(No Model.)

W. E. SMITH.

CAR WHEEL.

No. 408,266. Patented Aug. 6, 1889.

Fig. 1.

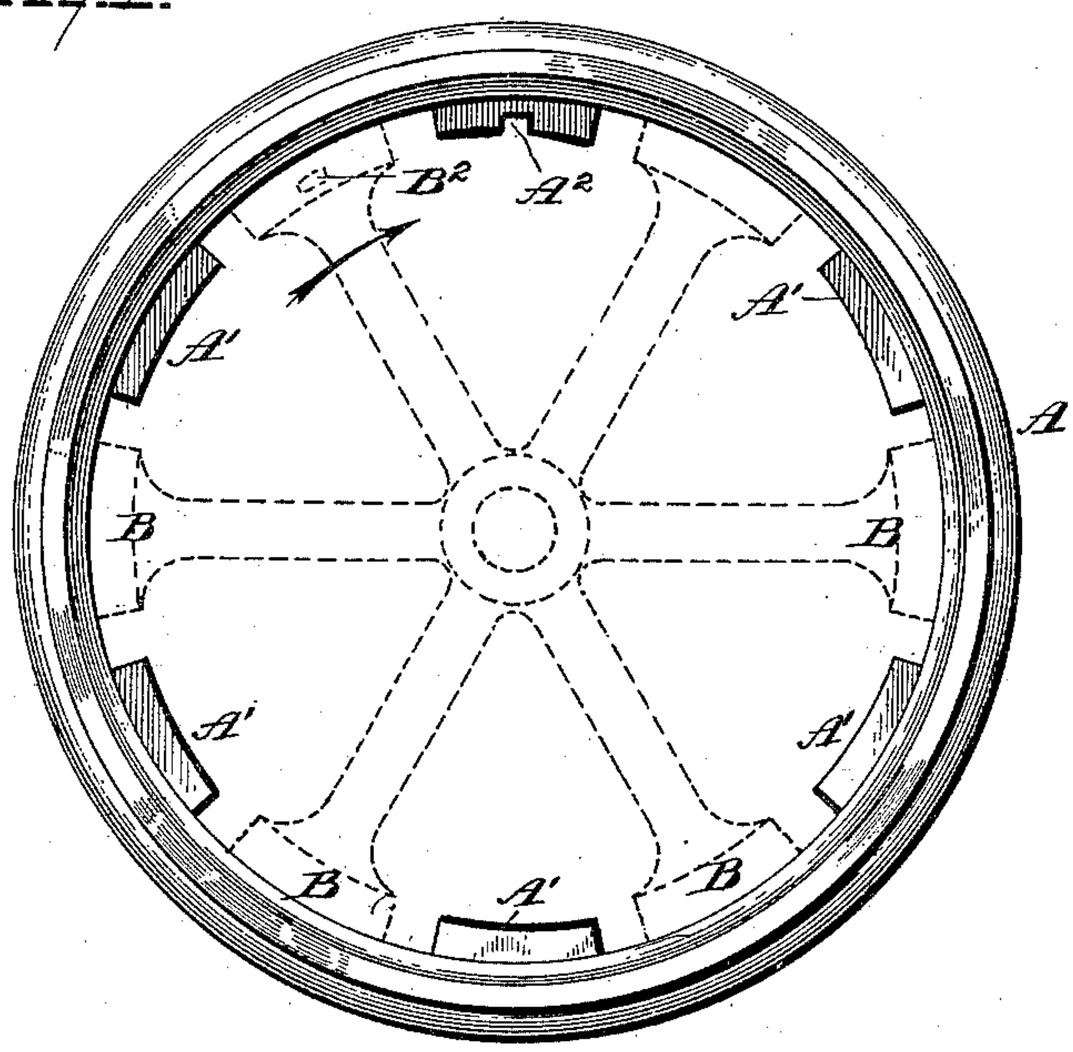


Fig. 2.

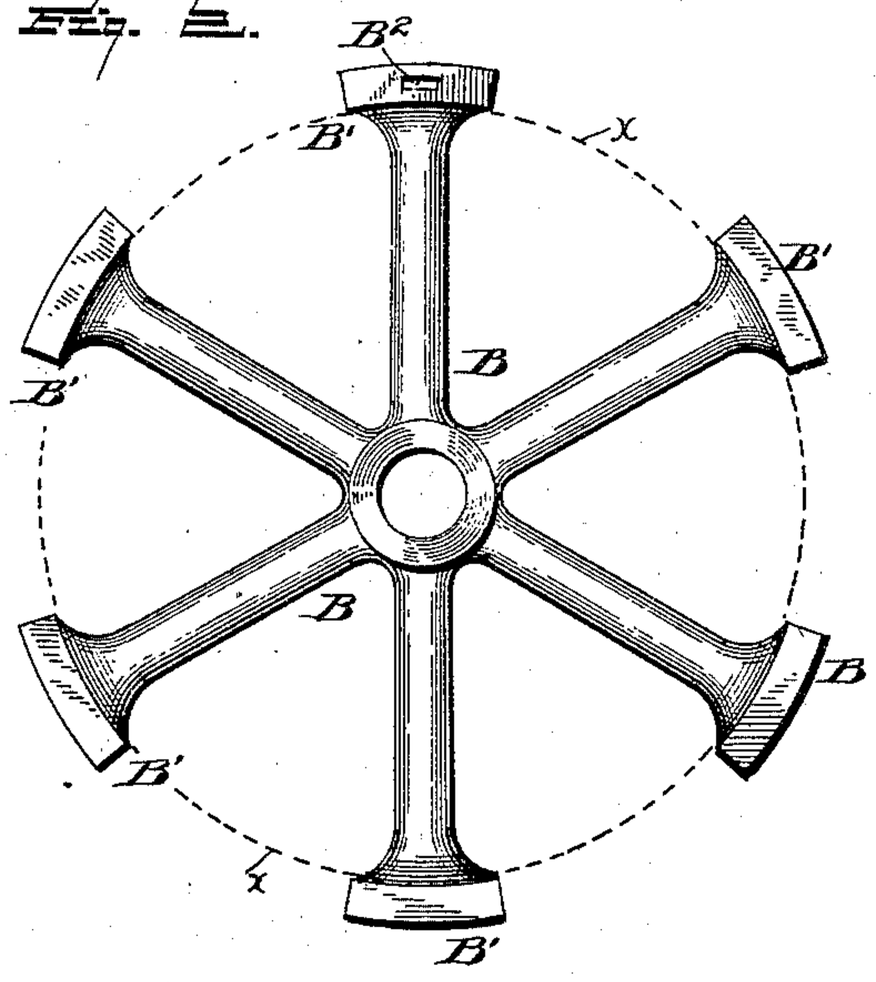
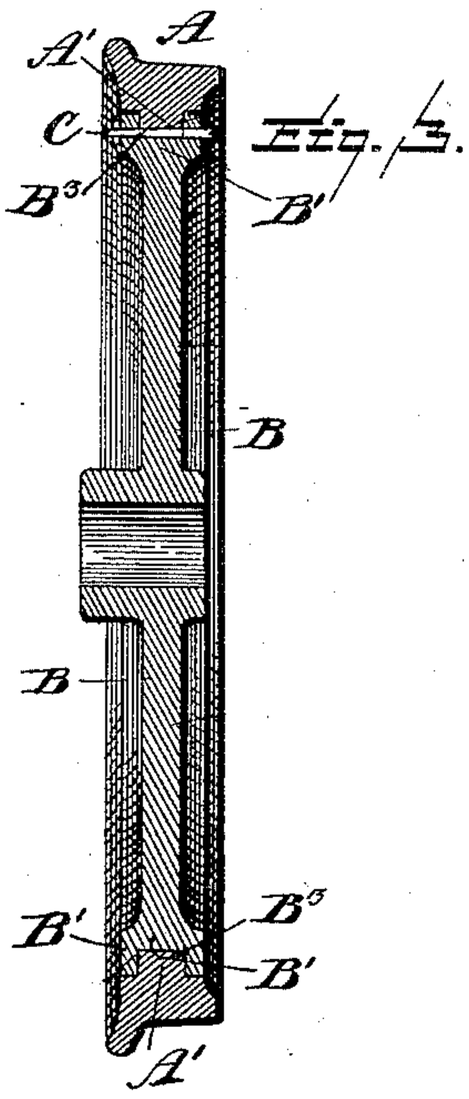


Fig. 3.



Witnesses
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By

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UNITED STATES PATENT OFFICE.

WHEELER E. SMITH, OF LITTLE ROCK, ARKANSAS.

CAR-WHEEL.

SPECIFICATION forming part of Letters Patent No. 408,266, dated August 6, 1889.

Application filed April 20, 1889. Serial No. 307,999. (No model.)

To all whom it may concern:

Be it known that I, WHEELER E. SMITH, a citizen of the United States, residing at Little Rock, in the county of Pulaski, State of Arkansas, have invented certain new and useful Improvements in Car-Wheels, of which the following is a specification, reference being had therein to the accompanying drawings.

My invention has relation to car or other wheels, and particularly to that class where the rim and web are cast separable, the main object of the invention being the provision of a wheel which when one part is worn out that part can be quickly and easily replaced without the necessity of taking the axle out from under the car and pressing the old wheel off and new one on. Other objects are to provide a wheel which, when constructed as above, can be manufactured at a minimum cost and at the same time be light, strong, and serviceable. Other objects and advantages of the invention will appear in the following description, and the novel features thereof will be particularly pointed out in the claim.

Referring to the drawings, Figure 1 is a side elevation of a wheel, the web thereof being shown in dotted lines and ready for insertion in place. Fig. 2 is a side elevation of the web detached from the wheel; and Fig. 3 is a vertical section of a wheel constructed in accordance with my invention.

Like letters of reference indicate similar parts in all the figures of the drawings.

A represents the rim or outer portion of a wheel, the inner periphery of which is provided with suitable lugs or shoulders projecting at suitable distances therefrom, the object of which will be later apparent. One or more of the lugs or shoulders A′ are provided with a groove or slot A^2, a groove being shown in this instance.

B is the web of the wheel, provided with the usual spokes and journal for the reception of the axle. (Not shown.) The spokes of the web are provided on their ends with lugs or shoulders B′, which are grooved their entire length, as at B^3, to receive the lugs A′ on the rim A, which are adapted to fit snugly therein. One or more of the shoulders or lugs are slotted to receive a set-screw or wedge, the function of which is to hold the web securely in place in the rim.

The operation involved in placing the web in the rim is as follows: The web is placed in the rim, the shoulders or lugs on the spokes of the web being between those formed on the rim—that is, in the position indicated by dotted lines in Fig. 1. The web is then turned in the direction indicated by the arrow (the groove in the shoulder B′ receiving the shoulder A′ of the rim) until the slot B^2 in the shoulder B′ is opposite the groove A^2 formed in the lug A′. The wedge-pin (or other suitable fastening device) C is then driven in the slot B^2, passing through the groove A^2, thus holding the web securely in place within the rim.

In Fig. 2 I have shown by dotted circle the invention applied to a disk-web, which is equally advantageous to a spoke-web.

I am aware that it is not new to provide a wheel-rim with lugs to interlock by means of a dovetail joint with lugs on the web or spokes, and do not seek to cover such construction, broadly. I deem it important that other means should be used than the frictional engagement of the parts or of soft metal poured in between the joints, as has been proposed. These means should be made removable for convenience in assembling or separating the parts. By my construction all evil results attending the expansion and contraction of the wheel are avoided.

What I claim is—

The combination, with a rim of a wheel having shoulders on its inner periphery, some of which are grooved transversely, of a web provided with lugs grooved on their periphery to receive the shoulders on the rim, and slotted transversely, and retaining means passed through said slots and into the grooves in the shoulders on the rim, substantially as shown and described.

In testimony whereof I affix my signature in presence of two witnesses.

WHEELER E. SMITH.

Witnesses:
N. W. COX,
J. F. O'HAIR.