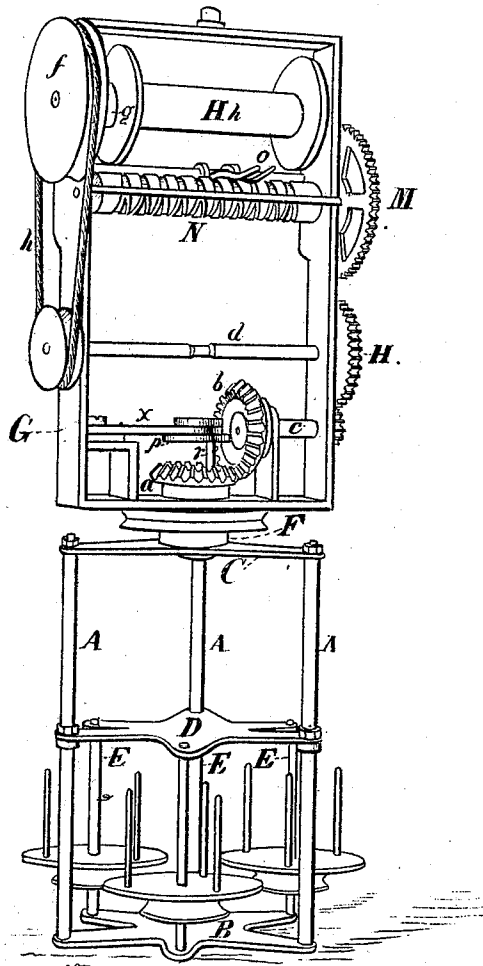


J. A. PECKHAM.
CORDAGE-MACHINE.

No. 171,041.

Patented Dec. 14, 1875.



Witnesses
Roger M. Shuman
William F. Hopson

Inventor
John A. Peckham
by his Attorney
George Perry

UNITED STATES PATENT OFFICE.

JOHN A. PECKHAM, OF NEW HAVEN, CONNECTICUT, ASSIGNOR OF ONE-HALF HIS RIGHT TO CHARLES A. STOKES, OF SAME PLACE.

IMPROVEMENT IN CORDAGE-MACHINES.

Specification forming part of Letters Patent No. **171,041**, dated December 14, 1875; application filed April 9, 1875.

To all whom it may concern:

Be it known that I, JOHN A. PECKHAM, of the city and county of New Haven, State of Connecticut, have invented new and useful Improvements in Cordage-Machines; and I do hereby declare that the following is a full and exact description thereof, reference being had to the accompanying drawing, and to the letters of reference marked thereon, making a part of this specification.

My invention relates to an improvement in several of the parts of machines for making small lines.

The object of the invention is to give a better finish to the lines, to wind the lines evenly on the spools, and to construct the frame of the machine in such a manner that none of its parts shall be in the way of changing the bobbins used, and so that it shall be strong and stiff enough not to vibrate and shake at a high velocity.

In the drawing the three posts of the machine are indicated by the letter A. These posts are secured to the bottom plate B in any proper way, and pass through the plate D to the top plate C, which is held to the posts by nuts on the ends of the posts. They are made larger where they meet the plate D, and nuts on the posts above and below the plate hold the plate and allow of its adjustment with reference to the strand-spindles, indicated by the letter E. The two plates B and D may be described as having a common center large enough to give them strength, and six radial arms, making equal angles at the center. The top plate C differs from the before-mentioned plates in having only three radial arms. The strand-spindles, indicated by the letter E, are in the usual form, carrying the usual circular disks, on which are the studs on which the bobbins are placed and turn. Holes are drilled into their upper ends, and holes from the outside meet them. An eye is attached to them, through which the threads from the bobbins pass into the before-mentioned holes. They are driven by pulleys underneath their circular disks, are arranged between the plates B and D, and turn in their radial arms. Each of the spindles is also arranged between two posts of the frame,

and equidistant from each. In the center of the top plate C the stud F is fastened, on which the laying-frame G revolves, and to which it is secured by the stationary bevel-gear wheel *a*, which is a nut as well as a gear-wheel, and screws onto the top of the stud. The stud F has a hole through its center, in the top of which the lay-block is inserted, made in the usual form. To the under side of the frame G a pulley is attached for driving the frame. The vertical bevel-gear wheel *b*, on the shaft *c*, meshes in the stationary wheel *a*, and derives its motion from the revolving frame G. To the outer end of the shaft *c* a pinion is attached, which gives motion to the wheel H fastened to the horizontal shaft *d*. On the opposite end of this shaft *d* a pulley is attached, around which a belt, *h*, passes, and also around the pulley *f*, attached to the shaft *g*, on which the spool is placed. To the outer end of the shaft *g* a pinion is attached, which drives the wheel M, attached to the journal of the slotted cylinder N. The cylinder N has an endless spiral slot or groove cut into it, commencing near one end of the same and running nearly to the other end, and thence returning to the place of beginning. Thus cut, the slot is an endless spiral slot. To cut this slot a line is drawn on the cylinder parallel with its axis, and two holes are drilled on it in the cylinder a given number of inches apart. A turning-tool set in one of these holes, the cylinder being in a screw-cutting or engine-lathe, set to a given number of threads to the inch, comes out in the other hole, cutting a right-handed spiral slot. A tool set in the other hole, and the lathe adjusted, cuts a left-handed spiral slot. Of course the number will vary to move the fork *o* the right distance for different-sized lines, or the relative numbers in the wheel M and pinion turning it may be changed, producing a like result. The fork *o* is made in two pieces, with a piece between them running in the slots in the cylinder N, and moving the fork *o* back and forth the length of the spool H *h*, which takes up the slack of the line. The fork is held in position, and slides on the round rod *i*. In this machine the condenser is made stationary, giving a better finish to the line. The piece

x is attached to the frame *G*, and supports the stationary piece *p*, which is free to turn in the piece *x*, and is held from turning by the pin *r* passing into the stud *F*. The condenser is held in the piece *p*.

To one skilled in the art the operation of the machine is easily understood. The threads from the bobbins on the studs, in the disks, pass through an eye on the spindles and through the holes in their tops, between which and the stud *F* the twist of the strands are made, through the stud *F*, between which and the condenser the lay of the line is made, through the condenser and around the shaft *d*, which draws up the line through the fork *o*, and is wound on the spool *H*.

I claim as my invention—

1. The herein-described frame, consisting of the three posts indicated by the letter *A*, the two like plates *B* and *D*, constructed and arranged to hold the spindles denoted by the letter *E*, in the manner described, and the top plate *C*, all the said parts constructed and arranged substantially as described.

2. The piece *x* and frame *G*, in combination with the piece *p* and pin *r*, substantially as and for the purpose set forth.

JOHN A. PECKHAM.

Witnesses:

GEORGE TERRY,
R. M. SHERMAN.