

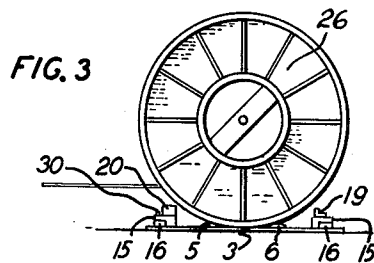
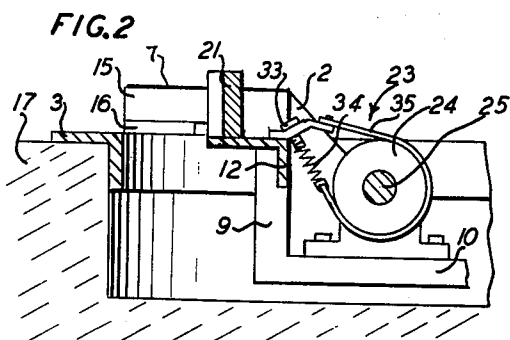
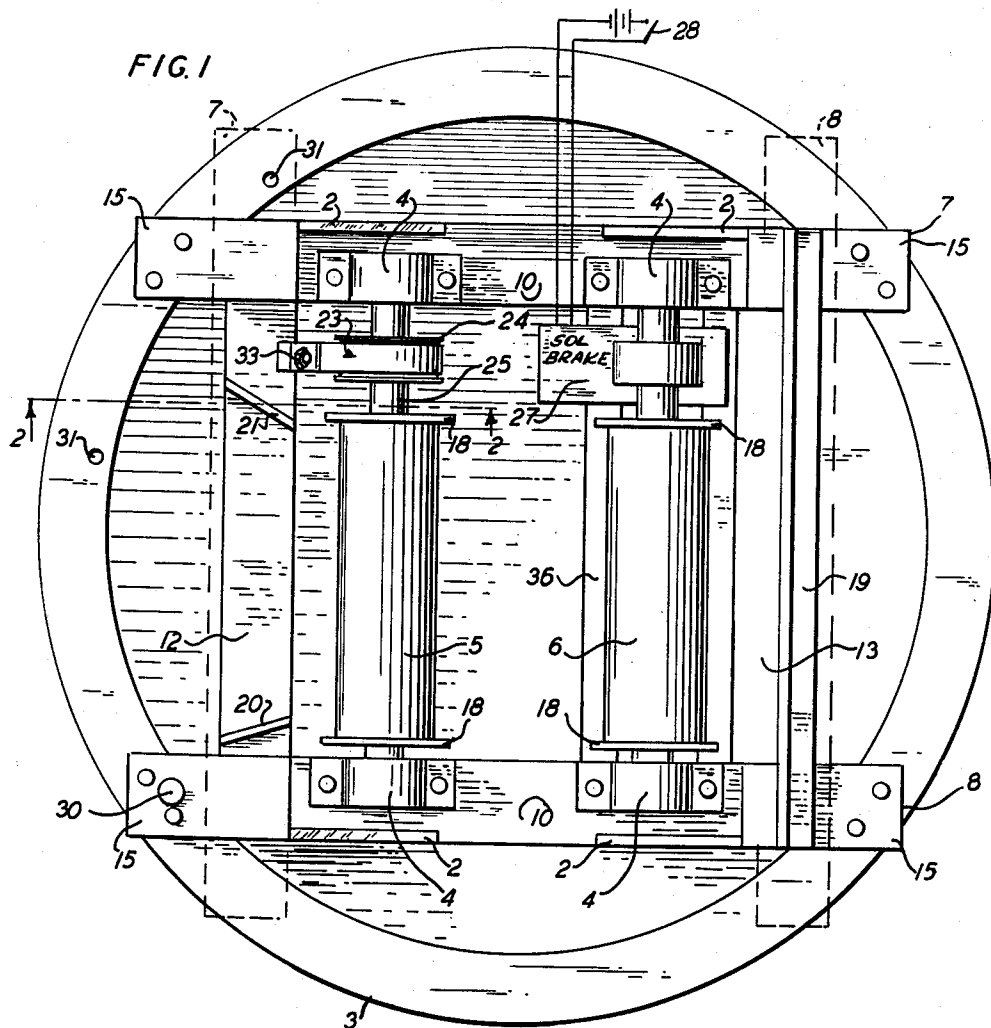
Dec. 23, 1958

H. L. WOELLNER

2,865,576

REEL STAND

Filed May 9, 1956



INVENTOR
H. L. WOELLNER
BY *W. J. Parnes*
ATTORNEY

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2,865,576

REEL STAND

Horst L. Woellner, Buffalo, N. Y., assignor to Western Electric Company, Incorporated, New York, N. Y., a corporation of New York

Application May 9, 1956, Serial No. 583,730

5 Claims. (Cl. 242—78.7)

This invention relates to reel stands and particularly to stands utilizing rollers for rotatably supporting a reel.

Roller-type reel stands have been used heretofore in the cable and wire industry, but these prior stands are not entirely satisfactory in that they are mounted in fixed alignment for use with a particular machine and cannot be used readily with any other apparatus or machine. In addition, these reel stands, when used to pay-off strands from a reel to, for example, a wire drawing machine, do not provide adequate control over the rotation of the reel. This results in an over-run problem when the pay-off rate is suddenly reduced as well as a braking problem when the reel is to be stopped.

It is, therefore, the principal object of this invention to provide a roller-type reel stand which may be aligned in various directions for use with a plurality of associated machines.

It is another object of this invention to control the free rotation of reels supported on the stands.

According to the general features of the invention, two spaced rollers, on which the reels are supported for rotary motion, are mounted on a drop frame which in turn is supported on a circular track and may be rotated thereupon for aligning the reels as required for a particular machine. A drag brake prevents over-running of a reel on the rollers when the pay-off rate is suddenly reduced and an externally controlled brake is actuable to stop rotation of the reel.

These and other features of the invention will be more fully understood from the following detailed description taken in conjunction with the accompanying drawing, in which:

Fig. 1 is a plan view of a reel stand incorporating the features of the invention;

Fig. 2 is a partial view of Fig. 1 as seen along the plane of line 2—2; and

Fig. 3 is a side elevational view in reduced scale showing a reel supported on the device of Fig. 1.

As seen in the drawing, reel supporting rollers 5 and 6 are rotatably mounted in spaced parallel relation by means of bearings 4 on lower horizontal portions 10 of drop frame members 7 and 8. The drop frame members 7 and 8 are substantially U-shaped and are reinforced with triangular braces 2 welded between the vertical portions 9 and the lower horizontal portions 10 thereof and transverse angle iron bracing members 12 and 13 welded between the vertical portions 9 of the members 7 and 8. The upper horizontal ends 15 of the members 7 and 8 are provided with slide blocks 16 which contact a circular steel track 3, secured to the edge of a circular hole in the floor 17, to facilitate rotating the drop frame structure thereupon. To align a reel on the rollers 90 degrees with respect to that shown in Fig. 1, the drop frame is simply rotated on the track 3 until the members 7 and 8 are aligned as shown in dashed lines. A locking pin 30, slidably mounted in the one end 15 of member 8, slides into one of a plurality of holes 31 in the track 3 to lock the frame in any of

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a number of different positions. Before rotating the frame to a new position, the pin 30 must be lifted to remove the pin from the hole and the frame is then free to be rotated.

The circular track 3 is supported on the floor 17 so that reels may simply be rolled onto the rollers 5 and 6. Flanges 18 are provided on the ends of the rollers so that the reels will be positioned therebetween and an angle iron stop member 19, extending between end portions 15 on the back side of the stand, keeps them from rolling through the stand when they are loaded thereon. Inclined guide members 20 and 21 are provided on the bracing member 12 on the entrance end of the stand in order to guide the reels between flanges 18 of the rollers.

An adjustable drag or friction brake 23 supported from bracing member 12 is provided for engaging a drum 24 on the shaft 25 of the roller 5 to prevent over-run of a reel 26 on the rollers when the rate of paying wire off the reel is suddenly reduced. The drag produced by this brake may be adjusted by tightening or loosening nut 33 which changes the tension of the spring 34 on the brake band 35. In addition to the drag brake which keeps a reel on the rollers from running free, a conventional solenoid-controlled brake 27 on a support member 36 permits locking the shaft for roller 6 against rotation to prevent rotating a reel 26 thereon. This solenoid-controlled brake may be actuated from a remote position by a switch 28 in the energizing circuit for the solenoid thereof.

It is to be understood that the above described arrangements are simply illustrative of the application of the principles of the invention. Numerous other arrangements may be readily devised by those skilled in the art which will embody the principles of the invention and fall within the spirit and scope thereof.

What is claimed is:

1. A reel stand comprising a circular support track adapted to be secured to the edge of a circular hole in a floor, a frame, having a central depressed portion, slidably supported on the circular track so that the depressed portion is located within the hole, a pair of rollers, and means for rotatably supporting the rollers in spaced parallel relation on the depressed portion of the frame for rotatably supporting a reel at substantially floor level thereon.

2. A reel stand comprising a circular support track adapted to be secured to the edge of a circular hole in a floor, a frame, having a central depressed portion, slidably supported on the circular track so that the depressed portion is located within the hole, a pair of rollers, means for rotatably supporting the rollers in spaced parallel relation on the depressed portion of the frame for rotatably supporting a reel, at substantially floor level thereon, and means for selectively stopping the rotation of the rollers.

3. A pay-off reel stand comprising a circular support track adapted to be secured to the edge of a circular hole in a floor, a frame, having a central depressed portion, slidably supported on the circular track so that the depressed portion is located within the hole, a pair of rollers, means for rotatably supporting the rollers in spaced parallel relation on the depressed portion of the frame for rotatably supporting a reel at substantially floor level thereon, drag braking means for the rollers to prevent over-run of a reel supported thereon, and means for selectively stopping the rotation of the rollers.

4. A pay-off reel stand comprising a circular support track adapted to be secured to the edge of a circular hole in a floor, a frame having a central depressed portion, means for slidably supporting the frame on the circular track so that the depressed portion is located within

the hole, a pair of rollers having annular flanges extending from their ends, means for rotatably supporting the rollers in spaced parallel relation on the depressed portion of the frame for rotatably supporting a reel between the flanges thereon, guide members on one end of the frame for aligning a reel with the rollers, and a stop member on the other end of the frame for stopping a reel on the rollers.

5 5. A reel stand according to claim 1 in which the frame comprises a pair of parallel, spaced-apart, U- 10 shaped members having ends extending horizontally therefrom for making sliding engagement with the circular track and a pair of transverse bracing members

connected between the U-shaped members, said rollers being mounted transversely between the U-shaped members.

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