Jan. 31, 1928. 1,657,755

H. JANSSEN

BRAIDER SPOOL

Filed April 19, 1926

Fig. 2.

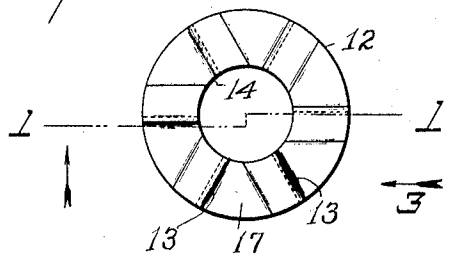
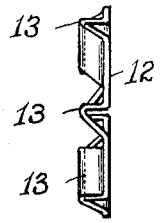


Fig. 3.



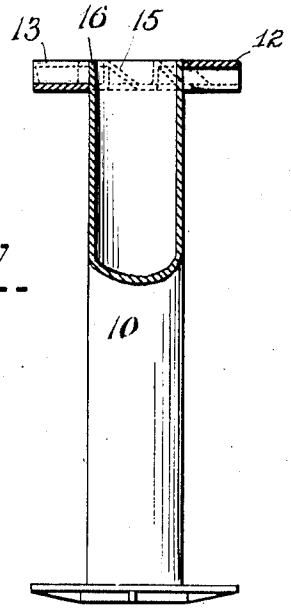


Fig. 1.

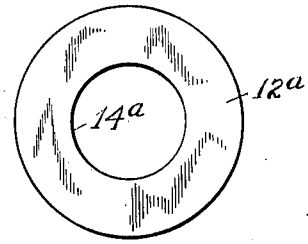


Fig. 4.

Henry Janssen,

INVENTOR.

BY W. G. & D. McElwain

ATTORNEYS.

Patented Jan. 31, 1928. 1,657,755

UNITED STATES PATENT OFFICE.

HENRY JANSSEN, OF WYOMISSING, PENNSYLVANIA, ASSIGNOR TO TEXTILE MACHINE WORKS, OF WYOMISSING, PENNSYLVANIA, A CORPORATION OF PENNSYLVANIA.

BRAIDER SPOOL.

Application filed April 19, 1926. Serial No. 102,920.

My invention relates particularly to ratchet-headed braider bobbins or spools; and it consists in the improved heading construction hereinafter fully set forth in connection with the accompanying drawings, the novel features being clearly defined in the claim.

My improved construction comprises essentially a rolled metal tube portion and a sheet metal head portion; the latter being separately formed from an apertured disk of determinedly larger exterior and interior diameters than are desired in the finished head; such ring of flat material being corrugated to form approximately radial projections or teeth on the annular portion, and a wave-line shaping of the aperture edge whereby the reduced aperture diameter is made to correspond with the exterior diameter of said tube portion so as to permit of the latter being snugly inserted in said aperture to unite the parts. The resiliency of the thus shaped sheet material insures the securing of an advantageously close fitting of the pressed-together parts; and the inserting of the tube a sufficient distance to come flush with the top of the corrugation projections, provides a circular flange for the head which serves as an inner wall for the interdental spaces thereof.

Fig. 1 is a partly sectional elevation of a ratchet-headed braider spool embodying my invention in simple form.

Fig. 2 is a plan and Fig. 3 an edge view of the separately formed head portion; and Fig. 4 is a plan view of the flat-disk blank from which said head is formed in suitable dies.

The body portion 10 of the spool indicated, is merely a cut-off section of commercial tubing, of determined proper length for the directly or indirectly carried thread plus a head-engaging end portion.

The sheet metal blank 12^a of Fig. 4, from which the separately formed head 12 shown in Fig. 2 is shaped by suitable dies, is simply a ring disk having determinedly larger exterior and aperture diameters than the shaped head has; said larger diameters of the blank being determined by the amount of material in the annulus which is taken up by the folding thereof into substantially radial corrugations as indicated in Fig. 2; which corrugations, as shown, form transverse ratchet teeth or projections 13 on the top face of the head, and an aperture 14 having a wave-line wall edge 15.

The diameter of this aperture 14 of the head is reduced by the corrugations from that of the blank aperture 14^a, to provide for a cylindrical fitting of the separately formed head upon the tube 10 when the end of the latter is inserted in said aperture 14. This inserting of the tube into the somewhat resiliently walled aperture 14 may be made to require sufficient forcing to insure a satisfactorily rigid connection of the parts without otherwise uniting the same, though brazing or spot-welding may obviously be used if desired; and the inserting of the tube to the full extent of the upwardly pressed corrugation projections 13 not only insures a strong and symmetrical connection of the parts but forms an inner circular flange for the head whereby a closure wall 16 is provided for each interdental space 17 of the latter.

It will be understood that the sizes of the dies for forming the blank and finished head respectively, call for some nicety of proportioning relative to each other and to the connected tube in order to provide for proper fitting of the connected parts, but the facility with which the parts are manufactured and satisfactorily united results in most economical production of a very light weight and rigidly symmetrical device.

What I claim is:

A metallic braider spool comprising a tubular body portion, and a head portion secured thereto; said head portion being a die-shaped sheet metal ring having pressed-up radial corrugations forming a round aperture with a wave-line edge, and said tubular body being inserted in said aperture to form an edge-engaging interdental ring-wall.

In testimony whereof I affix my signature.

HENRY JANSSEN.