

(No Model.)

G. N. MONRO, Jr.
PNEUMATIC TIRE.

No. 517,584.

Patented Apr. 3, 1894.

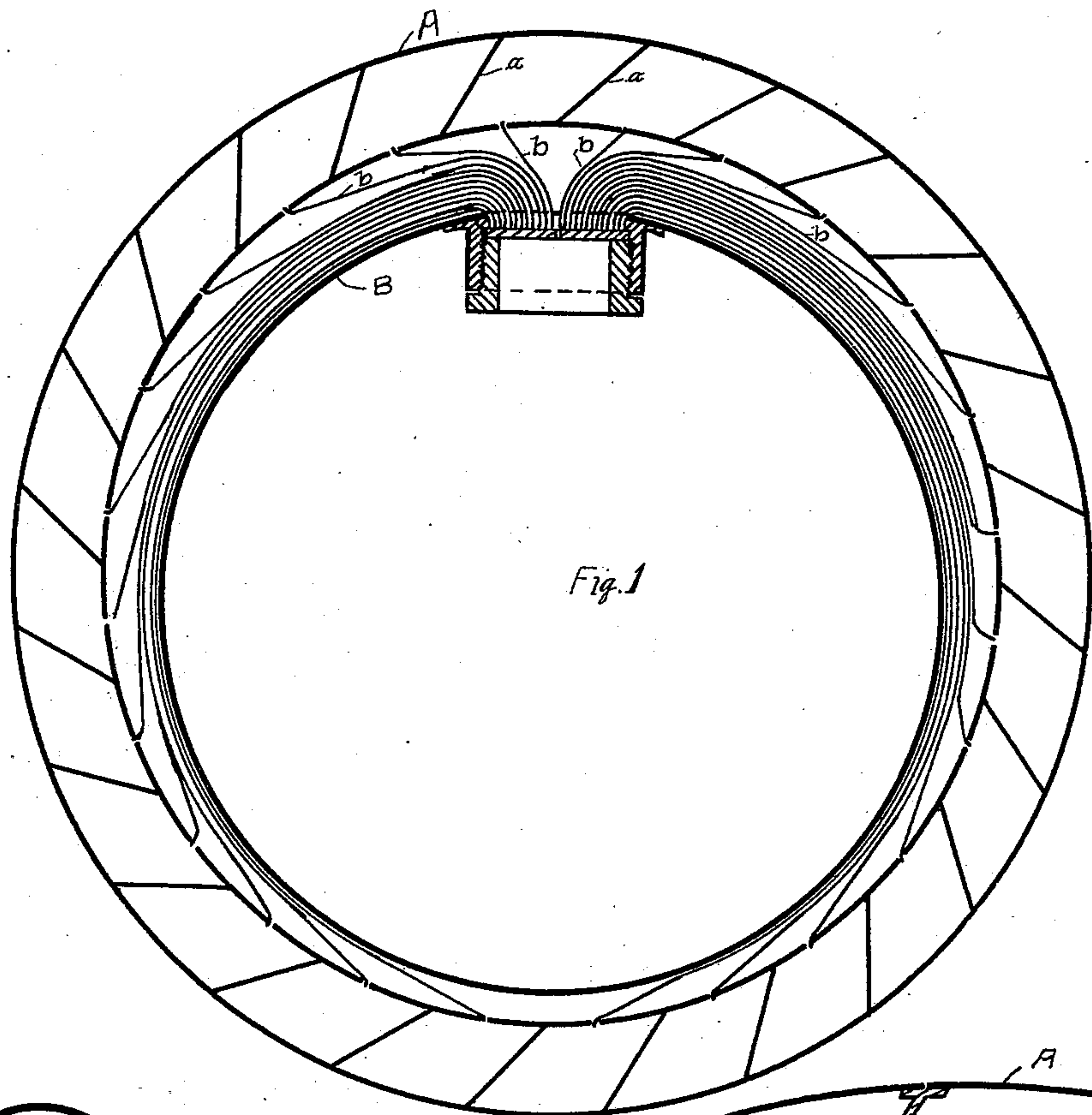


Fig. 1

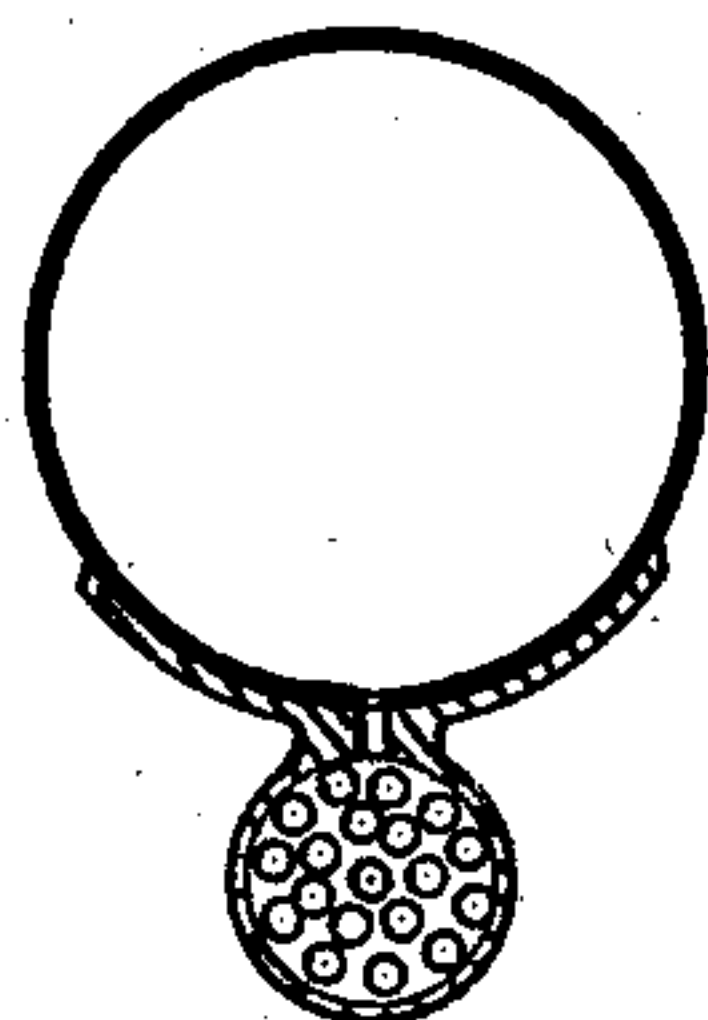


Fig. 2.

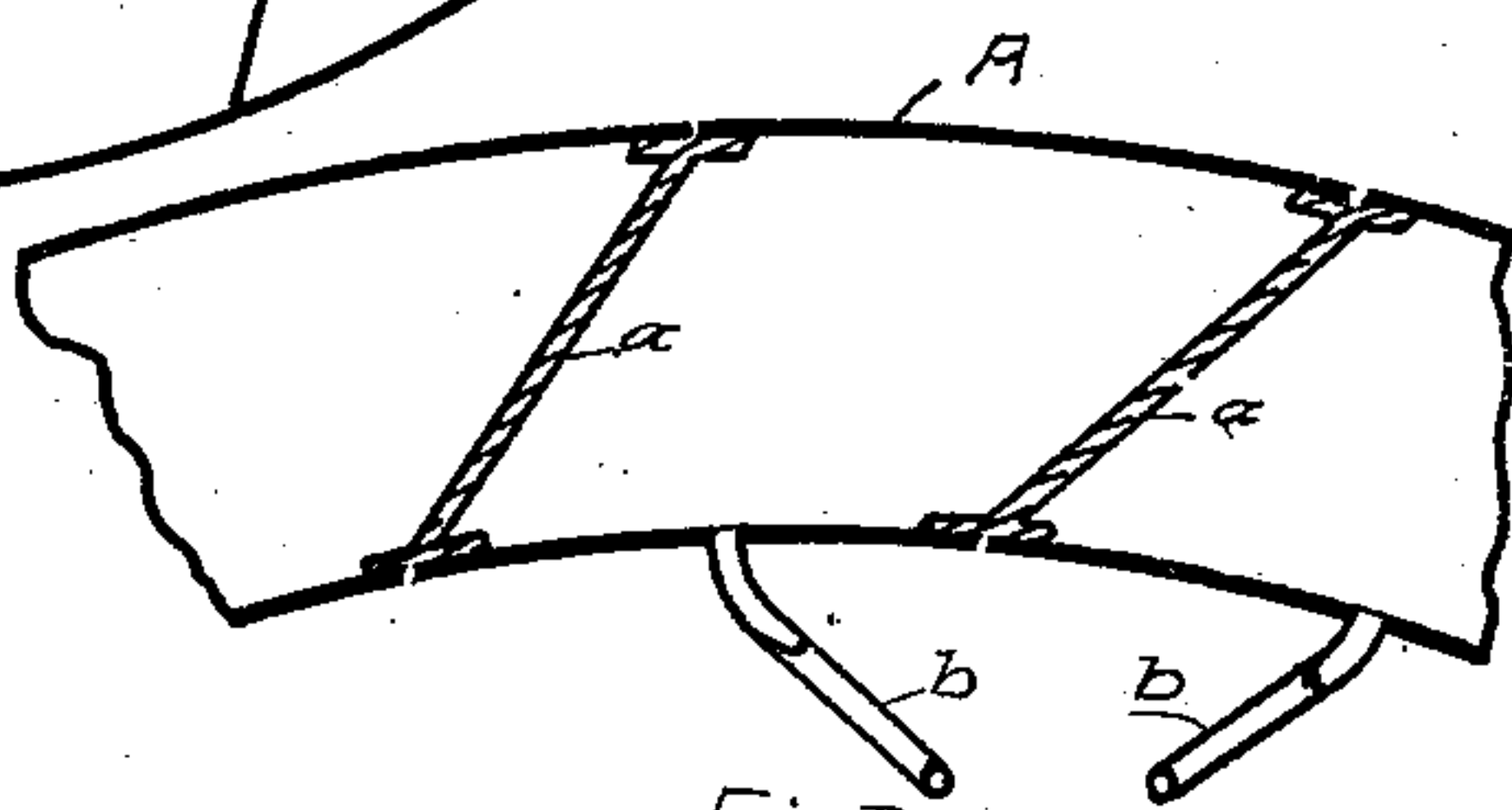


Fig. 3.

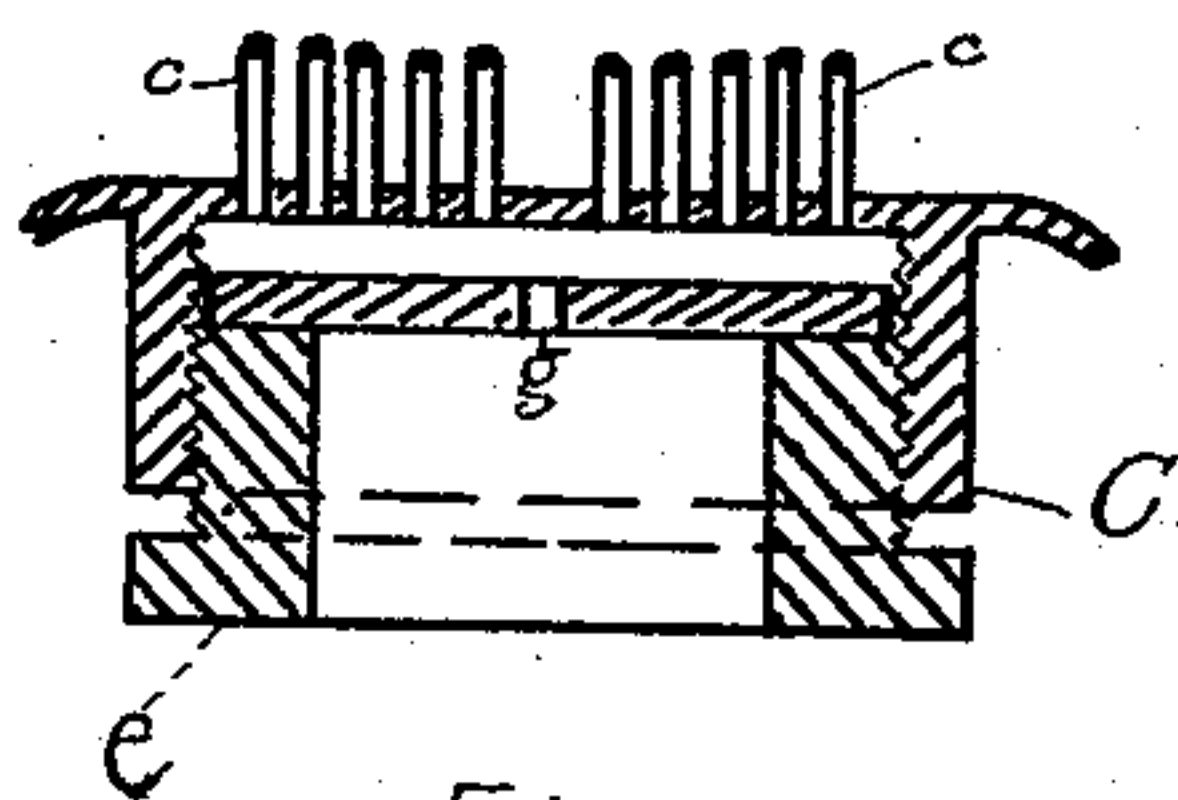


Fig. 4.

WITNESSES

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PNEUMATIC TIRE.

SPECIFICATION forming part of Letters Patent No. 517,584, dated April 3, 1894.

Application filed May 15, 1893. Serial No. 474,312. (No model.)

To all whom it may concern:

Be it known that I, GEORGE NUGENT MONRO, Jr., a citizen of the United States, residing at Pittsburg, in the county of Allegheny and State of Pennsylvania, have invented certain new and useful Improvements in Pneumatic Bicycle-Tires; and I do 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, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification, in which—

Figure 1 indicates a vertical sectional elevation of my improved pneumatic tire. Fig. 2 is a transverse section of same. Fig. 3 is an enlarged section of one of the air compartments with its feed tube. Fig. 4 is a vertical section of valve.

My invention relates to pneumatic tires for bicycles and my object is to prevent the total collapse and consequent disablement of the same in the event of puncture; and for this purpose consists of the novel construction hereinafter specifically described, reference being had to the accompanying drawings forming part hereof in which like letters indicate like parts whenever they occur.

It will be apparent from an inspection of the drawings that the tire consists of two tubes A and B formed of rubber or other suitable material. The outer tube, A, is subdivided into a series of separate and non-communicable compartments *a* by the transverse disk-shaped partitions, which are suitably secured in the sides of said tube, preferably at the angle shown, for the purpose of resiliency. The inner, or tube B is adapted to inclose the small feed tubes, *b* corresponding in number to the air compartments in said outer tube and in which respectively the inner ends of said feed tubes respectively project, the outer of said feed tubes respectively being drawn over or otherwise suitably secured upon the small metallic tubes *c* which are suitably secured in the top of the outer shell *d* forming part of the valve C which is

suitably attached to the rim upon which said tire is secured. Said valve consists of said shell and tubes secured therein, the shell being internally threaded to enable the threaded cylinder *e* forming a portion of the valve to operate therein. The top of said cylinder is provided with an orifice *g* in the center thereof and directly opposite the solid portion of the top of said shell, whereby when said valve is closed, air is prevented from passing from said respective sections through the respective feed tubes connecting the same and said valve. The top of said cylinder may be covered with felt disks or other suitable material to make the same thoroughly air-tight. The operation of my device is very simple; the valve is connected with an ordinary air-pump and it may be supplied with any usual attachment for this purpose. The pump is operated until the several compartments contained in the outer tube *i. e.* tire tube, are fully inflated. The valve is then closed by screwing the cylinder internally of the shell and the pump detached.

One of the many advantages secured in the use of my tire is that a puncture of one of the compartments does not impair the whole to such extent as to render it useless for travel.

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

In a pneumatic tire for bicycles the combination of two tubes, the outer one being subdivided into series of non-communicable compartments; and the inner one adapted to inclose a number of small feed tubes corresponding in number with air compartments contained in the outer tube; and a valve connected with said air compartments respectively by said feed tubes, substantially as and for the purpose herein described.

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

GEORGE NUGENT MONRO, JR.

Witnesses:

ANDREW PATTERSON,
WM. L. MONRO.