

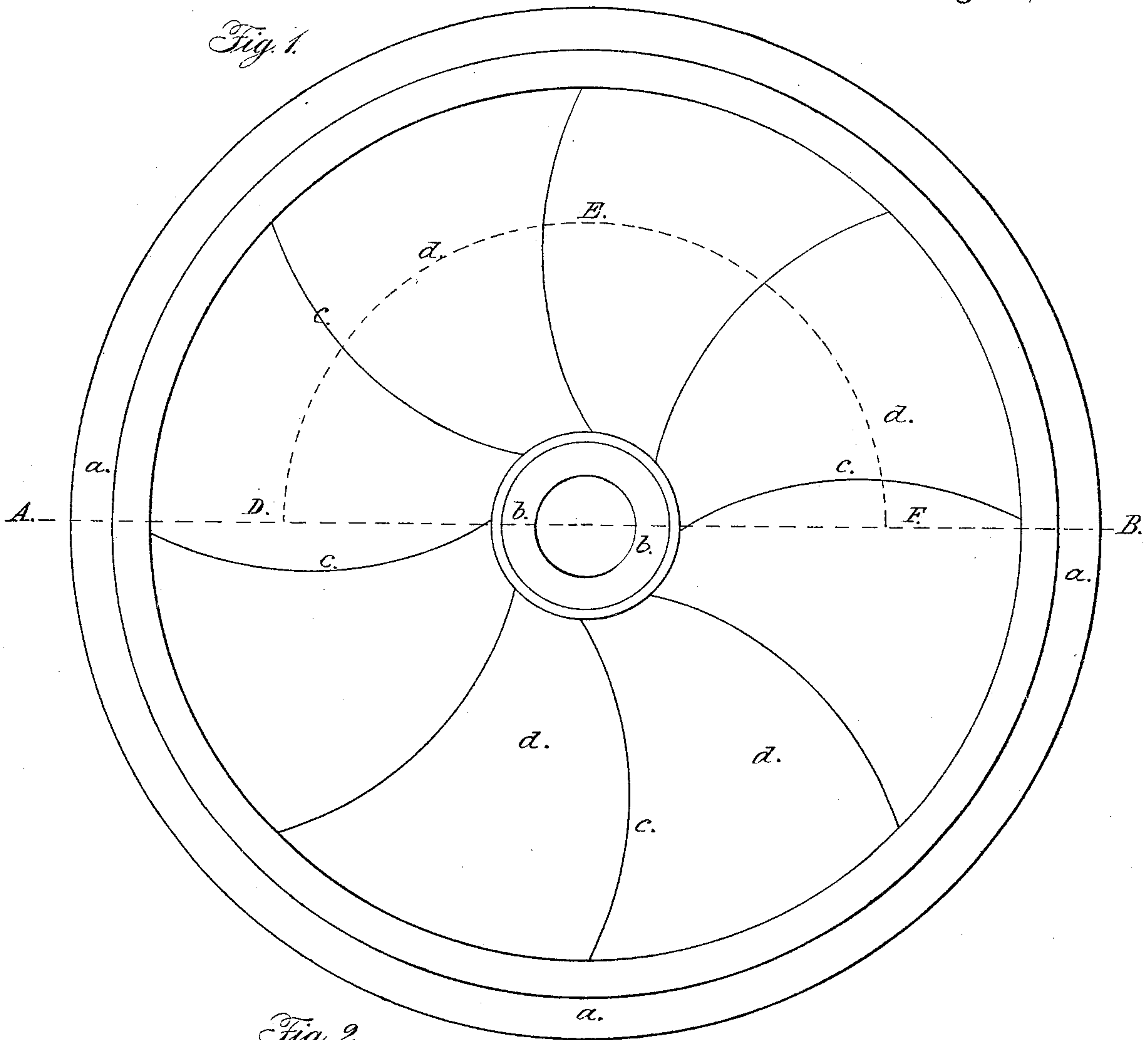
A. FULLER.

Car Wheel.

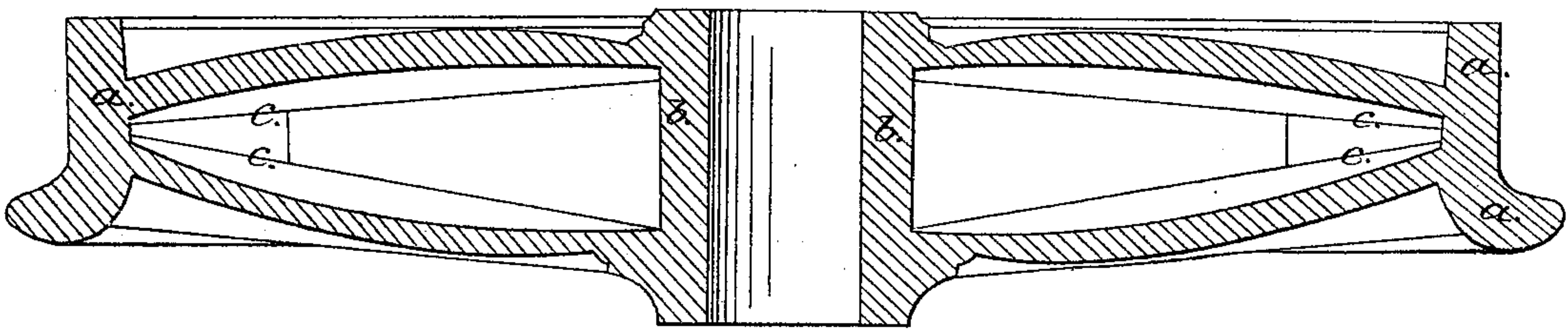
No. 7,599.

Patented Aug. 27, 1850.

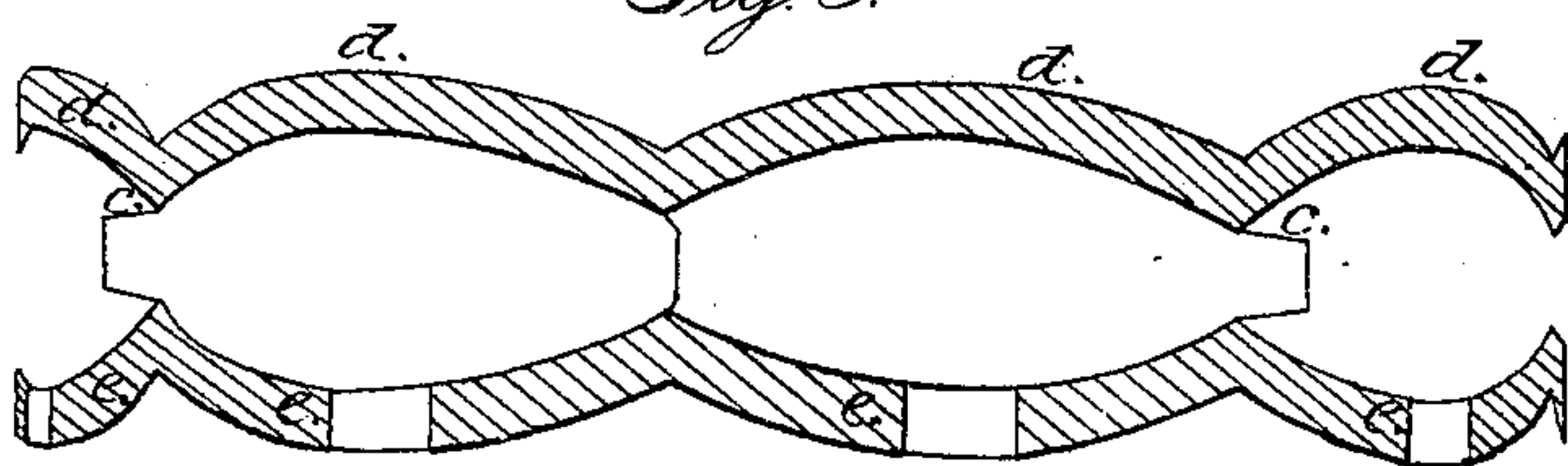
*Fig. 1.*



*Fig. 2.*



*Fig. 3.*



# UNITED STATES PATENT OFFICE.

ALBERT FULLER, OF BOSTON, MASSACHUSETTS.

## CAST-IRON CAR-WHEEL.

Specification of Letters Patent No. 7,599, dated August 27, 1850.

*To all whom it may concern:*

Be it known that I, ALBERT FULLER, of Boston, in the county of Suffolk and State of Massachusetts, have invented a new and useful Improvement in the Construction of Cast-Iron Railroad-Wheels, and that the following description, taken in connection with the accompanying drawings, hereinafter referred to, forms a full and exact specification of the same, wherein I have set forth the nature and principles of my said invention by which it may be distinguished from others of a similar class, together with such parts as I claim and desire to have secured to me by Letters Patent.

The figures of the accompanying plate of drawings represent my improved construction of a rail-road car wheel. Figure 1 is a side elevation of the same. Fig. 2 is a horizontal section, taken in the plane of the line A B, Fig. 1, and Fig. 3 is a detail sectional view on the circular line D E F, projected on the plane of the line A B.

The rim *a a a* of the wheel is made in the usual form, and is cast in a chill, and the hub *b b*, is also cast solid, which is considered to be the most desirable way, the shrinkage by casting the rim in a chill, being provided for otherwise than by an opening in the center of the width of the hub, and full as effectually.

The connection between a solid hub and a chilled rim, has been mostly heretofore made by means of double plates, one convex, the other concave, or both convex, or undulatory, or with concentric tubes, so that the contraction or shrinking of the rim, by reason of the chilling of the same, may spend itself in these undulations, convexities, or concavities or other irregularities of said connecting plates.

By my improvements, the connection between the hub and rim is effected by means

of the curved partitions *c c, c c, &c.* extending from said rim *a a* from 3 to 4 inches for a 33 inch wheel toward the hub *b b*, as shown in the drawings, which divides the space between the two, into a series of sector shaped compartments, the sides or partitions *c c*, being curved as above stated, and between these partitions on each side thereof, spring the arches *d d, d d, e e, e e, &c.* shaped as shown in section, in Fig. 3, which make the inner and outer face of the wheel.

The space between the inner and outer arched plates, and between the partitions *c c, c c*, is formed by cores in a manner well known to iron founders, and proper holes should be left, as shown in the drawings, for the removal of the sand, after the casting is completed.

By forming the inner and outer plates of the wheel in these several lateral arching sections, connected by the curved partitions *c c*, the tread of the wheel is better sustained, and what is of great importance, the liability to breakage, by reason of the lateral jar of the wheel in running, which, as wheels are now constructed, is considerable, is effectually obviated; and the securing this result by the means above specified, is the distinguishing feature of my improvement.

Having thus described my improvements, I shall state my claim as follows:

What I claim as my invention, and desire to have secured to me by Letters Patent, is—

Making the two plates which connect the hub and rim of a cast iron railroad wheel, in a series of lateral arching sectors connected by the curved partitions *c c, &c.* in the manner and for the purpose herein above specified.

ALBERT FULLER.

Witnesses:

GEORGE E. HEAD,  
EZRA LINCOLN.