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WIRE SPOOL HOLDER

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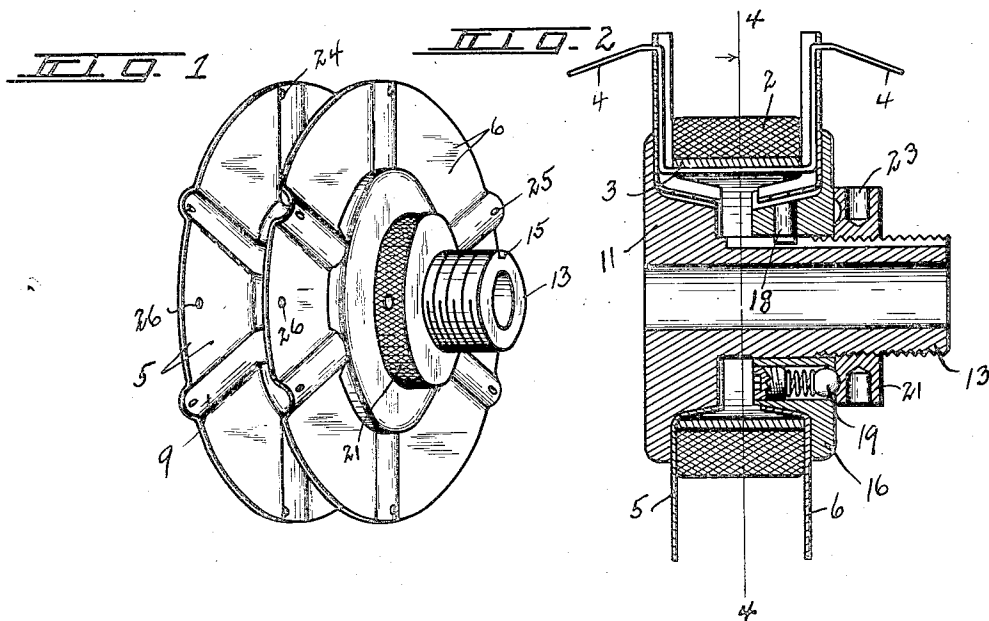


FIG. 3

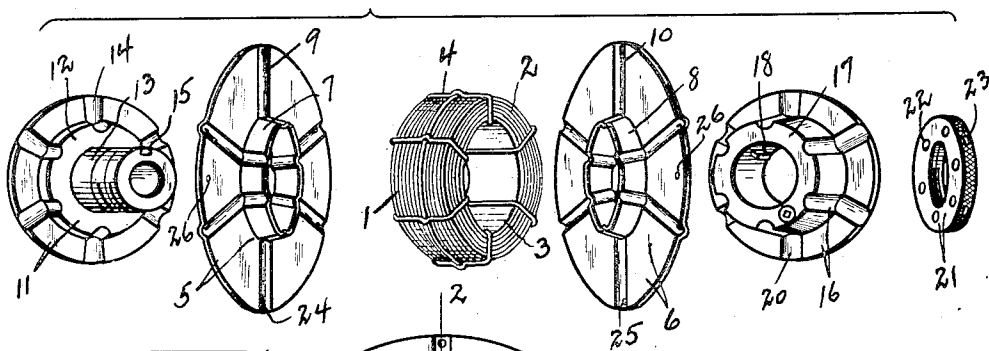
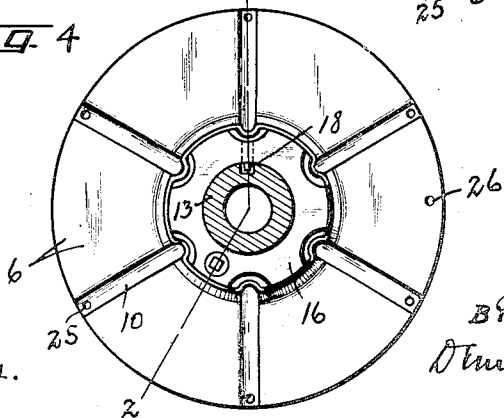


FIG. 4



WITNESS
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WIRE SPOOL HOLDER

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7 Claims. (Cl. 242—124)

This invention relates to a new and improved wire spool holder.

The main object of my invention is to provide a wire spool holder of such construction that it is adapted to receive and hold wire spools having varying lengths of cores.

Another object is to provide a holder which will automatically center the wire spool when the device is assembled.

Another object is to provide a holder of such a construction that the binding wires for the spool may be left in position so that they may be reconnected to secure the spool, if it is desired to remove it from the holder before the wire has been entirely used.

Other objects and advantages relate to the size, shape and arrangement of parts, all as will more fully appear from the following description taken in connection with the accompanying drawing in which:—

Figure 1 is a perspective view of my holder.

Figure 2 is a section on line 2—2 of Figure 4, showing a wire spool in position on the holder.

Figure 3 is an exploded view of my device.

Figure 4 is a section on line 4—4 of Figure 2, with the wire spool removed.

My device is used to hold wire spools as 1 in which the wire 2 is wound on a core 3 usually of cardboard.

Before use, the wire 2 is held in position on the core 3 by a plurality, in this case shown as six, of binding wires 4, which are passed through the core 3 and secured together on the outer surface of the coiled wire 2.

I provide a pair of opposed circular side plates 5 and 6 having central apertures and inwardly extending inwardly tapered collars 7 and 8 extending inwardly from the edge of the central aperture in such side plates 5 and 6.

Side plate 5 and its collar 7, and side plate 6 and its collar 8 are provided with radially extending grooves as 9 and 10 in which the binding wires 4 are seated when a wire spool is in position in the device.

An end plate 11 has a central hub 12 adapted to seat in the collar 7 of side plate 5. A tubular post 13 extends outwardly from the center of hub 12, the aperture in post 13 being continued through the hub 12.

The end plate 11 and the hub 12 are provided with radially extending grooves 14 in which are seated, when the device is assembled, the ridges which are formed in side plate 5 when the grooves or channels 9 are formed therein.

The end of post 13 is threaded and a key-way 15 is provided therein.

A second end plate 16 is formed with a central apertured hub 17 adapted to seat in collar 8 of side plate 6. Hub 17 is provided with an inwardly extending key 18 adapted to enter the key-way 15 in post 13 to hold the parts against relative rotary motion when the device is assembled.

As may best be seen from Figure 2, I provide in hub 17 a spring pressed ball 19, which has a portion normally extending outwardly a slight distance beyond the outer face of end plate 16 for a purpose hereinafter to be described.

End piece 16 and hub 17 are provided with a plurality of radially extending grooves 20 to receive the ridges formed on side plate 6 when the grooves or channels 10 are formed therein.

For the purpose of locking the parts after they have been assembled, I provide a knurled nut 21 having on its inner face a plurality, in this case shown as six, of recesses 22.

For the purpose of providing a convenient means for tightening nut 21, I provide on its periphery, a plurality of spaced recesses 23 into which a nail or rod may be introduced to aid in manipulating the nut 21.

When it is desired to place a wire spool 1 in my device, the end plate 11 is inserted through the central opening in side plate 5. The core 3 of the wire spool 1 is then placed over the post 13 and on the tapered collar 7. The tapered collar 8 of side piece 6 is then placed over the post 13 and into the collar 3. The end plate 16 is then placed in the collar 8 and over the post 13 with the key 18 in registration with key-way 15. The nut 21 is then threaded on the post 13 and turned downwardly to draw the assembled parts together. The nut 21 passes over the spring pressed ball 19 until it is moved downwardly to its final position and is then left in position with the ball 19 seated in one of the recesses 22, so that there may be no possibility of the nut 21 unscrewing from its locking position.

The collars 7 and 8 being tapered, they will automatically center the core 3 as they are drawn together.

The post 13 is of such a length that wire spools having cores of different lengths may be assembled in the device.

When the wire spool 1 has been placed in position in the holder in the manner just described, the binding wires 4 are cut and their loose ends are passed outwardly through apertures 24 and

25, which are provided in the outer ends of channels 9 and 10 respectively.

In this position, the wires 4 will not interfere with the running of the wire 2 from the spool 1, but they will be available for re-binding the spool 1 if it is desired to remove the same from the holder before all of the wire 2 has been removed from the core 3.

I also prefer to provide an aperture as 26 in one or both of the side plates 5 and 6 as a convenient means for securing the end of the wire 2 when the same is not being unwound from the core 3.

The ridges on the outer faces of side plates 5 and 6 being seated respectively in the grooves 14 and 20 in the end plates 11 and 16, such parts will be held securely against relative rotary movement.

Furthermore, end plates 16 being keyed to post 13, it will be held against relative movement with respect to end plate 11. This construction insures a rigid assembly with all the parts held securely against relative movement.

Although I have shown and described a specific structure and form and relation of parts as an embodiment of an exemplification of my invention, it will be understood that I do not desire to restrict myself to the exact size, shape or relation of parts, as various changes may be made within the scope of the appended claims.

I claim:

1. A wire spool holder comprising opposed apertured side plates, each having a centrally positioned inwardly extending tapered collar adapted to enter the core of a wire spool for engaging the inner wall thereof, an apertured end plate having a hub positioned in the collar of one side plate, a second apertured end plate having a hub positioned in the other side plate, a tubular threaded post on the first named end plate and extending through the apertures in the side plates and the other end plate, and a nut co-acting with the post for moving the side plates towards each other.

2. A wire spool holder comprising opposed apertured side plates, each having a centrally positioned inwardly extending tapered collar adapted to enter the core of a wire spool for engaging the inner wall thereof, an apertured end plate having a hub positioned in the collar of one side plate, a second apertured end plate having a hub positioned in the other side plate, a tubular threaded post on the first named end plate and extending through the apertures in the side plates and the other end plate, means for holding the second named end plate from rotary motion with respect to the post, and a nut co-acting with the post for moving the side plates towards each other.

3. A wire spool holder comprising opposed apertured side plates, each having a centrally positioned inwardly extending tapered collar adapted to enter the core of a wire spool, said side plates having a plurality of radially extending grooves in one face and corresponding ridges on the other face, an apertured end plate having a hub positioned in the collar of one side plate and having radially extending grooves adapted to receive the ridges on such side plate, a second apertured end plate having a hub positioned in the other side

plate and having radially extending grooves adapted to receive the ridges on such side plate, a tubular threaded post on the first-named end plate and extending through the apertures in the side plates, and the other end plate, and a nut co-acting with the post for holding the parts in assembled relation.

4. A wire spool holder comprising opposed apertured side plates, each having a centrally positioned inwardly extending tapered collar adapted to enter the core of a wire spool, said side plates having a plurality of radially extending grooves in one face and corresponding ridges on the other face, an apertured end plate having a hub positioned in the collar of one side plate and having radially extending grooves adapted to receive the ridges on such side plate, a second apertured end plate having a hub positioned in the other side plate and having radially extending grooves adapted to receive the ridges on such side plate, a tubular threaded post on the first-named end plate and extending through the apertures in the side plates and the other end plate, means for holding the second named end plate from rotary motion with respect to the post, and a nut coacting with the post for holding the parts in assembled relation.

5. A wire spool holder comprising opposed apertured side plates, each having a centrally positioned inwardly extending tapered collar adapted to enter the core of a wire spool for engaging the inner wall thereof, a pair of end plates positioned adjacent the side plates, each of said end plates having a hub portion positioned in the collar of the respective side plate, one of said end plates being provided with an opening there-through, a post connected to the other end plate and extending through the apertures in the side plates and said end plate opening, and means coacting with the post for moving the side plates towards each other.

6. A wire spool holder comprising opposed apertured side plates, each having a plurality of uneven portions defining radially extending grooves in one face and corresponding ridges on the other face, a pair of end plates positioned adjacent the side plates and having uneven portions in one face adapted to coast with the uneven portion of the side plates for preventing relative rotary movement of the plates, and means connected with one of said end plates and engaging the other end plate for moving the side plates towards each other.

7. A wire spool holder comprising opposed apertured side plates, each having an inwardly extending tapered collar adapted to enter the core of a wire spool for engaging the inner wall thereof, a pair of end plates positioned adjacent the side plates, each of said end plates having a hub portion positioned in the collar of the respective side plate, said plates, collars and hubs being provided with coacting radially extending grooves and ridges for preventing relative rotary movement of said plates and to provide passageways for tie wires, and means connected with one of said end plates and engaging the other end plate for moving the side plates towards each other.

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