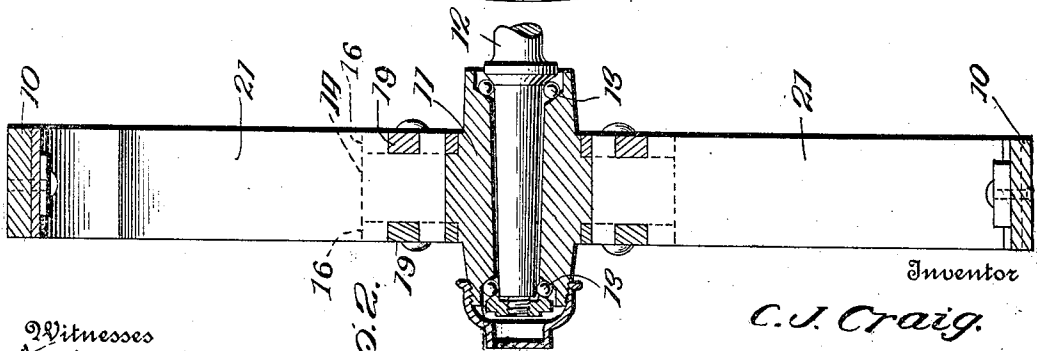
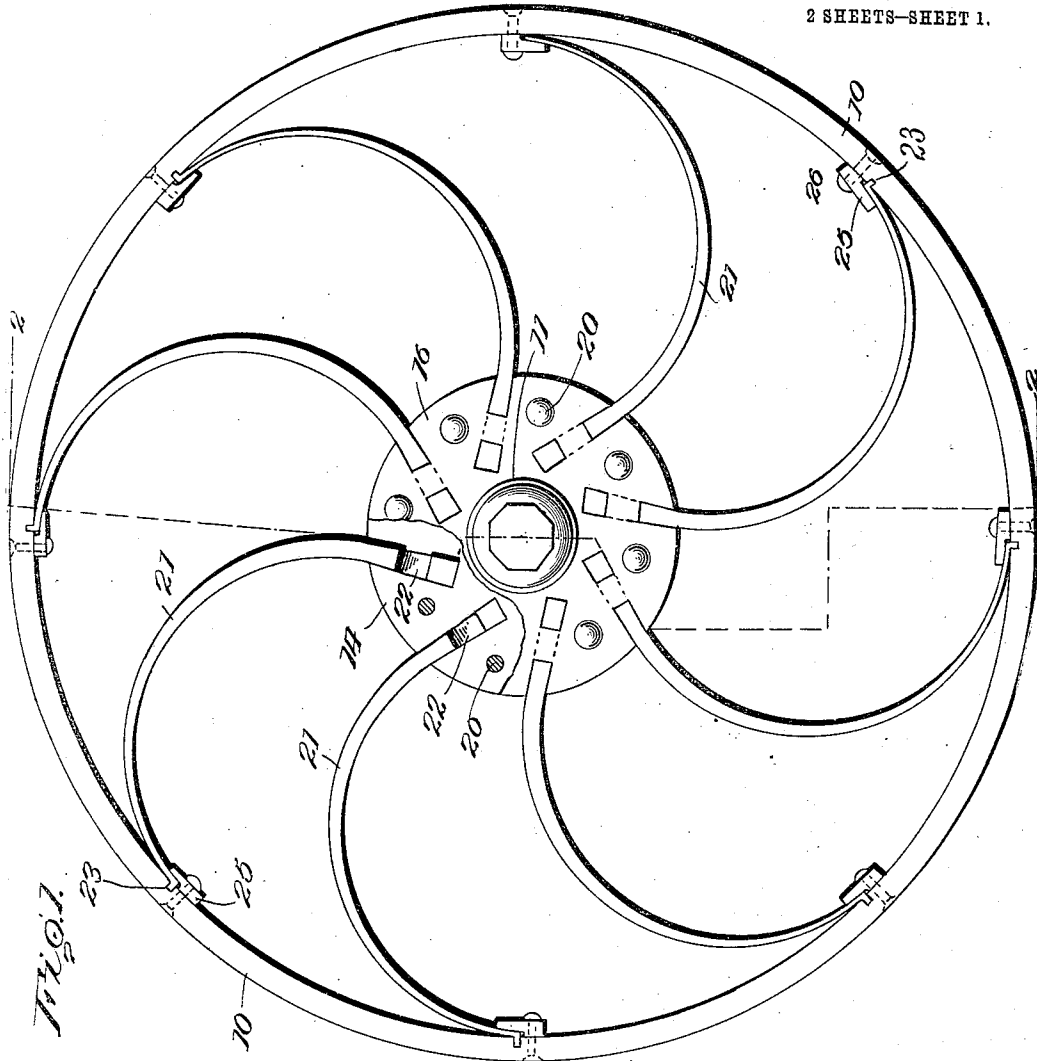


G. J. CRAIG.
RESILIENT WHEEL.
APPLICATION FILED DEC. 28, 1911.

1,055,447.

Patented Mar. 11, 1913.

2 SHEETS—SHEET 1.



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2 SHEETS—SHEET 2.

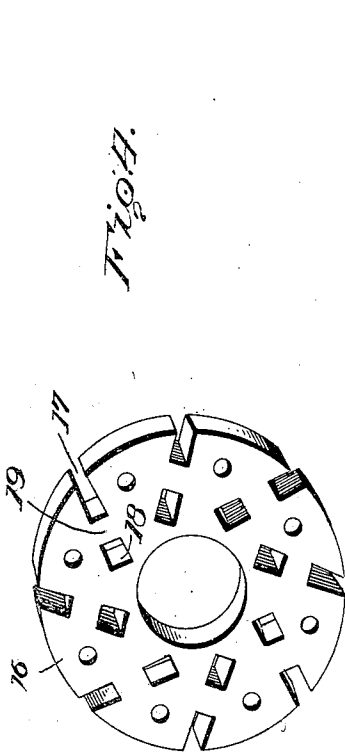


Fig. 1.

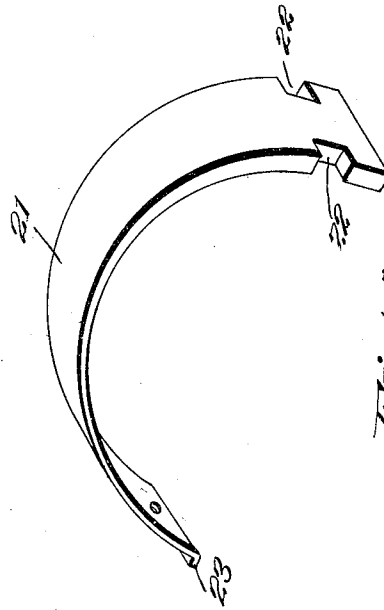


Fig. 2.

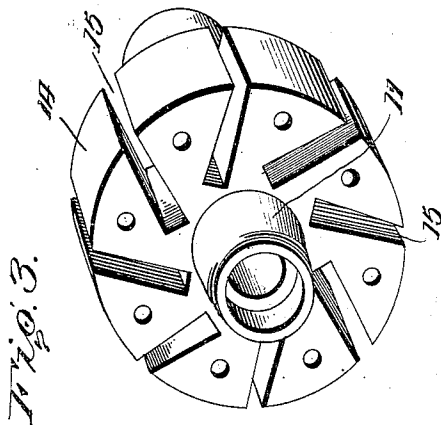


Fig. 3.

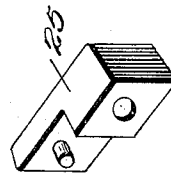


Fig. 4.

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UNITED STATES PATENT OFFICE

CHARLEY J. CRAIG, OF LATHROP, MISSOURI.

RESILIENT WHEEL

1,055,447.

Specification of Letters Patent.

Patented Mar. 11, 1913.

Application filed December 28, 1911. Serial No. 663,210.

To all whom it may concern:

Be it known that I, CHARLEY J. CRAIG, citizen of the United States, residing at Lathrop, in the county of Clinton and State of Missouri, have invented certain new and useful Improvements in Resilient Wheels, of which the following is a specification.

This invention relates to improvements in wheels, more particularly to the class of resilient wheels, and has for one of its objects to improve the construction and increase the efficiency, utility and durability of devices of this character.

Another object of the invention is to provide a simply constructed device of this character including a plurality of curved resilient spokes so arranged that one or more of the spokes may be detached in event of breakage or impairment and a new spoke inserted without discarding the remainder of the wheel.

With these and other objects in view, the invention consists in certain novel features of construction as hereafter shown and described, and then specifically pointed out in the claim, and in the drawings illustrative of the preferred embodiment of the invention, Figure 1 is a side elevation of the improved wheel with one of the hub clamp plates partly broken away; Fig. 2 is a section on the line 2—2 of Fig. 1; Fig. 3 is a perspective view of the central or body portion of the hub; Fig. 4 is a perspective view of one of the hub clamp plates; Fig. 5 is a perspective view of one of the spokes; Fig. 6 is a perspective view of one of the rim clamp blocks.

Corresponding and like parts are referred to in the following description and indicated in all the views of the drawings by the same reference characters.

The improved wheel comprises a rim 10 of any suitable material and of sufficient rigidity to withstand the strains to which it will be subjected without deflecting. The hub portion of the improved wheel comprises a central or intermediate member 11 of any suitable form, but preferably arranged to be mounted upon an axle journal 12 and with anti-friction bearing balls 13 arranged in any suitable manner. The central hub member 11 extends outwardly in the form of a relatively heavy disk 14 and provided with outwardly opening slots 15, the slots being arranged preferably tangentially of the periphery of the hub member

and slightly tapered or with the sides converging toward the center of the hub. Any required number of the slots may be employed, but will correspond in number to the number of spokes, each slot being designed to receive the butt or inner end of one of the spokes, as hereafter explained.

Bearing upon opposite sides of the hub member 14 are holding plates 16, the holding plates being provided with outwardly opening slots 17 corresponding to and registering with the outer portions of the slots 15, and likewise provided with a plurality of apertures 18 spaced from the inner ends of the slots 17 and corresponding to and registering with the inner ends of the slots 15. By this arrangement each of the slots 17 and its corresponding cavity 18 are separated by a portion 19 of the material of the plate 16. The plates 16 and the hub member 14 are connected by a plurality of clamp bolts 20 or other suitable fastening devices. Each of the spokes of the improved wheel is formed from a flat plate of metal, preferably tempered steel, and represented as a whole at 21, and uniformly reduced in thickness from end to end, the thicker or butt ends of the spokes conforming to and engaging closely in the converging slots 15 and 17, and with recesses 22 in their side edges to receive the solid intermediate portions 19 of the plates 16. By this means the spokes are firmly coupled at their inner ends to the hub and its clamp plates, and maintained firmly in position through the action of the clamp bolts 20.

At their outer thinner ends each spoke is provided with an outwardly directed transverse lug 23 which fits respectively in inwardly opening transverse recesses formed in the inner face of the rim 10. Bearing over the thinner terminal of each spoke and thus including the lug 23, is a clamp block 25 which is firmly secured to the rim by rivets 26 or other fastening devices. By this means a simply constructed coupling is provided for connecting the spokes to the rim. Each spoke is thus independently coupled to the rim and likewise independently coupled to the hub, so that a broken or impaired spoke may be readily detached and a new spoke supplied without discarding the remainder of the wheel.

The spokes are curved longitudinally as shown and being firmly secured at their ends respectively in the hub and to the rim,

when downward pressure is applied to the axle, the spokes will yield and thus prevent the jars and concussions to which the rim may be subjected without being communicated to the running gear, the wheels thus serving the same purpose as the ordinary pneumatic tire wheel.

The improved wheel is simple in construction, can be inexpensively manufactured and is strong and durable, and may be employed for vehicles of various forms, but is more particularly applicable to automobiles and like vehicles.

Having thus described the invention, what is claimed as new is:

In a wheel a central hub member having a plurality of radial slots, clamp plates bearing upon opposite sides of said hub member

and provided with a plurality of radial slots registering with the outer portions of the hub slots, and with apertures registering with the inner portions of the same, a spoke engaging in each set of said registering slots and with recesses for receiving the material of the plates which is located between the slots and with projections engaging in the apertures of the clamp plates, and clamp devices operating through the plates and hub member.

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

CHARLEY J. CRAIG. [L. S.]

Witnesses:

MATTIE L. CRAIG,
J. B. NICHOLAS.

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