Aug. 8, 1967 J. A. WILSON, JR., ET AL 3,334,840

HEAD FOR A WIRE REEL

Filed Oct. 14, 1965

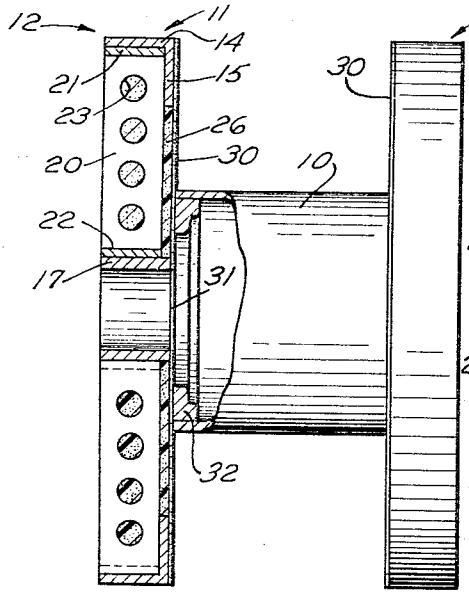


FIG. 1

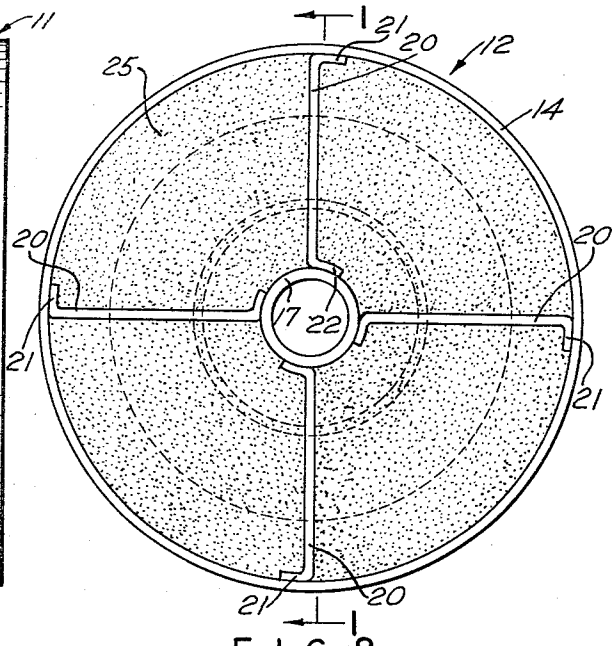


FIG. 2

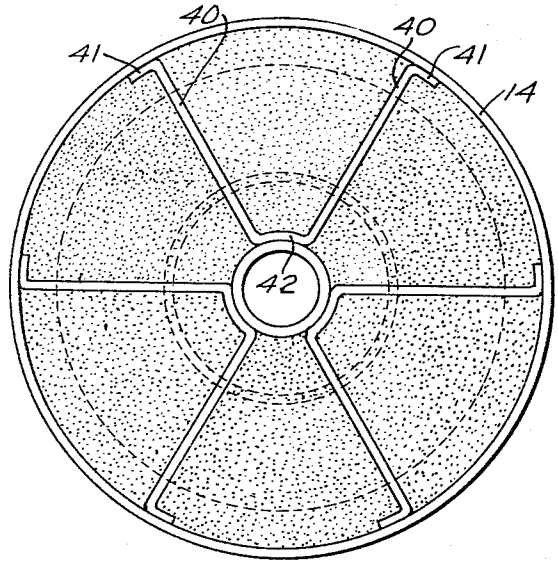


FIG. 4

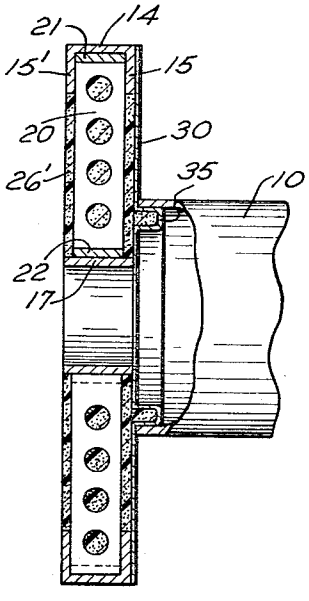


FIG. 3

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United States Patent Office 3,334,840 Patented Aug. 8, 1967

3,334,840

HEAD FOR A WIRE REEL

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Filed Oct. 14, 1965, Ser. No. 495,852
7 Claims. (Cl. 242—118.7)

This invention relates to a reel, more particularly the head of a reel which is adapted for receiving wire or other stranded material and provides a shipping package for transporting wire from one place to another.

The invention comprises a head at the end of the barrel portion of a reel, the head being formed of a ring member of angle iron at the outer periphery and a center bearing member at the center thereof with radially extending spokes between this outer peripheral member and the center member and with foam plastic material which is light in weight filling the space between the spokes, the center member and the member at the outer periphery. Also there is provided some smooth inner surface for the head which will be contacted by the wire which is assembled thereon.

One of the objects of the invention is to provide a lightweight reel which may be utilized for shipping wire from one point to another and at such low cost that it may be thrown away after one use.

Another object of the invention is to provide an inexpensive reel and yet one which will provide smooth surface contact with the wire and be strong enough to withstand the uses to which it will be subjected.

Another object of the invention is to utilize a framework construction and then filling in the framework to strengthen the structure satisfactorily for the uses to which it is to be subjected.

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 drawings:

FIG. 1 is an elevation of the reel partly in section to show the structure of the head;

FIG. 2 is an end view of the head;

FIG. 3 is a fragmental view similar to FIG. 1 but illustrating a modified form of head; and

FIG. 4 is an end view of a still different modified form of head.

In proceeding with this invention, we provide heads for the ends of a barrel by bending angle iron to form a circular member at the periphery of the head with a circular extending portion generally parallel to the axis of the reel and a radially inwardly extending portion from the circular portion. In the event that we provide two inwardly extending portions from the circular portion, the peripheral member is in essence a channel formation in cross section. A center bearing member of cylindrical or tubular form is at the center or middle portion of the head, and radial spokes with their ends turned to provide securing flanges extend from this center member to the outer peripheral member and are there secured by spot welding. This structure provides a framework which is filled with foam plastic to strengthen the head and yet permit it to be of light weight. Further, the foam is either formed smooth on the inner surface of the head by molding technique or the inner surface of the head is made smooth by a separate sheet which may serve as a means to provide a support for the barrel which extends between the heads.

With reference to the drawings, and particularly FIGS. 1 and 2, **10** designates generally a barrel having heads **11** at its opposite ends that are mirror images of each other. Each head comprises an outer peripheral

member **12** of angle iron or of right angular formation in cross section as seen in FIG. 1 with a circular extending portion **14** providing a web extending generally parallel to the axis of the reel and with a radially inwardly extending leg or portion **15** extending at right angles thereto and in a plane at right angles to the axis of the reel. A central cylindrical bearing member **17** is located to be co-axial with the axis of the reel and is supported from the outer peripheral member **12** by a plurality of radially extending spokes **20** each of which has a flange **21** at its outer end which is secured to the circular extending portion **14** of the peripheral member **12** by spot welding or some equivalent securing means, while at the inner end of each of these spokes there is a flange **22** which is shaped to extend along the cylindrical member **17** and be secured thereto by spot welding or any equivalent means. Each of these spokes is also provided with openings **23** spaced along its extent as seen in FIG. 1.

A filling material **25** of an axial extent substantially that of the axial extent of the member **14** is located between the spokes **20** and extending through the openings **23** so as to lock the plastic foam **25** in position. This plastic foam also extends to a point substantially flush with the inner surface of the radial portion **15** as at **26** as shown in FIG. 1, where it is either provided with a smooth surface for contacting the wire to be assembled on the barrel of the reel or there is provided a thin sheet **30** of material such as paper, plastic, fiberglass mat, metal, wood, or the like which is bonded to the foam portion **25** and to the radially extending portion **15** of the outer peripheral member. An opening **31** is provided in this sheet so that the reel may be supported on some arbor for rotation on the bearing member **17**. Shoulders **32** are bonded to the inner surface to support and locate the barrel **10** when assembled with the head, although other locating means **32** may be provided.

In FIG. 3 we have shown a somewhat modified reel head where in addition to the radially extending portion **15** on the inner portion of the head there is provided a radially extending portion **15'** on the outer part of the member **12** so as to in effect provide an inwardly opening channel formation. Also in this embodiment the sheet material **30** is provided with an integral molded offset portion **35** for the location of the barrel **10**. Otherwise, this figure illustrates the same structure as FIGS. 1 and 2 although in this case the plastic material **26'** extends out to be flush with the outer surface of the radially extending portion **15'**.

In some cases, however, instead of providing the spokes **20**, U shaped spokes **40** (FIG. 4) may be provided having flanges **41** to contact the circular extending portion **14** but having flanges **42** at their inner ends joined so that the flanges **42** are common to two spokes **40**. Otherwise, this formation of the reel would be the same as FIG. 1, and the foam material will be the same as shown in FIG. 1.

We claim:

1. A head for a reel comprising a peripheral rim with a circularly extending portion and a radial portion extending therefrom and of one piece therewith, a center tube and radial spokes with end flanges at their outer ends secured to said rim and with flanges at their inner ends secured to the center tube, a plastic filling between said spokes of substantially the axial dimension of said circularly extending portion of said rim, the inner surface of said head having a smooth facing.

2. A reel as in claim **1** wherein the outer flanges of said spokes are secured to the circularly extending portion of said rim.

3. A reel as in claim **1** wherein said spokes are webs in generally planes intersecting the axis of the head and

are perforated with the filling extending therough the spokes.

4. A reel as in claim 1 wherein the smooth facing is a separate member contacting and secured to said rim.

5. A reel as in claim 1 wherein the smooth facing is a separate member contacting and overlapping said radially extending portion of said rim and secured thereto.

6. A reel as in claim 1 wherein two of said spokes are of the same one piece of material and their flanges at the inner ends engaging the center tube are common.

7. A reel as in claim 1 wherein said rim is channel shape with two spaced inwardly extending radial portions.

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