E. W. BURGESS.

CARRIER ROLLER.

APPLICATION FILED JAN. 16, 1915.

1,200,076.

Patented Oct. 3, 1916.

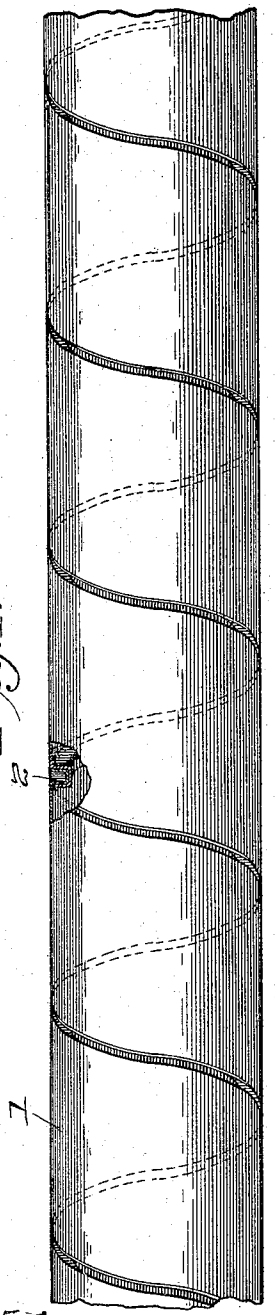


Fig. 1.

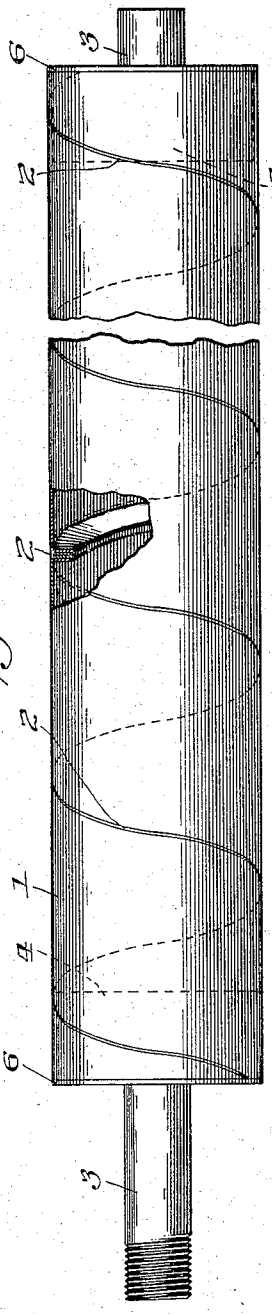


Fig. 2.

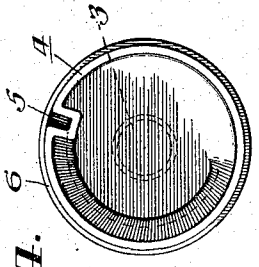


Fig. 4.

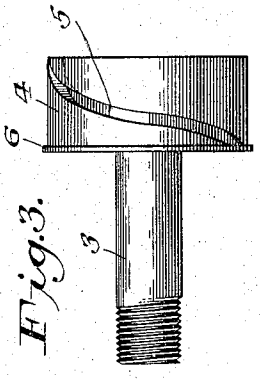


Fig. 3.

Witnesses:
C. C. Palmer.
F. W. Hoffmeister.

Inventor:
Edward W. Burgess,
By Chas. E. Lord
Atty.

THE NORRIS PETERS CO., PHOTO LITHO., WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

EDWARD W. BURGESS, OF CHICAGO, ILLINOIS, ASSIGNOR TO INTERNATIONAL HARVESTER COMPANY OF NEW JERSEY, A CORPORATION OF NEW JERSEY.

CARRIER-ROLLER.

1,200,076. Specification of Letters Patent. Patented Oct. 3, 1916.

Application filed January 16, 1915. Serial No. 2,697.

To all whom it may concern:

Be it known that I, EDWARD W. BURGESS, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Carrier-Rollers, of which the following is a full, clear, and exact specification.

This invention relates to tubular structures of either cylindrical or conical form in its general adaptation, and in particular to the construction of the rollers upon which are mounted the endless carrier aprons of a grain harvester. Its object is to provide a light cylindrical roller made from a single ribbon of sheet metal reinforced against torsional and deflection forces, and including convenient and efficient means whereby the journal bearings may be connected thereto. These objects are attained by means of the mechanism illustrated in the accompanying drawings, in which—

Figure 1 is a view of part of the body of a carrier roller having my invention embodied in its construction; Fig. 2 is a view of a complete roller, broken at its middle, and having journal members connected with its opposite ends; Fig. 3 is a plan view of one of the journal members; and Fig. 4 is an end elevation of Fig. 3.

Referring to the drawings, wherein the same reference numerals designate like parts throughout the several views, in constructing the hollow cylinder a ribbon 1 of sheet metal is preferably wound spirally upon a mandrel provided with spirally disposed channels having a lead less than the width of the ribbon stock, permitting the edges of the ribbon to overlap, and the overlapping edges are forced into the channel in interlocking engagement, thus forming an internal spirally disposed rib or thread 2 that extends from end to end of the body of the roller. The winding and rib forming means should direct force sufficient to stretch the material in a direction to cause it to assume a true cylindrical form as it is being wound. The journal members, as shown in Figs. 3 and 4, include cylindrical bearings 3 integral with cup-shaped cylindrical shell members 4, having spirally disposed channels 5 and peripheral flange members 6 whereby the cups may be threaded into opposite ends of the hollow cylindrical body of the roller, with the channels 5 receiving the rib 2 and the flanges 6 abutting the ends of the sheet forming the roller.

In the operation of forming the roller the ribbon is wound in a direction whereby, when driving power is applied to the journal, or otherwise, the torque will be in the same direction and will be resisted by the tensional strength of the ribbon, and the reinforcing ribs will also act as a resistant against deflection of the body of the roller.

Having shown and described a preferred form of my invention, I do not wish that it be confined to the details of its construction as illustrated, it being understood that many changes may be made in its form and proportion without departing from the spirit of the invention.

What I claim as my invention, and desire to secure by Letters Patent, is:

1. A hollow cylindrical roller having integral therewith spirally disposed reinforcing ribs upon its interior.

2. A hollow cylindrical roller having integral therewith spirally disposed reinforcing ribs upon its interior, and journal members threaded upon said ribs at opposite ends of said roller.

3. A hollow cylindrical roller having integral therewith spirally disposed reinforcing ribs upon its interior, and cup-shaped journal carrying members threaded upon said ribs at opposite ends of said roller.

4. A hollow cylindrical roller having integral therewith spirally disposed reinforcing ribs upon its interior, journal carrying members threaded upon said ribs at opposite ends of said roller and having peripheral roller abutting flanges.

5. A spirally wound ribbon of sheet metal forming a hollow roller, the edges of said ribbon interlocking in the form of interior ribs.

6. A roller comprising a spirally wound

ribbon of sheet metal, the edges of said ribbon engaging with each other in a manner forming a spirally disposed interior rib operative as a resistant against torque and deflection forces when applied to said roller.

7. A roller comprising a spirally wound ribbon of sheet metal leading in the direction of torque applied as a driving force to the roller, the edges of said ribbon interlocking in the form of interior ribs.

In testimony whereof I affix my signature, in the presence of two witnesses.

EDWARD W. BURGESS.

Witnesses:
T. N. DAGGETT,
WILLIAM ELLIS.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."