

(No Model.)

2 Sheets—Sheet 1.

C. NICHOLSON.

COMBINED HAND AND FOOT POWER FOR SEWING MACHINES.

No. 303,180.

Patented Aug. 5, 1884.

Fig. 1.

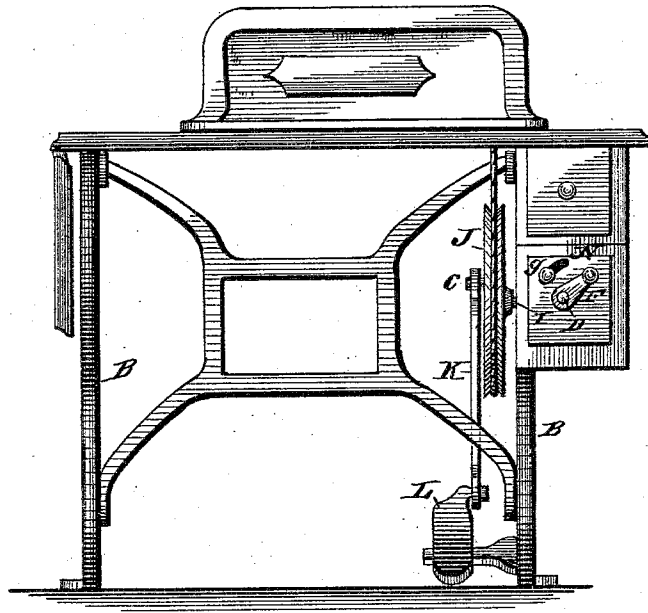
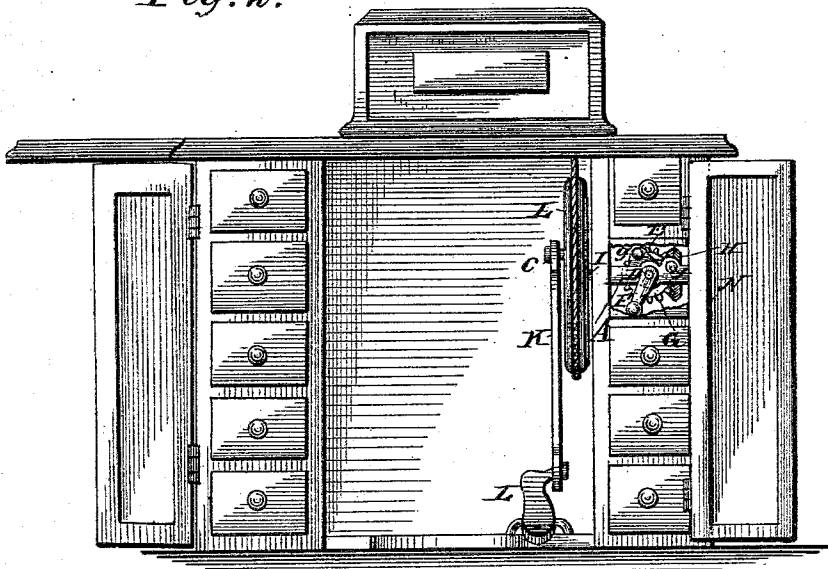


Fig. 2.



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Fig. 3.

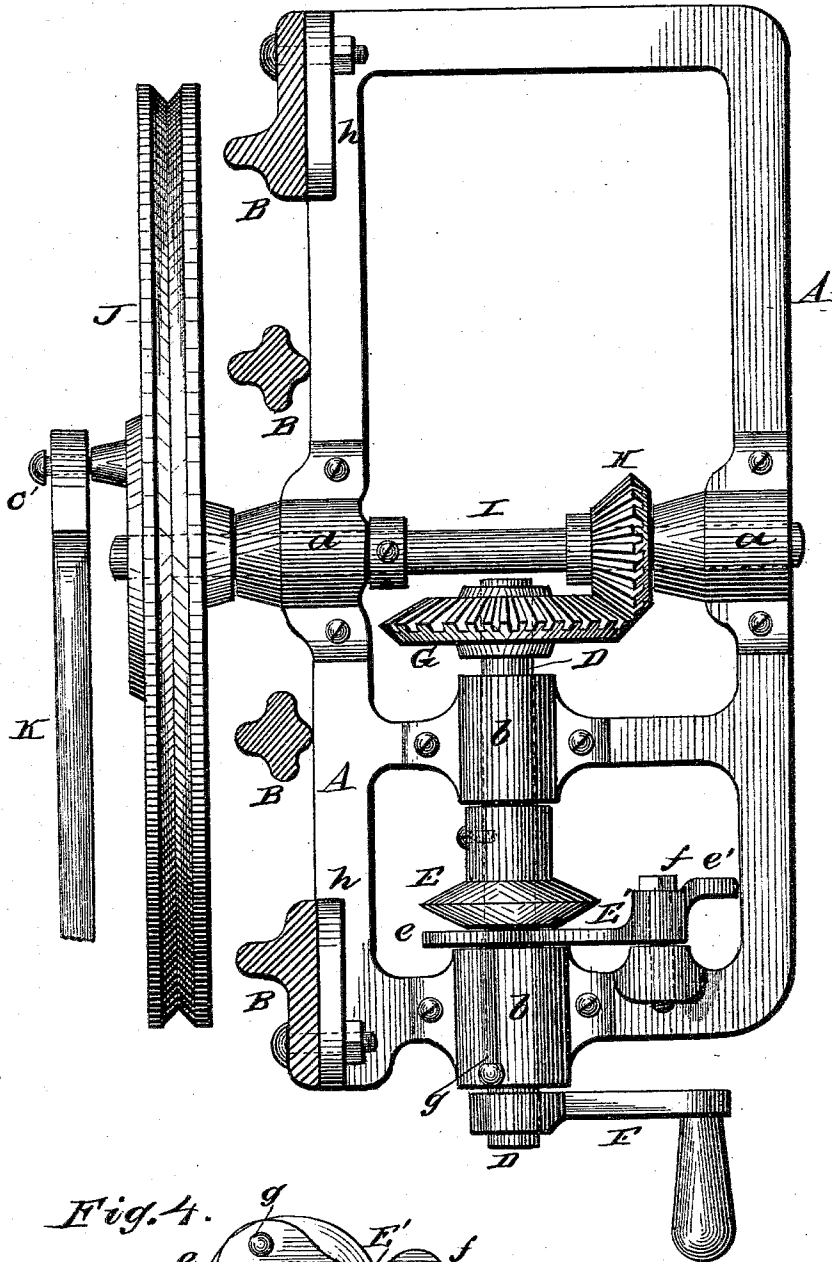
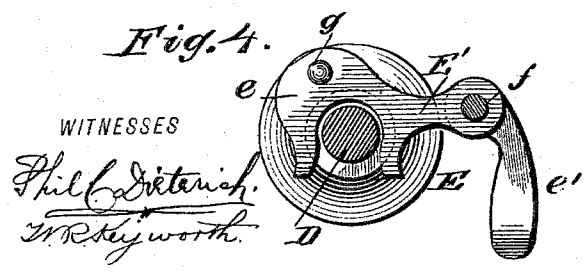


Fig. 4.



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UNITED STATES PATENT OFFICE.

CHARLES NICHOLSON, OF NEW YORK, N. Y.

COMBINED HAND AND FOOT POWER FOR SEWING-MACHINES.

SPECIFICATION forming part of Letters Patent No. 303,180, dated August 5, 1884.

Application filed June 16, 1884. (No model.)

To all whom it may concern:

Be it known that I, CHARLES NICHOLSON, of New York, in the county of New York and State of New York, have invented certain new and useful Improvements in Combined Hand and Foot Power for Sewing-Machines; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form part of this specification, in which—

Figure 1 is a front elevation of a sewing-machine table having my improved hand and foot power applied to it for driving the sewing-machine. Fig. 2 is a front elevation of a sewing-machine table, showing the position of the hand-power with respect to the foot-power. Fig. 3 is a plan view of the hand and foot mechanism drawn on an enlarged scale. Fig. 4 is a detail of the bifurcated locking device for disengaging the hand-power gearing when it is desired to operate the foot-power.

This invention relates to mechanism for driving sewing-machines and other light machinery; and it consists in a novel combination of parts whereby a foot-power and a hand-power are practically combined and so arranged that either can be conveniently used for driving a sewing-machine at the will of the operator, as will be fully understood from the following description when taken in connection with the annexed drawings.

A designates a rectangular metal frame, which is cast with journal-bearings *a a* and *b b* for two shafts, which are geared together at right angles to each other, and which is cast with lugs *h h*, through which lugs bolts are passed that secure the frame rigidly to the legs or frame B of the sewing-machine table. The journal-boxes *b b* are on the transverse bars of the frame A, and they afford bearings for an endwise movable shaft, D, on one end of which is keyed a bevel-spur wheel, G, and on the other end is applied a hand-crank, F, which latter is located in a convenient position to a person sitting at the machine. The bevel-gear G engages at times with a bevel-pinion, H, keyed on a transverse shaft, I, which has two bearings in the boxes *a a*. This shaft I has keyed on one end, outside of the

frame A, a belt-wheel, J, to which is secured wrist-pin *c*. On this wrist-pin is applied the pitman-rod K, and to said rod is attached treadle L, by means of which the operator can drive the sewing-machine with the foot.

E designates a double collar, which is keyed on the endwise shaft D, near the outer journal-box, *b*, and E' designates a locking-catch which is pivoted to the frame A by means of a pin *f*. This catch E' is constructed with a bifurcated end, *e*, adapted to straddle the shaft D between the outer journal-box, *b*, and the said collar, and hold the wheel G in gear with wheel H, as shown in Fig. 3. A pin or handle, *g*, is fixed to the locking-catch, and extends through a slot made through the front door of the case N, as shown in Fig. 1. The arm *e'* of the locking-catch is arranged so that by swinging this catch on its pivot its bifurcated end can be lifted from shaft D, and its arm *e'* can be caused to strike the back beveled side of the catch and press the shaft D outward, so as to disengage wheel G from wheel H. By reversing the movement of the catch the said wheels can be geared together.

It will be seen from the above description that when the wheels G H are in gear, the machine can be conveniently driven by turning the crank F with the right hand, while with the left hand the work can be guided. By disengaging the gear-wheels the machine can be driven by the foot of the operator without the extra labor which would be required if the crank revolved. I thus combine in a single machine a hand-power and a foot-power, either of which can be employed.

By reference to Fig. 2 it will be seen that the hand-power is applied in a case on the right-hand side of the machine, where it will be out of sight and out of the way.

Having described my invention, what I claim as new is—

1. A combined hand and foot power for sewing-machines, consisting of driving-shafts provided with gears, a shifting locking-catch therefor, a hand-crank, a belt-wheel, and a treadle, all constructed and adapted to operate substantially in the manner and for the purposes described.

2. In a combined hand and foot power for sewing-machines, the combination of the bear-

ing-frame, the shafts provided with gears, the beveled collar on the endwise movable shaft, the crank thereon, and the locking shifting-catch therefor, substantially as described.

5 3. In a combined hand and foot power for sewing-machines, the combination, with a sewing-machine frame or table, of the frame A, bearing two shafts, the gears on these shafts, a hand-crank thereon, a belt-wheel, and a
10 treadle and pitman connected therewith, substantially as and for the purposes described.

4. In a combined hand and foot power for sewing-machines, a frame provided with two transverse bearings for the belt-wheel shaft,
15 and two bearings for the hand-crank shaft, and also provided with lugs for securing the frame to a sewing-machine, in combination with and

adapted to receive the hand-power and the foot-power, substantially as described.

5. In a combined hand and foot power for a 20 sewing-machine, an inclosing case or housing below the table-top, a frame secured thereto adapted to afford bearings for a hand-crank shaft and a belt-wheel shaft provided with gears, and a foot-power, substantially as de- 25 scribed.

In testimony that I claim the foregoing as my own I affix my signature in presence of two witnesses.

CHARLES NICHOLSON.

Witnesses:

W. R. KEYWORTH,
F. O. McCLEARY.