J. H. STEINER.

Car Wheel.

No. 28,816. Patented June 19, 1860.

Fig. 2.

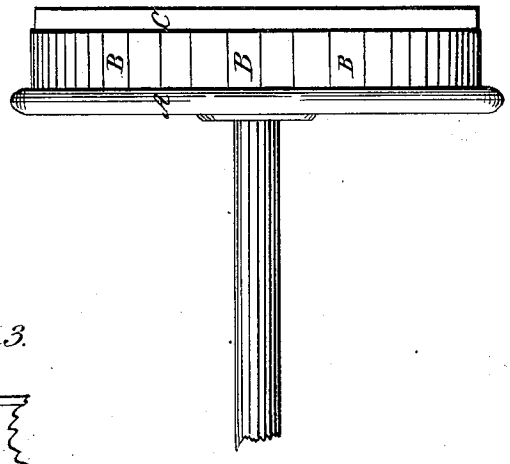


Fig. 3.

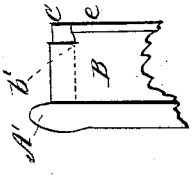
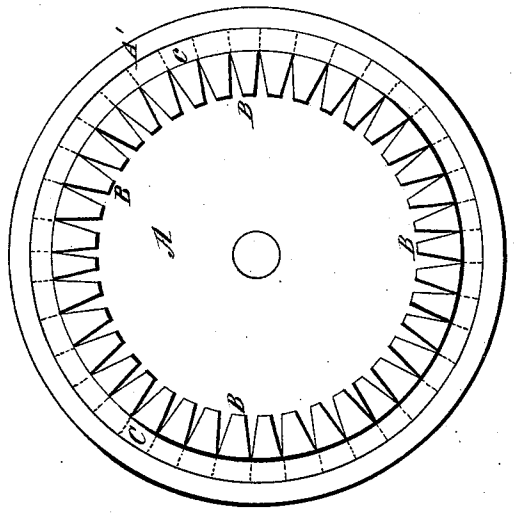


Fig. 1.



Witnesses:

H. H. Forbush

E. B. Forbush

Inventor:

John H. Steiner

AM. PHOTO-LITHO. CO. N.Y. (OSBORNE'S PROCESS.)

UNITED STATES PATENT OFFICE.

JOHN H. STEINER, OF PHILADELPHIA, PENNSYLVANIA, ASSIGNOR TO HIMSELF, AND JAMES E. THOMSON, OF BUFFALO, NEW YORK.

RAILROAD-CAR WHEEL.

Specification of Letters Patent No. 28,816, dated June 19, 1860.

To all whom it may concern:

Be it known that I, JOHN H. STEINER, of the city of Philadelphia, State of Pennsylvania, have invented a certain new and Improved Railroad-Car Wheel; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings and the letters of reference marked thereon.

To enable others skilled in the art to make and use my invention I will proceed to describe its construction and operation.

Having reference to the drawings (A) represents the cast iron part of my improved wheel. It is cast in one piece as a whole and has a series of pockets or tapering chambers for the reception of wedge like pieces of wood as represented at (B). The wheel is solid iron from the axle to the bottom of the wood chambers. The inner face of the wheel continues of solid iron until it terminates in the flange (A′). The blocks of wood used in the construction of the wheel are sawed into a tapering or wedge like form so as to fit snugly in the chambers the ends thereof touching (or nearly so) the bottom of the chambers and extending above the chambers and widening so that the several pieces meet above the chambers and form one perfect circle of wood for the tread of the wheel. A shoulder is formed on these wood blocks as shown at (*b*′) Fig. III for the reception of a wrought iron band (C). Before the blocks of wood are put into the wheel they should be boiled in coal oil or otherwise hardened and made impervious to water. They are dressed out lengthwise of the timber so that when put into the wheel they will have an end bearing upon the rail. When thus properly prepared and fitted they are driven into the pockets and the wrought iron band (C) is then shrunk on. This band will encircle the outer rim or face (*e*) of the wheel partly resting thereon and partly resting upon the shoulders in the wood blocks as shown in Fig. III. The band will shrink and fit into the dovetail form of the shoulder as shown in Fig. III and thereby hold the blocks of wood, perfectly tight and secure. After the blocks are thus put in the wheel is put into a lathe and the wood turned off to a perfect circle which should be left about a quarter or half an inch above the band. It should also be made sufficiently wide to allow for all lateral movement upon the rail so that under all circumstances the wheel will tread wholly upon the wood. The wheel is fastened upon its axle in a common manner. A wheel thus constructed will run lightly and noiselessly upon the rail and will not wear the rail as fast as a wheel having an iron tread. It is strong and durable and when the blocks of wood become too much worn they may be taken out and replaced by new blocks. The iron part of the wheel will last for many years and the saving by its use to the wear and tear of the cars and the rails will be very great.

I do not claim broadly the use of blocks of wood in the construction of railroad car wheels for the purpose of a wood tread—but,

I claim—

Constructing the cast iron part of the wheel with chambers, or tapering pockets in combination with wedge like blocks of wood, B, having shoulders *b*′, and the wrought iron band C shrunk thereon, for the purposes and substantially as described.

JOHN H. STEINER.

Witnesses:

E. B. FORBUSH,

W. H. FORBUSH.