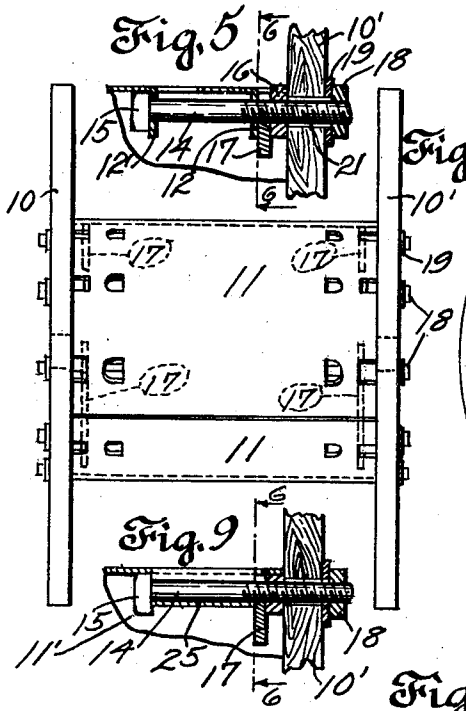
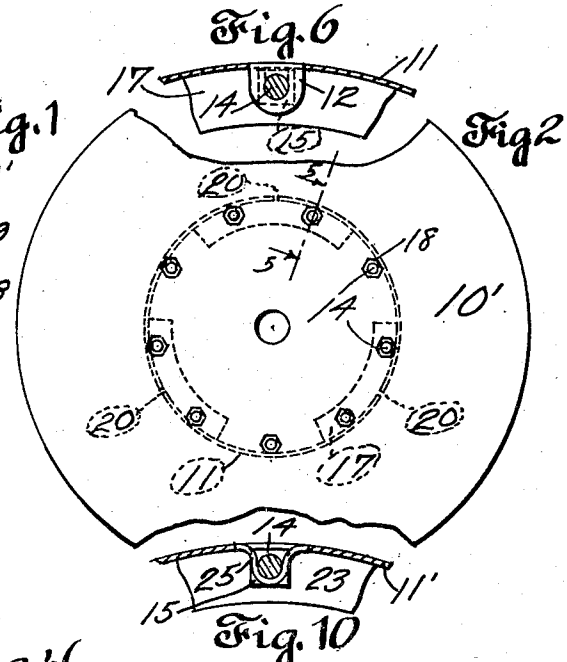
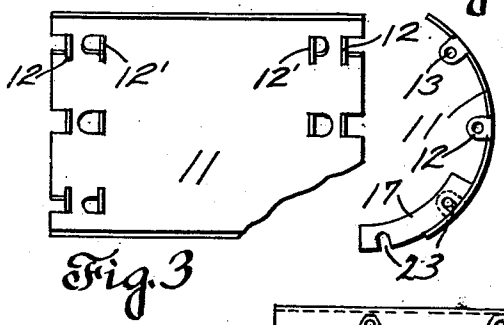
June 24, 1930. R. D. SMITH 1,767,710

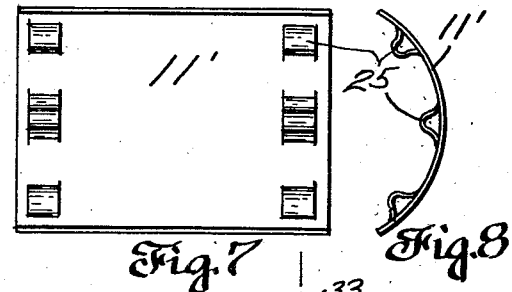
SECTIONAL BARREL FOR REELS

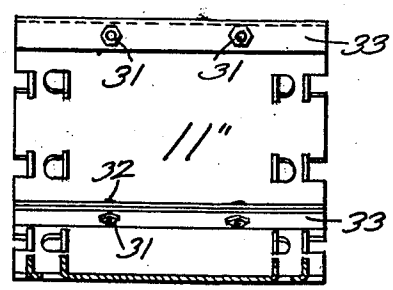
Original Filed Feb. 27, 1926

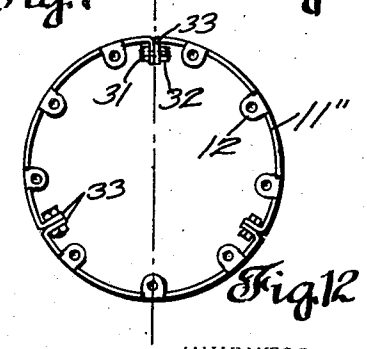












INVENTOR

Raymond D. Smith

Patented June 24, 1930 1,767,710

UNITED STATES PATENT OFFICE

RAYMOND D. SMITH, OF PLEASANTVILLE, NEW YORK

SECTIONAL BARREL FOR REELS

Application filed February 27, 1926, Serial No. 91,155. Renewed May 11, 1928.

This invention relates to sheet metal barrels for reels or spools of a kind adapted to the ready removal of the heads from the barrel and the taking apart of the barrel itself so that the reel may be stored and shipped within the smallest possible space.

Heretofore it has been customary to construct reels, particularly of the larger sizes for heavy wire and cable, with wooden heads joined and spaced apart by nailed wooden cleats parallel to the axis of the reel and forming the reel barrel on which the wire or cable is wound. Such construction in the case of breakage or damage requiring the replacement of one reel head involves an amount of labor to repair the reel about equivalent to that required to make a whole new reel. Furthermore the barrel made of wooden cleats is not desirably strong for the service for which the reel is commonly used and it is moreover wholly impractical to produce a reel capable of being taken apart and easily reassembled in such construction.

My present improvement has for its purpose the provision of a reel with a sheet metal barrel and particularly a sectional barrel which may easily and quickly be assembled to different reel heads whether the head be of wood or metal and which itself can be taken apart or (knocked down) in parts which are capable of nesting to save space in storage and shipment.

A further object is to produce my improved reel barrel of stamped metal construction so that it may be economically manufactured in quantities and preferably put together with standard bolts and nuts as an integral barrel or drum before the heads are applied at its ends to form the reel.

An illustrative embodiment of my invention is more particularly described and defined in the following description and its novel features are pointed out in the appended claims in which reference is had to the accompanying sheet of drawings wherein

Fig. 1 is a side view of a complete reel incorporating my improved sheet metal barrel.

Fig. 2 is an end view of the reel partly broken away.

Fig. 3 is a view looking at the concave or inside surface of one of the sections which comprise my improved reel barrel, one corner being broken away to make room for

Fig. 4 which is an end view looking at the right of Fig. 3 and showing one of the section connecting straps in place.

Fig. 5 is a section through one of the head holding bolts taken on the plane 5—5 in Fig. 2 looking in the direction of the arrows.

Fig. 6 is a section on the plane 6—6 in Fig. 5.

Fig. 7 is a view similar to Fig. 3 showing a different formation of the metal of the barrel section for holding the head bolt.

Fig. 8 is an end view looking at the right of Fig. 7.

Fig. 9 is a sectional view similar to Fig. 5 showing a modification of the bolt holding means pictured in Figs. 7 and 8.

Fig. 10 is a section on the plane 10—10 in Fig. 9 looking in the direction of the arrows.

Fig. 11 shows a substitute means of holding the barrel sections together in place of a segmental strap.

Fig. 12 is an end view looking at the right of Fig. 11.

Reference symbols recurring in different figures of the drawings designate different views of identical parts.

In Figs. 1 and 2 the reel heads 10 and 10′ are held against the ends of my improved sheet metal barrel comprised of three sections 11, alike. Three pairs of tongues 12 and 12′ are struck inwardly from the metal of section 11 at each end of the section, each of these tongues containing a bolt hole 13 to take the head bolt 14 the square head 15 of which is held close enough to the inner surface of the section 11 to keep it from turning. Bolt 14 is retained rigidly in the holes 13 by a nut 16 which clamps a segmental connecting strap 17 against the outer ear 12. The connecting strap 17 has notches 23 to accommodate bolt 14. The nut 16 thereby helps take the thrust of the reel head 10′ when the latter is drawn up against the end of the barrel section 11 by the outside nut 18 under which a burr or washer

19 may be used to advantage if the reel head be of wood.

In Fig. 2 it will be observed that the reel sections 11 abut at three points 20 each of which points are straddled circumferentially by the strap 17 whereby the barrel may be assembled as a whole before nut 18 is applied and be handled as a rigid metal drum having the bolts 14 projecting from its ends to protrude through holes 21 in the reel head to accurately locate same when applied.

Figs. 7 and 8 show a series of sheared depressions 25 to hold the bolt 14 in place of ears 12 and 12'. Figs. 9 and 10 show on an enlarged scale the assembled construction when the formations 25 are employed.

Figs. 11 and 12 show a method of bolting together the sections 11 to form a reel barrel without employing a separate connection strap such as 17. In this method the edge of the section is flanged over to abut against a corresponding flange 30 on the adjacent section; the flanges being held together by bolts 31 and nuts 32 or in any other suitable and preferably detachable manner.

In the above described constructions it will be observed that little or no dependence is placed upon the reel head for assistance in the strength and rigidity of the barrel. It is pointed out that this is a feature not depending on nor essentially concerned with any particular character of threaded stud, bolt, tie rod, or like expedients old in this art, which may be employed as the projecting members to take the nuts 18 for retaining the reel head. It will be observed that the parts depended upon to hold the reel together are self locating in assembly so that no skill nor adjustment is required to set up a properly assembled reel.

The following claims will be interpreted as intending to cover not only the devices and constructions herein pictured and described but also all fair equivalents of same that come within the spirit and principles of the features and combinations defined.

What I claim is:

1. A sectional sheet metal drum for reels embodying in combination, a plurality of sheet metal sections of common cylindrical curvature means to secure said sections rigidly to one another to form a hollow cylindrical drum, together with means carried at the cylindrical ends of said drum for securing the reel head rigidly thereto.

2. A sectional sheet metal drum for reels embodying in combination, a plurality of sheet metal sections of common cylindrical curvature means to secure said sections rigidly to one another to form a hollow cylindrical drum, together with fastening projections for the reel head carried rigidly at the cylindrical end edge of said drum sections and projecting therefrom parallel to the drum axis for penetrating the reel head.

3. A sectional sheet metal drum for reels embodying in combination, a plurality of sheet metal sections of common cylindrical curvature means to secure said sections rigidly to one another to form a hollow cylindrical drum, each of said sections having holding formations struck from the metal of same, together with studs rigidly secured in said formations to project from the edge of said section parallel to the cylindrical axis of drum for engagement with the reel heads to fasten same to the ends of said drum.

4. A sectional sheet metal drum for reels embodying in combination, a plurality of sheet metal sections of common cylindrical curvature means to secure said sections rigidly to one another to form a hollow cylindrical drum, each of said sections having stud holding formations struck radially inward from the metal thereof together with a bolt device engaging said formations and held thereby in close proximity to the inner concave surface of said section and projecting beyond the cylindrical end edge thereof as a means for securing the reel heads rigidly against the ends of said drum.

5. In combination, a reel head, a plurality of sections formed for assembly to comprise the barrel of the reel, and means to secure each of said sections against its adjacent section and in the absence of said head.

6. In combination, a reel head, a plurality of sections formed for assembly to comprise the barrel of the reel, and means to secure the edge of each of said sections to the edge of its adjacent section and in the absence of said head.

7. In combination, a reel head, a plurality of sections formed for assembly to comprise the barrel of the reel, and means to secure each of said sections against its adjacent section and in the absence of said head, said head having means to position it co-centrally with said barrel when assembled therewith.

8. In combination, a reel head, a plurality of sections formed for assembly to comprise the barrel of the reel, and means to secure each of said sections against its adjacent section and in the absence of said head, and means to prevent said head from turning relative to said barrel when drawn up against the end thereof.

9. In combination, a reel head, a plurality of sections formed for assembly to comprise the barrel of the reel, and means to secure each of said sections against its adjacent section and in the absence of said head, said head having means to position it co-centrally with said barrel when assembled therewith, and means to prevent said head from turning relative to said barrel when drawn up against the end thereof.

10. In combination, a reel head, a plurality of sections formed for assembly to comprise the barrel of the reel and also formed to nest for saving of space when dis-assembled and packed as separate parts, and means to secure each of said sections against its adjacent section and in the absence of said head.

11. A reel having a head and a barrel comprised of two or more sections arranged to be assembled and dis-assembled independently of said head.

12. A reel having a barrel comprised of sectorially separable curved portions conjoined by connecting parts of curvature corresponding to the curvature of said portions, and a head for said reel separable from said barrel and from said connecting parts.

13. In reel construction a plurality of barrel sections carrying internally thereof holding means for endwise projecting members to engage the head of the reel, and a tie strap of less than complete circular extent and having means to engage the bolts of more than one of said barrel sections for securing them together.

14. In reel construction a plurality of barrel sections carrying internally thereof holding means for endwise projecting members to engage the head of the reel, and a tie strap of less than complete circular extent and having means to engage the bolts of more than one of said barrel sections for securing them together, together with a reel head and bolts, each of which penetrates said guide means, said tie strap and said reel head.

15. In reel construction a plurality of barrel sections carrying internally thereof holding means for endwise projecting members to engage the head of the reel, and a tie strap of less than complete circular extent and having means to engage the said members of more than one of said barrel sections for securing them together, together with a reel, each of said members penetrating one of said holding means, of said tie straps and said reel head, said members being kept from turning by their manner of contact with the barrel section.

16. In the construction of sheet metal drums, a weldless means for holding at the interior surface of said drum an endwise projecting bolt, and embodying a portion of the sheet metal of said drum struck inwardly to afford an aperture to accommodate the body of the bolt and hold the same in substantial alignment with the axis of the drum and sufficiently close to the sheet metal so that the head of the bolt will by contact therewith be prevented from turning.

17. In the construction of sheet metal drums, a weldless means for holding at the interior surface of said drum an endwise projecting bolt, and embodying a portion of the sheet metal of said drum struck inwardly to afford a plurality of axially spaced apertures to accommodate the body of the bolt and hold the same in substantial alignment with the axis of the drum and sufficiently close to the sheet metal so that the head of the bolt will by contact therewith be prevented from turning.

18. In combination, a reel drum, comprised of a plurality of sections adapted to be assembled to form the barrel of a reel, said sections being formed from sheet metal bent over at the adjoining edges of said sections to form a flange inturned to afford a means for securing the sections together without disturbance of a smooth circumferential exterior in the assembled drum.

19. In a sheet metal drum a weldless construction for assembling a plurality of sections made of sheet metal and adapted to present a smooth cylindrical outer surface for use as the barrel of a reel and including an inwardly disposed formation of the adjacent edges of said sections adapted to be fixedly secured together by removable coupling means, together with other inwardly disposed formations struck from the sheet metal of the section and formed to hold and prevent from turning a separate coupling means disposed to receive and secure a reel head.

Signed at New York, N. Y., this 26th day of February, 1926.

RAYMOND D. SMITH.