

No. 830,725.

PATENTED SEPT. 11, 1906.

M. KÜLLER.

MOLD.

APPLICATION FILED MAY 11, 1905.

2 SHEETS—SHEET 1.

Fig. 1

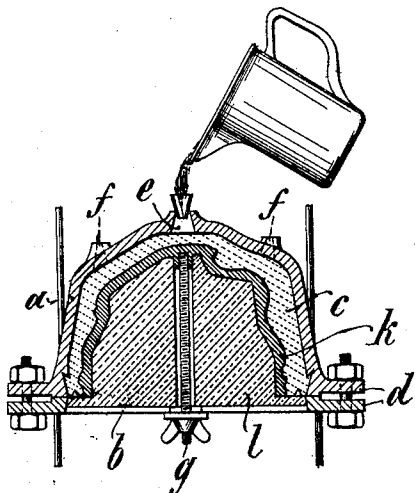


Fig. 2

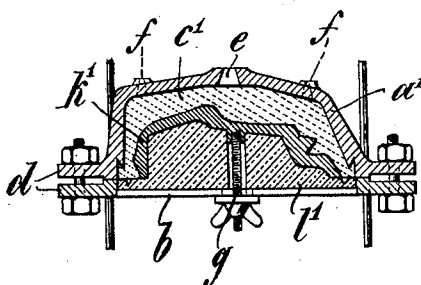


Fig. 3

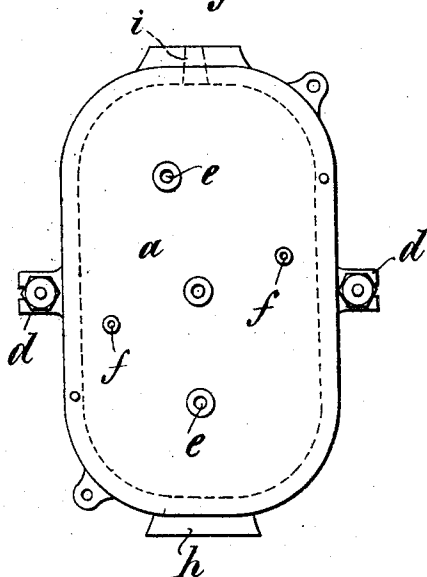
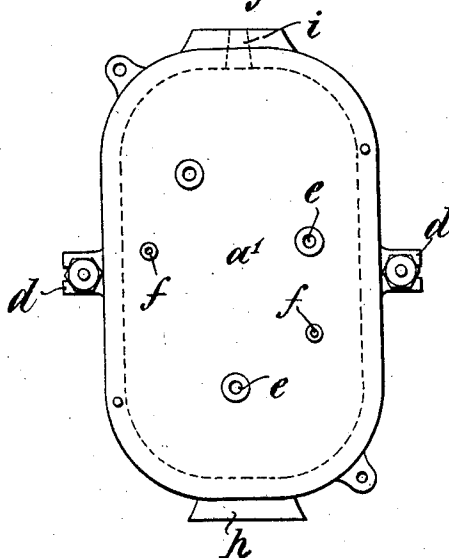


Fig. 4



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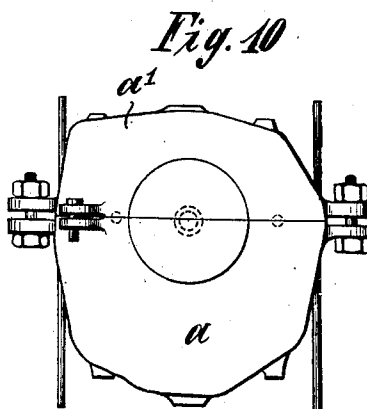
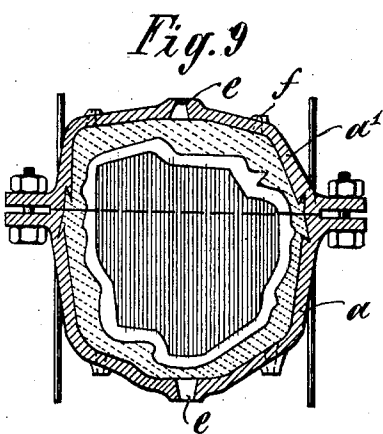
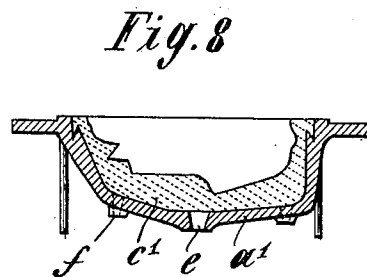
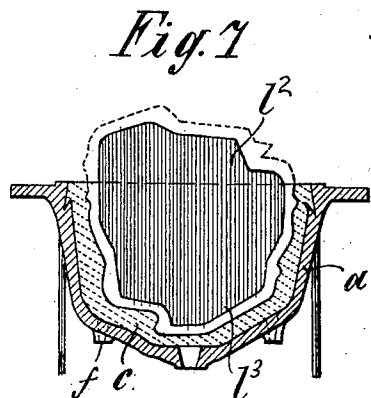
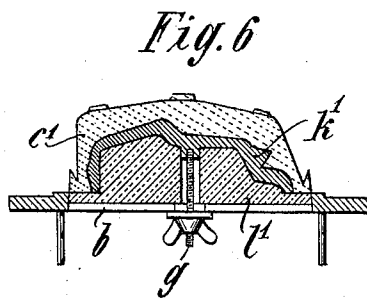
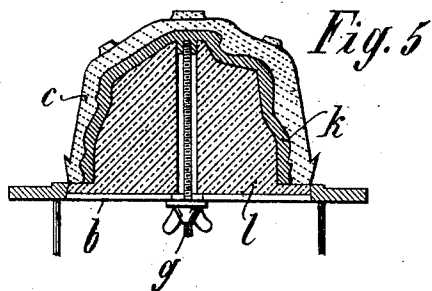
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2 SHEETS—SHEET 2.



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# UNITED STATES PATENT OFFICE.

MAX KÜLLER, OF CHARLOTTENBURG, GERMANY.

## MOLD.

No. 830,725.

Specification of Letters Patent.

Patented Sept. 11, 1906.

Application filed May 11, 1905. Serial No. 260,049.

*To all whom it may concern:*

Be it known that I, MAX KÜLLER, a subject of the King of Prussia, German Emperor, residing at Charlottenburg, near Berlin, Prussia, Germany, have invented new and useful Improvements in Molds, of which the following is a description.

The present invention consists of means for carrying out the process for making molds for art casting and other purposes, covered in my application bearing the Serial No. 132,306; and the particular object of the present invention is to provide a mold suitably adapted for making a number of castings—i. e., for the wholesale production of such castings.

In order to render the present specification easily intelligible, reference is had to the accompanying drawings, in which similar letters of reference denote similar parts throughout the several views.

Figure 1 is a cross-section through one half of the mold with the model and model-supporting parts therein. Fig. 2 is a similar cross-section of the other half. Fig. 3 is a plan of Fig. 1, and Fig. 4 a plan of Fig. 2. Fig. 5 shows in section the molding mass of one half on the model with the cap removed, and Fig. 6 a similar section of the other half. Fig. 7 shows the lower half of the mold, having the molded mass in the cap and the core in position therein; and Fig. 8 shows the other half of the cap with the molded mass lying therein ready to be placed on the first half. Fig. 9 is a vertical cross-section through the complete mold ready to receive the casting metal; and Fig. 10 is an external view of the mold.

The mold-forming mass intended to be employed in connection with the present mold possesses the property of changing from a thick fluid or pasty mass, in which form it is applied to the model, to an elastic flexible condition, admitting of its removal even from undercuts of the model without breaking or tearing. Thereafter the mass may be dried or glowd and attains the form of an ordinary finished sand-mold, as particularly described in my patent application above referred to.

As will be seen from Figs. 1 to 4, the mold in the present case consists of two or more flasks *a a'* of fireproof material, such as iron, the open faces of the said flasks being adapted to register exactly one on the other and

means, such as lugs and clamping-screws *d*, being provided to keep the flasks together. Each flask is also provided with an inlet *e* for the mold-forming mass *c c'* and air-holes *f*. Also each flask forms advantageously one-half or a part of the inlet-opening *i* for the metal. Each flask is also advantageously provided with a foot *h*, on which the whole mold stands when finished. The flask-halves are made to conform roughly to the configuration of the model. Each half or part of the mold contained in each flask is made separately. The half of the model *k* or *k'*, suitably supported on the core or other support *l* or *l'* is first laid on the supporting-plate *b*, on which it is suitably centered and attached by means of a bolt *g* or other suitable means. The metal flask *a* or *a'* is then placed over the model, so as to leave sufficient space all around the same for the mold-forming mass *c c'* and properly secured to the supporting-plate *b* by means of bolts passing through or engaging the lugs *d*. The mold-forming mass is now poured in through the opening *e* and the whole allowed to stand until the mass has attained its elastic flexible condition. The flasks *a a'* are now removed, Figs. 5 and 6, and the model-halves with their undercuts carefully taken out of the elastic molding mass *c c'*, which is then carefully laid back in its respective cap, Figs. 7 and 8. The core *l l'* is now properly supported in one of the flasks, as shown at Fig. 7, and the other flask, in this case *a'*, is placed on the first one and properly secured thereto, Figs. 9 and 10. The casting with metal may now take place in the ordinary manner.

In the wholesale manufacture any number of flasks may be provided for one and the same article, so that a number of such articles may be made at one time.

Although a mold having two flasks has been described for the purposes of the present specification, it will be obvious that a mold may be made according to the present invention, consisting of any desired number of flasks.

I claim as my invention—

1. In a device of the character described, a set of flask-sections adapted to be secured together, each flask-section having its own filling and vent openings, a pattern-carrying device for each section with means for detach-

ably connecting it to the corresponding flask-section, and a pattern-section carried by each of said devices, substantially as described.

2. In a device of the character described, a  
5 pair of complementary flask-sections adapted to be secured together, a plate adapted to be secured to the open side of each section, a pattern-section detachably connected to each plate, a filling-opening in the side of each

flask-section, and a filling-opening in the end 10 common to both sections, substantially as described.

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

MAX KÜLLER.

Witnesses:

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JOHN BAKER.