(No Model.)

G. HULL.

CAR WHEEL.

No. 483,064. Patented Sept. 20, 1892.

Fig. 1.

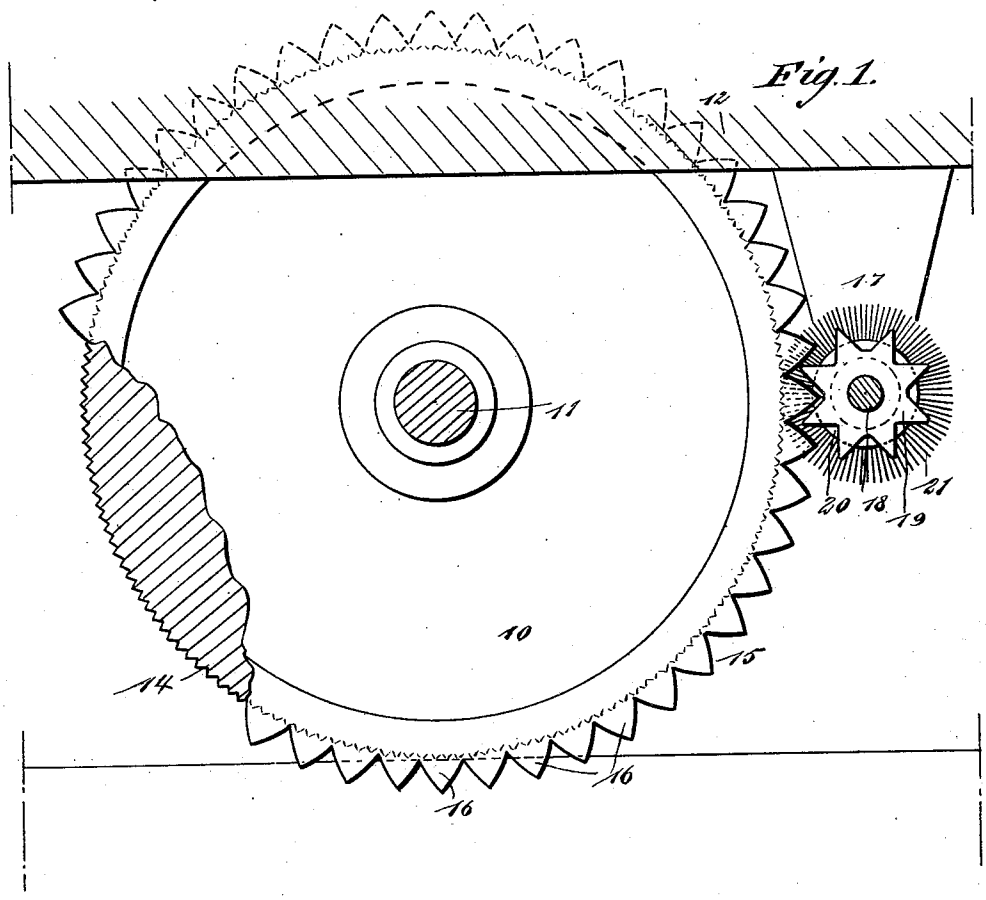


Fig. 3.

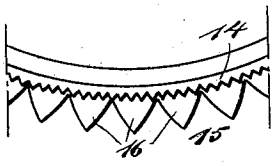


Fig. 2.

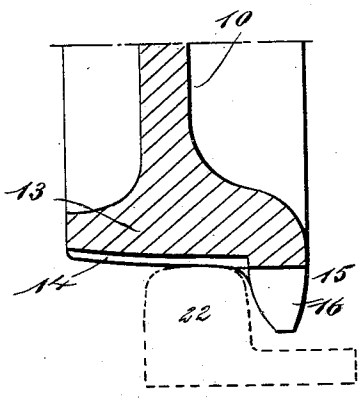
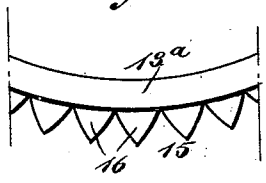


Fig. 4.



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GEORGE HULL, OF BINGHAMTON, NEW YORK.

CAR-WHEEL.

SPECIFICATION forming part of Letters Patent No. 483,064, dated September 20, 1892.

Application filed February 6, 1892. Serial No. 420,531. (No model.)

To all whom it may concern:

Be it known that I, GEORGE HULL, of Binghamton, in the county of Broome and State of New York, have invented a new and Improved Car-Wheel, of which the following is a full, clear, and exact description.

My invention relates to improvements in car-wheels; and the object of my invention is to produce a simple form of wheel which may be secured to any car, but is especially adapted for use on street-cars, which by simply running it upon a track will quickly and thoroughly clean the track from ice. It is well known that street-railway tracks are very liable to fill with water; that in a sudden cold snap the water freezes, so as to fill the grooves of the track, thus rendering traffic almost impossible, and that it is necessary to construct the wheel so that it will clean the groove of the track and also clean off the tread of the track.

With this end in view my invention consists in a car-wheel the construction of which will be hereinafter described and claimed.

Reference is to be had to the accompanying drawings, forming part of this specification, in which similar figures of reference indicate corresponding parts in all the views.

Figure 1 is a broken side elevation, partly in section, of the wheel and the wheel-cleaner as applied to a car. Fig. 2 is a cross-section of a segment of a wheel. Fig. 3 is a broken detail side elevation of a modified means of securing the cutting-flange and tread-cutters to the wheel; and Fig. 4 is a broken detail side elevation of the bearing-surface of the wheel, having a smooth tread and a cutting-flange.

The wheel 10 is of the same general shape as an ordinary car-wheel and is journaled on the axle 11 of the car 12 in the usual way. The tread 13 of the wheel is adapted to run upon the tread of the rail in the usual manner, and this portion of the wheel is provided with a series of transverse knives or teeth 14, which are not very deep, and which by contact with the tread of the rail are adapted to crush the ice upon the rail, and consequently clean the rail from ice. These knives or teeth are preferably formed integral with the wheel, as shown in Fig. 1; but they may be formed upon a separate band and shrunk upon the wheel, as shown in Fig. 3. The wheel has a flange 15, which is adapted to extend downward into the groove of the rail, as shown in Fig. 2; but the flange instead of being solid, as is usually the case, is formed of a series of cutters 16, which may be ground to an edge or which may be made in the form of spurs. These cutters or spurs are preferably used in connection with the wheel having the toothed tread, as shown in Fig. 2; but they may be produced upon the wheel having a smooth tread 13^a, as shown in Fig. 4.

In practice the wheel is journaled to the axle of the car, and by reference to Fig. 2 it will be seen that the knives 14 will bear upon the tread of the rail 22, while the cutters 16 will project downward into the groove of the rail, and when the wheel is revolved it will clean the ice from both parts of the rail. It is not necessary to provide all the cars with wheels of this kind, as several of them may be provided with the wheels described, and by running these cars over the track the rails will be thoroughly cleaned.

To prevent any possible clogging of the teeth 14 and the cutters 16 of the wheels, the following cleaning mechanism is used, which mechanism is shown in Fig. 1.

Hangers 17 are suspended from the car-bottom adjacent to the wheels, and secured to a shaft 18, which is journaled in the hangers 17, are star-wheels 19, the teeth of which project between the cutters 16, and on the hubs 20 of the star-wheels are wire bristles 21, which are adapted to brush the teeth 14 and thoroughly clean them. The shaft 18 is revolved by means of the main wheels 10, the cutters 16 of which engage the teeth of the star-wheels 19.

The wheels described above may be journaled to the axle of any kind of a car or they may be independently rotated, if desired, the essential thing being to bring the revolving wheels into contact with the rails.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

1. The combination, with the car-wheel having a flange formed of cutters, of a cleaner supported adjacent to the wheel and adapted to contact therewith, said cleaner being revolved by contact with the wheel, substantially as described.

2. The combination, with the car-wheel having transverse teeth upon its tread-surface and having a flange formed of a series of cutters, of a star-wheel journaled near the car-wheel and adapted to engage the flange thereof, and a brush carried by the star-wheel and held to contact with the tread of the car-wheel, substantially as described.

3. The combination, with the car-wheel having a flange formed of a plurality of cutters, of a star-wheel journaled near the car-wheel and adapted to contact with the flange-cutters, substantially as described.

GEORGE HULL.

Witnesses:
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