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L. E. WAITE

1,853,479

METHOD OF FORMING WHEELS

Original Filed April 18, 1929

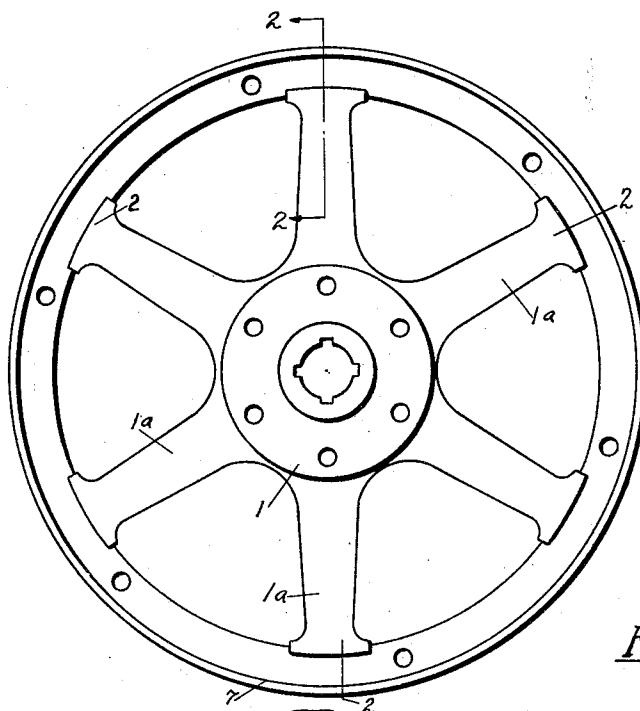


FIG. 1.

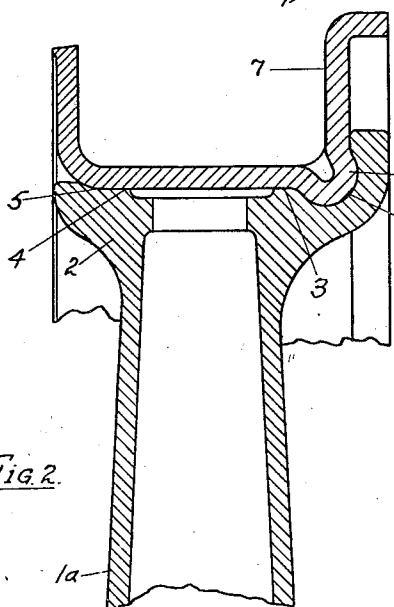


FIG. 2.

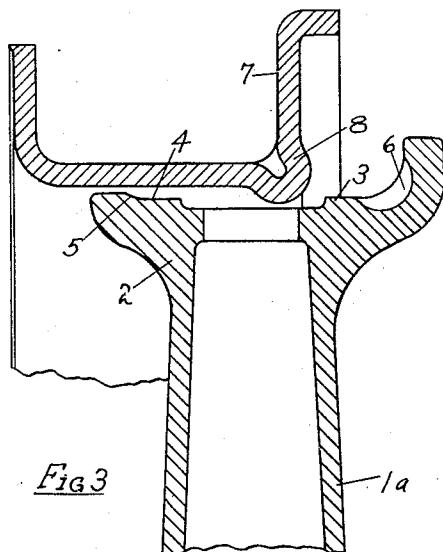


FIG. 3

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METHOD OF FORMING WHEELS

Original application filed April 18, 1929, Serial No. 356,108. Divided and this application filed March 3, 1930. Serial No. 432,719.

In forming metal wheels one of the problems is to so secure the felloe to the spokes as to assure rigidity and certainty of the connection so that it will remain locked as to driving strains and as to all types of road shocks. The present invention is designed to form such a wheel with a comparatively light felloe and one that may be readily fabricated. It is a division of application filed by me, April 18, 1929, Serial Number 356,108. Features and details of the invention will appear from the specification and claims.

A preferred embodiment of the wheel illustrating the method by which it is made is shown in the accompanying drawings as follows:—

Fig. 1 shows a side elevation of the finished wheel.

Fig. 2 an enlarged section on the line 2—2 in Fig. 1.

Fig. 3 a similar view with the felloe and wheel end in the process of assembly.

1 marks a wheel center with spokes 1a. This is ordinarily of cast metal. The spokes 15 are provided with felloe pads 2 at their outer ends, these pads having felloe seats 3 and 4. An inwardly faced shoulder 5 is arranged just outside of the seat 4 and a locking socket 6 is arranged in the inner edge of the pad 2 30 along the seat 3.

A channel-shaped felloe 7 surrounds the wheel center and has protuberances 8 formed in the metal that extend into the sockets 6. The outer edge of the felloe engages the shoulder 5 supplementing the protuberances in locking the felloe in place. It will be noted that the protuberances not only extend internally but laterally into the sockets.

In forming the wheel, the wheel center is cast in the ordinary manner and the seats formed on the felloe pads. The felloe is formed with an initial diameter slightly less than that of the pads with the protuberances arranged therein. It is expanded so that it may be introduced over the shoulder 5 into place on the seats with the protuberances in place in the sockets. Upon the cooling of the felloe it securely seats itself on the pads and 50 locks the wheel in place with the protuber-

ances locking the wheel as to driving strains and the sockets and shoulder holding the felloe in place. It will be noted that the rim may be assembled by moving it to its position axially with the protuberances off-set circumferentially from the shoulders 5 and the felloe may then be rotated to bring the protuberances into register with the sockets. In this way the protuberances may extend inwardly beyond the seats 3 and 4 without requiring an expansion sufficient to carry the protuberances outside of the shoulders 5. This permits, therefore, of deeper sockets and larger protuberances than would be the case if it was necessary to move these in an axial direction over the shoulders.

What I claim as new is:—

1. The method of forming wheels which consists in forming a wheel center with spokes having felloe pads with locking sockets therein, forming a felloe of less initial diameter than the wheel center as defined by the seating surfaces of the pads and with protuberances in the metal thereof, expanding the felloe by heat, placing the same on the pads with the protuberances in register with the sockets, and permitting the felloe to shrink into seating position.

2. The method of forming wheels which consists in forming a wheel center with 80 spokes having felloe pads, said pads having inwardly faced shoulders and locking sockets therein, forming a felloe of initially less diameter than the wheel center as defined by the seating surfaces of the pads and with protuberances in the metal thereof, expanding the felloe by heat, placing the same on the pads with the protuberances in register with the sockets, and permitting the felloe to shrink into seating position.

3. The method of forming wheels which consists in forming a wheel center with spokes having felloe pads, said pads having inwardly faced shoulders and locking sockets therein, forming a felloe of initially less diameter than the wheel center as defined by the seating surfaces of the pads and with protuberances in the metal thereof, expanding the felloe by heat, placing the same on the 100

pads by an axial movement of the felloe relatively to the pads and a rotative movement of the felloe to bring the protuberances into register with the sockets, and permitting the felloe to shrink into seating position.

5 In testimony whereof I have hereunto set my hand.

LORENZO E. WAITE.

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