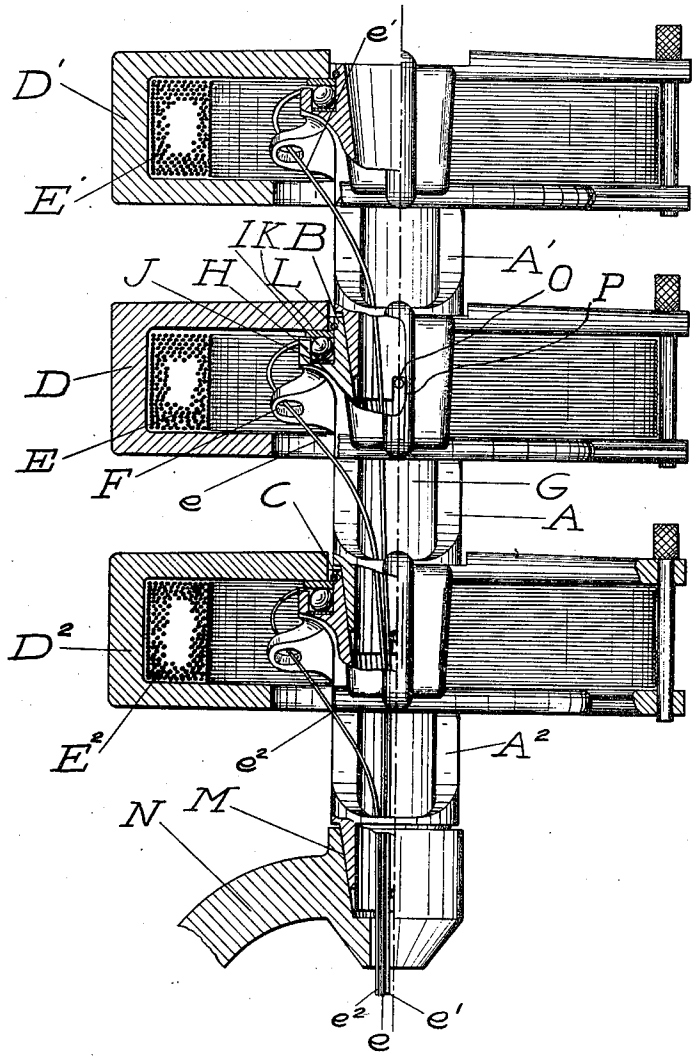
L. A. CASGRAIN.

REEL SUPPORT.

APPLICATION FILED SEPT. 25, 1906.

1,001,815. Patented Aug. 29, 1911.



WITNESSES.

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LOUIS A. CASGRAIN, OF BEVERLY, MASSACHUSETTS, ASSIGNOR TO UNITED SHOE MACHINERY COMPANY, OF PATERSON, NEW JERSEY, A CORPORATION OF NEW JERSEY.

REEL-SUPPORT.

1,001,815. Specification of Letters Patent. Patented Aug. 29, 1911.

Original application filed February 16, 1906, Serial No. 301,473. Divided and this application filed September 25, 1906. Serial No. 336,152.

To all whom it may concern:

Be it known that I, LOUIS A. CASGRAIN, a citizen of the United States, residing at Beverly, in the county of Essex and Commonwealth of Massachusetts, have invented certain Improvements in Reel-Supports, of which the following description, in connection with the accompanying drawings, is a specification.

This invention relates to a novel support for reels, designed for holding wire which is to be formed into fastenings or slugs and inserted into stock.

The form of support of this invention is particularly useful in connection with a machine for inserting metallic fastenings in a plurality of rows, such, for example as shown in my application, Serial No. 301,473, filed February 16, 1906, from which this present application is a division.

The object of the invention is to provide a reel support so constructed that other supports, preferably similarly constructed, may be removably sustained thereby. With such a construction the operator is enabled to provide the inserting machine at will with a single strand or with a plurality of strands of wire, as may be desired for the class of work to be performed, without disturbing the number of strands already in use or those to remain in use.

The preferable manner of mounting a plurality of reels is one above the other so that the axis of one support forms a continuation of the axis of another and to this end the supports are preferably formed at one end with a bearing and with the other end shaped to fit a correspondingly shaped bearing on another support so that they may be mounted end to end. With such a construction the most convenient manner of leading the various strands of wire from the coils to the inserting mechanism of the machine is centrally of the reel supports and to this end each support is preferably made tubular and is provided with an opening in its side through which one end of the wire strand from the sustained reel is passed.

The accompanying drawing, partly in section, illustrates the best embodiment of the invention now known to me wherein a plurality of reels are mounted one above the other.

Referring to the drawing, a preferred construction of reel support whereby the number of reels supplying strands of wire to the inserting mechanism of a fastening-inserting machine may be increased or diminished at will without disturbing the number of strands already in use, or the number of strands to remain in use, is shown at A. This support is formed at one end with a bearing B and with its other end C shaped to fit into a correspondingly shaped bearing on another support. The support A is also provided with an anti-friction bearing upon which is mounted a reel D, having an open center, of substantially the same construction as that shown in my prior Patent No. 765,650, dated July 19, 1904. This reel carries a coil of wire E.

In the illustrated embodiment of the invention, above and below the support A are similar supports A′ and A^2 which in turn support reels D′ and D^2, carrying coils of wire E′ and E^2. These supports are placed end to end so that their axes form one continuous line and as here shown are vertically one above the other. With such a construction the most convenient manner of leading the strands of wire e, e', e^2 to the inserting mechanism of the machine is centrally of the reel supports and to this end the supports are preferably made tubular. As shown the support A is provided with an opening G through its side. The free end of the wire coil E is passed through a guide F on the support A, which guide not only prevents the wire from twisting but also applies the strain exerted on the wire to unwind the same in such direction as to insure rotation of the wire coil and with it the reel, and is then passed through the opening G and thence downward through the reel support to the machine. Each of the other supports is similarly provided with the openings and wire guides just described.

With the tubular support, a convenient manner of forming the bearing B is to taper the inner surface of the tube at one end so as to form substantially a tapered socket

into which one end of another support may be inserted. With this construction the end C of the tubular support is also tapered, but on its outer surface. Preferably the tapered portion C is less in length than the tapered portion B so that when two supports are fitted together they will be held securely in place by the hard frictional contact.

The anti-friction bearing is preferably in the form of a circular raceway H in which rest the anti-friction members such as balls I. Any convenient means may be used for preventing the balls I, which are of much harder metal than the reel support A, from wearing out the bottom of the raceway H, for example a hardened steel annulus J may be placed in the bottom of the raceway between the balls and the metal of the reel support. Means is provided for retaining the balls in place when the reel is removed from its support. As here shown, such means comprise an annulus K resting on top the balls and held loosely in place, so as to revolve with the balls, in any convenient manner, as by a split ring L which in this instance is shown as a wire partly embedded in the reel support. The supports A′ and A^2 are each provided with similar parts to those just described. The rotatable annulus K also prevents wear of the top plate of the reel.

Some means must be provided upon the machine for supporting the various reels and this may be a socket M, of a similar shape to the bearings in the reel supports, which may be formed either in the machine frame, or in a bracket or arm N mounted on the frame. Relative rotative movement between the different supports may be prevented by any suitable means as, for example, a pin O on one member entering a slot or recess P in the other. In the construction shown four of such slots or recesses are provided permitting a rotative adjustment between the supports.

Obviously the reels need not necessarily be mounted vertically one above the other, but the axes of the combined reel supports may be placed horizontally if desired and in this instance the strands of wire need not necessarily be led to the machine centrally of the supports.

Having thus described my invention, what I claim as new and desire to secure by Letters Patent of the United States is:—

1. A support, a reel rotatably mounted thereon, a second support sustained by the first support and a reel rotatably mounted on the second support and a wire guide upon each support, said guides being in substantially vertical alinement.

2. A tubular support, a reel mounted to rotate thereon, a second tubular support socketed in the first support, and a reel mounted to rotate upon the second support, each support being provided with a wire guide and an opening through which wire is conducted from the associated reel to the continuous tube formed by the supports.

3. A plurality of tubular supports constructed and arranged to be jointed to one another and a reel rotatably mounted upon each support, provision being made for conducting wire from said reels into the continuous tube formed by said supports.

4. A tubular support, a reel rotatably mounted thereon, a second tubular support in interlocking engagement with the first support and a reel rotatably mounted on the second support, provision being made for conducting wire from said reels into the continuous tube formed by said supports.

5. A plurality of tubular supports each provided with an opening through its side, constructed and arranged to be jointed to each other end to end, and a reel upon each support.

6. A sectional support for a plurality of reels comprising a plurality of like tubular sections arranged one upon another, each section being provided with a reel bearing and each having one end shaped for interlocking engagement with the opposite end of another section, provision being also made for conducting wire from each of the reels into the tube formed by said sections.

7. A sectional support for a plurality of reels comprising a plurality of like tubular sections arranged one upon another, each section being provided with a reel bearing and each section having each of its ends shaped for interlocking engagement with the respective opposite ends of other sections, provision being also made for conducting wire from each of the reels into the tube formed by said sections.

8. A reel support having at one end a tapered socket and tapered at its other end to fit an opening corresponding to said socket, said tapered portion being less in length than the depth of the socket.

9. A tubular support, a reel rotatably mounted upon said support, a second tubular support mounted on the first support, and a reel rotatably mounted on said second support, said supports being provided with openings through which wire may be introduced from said reels into the continuous tube formed by said supports.

10. A reel having an open center, a tubular support extending through the open center and provided at its upper end with a bearing on which the reel is rotatably mounted, and an opening formed in the side of said support through which the wire passes as it is drawn from a coil sustained in said reel.

11. A reel having an open center, a tubular support extending through the open center and provided at its upper end with a

bearing said reel having a top plate rotatably mounted on said bearing, said support having an opening formed in its side through which the wire passes as it is drawn from a coil sustained in said reel, and a bearing in the upper end of said support for sustaining the support for a second reel.

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

LOUIS A. CASGRAIN.

Witnesses:

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