

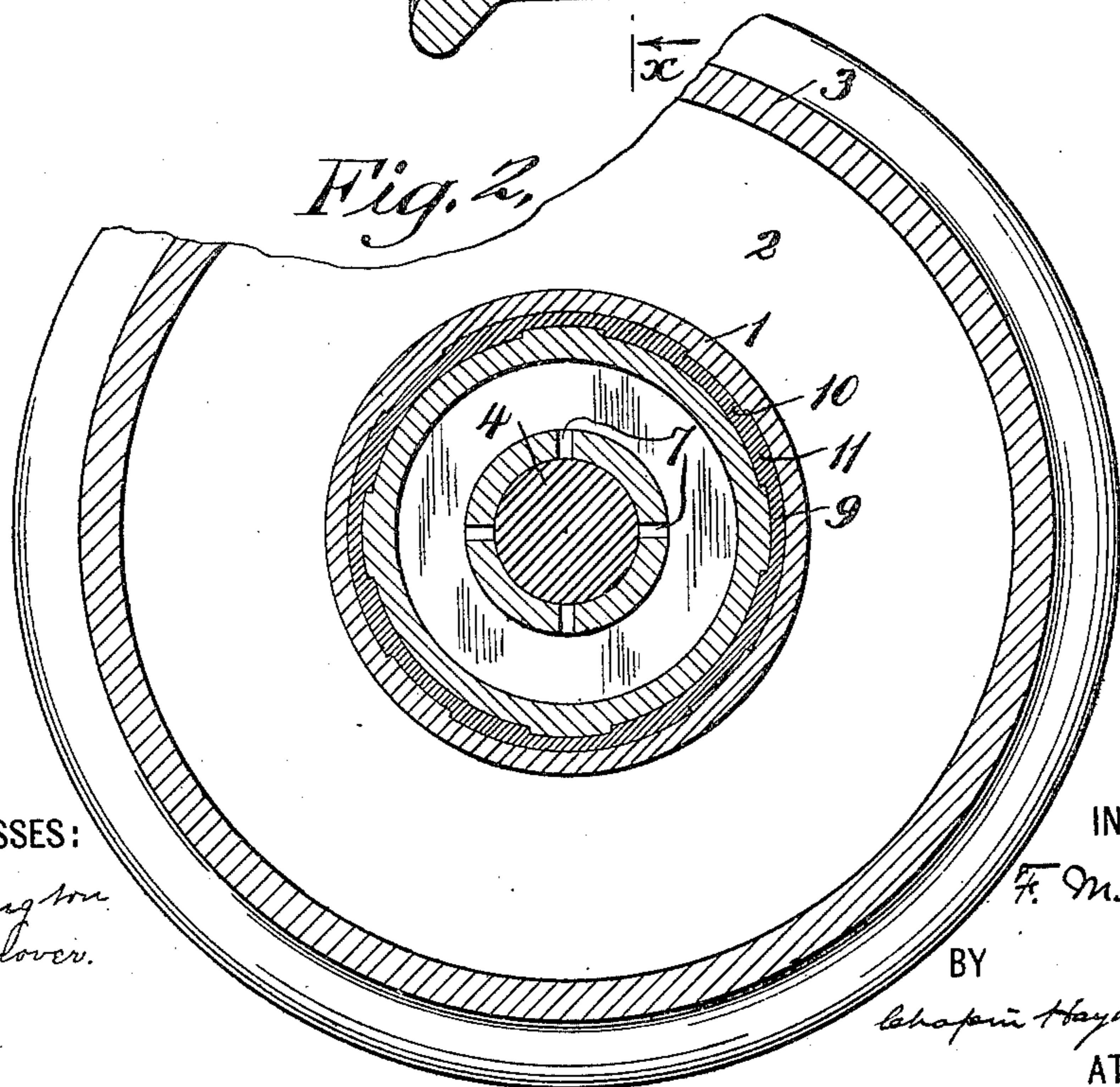
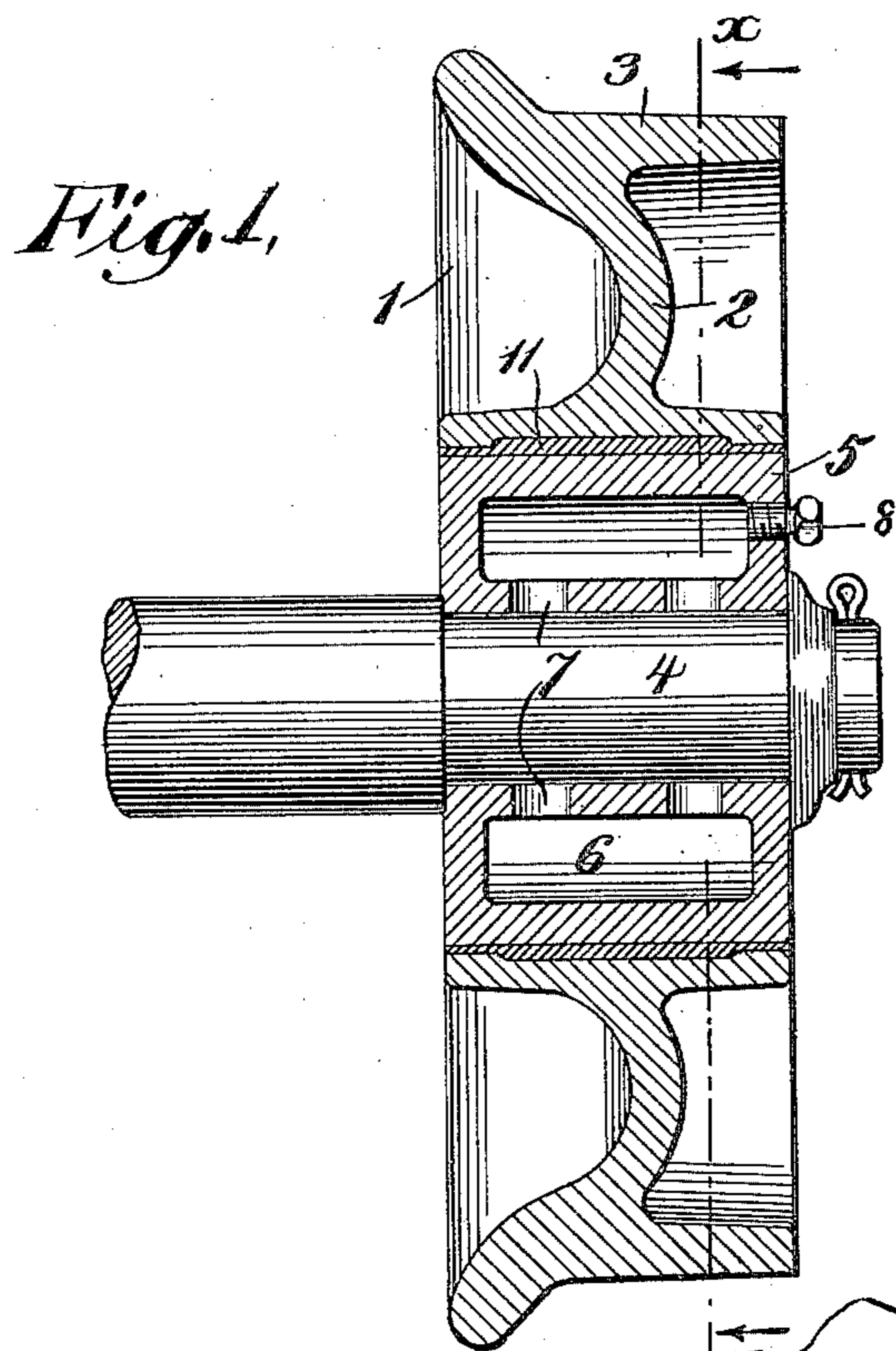
No. 701,292.

Patented June 3, 1902.

F. M. CANDA.
WHEEL.

(Application filed Oct. 30, 1901.)

(No Model.)



WITNESSES:

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WHEEL.

SPECIFICATION forming part of Letters Patent No. 701,292, dated June 3, 1902.

Application filed October 30, 1901. Serial No. 80,495. (No model.)

To all whom it may concern:

Be it known that I, FERDINAND MORA CANDA, a citizen of the United States, residing in New York, in the county and State of New York, have invented certain new and useful Improvements in Wheels; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to improvements in wheels, and particularly to improvements in car-wheels, such as mine-car wheels, which revolve about journals formed on stationary axles.

My invention consists in the novel composite construction of the wheel, whereby the body and rim of the wheel may be formed of a hard material, like chrome-steel, while the hub may be of softer material, such as cast-iron, which may be machined readily to fit the axle-journal and may have formed in it a chamber for the reception of a lubricant and which will wear better on a steel journal than will a steel friction-surface.

The objects of my invention are to facilitate the fitting of wheels of the class described, composed of a hard material, like chrome-steel, to their journals, to provide for proper lubrication of wheels of the class described, and to make the wheel as simple, inexpensive, and strong as possible.

I will now proceed to describe my invention with reference to the accompanying drawings, in which—

Figure 1 is a central longitudinal section of the wheel in place on the journal, and Fig. 2 is a section of the wheel on the line X X of Fig. 1.

Referring now to the drawings, the wheel there shown consists of a main portion or body 1, having the usual web 2 and flanged rim 3. This portion of the wheel I preferably construct of a hard and strong material—such as cast-steel, preferably chrome-steel—thereby securing greater strength and better wearing qualities than can be obtained in a chilled cast-iron wheel of the ordinary type. Such a wheel is difficult or impossible to bore or ream out to form a bearing-surface for the journal 4, on which the wheel is to be mounted, because of the hardness of the material.

Likewise a chamber for the reception of lubricant cannot be cored out well in a steel wheel of the class described. For these reasons the steel body portion 1 of the wheel is formed to receive a hub 5, of cast-iron or other suitable material soft enough to permit it to be bored and reamed easily, and in which a chamber 6, to receive lubricant, may be cored out readily. Passages 7 7 serve to convey the lubricant from this chamber to the journal, and the said chamber may be filled through an opening normally closed by a screw-plug 8.

The hub 5 is provided on its periphery with small lugs 9, and the body 1 of the wheel is provided with corresponding lugs 10. The wheel and its hub are secured together by pouring molten zinc or other suitable readily-fusible material into the space between the hub and body after the two have been assembled. This is an easy and convenient method of securing the parts together and permits accurate centering of the bore of the hub with respect to the tread of the rim without machining the inner surface of the body of the wheel or the outer portion of the hub of the wheel. The lugs 9 and 10 prevent the zinc filling from slipping. The use of such a joint also facilitates the removal of a hub when it becomes worn, because by heating the wheel the fusible binding metal may be melted and caused to run out, after which a new hub may be inserted and secured in place in the same manner as the former hub.

The layer of binding material is designated in the drawings by the numeral 11.

Having thus completely described my invention, what I claim, and desire to secure by Letters Patent, is—

1. As an article of manufacture, a car-wheel comprising a body portion formed of a relatively hard material and a separate hub formed of a softer material suitable for a bearing member, said body portion and hub being secured together by a layer of binding material fusible at a lower temperature than either the body portion or the hub, and said hub having an interior bearing adapted to permit rotation about a suitable journal.

2. As an article of manufacture, a car-wheel, comprising a cast-steel body portion and a separate hub formed of a softer material and

secured to said body portion by a layer of metal fusible at a lower temperature than the metals of said body portion and hub, said hub having an interior bearing-surface adapted to permit rotation about a suitable journal, and having within it a chamber for lubricant communicating by a passage with said bearing-surface.

3. As an article of manufacture, a car-wheel, comprising a cast-steel body portion and a separate hub formed of a softer material, and a layer of cast metal filling the space between

said body portion and said hub and securing the same together, said body portion and hub having on their adjacent surfaces projections whereby they are interlocked with the layer of cast metal binding them together. 15

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

FERDINAND MORA CANDA.

Witnesses:

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