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Patented Aug. 9, 1910.

Fig. 1.

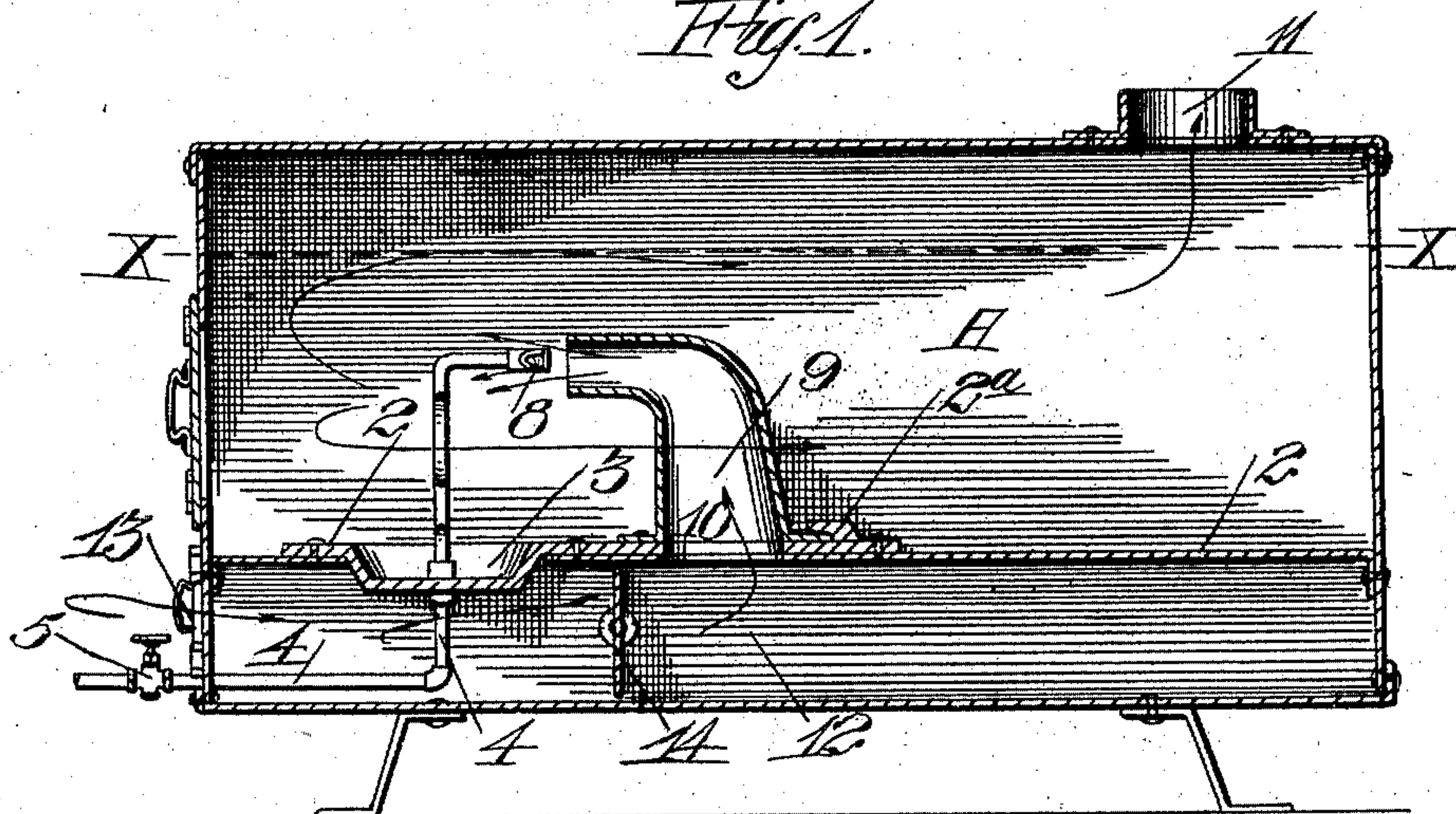


Fig. 2.

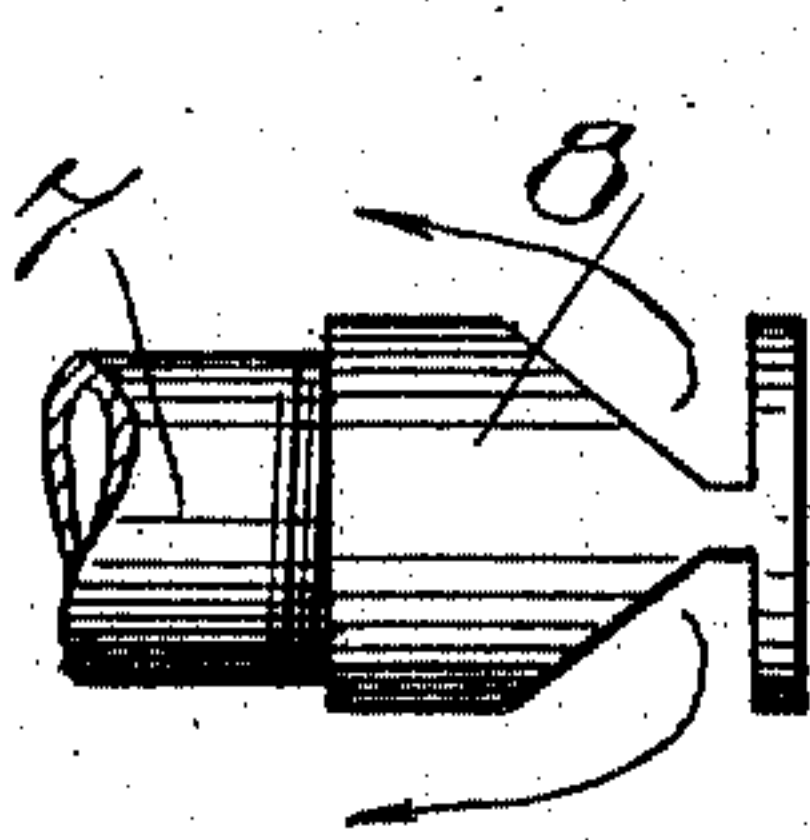
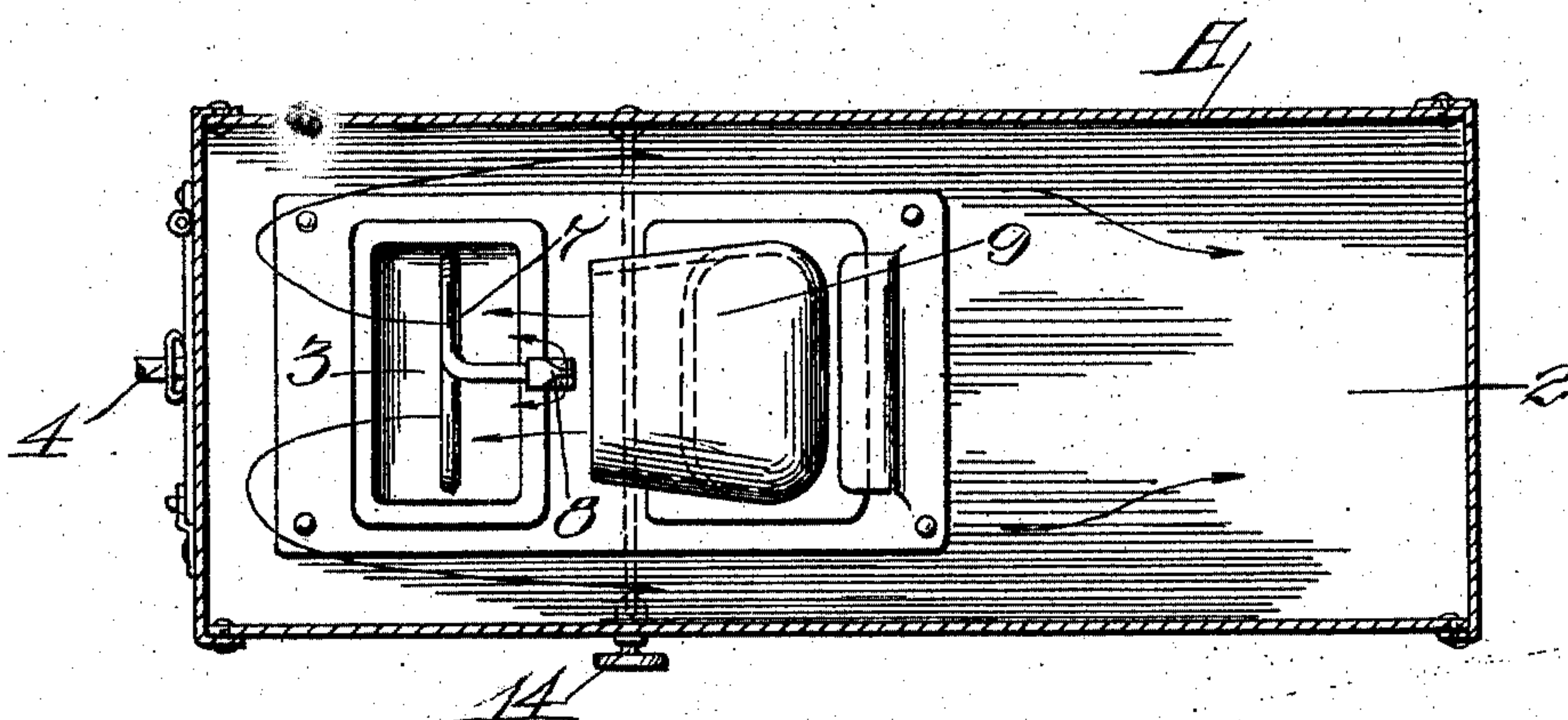
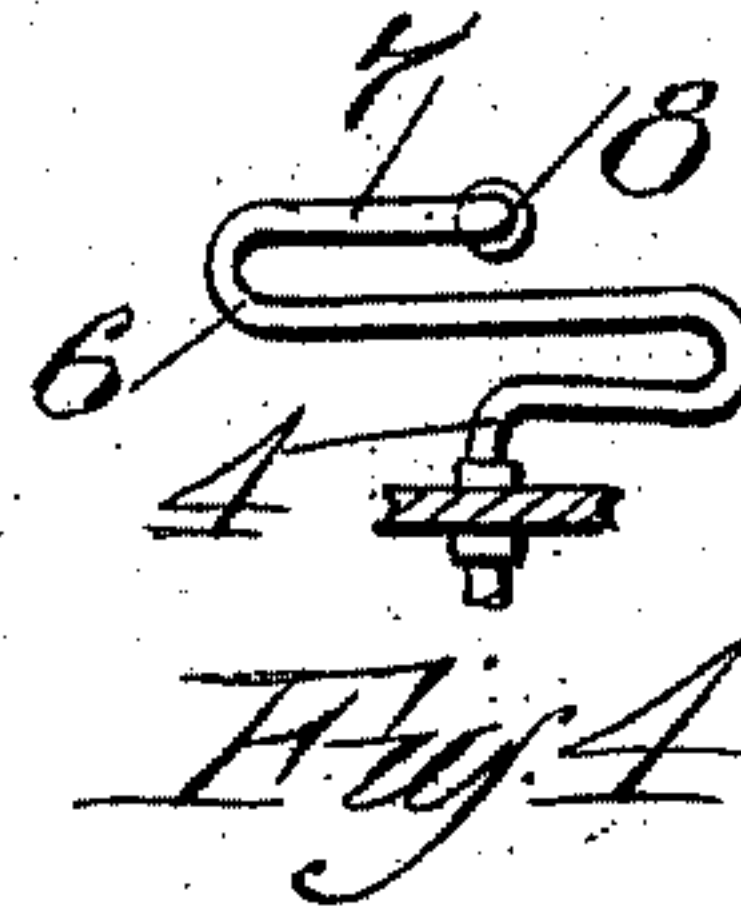


Fig. 3.



Inventory.  
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By E. H. Strong.  
his Atty.



# UNITED STATES PATENT OFFICE.

AUGUST J. GARLOFF, OF STONY POINT, CALIFORNIA.

OIL-BURNER.

966,899.

Specification of Letters Patent.

Patented Aug. 9, 1910.

Application filed April 11, 1910. Serial No. 554,832.

*To all whom it may concern:*

Be it known that I, AUGUST J. GARLOFF, a citizen of the United States, residing at Stony Point, in the county of Sonoma and State of California, have invented new and useful Improvements in Oil-Burners, of which the following is a specification.

My invention relates to an improved burner for the combustion of oil.

10 It consists in the combination of parts and details of construction which will be more fully explained by reference to the accompanying drawings, in which—

15 Figure 1 is a sectional elevation of the stove showing the application of my burner. Fig. 2 is a horizontal section through X, X, Fig. 1. Fig. 3 is an enlarged view of the burner. Fig. 4 is a view of the generator coil.

20 My invention is especially designed for use with heating stoves, such as employed in connection with incubators, and for similar or like purposes.

25 I have here shown my burner in connection with a box or stove A. The burner consists of a base plate 2, which may be bolted or otherwise fixed to the bottom of the stove, and this plate has a depressed pan 3, through the center of which the oil-conducting pipe 4 passes, so that there will be no leakage.

35 The flow of oil through the pipe 4 is controlled by a suitable valve or cock 5. That portion of the pipe 4 within the stove is bent at right angles, horizontally and transversely, thence upwardly, thence returning horizontally, thence upwardly, as shown at 6, and finally being bent horizontally again at right angles, as shown at 7, and having the burner 8 fixed to the end. The object of these bends in the pipe is to expose a considerable surface, and to make the pipe long enough so that it will be heated and the oil vaporized before reaching the burner.

45 An air inlet 9 is formed with or secured to the base-plate 2, and at the bottom communicates with an opening made through the base-plate, as at 10. The upper end of this pipe or passage 9 is bent at right angles and its open discharge end is in close proximity with the burner 8.

55 In operating this burner, when it is desired to commence, a sufficient amount of oil or other inflammable liquid is placed in the pan 3 and ignited, and the heat will be communicated to the convolutions of the

pipe 4; the oil being then admitted through this pipe will be vaporized and discharged outwardly through the perforations or openings made for the purpose, and the air admitted through the passages 9—10 meets the oil discharged from the burner and provides sufficient oxygen for an intense combustion. The direction of the draft is such that the heated products of combustion are first discharged toward the left or front end of the stove, thence they sweep backwardly over and around the oil feed pipe and through the body of the stove, also heating the air in the pipe so as to increase the draft and improve the combustion. The products of combustion, after passing to the rear of the stove, escape through the usual pipe or chimney, as at 11. The air is admitted into a chamber 12 below the bottom of the stove, and this chamber having a bottom and sides will inclose it, and the air is admitted into this chamber through a door or passage, as at 13.

14 is a draft damper which may be employed to regulate the amount of air admitted.

The plate 2 with its pan, the air conduit 9 and the burner pipe above the pan are united, and form an integral structure, which may be removably attached to the bottom of the stove by any means. The air inlet casting 9 may be fastened to the plate by means of the arched or hook-shaped lugs 2<sup>a</sup> fixed to the bottom plate so that the castings may be easily taken apart for shipment.

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

1. An oil burner comprising a base plate, an oil conducting tube extending through said plate to a point above the same and having the extended portion bent right and left to form a vertical series of coils, the terminal of the uppermost coil being bent at right angles and provided with a burner, and an air-conduit connected to the plate and having its discharge end presented horizontally in line with said burner.

2. An oil burner comprising a base plate having a depressed pan, an oil conducting tube extending through the pan to a point above the same, and having the extended portion bent transversely to form a vertical series of coils, the terminal of the upper coil being bent horizontally in a plane at right angles to the coils, and having a burner fixed to its end, and an air-conduit extending up-



wardly from the base and having its discharge end separated from and presented horizontally toward the burner.

3. The combination in an oil burner of a  
5 base plate having a depressed pan, an oil-conducting pipe passing through the bottom of the pan and extending thereabove and having the extended portion bent back and forth upon itself to form superposed coils  
10 set on edge, the terminal of the upper coil being bent substantially at right angles and having a burner secured to its end, and an

air-conduit fixed to the plate and extending upwardly and having its discharge end turned substantially horizontally and adapted to discharge toward the burner. 15

In testimony whereof I have hereunto set my hand in the presence of two subscribing witnesses.

AUGUST J. GARLOFF.

Witnesses:

CHARLES A. PENFIELD,  
CHARLES EDELMAN.