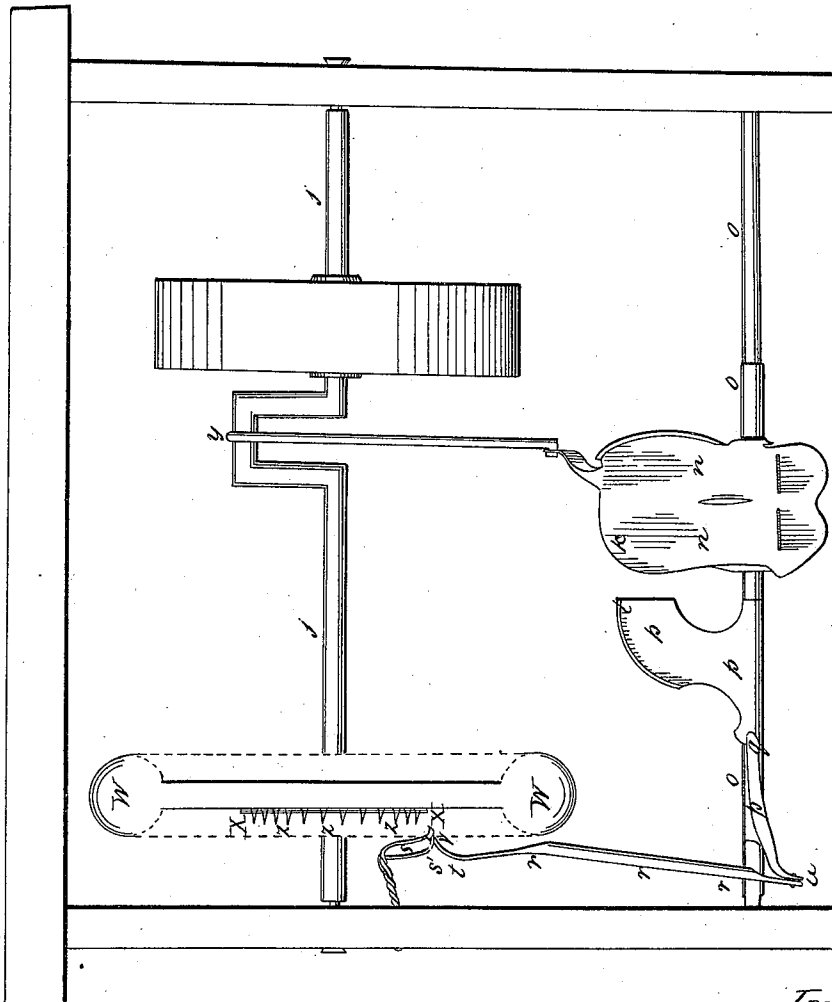


J. P. Herron,

Treadle.

N^o 43,641.

Patented July 26, 1864.



Inventor

James P. Herron

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Witnesses

A. Ramsdell

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UNITED STATES PATENT OFFICE.

JAMES P. HERRON, OF WASHINGTON, DISTRICT OF COLUMBIA.

IMPROVEMENT IN DEVICES FOR STARTING SEWING-MACHINES, &c.

Specification forming part of Letters Patent No. 43,641, dated July 26, 1864; antedated July 9, 1864.

To all whom it may concern:

Be it known that I, JAMES P. HERRON, of the city of Washington, in the District of Columbia, have invented a new and useful arrangement for starting machines moved by cranks when inert or resting at a dead-point; and I do declare that the following is a full and exact description of the same, reference being had to the accompanying drawing, and to the letters of reference marked thereon.

It is well known that difficulty exists in starting machines propelled by a crank, especially when it works perpendicularly and stops at a dead-point. When stopping, the crank drops to rest at an inert point, and cannot be moved without applying other force than the ordinary moving power—as is seen in sewing-machines, for instance; and, further, it is a well-known fact that it is a matter of great inconvenience to run sewing-machines slowly, to make but a few stitches at a time, to stop and start at short and irregular intervals, to adjust the needle, &c. In all these instances the operator has to use one hand to work the fly or balance wheel, and is thus deprived of the use of one hand in cases and at times when both hands are most needed for adjusting and managing the fabric being worked, besides the inconvenience of putting the hand under to move the machine. In order to obviate all such difficulties, I have constructed a new method or device for starting such machines and obtaining such motion as the operator may desire without applying the hand to the machine. To accomplish this object, I make a machine in the manner illustrated in the accompanying drawing.

I add to the fly or balance wheel *w*, which is shown in section in order to exhibit the teeth or ratchets *z z*, a circle or inside ring, *x x*, the diameter of which may be the same as that of the circle described by crank *y*, or greater or less, as may be desired, this circle having ratchets or cogs slightly hooked, as seen at *z z*, in which works the upper end of a rod, *r r*, the upper end having a turn or bend at *t*, inclining from thirty to ninety degrees and running through a curved slot or opening, *s*, in a bracket attached to the frame below and in front of the journal *j j*, as seen at *s s*, nearly parallel to the balance-wheel *w*. On the up-

per end of the rod *r r t* is a hook of an italic-*v* shape, seen at *v*, which, when raised, is by reason of the inclined portion *t* of the rod bearing upon the inner extremity, *s'*, of the guide-slot *s*, forced inward until it comes in contact with the circle *x x*, catching on one of the lower ratchets or cogs at about the point *z z* and moving the balance-wheel *w*, which gives motion to the crank *y*, moving it past its dead-point and giving such motion to the machine as may be desired, running it as slowly as required and stopping and starting as often as necessary.

To communicate motion to the rod *r r* and to the sewing-machine, I attach to the bar *o o*, on which the foot-piece or treadle *n n* is placed, a pedal, *p p*, with a hinge-joint, *q*, in the middle inclining to the toe of the treadle *n n*. The bar *o o* is the fulcrum, and the other or rear end of the pedal inclines from the foot-piece or treadle in such position as to connect with the lower end of the rod *r r* by a movable joint, *u*. The toe may be moved from the treadle *n*, as seen at *k*, across to the pedal at *l*. By bearing down at *l* the pedal rises at *u*, raising the rod *r r*, inclining through the slot *s s*, and the end hook, *v*, catches on a lower ratchet or cog, *z z*, or similar construction, (varied to suit different machines,) and moves the balance-wheel *w*. When the foot is removed from the pedal *p p* the rod by its weight falls to rest, and by the shape of the cam-slot and the peculiar form of the top of the rod the hook *v* falls and rests free from contact with the wheel *w* and the ratchets *z z*. The pedal is so constructed with a hinge-joint in the middle on the bar *o o* that the toe end *l* is free to rise, so as not to pinch or bind the toes between it and the treadle while the pedal and its connections are at rest.

By this my attachment to machines the foot is made to do the work of the hand in starting the machine for the purpose of adjusting the needle, making one or a few stitches, moving slowly, &c., at the will of the operator.

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

1. The combination of the pedal *p p*, the rod *r r*, and the hook *v*, or their equivalents, constructed and operating substantially as and for the purpose shown and set forth.

2. The circle of teeth z , constructed as described, and used in connection with the rod r and its hook v .

3. The combination of the cam-slot s or its equivalent and the rod r , as and for the purpose shown and described.

4. The combination of the pedal p , the rod

r , the hook v , the teeth z , and the cam-slot s , in the manner and for the purpose set forth.

JAMES P. HERRON.

Witnesses:

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