

(No Model.)

J. S. HULL.
SOLDERING IRON HEATER.

No. 328,406.

Patented Oct. 13, 1885.

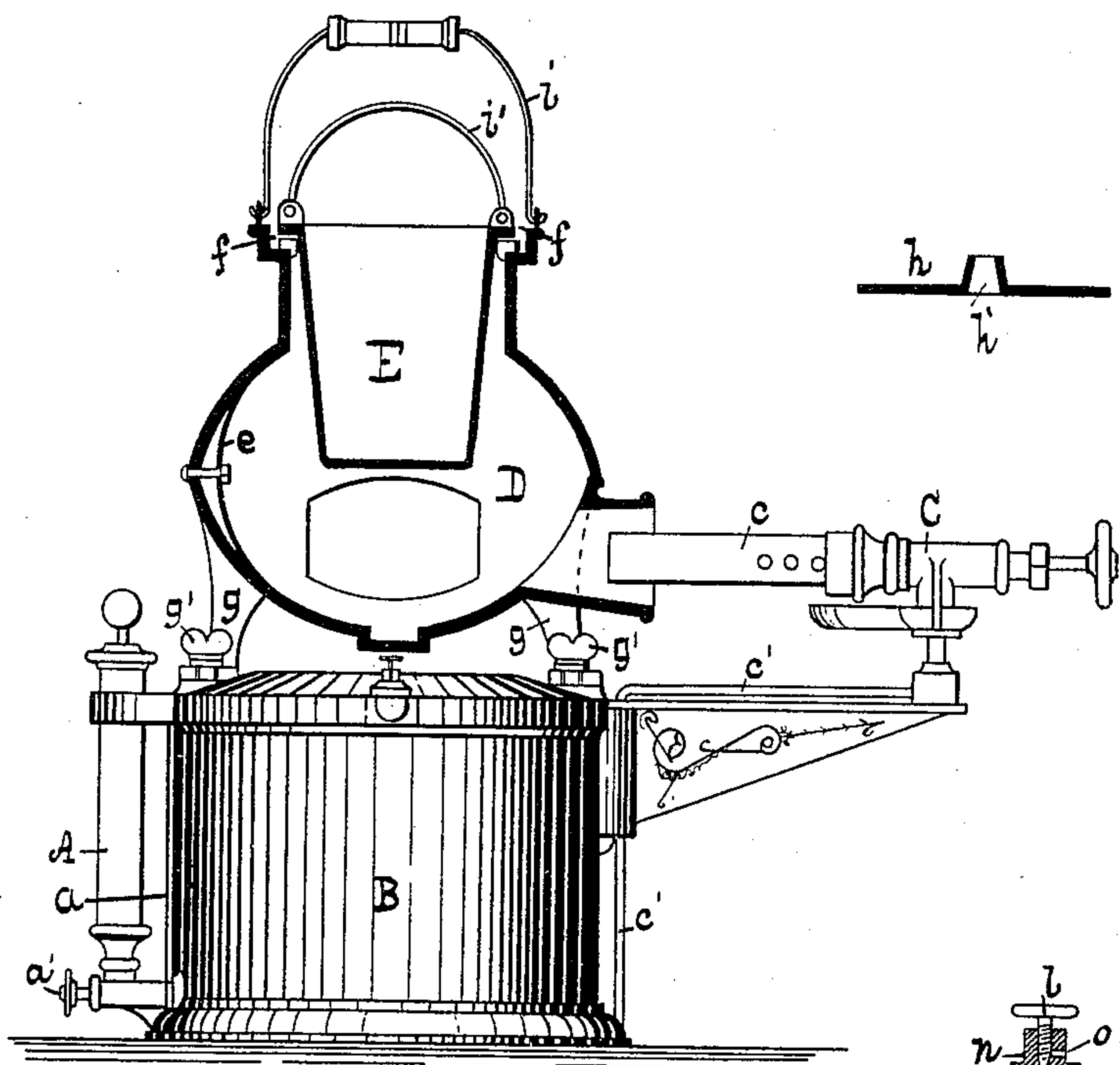


Fig. 1.

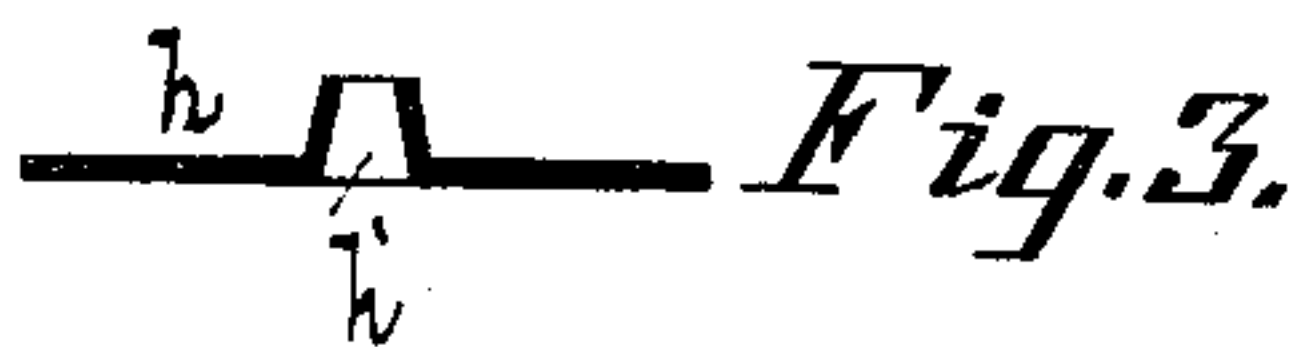


Fig. 3.

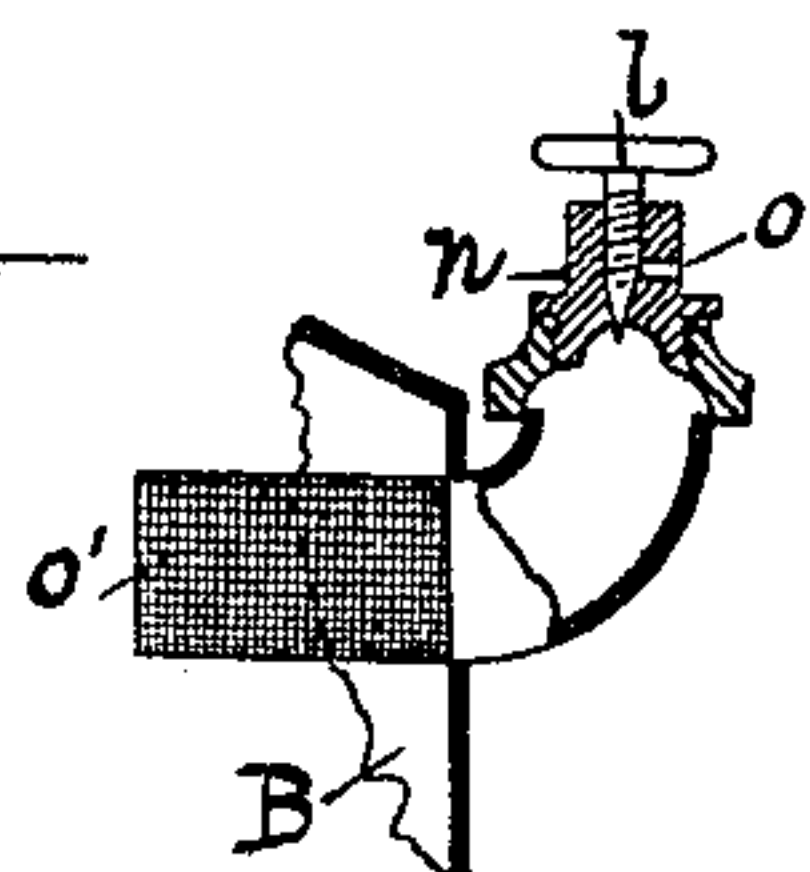


Fig. 4.

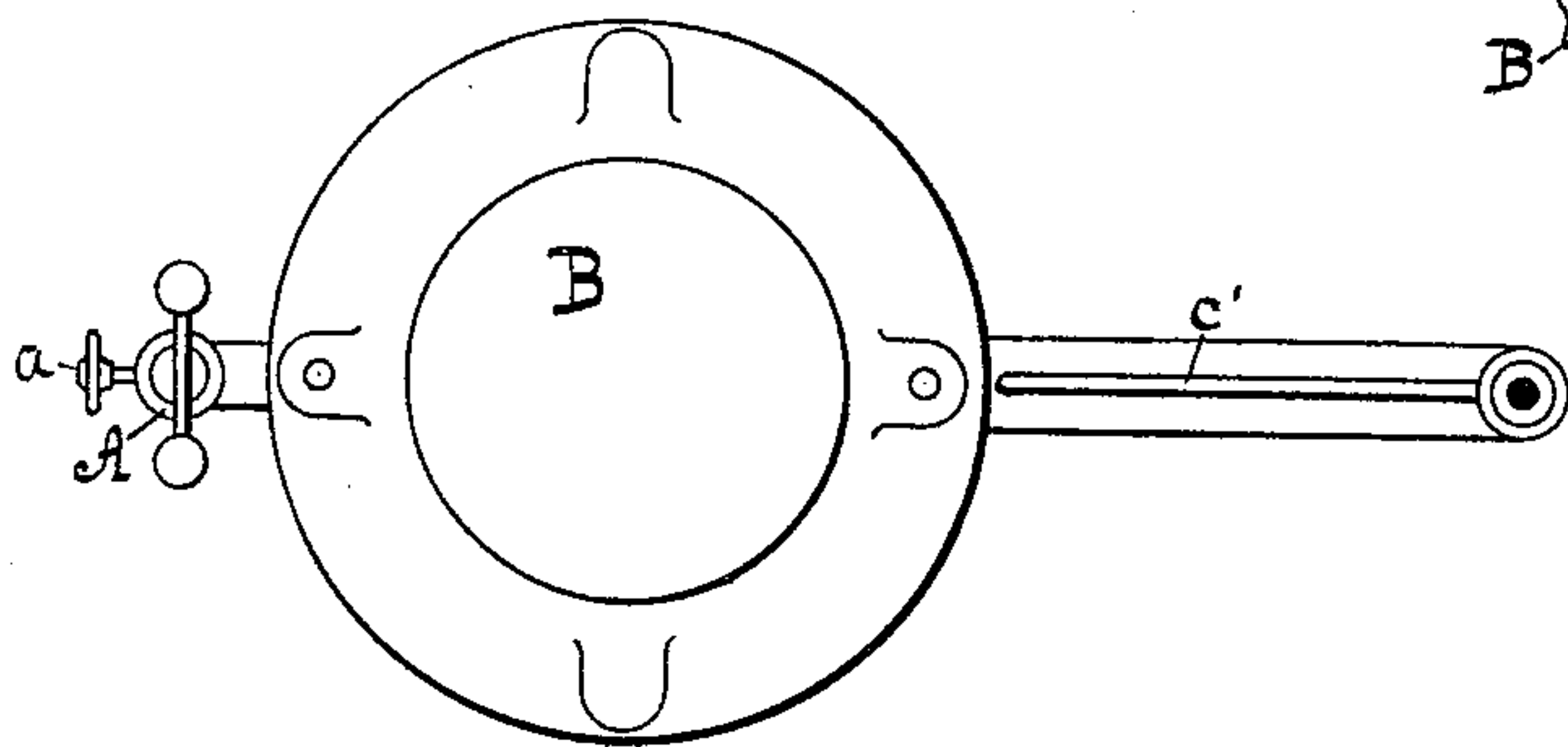


Fig. 2.

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SOLDERING-IRON HEATER.

SPECIFICATION forming part of Letters Patent No. 328,406, dated October 13, 1885.

Application filed August 20, 1884. Serial No. 141,001. (No model.)

To all whom it may concern:

Be it known that I, JOHN S. HULL, a citizen of the United States, residing at Baltimore, and State of Maryland, have invented certain new and useful Improvements in Hydrocarbon-Burner Fire-Pots, of which the following is a specification, reference being had to the accompanying drawings.

My present invention relates to adapting my hydrocarbon system to tinners' and plumbers' fire-utensils, and has for its object, first, arranging the same to be used either with a fire-pot or independent, as the circumstances may call for; second, combined with the same, a receptacle to melt metals, &c., in, at the same time the soldering-coppers are being heated; and, third, arranging the different parts so either or all may be used together or independent of each other. I attain these results by means shown in the accompanying drawings, in which—

Figure 1 is a side view of my device with the fire-pot and metal-receptacle in section; Fig. 2, a top view of the oil-tank, &c., with the fire-pot removed; Fig. 3, a sectional view of the lid to be used when the metal-pot is not in use; Fig. 4, a section of my escape and filling port, showing the safety device and part of the oil-tank.

Similar letters refer to similar parts throughout the several views.

The letter A designates the pump; B, the oil-tank; C, the burner; *c*, the combustion-tube, (all of which are fully described and shown in several prior patents to me;) D, the fire-pot, and E the metal-receptacle.

In operating my present device the air is forced in the oil-tank B, on top of the oil, from the pump A, through the pipe *a*, into the tank. When sufficient pressure is acquired, the cut-off *a'* is closed, thereby preventing any air from escaping back through the pump, the compressed air forcing the fluid to the burner C through the pipe *c'*, where it is generated into vapor and passes into the combustion-tube *c* through a small orifice, mingling with the air and igniting therein, the flame passing into the fire-pot D, over and around the coppers or other utensils placed therein, then striking the curved fire-back *e*, and rebounding strikes the metal-receptacle E, passing up and around the same and out through the

opening *f*, which is formed by four brackets projecting from the neck of the fire-pot on which the receptacle rests.

The fire-pot D rests on the oil-tank B by four legs, *g*, the feet of which are slotted, and which permit the fire-pot to be removed by releasing the thumb-screws *g'* and moving the pot to one side, thereby detaching the same from the generating apparatus and permitting the latter to be used for any purpose that may be desired—such as removing paint from different substances, tempering, and a variety of purposes—which would be impossible if the fire-pot were attached.

In case it is desired to use the fire-pot D without the metal-receptacle, the same may be removed and the lid *h* substituted therefor, the heat and gases passing out at the opening *h'* in the same.

The handle *i* is used to carry the whole device, which is necessary, as the same is carried through the streets, on house-tops, &c., the smaller one, *i'*, being attached to the metal-receptacle, and by which the same is removed or handled.

Shown in detail, Fig. 4, is my air-escape safety and filling device, which is operated and works as follows: When the pressure is to be let off or lessened, the needle *l* is unscrewed, which permits the air to escape from the tank B by passing out through the port *o*, and through the screen *o'*, the latter preventing the oil in the tank from becoming ignited, in case of lingering fire, the same working on the well-known Davy principle. When it is desired to replenish the oil, the cap *n* is unscrewed and the oil poured in, which passes through the screen *o'*, thereby preventing any foreign matter of larger size than the holes in the screen from passing into the tank. When a sufficient quantity of oil has been put in the tank, the cap is then screwed in its place and the air pumped in, as before described.

The whole device may be used together or separately, as herein described, thus affording a convenient, useful, and economical arrangement, which may be readily handled and conveyed to any desired place by plumbers, tin-smiths, machinists, and others.

I reserve the right of all devices herein shown, but not claimed, for the matter of future patents.

I am aware that fire-pots have been arranged with hydrocarbon-burners and combustion-tubes, and such devices are shown in patent to me, No. 269,577, dated December 26, 1882, 5 therefore what I herein claim, and wish to secure by United States Patent, is the arrangement of the parts as follows:

1. In a hydrocarbon - burner fire-pot, the combination of the oil-tank B, the burner C, 10 the metal-receptacle E, and the fire-pot D, arranged to convey the flame from the burner to and about the soldering-irons placed therein and from thence to and around the metal-receptacle, for the purpose as herein set forth.

2. In a tinner's fire-pot, the combination of 15 oil-tank B, the burner C, the combustion-tube c, the fire-pot D, the legs g, provided with slots, and the thumb-screws g', whereby the fire-pot may be removed from the oil-tank, as herein shown, and for the purpose as set forth. 20

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

JOHN S. HULL.

Witnesses:

WM. B. NELSON,
WM. BOYDEN.