

D. L. CROSBIE.
RESILIENT WHEEL.
APPLICATION FILED MAR. 12, 1912.

1,043,571.

Patented Nov. 5, 1912.

Fig. 1

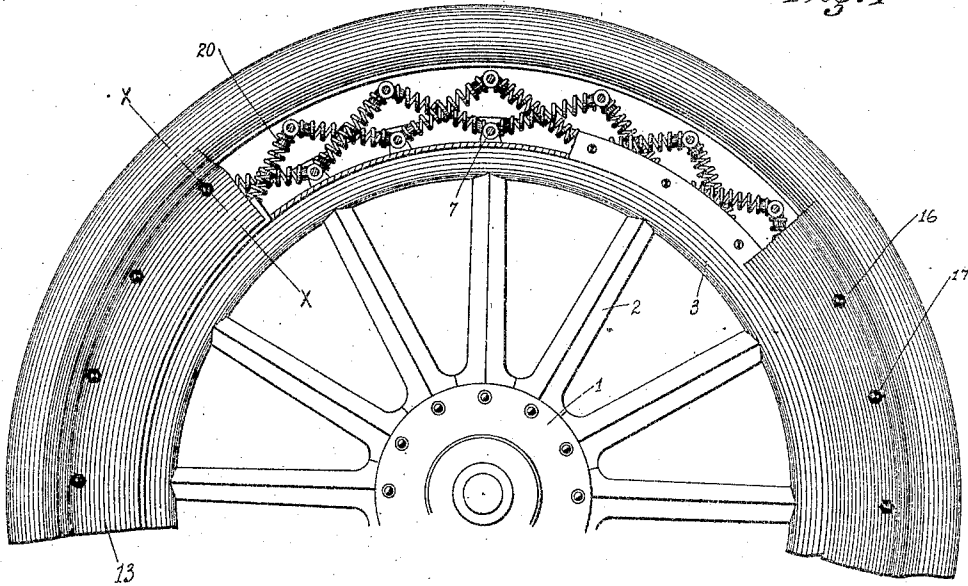


Fig. 2

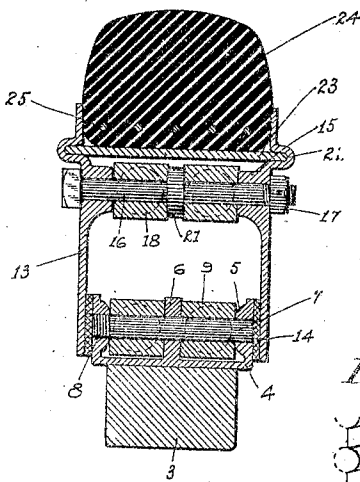


Fig. 3

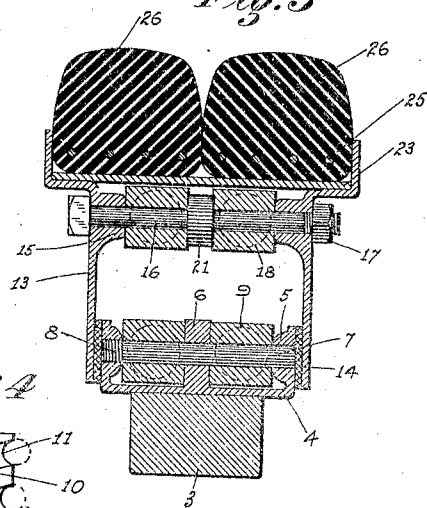
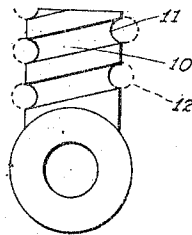


Fig. 4



Witnesses

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UNITED STATES PATENT OFFICE.

DANIEL L. CROSBIE, OF SACRAMENTO, CALIFORNIA.

RESILIENT WHEEL.

1,043,571.

Specification of Letters Patent.

Patented Nov. 5, 1912.

Application filed March 12, 1912. Serial No. 683,239.

To all whom it may concern:

Be it known that I, DANIEL L. CROSBIE, a citizen of the United States, residing at Sacramento, in the county of Sacramento, State of California, have invented certain new and useful Improvements in Resilient Wheels; and I do declare the following to be a full, clear, and exact description of the same, 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 characters of reference marked thereon, which form a part of this application.

This invention relates to improvements in vehicle wheels and particularly to a resilient wheel adapted to replace the pneumatic tired wheels now so commonly used.

The object of the invention is to produce a resilient wheel which will be provided with solid tires and at the same time provided with a resilient spring structure which will have the same cushion and resilient effect as pneumatic tires when the wheels ride over the ground surface.

This invention especially relates to specific improvements over my pending applications for patents Ser. Nos. 653,767 filed October 10th, 1911, and 656,485, filed January 16th, 1911.

A further object of the invention is to produce a simple and inexpensive device and yet one which will be exceedingly effective for the purposes for which it is designed.

These objects I accomplish by such means and relative arrangement of the parts as will fully appear by a perusal of the following specification and claim.

In the drawings similar characters of reference indicate corresponding parts in the several views.

Figure 1 is a side elevation partly broken out of my improved wheel. Fig. 2 is a sectional view taken on a line X—X of Fig. 1. Fig. 3 is a sectional view of a modified form of wheel from that shown in the other views. Fig. 4 is a detached view of the spring carrying lug.

Referring now more particularly to the characters of reference on the drawings, 1 designates the hub of the wheel, 2 the spokes and 3 the felly to which is secured a channel shaped rim 4 having inwardly projecting flanges 5 on the inside of its sides. The

member 4 is also provided with a central rib 6 projecting centrally around its inner periphery.

The numeral 7 designates screw pins projecting through the members 5 and 6 and screwed into one of said members 5 as at 8, which pins carry blocks 9 interposed between the members 5 and 6 as shown. Each block 9 is provided with a projecting lug 10 which is screw threaded as at 11 to permit of springs 12 being screwed thereon.

The numeral 13 designates outer plates slidable over the sides of the rim 1 there being a felt filler 14 interposed between said members 13 and said member 4 to keep out the dirt from between the same. The members 13 at their outer edges have inner projecting flanges 15. The numeral 16 designates bolts projecting through said flanges and having nuts 17 which bolt said plates together, said bolts carrying blocks 18 similar to the blocks 9 and which are provided with projecting threaded lugs 20, to receive the springs 12. A washer 21 is interposed between each pair of the blocks 18 to keep them spaced equally as does the member 6 keep the blocks 9 spaced.

The outer edges of the plates 13 are provided with grooves 22 and in one of said grooves a plate or rim 23 is riveted and adapted to engage into said groove 22 on the other side and be held there when the bolts 16 and nuts 17 are placed in position. Between the outer edges of the members 13 and resting against the plate 23 is a solid rubber tire 24 having reinforcing wires 25 which tire is held in position by means of frictional contact between said plates 13 and around said plate 23.

In practice the springs 12 are projected from one of the blocks 9 to one of the blocks 18 in alternate order and crossing each other as shown in Fig. 1 and these springs sustain the supporting wheel structure 1—2—3 against receiving any of the jolt or jar of the road surface which the tire 25 encounters, since said springs compensate for and absorb all of said jolts and jars.

Fig. 3 is a sectional view showing a modified form of structure over that shown in the other views in that it has two rubber tires 26 which can be used on heavy trucks of other vehicles found desirable.

From the foregoing description it will be

readily seen that I have produced such a device as substantially fulfil the objects of the invention as set forth herein.

While this specification sets forth in detail the present and preferred construction of the device, still in practice such deviations from such detail may be resorted to as do not form a departure from the spirit of the invention.

10 Having thus described my invention, what I claim as new and useful and desire to secure by Letters Patent is:—

A device of the character described comprising a wheel having a hub, spokes and felly, a channel shaped rim secured to said felly and provided with inwardly projecting flanges on its inner sides and a centrally disposed rib, pins projecting through said flanges and said rib, blocks on said pins
20 interposed between each of said flanges and

said rib, outer plates slidably mounted over said rim, said outer plates having inwardly projecting flanges, bolts projecting through said flanges and being provided with nuts, blocks on said bolts alined with said first 25 named blocks, projecting lugs on all of said blocks, springs secured to lugs on said first named blocks and the lugs in said second named blocks in alternate order, each row of said springs crossing its adjacent row in 30 an oblique manner, and a solid rubber tire interposed between said side plates at their outer edges, as described.

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

DANIEL L. CROSBIE.

Witnesses:

JAY HENRY,

PERCY S. WEBSTER.