D. WHITON, W. THOMAS, & C. F. HOUGH.

ROPE-MACHINES.

No. 182,540. Patented Sept. 26, 1876.

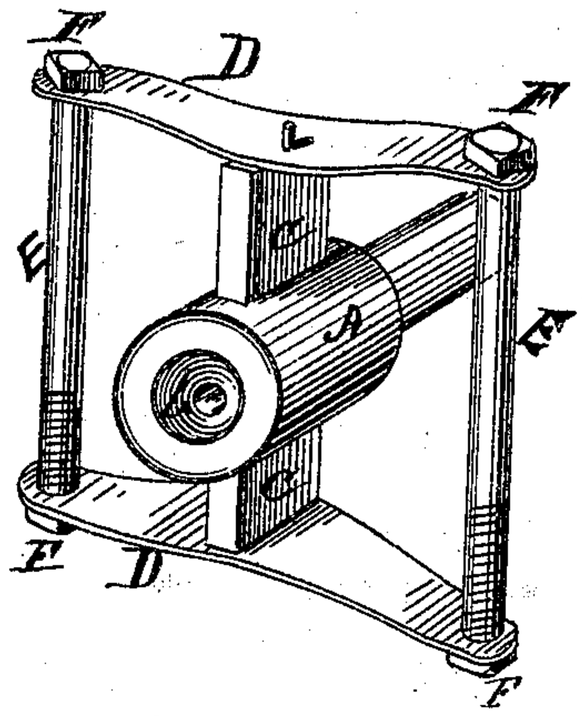

Fig. 1

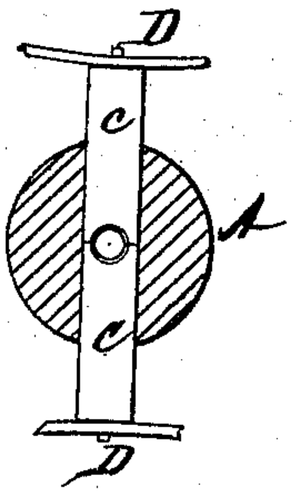

Fig. 3.

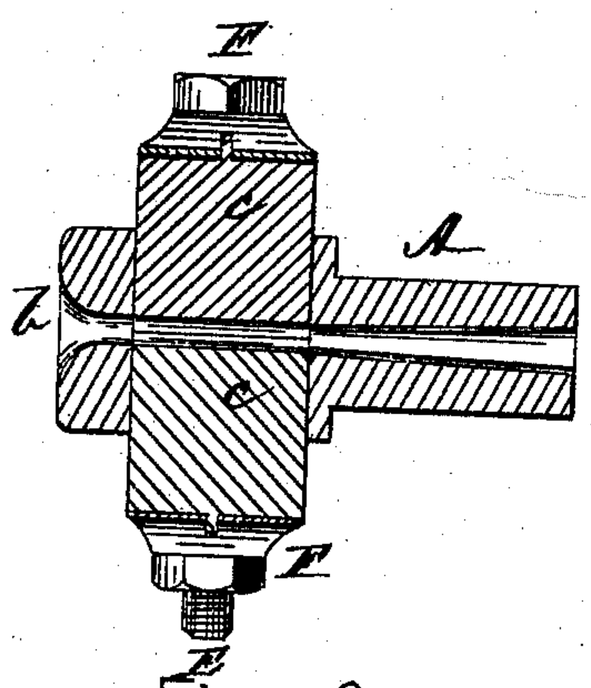

Fig. 2.

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UNITED STATES PATENT OFFICE.

DAVID WHITON, WILLIAM THOMAS, AND CHARLES F. HOUGH, OF HINGHAM, MASSACHUSETTS.

IMPROVEMENT IN ROPE-MACHINES.

Specification forming part of Letters Patent No. **182,540**, dated September 26, 1876; application filed August 14, 1876.

To all whom it may concern:

Be it known that we, DAVID WHITON, WILLIAM THOMAS, and CHARLES F. HOUGH, all of Hingham, Massachusetts, have invented an Improvement in Rope-Machines, of which the following is a specification:

This invention relates to the manufacture of rope, and particularly to that step in the manufacture which has to do with forming the strands or "readies" from the yarns preparatory to putting them into rope. It has particular relation to the continuous rope-machine in which bobbins of yarns are mounted, enough for the yarns of any given rope, as for a six, nine, twelve, fifteen, eighteen, &c., yarn rope.

Three sets of these yarns, each having an equal number, are led into a mouth-piece and twisted into three readies, which again are led into another mouth-piece, and twisted into rope. The combination of the yarn into readies and of the readies into rope is done at short ratch, and the rope is wound up as made.

This invention has for its object the making of the readies smoother, fairer, and rounder than has been done before; and consists of combining with the mouth-piece, into which the yarns to make the readies are led, a pair of self-adjusting spring-pressure dies, to smooth, mold, and round the readies as they are formed. This requires the mouth-piece to be made as a short tube, or to have a short tube attached to it, long enough to guide and steady the dies upon the readies, and furnish ways for them.

In the drawing, Figure 1 is a perspective. Fig. 2 is a longitudinal vertical section; and Fig. 3 is a transverse vertical section.

A is a tubular block of metal, provided at one end with a flaring mouth, *b*, and formed at the other so as to fit into the rotating head which forms and spins the readies. A slot is made from side to side of this block a little wider than the diameter of the tube, and into this is slipped a pair of dies, *c c*, one from each side, and having each a semi-cylindrical groove on the edge, which abuts on the other die, thus making a cylindrical canal, communicating on one side with the mouth *b*, and on the other with the tube of the block A, and this canal of the dies is smaller than either of the orifices in the block, and of even size throughout.

These dies are compressed together by a pair of semi-elliptical springs, D D, which are adjustable in their pressure by the bolts and adjusting-nuts E E F F.

By this attachment the yarns are spun into readies at a short ratch, under radial compression, which secures great smoothness and evenness, and perfect roundness, and greatly improves the quality of the rope.

We claim—

The combination, with the ready mouth-piece of a rope-machine, of the pair of self-adjusting dies *c c*, springs D D, and adjusting bolts and nuts E E and F F, substantially as described.

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