

*O. H. Needham,*

*Treadle.*

*No. 107,619.*

*Patented Sep. 20, 1870.*

FIG. 1

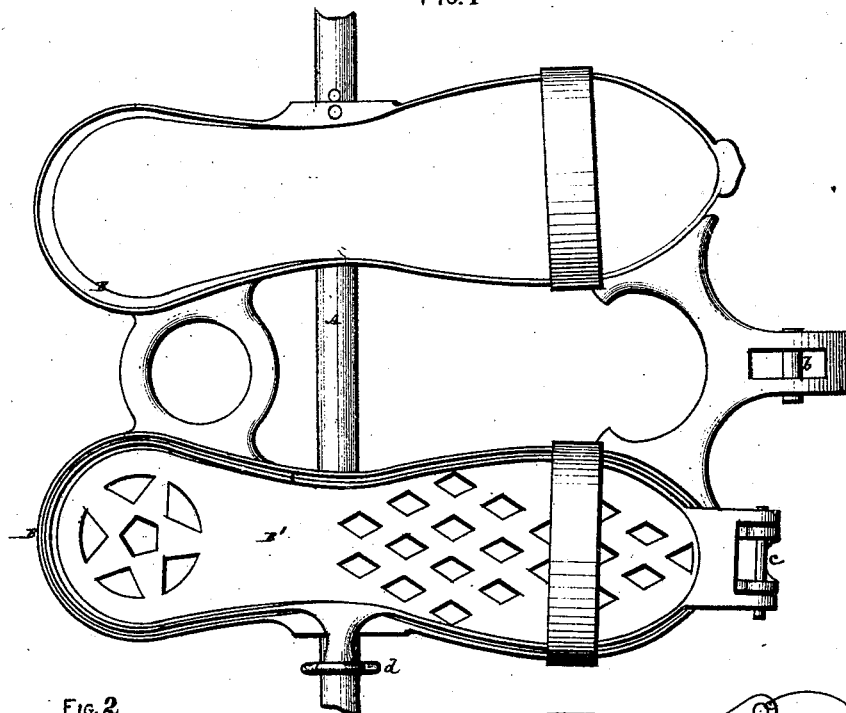
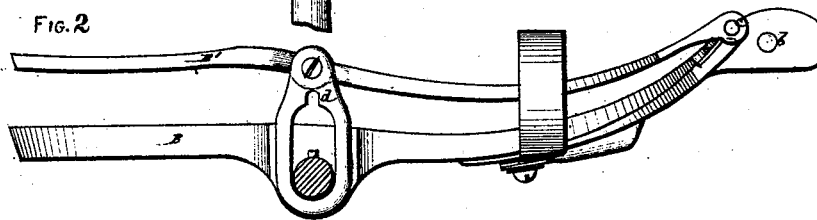


FIG. 2



*Witnesses*  
*Fred. Haynes*  
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# United States Patent Office.

ORWELL H. NEEDHAM, OF NEW YORK, N. Y.

Letters Patent No 107,619, dated September 20, 1870.

## IMPROVEMENT IN COMPOUND 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, ORWELL H. NEEDHAM, of the city, county, and State of New York, have invented a new and useful Compound Treadle, of which the following is a full, clear, and exact description, reference being had to the accompanying drawing forming part of this specification, and in which—

Figure 1 represents a plan of my improved compound treadle, and

Figure 2 a side elevation of the same.

Similar letters of reference indicate corresponding parts.

My invention, while applicable to treadle-motions generally, is more particularly intended to be used in connection with the treadle-movements of sewing-machines, to allow of the starting of the crank-shaft when arrested on its dead-center, and to insure the starting of it in the requisite or a given direction, in whatever position it may have been stopped; to this end,

My treadle, which is the subject of this application, may be connected, in addition to its attachment by pitmen to the crank, with a combination of ratchet and pawl devices, similar to those described in Letters Patent No 101,152, issued to me March 22, 1870, or with any other means that will secure to the crank-shaft, by treadle-pressure or action, a starting movement in the requisite direction.

My invention consists in a compound treadle for effecting both the starting of the crank-shaft, as hereinbefore referred to, and the running or driving of said shaft, after it has been started, without removal of the foot, as where an independent treadle is used, and without any protrusion above the foot or sole-piece of the treadle proper to enter the arch of the foot, and which it is difficult to adapt to feet of different shape, or shoes of varied form, as, for instance, boots with heels and slippers without heels.

Referring to the accompanying drawing—

A represents the treadle or rock-shaft, and

B the treadle or foot-plates, from which the con-

nection is made by pitman, as at *b*, to the crank of the driving-shaft.

One or both of the foot-plates, which constitute an ordinary treadle, has hinged to it or them, as at *c*, an upper sole or foot-plate, *B'*, of flat contour, or of corresponding shape with the lower foot-plate or treadle, over which it lies, and is made capable of shutting down upon, so that it constitutes an integral part or mere additional thickness, as it were, of the lower foot-plate, and presents no obstruction to the passage of the foot over it, and is alike applicable to boots or shoes with or without heels, being independent of the fit of the arch of the foot to it, yet, by its arrangement over the lower foot-plate or treadle, of which it forms part, and to which it is attached or hinged, said upper foot-plate *B'* is capable of being operated without removal of the foot from the treadle. When down, it becomes part of the treadle to actuate the crank-shaft in the ordinary manner; but, when raised, it occupies a position which allows of an independent motion, by pressure of the foot upon it, to give the necessary movement to the starting devices of the crank-shaft, to which end said upper foot-plate *B'* may be connected with said devices by rod from a slotted guide or arm, *d*, projecting from the side of said foot-plate, and made to embrace the rock-shaft *A*. It may be kept raised, when the foot is relieved from pressure on it, by a spring adjustment of the starting devices back to their normal position.

What is here claimed, and desired to be secured by Letter Patent, is—

A compound treadle, formed of a lower foot-plate or plates *B* and upper foot-plate *B'*, pivoted, as at *c*, to the lower plate, for independent action and joint operation with the latter, relatively to the treadle-shaft *A*, substantially as specified.

ORWELL H. NEEDHAM.

Witnesses:

FRED. HAYNES,

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