Jan. 21, 1964 J. E. SHUMAKE 3,118,634

REEL FOR UNWINDING COILS

Filed April 2, 1962

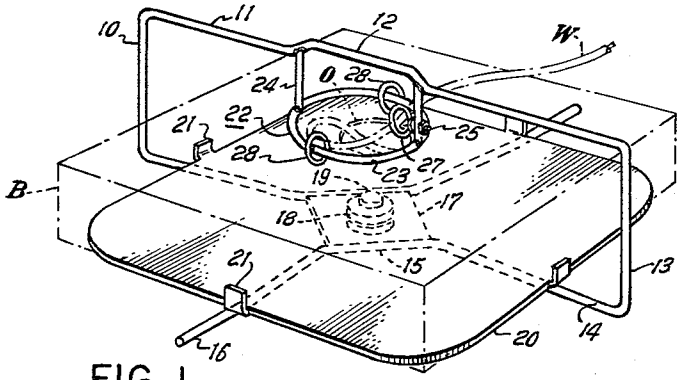


FIG. 1

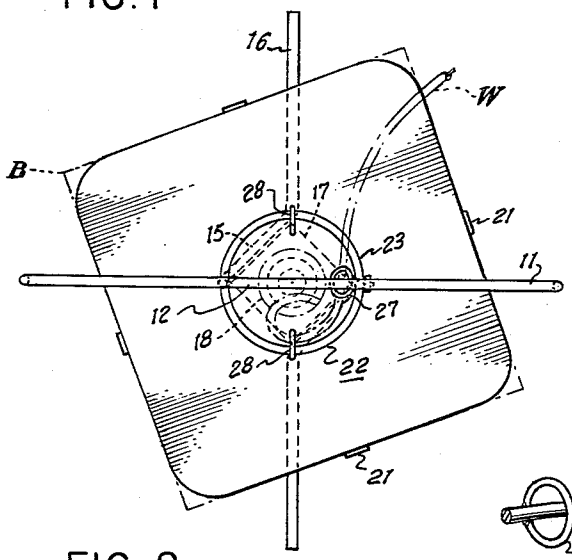


FIG. 2

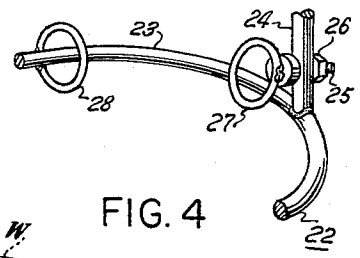


FIG. 4

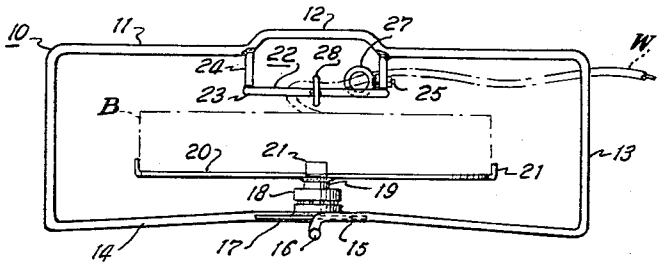


FIG. 3

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REEL FOR UNWINDING COILS

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This invention relates to new and useful improvements in reels for unwinding coils.

One object of the invention is to provide an improved reel for unwinding coiled wire or other coils in such manner that the wire is not kinked and need not be removed from its container.

Another object of the invention is to provide an improved reel, of the character described, having means for rotatably supporting a coil of wire and guide means for receiving the wire from the interior of the coil whereby the wire is unwound without kinking due to rotation of the coil.

A particular object of the invention is to provide an improved reel, of the character described, wherein the guide means is so arranged that it will accommodate wire that is coiled in either direction whereby either side of the coiled wire may face said guide means.

A further object of the invention is to provide an improved reel, of the character described, which is of economical, light-weight construction capable of supporting a box of coiled wire so that the reel may be positioned in convenient proximity to the place of installation of the wire.

A construction designed to carry out the invention will be hereinafter described, together with other features of the invention.

The invention will be more readily understood from a reading of the following specification and by reference to the accompanying drawing, wherein an example of the invention is shown, and wherein:

FIG. 1 is a perspective view of a reel constructed in accordance with the invention, a box of coiled wire being shown in broken lines,

FIG. 2 is a top plan view of the reel with its turntable rotated relative to its support, the box of wire being shown in broken lines,

FIG. 3 is a side elevational view of the reel, the box of wire being shown in broken lines, and

FIG. 4 is an enlarged, perspective view of a portion of the guide of the reel.

In the drawing, the numeral **10** designates the frame of a reel for unwinding coiled material, such as electrical wire, which is usually contained in a box as shown by the broken lines W and B, without kinking thereof. The frame **10** is rectangular, being of greater length than height, and includes an elongate, horizontal, upper rod or member **11** having an upwardly-offset medial portion **12** to provide a convenient handle. An upright arm or member **13** depends from each end of the upper rod **11** and has a horizontal rod or member **14** extending inwardly from its lower end in substantially parallel, underlying alinement with said rod **11**. As shown by the numeral **15**, the underlying rods **14** are bent outwardly upon themselves at their medial portions to form horizontal extensions or legs **16** which extend at right angles to the upper rod and which are of a combined length comparable to the length of said upper rod. The rods **14** and their legs **16** coact to support the reel.

It is noted that the medial portions **15** of the underlying rods are disposed in spaced, parallel relation to each other and extend at angles of 45° to said rods and their legs. As shown in FIG. 3, the medial portions may be offset upwardly or upset relative to the outer ends of the rods **14** and their legs **16** by inclining said rods and legs slightly upward. A horizontal, rectangular plate **17** is

welded or otherwise secured between the rod medial portions **15** for supporting an anti-friction bearing **18** having an axial, upstanding spindle **19** in substantially vertical alinement with the center of the handle **12** of the overlying rod **11**. A horizontal turntable **20** is mounted on the spindle **19** for rotation relative to the frame **10** and, preferably, is in the form of a flat, substantilly square plate or platform having its center welded or otherwise secured to said spindle. The box B is adapted to rest on the plate **20** which has ears or lugs **21** upstanding from the medial portions of its margins for confining said box against lateral displacement.

An axial guide **22** is provided for the wire W unwound from the coil in the box B and includes an annular, horizontal element or ring **23** suspended from the handle portion **12** of the upper frame member or rod **11** by a pair of upright, spaced arms **24**. One of the arms **24** has a bolt or pin **25** extending transversely therethrough adjacent the ring **23** and loosely confined by a nut **26** whereby the bolt may swivel or undergo relative rotation. An eye or small ring **27** is welded or otherwise secured to the inner end of the bolt **25** so as to be disposed inwardly of the horizontal ring **23**. The latter has a similar pair of diametrically-opposed small rings or eyes **28** welded or otherwise rigidly attached to its outer surface between the arms **24** and extending inwardly thereof in perpendicular relation to the ring **23** and eye **27**. Although the eyes **28** encircle the ring **23**, said eyes are of sufficient diameter to accommodate the wire.

In use of the reel, a box B of coiled wire W is placed on the turntable plate **20** after an opening is cut in the top of the box. This opening is shown by the broken line O in FIG. 1. Wire from the interior of the coil is threaded through one of the stationary eyes **28** and then through the swivel eye **27**, the stationary eye selected being determined by the direction of coiling of the wire. Upon pulling of its free end, the wire is unwound from the coil and this unwinding causes rotation of said coil and its box which is permitted by the rotatable mounting of the turntable plate. Due to this rotation, the wire does not kink as it is unwound and a straightening action is imparted thereto by the coaction of the eyes **27** and **28** of the guide **22**. The swivel mounting of the eye **27** prevents binding of the wire when it is pulled at various angles to the reel. Manifestly, the compact, lightweight construction of the reel permits it to be positioned in convenient proximity to the place of installation of the wire. The reel may be readily carried from location to location and is always ready for immediate unwinding of the wire.

The foregoing description of the invention is explanatory thereof and various changes in the size, shape and materials, as well as in the details of the illustrated construction may be made, within the scope of the appended claims, without departing from the spirit of the invention.

What I claim and desire to secure by Letters Patent is:

1. A reel for unwinding coils including a frame, a horizontal turntable rotatably mounted on the frame for supporting a coil of wire or other material, said frame having a portion thereof overlying the turntable, and guide means mounted on the overlying portion of said frame in overlying relation to the center of said turntable, the guide means comprising a pair of stationary eyes disposed in opposed relationship with a swiveled eye therebetween for receiving wire from the interior of the coil whereby said turntable is rotated to permit unwinding of the wire without kinking thereof upon pulling of the wire through the eyes, the swiveled eye facilitating pulling of the coil at angles to said coil and having the wire threaded therethrough after being threaded through the stationary eyes.

2. A reel for unwinding coils including a frame, a

horizontal turntable rotatably mounted on the frame for supporting a coil of wire or other material, said frame having a portion thereof overlying the turntable, and guide means mounted on the overlying portion of said frame in overlying relation to the center of said turntable, the guide means having at least a pair of spaced eyes for receiving wire from the interior of the coil whereby said turntable is rotated to permit unwinding of the wire without kinking thereof upon pulling of the wire through the eyes, said frame comprising a substantially horizontal rod having its medial portion overlying the center of said turntable and supporting said guide means, an arm depending from each end of the rod, members extending inwardly from the lower ends of the arms in underlying relation to said turntable, and bearing means at the inner portions of the members for rotatably supporting said turntable.

3. A reel as set forth in claim 2 wherein the members are bent upon themselves at their medial portions and have end portions extending outwardly from said medial portions in angular relation to said members.

4. A reel for unwinding coils including a frame, a horizontal turntable rotatably mounted on the frame for supporting a coil of wire or other material, said frame having a portion thereof overlying the turntable, and guide means mounted on the overlying portion of said frame in overlying relation to the center of said turntable, the guide means having at least a pair of spaced eyes for receiving wire from the interior of the coil whereby said turntable is rotated to permit unwinding of the wire without kinking thereof upon pulling of the wire through the eyes, said turntable comprising a platform for supporting a box of coiled wire or other material, and lugs upstanding from the margins of the platform for preventing lateral displacement of the box.

5. A reel for unwinding coils including a frame, a horizontal turntable rotatably mounted on the frame for supporting a coil of wire or other material, said frame

having a portion thereof overlying the turntable, and guide means mounted on the overlying portion of said frame in overlying relation to the center of said turntable, the guide means having at least a pair of spaced eyes for receiving wire from the interior of the coil whereby said turntable is rotated to permit unwinding of the wire without kinking thereof upon pulling of the wire through the eyes, said guide means comprising a substantially horizontal ring, a pair of arms depending from the overlying portion of said frame for suspending the ring therefrom, one of the eyes being secured to said ring and extending perpendicular thereto, the other of said eyes being swivelly mounted on one of the arms for rotation about a horizontal axis.

6. A reel for unwinding coils including a frame, a horizontal turntable rotatably mounted on the frame for supporting a coil of wire or other material, said frame having a member overlying the turntable, guide means mounted on the overlying member in overlying relation to the center of said turntable, the guide means having at least one eye for receiving wire from the interior of the coil whereby said turntable is rotated to permit unwinding of the wire without kinking thereof upon pulling of the wire through the eye, at least one upright member depending from said overlying member outwardly of said turntable, a member extending inwardly from the lower end of the arm in underlying relation to said turntable, and bearing means at the inner portion of the underlying member for rotatably supporting said turntable.

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