June 5, 1928. 1,672,167

F. MOSSBERG

SPOOL

Filed March 1, 1926

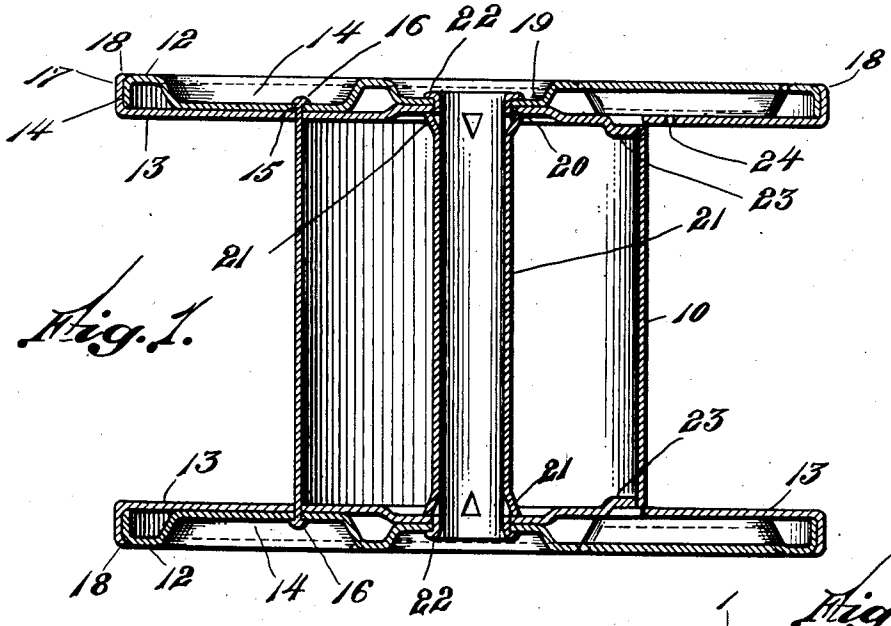


Fig. 1.

Fig. 2.

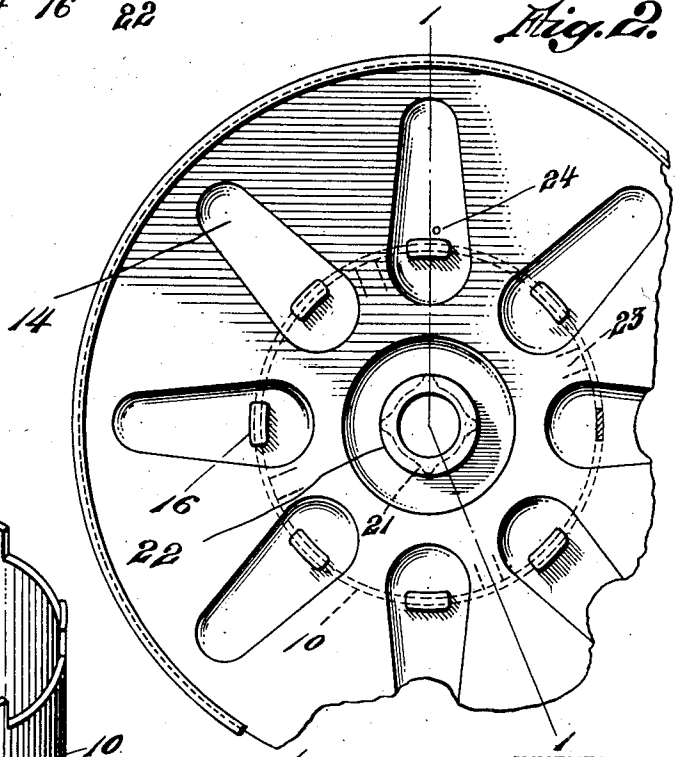
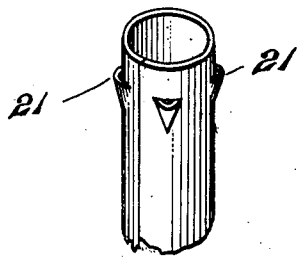


Fig. 4.



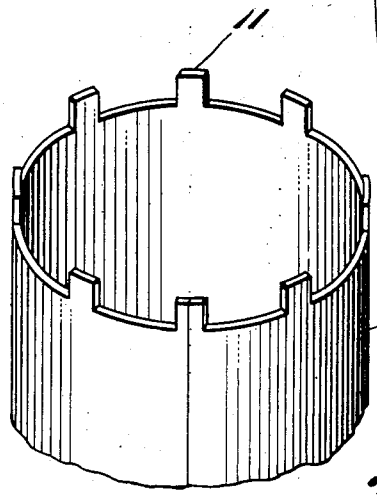


Fig. 3.

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UNITED STATES PATENT OFFICE.

FRANK MOSSBERG, OF ATTLEBORO, MASSACHUSETTS, ASSIGNOR TO MOSSBERG PRESSED STEEL CORPORATION, OF ATTLEBORO, MASSACHUSETTS, A CORPORATION OF MASSACHUSETTS.

SPOOL.

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This invention relates to an improved construction of sheet metal spool, and has for its object to provide a spool of this character that is strong and durable and yet light in weight, having its heads formed to strongly resist bending upon being thrown about and roughly handled.

A further object of the invention is to form the heads of the spool hollow and with spaced plates one of which may be ribbed for obtaining great strength also to provide a broad, peripheral edge on the head to minimize the possibility of the two adjacent spools working out of line with each other when stacked to prevent rubbing against the material carried by the adjacent spools during shipment.

A still further object of the invention is to form the heads of the spool so that they have no projections extending beyond the plane of its outer face, which construction facilitates storing and shipping permitting the spool to lie flat one upon the other when stacked in end-to-end relation.

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 side elevation on line 1—1 of Figure 2.

Figure 2 is an end view of my improved spool with a portion of its periphery partly broken away.

Figure 3 is a perspective view showing one end of the barrel with the attaching or riveting lugs or fingers extending therefrom.

Figure 4 shows a portion of the central bearing tube with the abutment shoulder lugs extending outwardly from the surface thereof.

It is found in the practical construction and use of sheet metal spools of this character, of advantage to provide a head which is hollow, by securing two plates together in spaced relation and to form stiffened ribs on the heads by forcing inwardly portions of the outer plate to abut against the face of the inner plate. These stiffening portions also serve as pockets or recesses into which the ends of the fastening members of the body may extend, which ends may be riveted or welded in position to serve not only to secure the barrel portion to the heads, but to also serve to secure the two head plates firmly together, whereby these plates stiffen and support each other and so provide a head of great strength adapted to strongly resist any bending or injury when subjected to unusual strains and at the same time provide an outer surface without projections having its fastening means below the outer plane thereof; and the following is a detailed description of the present embodiment of my invention and showing one means by which these advantageous results may be accomplished:—

With reference to the drawings, 10 designates the body portion of a spool, which may be cut to length from a piece of tubing or which may be formed of sheet metal rolled into tubular form. The ends of the body are preferably provided with attaching fingers 11 for the purpose presently described.

The heads of my improved spool are also formed of sheet stock having an outer plate 12 and an inner plate 13 spaced from each other. The inner portion of the outer plate is provided with an inturned flange 14 to rest against the outer face of the inner plate, also this outer plate is provided with a plurality of radially-disposed stiffening rib portions 14 which extend toward and abut against the inner plates or ribs preferably being of a length to extend across the circumferential line of the body member. These ribs form recesses or pockets in the outer faces and through both this inner plate and outer plate are formed openings 15 for the reception of the end fingers 11 of the body which are preferably riveted over at 16 in said recesses. The inner plate is also provided with an outturned flange 17, the outer edge 18 of which is preferably rolled inwardly over the edge of the inner flange and serves to secure the peripheries of both plates together.

In some instances, I inset the central portion of the outer plate as at 19 and provide a central bore through both plates as at 20, and I provide a tubular member 21 which extends through the center of the body, the tube being preferably provided with outwardly-extending shouldered portions 21 preferably pressed from the stock to abut against the inner surface of the inner plate. The outer portions of the tube being ar-

ranged to extend through the opening 20 in the plates and is headed over as at 22 to rivet it in place, the ends of the tube being welded or otherwise secured in position.

In some instances, in order to provide a centralizing means for the barrel portion on the head, I cut and force inwardly the stock from the inner plates 13 at intervals about its face as at 23, which fingers may provide this centralizing feature, when desired.

A small hole 24 is formed through the head plates through which the starting end of the wire may extend before winding the wire upon the body of the spool.

My improved spool is very simple and practical in construction, is light in weight, and is very strong and durable and will serve to strongly resist being bent or injured when thrown about or subjected to rough handling.

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 sheet metal spool comprising a body portion and a hollow head secured to each end thereof, each of said heads being formed of a pair of spaced plates of substantially the same size, each having a peripheral flange extening towards the other to assist in determining the space between said plates and the outer plate having a rounded edge the outturned edge of the flange of the inner plate being turned downward over the rounded edge of the outer plate and being flush with the outer face of the outer plate.

2. A sheet metal spool comprising a body portion and a hollow head secured to each end thereof, each of said heads being formed of a pair of spaced plates having flanges telescoping one within the other, the outer edge of the flange of the inner plate being turned over a portion of the outer plate and being flush with the outer surface of the outer plate, and one plate of each head having spaced radially disposed stiffening ribs formed by deflecting portions from the stock of the plate.

3. A sheet metal spool comprising a tubular body, a hollow head at each end thereof formed of spaced plates with telescoping flanges, depressed radially disposed rib portions in the outer plate to abut against the inner plate, and members having their end portions secured in said depressions for fastening the heads to the ends of the body.

4. A sheet metal spool comprising a tubular body having end projections, a hollow disc-shaped head secured to each end of said body, each of said heads being formed of a pair of spaced plates, one plate having a plurality of spaced portions set inwardly toward the other plate forming recesses, and said body projections extending through said plates and secured in said recesses for attaching the heads to the ends of said body.

5. A sheet metal spool comprising a tubular body having end projections, a hollow disc-shaped head secured to each end of said body, each of said heads being formed of a pair of spaced plates, the outer plate having radially-disposed stiffening rib portions set inwardly and contacting with the inner plate and forming a plurality of spaced recesses in the outer plate, and said projections extending through both of said plates at said contacting portion and riveted over in said recesses to secure the body to said heads, said riveted portions being below the outer surface of the head.

6. A sheet metal spool comprising a hollow body portion, a head at each end thereof, means for centralizing the body relative to the heads, a tubular center member having shoulder abutments cut and raised from the surface of the tube forming square shoulders for engaging the inner surface of said heads and having end portions extending through said head and secured against the outer surface thereof.

7. A sheet metal spool comprising a tubular body portion, a hollow head at each end thereof formed of a pair of spaced plates, one of said plates having its central portion extending into contact with the other of said plates and a tubular member having shoulders in engagement with the inner surface of said inner plates with its ends extending through said plates at said contacting portion and riveted over.

8. A sheet metal spool comprising a tubular body portion, a hollow head at each end thereof formed of a pair of spaced plates, the outer plate of each pair being set inwardly and the inner center portion set outwardly into contact with the outer plate forming a recess in the outer plate, and a tubular member extending through said contacting portions and riveted over at its ends in said outer recess.

In testimony whereof I affix my signature.

FRANK MOSSBERG.