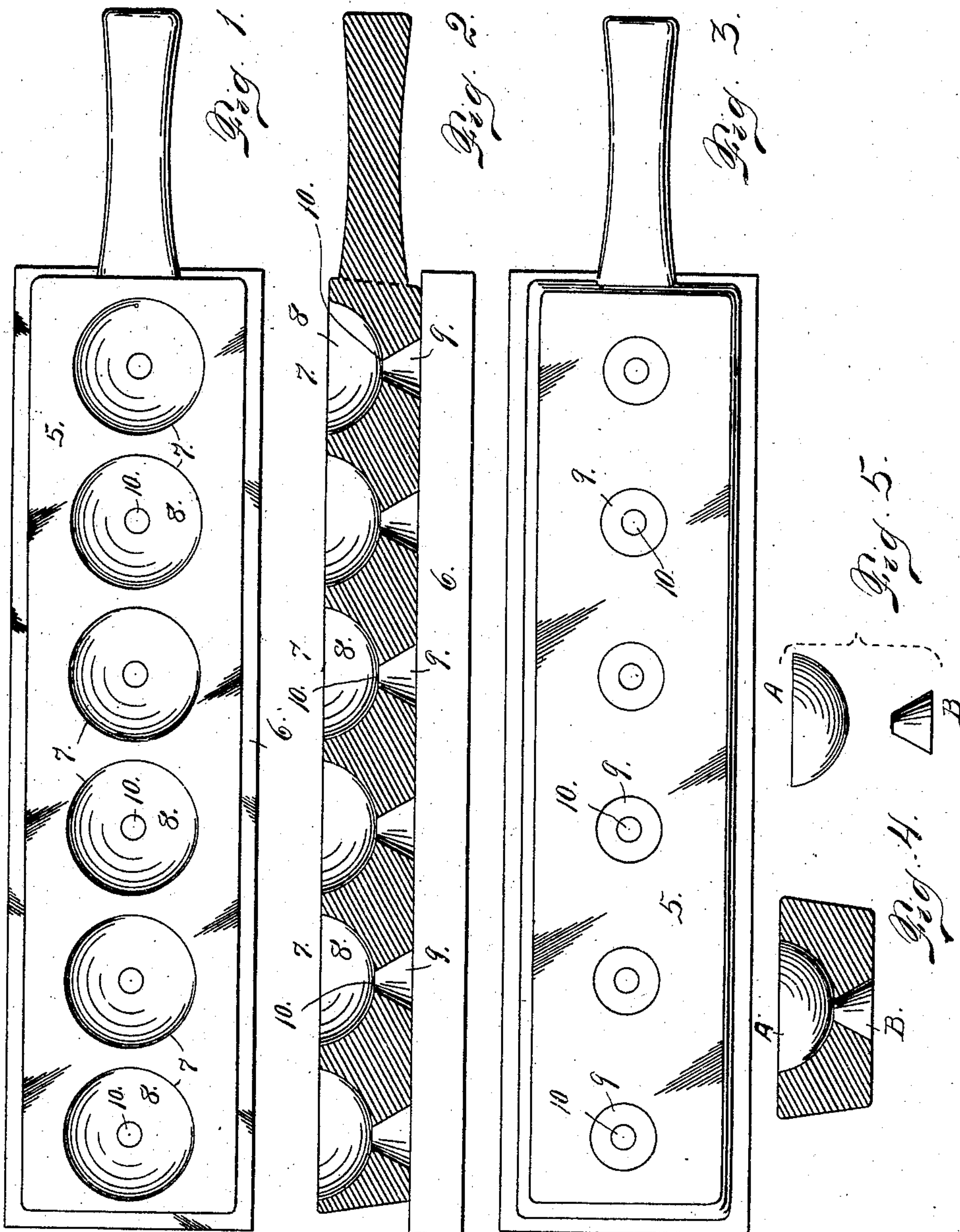


No. 850,811.

PATENTED APR. 16, 1907.

J. J. BAILEY.
ASSAYER'S POURING MOLD.
APPLICATION FILED JUNE 11, 1906.



Witnesses

Otho E Haddock
Dena Nelson,

Inventor

Inventor
J. J. Bailey
By A. R. 8 men
Attorney

UNITED STATES PATENT OFFICE.

JOHN J. BAILEY, OF VICTOR, COLORADO.

ASSAYER'S POURING-MOLD.

No. 850,811.

Specification of Letters Patent.

Patented April 16, 1907.

Application filed June 11, 1906. Serial No. 321,267.

To all whom it may concern:

Be it known that I, JOHN J. BAILEY, a citizen of the United States, residing at Victor, in the county of Teller and State of Colorado, have invented certain new and useful Improvements in Assayers' Pouring-Molds; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters and figures of reference marked thereon, which form a part of this specification.

My invention relates to improvements in assayers' pouring-molds, my object being to provide a mold of this class adapted to facilitate the separation of the metallic portion of the contents of the mold from the slag or lighter portion. Heretofore, so far as I am aware, molds of this character have been provided with conical receptacles. In this case when the molten mass containing the flux and ore is poured into the receptacle of the mold the metallic portion being heavier settles to the bottom, while the lighter portion or gangue remains above. In separating the metallic portion from the gangue considerable difficulty is experienced from the fact that the gangue clings to the metallic portion.

In my improved construction I provide two compartments—one for the metal and the other for the gangue—the said compartments, however, communicating with each other by a reduced orifice. The contents of the mold may then be easily separated at the reduced part or neck intermediate the two members.

Having briefly outlined my improved construction, I will proceed to describe the same in detail, reference being made to the accompanying drawings, in which is illustrated an embodiment thereof.

In the drawings, Figure 1 is a top plan view of my improved pouring-mold. Fig. 2 is a longitudinal section of the same. Fig. 3 is an underneath view of the mold proper. In this case the body of the mold is turned over and its top surface rests upon the base-plate. Fig. 4 is a cross-section taken through the mold member proper, cutting one of the receptacles for the molten material. Fig. 5 is a detail view of the contents of the mold after it has become hard and the metal ob-

tained has been broken from the upper or slag portion.

The same reference characters indicate the same parts in all the views.

Let the numeral 5 designate the body of my improved mold, which when in use rests upon the base-plate 6. The body of the mold is composed of a series of receptacles 7, each composed of compartments 8 and 9, the compartment 8 communicating at its bottom or lowest point with the upper reduced extremity of the compartment 9. The compartment 8 is cup-shaped, having curved walls interrupted only by the small orifice 10, communicating with the compartment 9, the latter being cone-shaped or having the shape of the frustum of a cone. It must be understood that the shape of the compartments 8 and 9 may be varied without departing from the spirit of the invention. Each mold may be provided with any desired number of receptacles, six being shown in the drawings.

When the mold is in use, it is placed upon the base 6, with the compartment 9 lowermost. After the ore from which the values are to be extracted has been mixed with the necessary flux and reduced to a molten condition it is poured into the receptacle 7. The values or metallic portion to be separated from the crude material or gangue being heavier pass downwardly into the compartment 9, while the lighter or gangue portion occupies the compartment 8. As soon as the contents of the receptacle becomes cold it is only necessary to tap the member A of the contents of the mold with a hammer in order to cause the member B to break off and drop out of its compartment. In this way a more nearly exact separation of the member B from the member A is effected than can be accomplished where the molten mass is poured into a single compartment.

Having thus described my invention, what I claim is—

1. An assayer's pouring-mold provided with a receptacle containing two compartments communicating with each other by a relatively small orifice.

2. An assayer's mold provided with a receptacle composed of two compartments of unequal size, communicating with each other by a relatively small orifice.

3. An assayer's mold provided with a receptacle composed of two intercommuni-

cating compartments of unequal size, the lower compartment being the smaller.

4. An assayer's mold provided with a receptacle containing two intercommunicating
5 compartments, one being cup-shaped and the other conical, the conical compartment being lowermost and communicating at its smaller extremity with the bottom of the cup-shaped compartment.

10 5. An assayer's pouring-mold, provided with a series of receptacles, each receptacle containing two compartments of unequal size, the larger compartment being uppermost and communicating at its bottom with

the smaller compartment by way of a relatively small orifice. 15

6. An assayer's pouring-mold provided with a plurality of receptacles, each consisting of two intercommunicating compartments of unequal size, the larger compartment being uppermost. 20

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

JOHN J. BAILEY.

Witnesses:

DENA NELSON,
A. J. O'BRIEN.