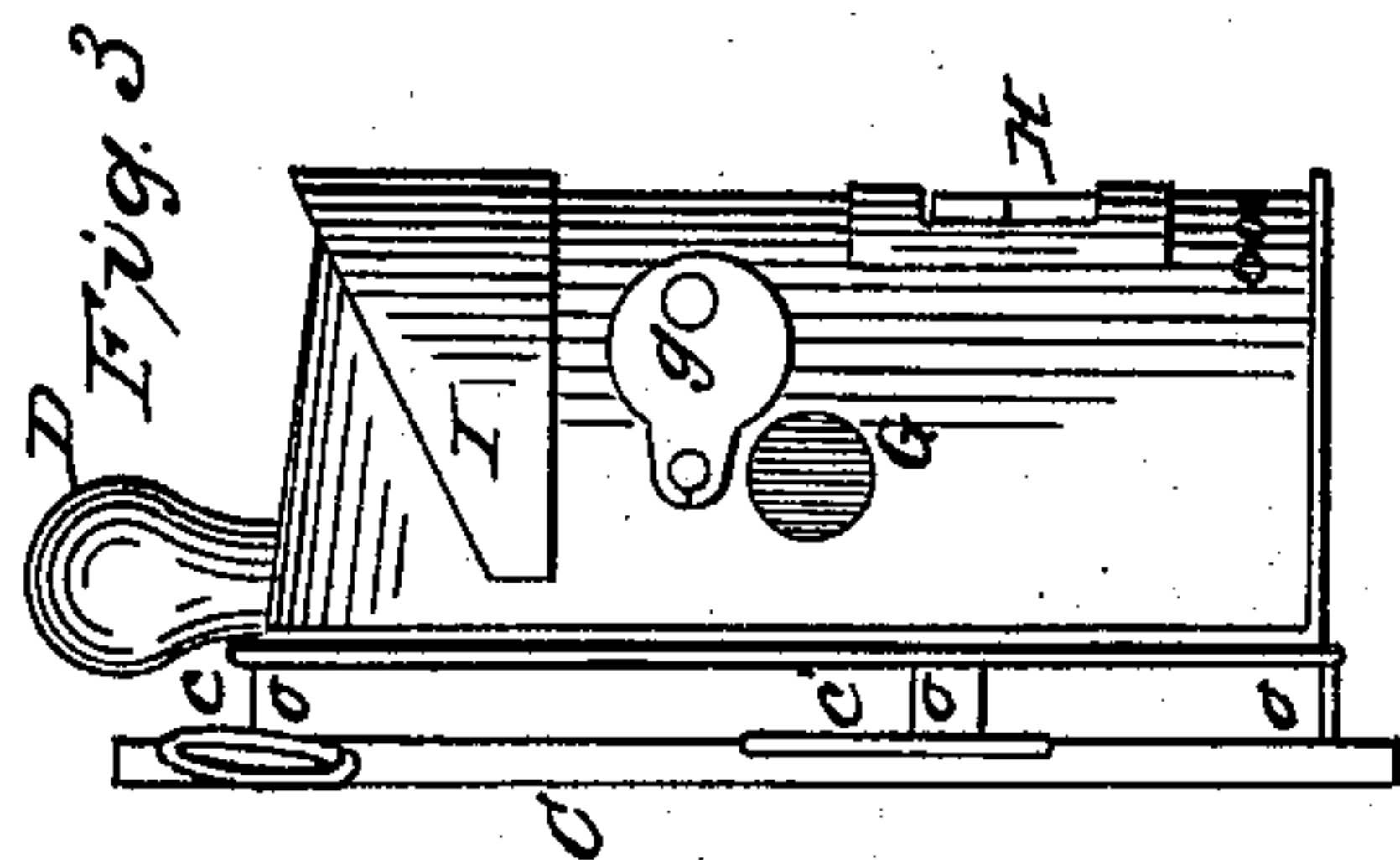
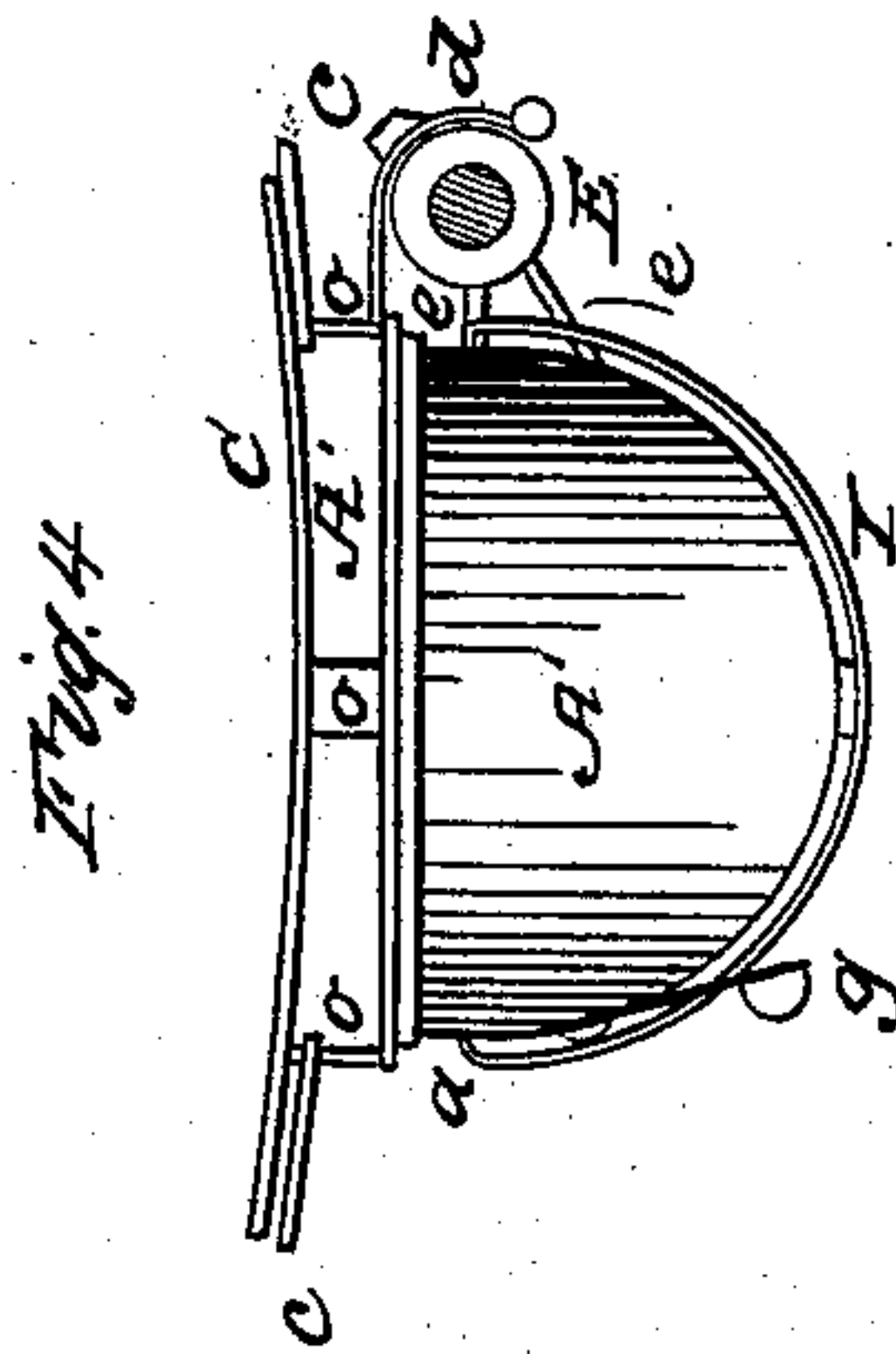
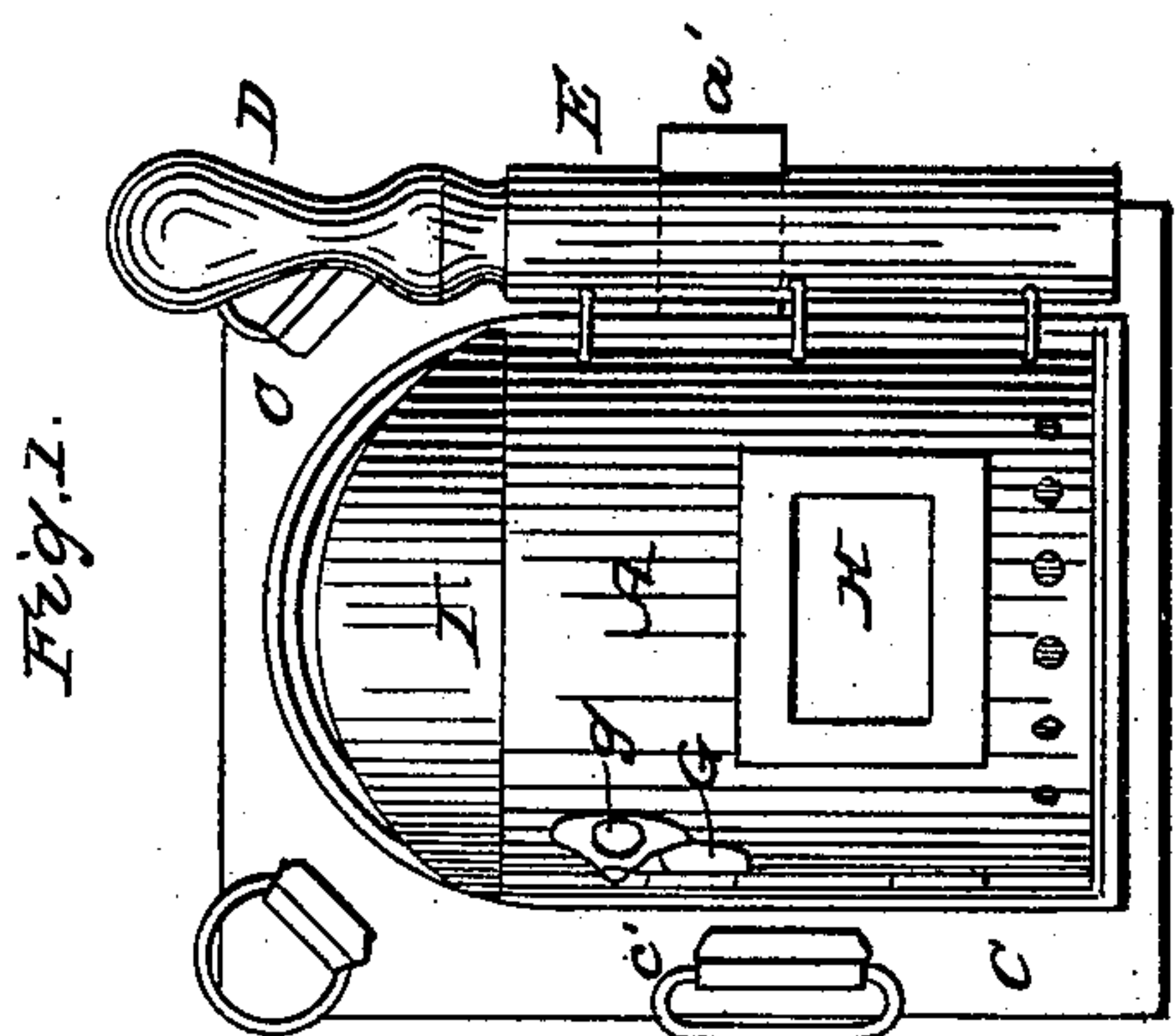
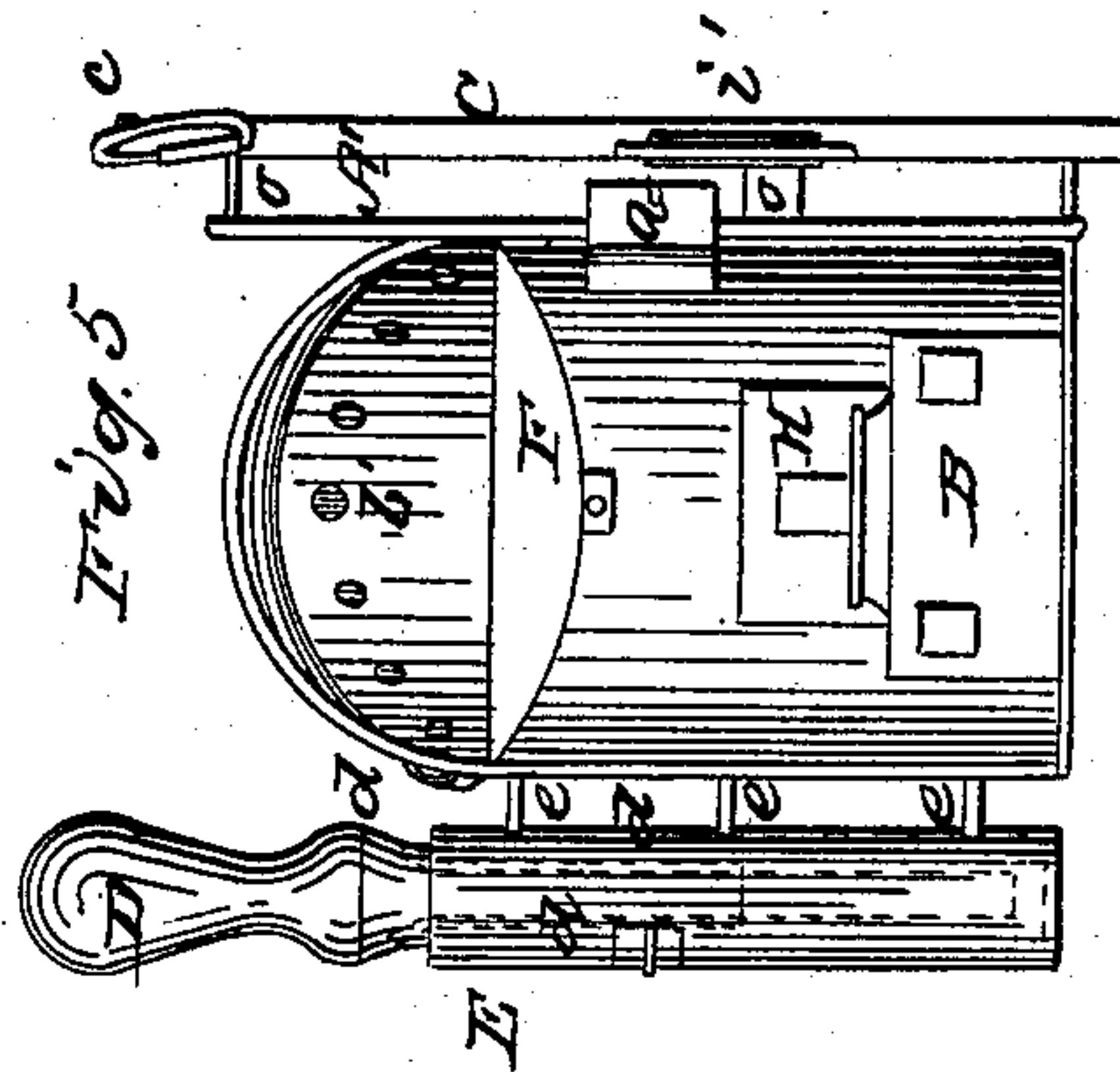
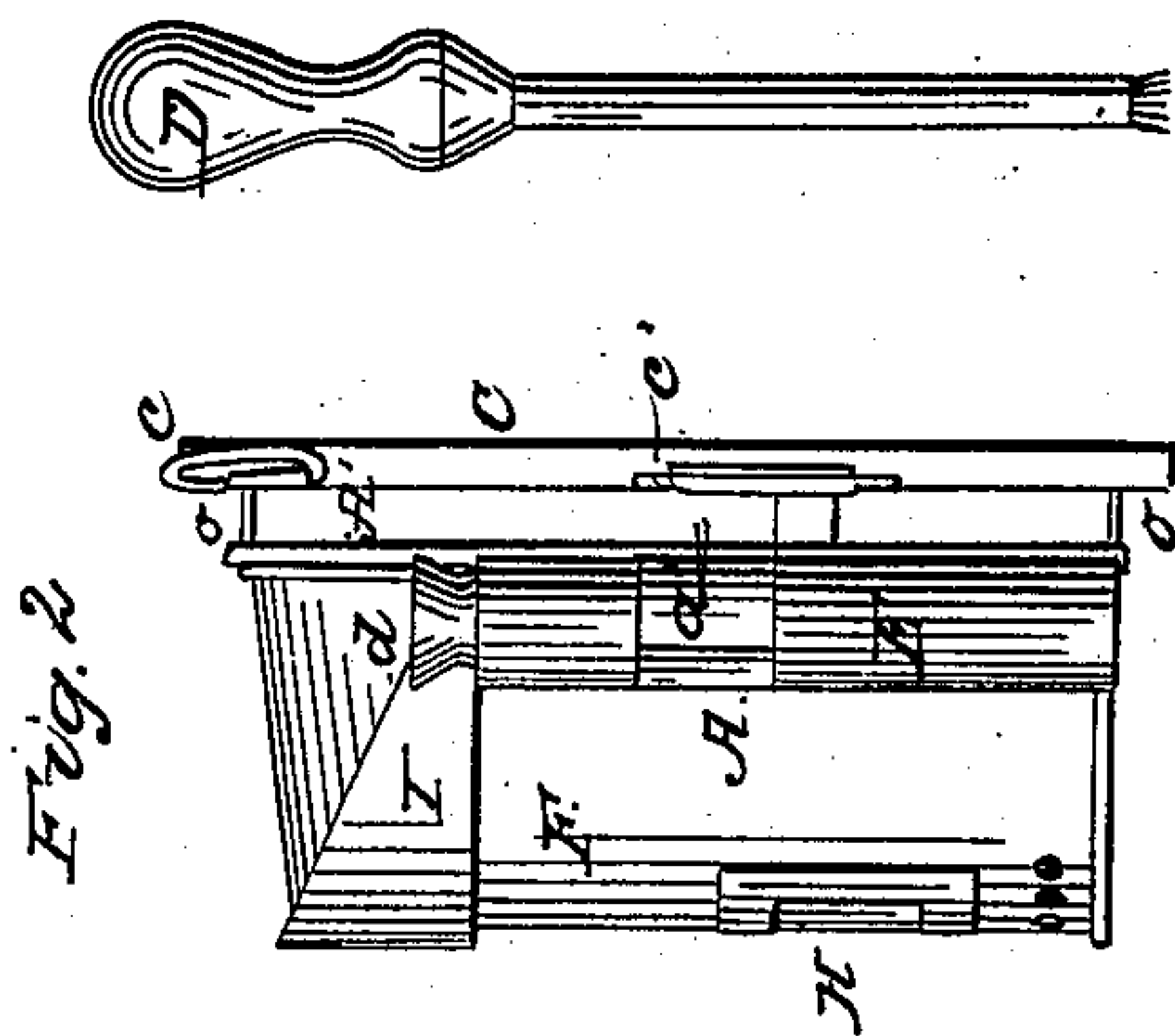


H. BREWER.

Lantern.

No. 10,419.

Patented Jan. 10, 1854.



UNITED STATES PATENT OFFICE.

HARVEY BREWER, OF EAST BOSTON, MASSACHUSETTS.

TORCH-LAMP.

Specification of Letters Patent No. 10,419, dated January 10, 1854.

To all whom it may concern:

Be it known that I, HARVEY BREWER, of East Boston, in the county of Suffolk and State of Massachusetts, have invented a new and Improved Apparatus for Lighting Street-Lamps, which I call a Torch-Lamp; and I hereby declare the following to be a full, clear, and exact description of the same, reference being had to the annexed drawings, making part of this specification, in which—

Figure 1 is a front elevation of the lantern to which my invention is applied; Fig. 2 a side view of the same with the torch D withdrawn; Fig. 3 an elevation of the opposite side showing the door through which the torch is introduced to be lighted. Fig. 4 is a top view of the lantern, and Fig. 5 is a view of the lantern the door being open to show the interior parts.

My invention is designed to enable me to employ camphene or other highly inflammable fluid for the purpose of lighting street lamps in lieu of the expensive "oil torch" or "lamp lighter" heretofore in use, whereby great economy in the consumption of oil is effected and increased certainty and rapidity in lighting the lamps are secured. And my invention consists in a peculiarly constructed reservoir for containing the camphene, by which the same is prevented from being spilled upon the clothes of the operator, should he at any time fall or stoop, while the reservoir at the same time is constantly open for the reception of the torch.

To enable others skilled in the art to which this most nearly pertains to make and use my invention I will proceed to describe the construction and operation of my lantern and also of the reservoir which I have applied thereto for the purpose of holding the camphene.

A is the body of the lantern B the lamp within. A' the back of the lantern which is attached to the guard C, by the stretchers *c c'* the two being separated a short distance from each other as seen in Figs. 2, 3, 4 and 5. By means of this construction, the lantern which is worn attached to the person of the lamp lighter is supported at such a distance from his body that he is not inconvenienced by the heat of the burning lamp.

The back A' or door of the lantern with the guard C, opens upon the hinge *a* to give

access to the lamp as seen in Fig. 5. They are fastened when closed by the clasp *a'*.

c c' are rings through which pass the straps which bind the lantern to the breast of the lamp lighter, his hands being left entirely free.

The reservoir for containing the burning fluid is of peculiar construction and may be described as follows: E is the exterior tube, *d* an interior tube which is adapted thereto and which extends about half way to the bottom of the reservoir all entrance to which is closed except that through the small tube *d*, it is therefore evident that if the reservoir be partially filled with liquid that the lantern may be turned in any direction upon either side or even be inverted without the possibility of spilling the liquid; and that should the operator stoop or fall he is in no danger of throwing the liquid upon his clothes, while at the same time the reservoir is constantly open for the reception of the torch, the interior tube being of a size just sufficient to admit it. The torch D is constructed of a tin tube with a handle, the tube serving to hold the wicking or other fibrous material which composes the swab.

F is a guard upon the inside of the lantern which prevents the lamp from being extinguished by the air which enters the ventilating holes *b'*. I is another guard upon the outside of the lantern for a similar purpose.

G is the post for the insertion of the torch when it is required to be lighted and which is closed by the cover *g*.

H is a window of mica to give light in front of the operator.

Operation: The lamp B being lighted and the lantern strapped to the breast of the operator, the reservoir E is filled to about one fourth of its capacity with burning fluid and the torch is placed in the reservoir as seen in Fig. 5. The lamplighter it will be seen has both his hands at liberty to manage his ladder, and open the street lamps. The torch which is held in the right hand, is thrust in at the port G the cover *g*, being removed at the same instant with the left, and when lighted it is applied to the wicks of the lamp or to the gas tube as the case may be, in the former case the swab is slightly pressed upon the wicks by which a portion of the fluid is left upon them in a

burning state. This continues to burn a sufficient length of time to ignite the wick, without obliging the operator to wait until this is effected, in severely cold weather when the oil is chilled the heat thus produced is found to be sufficient to melt the oil in the immediate vicinity of the wick, and thus the ignition of the latter is insured. The torch is then blown out and returned to the reservoir.

There are many advantages attending the use of camphene in the manner described. Among them may be enumerated: 1st. Great economy,—the expense of feeding the old torch being considerable while a spoonful of camphene per day is more than is required for my torch. 2d. The rapidity with which the lamplighter is enabled to perform his work, is a further source of economy, as he can take care of a much larger number of lamps, it only being necessary to touch the lamp wicks with the swab which leaves a sufficient quantity of the burning camphene upon each one of them to insure its ignition. 3d. The smoke which the old torch throws off is a serious objection to its use in crowded cities, and this inconvenience does not attach itself to the use of my torch. These advantages result as above stated from the use of camphene or some similar highly inflammable liquid; but the danger attendant upon its use has prevented it from being introduced for this purpose, for should the lamp lighter stoop or fall the fluid would be spilled upon his clothes and perhaps ignited at the same instant and serious consequences might result. By the use of my invention all danger of this kind is avoided,

and the use of the liquid in question is rendered perfectly practicable, for, should the lamp lighter fall or stoop or should the lantern at any time be overturned the liquid will pass up between the interior and exterior tubes of the reservoir, from which it can in no wise escape.

I am aware that torches have been adapted to cylindrical reservoirs containing burning fluid the handle of the torch or swab closing the mouth of the reservoir and extinguishing the fluid, should it chance to be ignited by returning the torch while burning. I do not therefore claim such a device, neither would it answer the purpose, where the reservoir is not stationary or where it is to be attached to the person. Neither do I claim any of the details of the construction of my lantern, except such as I shall hereafter specify, nor do I claim the lantern itself as new, nor the making use of camphene or any similar fluid for the purpose of lighting street or other lamps, but

What I do claim as my invention and desire to secure by Letters Patent is—

The peculiar construction of the reservoir for containing the camphene; that is to say, the combination of the exterior tube E with the interior tube d for the purpose of preventing the liquid from being spilled should the lamp be overturned; while the reservoir is at all times open for the reception of the torch.

HARVEY BREWER.

Witnesses:

A. REED,
LUTHER FULLER.