

C Collins.

Machine for Making Wire Rope.

Nº 28,738.

Patented Jun. 19, 1860.

Fig. 1;

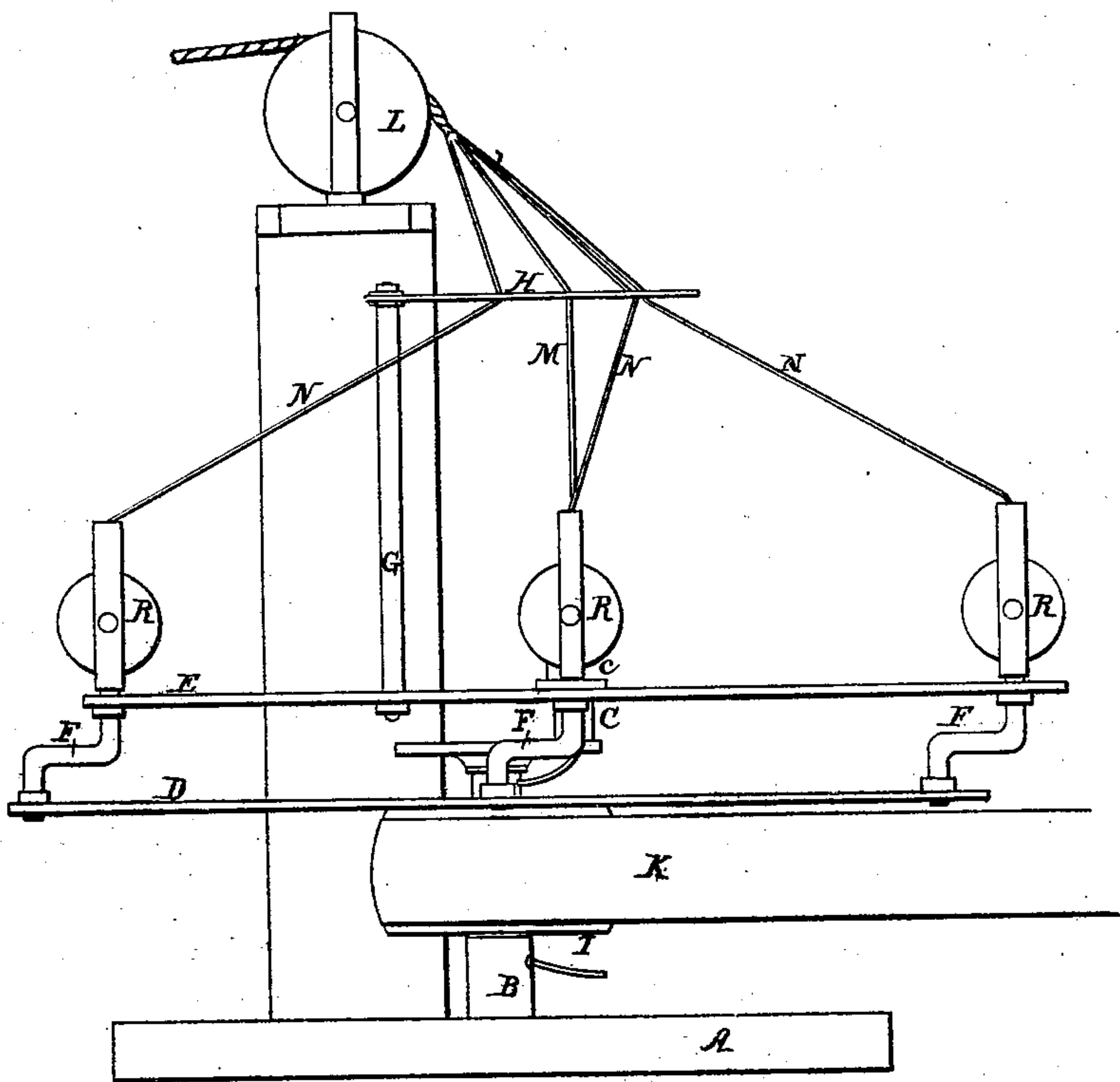
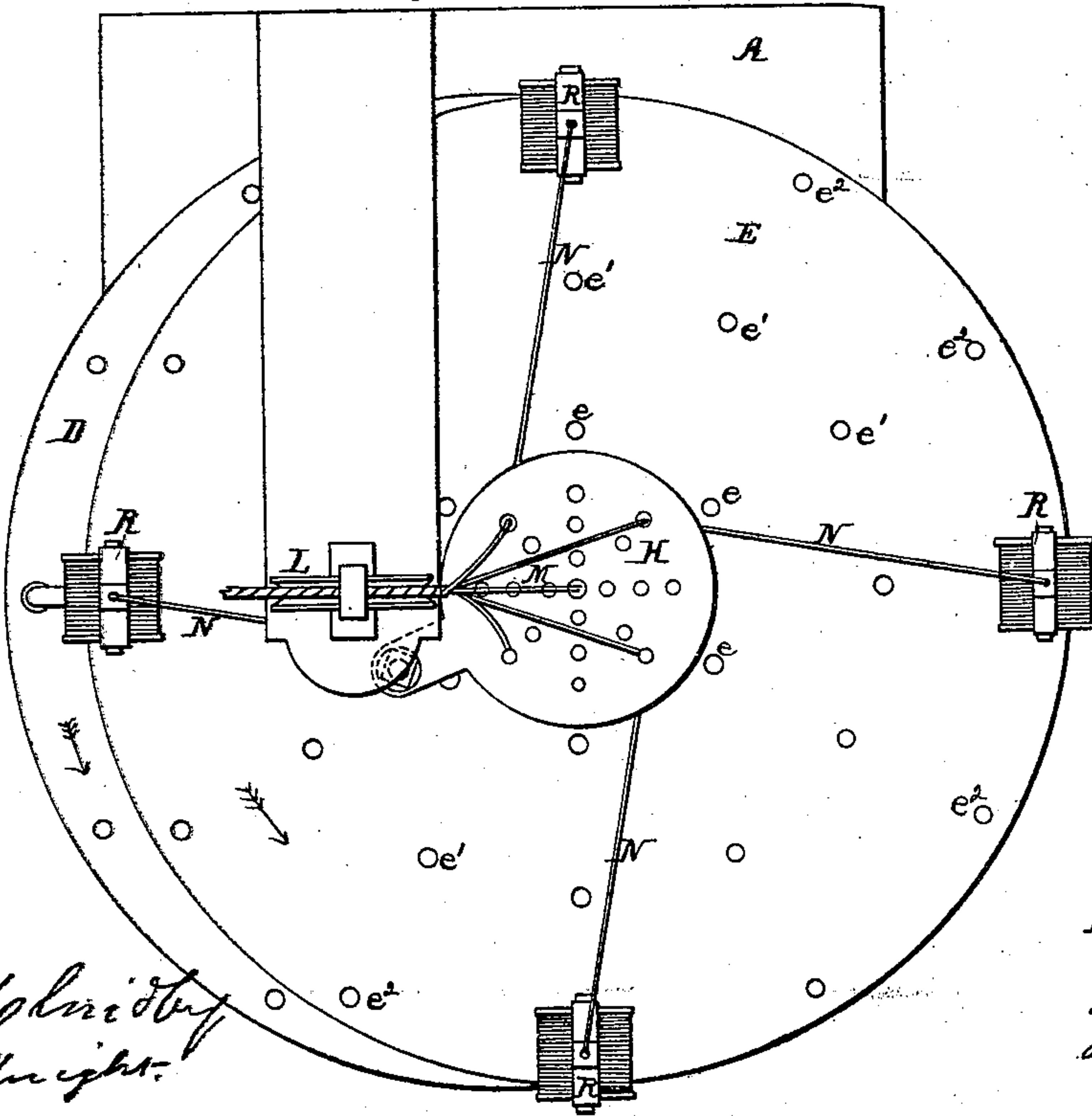


Fig. 2.



Witnesses;
James Holmstedt
Oscarus Knight.

Inventor;
Comelius Collins
J. C. Robbins
attorney for

UNITED STATES PATENT OFFICE.

CORNELIUS COLLINS, OF BROOKLYN, NEW YORK.

IMPROVEMENT IN MACHINERY FOR MAKING WIRE ROPE.

Specification forming part of Letters Patent No. 28,738, dated June 19, 1860.

To all whom it may concern:

Be it known that I, CORNELIUS COLLINS, of Brooklyn, in the county of Kings and State of New York, have invented a certain new and useful Machine for Making Wire Rope; and I hereby declare the following to be a full and exact description of the same, reference being had to the accompanying drawings, making part of this specification.

The subject of my said invention is a machine adapted to lay a number of wires in one or more convolutions around a central strand or core, while avoiding any twisting of the separate wires.

In the accompanying drawings, Figure 1 represents an elevation of the machine and Fig. 2 a plan of the same.

A is the base.

B is a rigid standard rising therefrom and surmounted by a stationary crank eccentric or set-off C.

D is a disk rotating upon the standard B.

E is a disk rotating upon the wrist of the crank C, and thereby held in a position eccentric with the disk D.

c is a nut confining the disk E upon the crank.

The disk E is perforated with equidistant holes e e' e'' , arranged in concentric circles, as shown. The disk D is perforated in a manner precisely similar to the disk E, so that corresponding perforations in the respective disks may occupy the same relative position as the centers of the disks.

F are cranks, the arms of which precisely equal in length that of the crank C, or, in other words, the distance between the centers of the disks D and E. The wrists of the said cranks work in corresponding perforations of the disks D and E.

R are reels or bobbins rigidly mounted above the disk E upon the upper ends of the cranks F.

G is a standard rising from the disk E and forming the means of attachment and support for a perforated laying-plate H, which is fixed in a position concentric with the said disk.

I is a pulley attached to the disk D and forming the means of rotating the same by a band K.

L is a pulley over which the complete rope is drawn.

The number of reels employed may of

course be varied as circumstances require. The present illustration represents a machine adapted for thirty-six reels in concentric circles of six, twelve, and eighteen, respectively, four reels being shown to exhibit the principle of their operation.

The operation is as follows: A central wire or core M is passed through the standard B and crank C and up through the center of the laying-plate H, and a suitable number of wires N from the reels through perforations in the laying-plate, and the whole attached to a fixed point. The disk D is now rotated, (see arrow,) and by means of the cranks F a corresponding rotation is imparted to the disk E, carrying the reels R round in their orbits, but preventing their rotation on their vertical axes by holding the respective wrists of the cranks F in the same relative position which they occupied at starting and holding the arms of the said cranks in a position parallel with that of the crank C. The effect is therefore to avoid all twisting of the separate wires and cover the core M with a close spiral casing of wire. If more than one circle of reels be employed, the wires from the inner circle will be laid first, and the next form a separate layer on the outside of the first, and so on, so that with a machine of sufficient capacity a strand of any desired size may be produced at a single operation. To form a complete rope a number of these strands are laid together by a machine similar in construction to that above described, but on a larger scale.

In cordage formed of vegetable fiber the twisting of the separate strands is necessary. With wire cordage, on the contrary, such twisting results in violence to the fiber of the wire and consequent injury to the manufacture.

I claim as new and of my invention herein and desire to secure by Letters Patent—

The combination of the standard B, fixed crank C, disks D and E, cranks F, and reels R, the whole being arranged and operating in the manner and for the purposes set forth.

In testimony of which invention I hereunto set my hand.

CORNELIUS COLLINS.

Witnesses:

OCTAVIUS KNIGHT,
JAMES H. WIDLEY.