(No Model.)

M. HAMLIN.

CAR WHEEL.

No. 358,352. Patented Feb. 22, 1887.

Fig. 1.

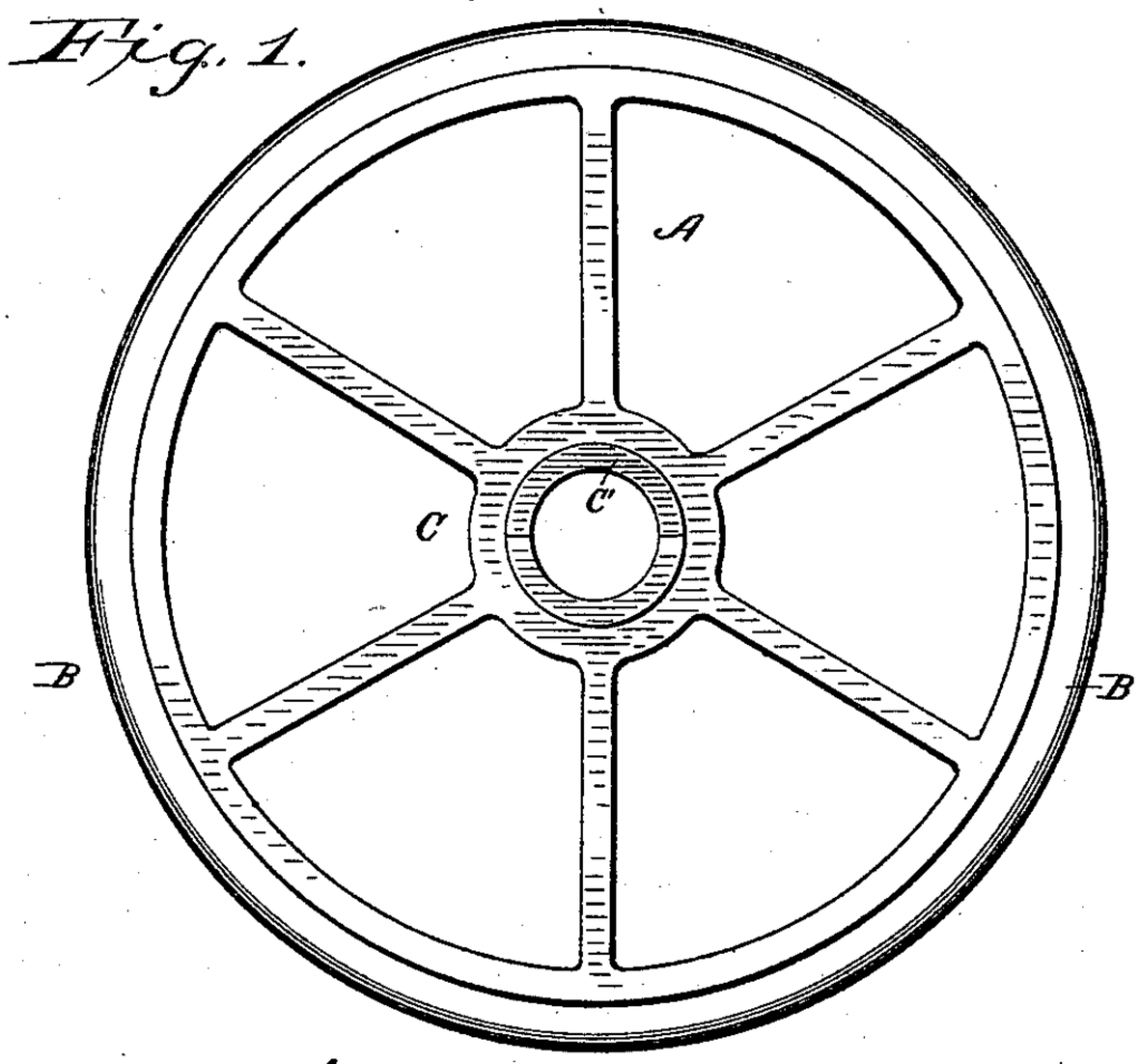


Fig. 2.

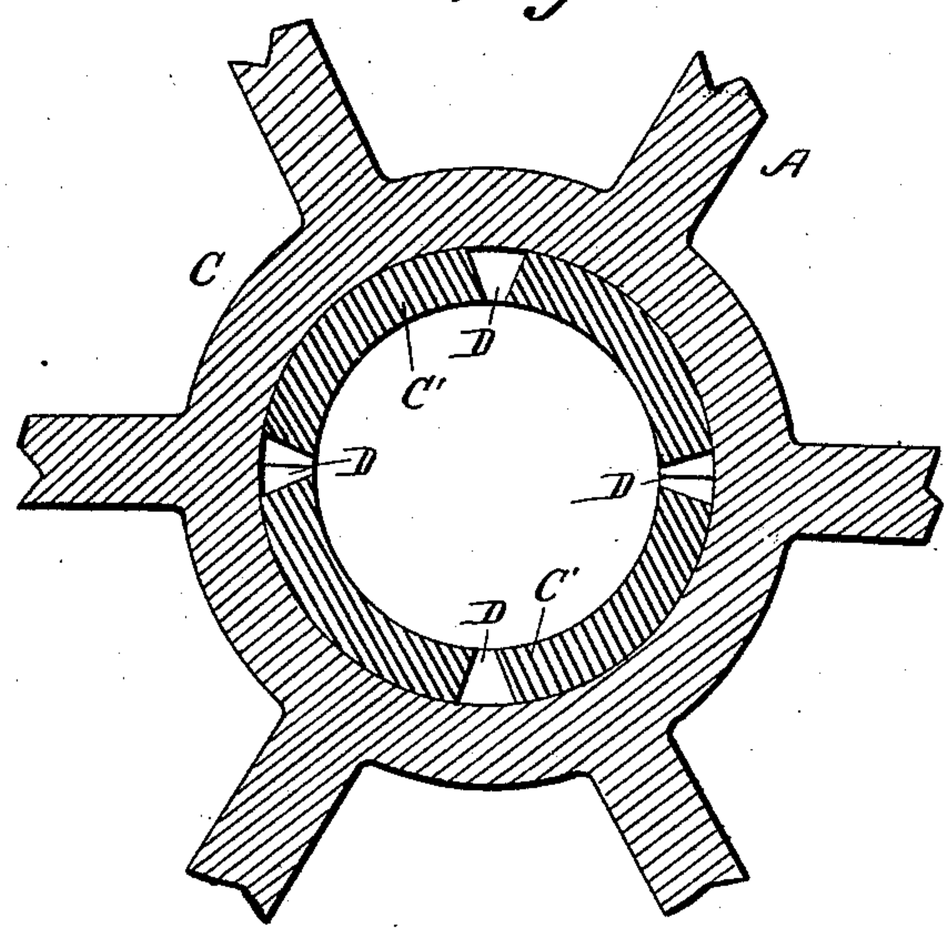
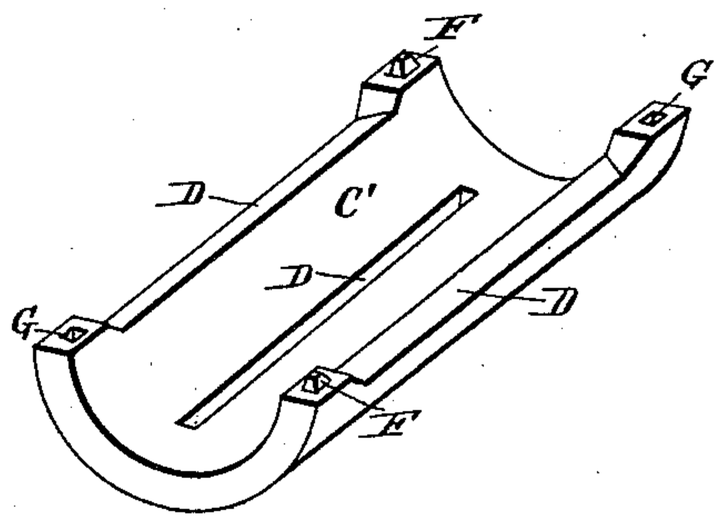


Fig. 3.



WITNESSES

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MAHLON HAMLIN, OF CATAWISSA, PENNSYLVANIA.

CAR-WHEEL.

SPECIFICATION forming part of Letters Patent No. 358,352, dated February 22, 1887.

Application filed December 20, 1886. Serial No. 222,099. (No model.)

To all whom it may concern:

Be it known that I, MAHLON HAMLIN, a citizen of the United States, residing at Catawissa, in the county of Columbia and State of Pennsylvania, have invented certain new and useful Improvements in Car-Wheels, of which the following is a specification, reference beinghad therein to the accompanying drawings.

This invention relates to certain improvements in car-wheels; and it has for its objects to so construct the wheel that it may be cast complete and in so nearly a finished condition as to require no boring at the hub, thus diminishing its cost materially, to provide a harder periphery and bearing at the hub, thus increasing its durability, and to insure the proper lubrication of the wheel when complete, as more fully hereinafter specified. These objects I attain by the means illustrated in the accompanying drawings, in which—

Figure 1 represents a side elevation of a wheel constructed according to my invention; Fig. 2, a sectional view of the hub of the wheel and its bushing, and Fig. 3 a perspective view of the sections of the bushing of the hub.

In the drawings, the letter A indicates the body of the wheel, which is constructed of cast-steel or other hard metal, with a flanged rim or periphery, B, and a hub, C.

The letter C′ indicates a bushing, which is constructed of chilled cast metal in two semi-cylindrical parts or sections. These sections have longitudinal slots or openings D, and are provided with projections F and recesses G, which interlock when the sections are placed together, causing them to mutually register and hold them in position while the wheel is in process of construction.

In the construction of the improved wheel the bushing is first cast and the sections are finished by truing out the inner sides by means of an emery-wheel or other grinding-tool, thus obviating the expensive process of boring. The pattern of the main portion of the wheel is then placed in the lower part of a two-part mold, the lower end of the hub of the pattern being provided with a slight core-print of an external diameter corresponding to that of the bushing, so as to form a seat for the same in the sand. The upper portion of the hub is provided with a similar core-print, which forms a recess for the upper end of the bushing in the cope or upper portion of the mold. After the impression of the pattern has been formed in the mold the parts are separated and the pattern removed. The bushing is then placed in the lower part of the mold, and the central portion, as well as the longitudinal slots, is packed with molding-sand, and the upper portion or cope of the mold is replaced, after which the casting is effected in the ordinary manner.

The molten metal, during the process of cooling, will contract, compress, and bind the bushing, securing it firmly within the hub. As the bushing has been previously trued and finished so as to center accurately it will be evident that no boring will be required to fit it to the axle of the car. As the boring is thus dispensed with, it is apparent that the bushing may be made of the hardest metal, so as to furnish a wheel at comparatively small cost, which will be much more durable than the ordinary wheels, the hubs of which have to be constructed of softer metal in order to permit the boring necessary in the usual finishing operations.

The slots in the bushing, after the filling of sand has been removed from its interior, are filled with absorbent packing, to secure and hold the oil or other material employed to lubricate the bearings. By thus constructing the wheel of chilled steel at its periphery and hub it will offer great resistance to the parts subjected to most wear, while the body or web will have the requisite toughness to give the wheel the greatest possible strength.

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

1. A car-wheel constructed of chilled metal and having a bushing of metal constructed of finished sections secured in the hub during the casting of the wheel, substantially as specified.

2. The combination, in a car-wheel, of the

sectional bushing secured within the hub and provided with longitudinal slots for absorbent packing for oil or other lubricant, substantially as specified.

3. The combination, with the hub of the wheel, of the sectional finished bushing having interlocking registering devices, substantially as and for the purposes specified.

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

MAHLON HAMLIN.

Witnesses:
JNO. S. FINCH, Jr.,
M. P. CALLAN,
CHAS. D. DAVIS.