H. E. NYE.

COLLAPSIBLE CORE.

APPLICATION FILED MAY 24, 1915.

1,166,625.

Patented Jan. 4, 1916.

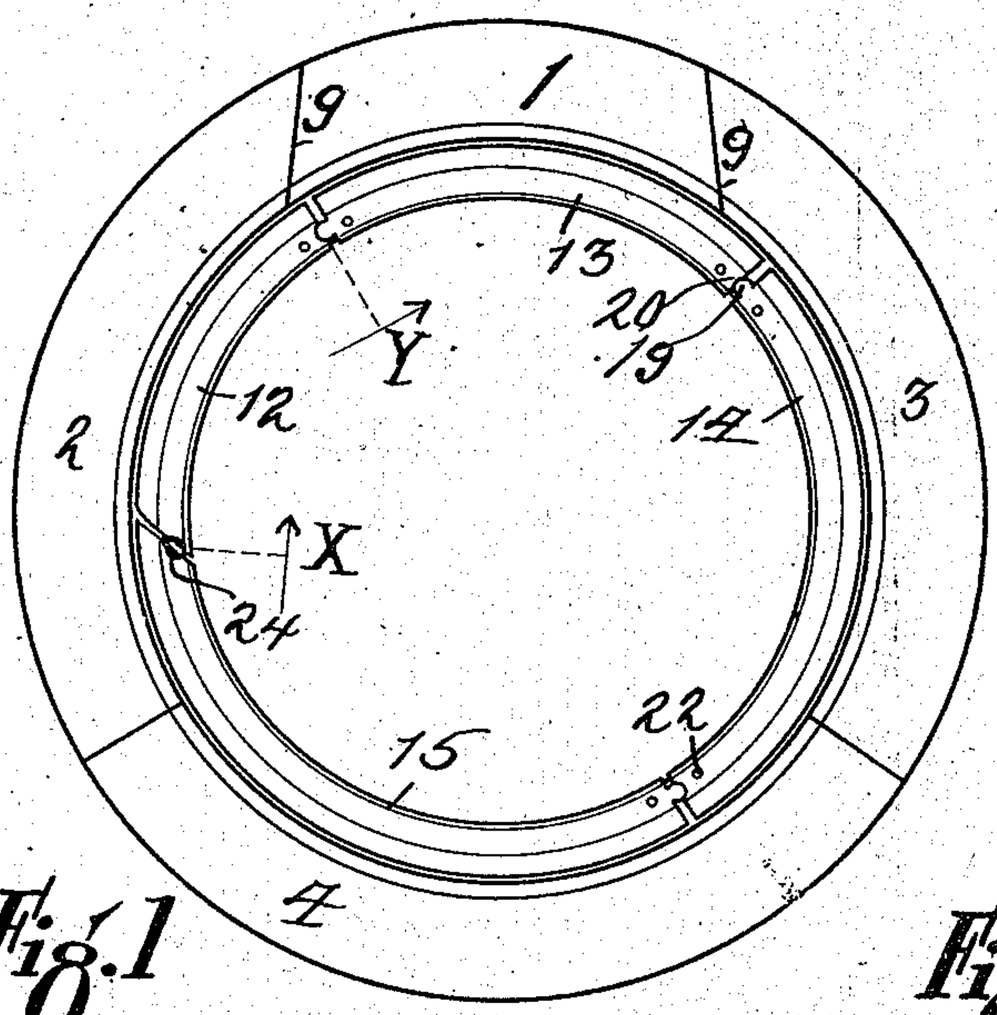


Fig. 1

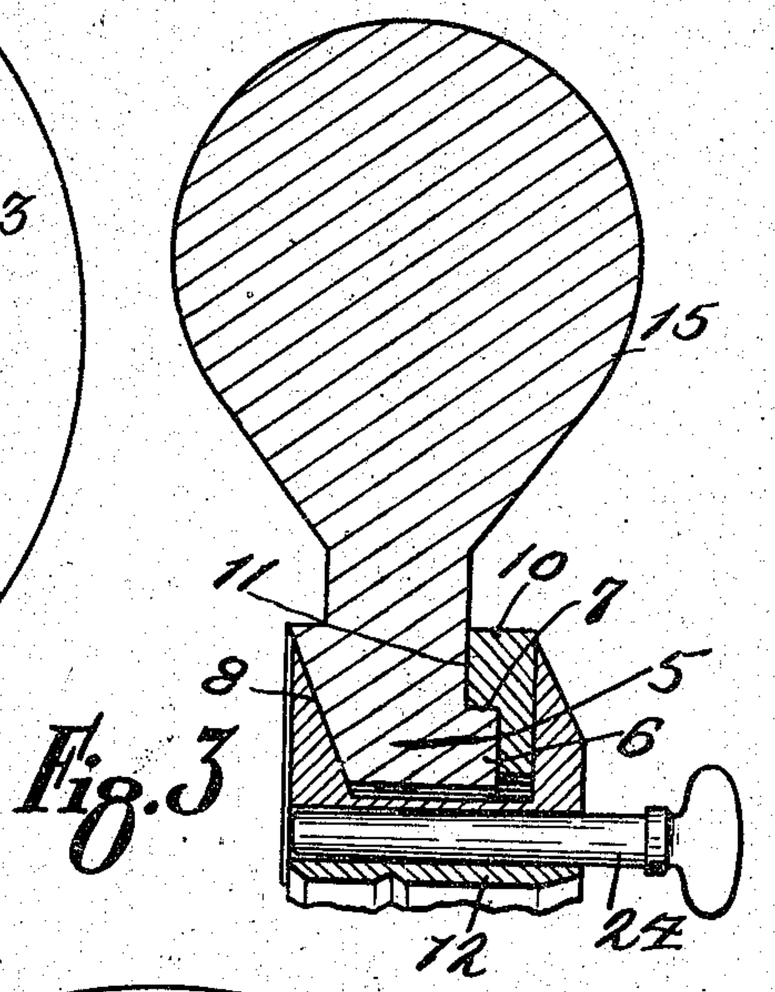
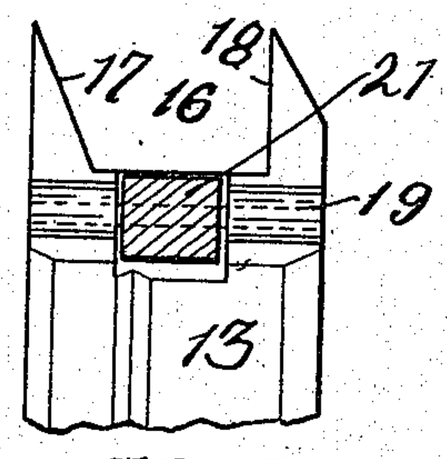


Fig. 3



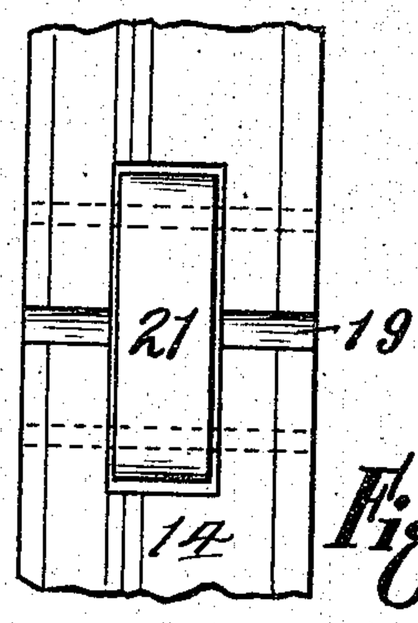


Fig. 4

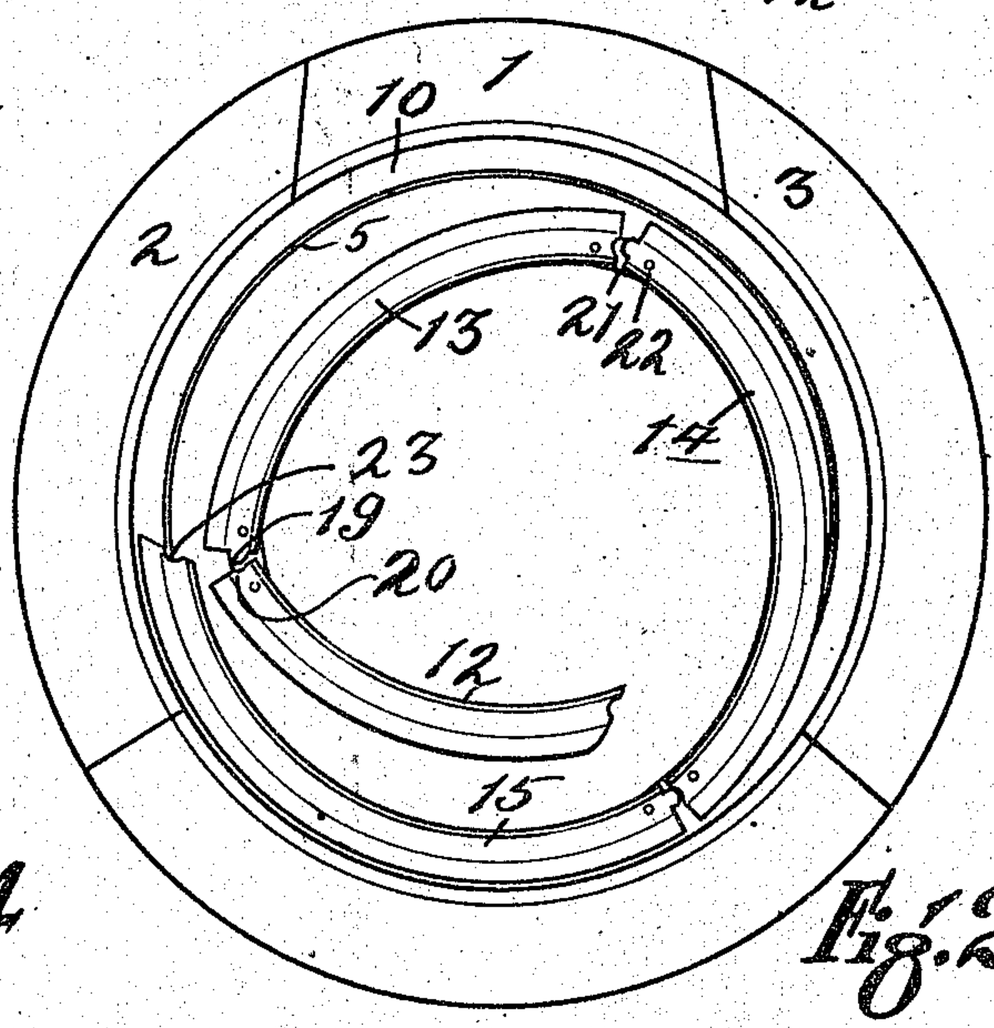


Fig. 2

INVENTOR.

Harry E. Nye,

BY C. E. Humphrey

ATTORNEY

UNITED STATES PATENT OFFICE.

HARRY E. NYE, OF AKRON, OHIO.

COLLAPSIBLE CORE.

1,166,625. Specification of Letters Patent. Patented Jan. 4, 1916.

Application filed May 24, 1915. Serial No. 30,132.

To all whom it may concern:

Be it known that I, HARRY E. NYE, a citizen of the United States, residing at Akron, in the county of Summit and State of Ohio, have invented new and useful Improvements in Collapsible Cores, of which the following is a specification.

This invention relates to improvements in collapsible cores for the manufacture of outer casings for double-tube pneumatic tires, and the object of the invention is to provide a callapsible core comprising a plurality of segment-shaped sections adapted to be assembled in annular formation and provided with new and improved means for uniting the sections together in their assembled condition, said means being capable of holding the sections in their annular formation and being easily removed to permit the removal of the members through the inner circumferential opening in the casings which are to be made thereon.

With the foregoing and other objects in view, the invention consists in the novel construction, combination and arrangement of parts constituting the invention to be hereinafter specifically described and illustrated in the accompanying drawings which form a part hereof wherein is shown the preferred embodiment of the invention, but it is to be understood that changes, variations and modifications can be resorted to which come within the scope of the matter hereinafter claimed.

In the drawings in which similar reference numerals indicate like parts in the different figures, Figure 1, is a plan of a core embodying this invention; Fig. 2, is a view similar to Fig. 1 showing the locking element partially removed from the core section; Fig. 3, is a sectional view taken on line X of Fig. 1; and, Fig. 4, is a sectional view of the locking member taken approximately on line Y of Fig. 1.

A ring core embodying this invention is constructed of a plurality of segment-shaped sections which when united together as hereinafter described constitute an annulus, the outer and lateral faces of which are shaped to impart a preferred configuration to the corresponding inner face of the tire shoe which is to be manufactured thereon. The sections which are employed to form the ring core are designated in the drawing by the reference numerals 1, 2, 3 and 4 and are all provided with inwardly-extending flanges 5. These flanges are all similar in cross section and are provided on one face with laterally-projecting beads 6 providing shoulders 7 at their junction with the flange. The opposite faces 8 of the flanges are inclined as clearly shown in Fig. 3. The junction lines 9 between the ends of the section 1 and the sections 2 and 3 are so inclined that the member 1 is substantially wedge-shaped to constitute a key-forming member. The joints or lines of severance between the members 2, 3 and 4 are approximately radial with respect to the assembled core.

In order to hold the various sections 1—4 in their assembled position and in complete registration I provide a ring 10 adapted to fit over the beads 6 on the flanges 5 and provided with offsets 11, which form with the main portion of the ring 10 a shoulder adapted to receive the shoulder 7 between the beads 6 and the flanges 5 so that when the sections 1—4 are forced outwardly the shoulders 7 on the flanges of the sections engage the shoulder on the ring 10, and the outer portions of the core sections are thus held in complete and perfect registration.

As the means employed for forcing the sections 1—4 inclusive outwardly so as to cause snug engagement between the shoulders on the flanges 5 with the shoulder in the face of the ring 10, I provide a plurality of segment-shaped members 12, 13, 14 and 15 all similarly constructed but preferably differing in length. These members are provided in their outer faces with a groove 16, one face 17 of which is inclined at an inclination approximating the inclination of the faces 8 of the flanges and adapted to engage the same. The opposite face 18 is perpendicular to the core axis and is adapted to overlap the outer lateral face of the ring 10. One end of each of the members 13, 14 and 15 are provided with a pair of laterally-projecting rounded lugs 19 spaced apart from each other and the coadjacent ends of the section 12, and the opposite ends of the sections 13 and 14 are provided with concave grooves 20 adapted to receive the lugs 19. The members 12—15 inclusive are preferably connected through the medium of links 21 pivotally united by pins 22 to opposite ends of the sections so that the locking elements comprising the members 12—15 may be handled as a unitary article. The opposing ends of the sections 12 and 15

are provided with registering notches 23 which when the core is in its assembled condition provide a transversely-extending aperture through which may be extended a tapered pin 24 for holding the members 12—15 inclusive against inward movement.

In practice, the depth of the groove 16 in the locking member will be greater than the radial depth of the flange 5 and when the parts are assembled the insertion of the tapered pin 24 or any other suitable instrumentality for forcing the members 12—15 outwardly will tend to expand the members and thereby clamp the ring 10 in position and also assist in forcing the core sections into complete registration.

I claim:—

1. A core of the character described comprising a plurality of separable sections having inwardly-extending flanges, said flanges each provided on one face with a lateral bead and having the opposite face inclined, a ring having a lateral bead locking over the beads on the flanges, and a plurality of segment-shaped locking members having peripheral grooves adapted to simultaneously receive said flanges and said ring.

2. A core of the character described comprising a plurality of separable sections having inwardly-extending flanges, said flanges each provided on one face with a lateral bead and having the opposite face inclined, a ring having a lateral bead locking over the beads on the flanges, and a plurality of segment-shaped locking members hinged together and provided with grooves in their peripheral face adapted to simultaneously receive said flanges and said ring.

3. A core of the character described comprising a plurality of separable sections having inwardly- extending flanges, said flanges each provided on one face with a lateral bead and having the opposite face inclined, a ring having a lateral bead locking over the beads on the flanges, a plurality of segment-shaped locking members having grooves in their outer faces adapted to receive said flanges and said ring, and means for forcing said members outwardly to thereby force the beads on the flanges into snug engagement with the bead on said ring.

4. A core of the character described comprising a plurality of separable sections having inwardly-extending flanges, said flanges each provided on one face with a lateral bead and having the opposite face inclined, a ring having a lateral bead locking over the beads on the flanges, a plurality of segment-shaped locking members having grooves in their outer faces adapted to receive said flanges and said ring, means for forcing said members outwardly to thereby force the beads on the flanges into snug engagement with the bead on said ring, and means to hinge said sections together.

5. A core of the character described comprising a plurality of separable sections having inwardly-extending flanges, said flanges each provided on one face with a lateral bead and having the opposite face inclined, a ring having a lateral bead locking over the beads on the flanges, a plurality of segment-shaped locking members having grooves in their outer faces to simultaneously receive said flanges and said ring, and a detachable member adapted to shift all of said members outwardly for forcing said locking members against said separable sections and lock said locking members against independent movement.

In testimony whereof I have hereunto set my hand.

HARRY E. NYE.