C. L. NOE.

Traverse-Motion.

No. 166,801. Patented Aug. 17, 1875.

Fig. 1

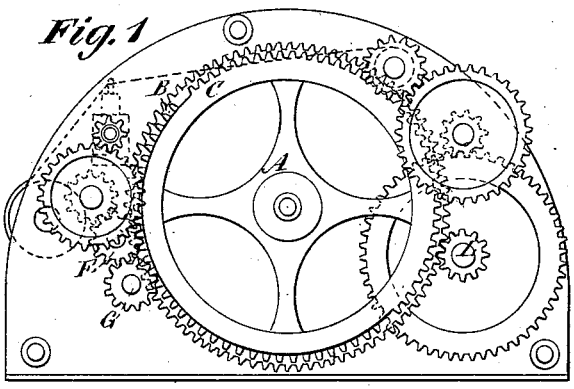


Fig. 2

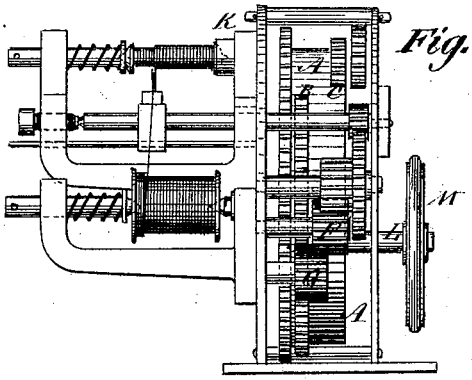


Fig. 3.

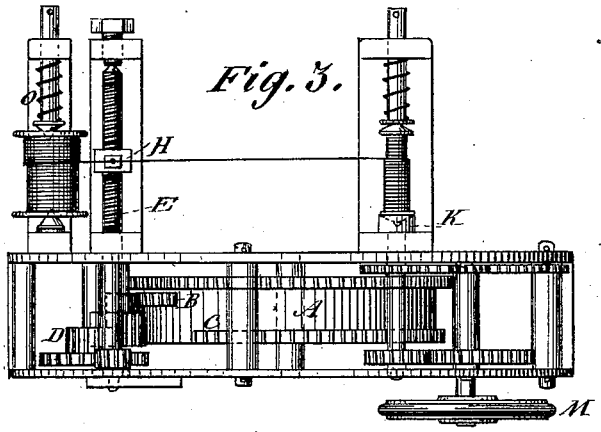


Fig. 5

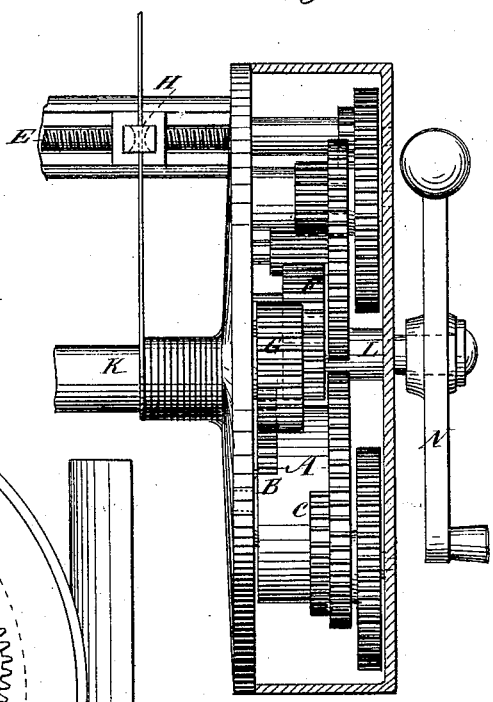
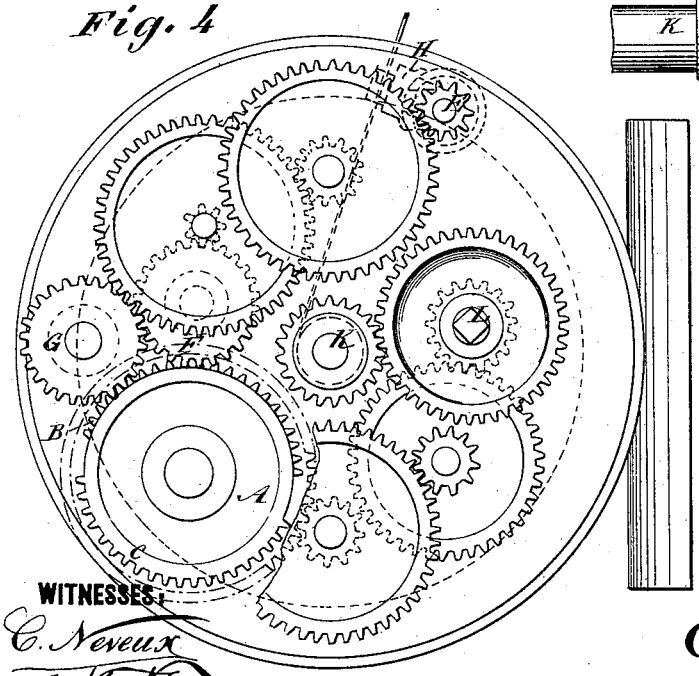


Fig. 4



WITNESSES:

C. Neveux

A. F. Terry

INVENTOR:

Chas. L. Noe

BY

Munn & Co

ATTORNEYS.

UNITED STATES PATENT OFFICE.

CHARLES L. NOE, OF BERGEN POINT, NEW JERSEY.

IMPROVEMENT IN TRAVERSE-MOTIONS.

Specification forming part of Letters Patent No. **166,801**, dated August 17, 1875; application filed July 10, 1875.

To all whom it may concern:

Be it known that I, CHARLES L. NOE, of Bergen Point, in the county of Hudson and State of New Jersey, have invented a new and Improved Traverse-Motion, of which the following is a specification:

My invention consists of a master-wheel with two half or nearly half circular cog-rims in different planes, in combination with a train for turning a screw for working a traverse-guide or other device, in which train there are two pinions for transmitting the motion from the master-wheel alternately in different directions, one taking it from one of the cog-rims and the other taking it from the other rim, and one of which pinions transmits the motion direct, while the other transmits it through the first pinion, so that one causes the screw to turn one way and the other turns it the other way, thus producing a continuous traverse of the guide forward and backward, substantially as will be hereinafter described.

This master-wheel is revolved by hand-crank or any other device, and the driving mechanism which turns it also turns the spool or bobbin on which the twine is to be wound.

The invention is alike applicable for bobbin-winders for sewing-machines, reels for fishing-rods, and other spool or bobbin winding apparatus.

Figure 1 is a side elevation of the invention applied to a bobbin-winder. Fig. 2 is a front elevation of Fig. 1. Fig. 3 is a top view. Fig. 4 is a side elevation of the invention applied to a fishing-reel, and Fig. 5 is an elevation of Fig. 4.

Similar letters of reference indicate corresponding parts.

A is the master-wheel, whereon are two nearly half circumferential cog-rims, B C, in different planes. D is the train for turning the traverse-screw E, and F and G are the pinions for taking the motion from the master-wheel, said pinions being geared together, and so arranged that one gears with rim B and the other with rim C, but not at the same time. The said rims, being on opposite sides of the master-wheel, alternately engage and disengage upon the pinions through which each rim acts—that is, while the master-wheel is running in the same direction the rim B will engage its pinion when the rim C is disengaged, and rim C will engage its pinion when the rim B is disengaged, and vice versa, thereby producing the reverse motions required of the screw for working the guide H forward and backward.

This wheel always turns in the same direction, and immediately after one rim disengages its pinion the other engages the pinion through which it acts, and vice versa, thus producing the reverse motions required of the screws for working the guide H forward and backward.

K is the bobbin or spool spindle, which gears with the driving-shaft L, with which the master-wheel also gears by trains suitably speeded for the work in hand. This driving-shaft will be provided with a friction-wheel, M, for bobbin-winders for sewing-machines, to be turned by the sewing-machine wheel; but for fishing-reels it will have a crank, N. The screw E for working the guide will be contrived to be readily detached to use screws of different pitch for threads of different sizes. O is the spool-holder for the bobbin-winders.

It will be found in practice that the cog-rims B and C should be made a little short of half the circumference of the master-wheel, in order that one may escape entirely from its pinion before the other rim engages the other pinion, to prevent any clashing or locking.

The contrivance may be applied to other devices besides a screw and traverse-guide.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

The combination of a master-wheel, having two half or nearly half circular cog-rims on opposite sides and in different planes, and two transmitting-pinions, the arrangement being such that one of said pinions transmits the motion direct, and the other transmits it through the first, and thus produces reciprocal motion, substantially in the manner described.

CHARLES L. NOE.

Witnesses:

T. B. MOSHER,
ALEX. F. ROBERTS.