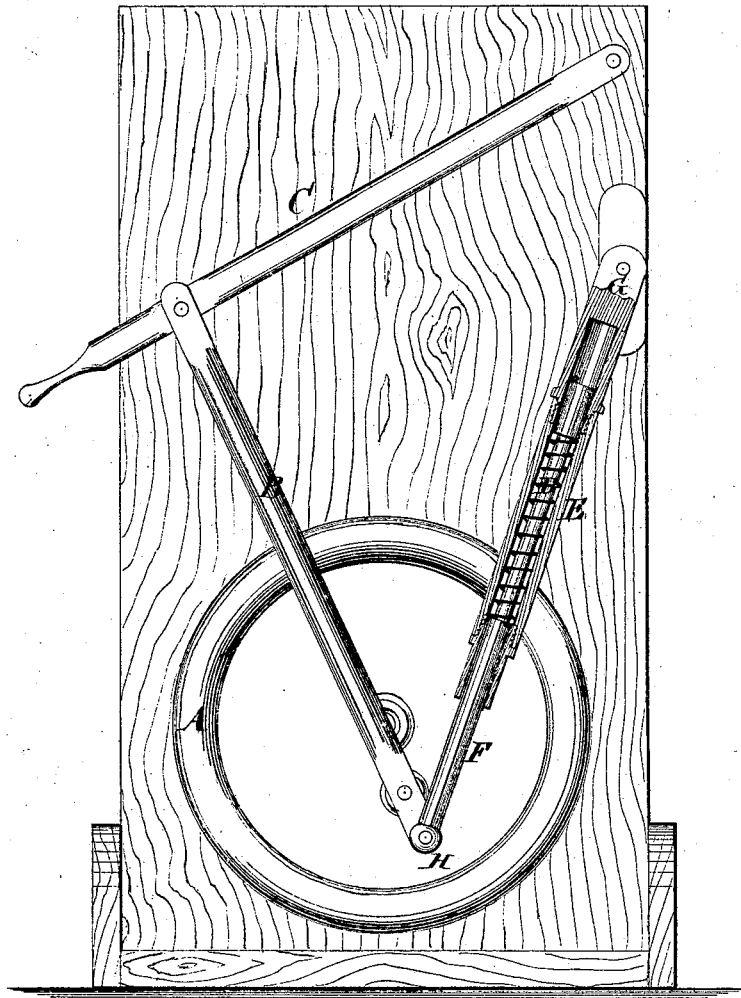


H. LULL.

Improvement in Auxiliary Springs for Treadles.

No. 115,073.

Patented May 23, 1871.



Witnesses:

*M. Vorländer*  
*Wm. H. C. Smith*

Inventor:

*H. Lull.*

PER *Wm. L. Co.*  
Attorneys.

# UNITED STATES PATENT OFFICE.

HARVEY LULL, OF HOBOKEN, NEW JERSEY.

## IMPROVEMENT IN AUXILIARY SPRINGS FOR TREADLES.

Specification forming part of Letters Patent No. 115,073, dated May 23, 1871.

*To all whom it may concern:*

Be it known that I, HARVEY LULL, of Hoboken, in the county of Hudson and State of New Jersey, have invented a new and useful Improvement in Auxiliary Springs; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to make and use the same, reference being had to the accompanying drawing forming part of this specification.

My invention consists in improving that class of hand or foot crank mechanisms which employs a spring to store up the power and to take the crank over the "dead-point."

The accompanying drawing illustrates my invention.

Similar letters of reference indicate corresponding parts.

A is the crank fly-wheel. B is the pitman. C is the bar, to which power may be applied for revolving the wheel and shaft, to which the wheel is attached. In the application of this device to a sewing-machine this bar would represent the treadle. D is the spring, which, in this example of my invention, is a spiral spring; but I do not confine myself to any particular kind of spring—a flat or a bow spring may be applied. A weight may, perhaps, be used to good advantage for assisting the crank

as proposed. This spiral spring is confined in the tube E, around the rod F. The tube E is pivoted at the point G, and the rod F is pivoted to the end of the pitman, as seen at H. The rod is thus given the required play to allow the crank to revolve, and is so arranged in regard to the position of the crank that the spring is made to act upon the crank while the latter is passing the centers and so that the crank will not stop on a dead-center.

When applied to a sewing-machine both hands of the operator are left free, the usual handling of the fly-wheel to throw the crank off the center and start the machine not being necessary.

I am aware of patent 922, granted some years ago, and desire distinctly to disclaim all that is set forth therein; but

What I do esteem to be new, as an improvement thereon, and desire to protect by Letters Patent, is—

The pivoted tube E and spring D therein, combined with arm F and pitman B, pivoted together at H, all arranged as and for the purpose specified.

HARVEY LULL.

Witnesses:

GEO. W. MABEE,  
ALEX. F. ROBERTS.