Nov. 25, 1941. H. C. HOWSAM 2,264,117

SPOOL OR REEL

Filed Aug. 12, 1940

Fig. 1.

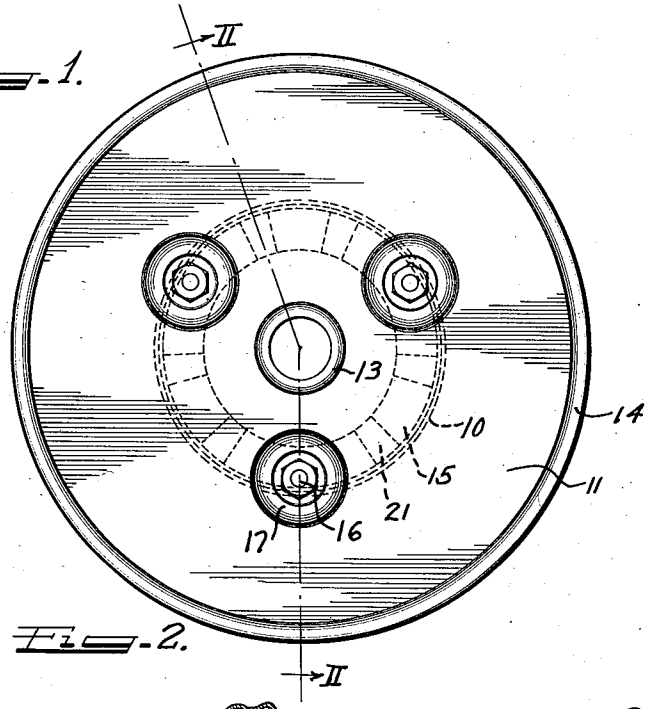


Fig. 2.

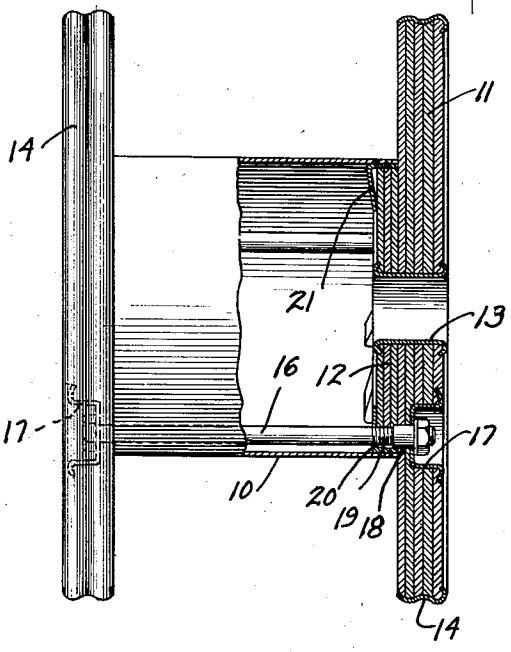
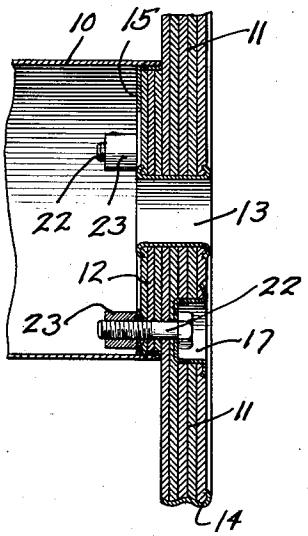


Fig. 3.



Inventor

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by Charles Hills Atty.

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UNITED STATES PATENT OFFICE

2,264,117

SPOOL OR REEL

Hilyard C. Howsam, Chicago, Ill., assignor to Hubbard Spool Company, Chicago, Ill., a corporation of Illinois

Application August 12, 1940, Serial No. 352,216

1 Claim. (Cl. 242—124)

My invention relates to spools or reels adaptable for holding different materials but designed particularly for holding comparatively heavy material such as wire.

The important object of the invention is to provide improved construction for the head elements and improved means for rigidly securing the heads to the barrel ends, and in general to produce a strong and rigid but comparatively light reel economically manufactured and assembled and capable of holding up under the various conditions to which it will be subjected during service or shipment.

The features of my invention are incorporated in the structure shown on the drawing, in which drawing:

Figure 1 is an end view of a reel;

Figure 2 is a side elevation partly in section on plane II—II Figure 1; and

Figure 3 is a section similar to Figure 2 showing a modified arrangement.

The reel shown comprises a cylindrical barrel 10 which may be a length of metal tubing or formed from a sheet metal blank. Each head structure for the reel comprises a body part 11 and a neck part 12 concentric therewith, the neck parts receiving the ends of the barrel. Each head structure may be solid, but preferably, in order to obtain greater strength, each head structure is built up of laminations preferably of non-metallic material, such as wood, fiber, or suitable composition material. The body part and neck of each head structure have centrally located passageways therethrough for receiving a bearing thimble or bushing 13 whose ends are clinched around and deflected to sink a distance into the outer faces of the head structures to hold the laminations together. The body part 11 of each head structure may be surrounded by a sheet metal tire 14 whose outer peripheral part is clinched around and against the outer face of the body portion to hold the laminations rigidly together at their outer edges. The body portion of each head may be assembled separately and a tire portion applied thereto, and the neck portion 12 may also be assembled separately, and then the body and neck portions are assembled together and secured by a bushing 13. The laminations may be secured together as by gluing or cementing.

In each end of the barrel is secured a seating ring 15 of L-shaped cross section, the cylindrical leg of the ring being preferably welded to the barrel. The neck part of each head structure fits into the cylindrical part of the respective ring and the radially extending part of the ring forms a seat for the neck part. Bolts are then applied to hold the head structures to the barrel ends with their neck portions securely received by and seated against the seating rings. In the arrangement shown on Figure 2, through bolts 16 are provided, the body portions 11 of the head structures being recessed to receive cup-shaped washers 17 for receiving the heads and nuts of the bolts. The bolts extend close to the barrel wall and through registering passageways 18 and 19 in the body and neck portions of the head structures, and through openings 20 in the seating walls of the seating rings. To stiffen the seating rings, the radial seating walls thereof may be deflected inwardly transversely to provide stiffening and strengthening ribs 21.

In the modified arrangement shown on Figure 3, separate bolt structures are used for securing the head structures to the barrel ends. Short bolts 22 extend through the head structures and thread into nut members 23 secured against the inner sides of the radial seating walls of the rings. These nut members are secured by welding or by being riveted or clinched to the seating rings.

The various parts of the reel can be economically manufactured and assembled and a strong, rigid and durable reel results which is comparatively light. The metal tires 14 will protect the peripheries of the head structures against abrasion, chipping or wear. The clinched over outer ends of the tires and of the bearing bushings 13 are in a common plane slightly displaced from the plane of the outer surface of the body 11 so that when the spool is stacked or in service metal contact with the support is provided and therefore the outer faces of the non-metallic heads will be protected against wear.

I do not desire to be limited to the exact construction shown and described as changes and modifications may be made without departing from the scope of the invention.

I claim as follows:

A reel or spool comprising a tubular barrel, head structures each comprising a cylindrical body part and a cylindrical neck part concentric therewith, seating rings of angular cross section fitting and secured in the ends of said barrel for intimately receiving and seating said head structure neck portions, nut members secured to the inner sides of said seating rings, and screws passing through said head structures for threaded engagement with said nut members for rigidly clamping said head structures to the barrel ends and seating rings.

HILYARD C. HOWSAM.