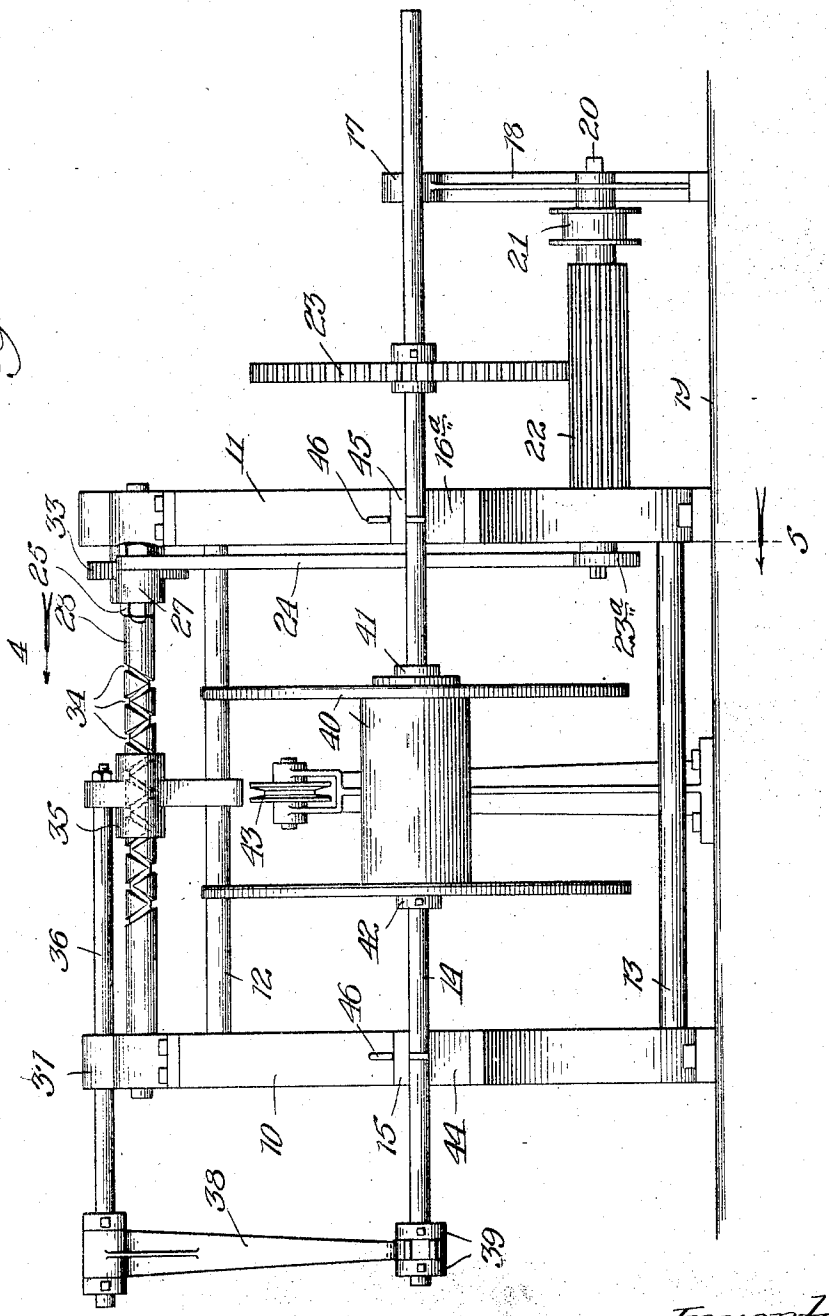
Aug. 25, 1925. 1,551,251

A. C. HOPKINS

REELING MACHINE

Filed April 24, 1924 2 Sheets-Sheet 1

Fig. 1.




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REELING MACHINE

Filed April 24, 1924 2 Sheets-Sheet 2

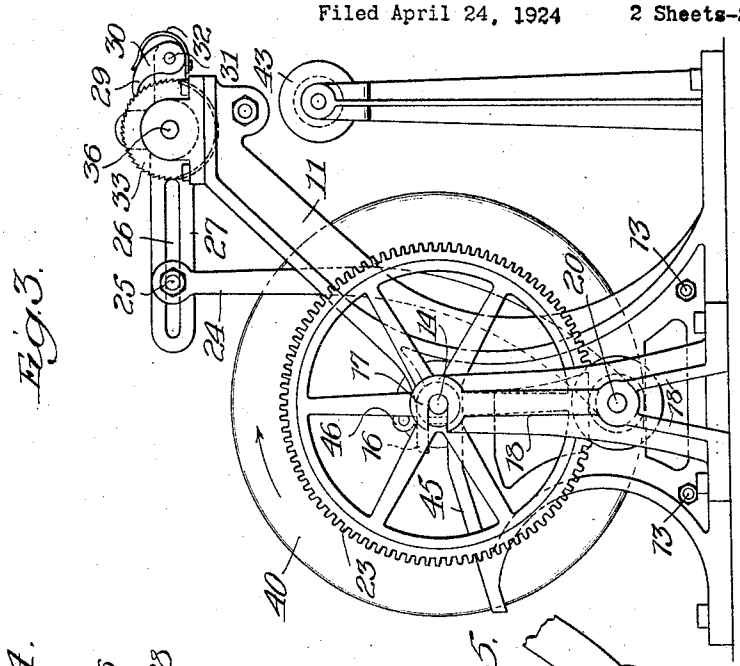


Fig. 3.

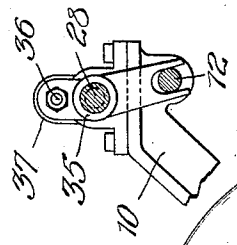


Fig. 4.

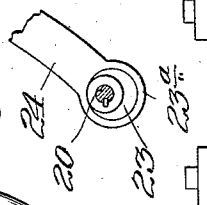


Fig. 5.



Fig. 2.

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# UNITED STATES PATENT OFFICE.

ARTHUR C. HOPKINS, OF NILES, MICHIGAN, ASSIGNOR TO NATIONAL STANDARD COMPANY, OF NILES, MICHIGAN, A CORPORATION OF MICHIGAN.

## REELING MACHINE.

Application filed April 24, 1924. Serial No. 708,686.

*To all whom it may concern:*

Be it known that I, ARTHUR C. HOPKINS, a citizen of the United States, residing at Niles, in the county of Berrien and State of Michigan, have invented a new and useful Improvement in Reeling Machines, of which the following is a specification.

This invention relates to reeling machines such as are used for winding rope, wire braid or the like on reels and spools and is fully described in the following specification and shown in the accompanying drawings in which:

Figure 1 is a front elevation of a machine embodying the invention;

Fig. 2 is an end elevation of the left hand side of said machine;

Fig. 3 is a right hand elevation of the same;

Fig. 4 is a partial section on the line 4 of Fig. 1; and

Fig. 5 is a partial section on the line 5 of Fig. 1.

The embodiment illustrated comprises a machine having a frame made up of end members 10 and 11 secured together by means of stay rods 12 and 13. A longitudinal slidable shaft 14 passes through suitable bearings 15 and 16 in the end members 10 and 11, and has an outer board bearing 17 in the member 18, the latter as well as the end members 10 and 11 being secured to the floor 19.

A counter-shaft 20 is suitably journalled in the members 11 and 18, and has a flanged pulley 21 keyed thereon. The shaft 20 also carries a long pinion 22 which meshes with a gear 23 which is keyed to the shaft 14. This gear moves endwise with the shaft 14 as will later be described, which necessitates the long pinion 22 as shown.

The shaft 20 also carries an eccentric $23^a$ which operates the eccentric rod 24, the upper end of which is adjustably connected by means of a pivot 25 in the slot 26 of the arm 27. This arm is hingedly mounted upon the reversing feed shaft 28 which is suitably journalled in the end members 10 and 11. The arm 27 carries a pawl 30 which is hingedly mounted at 31 and is pressed by means of springs 32 against the ratchet wheel 33, the latter being keyed to the shaft 28.

This shaft has a double reversing screw thread 34 formed therein as shown in Fig. 1, and a slider 35 operates thereover and has a follower which follows this screw thread in a well known manner.

The slider 35 carries a rod 36 which slides through a guide 37 carried by the end member 10. The outer end of the rod 36 has an arm 38 secured thereto, the outer end of the arm being journalled to the shaft 14 between set collars 39.

A reel or spool 40 is secured on the shaft 14 between collars 41 and 42. As the shaft 20 is turned the pinion 22 revolves the gear 23 which turns the shaft 14 and the reel 40, thereby winding the steel braid A upon the reel. At the same time the shaft and reel will fit evenly across in front of the sheave 43 off which the steel wire braid passes, by means of the oscillatory eccentric rod 24 which causes the pawl 29 to operate the ratchet 33, thereby turning the shaft 28 and set the slider endwise along the double cam groove 34.

When the braid A reaches the reel 40, the reel which is set with respect to the groove 34, is retained by the revolving action of this groove and the next layer of braid is evenly placed on the drum.

This insures that the braid will always be set to the rear in nearly a straight line as possible so that big bends in the braid which have heretofore been present will be substantially eliminated.

For easily inserting and removing the shaft 14, the end members 10 and 11 are provided with bearings 15 and 16 which have an open side as shown in Figs. 2 and 3 and downwardly inclined surfaces 44 and 45 so that the heavily loaded reel 40 may be rolled down these surfaces to planks or runways, not shown. Pins 46 pass through these bearings for retaining the shaft therein. The bearing 17 is likewise open in the front to receive the shaft 14.

After the loaded reel 40 is removed, the set collars 39 and 42 are taken off and the shaft withdrawn from the reel 40 and a new reel placed thereon, the set collars 39 and 42 replaced and the shaft again inserted in the machine when it is ready for beginning the winding of the new reel.

While I have shown and described certain embodiments of my invention, it is to be understood that it is capable of many modifications. Changes therefore in the construction and arrangement may be made

without departing from the spirit and scope of the invention as disclosed in the appended claims, in which it is my intention to claim all novelty inherent in my invention as broadly as possible in view of the prior art.

I claim:

1. In a reeling machine, a frame, a shaft slidable endwise therein, a reel removably secured on said shaft, a drive shaft having a long pinion, a gear on said sliding shaft meshing with said pinion, a feed shaft operably connected to the drive shaft and having a double reversing screw thread therein, and a slider movable by said screw thread on the feed shaft and operably connected to the sliding shaft whereby the latter is moved back and forth as it is turned.

2. In a reeling machine, a frame, a shaft slidable endwise therein, a reel removably secured on said shaft, a drive shaft having a long pinion, a gear on said sliding shaft meshing with said pinion, a reversing feed shaft operably connected to the drive shaft, a slider movable by the feed shaft, a rod connected to the slider and mounted to slide parallel to the sliding shaft, and an arm carried by said rod and rotatably connected to said sliding shaft for moving the same endwise.

3. In a reeling machine, a frame, a shaft slidable endwise therein, a reel removably secured on said shaft, a drive shaft having a long pinion, a gear on said sliding shaft meshing with said pinion, a feed shaft, a ratchet thereon, a pawl operably connected to the drive shaft for driving said ratchet, said drive shaft having a double reversing screw thread therein, and a slider movable by said screw thread and operably connected to the sliding shaft whereby the latter is moved back and forth as it is turned.

ARTHUR C. HOPKINS.