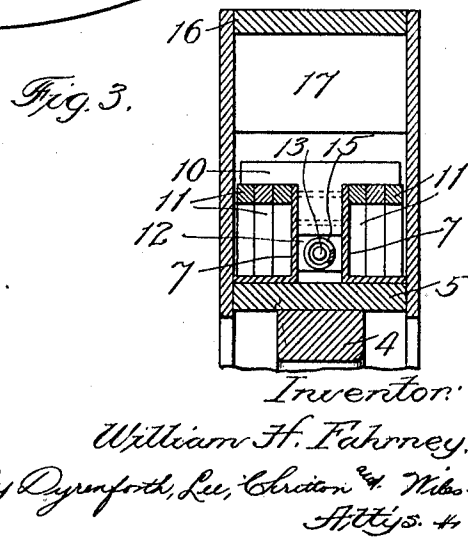
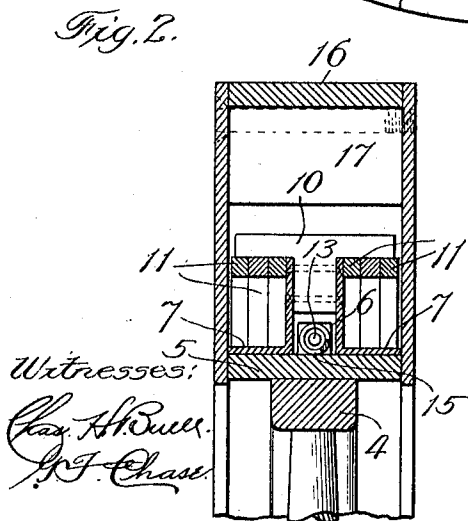
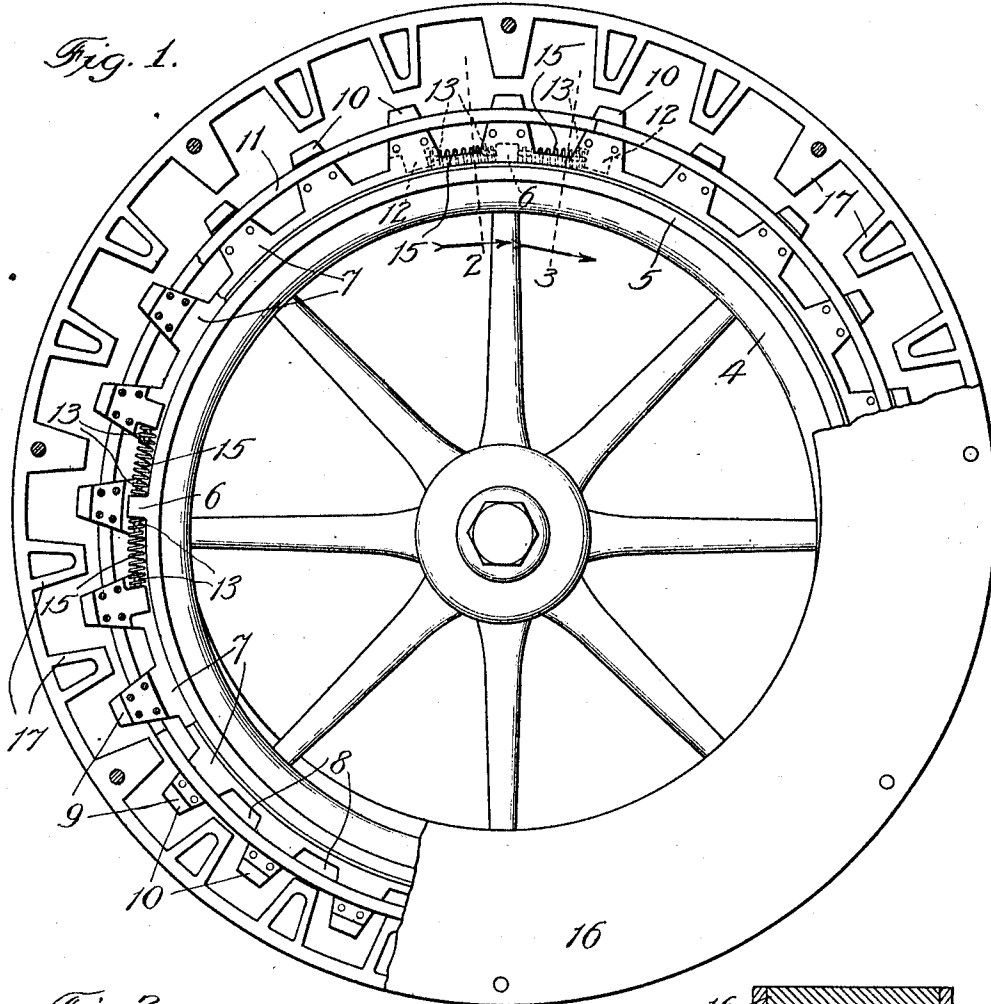


W. H. FAHRNEY.
VEHICLE WHEEL.
APPLICATION FILED JUNE 12, 1911.

1,004,397.

Patented Sept. 26, 1911.



UNITED STATES PATENT OFFICE.

WILLIAM H. FAHRNEY, OF CHICAGO, ILLINOIS.

VEHICLE-WHEEL.

1,004,397.

Specification of Letters Patent. Patented Sept. 26, 1911.

Application filed June 12, 1911. Serial No. 632,607.

To all whom it may concern:

Be it known that I, WILLIAM H. FAHRNEY, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented a new and useful Improvement in Vehicle-Wheels, of which the following is a specification.

My invention relates to an improvement in the construction of the spring vehicle-wheel of Letters Patent No. 979,269, granted to me December 20th, 1910. My said patented construction comprises a rim about the wheel-center provided with a circumferential series of outwardly-extending projections which confine spring-bands by their outward expansion against the heads on the projections, and an annular tire-portion about the rim in spaced relation thereto and provided with a circumferential series of internal projections registering with the spaces between the rim-projections to engage the springs through said spaces. The practical use of my said wheel has developed the fact that in running, the impact of a rim-projection against an adjacent tire-projection at the treading part of the tire causes a shock with resultant noise which is sufficiently audible in the vehicle to render abolishment of both desirable; and the primary purpose of my improvement is to overcome that objection.

In the accompanying drawing, Figure 1 is a view in side elevation of my improved construction of the wheel with a part of the tire-portion broken away to show features covered thereby, and Figs. 2 and 3 are sections, respectively on lines 2 and 3, Fig. 1.

The wheel-center shown is the same as that in my aforesaid patent, with a rim 5 about the felly 4 and provided at points, preferably four equidistant apart, with radially-projecting lugs 6, of which only two are shown. The rim is surrounded by two parallel angular sheet-metal bands 7 preferably of L-shape in cross-section, correspondingly serrated about their outer edges to form outwardly-flaring spaces 8 between teeth 9. These bands are movable about the rim against the spring-tension hereinafter described; and between each pair of the registering teeth of the two bands 8 is riveted the stem of a T-shaped head 10 forming with the teeth a projection. Spring bands 11 are confined by expansion against the heads as in the aforesaid patent. The two heads 10 respectively adjacent to opposite

sides of each lug 6 have extending centrally from the inner ends of their stems lugs 12, and from opposite sides of each lug 6 and the adjacent sides of the lugs 12 flanking it extend guide-studs 13 for normally-distended spiral springs 15, 15.

The tire-portion 16 shown is the same as that in my aforesaid patent, being provided with a circumferential series of inwardly-extending projections 17 registering with the spaces 8 to engage through them the spring-bands 11 for elastically supporting the wheel-center on the tire.

When, in the running of the wheel in either direction a projection on the lower part of the rim strikes a projection 17 on the tire to turn it, the impact is cushioned by the elastic yield about the rim of the serrated bands 7 due to their spring-connections with the rigid rim 5 at its lugs 6, thereby absorbing the shock of the impact, and also the noise thereof to an extent which renders it inaudible or unnoticeable in the vehicle. Moreover, the described construction of the projections about the rim, employing the sheet-metal bands, materially lightens, simplifies and cheapens the structure over that of the corresponding projections in the patent referred to.

What I claim as new and desire to secure by Letters Patent is—

1. In an elastic vehicle-wheel, the combination with a wheel-center provided with a rim, of a tire surrounding the rim to form therewith an interposed annular space and provided with internal projections, lugs at intervals on said rim, and annular series of spaced projections loosely surrounding the rim and provided at intervals with lugs, springs confined between the rim-lugs and the lugs adjacent thereto on said projections, and band-springs confined by expansion against said projections about the rim but unsupported against inward compression and cooperating with the tire-projections to elastically support the tire.

2. In an elastic vehicle-wheel, the combination with a wheel-center provided with a rim, of a tire surrounding the rim to form therewith an interposed annular space and provided with internal projections, an annular series of spaced rim-projections comprising a pair of annular serrated bands of angular cross-section loosely surrounding the rim with T-shaped heads secured at their stems between opposite teeth of the bands,

springs confined at intervals between said bands and rim, and band-springs confined by expansion against said heads but unsupported against inward compression and co-operating with the tire-projections to elastically support the tire.

3. In an elastic vehicle-wheel, the combination with a wheel-center provided with a rim, of a tire surrounding the rim to form
10 therewith an interposed annular space and provided with internal projections, lugs at intervals on the rim, an annular series of spaced rim-projections comprising a pair of annular serrated bands of angular cross-sec-

tion loosely surrounding the rim with T- 15
shaped heads secured at their stems between opposite teeth of the bands, lugs depending from said stems at opposite sides of each rim-lug, spiral springs confined between the rim-lugs and adjacent stem-lugs, and band- 20
springs confined by expansion against said heads but unsupported against inward compression and coöperating with the tire-projections to elastically support the tire.

WILLIAM H. FAHRNEY.

In presence of—

A. U. THORIEN,

R. A. SCHAEFER.

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