J. GUAGLIARDO.

PNEUMATIC TIRE.

APPLICATION FILED MAY 21, 1920.

1,379,915. Patented May 31, 1921.

Fig. 1.

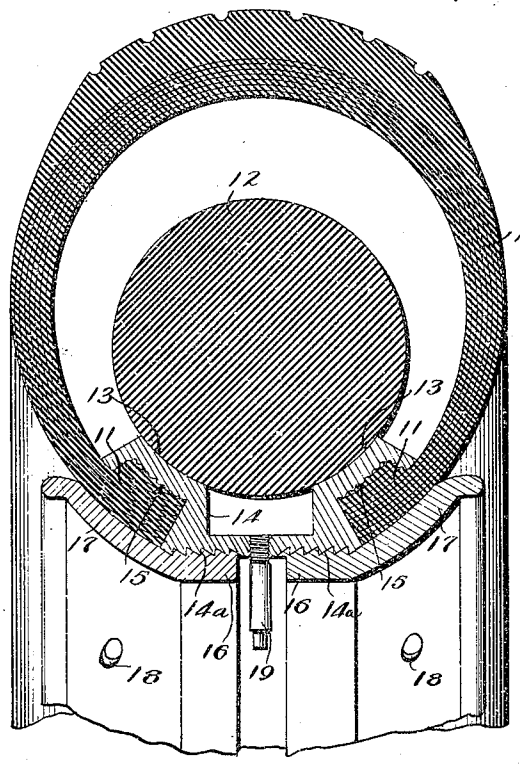
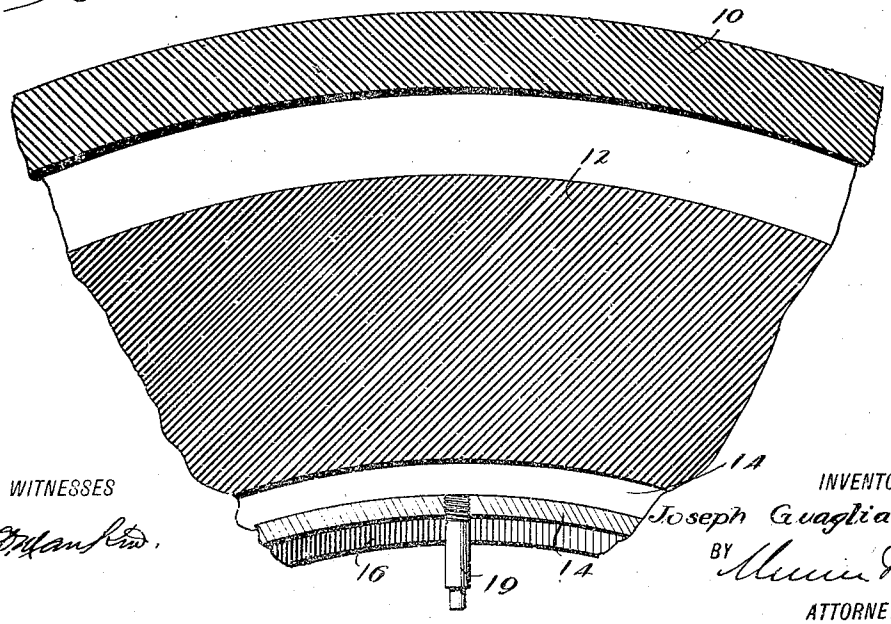


Fig. 2.



WITNESSES

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PNEUMATIC TIRE.

1,379,915. Specification of Letters Patent. Patented May 31, 1921.

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To all whom it may concern:

Be it known that I, JOSEPH GUAGLIARDO, a citizen of the United States, and a resident of Hammond, in the parish of Tangipahoa and State of Louisiana, have invented certain new and useful Improvements in Pneumatic Tires, of which the following is a specification.

My present invention relates generally to pneumatic tires, particularly those of the type utilized by motor cars and motor vehicles, and my object is the provision of a construction which will obviate the necessity of inner tubes and which, while it will not eliminate puncture, will at least avoid the necessity of immediate change of tires and will permit the user to proceed for a time at least with little discomfort and without danger of destruction of the tire.

This and other objects will more clearly appear in the course of the following specification in which reference is made to the accompanying drawing, forming a part of this specification, and wherein—

Figure 1 is a transverse section through my improved tire, and

Fig. 2 is a fragmentary longitudinal section.

Referring now to these figures, my invention proposes an outer inflatable casing 10 having laterally enlarged inwardly projecting beads 11 therearound. This casing which is formed as usual, of layers of fabric or cord with rubber is made strong and durable and of a nature impervious to air, and may, if desired, be provided with any suitable means tending to reduce the danger of puncture.

Within the casing is a resilient core 12 smaller in diameter than the casing and of circular form in cross section, so as to leave a space around the same and between the same and the casing, for receiving air pressure. This core seats on the inner concave faces 13 at opposite sides of the median line of a ring 14 having grooves 15 opposite said concave seats or faces 13, said grooves receiving the casing beads 11.

Between the grooves 15, the exposed portion of the ring 14 has a series of oppositely inclined annular teeth or threads 14^a into connection with which the side sections 16 of an annularly split rim are adapted to screw. These rim sections have outer flared portions 17 which engage the beaded portions of the casing and serve to snugly hold the beads within the ring grooves.

The rim sections 16 may have wrench openings 18 or any other means facilitating their rotation into and out of operative position and when in such position, as shown in Fig. 1, their inner annular edges are spaced apart to receive a valve tube 19 connected to the ring 14 so that the casing may be inflated.

The walls of the ring grooves may have roughened faces for better gripping the casing beads as shown, and the device as a whole as thus described, obviously attaches to a wheel felly in any well known manner as by means of the usual demountable rim holding lugs.

Thus in case of puncture, and in this way, loss of its normal sustaining air pressure, the casing 10 simply collapses inwardly against the core 12 at the ground, and is supported thereby to the extent of preventing rim cutting or other injury thereto. This obviously permits the user to proceed without danger to his home or to another convenient point of repair, with safety and with moderate comfort.

I claim:—

1. A pneumatic tire consisting of an outer inflatable casing forming an air chamber therein, an inner resilient core normally spaced from the outer side and tread portions of the wall of the casing and located within the air chamber and means to clamp the inner portions of the side walls of the casing, said means forming a rigid support for the core as described.

2. A pneumatic tire, comprising an outer inflatable casing having inner opposing beads, an inner core, and means for clamping the beads, said means forming a support for the core.

3. A pneumatic tire, comprising an outer inflatable casing having inner opposing beads, an inner core, and an annular clamping ring supporting the core and having grooves receiving the casing beads.

4. A pneumatic tire, comprising an outer inflatable casing having inner opposing beads, an inner core, and an annular clamping ring supporting the core and having grooves receiving the casing beads, and also having an annularly threaded inner periph-

eral face between the beads, and rim sections threaded into said ring and having portions engaging the casing beads.

5. A pneumatic tire consisting of an outer inflatable casing forming an air chamber therein, a resilient core in said chamber normally spaced around its outer portion from the wall of the casing, and an annular ring between and engaging the inner edges of the casing side walls having annularly enlarged portions at opposite sides of its median line provided with concave inner faces forming seats for the inner portion of the core, and with outwardly facing grooves receiving the inner edges of the casing.

JOSEPH GUAGLIARDO.