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J. RILEY

INNER TUBE

Filed Nov. 24, 1922

Fig. 1.

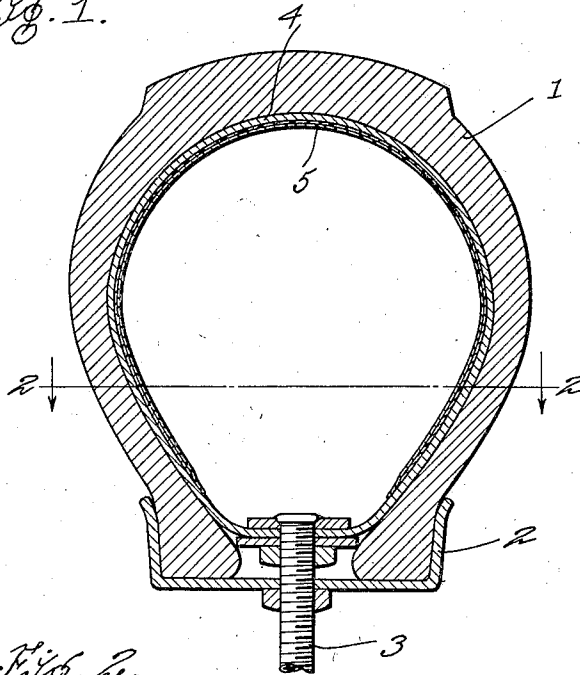
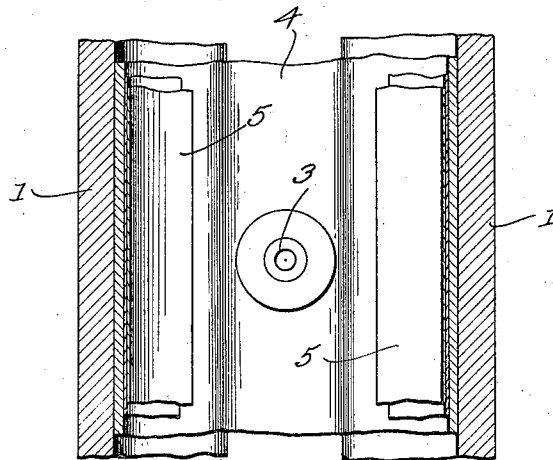


Fig. 2.



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UNITED STATES PATENT OFFICE.

JEFFERSON RILEY, OF WEST DURHAM, NORTH CAROLINA.

INNER TUBE.

Application filed November 24, 1922. Serial No. 603,017.

To all whom it may concern:

Be it known that I, JEFFERSON RILEY, a citizen of the United States, residing at West Durham, in the county of Durham and State of North Carolina, have invented new and useful Improvements in Inner Tubes, of which the following is a specification.

The object of my present invention is the provision of an inner tube for pneumatic tires, characterized by a fabric lining so relatively arranged that the capacity of the inner tube to be distended is not interfered with and yet the tube is adapted to eliminate blow-outs in casings, and is not liable to blow or protrude through small openings caused by cuts, stone bruises or nail punctures, so that when my novel inner tube is employed a casing can be used until the same is completely worn out.

To the attainment of the foregoing, the invention consists in the improvement as hereinafter described and definitely claimed.

In the accompanying drawings, forming part of this specification:—

Figure 1 is a cross-section showing a wheel and the tire casing thereon with my novel inner tube relatively arranged in proper working position to the rim and the casing.

Figure 2 is a detail section through a portion of my novel inner tube in the plane indicated by the line 2—2 of Figure 1, looking in the direction indicated by arrow.

Similar numerals of reference designate corresponding parts in both views of the drawings.

The casing 1 is of the ordinary well known construction as is also the rim 2.

My novel inner tube is adapted to be inflated and distended in the ordinary well known manner, and in this connection it is to be understood that the inner tube is equipped with the usual or any other appropriate means 3 for the introduction of air under pressure and the retention of such air in the tube.

As clearly shown in the drawings, the novel inner tube is made up of an outer thickness 4 of soft vulcanized rubber, and an inner lining thickness or thicknesses 5 of textile fabric, the several thicknesses being

permanently connected together in appropriate manner preferably at the time of the manufacture of the tube. An important feature of my invention resides in the fact that the inner portion of textile fabric does not extend throughout the cross-section of the tube. On the other hand the said portion 5 extends from a point at one side of the inner longitudinal portion of the outer thickness 4 to a point at the opposite side of the longitudinal center of the said inner portion so that the portion of the rubber thickness 4 adjacent to the rim 2 is not lined. From this it follows that the distensible capacity of the inner tube is not interfered with, and this notwithstanding the inner portion or thickness of textile material will reinforce the outer portion of the inner tube and prevent blow-outs in the casing and will also prevent the inner tube from protruding through holes produced in the casing. In other words my novel tube is adapted to be inflated in the same manner and to the same extent as an ordinary inner tube—i. e., sufficiently to stretch and fill the casing.

The description of the outer thickness 4 of soft vulcanized rubber is intended to convey the idea that the said thickness 4 is of the same character as an ordinary inner tube.

Having described my invention, what I claim and desire to secure by Letters-Patent, is:—

An inner tube for pneumatic tires comprising an outer thickness of soft vulcanized rubber and an inner lining thickness of textile material exposed to the interior of the tube and permanently joined to the outer thickness; the said inner exposed lining thickness of textile material extending from a point at one side of the longitudinal center of the inner portion of the outer thickness to a point at the opposite side of the said longitudinal center of the inner portion, and the ends of the inner textile thickness being spaced apart whereby the inner portion of the tube is formed of the thickness of soft vulcanized rubber alone.

In testimony whereof I affix my signature.

JEFFERSON RILEY.