Dec. 3, 1935. R. B. HAYWARD 2,023,172

REEL

Filed July 24, 1933 3 Sheets-Sheet 1

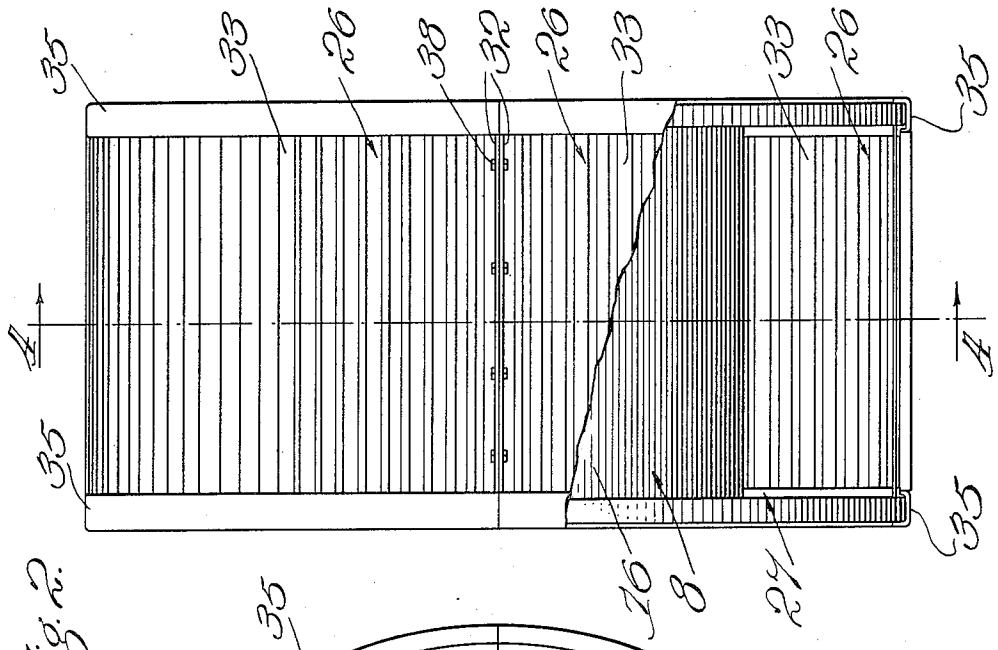


Fig. 2.

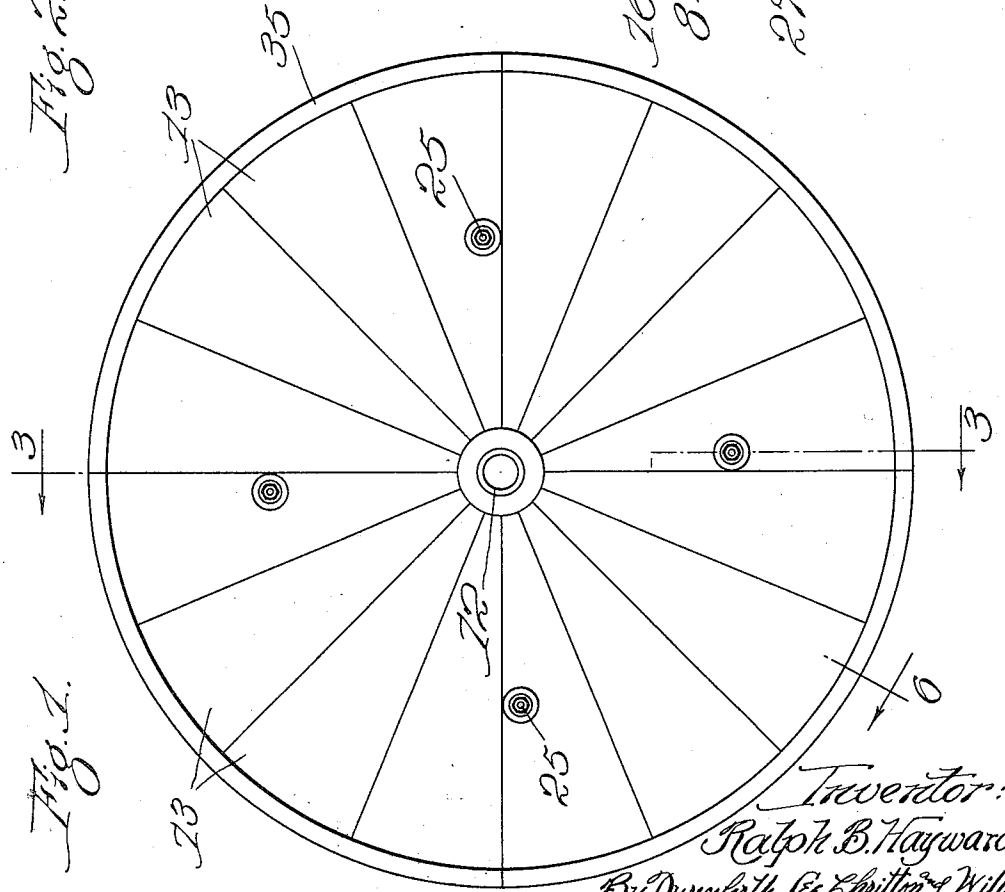


Fig. 1.

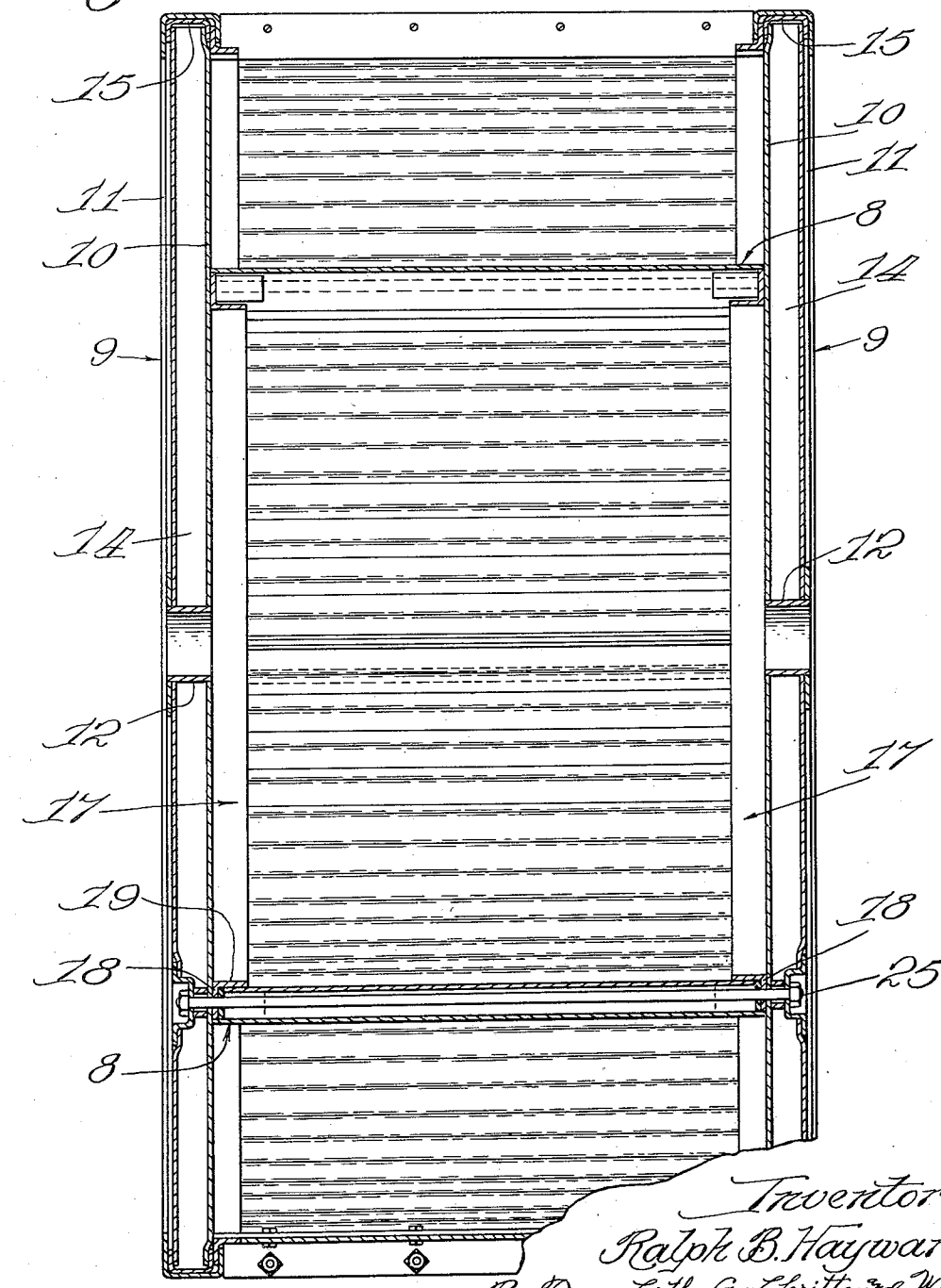
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Fig. 3.



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Fig. 4.

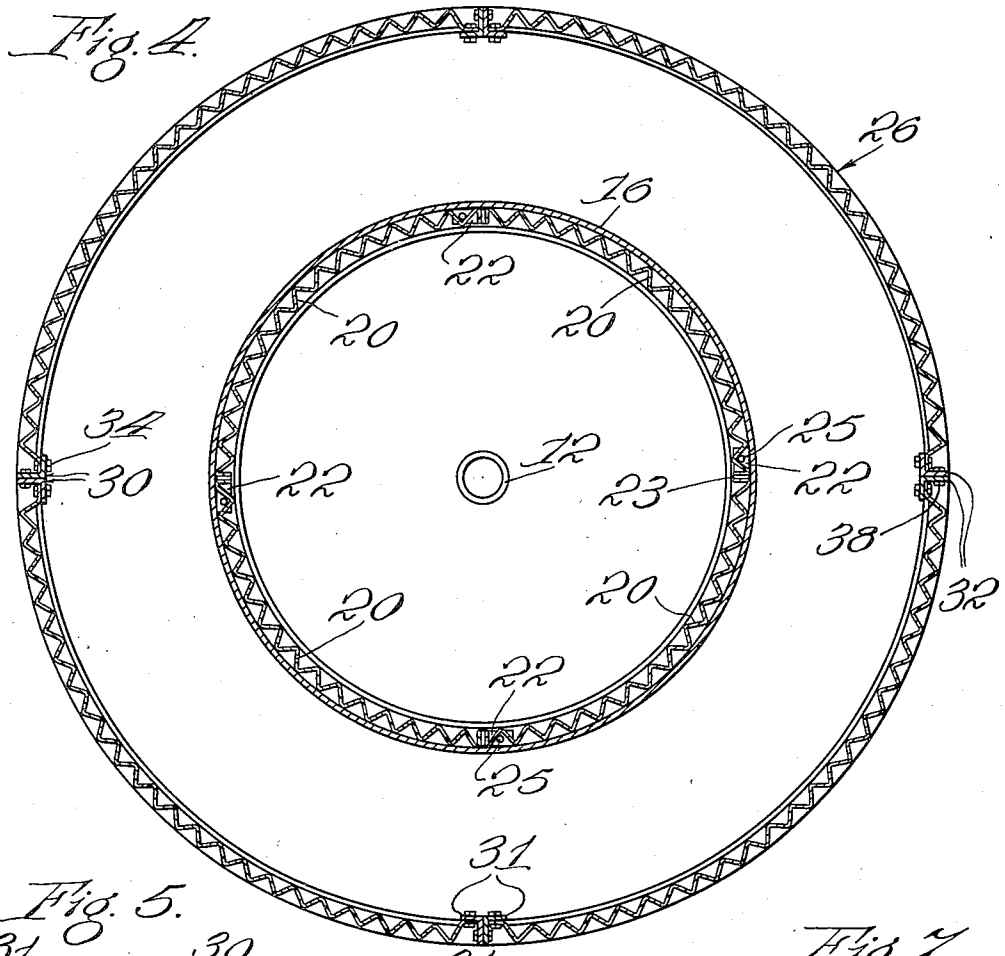


Fig. 5.

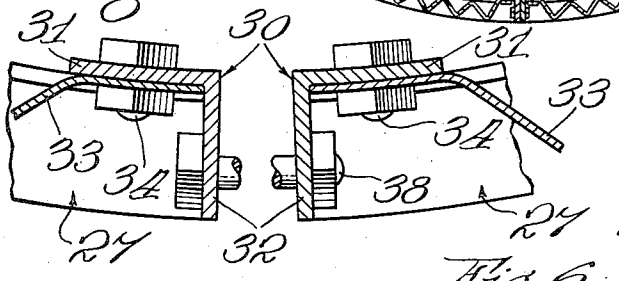


Fig. 7.

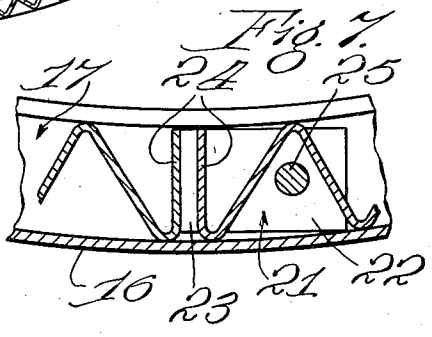
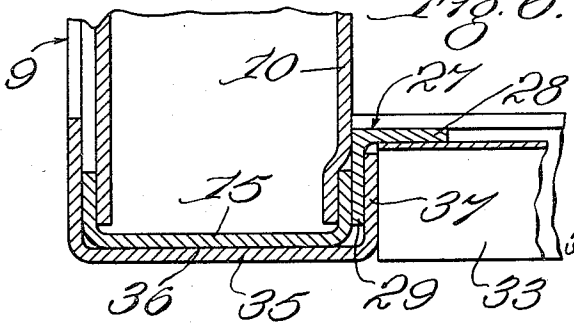


Fig. 6.



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2,023,172

UNITED STATES PATENT OFFICE

2,023,172

REEL

Ralph B. Hayward, La Grange, Ill.

Application July 24, 1933, Serial No. 681,985

2 Claims. (Cl. 206—59)

My invention relates more particularly to reels provided for the winding thereon of electric cables or the like, one phase of my invention relating to the construction of the drum portion of the reel and another phase thereof to the lagging provided as a cover for the material wound upon the reel.

As to the first phase of my invention, my primary object is to provide a novel construction of drum which may be constructed of the minimum amount of metal while permitting it to present the desired stiffness and durability particularly for the carrying of heavy loads.

As to the other phase of my invention, my primary object is to provide a novel construction of lagging which shall be highly durable and capable of repeated use, and readily applied to, and removed from, operative position on the loaded reel; and other objects as will be manifest from the following description.

Referring to the accompanying drawings:

Figure 1 is a view in end elevation of a reel embodying my improvements, the lagging being shown in place thereon.

Figure 2 is a view in side elevation of the construction shown in Fig. 1, a portion of the lagging being broken away to disclose certain underlying parts.

Figure 3 is an enlarged sectional view taken at the irregular line 3—3 on Fig. 1 and viewed in the direction of the arrows, a portion of the construction at its lower right hand corner being shown broken away.

Figure 4 is an enlarged sectional view taken at the line 4—4 on Fig. 2 and viewed in the direction of the arrows.

Figure 5 shows by cross sectional broken views, the adjacent portions of adjacent sections of the lagging, these portions being shown as spaced apart.

Figure 6 is an enlarged broken section taken at the line 6 on Fig. 1 and viewed in the direction of the arrow; and

Figure 7, an enlarged fragmentary view of a detail of the drum construction shown in Fig. 4, the section being taken at a line corresponding with the line 4—4 on Fig. 2 and viewed in the direction of the arrows.

Referring to the particular illustrated embodiment of my invention, the reel as shown comprises a hub, or drum, portion 8, and heads 9.

So far as my present invention is concerned, the heads 9 may be of any suitable construction. The construction of heads illustrated is the same as that forming the subject of the joint application of Ralph W. Clemmons and myself for United States Letters Patent Serial No. 630,848, filed July 17, 1933, and therefore the following brief description thereof will suffice:

Each head is formed of a disklike inner sheet metal member 10 and an outer sheet metal member 11 containing openings at their centers in which an arbor tube 12 is secured. The member 11 is formed of an annular series of sheet metal segments 13 each flanged along its radial edges as represented at 14, the flanges 14 of adjacent segments 13 fitting flatwise together. Surrounding the outer peripheries of the members 10 and 11 is a channel ring 15 which is connected in any suitable way with the members 9 and 11 to form circular tread portions.

The hub, or drum, portion 8 of the reel comprises an outer cylindrical sheet metal portion 16 shown as formed in one piece, angle rings 17 located in the opposite ends of the shell 16, the rings 17 presenting the ring portions 18 which flatwise oppose the inner faces of the adjacent heads and the ring portions 19 which extend concentrically of, but in spaced relation to, the shell 16.

The drum also comprises a cylindrical corrugated structure shown as formed of an annular series of corrugated sheet metal arcuate sections 20 each of which extends lengthwise of the drum and in the particular construction shown constituting one-quarter of a circle, the sections 20 being positioned against the inner surface of the drum 16, with their ends extending into the annular spaces between the shell 16 and the annular portions 19 of the angle rings 17, the rings 17 and corrugated sections 20 thus forming a firm backing for the sheet metal shell 16.

The sections 20 are shown as secured together at their adjacent longitudinally extending edges by means of angle clips 21 flatwise interposed at their portions 22 between the ends of the sections 20 and the annular portions 18 of the rings 17 and presenting angularly disposed lug portions 23 interposed between the longitudinal edge portions 24 of the corrugated metal of adjacent ones of the sections 20 to which portions the lugs 23 are secured, as for example by welding them thereto, the ends of the sections 20 being notched to receive the portions 22 of the clips 21.

The drum 8 and heads 9 are secured together by tie-rods, shown as bolts 25, which extend through openings in the heads 9, the portions 18 of the rings 17 and the portions 22 of the clips 21, the heads and nuts of these bolts engaging the outer faces of the heads 9 to effect the de-

sired clamping of the ends of the drum **8** against the inner faces of the heads **9**.

My improved reel construction also comprises lagging serving as a cover for the material wound on the drum **8**, and comprising an annular series of arcuate sections **26**, shown as four in number and of the same size and shape, and extending lengthwise of the reel.

Each section **26** is formed of a frame comprising arcuate angle irons **27** at its opposite ends presenting laterally extending flanges **28** and radially outwardly extending flanges **29**, and angle irons **30** extending lengthwise of the sections and presenting laterally extending flanges **31** and radially outwardly extending flanges **32**, the flanges **31** overlying the flanges **28** of the angle irons **27** and being secured thereto, as for example by welding these parts together.

Each section **26** also comprises a sheet metal portion **33** preferably corrugated as shown, which is located in the frame formed of the angle irons **27** and **30** and overlies the flanges **28** and **31**, the sheet portion **33** being secured in place, as for example by bolts **34** clamping together the longitudinally extending edges of the sheet portion **33** and the flanges **31**.

Each section **26** also comprises arcuate channel irons **35** at the opposite ends of the section, the channels **36** therein opening inwardly as shown. The inner flange portions **37** of the irons **35** lap the inner faces of the flanges **29** of the angle irons **27** and extend between these flanges and the ends of the sheet portion **33**, the flanges **37** being secured to the flanges **29**, as for example by welding them thereto.

The parts described are so proportioned and arranged as shown that the sections **26** are adapted to fit closely at their channeled end portions over the peripheries of the heads **9**, and the outer peripheral portion of the sheet members **33** extend substantially flush with the outer peripheral portions of the channel irons **35** as shown in Figs. 1, 2 and 6.

Any suitable means for detachably securing the sections **26** in place on the reel may be provided, in the arrangement shown the sections **26** being connected together at their adjacent flanges **32**, as for example by the bolts represented at **38**.

While I have illustrated and described certain particular constructions of reel-drums and lagging I do not wish to be understood as intending to limit my invention thereto as the same may be variously modified and altered without departing from the spirit of the invention.

What I claim as new, and desire to secure by Letters Patent, is:

1. Lagging for reels comprising a circumferential series of arcuate sections each comprising arcuate end members and sheet metal between said end members, said sections having radially inwardly opening channels at its ends adapting the sections to be fitted over the peripheries of heads of reels.

2. Lagging for reels comprising a circumferential series of arcuate sections each comprising arcuate angle-shaped members at its ends with flanges thereof extending radially outwardly, sheet metal between said flanges and arcuate channel members at the ends of said sections presenting radially inwardly opening channels adapting the sections to be fitted over the peripheries of the heads of a reel, side walls of said channel members being connected with said first-named members.

RALPH B. HAYWARD.