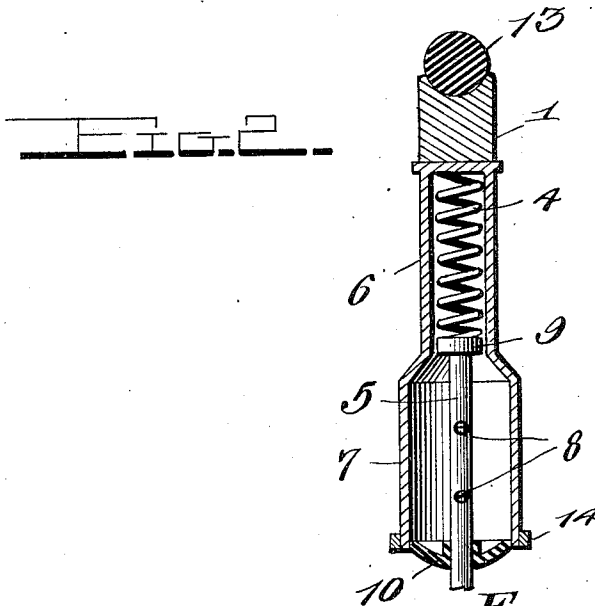
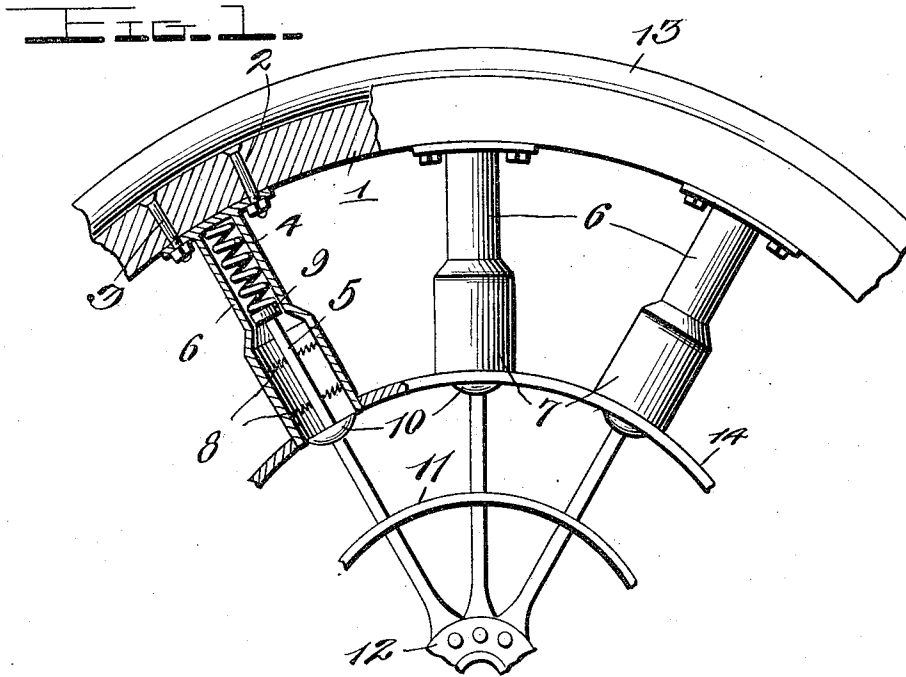


E. E. JULIEN.
RESILIENT WHEEL.
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1,050,950.

Patented Jan. 21, 1913.



Inventor

Ernest E. Julien,

Witnesses

Chas. L. Griesbauer.
L. S. Ellis.

By

Watson E. Coleman,
Attorney

UNITED STATES PATENT OFFICE.

ERNEST E. JULIEN, OF WATSEKA, ILLINOIS, ASSIGNOR OF TWO-THIRDS TO ZEDOK P. WATKINS AND JAMES H. STONE, BOTH OF WATSEKA, ILLINOIS.

RESILIENT WHEEL.

1,050,950.

Specification of Letters Patent.

Patented Jan. 21, 1913.

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To all whom it may concern:

Be it known that I, ERNEST E. JULIEN, a citizen of the United States, residing at Watseka, in the county of Iroquois and State of Illinois, have invented certain new and useful Improvements in Resilient Wheels, of which the following is a specification, reference being had to the accompanying drawings.

10 This invention relates to improvements in wheels, and particularly to that class of wheels designed to relieve the axle from the shocks imparted to the tire, and which are commonly known as resilient wheels.

15 The main object of this invention is to provide and arrange resilient means in the wheel, so that the same will not only give the desired action to the wheel, but will also be amply protected from dust and moisture, and the ordinary strains put upon it.

Other objects of this invention will become apparent as it is more fully set forth.

25 In the accompanying drawings which illustrate by way of example an embodiment of this invention, Figure 1 represents a fragmentary view of the wheel embodying this invention, with parts removed and in section to show the interior mechanism of the same. Fig. 2 is a detail of the resilient means embodying this invention, in connection with the parts used therewith.

Similar reference characters refer to similar parts throughout the drawings.

35 In the construction shown in the drawings, 1 represents a felly of the wheel, which is provided with holes 2 therein arranged to receive a plurality of bolts 3 for holding casings thereto. The casings are arranged to receive the spokes 5 which are secured in any suitable manner to the hub of the wheel. The outer portion 6 of each of the casings is restricted as clearly shown in the drawings to contain a spring 4 so that the same will be kept properly in position. The more central portion 7 of each casing is enlarged as clearly shown in the drawings, and provided with a plurality of springs 8 secured to the sides thereof and arranged to hold its respective spoke 5 in position, and also to give a resilient action to the same. A piston 9

is secured to the end portion of each spoke and arranged to come into engagement with the respective spring 4, and is restricted in diameter sufficiently to permit a slight side-wise motion to the spoke.

55 Suitably secured to the spokes 5 are caps 10 preferably constructed of leather or other suitable flexible material. These caps are arranged to close the outer openings of the portions of the casing and thereby prevent the ingress of dust and moisture within the same. A band 11 reinforces the more central portion of the spokes and is suitably secured thereto, and 12 designates the hub of the wheel. A tire 13 of any suitable construction and material is provided on the periphery of the felly 1, as is clearly shown in the drawings, and a band 14 is connected to the inner portion 7 of the casings to assist in keeping the same rigidly in position.

70 Owing to the simpleness of the construction of the device shown in this invention, it is not deemed necessary to explain its operation in detail except that the resiliency of the spring 4, together with that of the springs 8, enables the wheel to efficiently withstand the shocks given it. The provision of the caps 10 keeps the working parts of the wheel free from dust and moisture and at the same time is very inexpensive and can be readily removed to permit the inspection of the resilient parts of the wheel.

85 Obviously while there is shown but one form of this invention in the drawings, it is not desired to limit this application for Letters Patent to that particular form or in any other way otherwise than necessitated by the prior art, as many modifications in the construction thereof may be made without departing from the principles thereof.

90 Having thus described this invention, what is claimed is:—

In a resilient wheel, the combination of a hub, a rim, casings secured to the rim, each of said casings having an outer reduced portion and an inner enlarged portion, springs longitudinally arranged in the reduced outer portion of the casings, spokes secured to the hub having enlarged heads for engagement with the said springs, laterally arranged 100

springs in the enlarged portion of the casings, said laterally arranged springs bearing at one end against the casings and at the opposite ends against the spokes, and resilient caps frictionally disposed on the spokes and arranged for slidable engagement with the enlarged portions of the casings, the said laterally arranged springs and

the resilient caps adapted to resiliently hold the said spokes in position in the casings. 10

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

ERNEST E. JULIEN.

Witnesses:

W. E. SKEFT,
ZELLA ROBERTSON.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."
