

June 20, 1967

J. A. M. DE BRUYN

3,326,495

REEL FOR HOLDING A COIL OF WIRE, CORD OR THE LIKE

Filed Feb. 14, 1966

2 Sheets-Sheet 1

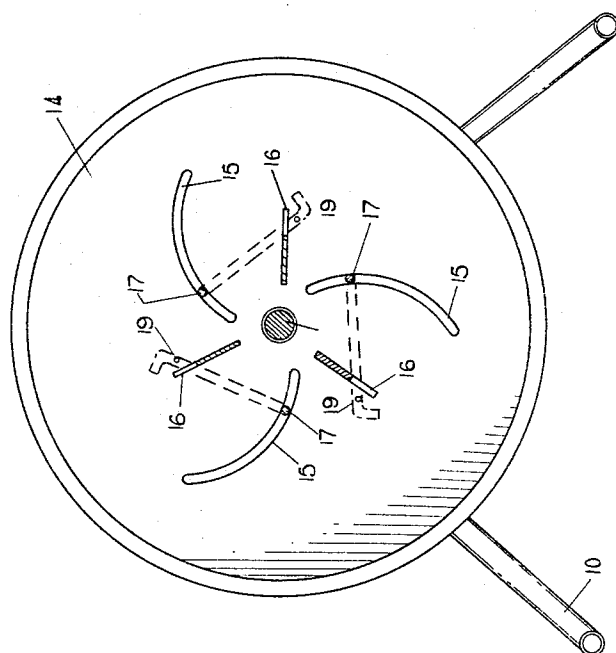


FIG. 2

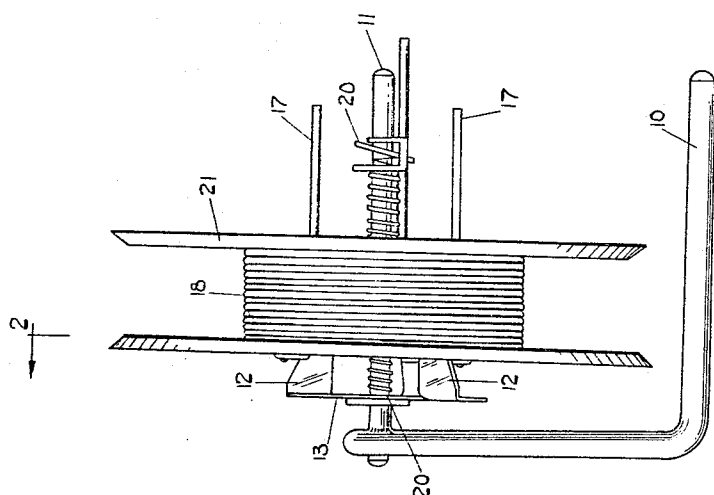


FIG. 1

INVENTOR
JOSEPH A. M. DE BRUYN
By *Young & Thompson*
ATTYS.

June 20, 1967

J. A. M. DE BRUYN

3,326,495

REEL FOR HOLDING A COIL OF WIRE, CORD OR THE LIKE

Filed Feb. 14, 1966

2 Sheets-Sheet 2

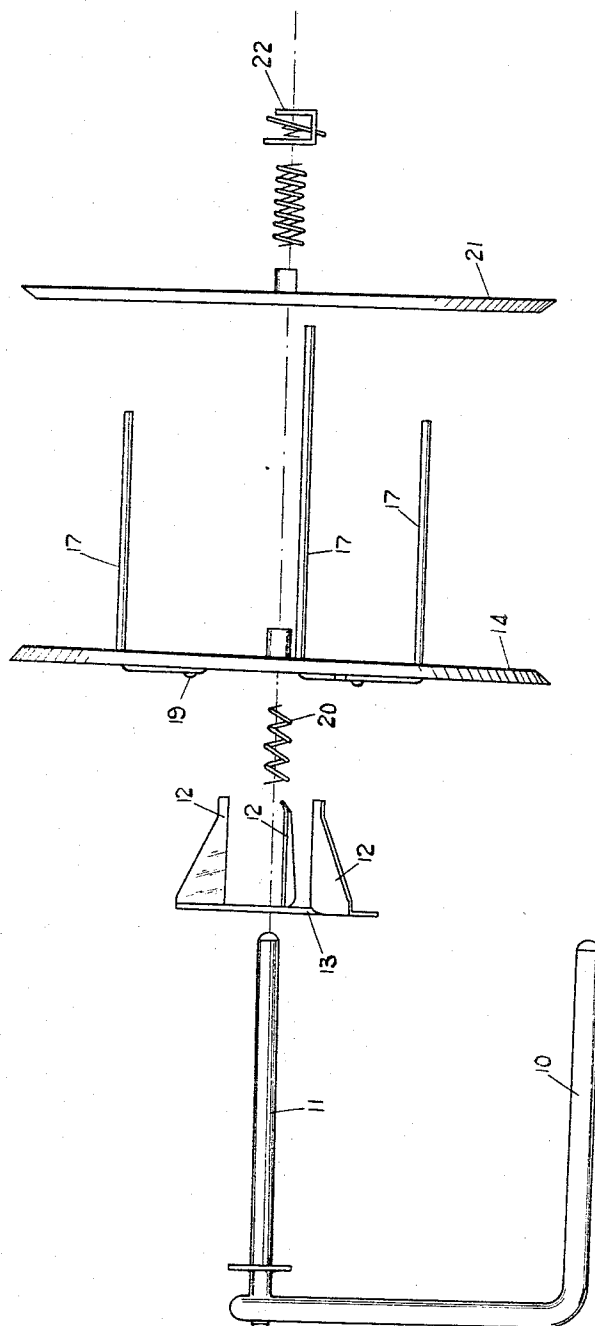


FIG. 3

INVENTOR

JOSEPH A.M. DE BRUYN

By *Young & Thompson*
ATTYS.

1

3,326,495

REEL FOR HOLDING A COIL OF WIRE, CORD OR THE LIKE

Joseph A. M. de Bruyn, 71 3rd Ave., Kew, Johannesburg, Transvaal, Republic of South Africa
Filed Feb. 14, 1966, Ser. No. 527,149
3 Claims. (Cl. 242—129)

ABSTRACT OF THE DISCLOSURE

A reel for holding coils of wire facilitates the unwinding of the wire from the coil. The core of the reel is defined by a series of fingers. The ends of the core are flanked by two side plates. If a coil of wire is positioned over the core and pressure is applied to one of the side plates, the fingers are caused to move outwardly to increase the diameter of the core until it corresponds to the internal diameter of the coil.

This invention relates to reels for holding coils of wire, cord or the like. An example of such a reel is the wire reel used by electricians for holding a coil of wire. The reel is normally mounted on a stand and is rotatable so that when the coil is positioned on the reel, the user can easily pull wire off the coil without entangling the wire.

Wire reels of the type described above are usually made with a fixed core diameter. Unfortunately the coils of wire used by electricians are sold in many sizes. In other words the inner diameters of the coils vary between wide limits. This is a serious disadvantage as the coil will simply rotate loosely on a core that is too small and the wire will become entangled.

To the best of the applicant's knowledge, the most commonly used reel of this type has a core of adjustable diameter to allow for coils of different diameters. The core is made up of rods which are bolted between two face plates. To alter the diameter of the core the rods have to be loosened and bolted again in different positions.

It is an object of the present invention to provide an improved reel for holding a coil of wire, cord, or the like.

A reel according to the invention comprises a base, a shaft on the base, two spaced parallel face plates mounted for rotation on the shaft and slidable thereon, a series of fingers parallel to the shaft and extending between the face plates to define a core coaxial with the shaft and around which the coil is adapted to be located, one end of each finger being hinged to one of the face plates to allow the diameter of the core to be changed, and a series of inclined flanges on the shaft protruding through one of the face plates and abutting against each of the fingers so that when that face plate is moved towards the inclined flanges the fingers ride up the flanges and are forced outwardly to increase the diameter of the core.

To illustrate the invention an embodiment thereof is described hereunder with reference to the accompanying drawings in which:

FIGURE 1 is a side view of a reel according to the invention,

FIGURE 2 is a sectional elevation along the line 2—2 in FIGURE 1, and

FIGURE 3 is an exploded view of the reel.

In the drawings a stand 10 is provided with a horizontal shaft 11. Three inclined flanges 12 are mounted perpendicularly on a base plate 13. The three flanges are spaced substantially 120° apart. The base plate 13 is mounted for rotation on the shaft 11. A first face plate 14 is then

2

mounted for rotation on the shaft 11 adjacent the base plate 13. Three arcuate slots 15 extending radially outwardly from the centre of the plate 14 are formed in the plate. In addition three straight slots 16 are formed in the plate. When the plate 14 is in position on the shaft 11 the tips of the three inclined flanges 12 are arranged to protrude through the three straight slots 16. The plate 14 is provided with three fingers 17 which provide a core around which a coil of wire 18 is adapted to be positioned. Each finger 17 is substantially L-shaped. One end of each finger is hinged to the plate at 19. The other end of each finger is arranged to protrude through an arcuate slot 15 so that the fingers 17 can move in the arcuate slots. The relationship between the fingers 17 and the inclined flanges 12 is such that a portion of each finger rests against one of the inclined flanges.

In use, the reel is assembled as explained. A short coil spring 20 is interposed between the base plate 13 and the face plate 14. This spring 20 serves to bias the plate 14 away from the base plate 13.

Before a coil is mounted on the reel, the fingers are manually forced towards each other so that the diameter of the core formed by the fingers is less than the inner diameter of the coil. The coil 18 is then positioned over the fingers. At this stage the reel should preferably be in a position in which the shaft 11 is vertical.

The weight of the coil forces the face plate 14 downwards. This causes the inclined flanges 12 to protrude further through the straight slots 16 which in turn causes the fingers to be moved outwardly by the inclined flanges until the coil is securely gripped over the fingers. A second face plate 21 is then slipped over the shaft 11 to sandwich the coil 18 between the plates. The second face plate 21 is then locked in position by any suitable lock 22.

The stand can then be turned until the shaft 11 is horizontal again. Since the base plate 13, the two face plates 14 and 21 and the coil 18 are all rotatable on the shaft, wire can easily be stripped off the coil.

I claim:

1. A reel for holding a coil of wire, cord and the like comprising a base, a shaft on the base, two spaced parallel face plates mounted for rotation on the shaft and slidable thereon, a series of fingers parallel to the shaft and extending between the face plates to define a core coaxial with the shaft and around which the coil is adapted to be located, one end of each finger being hinged to one of the face plates to allow the diameter of the core to be changed, and a series of inclined flanges on the shaft protruding through one of the face plates and abutting against each of the fingers so that when that face plate is moved towards the inclined flanges the fingers ride up the flanges and are forced outwardly to increase the diameter of the core.

2. A reel as claimed in claim 1 including means to clamp the face plate removed from the inclined flanges to the shaft.

3. A reel as claimed in claim 1 including spring means biasing the fingers away from the inclined flanges.

References Cited

UNITED STATES PATENTS

2,557,510	6/1951	Nav-Touron	242—72
2,990,135	6/1961	Croteav et al.	242—129

LEONARD D. CHRISTIAN, *Primary Examiner*.

FRANK J. COHEN, *Examiner*.