

(No Model.)

C. D. CANNON.
MOLD FOR METALLIC WHEELS.

No. 465,016.

Patented Dec. 15, 1891.

FIG. 1.

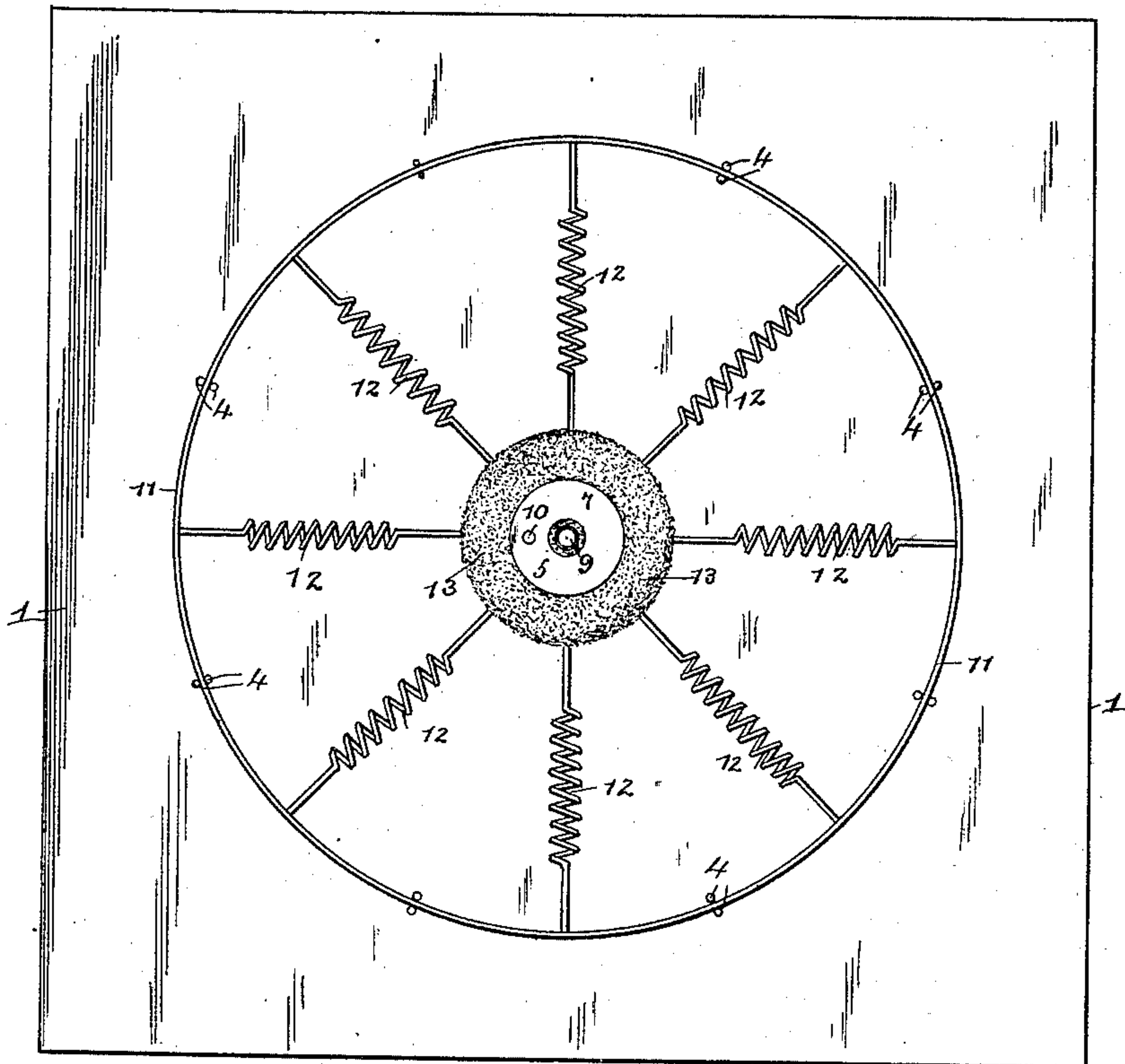


FIG. 2.

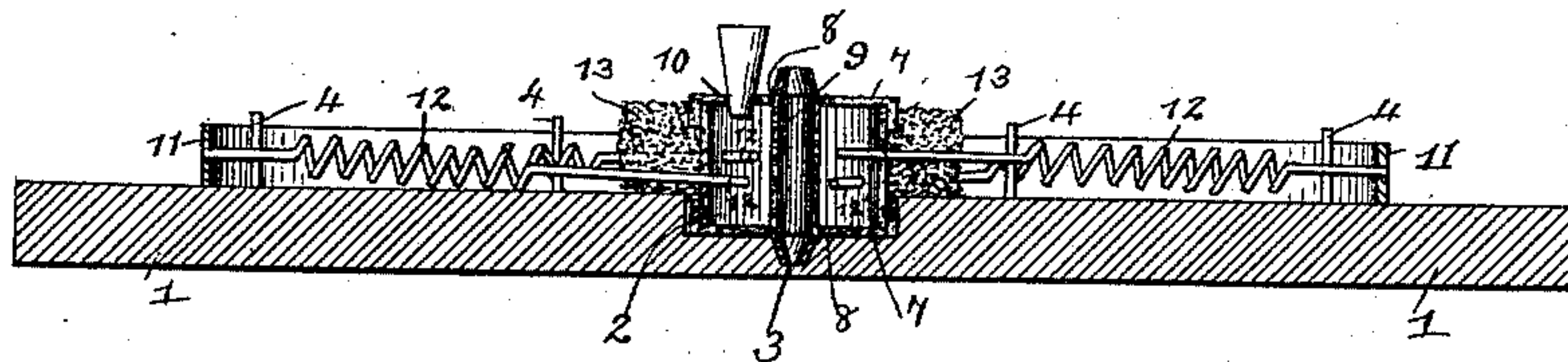


FIG. 3.

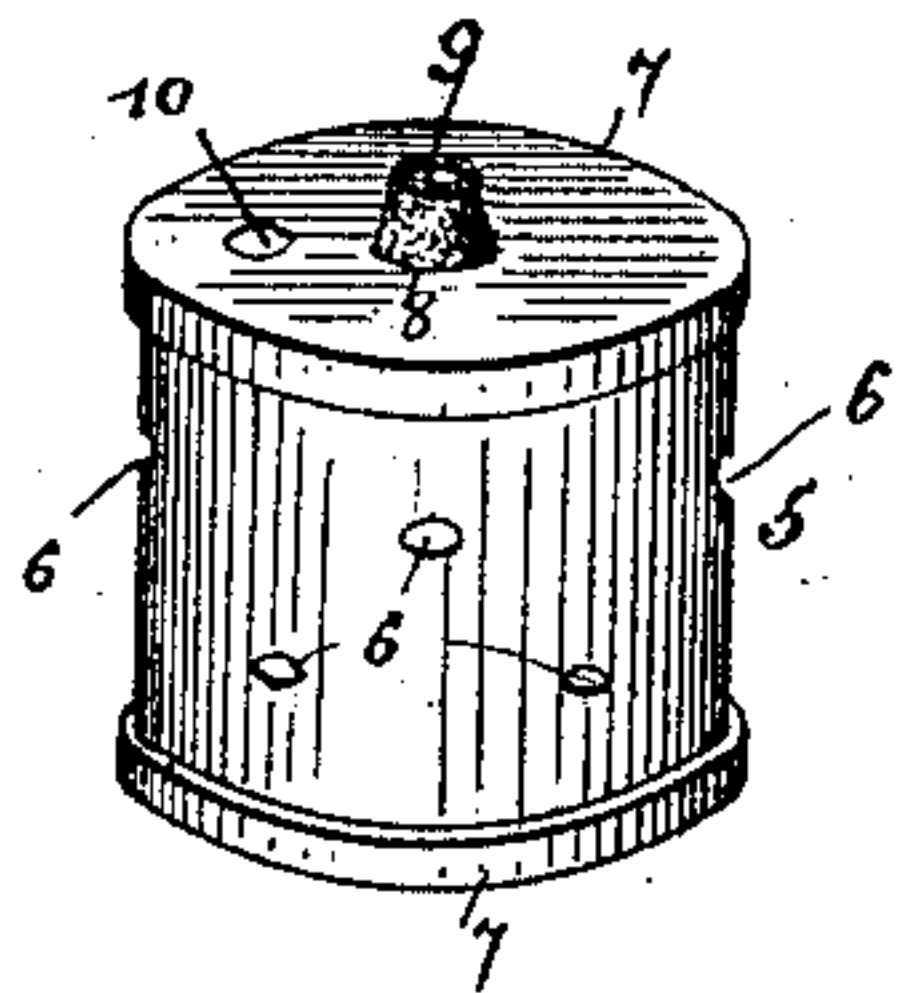
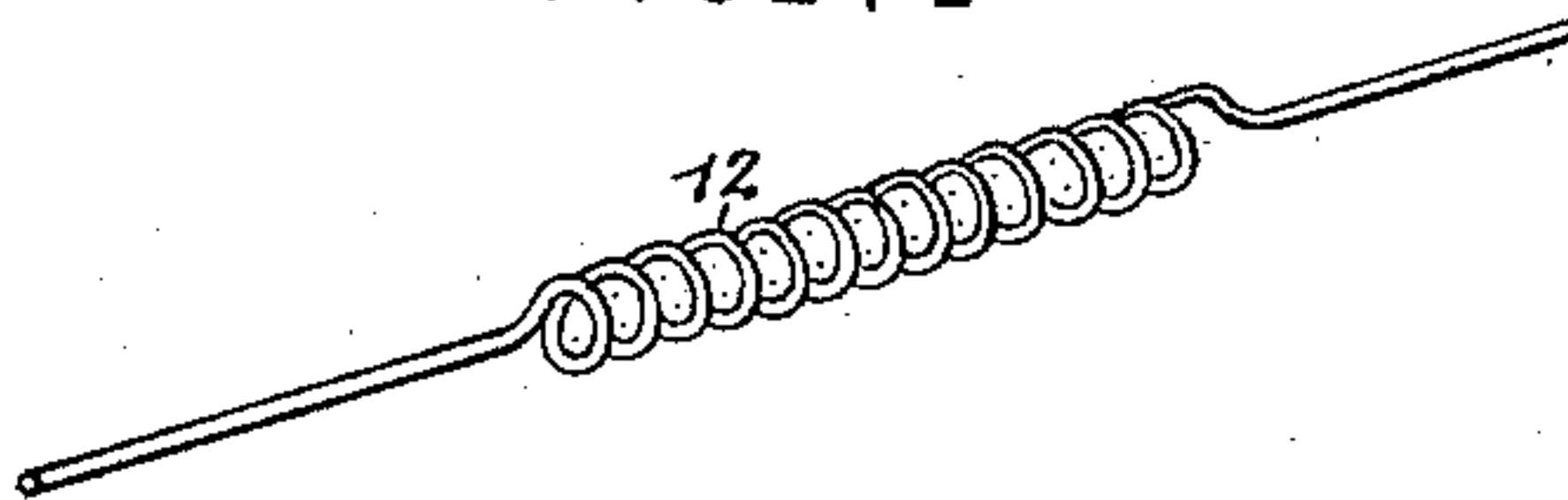


FIG. 4.



Witnesses

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CLINTON D. CANNON, OF BATTLE CREEK, MICHIGAN.

MOLD FOR METALLIC WHEELS.

SPECIFICATION forming part of Letters Patent No. 465,016, dated December 15, 1891.

Application filed July 17, 1890. Serial No. 359,060. (No model.)

To all whom it may concern:

Be it known that I, CLINTON D. CANNON, a citizen of the United States, residing at Battle Creek, in the county of Calhoun and State of Michigan, have invented a new and useful Improvement in the Manufacture of Metallic Wheels, of which the following is a specification.

My invention relates to an improvement in molds for casting hubs on the spokes of metallic wheels.

The object of this invention is to provide a molding apparatus and mold that will be simple in construction and that will do away with the difficulty encountered in sand molding by the generation of gas by the pouring of the molten metal into the said mold; and it consists in casting spokes passing through a metallic rim solid with the hub and using as the lining of the mold proper material of a similar nature to asbestos, which is preferred, the same being used in this apparatus, in that it can easily be cleaned off of the casting after the same is made.

It also consists of further details herein-after more fully described, and pointed out in the claim appended hereto.

In the accompanying drawings, Figure 1 is a plan view of a mold and wheel in position for molding in the spokes constructed and arranged in accordance with my invention. Fig. 2 is a sectional view of the same. Fig. 3 is a detail in perspective of the paper mold. Fig. 4 is a detail of one of the spokes.

1 represents a base or platform, constructed of any suitable material and provided with a central aperture or sink 2, conforming in shape to the end of the mold to be placed therein, and in the bottom of said aperture or sink 2 is a recess 3, designed to receive the core of the mold forming the hole through the hub. 4 indicates a series of pins placed concentrically to the said aperture, which are adapted to hold the rim of the wheel in its proper position on said base relative to the mold.

5 represents a mold constructed of asbestos, preferably, or of substance of similar nature thereto, and in a similar manner to the construction of ordinary paper boxes, and the inner wall of the same is formed in a shape to correspond to the shape of the hub de-

sired. Said mold is provided with a series of perforations 6, through which the spokes of the wheel pass, and are thus enabled to be cast in the hub. Both ends of mold 5 are covered by removable caps 7, which are each provided with a central perforation 8, through which the core 9 of said mold passes, and the uppermost cap is further provided with an additional hole 10, which receives a paper funnel or other suitable article to form the gate for the molten metal. Said core 9 consists of a sand or metal center wrapped with the same material with which the outer shell of the mold is composed, and as said core passes through the central apertures 8 of caps 7 it not only forms the hole through the hub, but also serves to steady the mold in its position on said base while the metal is being poured.

11 indicates a rim of a wheel formed of malleable iron placed on base 1 within the pins 4 thereon. Coiled spokes 12 pass through said rim and into mold 5 through the perforations 6, and a light packing 13 of sand is placed around the outer face of the mold in order to fill up any space not filled by the spokes in the said perforations, and thus prevents any outflow of the metal therefrom and a spoiling of the casting.

The operation of the process is as follows: The malleable-iron rim is first placed in position on the base, as described, and concentric thereto within the sink 2 the asbestos mold is next placed firmly in place. The coiled spokes are then passed through the holes in the rim made for that purpose and on through the holes in the mold, which were previously perforated in the proper places to hold the spokes to be cast on the hub. The top cap of the mold is removed and the core thereof is placed in the mold and inserted in the recess 3 in the bottom of the sink in which the mold is seated, and when the top cap is replaced in position over the core it can be readily seen that the same will be held firmly in place and the whole mold steadied in its position. The packing of sand, which is next placed around the mold, besides keeping back any metal which might ooze out through the perforations in the mold, gives additional strength and support to the same. This packing of sand completes an apparatus for molding that

either can be looked at as a sand mold provided with an interior lining of the nature described or of a mold, as set forth, having an exterior packing of sand. The molten metal
5 is then poured through the hole 10 in the top cap by any suitable means, thus completing the operation.

It is thought from the foregoing that the construction and operation of casting in my
10 improved mold will be apparent.

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

In a molding apparatus for casting the hub
15 on the spokes of metallic vehicle-wheels, a suitable base or support, a sectional asbestos

mold having an outer shell provided with a series of circular perforations for the reception of the spokes, detachable top and bottom caps inclosing said shell, a core covered 20 with the same material as the shell passing through said caps and holding the parts of the mold together, and an exterior packing of sand completely encircling said mold, substantially as set forth. 25

In testimony that I claim the foregoing as my own I have hereto affixed my signature in presence of two witnesses.

CLINTON D. CANNON.

Witnesses:

A. H. BRIGGS,
C. L. SIMONS.