(No Model.)

F. TELLANDER.

APPARATUS FOR CASTING HOLLOW ARTICLES IN METALLIC MOLDS.

No. 246,694. Patented Sept. 6, 1881.

Fig. 1.

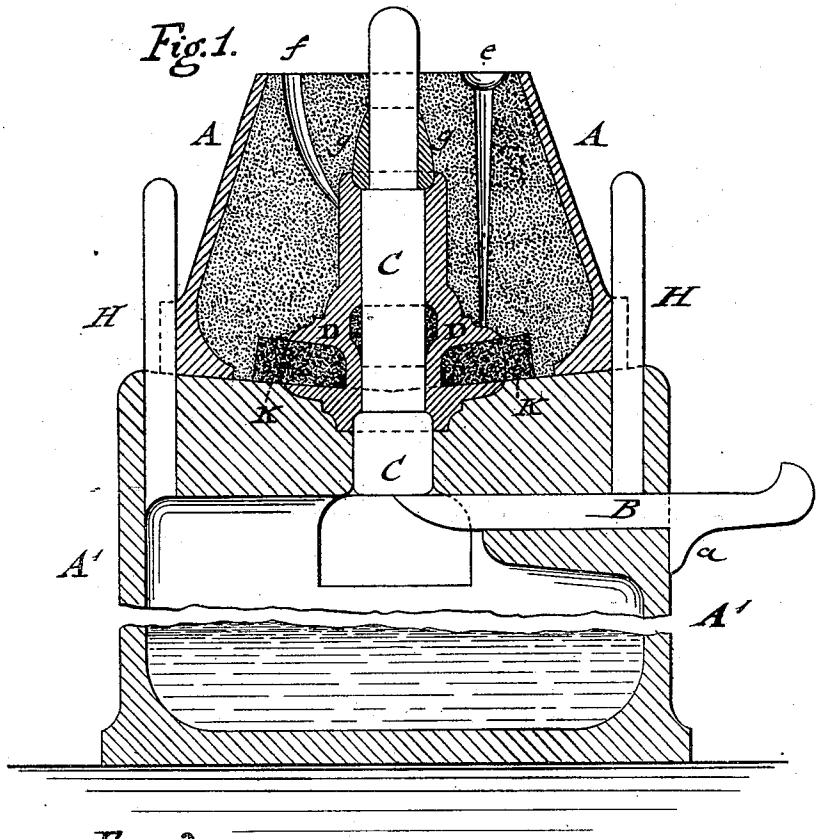


Fig. 2.

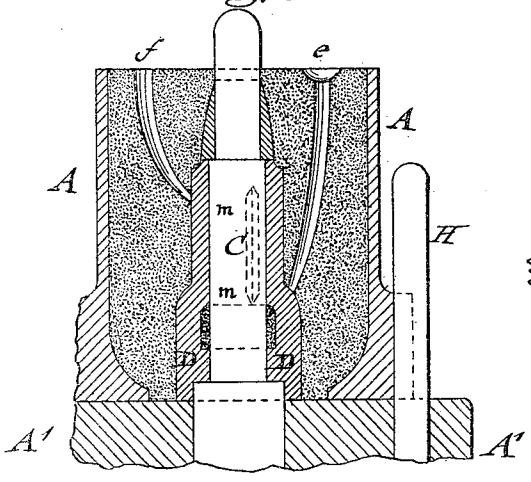
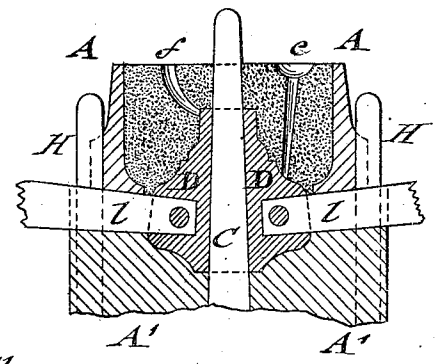


Fig. 3.



WITNESSES:

Fdk. K. Rosenbaum

Carl Kaup

INVENTOR

Ferdinand Tellander

BY Paul Goepel

ATTORNEY

N. PETERS. Photo-Lithographer. Washington, D. C.

UNITED STATES PATENT OFFICE.

FERDINAND TELLANDER, OF WENERSBORG, SWEDEN.

APPARATUS FOR CASTING HOLLOW ARTICLES IN METALLIC MOLDS.

SPECIFICATION forming part of Letters Patent No. 246,694, dated September 6, 1881.

Application filed June 18, 1881. (No model.)

To all whom it may concern:

Be it known that I, FERDINAND TELLANDER, of Wenersborg, in the Kingdom of Sweden, have invented certain new and useful Improvements in Apparatus for Casting Hollow Articles in Metallic Molds, of which the following is a specification.

The object of this invention is to cast all kinds of cylindrical, conical, or other hollow articles in metallic molds in such a manner that perfectly-smooth surfaces are obtained, and thereby the necessity of turning them in a lathe is dispensed with.

The invention consists of a flask provided with a hollow base part, which forms a reservoir for the cooling-liquid. The core of the mold is supported at the bottom by a removable key of the base part, which core is dropped into the base part on removing the key before the cast metal settles or after it has settled by the blow of a hammer. The molding-box is retained by vertical standards on the base part.

In the accompanying drawings, Figure 1 represents a vertical central section of my improved apparatus for casting hollow metal articles with smooth surfaces in metallic molds; and Figs. 2 and 3 are similar sections, showing the apparatus arranged for hollow articles of different shapes.

Similar letters of reference indicate corresponding parts.

The apparatus consists of a molding box or flask, A, of metal, which is supported by vertical standards H on a hollow base part, A′, which latter forms a reservoir for the cooling-liquid. The height of the base part has to be made equal to the length of the metallic core C of the flask, so that the latter can be dropped into the reservoir after the metal has been poured into the mold. The lower part of the flask A is provided with recesses, by which it is guided along the standards H into its proper position on the base part, A′. The base part, A′, is provided near its lid or top with a horizontal guide-opening, through which a key, B, is inserted, which extends toward the center of the base part, as shown clearly in Fig. 1. The key B is provided with a projection or shoulder, *a*, by which it is stopped when pushed in to its full extent. The key B extends sufficiently into the apparatus to enable it to support the core C of the mold. The metallic core C is provided with grease-grooves *m* in the usual manner, and is guided in a central opening of the top of the base part, A′.

The sand or other filling material of the mold is provided with channels or passages *e* and *f*, of which one forms the inlet for the metal and the other the outlet or vent for the air.

When the core is properly adjusted in the mold the metal is poured in, and the metallic core driven down by means of a hammer as soon as the molten mass D passes from the liquid into the solid form, after first removing the key B. The core C is thereby driven down into the liquid of the cooling-chamber formed in the hollow base part, A′. When, for example, metallic hubs for wheels are to be cast a special metallic case, *g*, is fitted onto the metallic core C and used for hardening one end of the hub. The other end of the hub is hardened by a collar at the lower part of the core C, while the inner surface of the hub is hardened by the shank of the core C, as shown in Fig. 1.

When casting hubs into which wrought-iron spokes are to be subsequently inserted, loose cores *k k* are employed in the usual manner to form the holes for the reception of the spokes, as shown in Fig. 1.

When the spokes are to be connected directly to the hub at the time of casting, they have to be placed into the mold, as shown at *l l*, Fig. 3, before the casting takes place. In this manner hollow metallic articles with entirely smooth and hardened surfaces are obtained directly in casting, so as to save the time and expense required for turning them off in a lathe.

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

1. An apparatus for casting hollow metallic articles, consisting of a hollow base part having a removable key, and of a metallic mold supported thereon, said mold having a metallic core which is guided in a top opening of the base part, substantially as specified.

2. In an apparatus for casting hollow metallic articles, the hollow base part A′, having a horizontal removable key, B, and vertical guide-standards H, with a metallic mold, A, having a core, C, which is guided in an opening in the top of the base part and adapted to be dropped into the same, substantially as and for the purpose set forth.

FERDINAND TELLANDER.

Witnesses:
C. A. PEHRSON,
G. N. RYDMAN.