

Jan. 2, 1923.

D. M. ROTHENBERGER.
RESILIENT TIRE.
FILED APR. 15, 1922.

1,440,699.

Fig. 1.

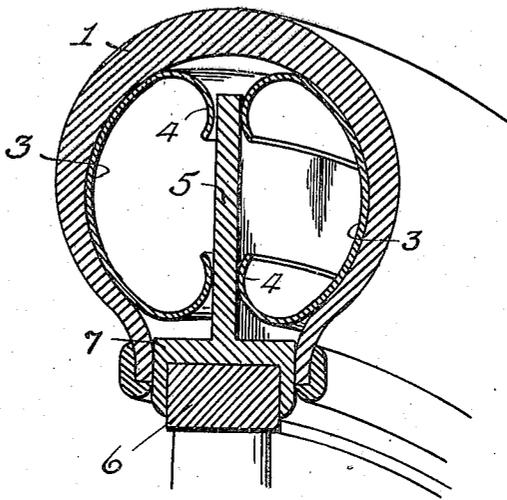
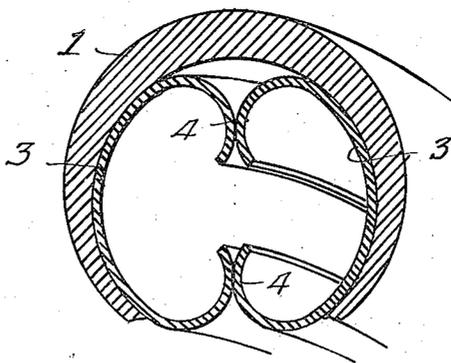


Fig. 2.



DANIEL M. ROTHENBERGER,
Inventor

By *Ed. M. [Signature]*
Attorney

UNITED STATES PATENT OFFICE.

DANIEL M. ROTHENBERGER, OF LEESPORT, PENNSYLVANIA, ASSIGNOR OF ONE-THIRD TO WILLIAM M. FRYERMUTH AND ONE-THIRD TO EPHRAIM P. WAN-
NER, BOTH OF READING, PENNSYLVANIA.

RESILIENT TIRE.

Application filed April 15, 1922. Serial No. 552,350.

To all whom it may concern:

Be it known that I, DANIEL M. ROTHENBERGER, a citizen of the United States, residing at Leesport, in the county of Berks and State of Pennsylvania, have invented certain new and useful Improvements in Resilient Tires, of which the following is a specification.

This invention relates to improvements in vehicle tires of the class known as resilient tires, and the object is to provide a tire, other than the inflatable or pneumatic type, in which the proper resiliency may be obtained without the accompanying annoyance due to punctures or blow-outs.

The invention consists of a hollow shoe and a plurality of metal spring members located within the shoe, whereby the desired resiliency may be obtained.

The invention is intended as an improvement on the device described and claimed in my co-pending application Serial No. 513,876, filed November 9th, 1921.

The invention is more fully described in the following specification and clearly illustrated in the accompanying drawing, in which:

Figure 1 is a sectional view, partly in perspective, of my improved tire.

Figure 2 illustrates a slight modification thereof.

The numeral 1 designates the usual shoe which is of elastic material, as usual, and provided with the ordinary means for attaching it to a wheel.

Within the shoe 1, I provide a plurality of pairs of steel spring members 3, each member having both its longitudinal edges curved, as shown by the numeral 4.

The numeral 5 designates a centrally disposed web or vane, substantially T-shaped in cross-section, the head of which embraces the felly 6 of the wheel.

The curved portions 4 of the springs 3, bear normally against opposite faces of the web 5.

The spring members are preferably arranged in pairs, directly opposite each other, and I provide preferably three such pairs of spring members, each pair covering approximately one-third of the interior of the shoe.

The web 5 may also be made in sections if preferred, for more convenient assemblage.

It is evident from the above description, taken with the illustration, that when pressure is placed on the shoe, the curved portions of the springs will ride on the opposite faces of the web 5 and cause a gradual increase of resistance as pressure is increased.

It is evident that the number of spring sections may be varied to suit circumstances, and that in some instances it may be desirable to dispense entirely with the web 5, as illustrated in Figure 2, and permit the spring members to bear against each other at their curved portions.

Having thus fully described my invention, I claim:—

1. A resilient tire comprising a shoe, a centrally disposed web of annular form within the shoe and a plurality of pairs of spring members fitting snugly against the inner wall of the shoe, each spring member having both longitudinal edges curved inwardly and bearing against the surface of the web.

2. In a resilient tire, a hollow shoe, two opposed spring members located inside the shoe, the edges of said spring members being curved, an annular, centrally disposed web within the shoe against which the curved portions of the spring members bear, said web having a head portion adapted for engagement by the felly of the wheel.

3. In a resilient tire, a hollow shoe, an annular web located centrally within the shoe, and a plurality of pairs of spring members also located within the shoe and bearing against opposite faces of said web.

4. A resilient tire comprising a hollow shoe, an annular, centrally disposed web of T-shaped cross-section located therein, the head of said T-shaped web being adapted for engagement with the felly of the wheel, a pair of spring members located within the shoe and on opposite sides of said web, said spring members having both of their longitudinal edges curved inwardly and adapted to bear against the web.

In testimony whereof I affix my signature.

DANIEL M. ROTHENBERGER.