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1,697,777

SPOOL

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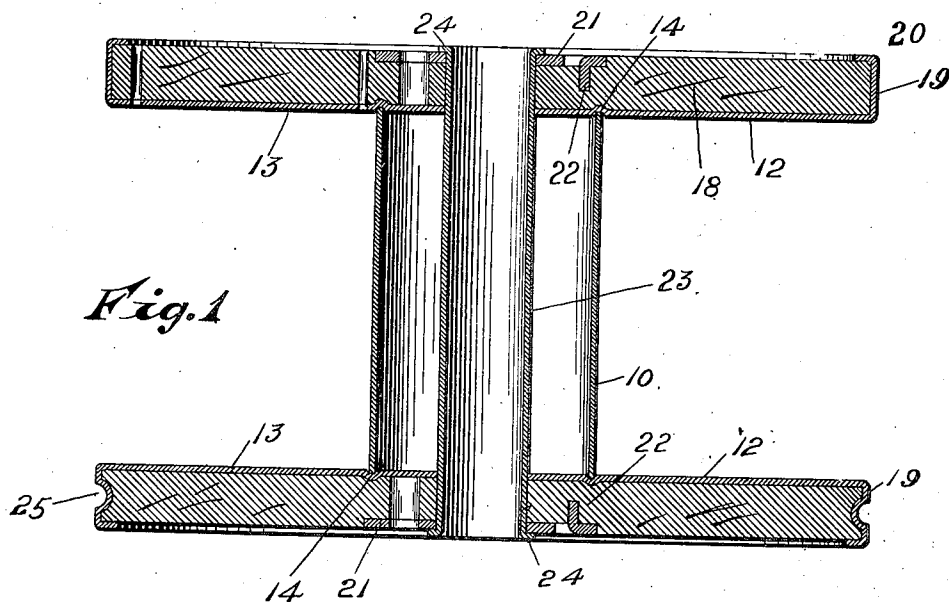


Fig. 1

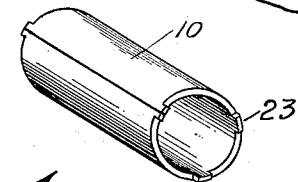
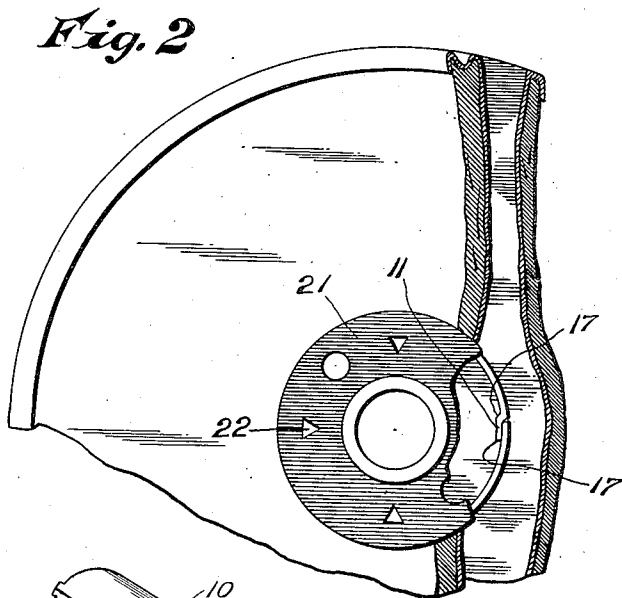


Fig. 5

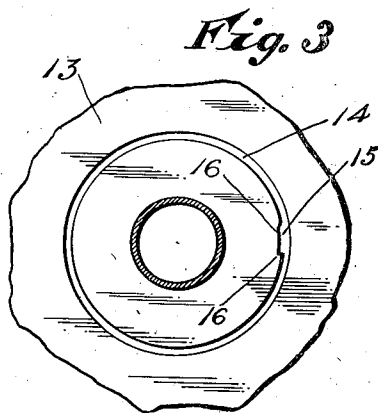


Fig. 3

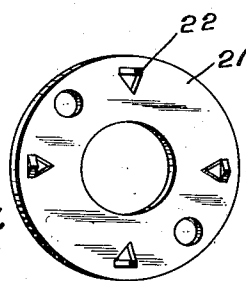


Fig. 4

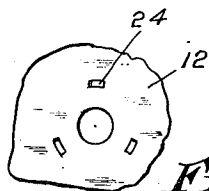


Fig. 6

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SPOOL.

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This invention relates to an improved construction of spool, reel or the like on which wire or other material may be wound; and the object of this invention is to provide such a spool having a tubular body with a head at each end thereof, the inner faces of the heads being recessed to receive the ends of the body portion to prevent relative rotation between them, independent means being also provided for locking or securing the heads to the body.

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:—

Figure 1 is a sectional elevation of my improved spool showing one form of head which is attached to the body thereof.

Figure 2 is a fragmental end view of my improved spool illustrating the annular groove into which the end portion of the body extends also illustrating the lap joint at the seam of the tubular body.

Figure 3 is a view of the inner face of a portion of one of the heads showing the annular groove for the reception of the end of the body and the enlargement in the groove for the reception of the lap joint portion of the body.

Figure 4 is a perspective view showing the collar plate which is attached to the outer face of the non-metallic filling in the head member.

Figure 5 is a modification illustrating the body member as provided with short extending end lugs.

Figure 6 is a view showing a portion of the inner face of one of the heads having recesses for the reception of the lug members on the body member as illustrated in Figure 5.

It is found in the practical construction of spools of this character, of advantage to provide a body member with heads at opposite ends thereof and to provide the inner faces of the heads with recesses for the reception of the ends of the body member and to so form these recesses as to provide one or more keys or means for preventing relative rotation between the body and the heads; also in some cases, it is found of advantage to provide a filling of wood or other suitable non-metallic material set into the outer faces of the head

plates and to also provide a collar-plate secured to the outer face of the filling member to which a tubular core or other member may be secured for the purpose of tying the head members onto the body. In some cases one of the flanged heads may be grooved to receive a driving belt; and the following is a detailed description of the present embodiment of my invention showing one means by which these advantageous results may be accomplished:—

With reference to the drawings, 10 designates the body of my improved spool which is preferably formed of sheet metal rolled into tubular form with the ends of the tube forming a lap joint 11 at the seam, and on the ends of this body member, I preferably mount head members 12 each formed from sheet stock comprising an inner disc plate 13 having an out-turned, peripheral flange 19 with an inturned edge 20. The inner faces of the disc plates are preferably provided with an annular groove 14 for the reception of the ends of the tubular body 10. This annular groove is also provided with an enlargement 15, see Figure 3, for the reception of the lap joint portion 11 of the body. The shoulders 16 of this enlarged recess 15 are for engagement with the shoulders 17 on the lap joint of the seam 11, whereby when this lap joint portion is inserted into this enlargement 15 in the annular recess of the head, it serves as a key to prevent relative rotation between the head and the body.

In some cases it is found of advantage to provide a filling 18 of non-metallic material in the outer face of the head member such as wood, vulcanized fibre or other similar material over which the outer edge 20 of the flange 19 is turned. It is also found of advantage to secure a collar-plate 21 to the outer face of the filling by forming spurs 22 on the collar-plate and driving them into the face of the non-metallic filling, and a tubular core 23 is herein shown as extending through the center of the body 10 and through the head members 12 and the collars 21 and having its end portions 24 rolled outwardly over this plate for binding the head members securely onto the heads of the body.

By this construction it will be seen that the filling may be inserted into the head members and the edges 20 of the flange 19 rolled over onto the filling before the head members

are positioned on to the body and after the parts of these head members are assembled and placed on the ends of the body 10, the ends of the tubular core are riveted or rolled over onto the outer faces of the head members to bind the whole together.

I do not wish to be restricted to the use of non-metallic material as a filler for the heads as this may be omitted, if desired, and any other suitable construction may be employed, neither do I wish to be restricted to the employment of a central or tubular core 23 as any other suitable means may be employed for securing the heads onto the body of this spool.

Instead of forming a continuous annular groove in the side faces of the head plates for the reception of the ends of the tubular body, I may form slight projections 23 on the ends of the tube as shown in Figure 5, and provide corresponding recesses 24 in the head plates, as illustrated in Figure 6.

In some instances I may provide an annular groove 25 in the periphery of one of the spool heads for the reception of the driving belt, if desired.

My improved spool is very simple, practical and inexpensive in construction, is very easy to assemble and is very strong and durable in its operation.

The foregoing description is directed solely towards the construction illustrated, but I desire it to be understood that I reserve the privilege of resorting to all the mechanical changes to which the device is susceptible, the invention being defined and limited only by the terms of the appended claims.

I claim:

1. A spool having a rolled sheet metal tubular body with a seam longitudinally thereof and a projecting portion adjacent the seam at the end of said body, a head at each end of the body, the inner faces of said heads having imperforate recesses to receive said projecting portion adjacent the seam and lock the seam closed and also prevent relative rotation of the body and heads and means for locking said heads onto the ends of said body.

2. A spool having a body with a head at each end, said body being formed of sheet metal rolled into tubular form with a lap joint seam, the inner faces of said heads being each provided with an annular recess into which the ends of the tube extend and with an enlargement for the joint portion, whereby the joint is prevented from spreading and the parts are prevented from rela-

tive rotation, and means for securing the heads to the ends of the body.

3. A spool having a body with a head at each end, said body being formed of sheet metal rolled into tubular form with a lap joint seam with an inwardly-extending shoulder, the inner faces of said heads being each provided with an annular recess into which the ends of the tube extend, and an enlargement for the joint portion also having a shoulder cooperating with that in the body joint to prevent relative rotation of the parts, and means for securing said heads to said body.

4. A spool comprising a tubular body member having head members, said heads having recesses for receiving the ends of said body and provided with an outwardly-turned peripheral flange, a non-metallic filling secured in each of said heads by its flange, a core for securing said members in assembled relation, and means for preventing the relative rotation of said members.

5. A spool comprising a tubular body member, head members at each end thereof having outwardly extending flanges, a non-metallic filling secured in each head by its flange and having a central opening therethrough, a collar-plate on the outer surface of said filling and located about said opening, and a core extending through said body having its ends engaging said collar plates to hold the members in assembled relation.

6. A spool comprising a tubular body member, head members at each end thereof, each having an outwardly-turned peripheral flange, a non-metallic filling in each head and the edge of said flange turned inwardly therein, said heads having a central opening therethrough, a collar-plate on the outer surface of said filling and located about said opening, and a tubular core extending through said body having its ends engaging said collar-plate to lock the heads onto the ends of the body.

7. A spool having a tubular body with head members at each end, means for preventing relative rotation of the heads and body, a non-metallic outer face on said heads, a collar plate on the outer surface of each of said faces having intumed spurs extending thereinto and a tubular core extending through the body and head members and engaging said plates to lock said head members on to the body.

In testimony whereof I affix my signature.

FRANK MOSSBERG.