

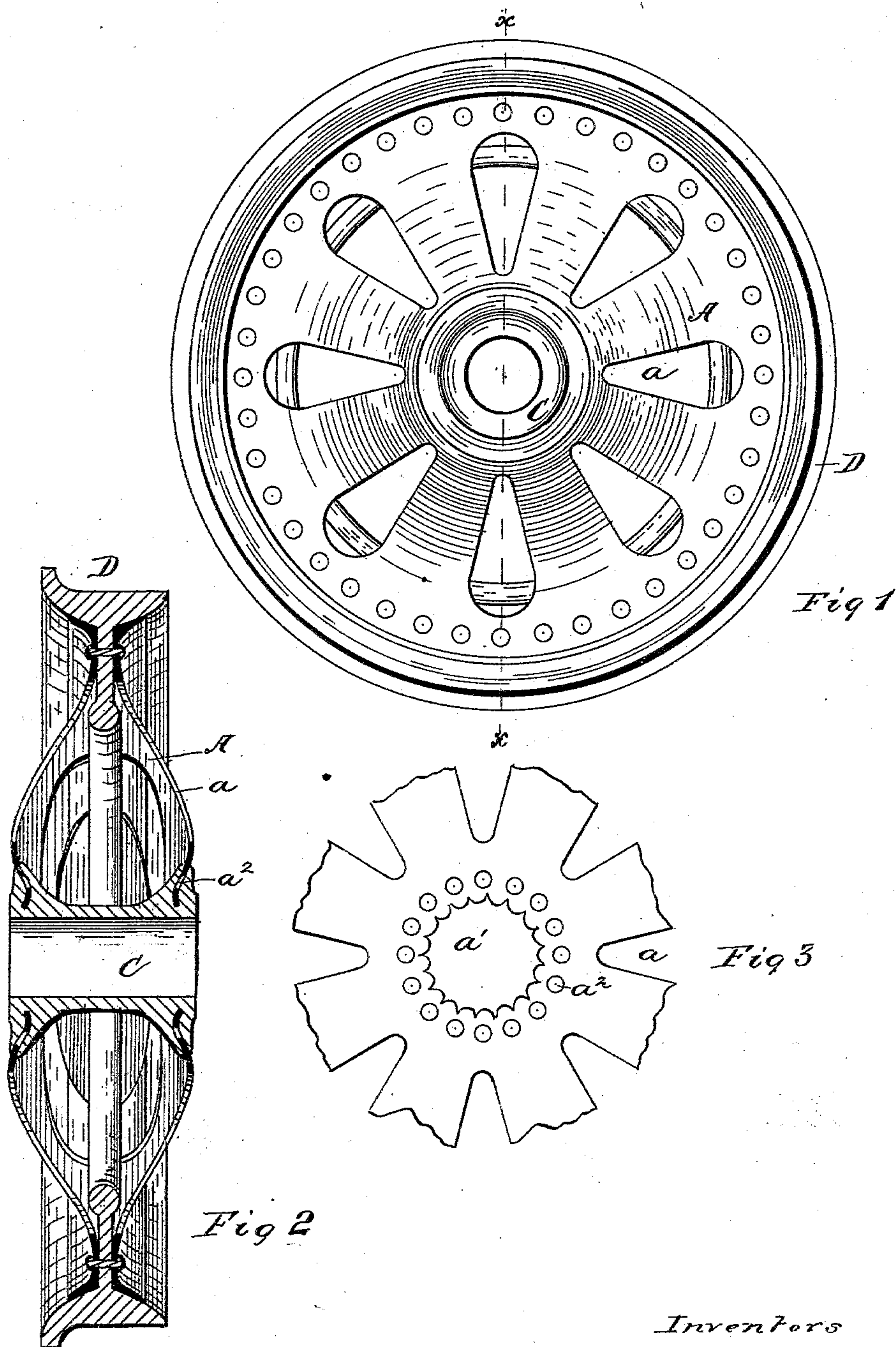
(No Model.)

E. B. MEATYARD & J. WHYTE.

CAR WHEEL.

No. 283,631.

Patented Aug. 21, 1883.



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UNITED STATES PATENT OFFICE.

EDWARD B. MEATYARD AND JAMES WHYTE, OF GENEVA, WISCONSIN.

CAR-WHEEL.

SPECIFICATION forming part of Letters Patent No. 283,631, dated August 21, 1883.

Application filed September 22, 1882. (No model.)

To all whom it may concern:

Be it known that we, EDWARD B. MEATYARD and JAMES WHYTE, citizens of the United States, residing at Geneva, in the county of Walworth and State of Wisconsin, have invented a certain new and useful Improvement in the Manufacture of Car-Wheels, which is fully set forth in the following specification, reference being had to the accompanying drawings, in which—

Figure 1 is a side elevation of a car-wheel made in accordance with our improvement. Fig. 2 is a section on the line xx in Fig. 1. Fig. 3 is a detailed view of the central part of the disk which forms the body or web of the wheel.

The same letters denote the same parts in all the figures.

Our invention relates to the manufacture of metallic wheels for railway-cars; and it consists in casting a hub of soft steel to a web stamped or forged of elastic sheet or plate metal, and having a central aperture with rough edges surrounded by perforations, the object being to promote economy, strength, and durability in such wheels.

We form the body or web of the wheel of a pair of disks, A, of elastic sheet or plate metal, having radial slots a , and curving inwardly from the hub to the tire, substantially as shown in the patent of Edward B. Meatyard, No. 260,593, dated July 4, 1882. These disks are also fastened to the tire D in the way shown in the same patent. The disk, however, is of substantially the same thickness from center to circumference, and its central aperture, a' , has a ragged margin, in order that it may unite more perfectly with the hub. A number of perforations, a^2 , are made around this aperture. The central part of the disk is then placed upon one division of a cast-iron mold of the proper form for the corresponding half of the hub C, and the other division is placed upon it, and the two divisions are fastened together. Soft steel is then poured in, and the metal flowing through the perforations a^2 around the central aperture of the

disk binds the outer and inner parts of the half-hub together and the disk to both. To make a perfect weld, we apply a heavy pressure to the metal of the hub while in a molten state, whereby the hub and web are joined together as firmly as if they had been originally of one piece.

We are aware that it has been proposed to cast an iron hub on a disk of iron or steel, the disk having perforations for the metal to flow through; but such a use of cast-iron is impracticable, inasmuch as the iron which is poured in to form the hub cools on coming in contact with the disk, so that no perfect or adequate adhesion of the one to the other can be obtained. The soft steel which we use makes under the same circumstances a weld sufficiently close for ordinary service, and when a heavy pressure is applied during the casting, as we have directed, the joining becomes perfect for all purposes. It would be impracticable to apply this pressure to iron in the process of casting, inasmuch as an ordinary mold would give way under the pressure, and a mold of cast-iron, such as is available for steel, would chill the whole mass of iron so as to make the operation a total failure.

What we claim as our invention, and desire to secure by Letters Patent, is—

In the manufacture of car-wheels, the hereinbefore-described method of forming the hub and web, which consists in stamping or otherwise fashioning a disk of sheet or plate metal with a rough-edged central aperture and a series of perforations around it, and in casting to the central part of this disk, under heavy pressure, a half-hub of soft steel, substantially as described.

EDWARD B. MEATYARD.
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Witnesses to signature of Edward B. Meatyard:

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