

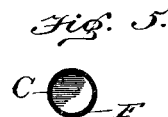
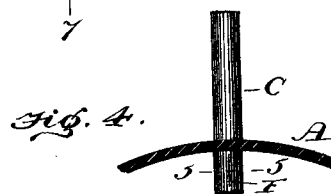
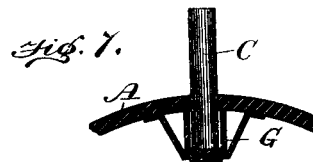
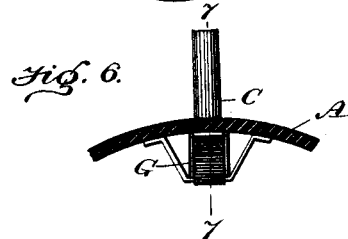
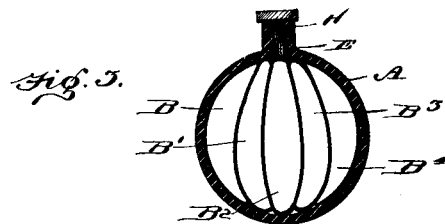
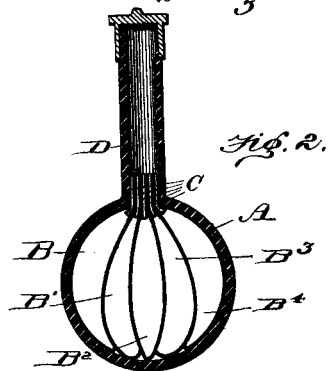
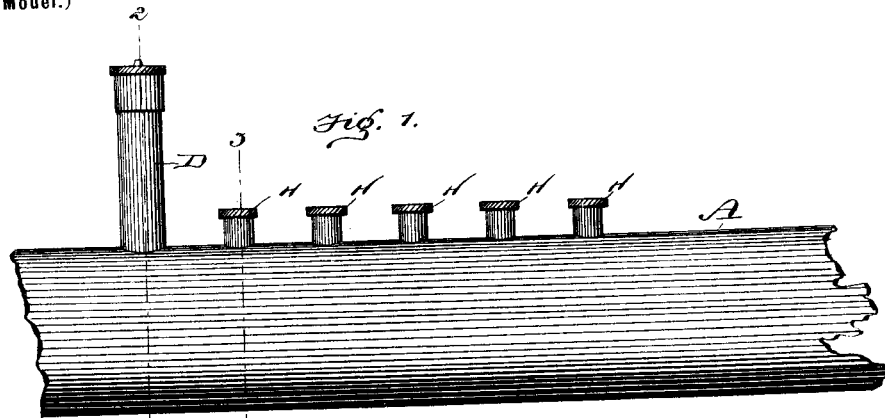
No. 675,913.

Patented June 11, 1901.

G. W. WHITE.
SECTIONAL TIRE.

(Application filed Dec. 6, 1899.)

(No Model.)



Witnesses
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UNITED STATES PATENT OFFICE.

GEORGE WASHINGTON WHITE, OF HUNTSVILLE, ALABAMA.

SECTIONAL TIRE.

SPECIFICATION forming part of Letters Patent No. 675,913, dated June 11, 1901.

Application filed December 6, 1899. Serial No. 739,423. (No model.)

To all whom it may concern:

Be it known that I, GEORGE WASHINGTON WHITE, a citizen of the United States, residing at Huntsville, in the county of Madison and State of Alabama, have invented certain new and useful Improvements in Sectional Tires; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to certain improvements in pneumatic tires, having for its object to provide for the ready inflation and re-inflation of the tire in event of the deflation thereof, also to facilitate the application of the inflatable closure or receiver employed in connection with the tire.

It consists of the employment of a separate and distinct closure or receiver to receive the air-pressure for insertion into the tire, said closure or receiver being preferably composed of a series of compartments or chambers peculiarly constructed and arranged, substantially as hereinafter more fully disclosed, and specifically pointed out by the claims.

In the accompanying drawings, illustrating the preferred embodiment of my invention, Figure 1 is a side elevation, parts being removed. Fig. 2 is a section on the line 2 2 of Fig. 1. Fig. 3 is a like view taken on the line 3 3 of the same figure. Fig. 4 is an enlarged view of a valve preferably used in connection with my invention. Fig. 5 is a section taken on the line 5 5 of Fig. 4. Fig. 6 is a modified form of the valve. Fig. 7 is a section taken on the line 7 7 of Fig. 6.

In carrying out my invention I provide any tire tube or tread A with a separate inflatable closure or receiver A', inserted thereinto and unconnected therefrom, it being of a cross-section commensurate with the inner diameter of said tube and provided with an inflating tube or nozzle D, secured to the tire tube or tread A and suitably closed with a screw-cap at its air-receiving end.

The inflatable closure or receiver A' comprises an inner or central compartment B² and a series of lateral compartments B B' B⁴ B⁵, communication with which is held through a series of valved nipples or tubes C, extending into the air-inflating tube or nozzle D.

The inner ends of the tubes or nipples C are provided with valves of peculiar construction, as disclosed in Figs. 4 and 5. Each valve is constituted by closing one end of a tube or nipple and producing a short longitudinal slit F therein, a tongue thus being formed, opening inward. It will therefore be seen that air-pressure within the tube or nipple will deflect the tongue or valve proper outward and allow the air to enter the communicating compartment, but that immediately air-pressure within the tube or nipple is removed the tongue will return to its closed position and prevent the efflux of air from the compartment.

The lateral compartments of the inner closure or receiver are built up by preferably cementing the walls of the inner ones thereof upon the central compartment and the walls of the outer ones upon the walls of said inner lateral compartments.

In operation the air introduced through the tube or nozzle D and passing into the tubes C and via the valves F into the compartments (any one or all) of the closure or receiver A', as may be desired, will inflate or expand said compartment or compartments, causing the same to fill the tire-tube, as required in "pumping up" or inflating the tire. In event of the puncturing of the wall of one of the compartments the unescaped air can be speedily or quickly removed by unscrewing the cap H thereof, thus allowing it to escape at that point. Air is again forced or pumped into the tube D and through the tubes or nipples C, it finally entering the unpunctured or unaffected compartments. It is obvious that air will pass through the punctured compartment-wall, but as it cannot escape through the valved tube of said compartment commensurately with the delivering of the air thereto the excess will enter the unpunctured compartment of said closure or receiver, additionally expanding the same, thus inflating the entire closure or receiver, causing it to wholly refill the tire-tube, as previously. If desired, but one inflated compartment of the closure or receiver may be brought into requisition at a time, and one or more of the other uninflated compartments may be inflated, as above described, in event of the puncturing or injuring of the inflated

compartment. The valves of the tubes or nipples being of rubber, the liability thereof to injury is reduced to a minimum as compared to the liability of the cutting thereof in the use of metallic valves.

It is obvious that in lieu of the small tubes having the valves large tubes could be employed provided with suitable stops of ordinary construction, whereby the flow of air to one or more of the sections could be prevented.

In Figs. 6 and 7 I have shown a form of valve which can be substituted for that herebefore described. Each of these valves consists of a cup G, which fits over the end of a tube C and is retained thereon preferably by means of elastic bands which are secured at the ends to the inner surface of the tire or to the sides of the tube C. These bands are also secured to the bottom of the cup G and retain the same in position upon the tube C, the end of the tube normally bearing upon the inner surface of the bottom of the cup.

In the foregoing description I have shown the preferred embodiment of my invention; but I do not limit myself thereto, as I am aware that modifications may be made therein without departing from the spirit of my invention and the same yet remain intact and be protected.

Having thus fully described my invention,

what I claim, and desire to secure by Letters Patent, is—

1. As a new article of manufacture, the inner closure or receiver for pneumatic tires, having a series of inflatable compartments having, themselves, air-inlet valved tubes housed in an outer tube, substantially as set forth.

2. As a new article of manufacture, the inner closure or receiver for pneumatic tires, having a central inflatable compartment and a series of lateral inflatable compartments having, themselves, air-inlet valved tubes housed in an outer tube, the walls of the inner lateral compartments being built upon said central compartment and the walls of the outer lateral compartments being built upon said inner lateral compartments, substantially as set forth.

3. The combination of a tire-tube and a separate inner closure or receiver having a series of inflatable compartments having, themselves, air-inlet valved tubes housed in an outer tube, substantially as set forth.

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

GEORGE WASHINGTON WHITE.

Witnesses:

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