

A. C. FLETCHER.
Car Wheel.

No. 88,154.

Patented March 23, 1869.

Fig. 3.

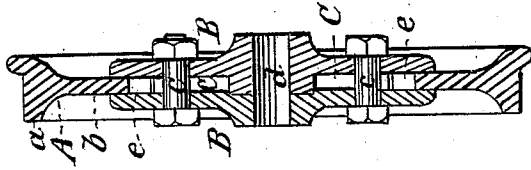


Fig. 2.

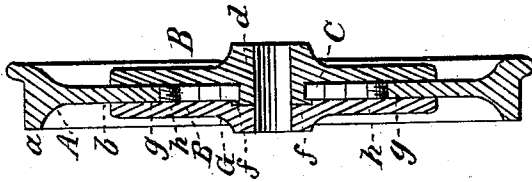
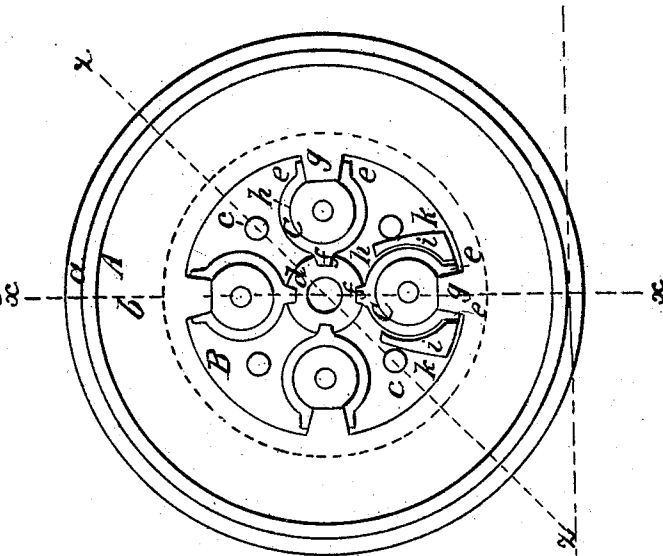


Fig. 1



Witnesses

McCombs
Geo. Haynes

Inventor

Adison C Fletcher

United States Patent Office.

ADDISON C. FLETCHER, OF NEW YORK, N. Y.

Letters Patent No. 88,154, dated March 23, 1869.

IMPROVED RAILWAY-CAR WHEEL.

The Schedule referred to in these Letters Patent and making part of the same.

To all whom it may concern:

Be it known that I, ADDISON C. FLETCHER, of the city, county, and State of New York, have invented a new and useful Improvement in Car-Wheels, of which the following is a full, clear, and exact description, reference being had to the accompanying drawing, forming part of this specification, and in which—

Figure 1 represents a face view of my improved car-wheel, with one of the side, or body-plates removed;

Figure 2, a transverse section of said wheel through the line *x x* in fig. 1; and

Figure 3, a similar view through the line *z z*.

Similar letters of reference indicate corresponding parts.

My invention consists in a peculiar construction of elastic car-wheel, by a freely-clamped arrangement of the rim-portion of the wheel between side, or body-plates and hub, having interposed between them independent springs of a novel character, and constructed to provide for the resistance of strain or pressure in various directions.

Referring to the accompanying drawing—

A represents the rim-portion of the wheel, made up of a tire, or tread-part, *a*, and interior annular flange *b*, which latter is clamped, in a free manner, between the outer edges of side, or body-plates B B, bolted together, as at *c c*, and constructed to form a hub, *d*.

Fitted in between these plates B B, is any desired number of independent springs, C C, preferably of the form represented in the drawing, and which spring is the subject of a separate application for patent made by me.

These springs are of metal, and of a divided, hoop-like character, having their mouths, or lips *e e* arranged to occupy an outer and radial position, with their interior sides converging inwardly, while a stud, or projection, *f f*, on the backs of the springs, is made to enter recesses formed in the hub *d* of the wheel.

The interior flange-portion *b* of the rim has wedge-like projections *g g* on its inner edge, arranged to snugly

fit between the lips *e e* of the metallic spring C C, so that on superincumbent weight or pressure being applied to the wheel, any deflection of the rim-portion of the latter will be borne by the several springs lying within the lower half of the wheel, not only vertically, but horizontally, and in various intermediate directions, relatively to the ground, or rail-surfaces on which the wheel travels, by, or through the gear of the wedges *g g*, with end-pressure of them against and on the lips *e e*, to open and spread them; also, by the pressure of the inner ends of said wedges against rubber fillings *h h*, to the springs which stiffen and strengthen the latter, and cushion their action.

There may also be rubber strips, *i i*, for a like purpose, arranged on the outsides of the springs, between them and blocks *k k*, made fast to the body-plates.

A sectional elastic car-wheel, thus constructed, provides, in a most efficient manner, for distribution of the strain consequent on deflection over a series of springs in constantly-varying directions, without prejudicially affecting the solidity of the wheel, and combines strength with convenience of replacing the rim-portion only when worn, and, if desired, of dispensing with a tire, by forming it of steel, while the central portion is of cast or wrought-iron.

What is here claimed, and desired to be secured by Letters Patent, is—

An elastic car-wheel, formed of an independent rim-portion, A, side, or body-plates B B, arranged to freely clamp an interior flange, *b*, of the rim, and carrying in between them independent springs C C, constructed to carry and divide the strain consequent on deflection of the rim in various directions, relatively to the ground, or rail-surfaces on which the wheel travels, substantially as specified.

ADDISON C. FLETCHER.

Witnesses:

J. W. COOMBS,
FRED. HAYNES.