June 16, 1942. R. V. OLSON ET AL 2,286,640

HEAD FOR SPOOLS, REELS, BEAMS OR BEAMHEADS

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Fig. 1.

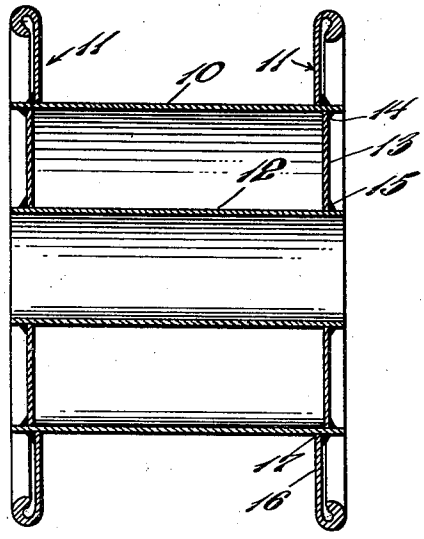


Fig. 2.

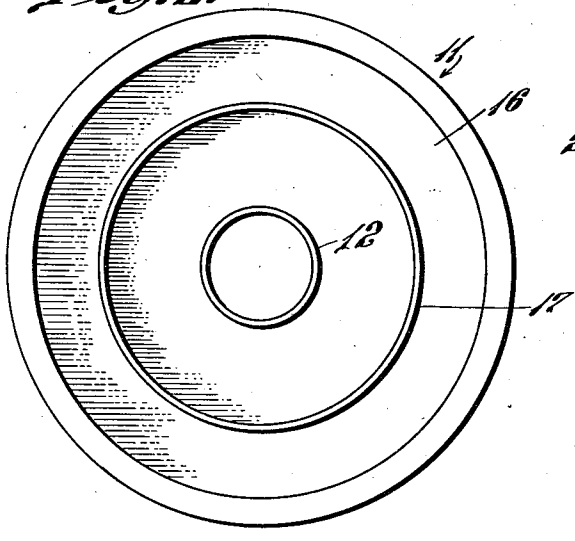


Fig. 3.

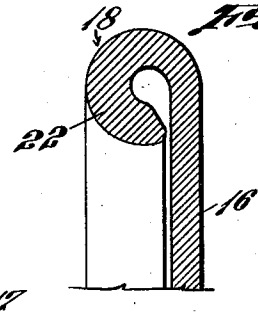
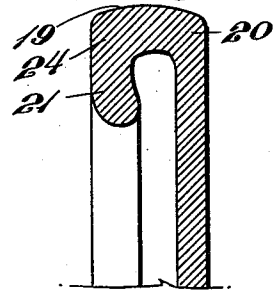


Fig. 4.



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HEAD FOR SPOOLS, REELS, BEAMS, OR BEAMHEADS

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Application December 9, 1941, Serial No. 422,288

5 Claims. (Cl. 242—123)

This invention relates to the head for a spool, reel, beam or beamhead of the type used for reeling wire or textile material.

In the manufacture of heads for spools, reels and the like, it has been found desirable to strengthen the outer peripheral rim of the head in various ways. Where the heads are cast different thicknesses may be obtained in the head for strengthening the same. In sheet metal heads with which this invention more particularly deals the strengthening of the outer peripheral edge of the head has sometimes been done by flanging or curling the periphery outwardly with all thicknesses of the stock of the head remaining the same. In some cases separate pieces of material have been added to the outer peripheral rim. Several of these constructions materially add to the weight of the head which is undesirable.

One of the objects of this invention is to increase the rigidity of the head, especially at the outer peripheral edge thereof, while keeping the weight of the head to the minimum.

Another object of this invention is to increase the rigidity of the head at the outer peripheral edge thereof in a construction where the outer edge is deflected from the plane of the disc without adding any separate piece of material to the head.

Another object of the invention is to increase the rigidity of the head at the outer peripheral edge thereof in a sheet metal construction additionally to the mere deflection of the stock at the outer edge of the head.

With these and other objects in view, the invention consists of certain novel features of construction, as will be more fully described and particularly pointed out in the appended claims.

In the accompanying drawing:

Fig. 1 is a sectional view illustrating a reel or spool having its head constructed in accordance with this invention.

Fig. 2 is an end view of the head.

Fig. 3 is an enlarged sectional view of the outer peripheral edge of the head.

Fig. 4 is a view similar to Fig. 3 but illustrating a modified form of the invention.

In proceeding with this invention we form from sheet metal of uniform thickness a disc shaped head with an outwardly deflected peripheral edge and then stiffen this deflected portion by thickening the stock of the sheet construction so as to form an integral thickened rim beyond the plane of the sheet stock of the disc head. The outwardly deflected portion may take various shapes and have its thickening occur at various points therealong which forms a flange of heavier construction and a materially stiffer head as a whole, of greatly increased rigidity.

With reference to the drawing, we have illustrated one form of spool or reel in Fig. 1 in which there is a barrel 10 with heads 11 positioned thereon adjacent to the end of the barrel. A suitable center tube 12 is positioned within the barrel and held in desired relation thereto by webs 13 welded as at 14 and 15 to the barrel and to the center tube.

The invention relates particularly to the heads 11 which are formed of sheet metal, that is, cut from a metal sheet of a uniform thickness in substantially the shape of a disc. The body portion 16 of this disc is cut out as at 17 to receive the barrel 10 therethrough while the edge of this sheet structure at its outer periphery is deflected outwardly such for instance as by curling as shown at 18 in Fig. 3 or by bending as at 19 in Fig. 4 to provide an outwardly extending flange 20 in an axial direction which then extends inwardly as at 21 in a radial direction.

This deflected portion when cut from the sheet stock in the form of a disc was originally the same thickness as the disc 16 but without adding a separate piece of stock this deflected portion either in the curl as shown in Fig. 3 or in the flange as shown in Fig. 4 has been increased in thickness as shown at 22 in Fig. 3 or 24 in Fig. 4 so as to provide this deflected portion in a materially greater thickness. This deflected portion is thickened without in any way changing the uniform thickness which exists in substantially a single plane in the disc 16.

We have found that this thickening of the deflected portion adds materially to the rigidity of the head and provides a very desirable rim of very superior strengthening qualities while the addition of the weight of the head is maintained at a minimum.

This thickening of sheet stock which may be readily observed in appearance is to be distinguished from casting or die-casting of a head which we do not intend to cover in this application.

We claim:

1. In a spool, reel, or the like, a barrel, a head associated therewith, said head being in the form of a sheet metal disc with its outer edge deflected out of the plane of the disc, said deflected portion being of a greater thickness

than the disc in the same integral piece whereby to add rigidity to the head.

2. In a spool, reel, or the like, a barrel, a head associated therewith, said head being in the form of a sheet metal disc of uniform thickness in a single plane with its edge at its outer periphery extending out of the plane of the disc and of a greater thickness than the disc in the same integral piece beyond the plane of the disc.

3. In a spool, reel or the like, a barrel, a head associated therewith, said head being in the form of a sheet metal disc of uniform thickness in a single plane with its edge at its outer periphery curled outwardly to extend out of the plane of the disc and with the portion beyond the plane of the disc of a greater thickness in the same integral piece than the disc beyond the plane of the disc.

4. In a spool, reel or the like, a barrel, a head associated therewith, said head being in the form of a sheet metal disc of uniform thickness in a single plane with a flange at its outer periphery extending axially outwardly and then radially inwardly and said flange being of greater thickness than the portion of the disc in the single plane.

5. In a spool, reel, or the like, a barrel, a head associated therewith, said head being in the form of a sheet metal disc with its outer edge deflected out of the plane of the disc, a part of said deflected portion being of a greater thickness than the disc in the same integral piece whereby to add rigidity to the head.

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