(No Model.) 2 Sheets—Sheet 1.

W. J. PARMELEE.

CAR WHEEL.

No. 456,635. Patented July 28, 1891.

FIG. 1.

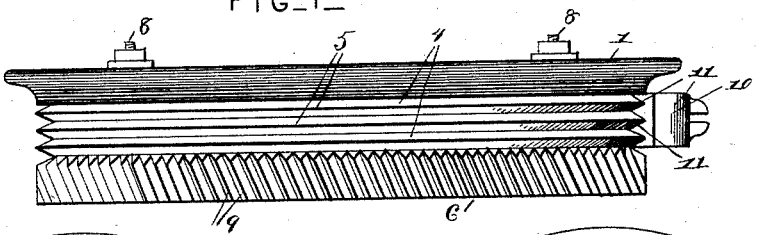


FIG. 2.

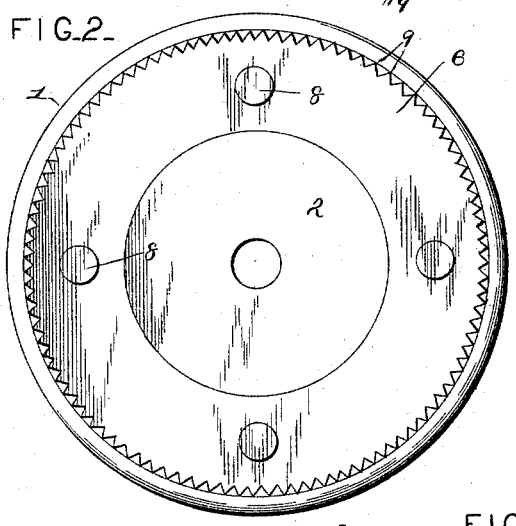


FIG. 6.

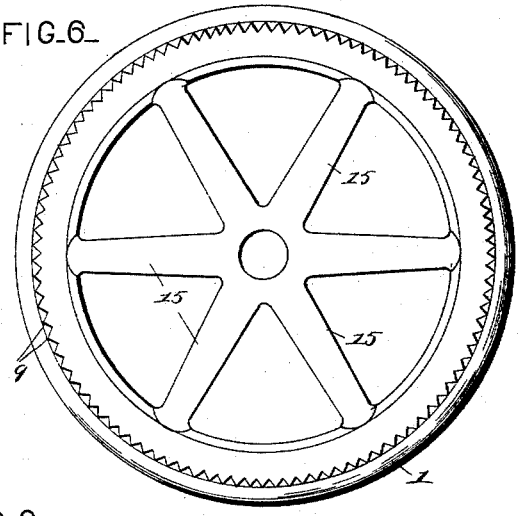


FIG. 8.

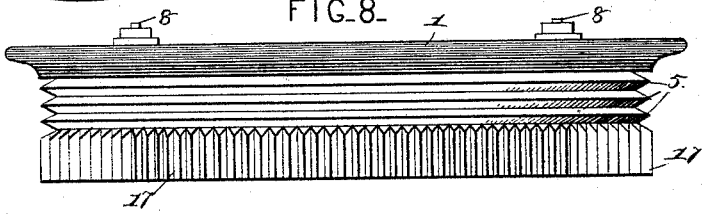
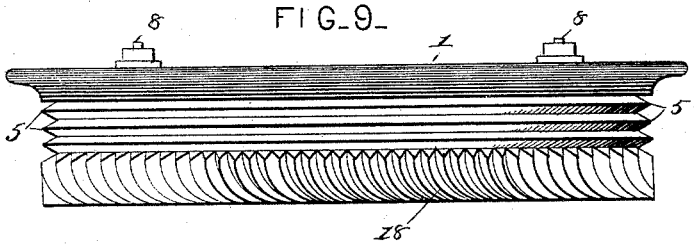


FIG. 9.



Witnesses

Geo. E. Frech.

M Suggers.

Inventor

Wolcott J. Parmelee.

By his Attorneys,

C. A. Snow & Co.

(No Model.) 2 Sheets—Sheet 2.

W. J. PARMELEE.

CAR WHEEL.

No. 456,635. Patented July 28, 1891.

FIG. 4.

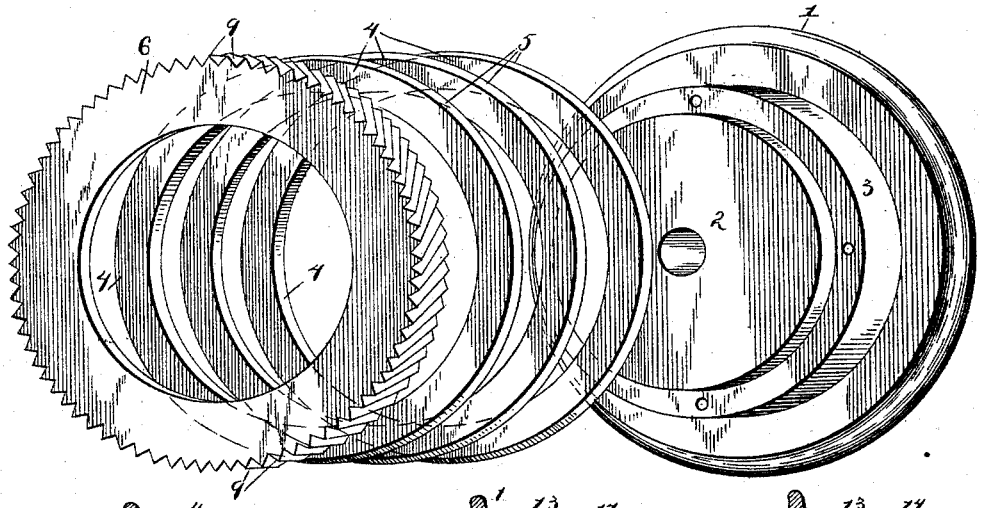


FIG. 3.

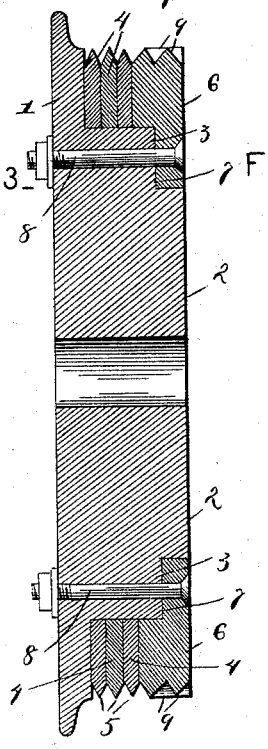


FIG. 5.

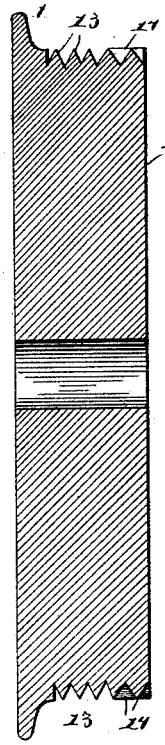
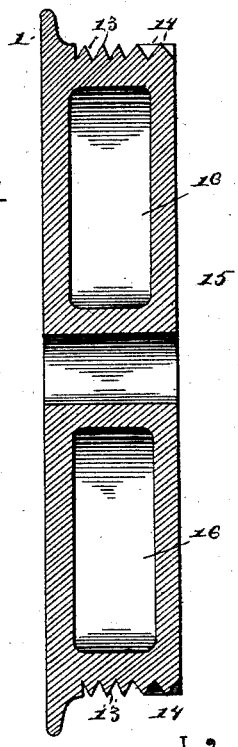


FIG. 7.



Witnesses

Geo. E. Frech.

M. Siggers.

Inventor

Wolcott J. Parmelee

By his Attorneys,

C. A. Snow & Co.

UNITED STATES PATENT OFFICE.

WOLCOTT JOHN PARMELEE, OF WILKES-BARRÉ, PENNSYLVANIA.

CAR-WHEEL.

SPECIFICATION forming part of Letters Patent No. 456,635, dated July 28, 1891.

Application filed February 28, 1891. Serial No. 383,225. (No model.)

To all whom it may concern:

Be it known that I, WOLCOTT JOHN PARMELEE, a citizen of the United States, residing at Wilkes-Barré, in the county of Luzerne and State of Pennsylvania, have invented a new and useful Car-Wheel, of which the following is a specification.

This invention relates to wheels for railroad-cars; and it has for its object to provide a wheel which shall be applicable for railroad-cars of all kinds, whether propelled by steam, electricity, or other modes of propulsion, and which shall be so constructed as to prevent the slipping of the wheel upon the track under any circumstances, thus doing away with a fruitful source of annoyance.

With these ends in view the invention consists in the improved construction of the said car-wheel, which will be hereinafter fully described, and particularly pointed out in the claims.

In the drawings hereto annexed, Figure 1 is a top view of one form of a car-wheel constructed in accordance with my invention and showing a brake-block adjacent to the same. Fig. 2 is a side view of the same. Fig. 3 is a vertical transverse sectional view. Fig. 4 is a perspective detail view showing the parts constituting my improved car-wheel separated or detached from each other, so as to illustrate the manner of construction. Fig. 5 is a vertical sectional view illustrating a modification whereby the entire wheel is cast in a single solid piece. Fig. 6 is a side view showing another modification, whereby the wheel is formed with spokes. Fig. 7 is a sectional view showing a third modification, whereby the wheel is cast with a core. Figs. 8 and 9 are top views of wheels, showing modifications in the formation of the transverse grooves.

Like numerals of reference indicate like parts in all the figures.

My invention consists, primarily, in providing a car-wheel with a roughened or corrugated tread adapted to engage the surface of the rail, and so prevent slipping. It is to be remembered, however, that all forms of corrugations would not answer, it being important to so construct the wheel as to be capable of being engaged by a brake-shoe of suitable construction when it shall be desired to retard the speed or to stop the car. Such corrugations as would enable the application of a brake-shoe to be successfully made would, however, necessarily require to be in the nature of circumferential grooves, which would be less affected than approximately transverse grooves in preventing the wheel from slipping upon the rail. I therefore prefer to provide the tread of my improved wheel with a series of circumferential grooves that may be engaged by a brake-block, and also with a series of spiral or approximately transverse grooves to prevent the wheel from slipping. This may be effected by different modes of construction, some of which I shall now proceed to more fully describe.

Referring to Figs. 1, 2, 3, and 4 of the drawings, 1 designates a disk, which may be described as forming the flange of the car-wheel, and which is provided on its outer side with a circular offset or enlargement 2, having an annular flange or recess 3, forming a shoulder, as will be readily seen in Figs. 3 and 4 of the drawings. A series of rings 4 4, which may be constructed of cast-steel, chilled, and which are provided with beveled or tapering edges 5, are fitted upon the circular offset 2, as shown in Fig. 3. Of these circular rings or sections any desired number may be used. In the drawings hereto annexed three have been shown.

6 designates a ring, which is constructed, like the rings 4, of chilled steel, and which is provided in its inner side with an annular groove or recess 7 to enable it to be fitted over the shoulder formed by the annular recess 3 of the offset or enlargement 2 in such a manner as to be capable of being forced up tightly against the rings 4. The several parts are secured together by means of bolts 8, passing through the ring 6, through that portion of the enlargement or offset 2, having the flange or shoulder 3, and obviously through the disk 1, of which the said enlargement forms an integral part. By tightening the nuts upon the said bolts the several parts of the wheel are drawn tightly together, and the wheel is ready for use. The outer edge of the ring 6 is provided with grooves or corrugations formed transversely or spirally therein, as will be seen in the drawings at 9.

The brake-block, which is designated by

10, is provided with grooves, as 11, adapted to engage the beveled edges 5 of the rings 4. It will be observed that the said grooves form a bearing or contact surface, which is about as large as that usually existing when the car-wheels are formed with flat treads. Such brake when applied will also be found to be very efficient in retarding the rotation of the wheel. At the same time the transversely or spirally corrugated edge of the ring 6, which engages the surface of the rail, serves in a very efficient manner to prevent the wheel from slipping, as will be readily understood, thus preventing icy and slippery tracks from interfering with locomotion, as is now frequently the case.

While the construction above described is for various reasons deemed preferable, it is obvious that various modifications may be resorted to without materially departing from the spirit of my invention. Thus, as shown in Fig. 5, the wheel may be cast in a single solid piece 12, the tread being provided with circumferential grooves 13 and with transverse or spiral corrugations 14. The construction may also be varied, as shown in Fig. 6, by constructing the wheel with spokes 15, or the wheel may be formed with a hollow core, as shown at 16 in Fig. 7. Again, the form of the transverse corrugations may be varied in numerous ways, examples of which have been shown at 17 and 18 in Figs. 8 and 9, respectively.

I desire it to be distinctly understood that I reserve the right to these and to all other modifications of my invention to which recourse may be had without departing from the general principles thereof.

Having thus described my invention, what I claim is—

1. A car-wheel having a flat tread provided with circumferential grooves and with transverse or spiral corrugations adjacent to said grooves, substantially as and for the purpose set forth.

2. A car-wheel comprising in its make-up a series of rings having beveled edges adapted to form a portion of the flat tread, substantially as set forth.

3. A car-wheel comprising in its make-up a ring having a transversely or spirally grooved outer edge forming a portion of the flat tread, substantially as set forth.

4. In a car-wheel, the combination, with a flange-disk having a circular offset or enlargement, of a series of rings mounted upon the same and having beveled edges, and an outer ring having a transversely or spirally corrugated edge, the said rings serving to form the tread of the wheel, substantially as set forth.

5. In a car-wheel comprising a flange-disk having a circular offset or enlargement provided with an annular groove, a series of rings mounted upon said offset and having beveled edges, an outer ring mounted upon the annularly-grooved portion of said offset and having a transversely or spirally corrugated edge, and suitable connecting-bolts, substantially as and for the purpose set forth.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in presence of two witnesses.

WOLCOTT JOHN PARMELEE.

Witnesses:
J. F. O'NEILL,
W. A. O'NEILL.