

Oct. 27, 1931.

C. H. FORNEY

1,829,643

PAPER PACKING SPOOL

Filed March 28, 1930

Fig. 1.

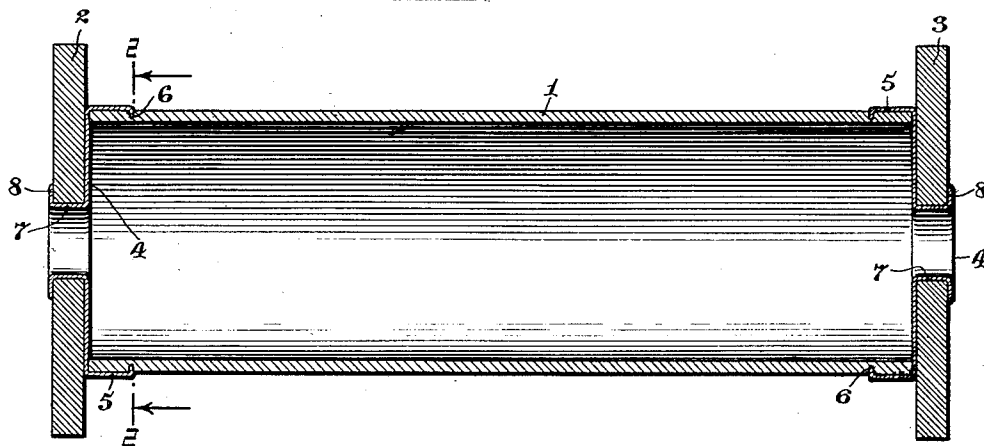


Fig. 2.

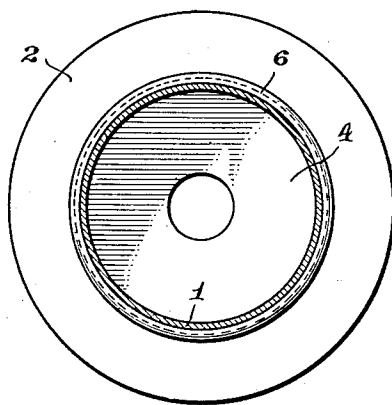
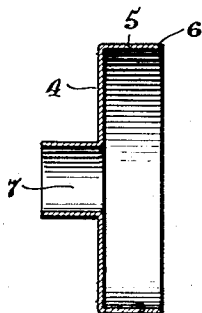


Fig. 3.



WITNESSES

Joe. R. Bamey
A. L. Kitchen.

INVENTOR

Clarence H. Forney

BY

Mumfrees.

ATTORNEYS

UNITED STATES PATENT OFFICE

CLARENCE H. FORNEY, OF JERSEY CITY, NEW JERSEY, ASSIGNOR TO SONOCO PRODUCTS COMPANY, OF HARTSVILLE, SOUTH CAROLINA, A CORPORATION OF SOUTH CAROLINA

PAPER PACKING SPOOL

Application filed March 28, 1930. Serial No. 439,765.

This invention relates to paper spools, and particularly to an improved paper packing spool which may be completed in a factory or may be partly made in a factory and shipped in a substantially knocked-down condition ready to be assembled by the purchaser.

The object of the invention is to provide a simple, strong and comparatively inexpensive spool which may be assembled with little effort by a skilled workman or by an inexperienced person.

Another object of the invention is to provide a paper spool formed with a metallic connection between the end and the barrel with the parts interlocking firmly so that there can be no disconnection except through breakage.

A further object of the invention is to provide a paper spool wherein there is presented a bendable and crimpable metal member adapted to be clinched to the barrel and to be bent into engagement with the end without injuring either the end or the barrel.

In the accompanying drawings:

Figure 1 is a longitudinal vertical sectional view through a spool disclosing an embodiment of the invention.

Figure 2 is a sectional view through Figure 1 on line 2—2.

Figure 3 is a sectional view through the metal connector shown in Figure 1 before the same has been bent and crimped into operative position.

Referring to the accompanying drawings by numerals, 1 indicates the body or barrel of the spool and 2 and 3 the respective ends. As the ends are identical in structure the description of one will apply to both. As shown in Fig. 1 the end 2 is connected to barrel 1 by a metal connector 4 which is formed with a laterally extending flange 5 on the outer edge, said flange being crimped at 6 so as to pinch barrel 1 and embed itself in the same. The connector 4 is also provided with a hollow projection or tubular member 7 which is adapted to extend through the axial opening in the end disk 2 and is bent over so as to provide a radially extending clamping flange 8 adapted to press against the end 2 whereby

the end 2 is firmly secured to barrel 1. It will be understood that the edge 6 is preferably crimped for the entire circumference of flange 5. It will also be noted that the flange 5 is of some appreciable depth so that the crimped edge 6 will be spaced from the end of the barrel 1 and thereby secure ample anchorage in barrel 1. When the spool is being made barrel 1 is completed as a tube, and disc 2 is completed preferably as a round disc with a centrally positioned aperture. Member 4 is then formed, as shown in Figure 3, the same being preferably of thin metal. This is slid over the end of barrel 1 and the edge 6 crimped or bent inwardly as shown in Figure 1, thus securing the connection member 4 in place. The end 2 is then slipped over the neck or tubular member 7 and the outer end thereof is bent over or upset to form the flange 8, thus clamping the disc 2 in place. If desired disc 2 can be secured in place before the connector 4 is secured to barrel 1.

By reason of the construction disclosed there is no glue or other adhesive used, and consequently to connect the parts together merely requires a device for crimping edge 6, and a device for forming flange 8.

The spool may be completed in a factory but preferably it is designed to be shipped in a knocked-down condition so that it may be assembled by the purchaser who must be supplied with proper devices for bending the connector 4 to form the flange 8 as described.

With regard to the crimped edge 6 it will be understood that this crimping may be a continuous inturned flange, or may be indents along the edge, or if desired may be only two or three indents or crimps at different places around the edge. The intention is to turn in all or part of the edge, or some part of the flange whereby the connector is firmly secured to the barrel.

I claim:

1. A spool comprising a barrel, a pair of end members, each end member having an aperture therein and a connecting member for each end member, each of said connecting members being formed of metal and having a peripheral flange positioned with its edge crimped to extend into the barrel for grip-

ping the barrel, said flange telescoping over the end of the barrel so that the crimped edge extends inwardly into the barrel and with a tubular projection bent to grip an end member, said tubular projection substantially straddling the end member at said aperture.

2. A paper packing spool comprising a tubular body, a pair of disk-shaped end members having centrally positioned apertures, a metal connector for securing each end member to the body, each of said connectors having a tubular portion extending through the aperture in the adjacent end member and a gripping flange gripping said body, said tubular portion substantially straddling the end member at one of said apertures, said gripping flange telescoping over the end of said body.

3. A paper packing spool comprising a barrel, a pair of end members, each end member having centrally positioned apertures and a connector for each end member, each connector being formed of a body acting as a cap for the barrel, said body having a laterally extending flange formed with a crimped edge, said flange fitting over part of the exterior of said barrel with the crimped edge extending into the surface of said barrel, said body having a tubular projection extending through the aperture in the end member and a flange substantially parallel with the body for gripping the end member, said body, said tubular projection and the said last mentioned flange forming an annular grooved structure substantially straddling the member at the aperture.

4. A spool comprising a paper barrel, paper end members, each end member having a central aperture of less diameter than said barrel, and a metallic connector for each end member, each of said connectors comprising a disc-shaped body adapted to fit flatwise against the end member with which it is associated, a tubular flange at the periphery of said body positioned to telescope over the end of said barrel, a crimped edge on said flange, said crimped edge adapted to be embedded in the outer surface of said barrel, a tubular extension extending through and snugly fitting said aperture, and a flange extending radially outwardly from the outer end of said tubular projection positioned to fit flatwise against the outer surface of said end for clamping the end to the body.

CLARENCE H. FORNEY.