April 12, 1932. G. D. ATWOOD 1,853,029

SPOOL

Filed June 4, 1930

Fig. 1.

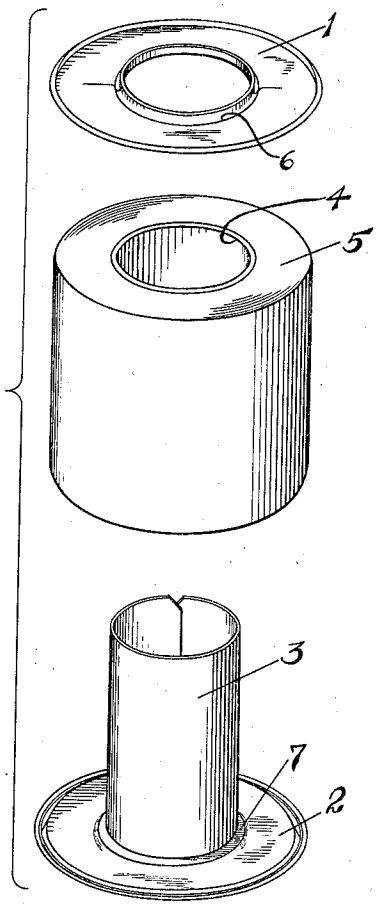


Fig. 3.

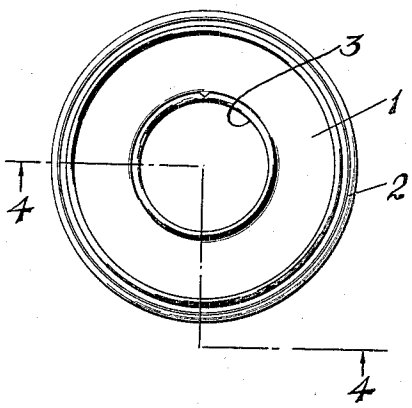


Fig. 4.

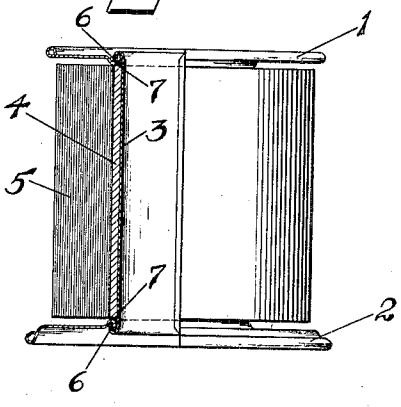
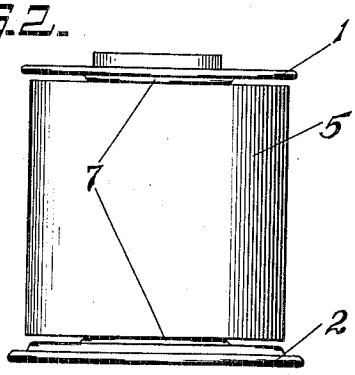


Fig. 2.



Inventor

George D. Atwood

By his Attorneys

Philipp Lampe Reis Klauber

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UNITED STATES PATENT OFFICE

GEORGE D. ATWOOD, OF BROOKLYN, NEW YORK

SPOOL

Application filed June 4, 1930. Serial No. 459,226.

This invention relates to improvements in sheet metal flanged spools and more particularly to such spools for receiving and carrying tape-like material, and to a method of combining such tape-like material with the spool proper.

The improvements of the present invention relate particularly, but not exclusively, to a sheet metal spool for receiving and carrying a winding of surgical adhesive tape which, for hygienic reasons, must be carried by and maintained on the spool with its edges out of contact with the flanges thereof, initially and also subsequently while the tape is unwound, from time to time, for use. The present improvements will be described with particular reference to such surgical adhesive tape but, as just stated, the invention is not to be so limited except as to those claims accompanying this specification in which the contrary is indicated.

Referring to the accompanying drawings,—

Figure 1 illustrates, in unassembled condition, the parts or units (three in number) of the spool and the tape-like material and its supporting means to be carried thereby;

Figure 2 is a side elevation of the spool with these parts assembled;

Figure 3 is a plan view of the spool, and

Figure 4 is a vertical section thereof on the line 4—4 of Figure 3.

In said drawings, 1, 2, represent the sheet metal annular flanges and 3 the sheet metal barrel of the spool, while 4 represents a tube, preferably of fibrous material, on which is wound the surgical adhesive tape 5, and which, with its winding of tape, is to be combined with and carried by the spool proper, the combination of these four units constituting of itself a new article of manufacture as recited in some of the claims accompanying this specification.

Surgical adhesive tape 5, wound upon the tube 4, when applied to the spool proper should, for hygienic reasons, be maintained thereon at all times with its edges out of contact with the spool flanges and such non-contact may also be desirable in the case of other tape-like material.

Having this in mind, and as a means towards this end, the spool flanges 1, 2, are bent at their inner edges or peripheries so as to provide recesses 6 on their outer faces and shoulders 7 on their inner faces, these shoulders on the two flanges being in alignment and concentric with each other and also with the ends of the tube 4 so that the latter will maintain the edges of the winding of tape 5 out of contact with the spool flanges, said winding not exceeding and preferably equalling in width the length of the tube 4 as shown, for example, in Figure 4. The ends of the tube 4 also will preferably be in intimate contact with the shoulders 7.

According to the method constituting part of the present invention and which will presently be described, the tape-like material 5 is wound upon the tube 4 preliminary to the assemblage or combination of the tube with the three units 1, 2, 3, of the spool proper to produce the new article of manufacture before referred to as made up of these three units and the tape-bearing tube 4 with its winding of the tape. This pre-winding of the tape upon the tube 4 may be effected by winding it upon such tubes or, as is preferable for economy in production, by winding sheets of such tape-like material on long tubes of fibrous material and then severing such material and tube in the desired dimensions lengthwise of the tube and widthwise of the sheet.

The method of assembling the three units 1, 2, 3, of the spool proper and the tape-carrying tube 4 consists, in the use (as a starting unit) of one of the spool flanges with one end of the barrel 3 interlocked with its recess 6, as indicated, for example, at the lower end of Figure 1, then slipping the tape-carrying tube 4 over the barrel 3, in which position its ends will be in line with the shoulders 7, then passing the other end of barrel 3 through the opening in the other flanged spool, and then bending that end into interlocking engagement with the recesses therein, this bending of the end of the barrel 3 being effected by the use of suitable dies and preferably resulting in intimate contact of

the shoulders 7 with the ends of tube 4, as shown, for example, in Figure 4.

What I claim is:

1. As a new article of manufacture a spool comprising a pair of annular sheet metal flanges each having at its inner edge an inwardly-projecting shoulder on its inner face and a recess on its outer face with the shoulder and recess on each flange in line with those on the other, a sheet metal barrel projecting through the flanges with its ends bent into locking engagement with said recesses and a tape-bearing tube mounted upon said barrel with its ends in line with said shoulders, whereby the edges of the tape carried by said tube are maintained out of contact with the flanges.

2. As a new article of manufacture a spool comprising a pair of annular sheet metal flanges each having at its inner edge an inwardly-projecting shoulder on its inner face and a recess on its outer face with the shoulder and recess on each flange in line with those on the other, a sheet metal barrel projecting through the flanges with its ends bent into locking engagement with said recesses, and a tape-bearing tube of fibrous material mounted upon said barrel with its ends in line with said shoulders, whereby the edges of the tape carried by said tube are maintained out of contact with the flanges.

In testimony whereof, I have hereunto set my hand.

GEORGE D. ATWOOD.