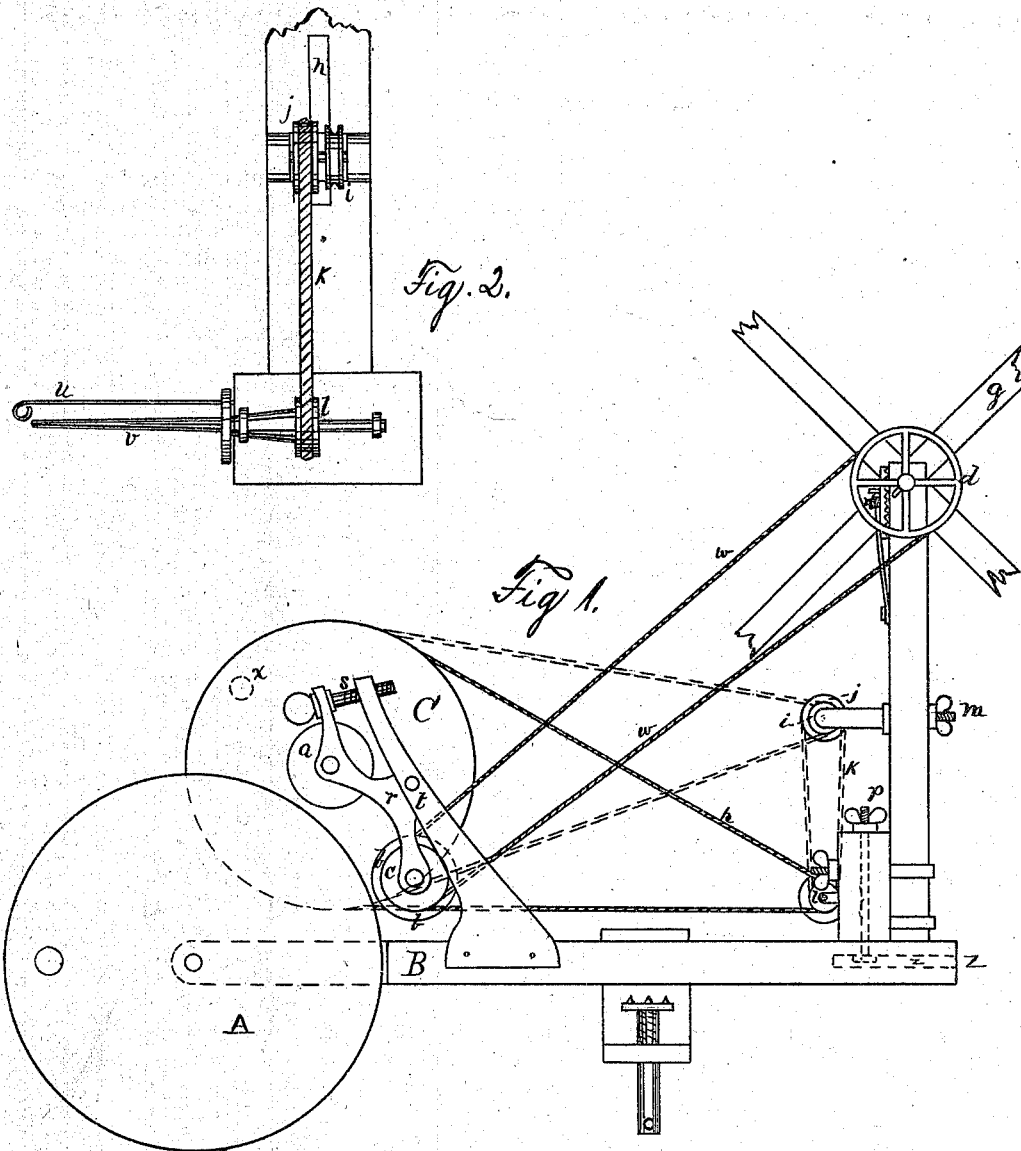


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Improvement in Combined Hand Spinning and Reeling Machines.

No. 115,465.

Patented May 30, 1871.



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IMPROVEMENT IN COMBINED HAND-SPINNING AND REELING-MACHINES.

Specification forming part of Letters Patent No. 115,465, dated May 30, 1871.

To all whom it may concern:

Be it known that I, WILLIAM P. HATCH, of Lincoln Centre, in the county of Penobscot and State of Maine, have invented a new and useful Improved Hand-Spinner; and I hereby declare the following to be a full, clear, and exact description of my invention, which will enable others to make and use the same, reference being had to the accompanying drawing forming a part of this specification, in which—

Figure 1 shows an elevation of the back; Fig 2, a detail of the spindle-head.

Same letters show like parts.

The object of my invention is to produce a simple and durable hand-spinner, which will be at once compact, easily operated, and serviceable.

My device can be used to advantage in spinning, quilling, or spooling yarn, being adapted, by proper adjustment, to all these purposes. It is readily adjustable by a clamp to any ordinary table, and when not in use occupies little space.

Its construction and operation will be readily understood by reference to the accompanying drawing.

I will first explain my device as adapted to spinning. In this operation the wheel A, which is attached to an extension of the base B, furnishes the driving-power in the usual manner, and gives motion to the speed-wheel C through a friction-wheel, *a*, which is fixed upon the axle C. From C runs the belt *h* directly to the small pulley *l*, upon the spindle *v* itself, which thus gets the motion required for the work. In reeling yarn after it is spun the wheel A also acts as a driving-wheel. In this case it imparts motion to the reel *g* through a friction-wheel, *b*, having a pulley, *c*, attached to its axle, from which pulley *c* passes the belt *w* to the pulley *d*, attached to the axle, upon which the reel *g* revolves, thus giving it its revolution. In this case the friction-wheel *a*, attached to the speed-wheel, is removed from contact with the wheel A by means to be hereinafter explained. Upon the axle of the pulley *d* is a stud or pin, which operates a "clock"-wheel for counting the yarns wound upon the reel, as common. The manner in which the pulleys *a* and *b* are alternately removed from contact with the driving-wheel A I will now explain: Instead of being rigidly attached to

the base B or a support attached to it, they have their axles in opposite ends of a vertical rocker, *r*. This rocker is mounted upon a pivot in the standard *t*, attached to the base B, and, moving on said pivot, its ends are capable of being moved near to or withdrawn from the wheel A alternately. This movement is regulated by a screw, *s*, passing through the upper end of the rocker and into the standard *t*, which has a thread to receive it. By turning this screw so as to bring the upper end of the rocker nearer the standard, the lower end, and consequently the pulley *b*, is brought toward the wheel A, and vice versa. As before stated, in spinning the pulley *a* is brought to the wheel A, and in reeling the pulley *b*, the other pulley, in either case, being removed from contact with the wheel A; and both may be removed, when necessary, by an intermediate position of the screw. In the above-described operations the wheel A furnished the driving-power. In quilling and spooling the power is furnished directly from the speed-wheel C, which has a handle upon it for the purpose; and in dotted lines at *x* I will describe the device for performing the last-mentioned operations. As stated, the power is taken from the wheel C, and the requisite speed is attained by changing the belt *h* from the pulley *l*, where it was when spinning, to and over a pulley, *i*, which is attached to the swifts' standard above the spindle-head. Upon the same axle as the pulley *i* is a second pulley, *j*, from which a belt, *k*, passes over the pulley *l* of the spindle, and imparts to it motion. The sizes of the pulleys *i*, *j*, and *l* are so arranged in comparison with each other that a sufficient speed is attained. Both pulleys *a* and *b* are removed from contact with the wheel A during the operation, and it is not in motion. The yarn to be spooled or quilled is taken directly from the swifts (which, when employed in reeling the yarn, act as a reel) to a spool or "quill" placed upon the spindle *v*, passing through the guide-wire *w* in its progress, and revolving the swifts as it is wound off. The pulleys *i* and *j*, which were mentioned as being attached to the swifts' standard, are secured thereto by a thumb-screw, *m*, passing through a vertical slot in said standard, and are capable of a motion upward or downward in said slot, seen at *n*.

This allows the band *k* to be tightened, if too loose, by raising the pulleys *i* and *j* in the slot *n*, and increasing the distance between them and the pulley *l*. To admit of the tightening of the belts *h* and *w*, the spindle-head *y*, to which also the swifts' standard is secured, is capable of moving backward or forward in a slot, *z*, (see dotted lines,) in the base *B*, and can be fixed in any position in said slot by the thumb-screw *p*, making said belts as tight as may be desired.

It will be seen that my device is capable of ready adaptation to the various uses of spinning, reeling, spooling, and quilling, and is effectual and capable of performing its work in either capacity.

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

1. The combination and arrangement of the friction driving-wheel *A*, standard *t*, rocker-bar *r*, screw *s*, friction-wheel *a*, speed-wheel *C*, belt *H*, small pulley *l*, and spindle *v*, as herein described, for the purposes set forth.

2. The combination and arrangement of the friction driving-wheel *A*, standard *t*, rocker-bar *r*, screw *s*, friction-wheel *z*, pulley *c*, belt *w*, pulley *d*, and reel *g*, as herein set forth, for the purposes described.

WILLIAM P. HATCH.

Witnesses:

WM. FRANKLIN SEAVEY,
H. D. FULLER.