

No. 688,086.

Patented Dec. 3, 1901.

L. GROSSMAN.

METAL POT FOR CASTING PRINTING PLATES.

(Application filed Feb. 9, 1901.)

(No Model.)

Fig 1

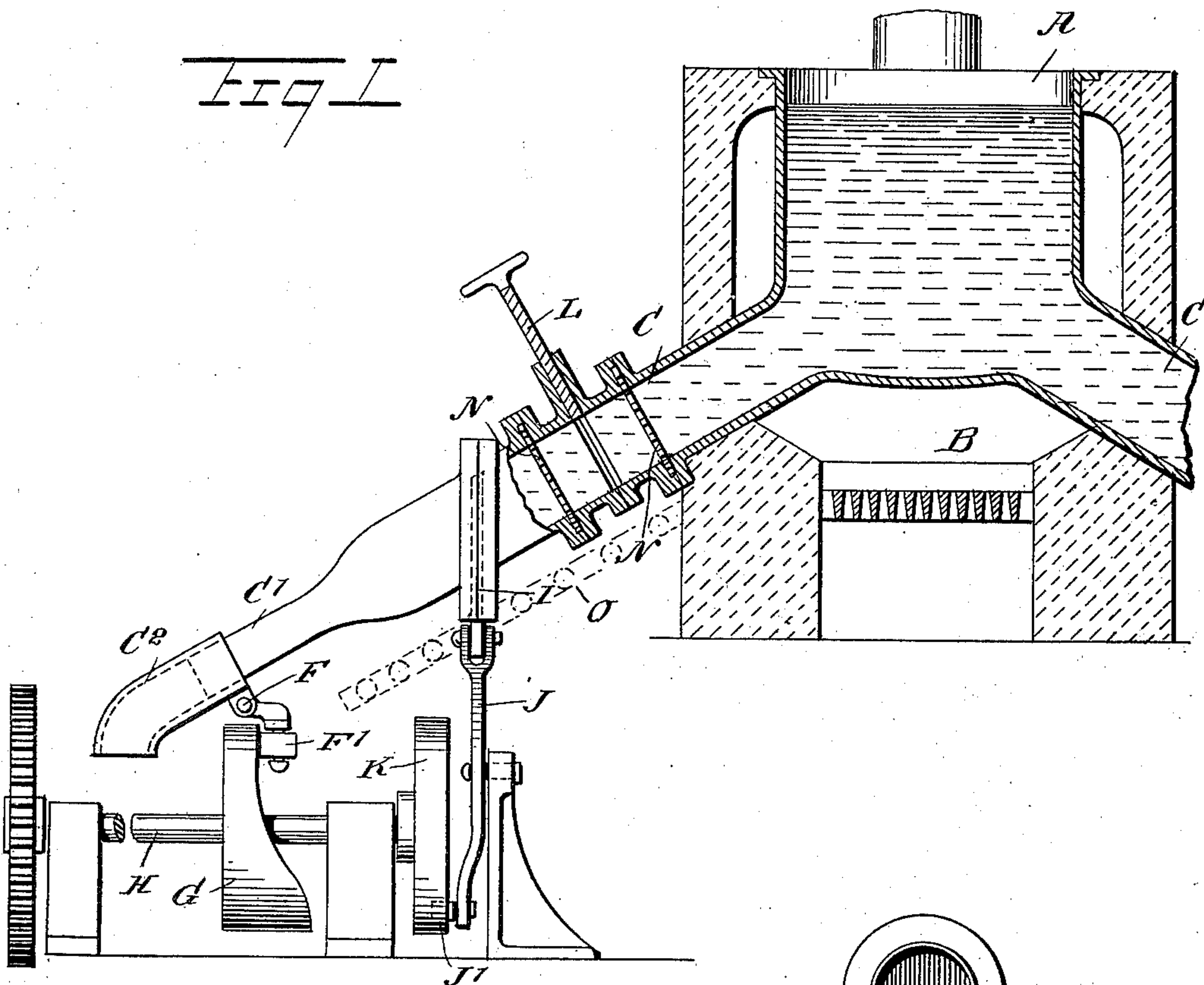
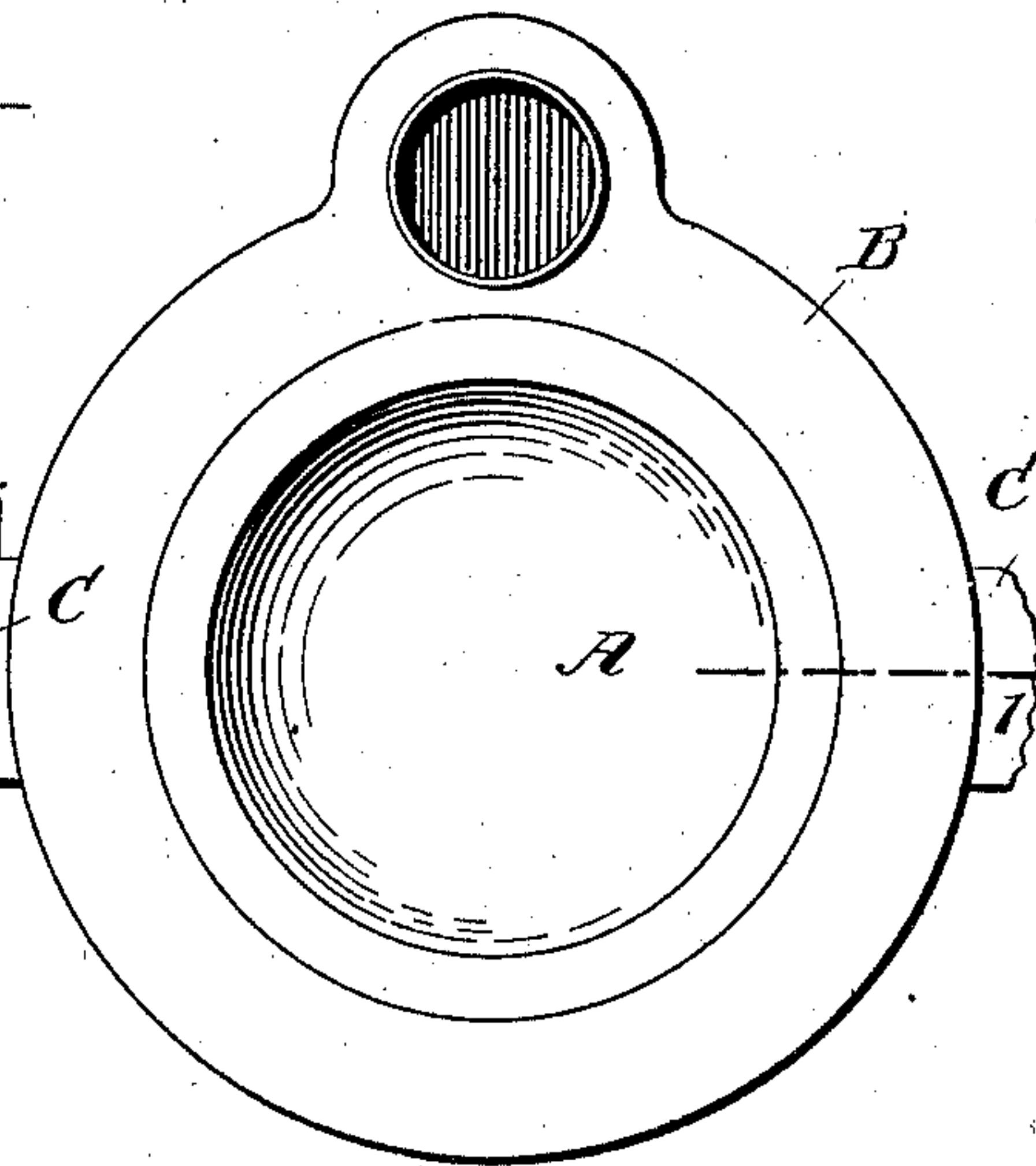
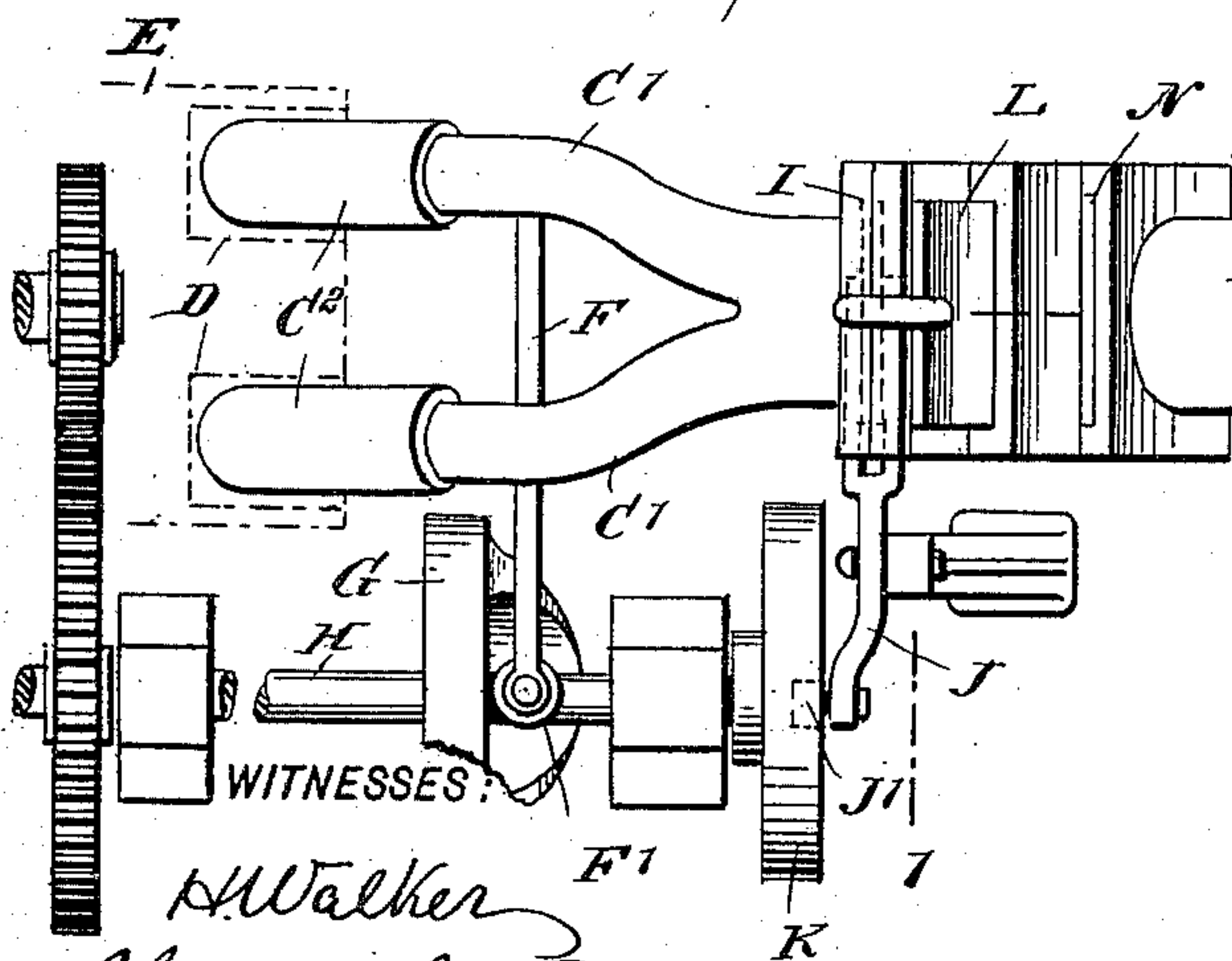


Fig 2



WITNESSES:

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LEO GROSSMAN, OF BROOKLYN, NEW YORK.

METAL-POT FOR CASTING PRINTING-PLATES.

SPECIFICATION forming part of Letters Patent No. 688,086, dated December 3, 1901.

Application filed February 9, 1901. Serial No. 46,642. (No model.)

To all whom it may concern:

Be it known that I, LEO GROSSMAN, a citizen of the United States, and a resident of the city of New York, borough of Brooklyn, in the county of Kings and State of New York, have invented a new and Improved Metal-Pot for Casting Printing-Plates, of which the following is a full, clear, and exact description.

The invention relates to casting boxes or molds for casting printing-plates—such, for instance, as shown and described in the application for Letters Patent of the United States, Serial No. 46,055, filed by me on the 5th day of February, 1901.

The object of the present invention is to provide a new and improved metal-pot arranged for automatically supplying molten metal to one or a plurality of casting-boxes in a perfectly pure condition and in a very simple manner without the aid of skilled labor.

The invention consists of novel features and parts and combinations of the same, as will be fully described hereinafter and then pointed out in the claims.

A practical embodiment of the invention is represented in the accompanying drawings, forming a part of this specification, in which similar characters of reference indicate corresponding parts in both the views.

Figure 1 is a side elevation of the improvement with parts in section on the line 1 1 in Fig. 2; and Fig. 2 is a plan view of the same.

The pot A for containing the molten metal is arranged in a suitable furnace B for keeping the metal in a molten state, and from the lower end of the pot A extends downwardly one or a plurality of spouts C, so that the molten metal in the pot A flows by its own gravity into and through the spouts to the casting box or mold, as hereinafter more fully described.

The outer end of each spout C preferably terminates in two arms C', each provided with a mouth C², mounted to slide on the arm C' in the direction of its length, the mouths C² for the two arms extending over the pouring-openings D, leading to the space between the drag and the cope of a casting box or mold E of any approved construction, but preferably of the construction shown and described in the application for Letters Patent of the United States above referred to.

The mouths C² are connected with each other by a transverse bar F, supporting a friction-roller F', engaged by a cam G secured on a shaft H, preferably rotated from one of the shafts of the casting box or mold E, so that the cam G by acting on the friction-roller F' imparts a sliding motion to the mouths C², so as to move the same in unison with the working of the casting box or mold—that is, move the mouths C² into an outermost position when the cope is in the drag and move the mouths away from the pouring-openings D when the cope swings out of the drag, as more fully described in the application above referred to. This movement is necessary to allow free swinging movement of the cope from the drag after the casting has been made.

In each spout C is arranged a gate I for automatically closing and opening the spout, and this gate I is pivotally connected at its lower end with a lever J, carrying a friction-roller J', engaging a cam-groove in a cam K, secured on the shaft H previously mentioned, so that when the casting box or mold is in action the cam K imparts a swinging motion to the lever J to cause the gate I to move into an open position or a closed position.

Now when the cope is in the drag and the mouths C² have moved over the pouring-openings D, then the gate I is automatically opened, as described, to allow the molten metal to flow from the pot through the spout C, the arms C', and the mouths C² into the pouring-openings D, and into the space between the cope and the drag to form the casting-plate. The cam K is so arranged that the exact amount of metal required for a casting-plate is allowed to flow past the gate I, and as soon as this has been done the gate I closes to shut off overflow of molten metal. In each spout C between the gate I and the pot A is arranged a hand-gate L under the control of the operator for closing the spout C whenever desired—that is, when the casting box or mold for a particular spout is not in operation.

In the spout C above and below each hand-gate L are arranged strainers N for preventing impurities contained in the molten metal from flowing through the spout into the casting-box.

From the foregoing it is evident that the molten metal flows by its own gravity periodically through the spout C into the casting box or mold at the time the cope is in position in the drag, and when the necessary amount of metal for the printing-plate has passed into the casting box or mold then the gate I automatically shuts off the flow of the molten metal. Soon after this has taken place and previously to the cope swinging out of the drag the cam G acts on the friction-roller F' to slide the mouths C² inward on the arm C' and move said mouths out of the way of the cope to permit the latter to swing out of the drag after the plate is cast. By arranging the spout C at or near the lower end of the pot A it is evident that any slag, scum, or similar light impurities do not pass into the spout, as the impurities float on the top of the metal, and consequently do not reach the spouts.

The metal in the spouts is kept in a molten state by heat emanating from Bunsen burners O or other heating device, as shown in Fig. 1.

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

1. A metal-pot for casting boxes or molds, comprising a pot proper, an outlet-spout leading from the pot at or near the bottom thereof and forming a gravity-discharge for the metal, and a discharge-mouth on said spout and slidable thereon to connect with or disconnect from the casting box or mold, as set forth.

2. The combination with a metal-pot for casting boxes or molds, of a plurality of spouts leading from the lower end of the pot in different directions to several casting boxes or molds, discharge-mouths on said spouts and slidable thereon to connect with or disconnect from the casting-boxes, and means in said spouts for controlling the flow of the molten metal from the pot to the casting-boxes, as set forth.

3. A metal-pot for casting boxes or molds, comprising a pot proper, an outlet-spout leading from said pot at or near the bottom thereof to connect with the casting box or mold, a gate in said spout, mechanism for actuating said gate to automatically open and close the same, the said mechanism comprising a lever connected with the lower end of said gate and means for swinging the lever, and a hand-gate in said spout, between the automatically-operated gate and the pot, as set forth.

4. A metal-pot for casting boxes or molds, comprising a pot proper, an outlet-spout leading from the pot at or near the bottom thereof, to connect with a casting box or mold, a hand-gate in said spout, and strainers in said spout at each side of the hand-gate, as set forth.

5. A metal-pot for casting boxes or molds,

comprising a pot, an outlet-spout leading from the pot at or near the bottom thereof, the spout having branch arms at its lower end, and discharge-mouths on said branch arms and movable thereon to connect with or disconnect from the pouring-openings of the casting box or mold, as set forth.

6. A metal-pot for casting boxes or molds, comprising a pot, an outlet-spout leading from the pot at or near the bottom thereof, the spout having branch arms at its lower end, discharge-mouths on said branch arms and adapted to connect with or disconnect from the pouring-openings of the casting box or mold, means for moving the said mouths to and from said pouring-openings, and mechanism for controlling said means, as set forth.

7. A metal-pot for casting boxes or molds, comprising a pot proper, an outlet-spout leading from the pot at or near the bottom thereof, a gate in said spout, a discharge-mouth at the end of the spout and mounted to slide thereon, and means substantially as described for automatically actuating said gate and moving said mouth, as set forth.

8. The combination with a metal-pot for casting boxes or molds, and an outlet-spout leading from the pot, of a discharge-mouth mounted to slide on the outer end of the spout, a shaft mounted to turn, a cam on said shaft, and means actuated by the cam for moving the discharge-mouth, as set forth.

9. The combination with a metal-pot for casting boxes or molds, and an outlet-pipe leading therefrom, of a gate in said spout for controlling the flow of the molten metal from the pot to the casting-box, a lever pivotally connected with the lower end of the gate, and a cam mounted to turn and provided with a cam-groove engaged by the said lever, as set forth.

10. The combination with a metal-pot for casting boxes or molds, and a spout leading from the pot and having branch arms at its ends, of discharge-mouths slidable on said branch arms, a bar connecting the discharge-mouths, a friction-roller supported by said bar, and a cam mounted to turn and engaging said friction-roller, as set forth.

11. The combination with a metal-pot for casting boxes or molds, and a spout leading from the pot, of a gate in said spout, a discharge-mouth at the end of the spout and slidable thereon, cams mounted to rotate in unison, and means for actuating the said discharge-mouth and the gate from the said cams, as set forth.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

LEO GROSSMAN.

Witnesses:

THEO. G. HOSTER,
EVERARD BOLTON MARSHALL.