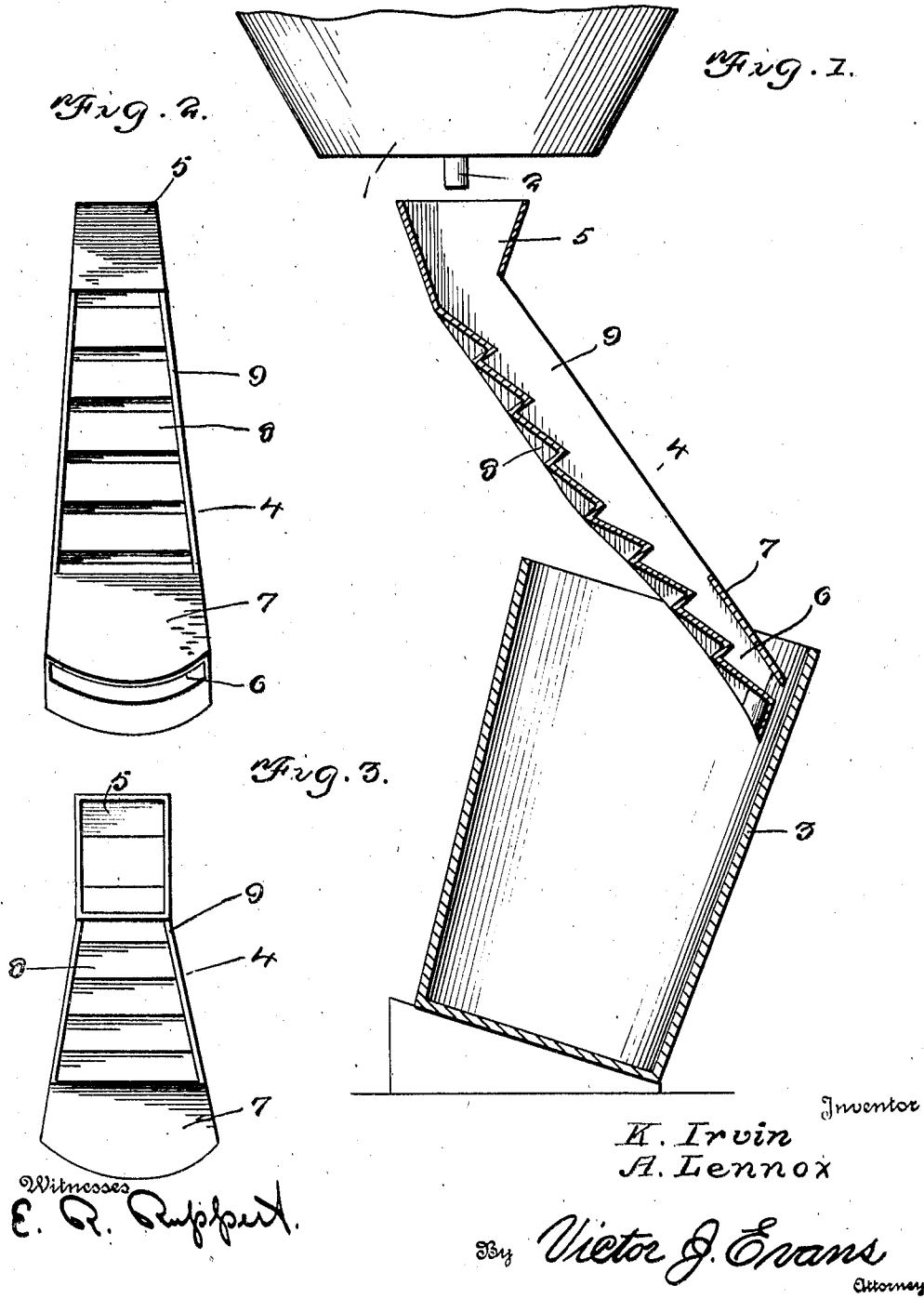


K. IRVIN AND A. LENNOX.
METHOD OF AND APPARATUS FOR POURING MOLTEN METAL.
APPLICATION FILED OCT. 8, 1919.

1,350,972.

Patented Aug. 24, 1920.



UNITED STATES PATENT OFFICE.

KING IRVIN AND ANDREW LENNOX, OF WASHINGTON, DISTRICT OF COLUMBIA.

METHOD OF AND APPARATUS FOR POURING MOLTEN METAL.

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Specification of Letters Patent.

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To all whom it may concern:

Be it known that we, KING IRVIN and ANDREW LENNOX, citizens of the United States, residing at Washington, in District of Columbia, have invented new and useful Improvements in Methods of and Apparatus for Pouring Molten Metal, of which the following is a specification.

The object of our present joint invention is the provision of a method of and apparatus for pouring molten metal in such manner as to obviate the formation of a hole or "pipe" in a casting.

To the attainment of the foregoing the invention consists in the improvement as hereinafter described and definitely claimed.

In the accompanying drawings, hereby made a part hereof:

Figure 1 is a view in vertical section of an apparatus for carrying out our invention.

Fig. 2 is a detail view, taken at right angles to Fig. 1, and showing the chute of the apparatus.

Fig. 3 is a top plan view of the said chute.

Similar numerals of reference designate corresponding parts in all of the views of the drawings.

In the practice of our invention we employ a receptacle 1 for molten metal which may be and preferably is in the form of a ladle, and is equipped with a discharge spout 2. We also employ a mold 3 that is canted or inclined from the vertical, as shown in Fig. 1.

Intermediate of the discharge orifice of the ladle or other molten-metal receptacle and the mold 3, we arrange a chute 4. The said chute is characterized by a receiving conduit portion 5, preferably disposed vertically, a lower discharge conduit portion 6, the wall 7 of which is adapted to prevent splashing of the molten metal, and an inclined series of riffles 8 extending from a point immediately below the conduit 5 to the discharge end of the conduit 6. The said riffles 8 extend transversely between the side walls 9 of the chute and have for their function to retard the downward movement of a stream of molten metal, and by reason of said retardation, promote spreading of the molten metal. The arrangement of the chute at an angle of inclination, also contributes to the spreading of the molten metal so that the same will enter the mold

and strike against the lower inclined wall thereof in the form of a sheet, rather than in the form of a narrow column. The disposition of the mold 3 at an angle also contributes to the spreading of the molten metal, with the result that the casting will be free of the objectionable hole or "pipe."

It will be apparent from the foregoing that notwithstanding the simplicity of the means employed in the carrying out of our invention, the invention brings about an important result in the art, inasmuch as it does away with the formation of faulty castings.

Having described our invention, what we claim and desire to secure by Letters-Patent, is:

1. The new and useful method of pouring molten metal, which consists in disposing a mold with one wall thereof at an angle to the vertical, continuously retarding the flow of and coincidentally spreading the molten metal laterally while the molten metal is en route to the mold, and delivering the molten metal to said inclined wall of the mold.

2. Apparatus for the purpose described, comprising a mold with a side inclined from the vertical, and an inclined chute having receiving and discharge conduits, the latter directed toward the inner side of the inclined wall of the mold, and also having transverse retarding and spreading riffles intermediate of said conduits.

3. A chute for the purpose described, adapted to be used in inclined position and having a lower inclined discharge conduit with a top wall to prevent splashing and an upper vertically disposed pipe-like receiving conduit and also having intermediate of said conduits and in the lower conduit transverse riffles to retard the flow of and spread molten metal.

4. A molten metal retarding and spreading chute having between its receiving and discharge portions and in the discharge portion a series of riffles to retard and spread molten metal and also having anti-splashing means over the discharge portion.

In testimony whereof we affix our signatures.

KING IRVIN.
ANDREW LENNOX.