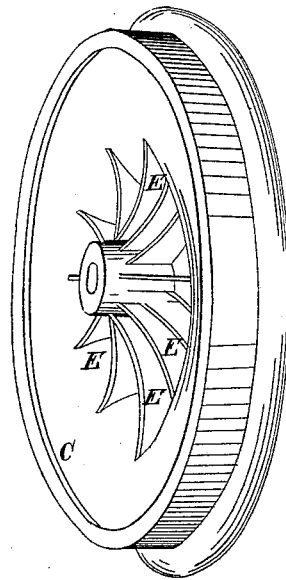


W. W. PENNELL.

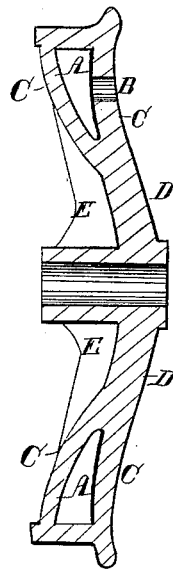
Car Wheel.

No. 1,076.

Patented Feb. 8, 1839.



*Fig 1*



*Fig 2*

# UNITED STATES PATENT OFFICE.

WM. W. PENNELL, OF LANCASTER, PENNSYLVANIA.

## MODE OF MAKING CAST-IRON WHEELS FOR RAILROAD-CARS.

Specification of Letters Patent No. 1,076, dated February 8, 1839.

*To all whom it may concern:*

Be it known that I, WILLIAM W. PENNELL, of the city of Lancaster, in the county of Lancaster and State of Pennsylvania, have  
5 invented a new and useful Improvement in the Construction of Cast-Iron Wheels for Railroad Cars and Carriages; and I do hereby declare that the following is a full and exact description thereof.

10 The car wheel is to be of iron, cast in one entire piece, in the general form and manner represented in the accompanying drawings.

In Figure 1, is a perspective view, and Fig. 2, a cross section of it through the  
15 middle of the hub.

That portion of the wheel which is toward the rim is hollow, a cavity such as is represented at A A, being formed around it by means of a core, to support which in the  
20 casting openings, as shown in the section at B, are left in it. The two sides C C, which constitute the shell of the cavity A A, unite, as they approach the hub or nave, constituting a single plate at D D. This plate, with  
25 the braces or brackets E E, give the necessary strength to that portion of the wheel

which is toward the hub or nave. The brackets E E, radiate from the hub, in the manner of arms, as shown in the drawing, and the plate D, being continuous, they are  
30 seen only on one face of the wheel. By this arrangement of the respective parts the metal is so distributed as to produce a wheel of greater strength than is usually produced by the same quantity of metal in any of the  
35 known modes of forming wheels.

What I claim as my invention, and desire to secure by Letters Patent, is—

The particular manner in which I have constructed this wheel and combined the  
40 respective parts together; that is to say, I claim in combination the forming of the part toward the rim, hollow in the manner herein described, while the part toward the hub consists of a single plate, the two parts  
45 being connected and supported by brackets, as set forth.

WM. W. PENNELL.

Witnesses:

C. H. WILTBERGER,  
LINTON THORN.