(No Model.)

W. W. LOBDELL & R. C. TOLMIE.

ANCHORING CORES IN MOLDING FLASKS.

No. 564,896. Patented July 28, 1896.

FIG. 1.

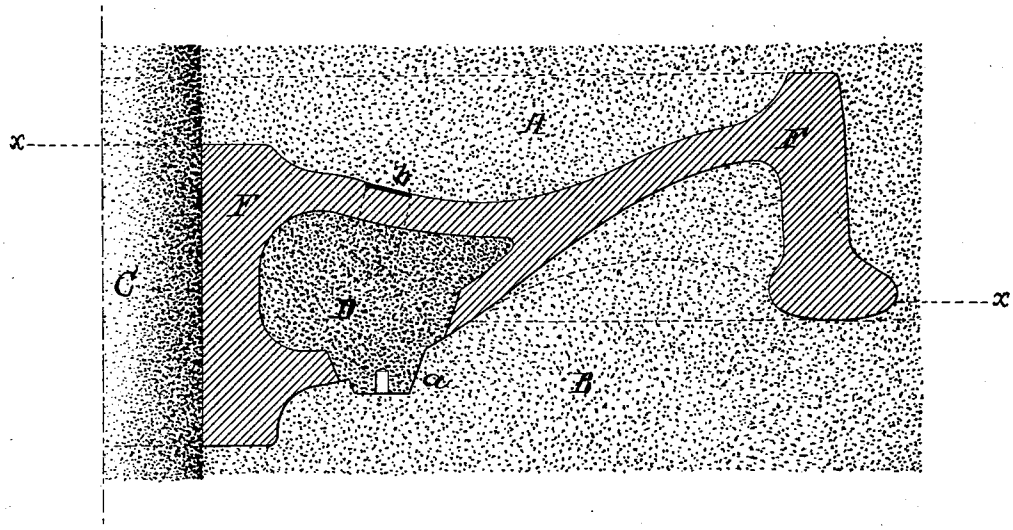
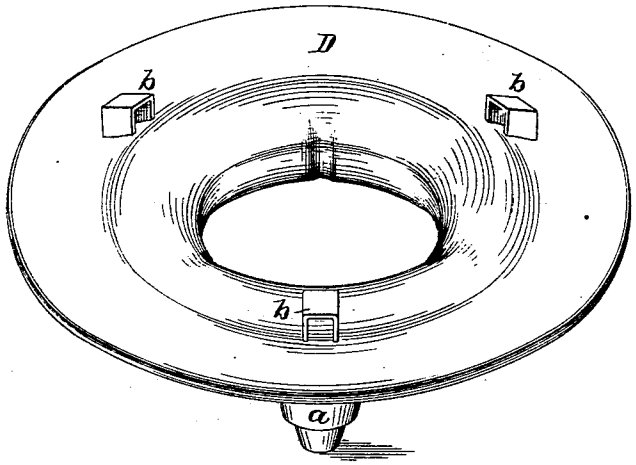


FIG. 2.



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THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

WILLIAM W. LOBDELL AND ROBERT C. TOLMIE, OF WILMINGTON, DELAWARE.

ANCHORING CORES IN MOLDING-FLASKS.

SPECIFICATION forming part of Letters Patent No. 564,896, dated July 28, 1896.

Application filed November 3, 1893. Serial No. 489,937. (No model.)

To all whom it may concern:

Be it known that we, WILLIAM W. LOBDELL and ROBERT C. TOLMIE, citizens of the United States, and residents of Wilmington, New Castle county, Delaware, have invented certain Improvements in Anchoring Cores in Molding-Flasks, of which the following is a specification.

The object of our invention is to so construct an anchor for the cores used in casting such objects as car-wheels that no special skill will be required on the part of the molder in preparing the mold nor will the core be to any material extent more expensive or more difficult to prepare.

In the accompanying drawings, Figure 1 represents part of a mold for a car-wheel, showing therein part of a wheel-casting and part of a core having an anchor constructed in accordance with our invention; and Fig. 2 is a perspective view of the core.

In molding such objects as car-wheels, where the core has no lateral support in the mold, but is entirely surrounded by the metal, with the exception of those portions whereby it is seated in the under part or drag of the mold, it becomes necessary to provide what are termed "anchors" for preventing the rise of the core in the mold when the metal flows under it. Such anchors may be either placed in the upper portion or cope of the mold for bearing upon the top of the core, or they may be carried by the core and bear upon the upper part of the mold, the latter plan being the preferable one. The forms of anchor heretofore used for the purpose are objectionable, because their use requires special care and skill in the preparation of the mold or core, and they are likely to be displaced prior to or during the casting operation, and thus fail to perform their intended function.

In carrying out our invention we provide the core or the upper half of the mold, preferably the core, with a permanent anchor, which is embedded in and retained by the cast metal and the use of which neither complicates nor renders more expensive the formation or setting of either mold or core.

In the drawings, A represents part of the upper half or cope of the mold; B, part of the lower half or drag of the same; C, part of the hub-core; D, part of the core for the hollow body, and F part of a car-wheel cast in the mold. The core C is seated in the cope and drag of the mold, and the core D has legs or supports *a*, seated in the drag of the mold in the usual manner. The core D is also provided with a series of anchors *b*, of which three are shown in the present instance, although two oppositely-disposed anchors may be sufficient in some cases, while in other cases more than three anchors will be advantageous. Each of these anchors consists of a strip of sheet metal bent into U shape and having its opposite legs embedded in the core, from which the upper portion or loop of the anchor projects upwardly to an extent equal to the desired thickness of the casting, so that when the core is inserted in the mold the top of the anchor will have a bearing against the sand in the cope of the mold and will thus serve to securely retain the core in position and prevent any vertical displacement of the same by the lifting action of the molten metal flowing under it.

By the term "U shape" we wish it understood that we do not intend to limit our invention to an anchor having legs strictly parallel, as said legs may be deflected from parallel without departing from our invention.

When the wheel is cast, the anchors are embedded in and retained thereby, the light and thin metal strip having so little bulk that it exercises no chilling effect upon the molten iron and becomes firmly united to the casting.

It will be understood that the top of the anchor is shaped to accord with the plane of the outer surface of the plate of the wheel, so that it is flush with said surface.

The material of which the core is composed is usually baked, so that the anchors will have a firm hold thereupon and will be less likely to be displaced by the upward pressure of the core than if they were embedded in the mold.

The anchors are preferably applied to the core after the molding and before the baking of the same by means of a tool similar to a stapeling-tool, such tool having in its face a recess for receiving the upper end of the an-

chor, said recess being of a depth equal to the desired extent of projection of the anchor from the face of the core.

The parting-line of the mold is represented at x x in Fig. 1, the line following the upper face of the wheel and the outer face of the tread.

Having thus described our invention, we claim and desire to secure by Letters Patent—

In a core for molding, the herein-described core-anchor consisting of a strip or plate of sheet metal bent to form leg portions embedded in the core, and a head above the core presenting a flat surface for bearing against the sand in the mold, substantially as specified.

In testimony whereof we have signed our names to this specification in the presence of two subscribing witnesses.

WILLIAM W. LOBDELL.
ROBERT C. TOLMIE.

Witnesses:
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