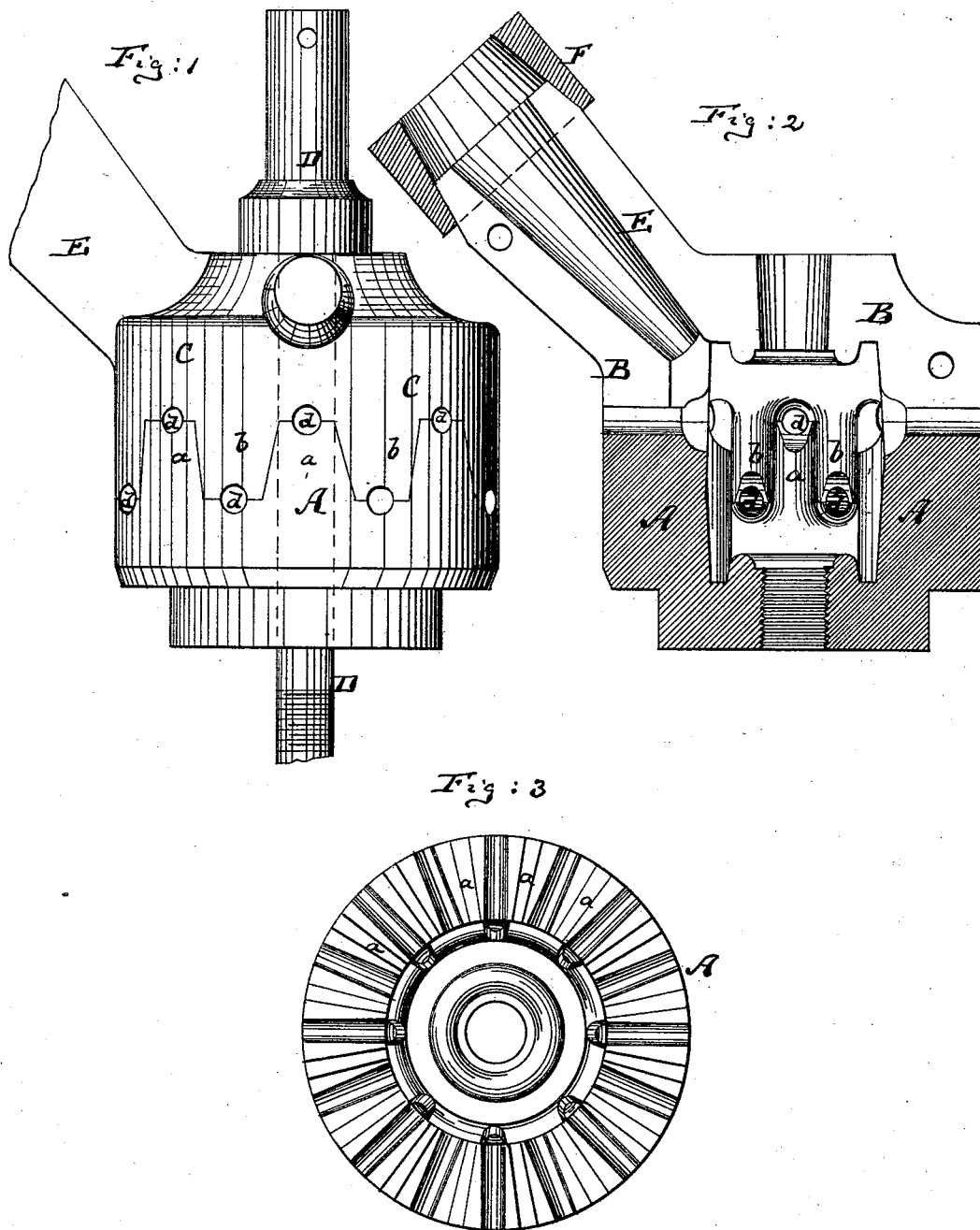


V. PRICE.
Molds for Casting Hubs.

No. 215,772.

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Witnesses:
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UNITED STATES PATENT OFFICE

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IMPROVEMENT IN MOLDS FOR CASTING HUBS.

Specification forming part of Letters Patent No. **215,772**, dated May 27, 1879; application filed December 23, 1878.

To all whom it may concern:

Be it known that I, VIRGIL PRICE, of the city, county, and State of New York, have invented an Improved Mold for Casting Wagon-Wheel Hubs, of which the following is a specification.

Figure 1 is a side view of my improved mold. Fig. 2 is a central vertical section of the same, and Fig. 3 a face view of one part thereof.

Similar letters of reference indicate corresponding parts in all the figures.

This invention has for its object to produce a sectional mold for casting metallic hubs for vehicle-wheels upon the spokes, so that the spokes will be intimately connected with the hubs when the latter come out of the mold.

The invention is applicable, preferably, (at least intended to be,) to the manufacture of such wheels whose spokes have been fitted into the tires or rims before they are cast into the hubs. These spokes so to be secured are made of wire or other metal, having their inner ends bent, flattened, or spread in suitable manner, to constitute heads wherewith to hold them fast in the cast hubs; and the mold which forms the subject-matter of this invention is made sectional, the sections being constructed to fit closely one to the other, so that the cavity within the sections will constitute outline and shape of the body of the hub when filled with metal. To this cavity lead a series of apertures, that extend throughout the circumference of the mold, and serve to receive the inner parts of the spokes that are to enter into the body of the mold and to be cast together with the hub.

In the drawings, the letter A represents the lower part of the mold. B and C are the two upper parts of the same. The lower part, A, is annular in form, and is provided on its upper surface with a series of projecting stems or pieces, *a a*, between which there are corresponding recesses to receive similar stems or pieces *b b*, that project downwardly into them from the upper parts, B and C, of the mold. These two upper parts are each semi-annular in form, so that when placed together they will be the counterpart of the lower piece, A, all the parts being so constructed and shaped that the projecting stems *a a* will interlock with the projecting stems *b b*, in manner indicated in Fig. 2, and

also shown in Fig. 1. Thus, when the mold is closed, as in Fig. 1, the outer circumference will be perfect, and within it will be a cavity of the proper shape and outline of the hub to be cast.

For the reception of the spokes I provide this mold with a series of apertures, *d*, which are clearly shown in Fig. 1, and which are formed so that one half of every such aperture is in the lower part, A, of the mold, and the other half is in the upper part of the mold that is placed over such aperture. In other words, the upper end of every stem *a* has a somewhat semicircular cavity corresponding to a similar cavity in the covering part on the upper part of the mold, and in like manner every stem *b* has in its lower end a semicircular cavity that corresponds to a similar cavity in that part of the piece A over which such stem is placed.

Thus the mold has apertures for the reception of the spokes, and at the same time, by having of each of these apertures one-half in the lower body, A, I am enabled to place the spokes properly into and onto the mold when the mold is taken apart, the lower piece, A, resting on a suitable platform or table; and after the spokes have been properly secured to a rim or tire the inner ends of these spokes are laid upon the part A of the mold, so that every spoke will rest in one of the semicircular cavities formed in the lower part, A, of the mold, as already stated. Thus the spokes are properly spaced. The upper parts, B and C, of the mold are then put in place and properly locked together, so that they will complete the above-mentioned circular cavities, and rest on the spokes placed into them, thus locking the spokes in place, and also closing the holes *d*, so that the fluid metal cannot escape through them. Having thus been united, the parts of the mold are further securely clamped together by means of a screw, D, which passes through the center of the mold lengthwise into the supporting table or platform, and which has a shoulder bearing upon the upper parts, B C, of the mold. This post or screw D serves also to form the bore of the hub, around which the metal is cast.

The metal enters the mold through a suitable spout or inlet, E, that is formed by proper projections of the parts B C, and fills the cav-

ity within the mold around the post D, thereby also passing around the inner ends of the spokes that enter the mold, and serve to unite the spokes to the hub.

When the process of casting is finished, a ring, F, which surrounds the upper part of the spout E, is turned, by a suitable wrench, to twist off the projecting part of metal that fills the spout, and to leave the hub complete within the mold, which can then be dismembered to remove the finished casting. The ring F, being turned loose on the spout E, takes hold by friction of the projecting neck of metal and twists it, thereby detaching the lower smaller end of the neck. The ring F is in place on the spout E during the act of casting, and therefore surrounds the upper end of the projecting neck of metal.

It is evident that the mold is properly centered on the supporting-table with reference to the rim or tire of the wheel in which the spokes are secured before the process of casting is commenced; and it is also evident that if the inner ends of the spokes are flattened, bent, or spread in any way the inner faces of the pieces of the mold are correspondingly shaped, to admit such spread, bent, or flattened ends.

Instead of making the mold with two rows of holes, *d d*, as in Fig. 1, it may be made with three or more rows of such holes, in which case a sectional ring, having upwardly and downwardly projecting pieces *a b*, is interposed between the part A and the parts B C of the mold. If the spokes are of other than cylindrical form, the shape of the apertures *d* must be correspondingly changed.

I claim as my invention—

1. The mold for casting hubs onto spokes, said mold consisting of the lower annular part, A, having stems *a*, and the upper parts, B C, having stems *b*, all arranged so that when the parts of the mold are put together apertures *d*, for the admission of the spokes, are formed in the mold, substantially as herein shown and described.

2. In combination with the mold A B C, forming the apertures *d*, the central post or screw, D, for operation substantially as specified.

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Witnesses:

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