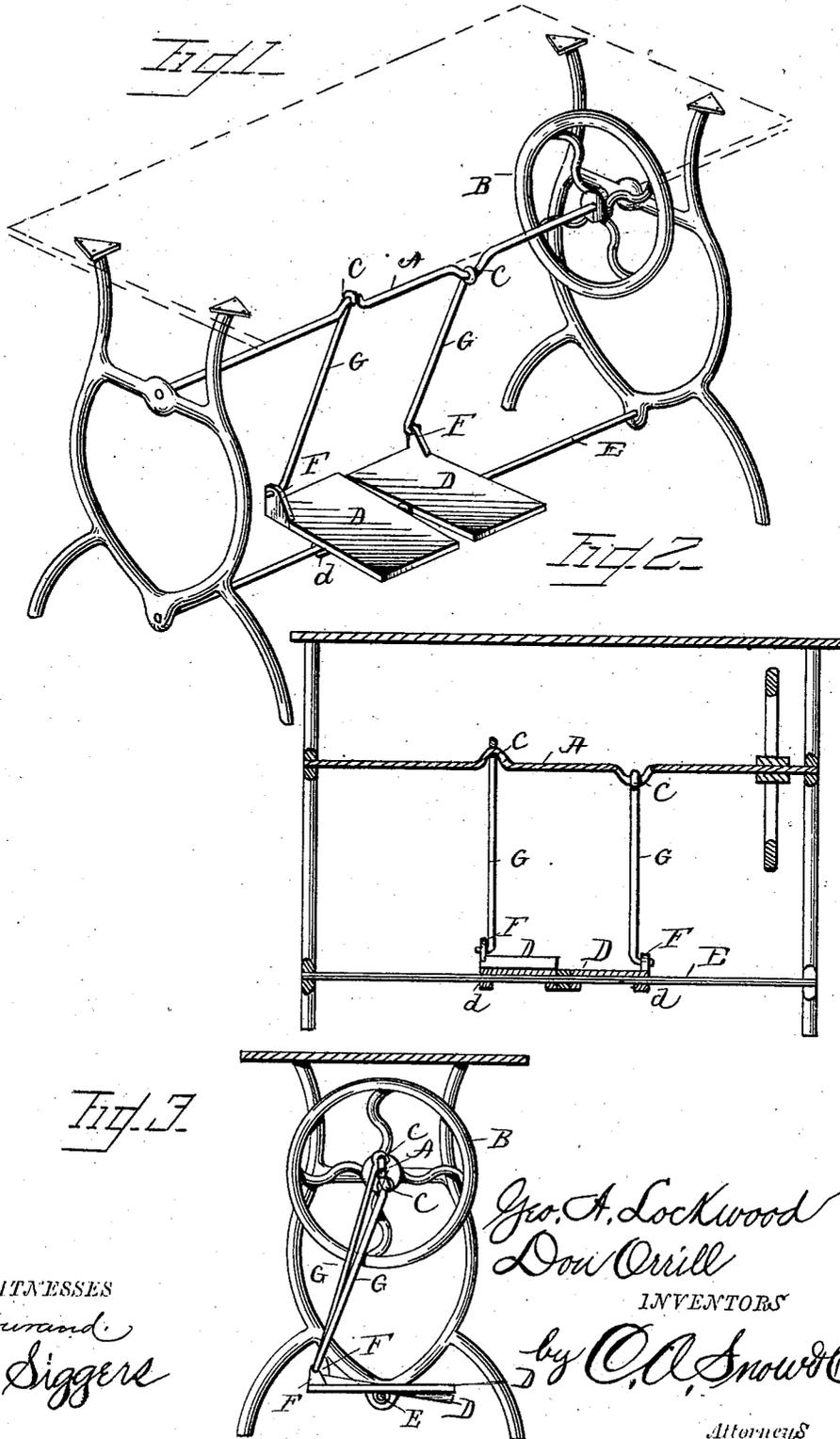


(No Model.)

G. A. LOCKWOOD & D. ORRILL.
SEWING MACHINE TREADLE.

No. 295,027.

Patented Mar. 11, 1884.



WITNESSES
H. L. Orland
E. S. Siggers

Geo. A. Lockwood
Don Orrill
INVENTORS

by *C. A. Snow & Co*

Attorneys

UNITED STATES PATENT OFFICE.

GEORGE ALONZO LOCKWOOD AND DON ORRILL, OF CHARITON, IOWA.

SEWING-MACHINE TREADLE.

SPECIFICATION forming part of Letters Patent No. 295,027, dated March 11, 1884.

Application filed January 9, 1884. (No model)

To all whom it may concern:

Be it known that we, GEORGE A. LOCKWOOD and DON ORRILL, citizens of the United States, residing at Chariton, in the county of Lucas and State of Iowa, have invented a new and useful Treadle, of which the following is a specification, reference being had to the accompanying drawings.

This invention relates to foot-powers for sewing-machines, lathes, and the like; and it has for its object to overcome the dead-center in crank motion, to simplify and cheapen the construction, and make such powers more convenient and effective in use. It is well known that in this class of mechanical powers, in which the power is applied by one or more treadles to a corresponding number of cranks formed on the operating-shaft, there is more or less danger of the shaft stopping on the dead-center, so that when it is desired to start the machine again the cranks refuse to move under the operation of the treadle, and the only remedy is to turn the cranks off the dead-center by hand. While the machine is in operation such devices depend upon the velocity of the driving-wheel to throw the cranks of the operating-shaft off the dead-center, and this causes an uncertain and unsteady motion to the machine. Another defect of this class of foot-powers results in pivoting the treadle at the rear end, near the heel of the operator, and thus it requires the full force of the operator's feet to be exerted at the rear part of the treadle to cause the downward movement thereof.

To obviate the aforesaid disadvantages and attain the objects above stated, the said invention consists in constructing the operating-shaft in one solid piece, with two cranks turned at an angle to each other, but not diametrically opposite, so that the machine will never stop on a dead-center, and while under operation the cranks will be automatically thrown off the dead-center without any assistance from the driving-wheel.

It consists, further, in pivoting the treadle in the center, so that the feet of the operator will give four distinct movements to the treadles to operate the cranks, besides making the foot-power considerably easier in working machinery; and it also consists in certain details of construction and combination of parts, as

hereinafter set forth, and particularly pointed out in the claims.

In the accompanying drawings, Figure 1 is a perspective view of our improved treadle. 55 Fig. 2 is a longitudinal sectional view of the same. Fig. 3 is a transverse sectional view.

Like letters refer to corresponding parts in the several figures.

Referring to the drawings, A designates the operating-shaft, formed solid, and provided with a driving-wheel, B, cranks C C being formed near each end of the shaft, said cranks being turned at an angle to each other.

D D designate two treadles pivoted upon a rod, E, at their centers, as shown at *d*, arms F extending out from the front corners of the treadles, and pitmen G connecting the arms with the cranks C, as shown. 65

The operation of our invention will be readily understood from the foregoing description, taken in connection with the annexed drawings. By the operation of the treadles the desired reciprocating motion will be imparted to the pitmen G, and by the connection with 70 the cranks C this motion will cause the rotation of the operating-shaft, and the consequent operation of the machine. 75

It will be seen that by arranging the double cranks preferably at a quarter of an angle to each other they will overcome the dead-center, permitting the machine to be stopped and started at any point. The pivoting of the treadles in the center gives the operator four distinct points of power from which to start or stop the machine, and causes the operator to have full control of the propelling-power, and allowing him the use of both hands, while the treadles are operated by a natural motion of the feet, or an alternate heel and toe motion, which obviates all strain and unnecessary waste of muscular power, which is so injurious to the operator. 80 85 90

By forming the operating-shaft in one piece, with cranks or wrists turned at an angle to each other that will overcome a dead-center, is a decided improvement over the divided shaft, since there will be no screws, nuts, or taps to become loosened by constant use. 95

It will also be seen that turning the cranks or wrists preferably at a quarter-angle to each other the dead-center will be overcome during 100

operation without any assistance from the velocity of the driving-wheel. Various devices have been constructed to attain this end; but in all of such machines the cranks or wrists are turned diametrically opposite each other, with the treadles hung at the rear end, near the heel, and are just as liable to stop on a dead-center as the old-style single treadle. By turning the cranks or wrists at an angle to each other, and with our construction of the solid shaft, the operator simply has to depend upon the continuous power that he has over the treadle to turn the cranks over the dead-centers. The construction of the treadle permits the feet to assume a more natural position during operation, and causes the location of the center of power immediately in the hollow of the feet. The treadles are operated by the heel, as well as by the toe. Consequently while the toe operates one treadle the heel of the other foot has the same power on the other treadle, giving the operator double power, and in a manner that is natural, without the use of any muscles of the leg above the knee.

It will be further seen that the construction of our treadle-power is simple, durable, inexpensive, and efficient, and will prove of great advantage in its application to sewing-machines, lathes, and the like.

Having fully described our invention, we claim—

1. In a foot-power, the operating-shaft, formed in one piece, with cranks or wrists at each end turned at an angle to each other, in combination with the rod E, a pair of treadles pivoted at their centers upon the rod, and pitmen connecting each of the treadles to one of the cranks or wrists, for the purpose set forth.

2. In a foot-power, the operating-shaft, formed with cranks or wrists at each end turned at an angle to each other, in combination with the rod E, a pair of treadles, D, pivoted at their centers upon the rod, and formed with arms F, extending upwardly therefrom, and pitmen connecting each of the arms F to one of the wrists or cranks, as set forth.

In testimony that we claim the foregoing as our own we have hereto affixed our signatures in presence of two witnesses.

GEORGE ALONZO LOCKWOOD.

DON ORRILL.

Witnesses to the signature of George Alonzo Lockwood:

D. J. EWING,

J. A. PENICK.

Witnesses to the signature of Don Orrill:

JAMES HAGERMAN,

A. J. MCCRARY.