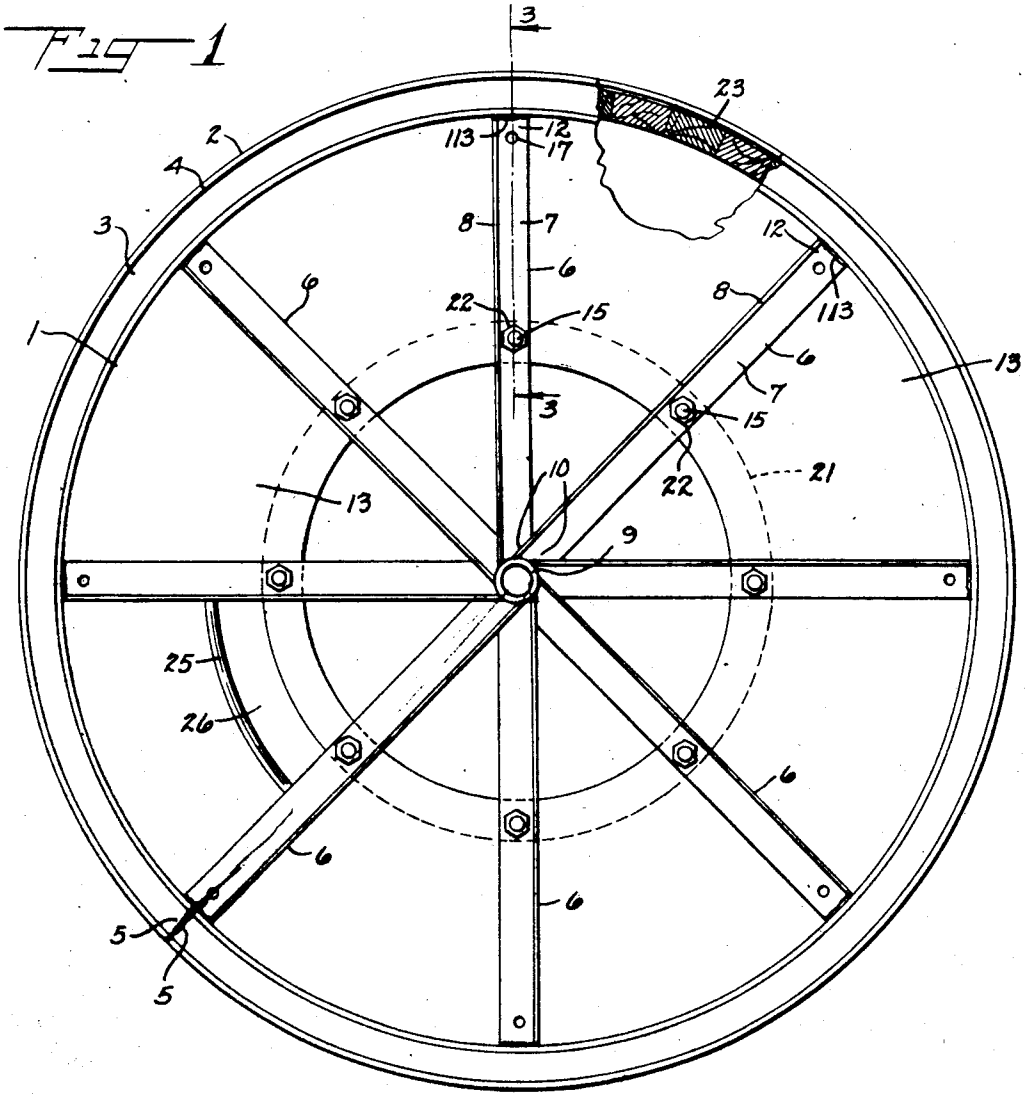
Dec. 20, 1932. E. N. HESCOCK 1,891,709

METAL CABLE REEL

Filed Dec. 18, 1929 2 Sheets-Sheet 1

Fig 1



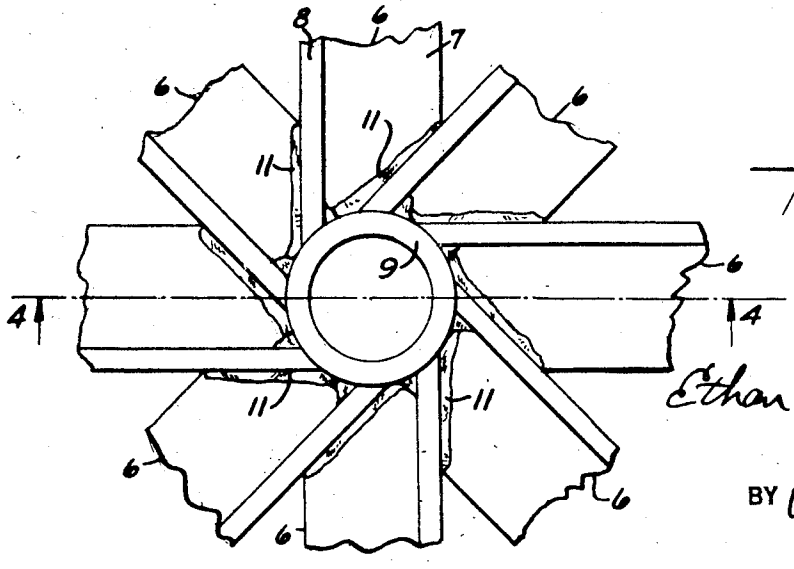


Fig 2

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METAL CABLE REEL

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Fig 3

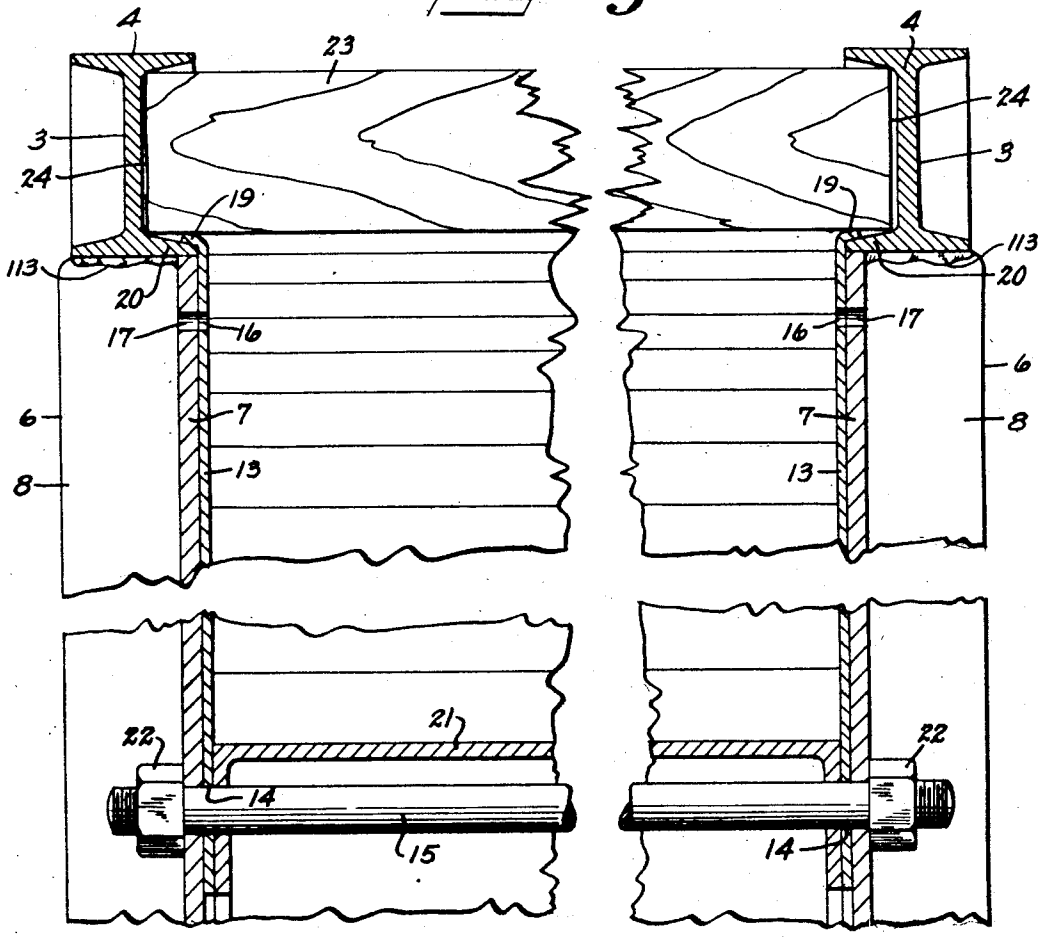


Fig 4

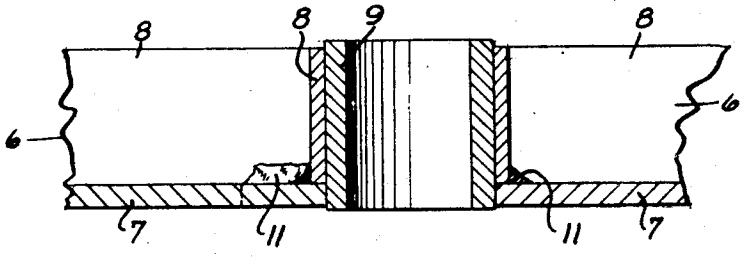
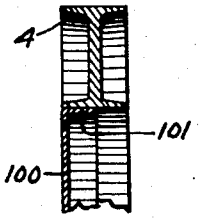


Fig 6



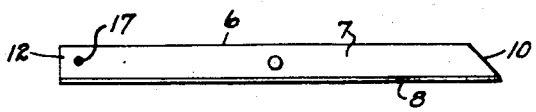


Fig 5

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UNITED STATES PATENT OFFICE

ETHAN N. HESCOCK, OF WESTFIELD, NEW JERSEY, ASSIGNOR TO HENRY B. NEWHALL CORPORATION, OF GARWOOD, NEW JERSEY, A CORPORATION OF NEW JERSEY

METAL CABLE REEL

Application filed December 18, 1929. Serial No. 414,912.

My invention relates to strong metal reels for heavy cable, heavy wire, wire rope, or similar material.

My invention further relates to combinations, sub-combinations, articles of manufacture, and details of construction, which will be more fully hereinafter described in the specification and pointed out in the claims.

In the accompanying drawings showing an illustrative embodiment of my invention, and in which the same reference numerals refer to similar parts in the several figures:—

Figure 1 is a side elevation, partly broken away, of one of my improved cable reels.

Figure 2 is a detail of the hub construction, on an enlarged scale.

Figure 3 is a vertical section, on line 3—3 of Figure 1 on an enlarged scale, looking in the direction of the arrows.

Figure 4 is a horizontal section, on an enlarged scale, on line 4—4 of Figure 2.

Figure 5 is a detail of one of the angle iron spokes.

Figure 6 is a fragmentary view, on a small scale, of the old manner of pre-forming the side plates, and attaching them to the rim or felloe.

Cable reels are used to hold heavy lead covered cable, heavy wire, wire rope, or other heavy material which can be wound upon the drum reels at the place of manufacture, and then the loaded cable reel is transported, in any suitable manner, to the location where the cable, wire, wire rope, or other material is to be used. To wind and unwind the cable, or other material from the reel, the reel is jacked up and temporarily supported so that it may rotate on a temporary axle passed through the hubs of the heads. For short distances, to get the cable reel into its proper position, it is sometimes customary to use the heads of the reel as wheels.

Necessarily, these cable reels have to be very large and very strong to withstand the tremendous load and the rough handling to which they are subjected.

At the same time the contents of the reels must be protected from abrasion, blows, or any distortion, which, in a lead covered cable, may injure the insulation on the wires forming the cable and render the cable valueless.

Lagging and side plates are employed to protect the cable wound on the drum. The application to the reel of these side plates have, heretofore, been a heavy item of expense.

The hub construction has heretofore been cumbersome, expensive to install, and after a head has been equipped with its hub it has usually been found that the entire head is dished, requiring that the head be placed in a hydraulic press for correction. All this of course adds greatly to the expense of the complete metal reel.

I form each of the two heads, 1, of my improved cable reel 2, by taking an I beam 3 of the proper size, for the particular size reel, and bend it in a bending machine to form the rim or felloe 4, the two ends 5, 5 Figure 1 being welded together.

To this rim or felloe 4 I secure the metal angle iron spokes 6, 6; eight being used for each head shown in Figure 1. These angle iron spokes have a flat horizontal portion 7 and a vertical flange 8.

The hub construction for each head consists of a short piece of pipe 9 to which the inclined ends 10 of the angle iron spokes 6 are welded. By cutting the ends 10 in this manner permits both the end of the horizontal portion 7 of the angle iron spoke, as well as the end of the vertical flange 8 to be both welded to the pipe hub 9, as shown in Figures 1 and 2. It also permits the vertical flange 8 of each spoke, to be welded to the horizontal portion 7 of the adjacent spoke, the different welds being designated 11, 11. The other end 12 of each angle iron spoke 6 is welded to the rim or felloe 4, as shown at 13, 13.

In this manner I form an extremely strong rigid head 1, (omitting the lining or side plates) and one which cannot be dished, because the welded vertical flanges 8, 8 will prevent such action. The head is, therefore, exceptionally strong both radially and axially.

The head has now to be provided with lining or side plates to protect the cable; this has previously been a large item in the ex-

pense of manufacture, particularly in the labor expense.

It is impossible to curve the I beams 3 in the ordinary process of manufacture without more or less variation in the curvature, forming a circular rim or felloe which is, for all practical purposes, a true circle, but which, as a matter of fact will not be an exact circle. This makes it difficult and expensive to fit the lining or side sheets to the head.

To better describe my invention, under section 4888 of the Revised Statues, I have shown in Figure 6 the old method of attaching the lining or side sheets 100 to the rim or felloe 4.

These lining sheets are cut in segments and pre-formed, in a press or otherwise, to provide them with a segmental flange 101. This flange 101 has to be cut away, or exactly notched at intervals, for the spokes, whatever their contour may be. It is difficult and expensive to hold the lining sheet 100 in the same plane as the rim 4 when starting to weld the flange 101 to the rim, and also to hold the flange 101 in proper position against the underside of the rim 4 while welding. A poor fit is the usual result, requiring chipping and grinding to make a neat job.

In my invention I avoid the necessity of notching the lining sheets; hand fitting; holding the lining sheets in the same plane as the rim; chipping; grinding; and accurately fit them to the felloe or rim, regardless of any error in the curvature of the rim or felloe.

My lining sheets 13 are formed as segment of comparatively thin sheet metal, cut to the required size for the particular head, but not cut to receive spokes, or pre-formed with a flange. If the lining sheets 13 come down as far as the through bolts 15, they are provided with holes 14 for the reception of the through bolts. It is to be understood, however, that these lining sheets may not extend axially as far as the through bolts.

The lining sheets are provided with holes 16 to register with holes 17 in the horizontal section of the angle iron spokes 6, for convenience in securing the end of the cable, after it has been wound on the drum 21.

The lining sheets 13 are fastened to the head in any suitable manner, as for example by electric tack welding at suitable points to both the spokes 6 and the rim or felloe 3.

The lining sheets 13 are formed of sufficient size so that their arcuate portions 19 will overlap, more or less, the flange 20 of the rim 4, depending upon the correct, or incorrect, curvature of the rim or felloe. It is then merely necessary to peen down the arcuate portion 19 of the lining or side sheets over the flange 20, to form the complete and finished head 1. That is, any irregularity in the curvature of the rim or felloe, is compensated for.

The winding drum 21 is secured between two heads 1, 1 by the through bolts 15 and nuts 22.

The short strips of wood lagging 23 are removably held in the grooves 24, 24 of two adjacent rims or felloes, and protect the outer coils of the cable, or other member wound on the drum 21 until the reel reaches its destination. They are then removed to permit the unwinding of the cable.

One of the segments is preferably cut away and its end bent to form a bead 25; the cut-away portion forms an arcuate slot 26 to permit the end of the cable (not shown) to be secured to one of the spokes 6, to wind it upon the drum.

In my claims where I refer to the inner end of the metal spokes being secured to the hub at a chordal angle, I mean a construction in which the inner ends of the spokes, if continued, will scrape or cut the hub, more or less, in a direction parallel to a tangential line.

Having thus described my invention in connection with an illustrative embodiment thereof, to the details of which I do not desire to be limited, what is claimed as new and what is desired to secure by Letters Patent is set forth in the appended claims.

What I claim is:

1. A new article of manufacture comprising a cable reel having heads formed of a structural shape of metal bent to form an irregular circular rim or felloe, a hub, spokes securing the hub and felloe together, and side or lining plates having their edges peened over a portion of the felloe and compensating for any irregularity in the circumference of the structural shape.

2. A new article of manufacture comprising a cable reel having heads formed of an I beam bent to form an irregular circular rim or felloe, a hub, spokes securing the hub and felloe together, and side or lining plates having their edges peened over a flange of the I beam and compensating for any irregularity in the circumference of the I beam.

ETHAN N. HESCOCK.