E. Brown.

Winding Bobbin.

No. 52,382. Patented Feb. 6, 1866.

Fig. 2.

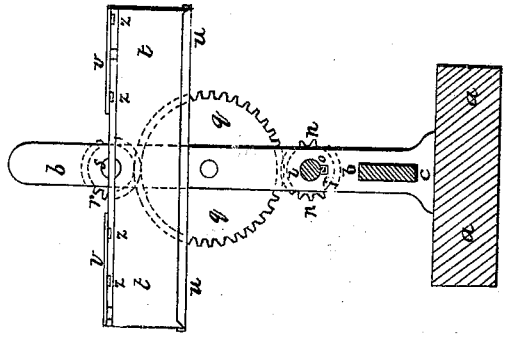
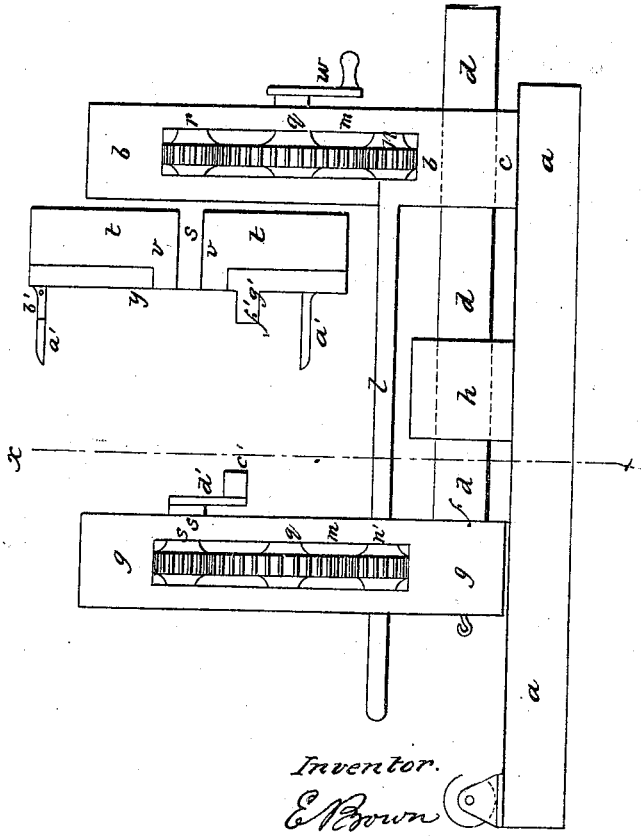


Fig. 1



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UNITED STATES PATENT OFFICE.

EDWARD BROWN, OF SOUTH OTSELIC, NEW YORK.

IMPROVEMENT IN MACHINES FOR WINDING CORD INTO A SERIES OF UNITED SKEINS.

Specification forming part of Letters Patent No. **52,382**, dated February 6, 1866.

To all whom it may concern:

Be it known that I, EDWARD BROWN, of South Otselic, in the county of Chenango and State of New York, have invented a new and useful Improvement in Machines for Winding up Lines, Cord, Twist, or other Fabric of a Similar Character; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable those skilled in the art to make and use the same, reference being had to the accompanying drawings, forming part of this specification.

The present invention consists in a novel and simple arrangement of devices for winding cord, lines, thread, twist, or other similar fabrics into skeins or hanks, which are represented in the accompanying plate of drawings, of which—

Figure 1 is a side elevation; Fig. 2, a transverse vertical section in plane of line *x x*, Fig. 1.

a a in the drawings represent the bench or bed-plate of the machine, having at one end a fixed standard, *b*, through the lower part, *c*, of which moves a horizontal sliding bar, *d*, extending lengthwise a short distance above the platform, and secured at its end *f* to the movable standard *g*, it passing through an intermediate fixed guiding-post, *h*, of the bench.

l is a horizontal shaft extending from one standard, *b*, to the other, *g*, and turning in bearings of the same, on which shaft, at or near each end and revolving with the same in the opening *m* of the standards, is a pinion, *n n'*, the former, *n*, of which is secured to the shaft, and the latter, *n'*, so secured to the same by the interlocking of a projection-piece, *o*, within the groove *p* of the shaft that it may move freely back and forth upon it as the movable standard is adjusted or set with regard to the fixed standard, and yet revolve with the shaft at whatever position it may be thus set thereon, the object of which will be presently specified.

Engaging with the pinion-wheels *n n'* upon their upper side are gear-wheels *q q* of same size, turning in bearings of the standards, and engaging with similar pinion-wheels *r r* to the pinions *n n'*, also having their shafts *s s* within suitable bearings of the standards.

t t is a box, having lid or cover *u* for opening or closing the same, secured by its bottom plate, *v*, at equal distances from each of its ends, to the inner end of the shaft *s* of the upper pinion-wheel of the fixed standard, and revolving with the same as the gear-wheel *q* is turned by the crank-handle *w*. In bottom plate of the box and open at its outer edge, *y*, are a series of cross slots or sockets, *z z z*, for the reception of the movable arms or pins *a' a'*, on which the cord, thread, or other article is wound into skeins.

To wind the thread or cord or similar article into skeins, first set the arms or pins *a' a'* in the sockets of the box at the proper distances apart to give the desired size to the skeins. Then, having tied a knot at the end of the cord, slip the cord under the spring *b'* of one of the pins *a*, which securely holds it there, when by turning the crank-handle *w* the box through the intermediate gearing is made to revolve, winding the cord around the pins from one to the other, it being fed to the same from any suitable swift or reel properly situated therefor. After sufficient cord has thus been wound upon the pins to give the desired length to the skeins, the pins, with the cord upon them, are then each in turn removed from the sockets of the box, and inserted the one in the loop end *c'* of the crank-piece *d'* on the shaft of the upper pinion, *r*, of the movable standard, and the other in the loop end *f'* of the projecting piece *g'* of the box, both of which loops are at equal distances from the center of their shafts. The movable standard is then adjusted with regard to the fixed standard by sliding it toward or from the same until the skein of cord, inserted and hung between them as described, is held at sufficient degree of tension to allow the cord to be cross-wound upon the same, which is accomplished by again turning the crank-handle *w* in the proper direction therefor, which, through the intermediate gearing hereinbefore described, revolves both loops between which the skein is hung in the same direction and plane, the cord being held between the thumb and forefinger of the hand and wound upon the skein in the usual form, after which the skein is removed from the pins and deposited in the box *t* without cutting or separating it from the remaining portion on the supply-reel. The pins are then again inserted in the sockets of the box at the proper

and desired distances apart, when the same operations take place as before described, and so on for any number of skeins, each skein as fast as wound being deposited in the box, if desired to have them of one continuous length.

To hold the skein with sufficient tension between the standards, as described, a treadle may be connected with it in any proper manner, so that by bearing down upon the treadle with the foot the adjustable standard can be moved and held at the desired points, according to the various sizes of the skeins.

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

1. The arrangement of the fixed and movable standards *b* and *g* and connecting-gearing, together with the loop-end crank-arms *d'* and *g'*, on and between which the skein is hung and cross-wound, all operating together substantially in the manner described.

2. The revolving box *t*, having adjustable projecting arms *a' a'*, operating as and for the purpose specified.

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