

E. L. KEYES.

REEL.

APPLICATION FILED DEC. 26, 1908.

1,053,612.

Patented Feb. 18, 1913.

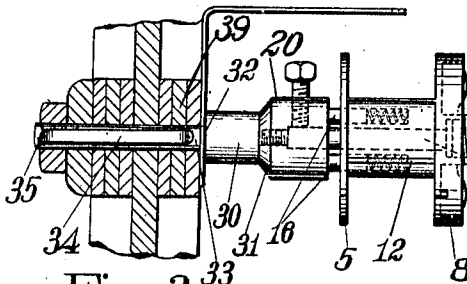


Fig. 3.

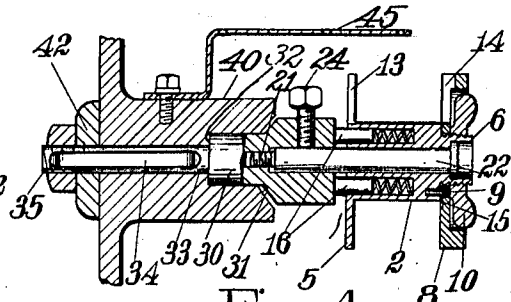


Fig. 4.

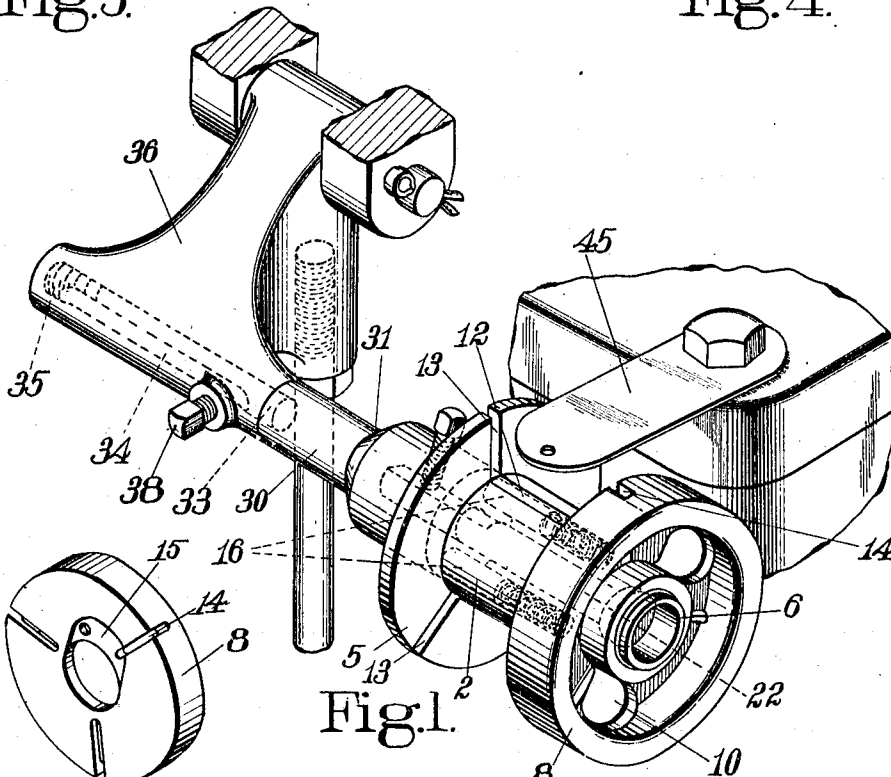


Fig. 1.

Fig. 5.

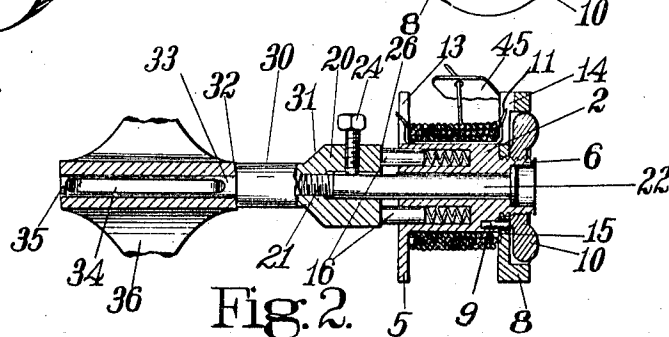


Fig. 2.

WITNESSES

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EUGENE L. KEYES, OF BOSTON, MASSACHUSETTS, ASSIGNOR TO UNITED SHOE MACHINERY COMPANY, OF BOSTON, MASSACHUSETTS, A CORPORATION OF NEW JERSEY.

REEL.

1,053,612.

Specification of Letters Patent.

Patented Feb. 18, 1913.

Application filed December 26, 1908. Serial No. 469,328.

To all whom it may concern:

Be it known that I, EUGENE L. KEYES, a citizen of the United States, residing at Boston, in the county of Suffolk and State of Massachusetts, have invented certain Improvement in Reels, of which the following description, in connection with the accompanying drawings, is a specification, like reference characters on the drawings indicating like parts in the several figures.

This invention relates to reels for dispensing wire and the like and has for its object to provide a reel which is constructed and arranged to receive readily a coil of wire of commercial form and which can be attached conveniently to any one of the several commercial machines in connection with which it is desirable to employ the reel.

The features of the invention include the novel means for attaching and supporting the reel and certain combinations of parts and details of construction which will appear in connection with the following description and be pointed out in the claims.

Figure 1 is a perspective view of a construction embodying this invention; Fig. 2 is a section of Fig. 1; Figs. 3 and 4 show the reel and holder applied to different supports. Fig. 5 is a perspective view of the removable flange from the inner side.

The reel comprises a hub 2 of a diameter to fit snugly a coil of the usual commercial size and form and has an integral flange 5 at one end and a reduced neck 6 at the other end. The flange 8 is formed to fit upon the neck which is threaded to receive a confining nut 10. The commercial coil is usually bound by three loops 11 of wire extending about sections of the coil and the hub is formed with longitudinal grooves 12, one of which is shown in Figs. 1 and 2, to receive these loops so that the coil may be put into place before removing the loops so that there is no liability of the coil becoming loosened, and the coil may fit the hub snugly so that it is not liable to turn independently of the hub in unwinding. It is also desirable in order to restrain the coil from independent turning to clamp it snugly between the flanges 5 and 8 and therefore these flanges are provided with grooves or slots 13, 14 alined with the grooves 12 by the stud 9 to receive the binding loop of the coil. The coil is customarily formed by projecting the end of the strand into a slot

or bore at one end of the mandrel or spool and winding the strand about the spool. This leaves an inwardly projecting end portion at one end of the coil. The flange 8 is formed with a recess 15 to receive this end portion which, being held between this flange and the end of the hub assists in preventing the turning of the coil upon the reel. The hub is bored out at a plurality of places from its inner end to receive spring-pressed plungers 16 adapted to have frictional engagement with the end face of the reel holder 20. The reel is secured to the holder by the pivot rod 22 threaded at 21 and the holder is bored to permit this axle to be adjusted in the holder to vary the tension on the plungers and thereby vary the resistance to the turning of the reel. The axle is held in adjusted position by a set screw 24.

The holder is given a special form to adapt it to be interchangeably applied to any one of the several machines with which it is contemplated the reel will be used, see Figs. 2, 3 and 4. To this end the holder has, in addition to the body portion against the end face 26 of which the spring plungers rest, a reduced neck 30 with an inclined shoulder at 31 and a perpendicular shoulder at 32, and is extended into a stem 33 which is planed on one side as at 34 and threaded at its end portion 35. This formation enables the holder to be applied as in Figs. 1 and 2 to the bracket 36 having a long bearing for the rod 33 by abutting the shoulder 32 against the end of the bracket and clamping the holder by a binding screw 38. In applying the holder to the machine support shown in Fig. 3 the neck 30 fits against the collar 39 on the support and gives a rigid mounting for the holder which is fastened by a nut on its screw-threaded end. In attaching the holder to the thick support in Fig. 4 the neck is received into the spacing block 40 which centers against the inclined shoulder 31 and forms with the perpendicular shoulder 32 a substantial bearing on one side of the thick wall of the machine support while a suitable spacing block 42 forms a similar bearing on the other side of the wall and the nut on the threaded end 35 secures the several parts rigidly in place. This simple and compact construction has advantages which do not need to be set forth but will be obvious to those in the art to which

this invention pertains. The wire guide which is used in combination with the reel comprises a plate 45, preferably of spring metal, arranged above and in close proximity to the periphery of the reel and having an eye located with relation to the direction of the pull on the wire, so that the wire must be bent over the guide as it is pulled therethrough. This arrangement provides that the guide shall take up a portion of the pull on the wire and shall prevent excess of wire from being unwound as the wire for use is pulled off. The bend of the wire over the guide at the eye also assists in preventing the wire from back-drawing and the turns forming the coil from thereby becoming loose.

Having explained the nature of this invention and described a preferred construction embodying the same, I claim as new and desire to secure by Letters Patent of the United States:—

1. An apparatus of the class described, having in combination a reel for receiving a coil of wire and comprising a hub and end flanges, spring pressed plungers arranged in the hub, a reel holder presenting a face for frictional engagement with said plungers, means for effecting an adjustable connection between the hub and the holder to vary the pressure on the spring plungers by changing the frictional resistance offered by them, said holder comprising also a reduced extension formed to extend through a support and be clamped therein.

2. An apparatus of the class described, having in combination, a reel for a coil of wire and a reel holder having the body portion 20, the inclined face 31, the neck 30, a perpendicular shoulder 32, and a stem 33 planed at 34 and threaded at 35, as and for the purpose described.

3. An apparatus of the class described, having in combination, a reel for a coil of wire and a reel holder bored to receive the axle of the reel and having the reduced stem 33 presenting the shoulder 32 for engagement with its support and the planed face 34 for engagement by the set bolt 38 whereby the holder is rigidly secured to its support.

4. An apparatus of the class described, having a hub and flanges to form a reel, the spring pressed friction plungers 16, the holder 20, the rod 22 threaded at 21 into the holder to adjust the tension of the plunger springs, and the set-screw 24 to secure the adjustment.

5. An apparatus of the class described having, in combination, a reel for receiving a coil of wire and comprising a hub, spring pressed plungers arranged eccentrically in the hub to project through an end face of the hub, and a reel holder presenting a face for frictional engagement with said plungers.

6. An apparatus of the class described having, in combination, a reel for receiving a coil of wire and comprising a hub, spring pressed plungers arranged in the hub, a reel holder presenting a face for frictional engagement with said plungers, and means for effecting an adjustable connection between the hub and the holder to vary the pressure on the spring plungers by changing the frictional resistance offered by them.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

EUGENE L. KEYES.

Witnesses:

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