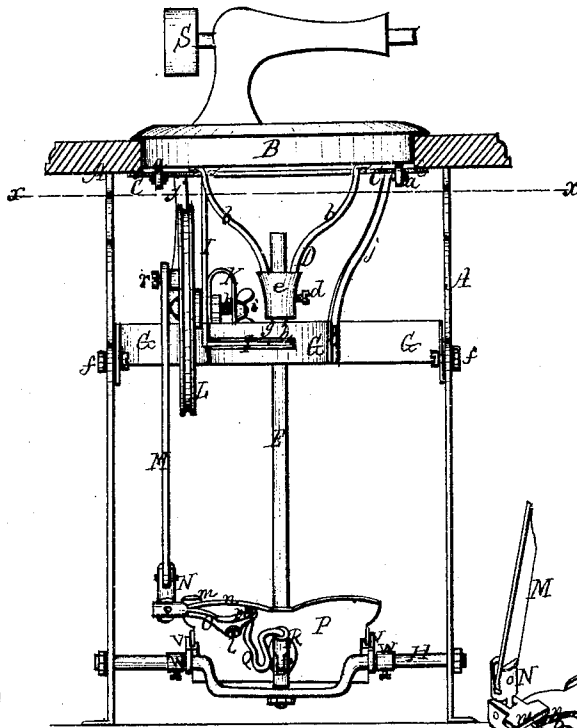


FIG. III.

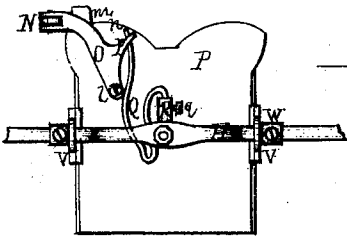


FIG. IV.

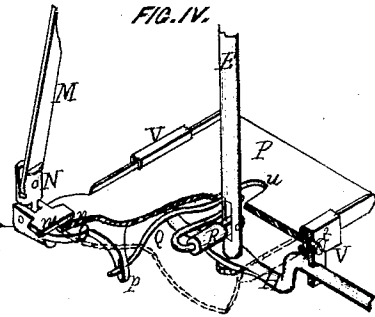
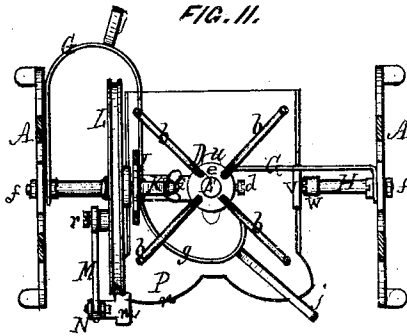


FIG. II.



Witnesses.  
Geo. H. Miall  
Quincy Van Voorhis

William S. Coon,  
By J. Fraser & Co.,  
attys.

# United States Patent Office.

WILLIAM S. COON, OF ROCHESTER, NEW YORK.

Letters Patent No. 101,104, dated March 22, 1870.

## IMPROVEMENT IN 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, WILLIAM S. COON, of the city of Rochester, in the county of Monroe and State of New York, have invented certain new and useful Improvements in the Application of Power, of which the following is a specification.

### Nature of Invention.

This invention consists in so arranging the operating parts as hereinafter described, that the same may be turned to any desired angle to present the tool or instrument properly to the work, either in front of or at the side of the operator.

### General Description.

In the drawings—

Figure 1 is an elevation of my improvement applied to a suitable frame.

Figure 2, horizontal section in plane  $x x$ .

Figure 3, a bottom view of the treadle and connections.

Figure 4, a perspective view of the same parts, a portion of the treadle being broken away.

A is a suitable frame of any desired kind.

B is a turn-table mounted thereon and sustaining the working parts.

To facilitate the turning of the table, friction-rollers  $a a$ , of rubber or other material, are situated under the same, resting in a metallic plate or rim, C, or equivalent.

On the under side of the table is attached the branching-arms  $b b$  of a bearing, D, whose hub  $c$  rests on a spindle, E, to which it is fixed at any desired height by a set-screw,  $d$ .

The spindle is stayed centrally by a scroll, G, presently to be described, and is swiveled at the lower end to the treadle-shaft H, which has a bend or depression for that purpose.

The scroll consists simply of a metallic leaf or band extending from side to side of the frame, to which it is attached by screw-bolts  $f f$ , which pass through vertical slots of the ends of the scroll, thereby allowing a vertical adjustment.

At suitable points the scroll has upright braces  $j j$  attached to the bed of the frame, and provided with similar screw and slot connections.

This vertical adjustment, both of the scroll and the bearing D, adapts the said parts to application on frames of different heights.

The central portion of the scroll is made concentric to any desired extent with the axis of the spindle, as shown at  $g$ , and this concentric portion is cut with a longitudinal slot,  $h$ , fig. 1.

Through this slot passes the elbow of a right-angled hanger, I, attached at the upper end to the turn-table,

and at the lower or inner end to the spindle, with which it turns when the table is revolved.

The hanger is fixed to the scroll at any desired position by any suitable arrangement, that shown in the drawings being a bent spring, K, attached to it, pressed up by a nut,  $i$ , on screw  $k$ .

A band-wheel, L, is hung to hanger I, and from crank  $r$  of this wheel a pitman-rod, M, extends down and has pivoted to its lower end a vertical joint-piece, N.

This in turn is jointed at right angles to a horizontal rock-plate, O, pivoted at  $l$  on the under side of the treadle P.

The outer end of the rock-plate is formed into a clasp,  $m$ , that embraces the edge  $n$  of the treadle, which is made concentric with pivot  $l$  to preserve contact of the parts.

The rock-plate has an arm,  $p$ , with an elongated eye in it, through which passes a bent rod, Q.

This rod at the opposite end is swiveled in a joint-piece, R, which is horizontal, and in turn is pivoted in the lower end of spindle E.

The swiveled end of the rod simply turns in the jointed piece, and is retained by a screw,  $q$ , which sets into a groove in the same, or by some equivalent means.

Power applied to the treadle P is transferred by pitman M to band-wheel L, and thence transferred to pulley S or other part at pleasure.

When the turn-table is turned around the band-wheel moves with it, also the spindle E.

The spindle carries with it the joint R and bent rod Q. The end of the bent rod sliding in the eye of the rock-plate O also draws that around on the treadle, and with it the joint N and pitman M.

Thus the whole working apparatus moves around simultaneously with the turn-table, and assumes just the angle that that does. Therefore the parts may be set at any desired position.

The double joints produced at the points R and N insure a free action of the treadle at whatever position the arrangement is set, as the said joints have almost a universal motion. There can be no cramping or binding under these circumstances.

This machine, thus arranged, is adapted to a great variety of purposes, such as operating drills, saws and other tools; also operating sewing-machines, &c. It enables the work to be done in almost any position or at almost any angle, thus not only facilitating the work and lessening the labor and trouble, but also economizing space, as by this adjustment the machine may be set near the wall instead of in the middle of the floor.

To facilitate the adjustment to the greatest degree, as well as to adapt the treadle to different machines, I rest said treadle in ways V V, which allow it to be

adjusted out or in, being held in any one position by set-screws *t t*.

A slot, *u*, is formed in the treadle, to allow such adjustment past the spindle.

The ways *V* form the bearings of the treadle upon the shaft, being swiveled thereto and held in place by sliding collars *W W*, or equivalent.

It is obvious that instead of a treadle for the application of foot-power, any equivalent device for the application of heavier power may be applied. In either case the same principle of adjustment of the operating parts would be involved.

#### Claims.

What I claim, and desire to secure by Letters Patent, is—

1. Arranging the operating mechanism in combination with the turn-table and treadle, in such a manner that the whole may be turned simultaneously to any desired angle by one movement, in the manner described and for the purpose specified.

2. The branched bearing *D*, combined with the turn-table *B* and spindle *E* in such a manner as to allow a vertical adjustment, as herein described.

3. The guide-scroll *G*, having a concentric portion, *g*, combined with the hanger *I* and band-wheel *L*, in the manner and for the purpose specified.

4. The elbow-hanger *I*, attached at one end to the turn-table and at the other to the central spindle, and supporting the band-wheel, in the manner and for the purpose described.

5. The arrangement of the bent spring *K*, screw *k* and clamping-nut *i*, combined with the hanger *I* and band-wheel *L*, as herein described.

6. The metallic rim or ring *C* and supporting-rollers *a a*, arranged in connection with the turn-table *B*, in the manner and for the purpose specified.

7. The combination of the rock-plate *O* and bent rod *Q* with the double joints *N R*, operating in the manner and for the purpose specified.

8. The combination with the treadle and the pitman of the double joints *N R*, which allows a free action of said parts at whatever angle the operating mechanism is turned, as herein described.

9. The combination of clasp-lip *m* of rock-plate *O* with the concentric edge *n* of the treadle, as described and for the purpose specified.

10. The combination of the swivelled ways *V V* and retaining-collars *W W* with the treadle, for accomplishing the proper adjustment of the same, as herein described.

11. The arrangement as a whole, consisting of the turn-table *B*, bearing *D*, spindle *E*, hanger *I*, scroll *G*, joints *N R*, rock-plate *O*, and bent rod *Q*, operating as described and for the purpose specified.

In witness whereof I have hereunto signed my name in the presence of two subscribing witnesses.

WILLIAM S. COON.

Witnesses:

GEO. W. MIATT,  
FRED. A. HATCH.