

WILLIAM H. H. COON.

Improvement in Tanners' Furnaces.

No. 128,122.

Patented June 18, 1872.

Fig. 1.

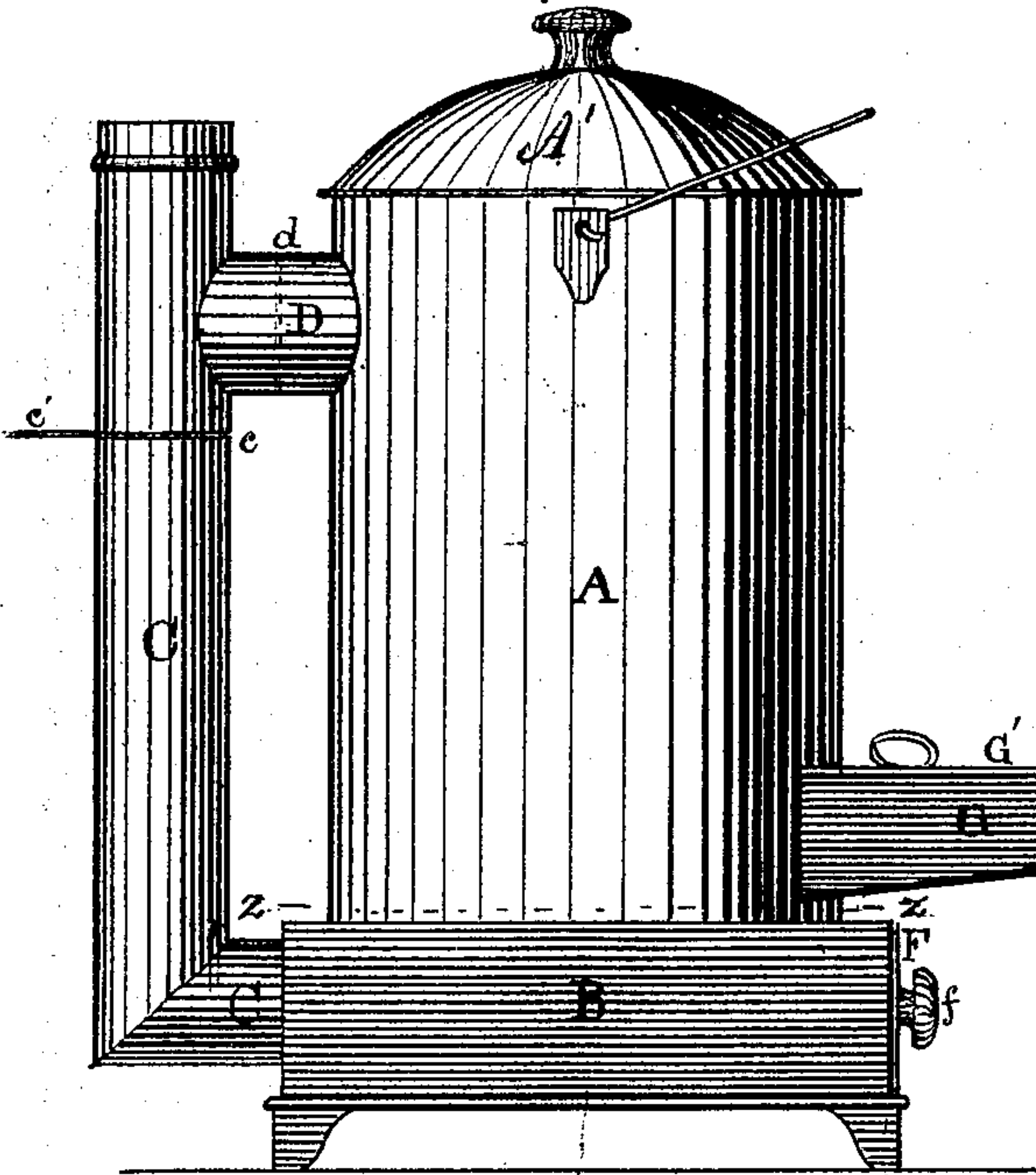


Fig. 3.

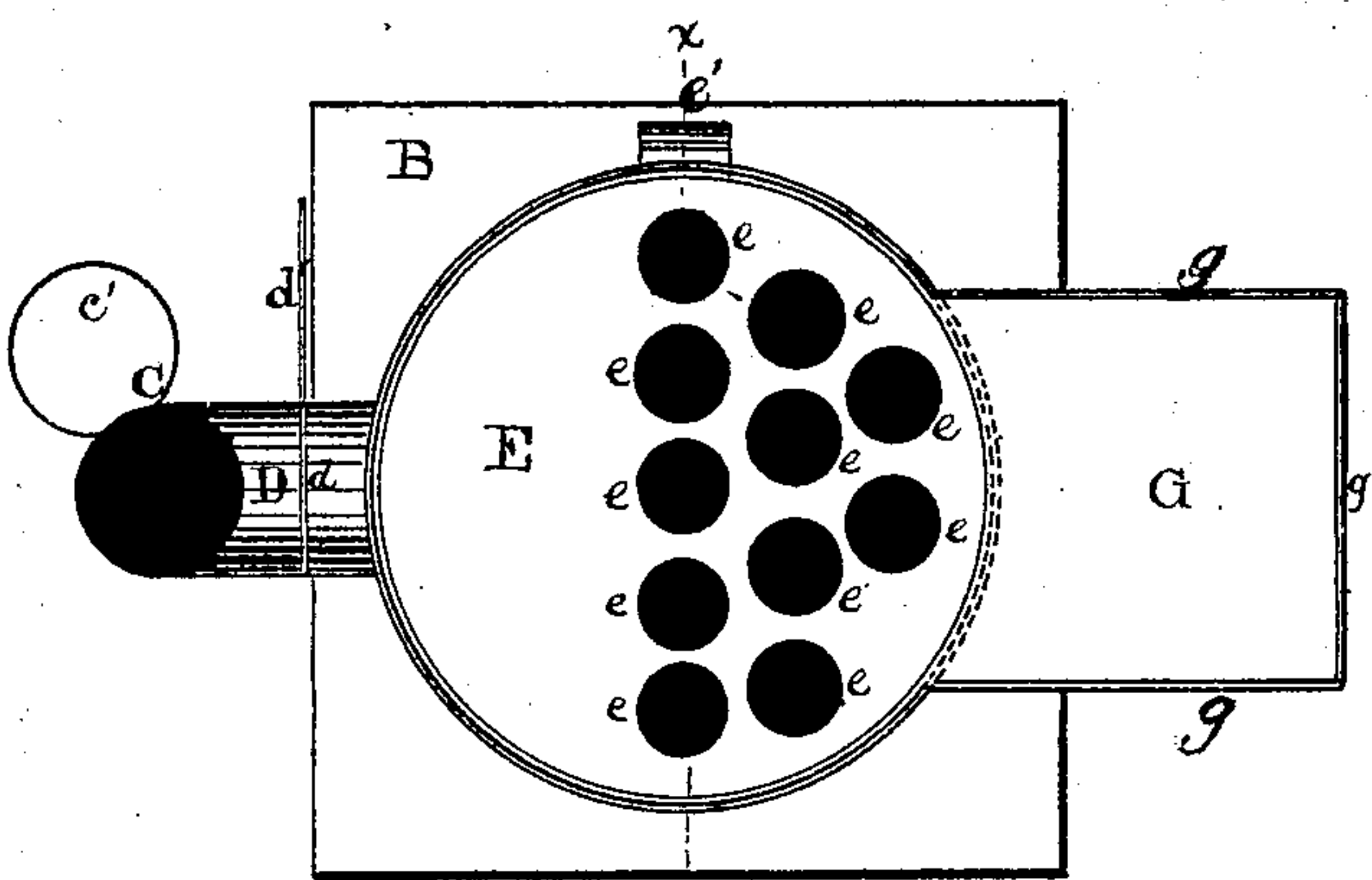
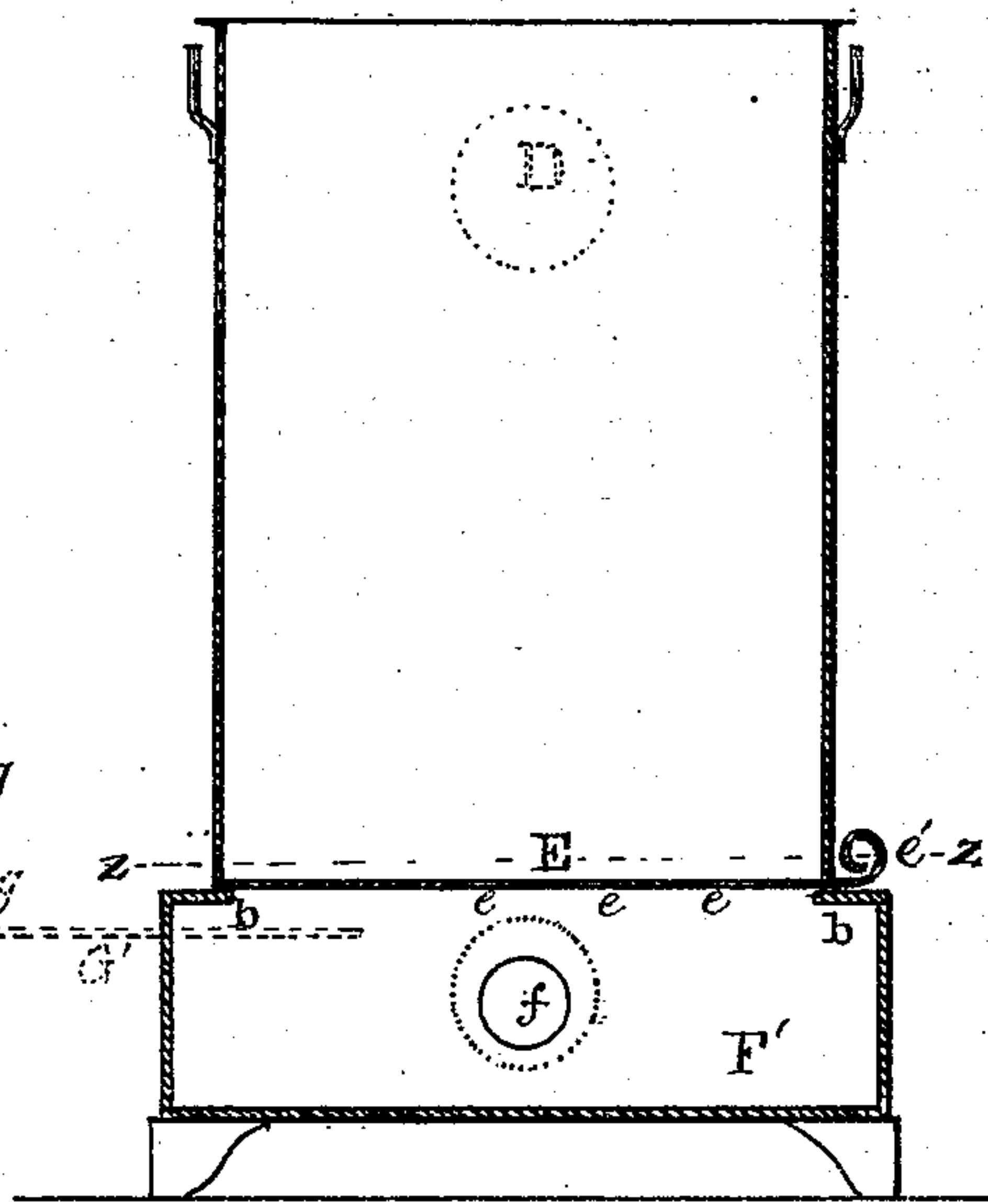


Fig. 2.

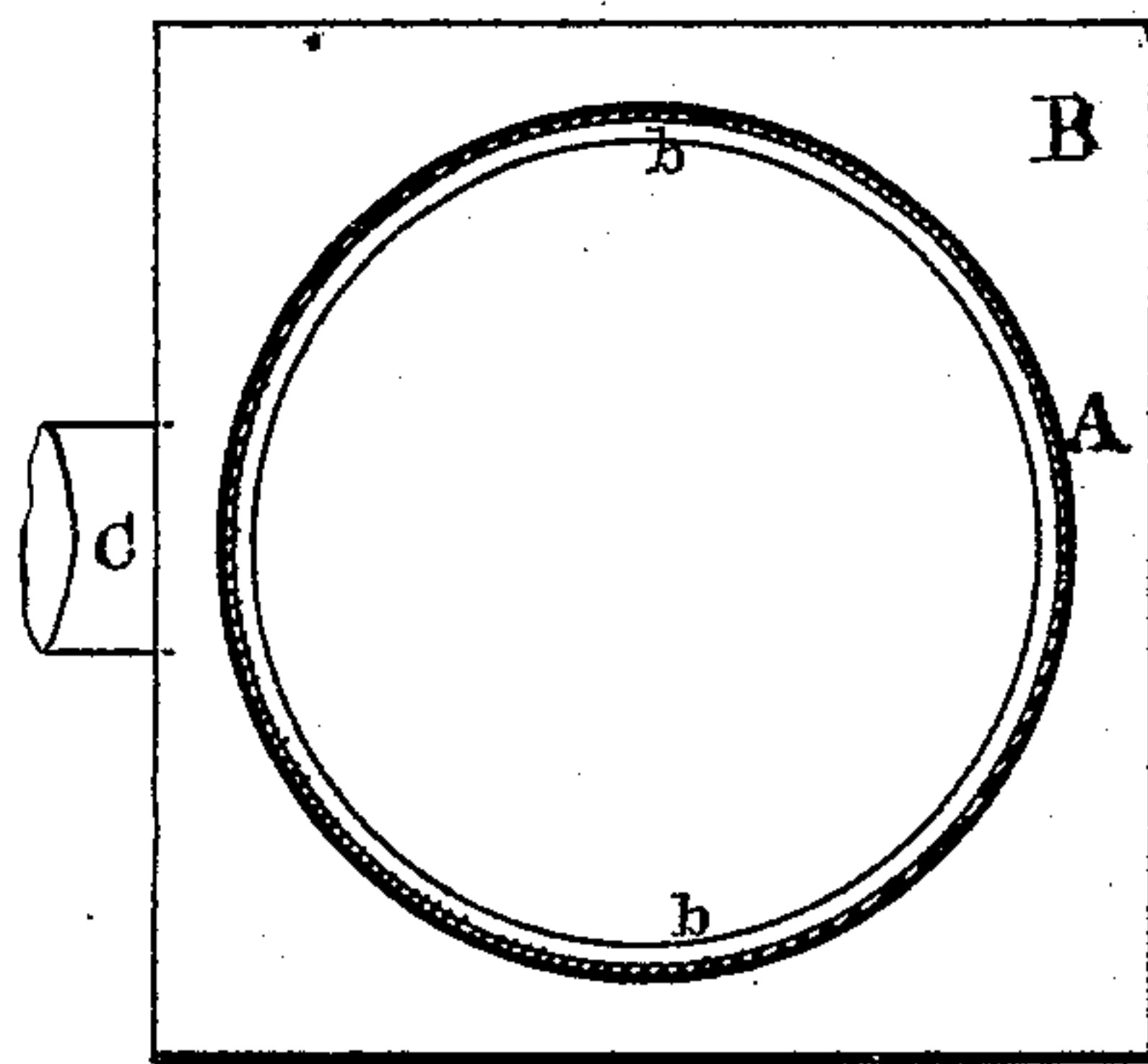


Fig. 4.

Attest

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WILLIAM H. H. COON, OF ST. PAUL, MINNESOTA.

IMPROVEMENT IN TINNERS' FURNACES.

Specification forming part of Letters Patent No. 128,122, dated June 18, 1872.

To all whom it may concern:

Be it known that I, WM. H. H. COON, of St. Paul, in the county of Ramsey and State of Minnesota, have invented certain new and useful Improvements in Tinnners' Furnaces; and do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawing making a part of this specification, in which—

Figure 1 is a side elevation of my improved device. Fig. 2 is a plan view of the upper side of the same. Fig. 3 is a vertical central section of said device on line *xx* of Figs. 1 and 2; and Fig. 4 is a horizontal section of the same on line *zz* of Figs. 1 and 3.

Letters of like name and kind refer to like parts in each of the figures.

My invention is an improvement upon a class of devices employed for the purpose of heating the soldering-irons of tinnners and other workers in sheet metal; and it consists in the device as a whole, substantially as and for the purpose hereinafter specified.

In the annexed drawing, A represents a straight cylinder of sheet metal resting upon and secured to a hollow rectangular base, B, and inclosed at its upper end by means of a cover, A'. Within the upper side of the base B, and within the cylinder A, is provided an opening which has a diameter slightly less than the diameter of said cylinder, so as to leave immediately inside of the wall of the latter a ledge, *b*, upon which rests a circular metal plate, E, provided with a series of openings, *e*. Attached to one side of said plate E (which forms a supporting-grate for the fuel) is a strip of metal, *e'*, which extends horizontally outward through a corresponding opening in the wall of said cylinder, and furnishes a means whereby said grate may be moved to and fro in a horizontal plane, so as to shake the ashes from the fuel. Extending horizontally rearward, and thence vertically upward from the base B, is a pipe, C, which is connected with the cylinder A, near its upper end, by means of a short horizontal pipe, D. A circular metal disk, *c'*, is pivoted to or upon one side of the pipe C, and, swinging horizon-

tally and edgewise inward through or into a corresponding slot, *c*, formed within said pipe, furnishes a means whereby the passage through the latter may be partially or entirely closed, as may be desired. A second damper, *d'*, constructed like that hereinbefore described, is pivoted to and works vertically within a slot, *d*, provided within the walls of the cross-pipe D, and enables the passage in and through the same to be diminished or closed at will. Secured to or upon the front side of the cylinder A, at a point slightly above the base B, is a hearth, G, which extends outward and slightly upward, and is provided with vertical sides *g*. A cover, G', corresponding in size and shape to the upper side and front end of the hearth, is hinged to or upon said end, so as to be capable of being turned upward and rearward (as seen in Fig. 1) so as to close said hearth, or of being turned outward and downward (as shown by the dotted lines) so as to leave said hearth entirely open and unobstructed. The usual openings for the passage of soldering-irons being provided in and through the wall of the cylinder, at and within the rear end of the hearth, and a suitable ash-drawer, F, provided within the base, the device is complete, and is operated as follows:

Fuel being applied to the cylinder and ignited, the cover G' and damper *c'* are closed and the damper *d'* and ash-drawer opened. The air now enters beneath the grate, passes upward through the burning fuel, while the heated escaping gases pass into and through the cross-pipe D. After the fuel is thoroughly ignited the damper *d'* should be closed, the damper *c'* opened, the ash-drawer closed, and air admitted to the upper side of the fuel, when the draught will be downward through said fuel into the ash-pit, and from thence into and through the rear pipe or flue C, by which means the gases given off from the fuel will be carried through the incandescent coal and thoroughly consumed, so as to not only afford a large increase in the quantity of heat, but also to bring said heat to the most desirable point. The advantage possessed by the extra damper within the back pipe is that it enables said pipe to be entirely closed and the

draught to be wholly directed into and through the cross-pipe, while ordinarily but one damper is employed and the back pipe never closed, so that a large proportion of the draught passes up the latter, even when said cross-pipe is open.

Having thus fully set forth the nature and merits of my invention, what I claim is—

A tinner's furnace, in which the dampers *c'* and *d'* and the hinged cover *G'* are combined with the other portions of the device, substantially as and for the purpose specified.

WM. H. H. COON.

Witnesses:

C. L. GRANT,

W. P. WARNER.