

No. 684,022.

Patented Oct. 8, 1901.

J. H. WIESTNER.
TWYER IRON.

(Application filed Sept. 21, 1900.)

(No Model.)

Fig. 1.

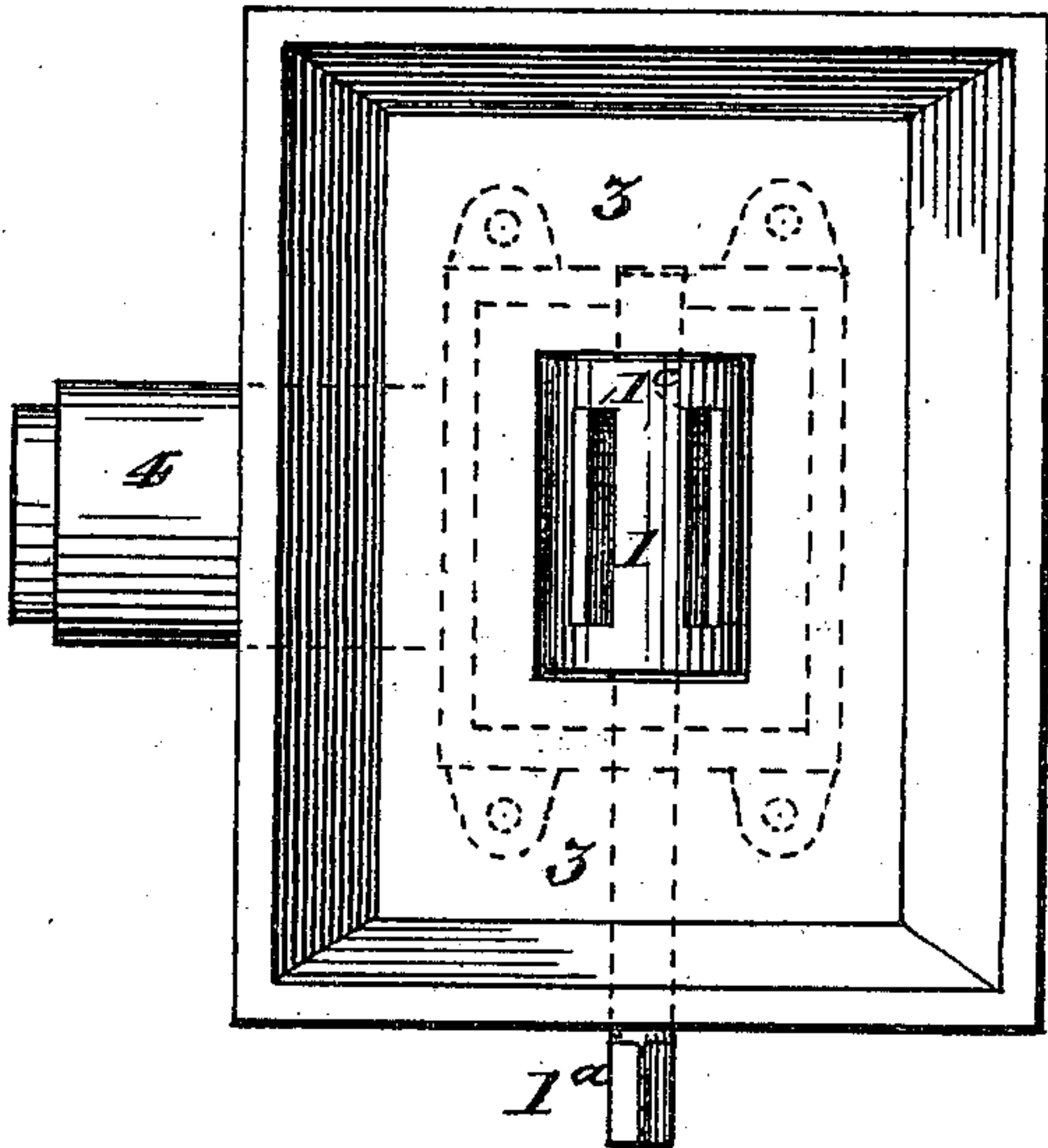


Fig. 3.

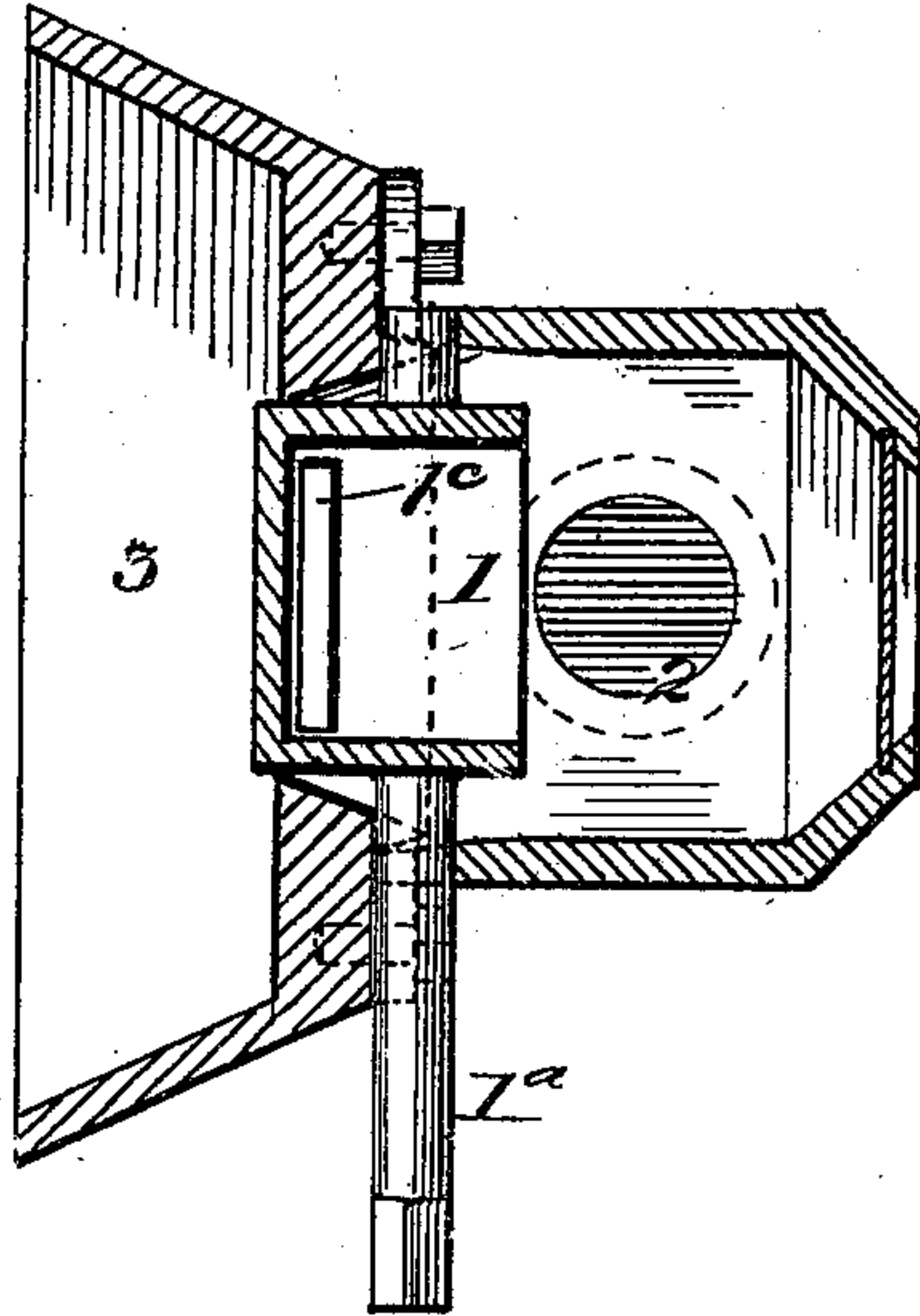


Fig. 2.

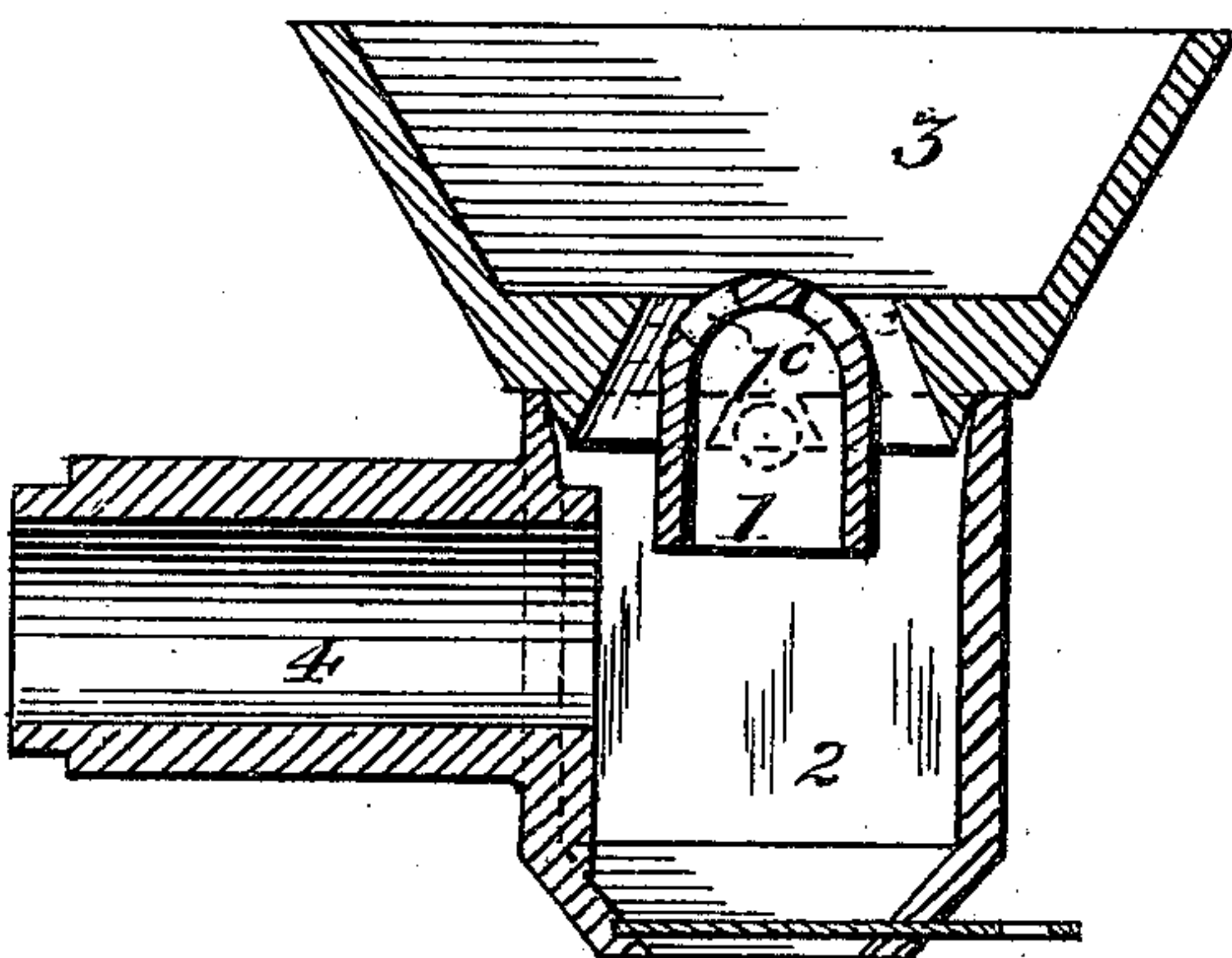


Fig. 5.



Fig. 4.



Witnesses:

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UNITED STATES PATENT OFFICE.

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TWYER-IRON.

SPECIFICATION forming part of Letters Patent No. 684,022, dated October 8, 1901.

Application filed September 21, 1900. Serial No. 30,706. (No model.)

To all whom it may concern:

Be it known that I, JOHN H. WIESTNER, a citizen of the United States, residing at Philadelphia, in the county of Philadelphia and State of Pennsylvania, have invented certain new and useful Improvements in Twyer-Irons; and I do hereby 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.

My invention relates to certain new and useful improvements in "twyer-irons" more especially designed for smiths' forges.

It has for its object, among other things, to render the twyer-iron light and yet not liable to prematurely burn out or be impaired, to regulate the air-blast and prevent choking from accumulation of ashes, also to lessen cost of manufacture and generally promote utility, convenience, and facility.

It consists of a valve, preferably hollow, with blast-passages therethrough and adapted to be rotated for manipulation as may be required in varying the blast, releasing ashes, &c., substantially as set forth and specifically pointed out by the claims.

In the accompanying drawings, illustrating the preferred embodiment of my invention, Figure 1 is a plan view showing the valve or twyer-iron. Fig. 2 is a transverse section. Fig. 3 is a longitudinal section. Figs. 4 and 5 are a transverse and a longitudinal section of a modification of the invention.

In carrying out my invention I employ a valve 1, otherwise termed the "twyer-iron," suitably arranged in the blast-chamber 2 to operate within the area of the hole in the bottom of the fire pot or box 3, said chamber being arranged below said fire-pot. The valve 1 has its stem or shaft 1^a suitably hung and adapted to be axially manipulated from the side of the smith-forge, (not shown,) the shaft preferably being integral or cast in one piece with the valve-closure. Said twyer-iron is generally oblong and hollow, its normally upper side being preferably rounded and having at opposite angles therein preferably oblong or rectangular openings or passages 1^b 1^c for directing therethrough into the fire-box above air-blasts from the air-chamber 2, admitted therein by the blast tube or pipe 4, leading from the ordinary forge-bellows or other air-generator. (Not shown.)

In operation it will be observed that with the valve or iron disposed in either one of two positions the air-blast passing through its passages will be varied according to the amount of blast desired to be supplied to the fire-box, and adjusting it in still another position the ashes, &c., can be dumped into the chamber below. This chamber has a slide-covered opening in its bottom to permit the ready discharge or dropping of the ashes, &c., therefrom into the ash-pit below.

The valve or twyer-iron being hollow, it is rendered light and yet as effective as the solid valve heretofore used and not any more liable of premature impairment or burning out than the latter by reason of the circulating air-blast reducing the temperature of the same. Further, ashes, &c., find no lodgment upon said valve or iron to the extent of clogging or choking the blast-passages, as would otherwise be the case. It will be further observed that as the valve is shifted to one side or the other any ashes or clinkers which may possibly lodge thereon are dumped therefrom below, and that whether the valve be disposed with both of its ports delivering the blast or only one additional openings or opening, respectively, will be provided laterally thereof, as well as through it, to enable the blast to circulate therearound, thus preventing the premature burning out of the valve.

Having thus fully described my invention, what I claim, and desire to secure by Letters Patent, is—

In a twyer, a hollow valve having a series of blast-delivering ports in its face, in combination with a fire-box having an opening through its bottom, within which said valve operates, said valve isolated from said bottom to provide lateral passages between it and the walls of said opening and yet adapted to be engaged therewith at a point intermediately of said series of ports, substantially as set forth.

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

JOHN H. WIESTNER.

Witnesses:

F. J. KING,
H. W. CLOUD.