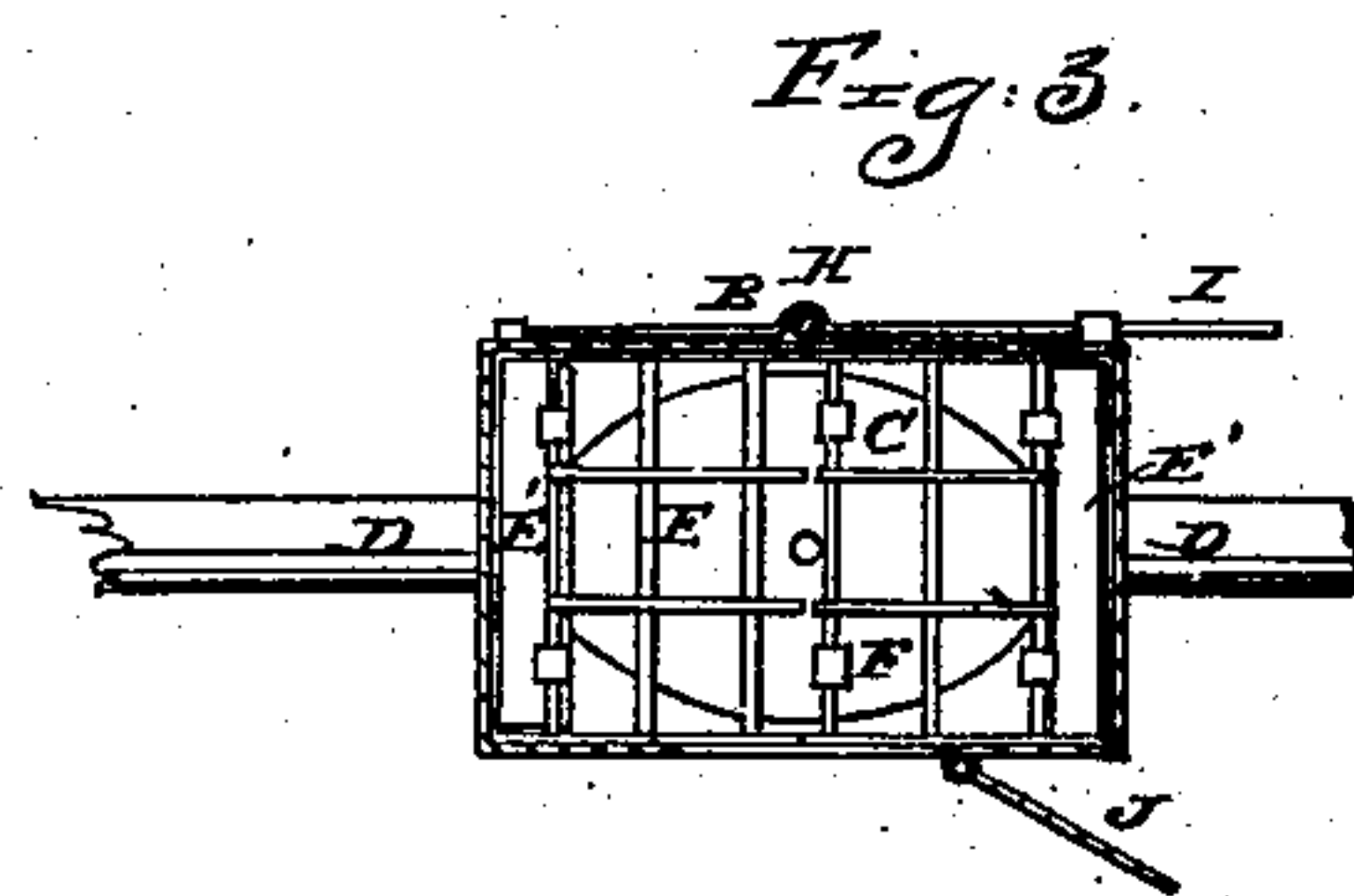
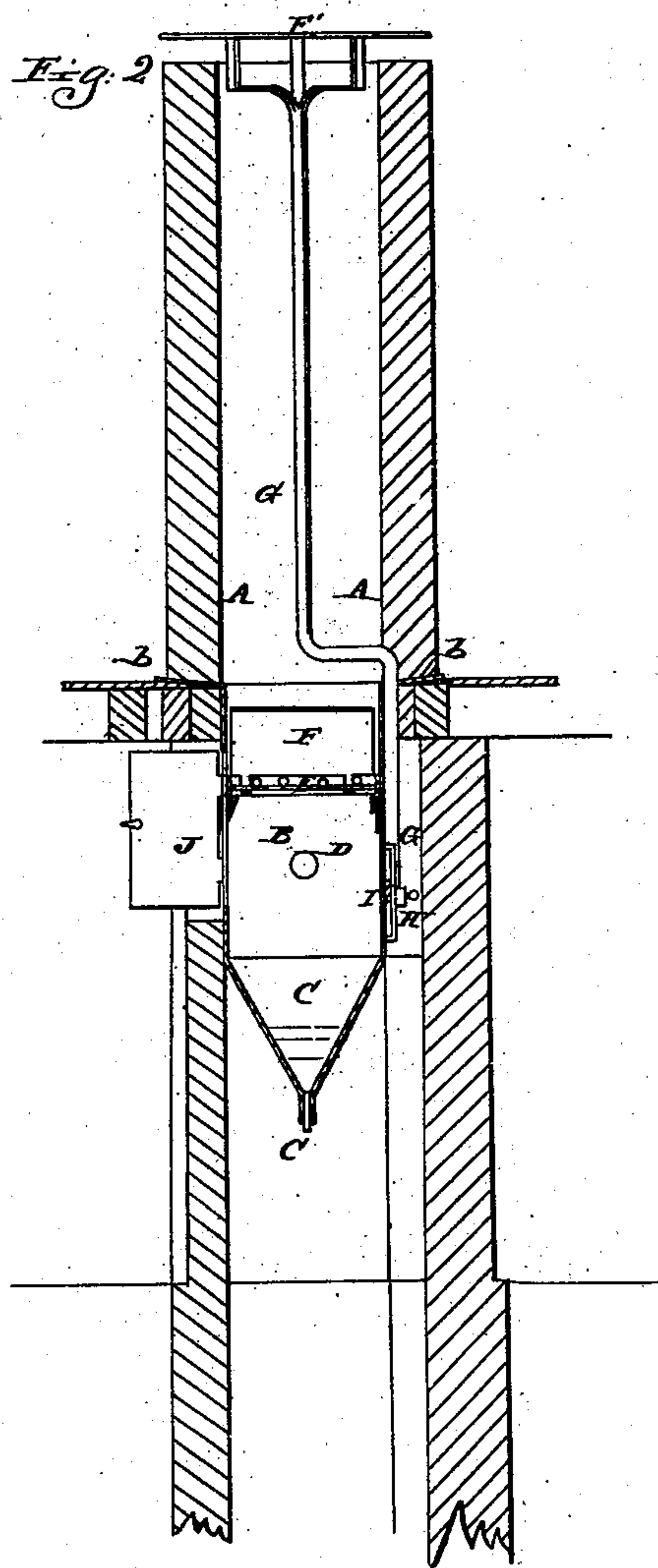
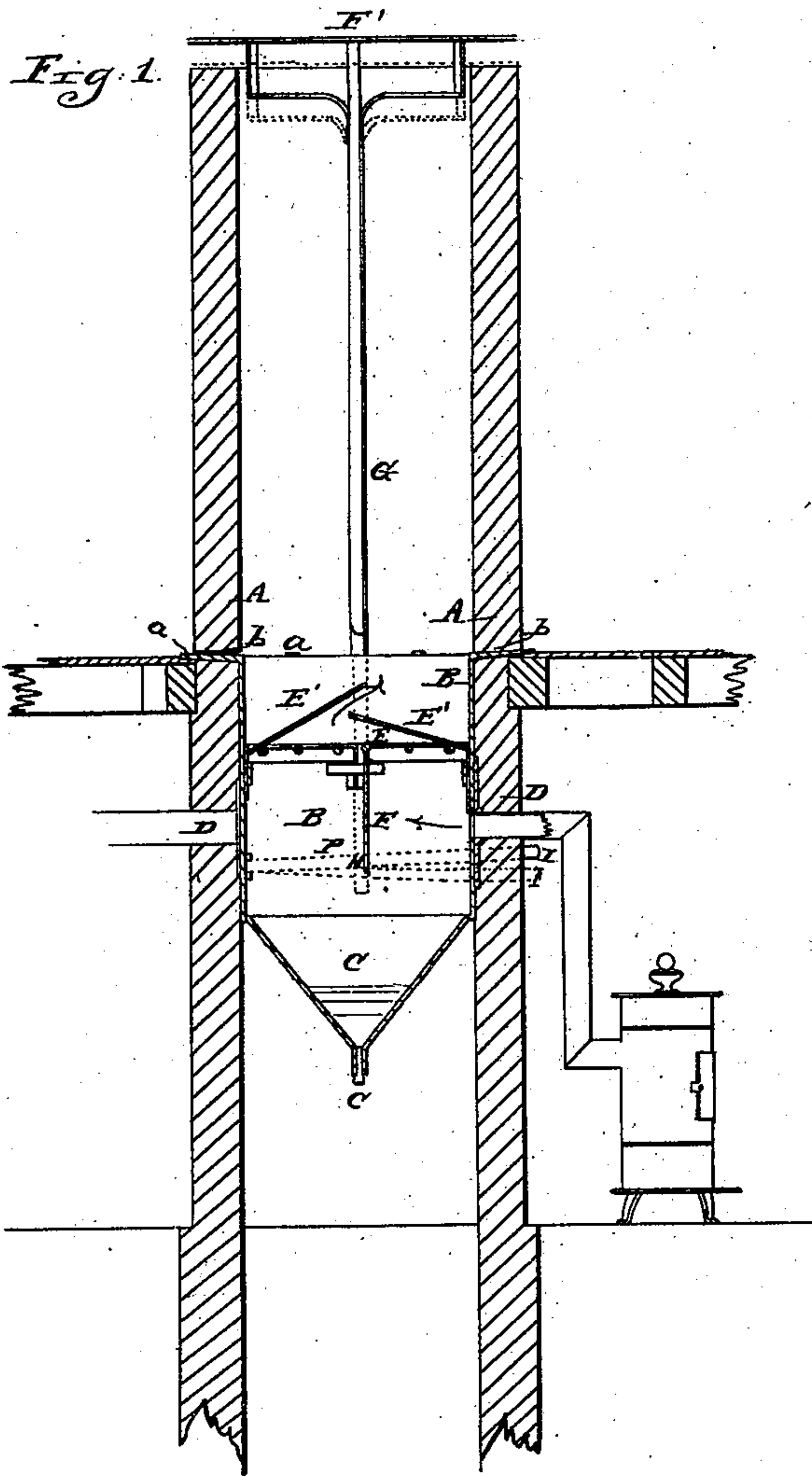


No. 12,404.

PATENTED FEB. 20, 1855.

G. B. CLARKE
CHIMNEY SAFE.



UNITED STATES PATENT OFFICE.

GEORGE B. CLARKE, OF LEONARDSVILLE, NEW YORK.

CHIMNEY-SAFE.

Specification of Letters Patent No. 12,404, dated February 20, 1855.

To all whom it may concern:

Be it known that I, GEORGE B. CLARKE, of Leonardsville, Madison county, State of New York, have invented a new and useful Improvement in Chimney-Safes; and I do hereby declare that the following is a full, clear, and exact description of the same.

The nature of my improvement consists in providing the lower part of the chimney with a smoke box, having a water tank below, and regulating dampers above; the point or points of entry of the smoke.

To enable others skilled in the art to make and use my improvement, I will proceed to describe its construction and operation, reference being had to the annexed drawings forming a part of this specification, in which—

Figure 1, is a side sectional elevation of my improvement. Fig. 2, an end sectional elevation of the same. Fig. 3, a horizontal plan section of same.

Similar letters of reference indicate corresponding parts in the several figures.

A is the chimney composed of brick, in the usual manner, B the smoke box, C tank or receiver, D stove pipe tubes, E wire screen or fender, E' hinged dampers, F vertical plate, J door of the smoke box. (a) apertures between the flange (b) of the smoke box B, and the chimney, (c) tube of receiver C.

The smoke box B open at the top, is placed under the chimney, its flanges (b) set in brick and mortar on the beams of the building, the principal part of the box hanging below the floor of the chimney room. It is provided with a door J in the front side and one or more tubes D, for stove pipes in the other sides, the tubes, of different sizes, being cast in plates of equal sizes, permanently or removably secured in the lower part of the sides of the smoke box. The plates, if removable, may be secured by flanges at their corners or they may be keyed on to staples or hooks in the castings, so that tubes of various sizes, set on plates of equal sizes may fit the aperture in the smoke box. In setting the chimney, care should be taken to leave a portion of the rim or flange (b) of the box outside the brick work; the rim being slightly raised to receive water running down outside. Small apertures (a) should be left in the mortar next the rim, that the water may run into the box.

The tank or receiver C, is situated at the lowest part of the smoke box B being a part of its bottom, in the form of an inverted cone terminating in a small tube (c) or nozzle which may be stopped by a cork or faucet. The purpose or use of the tank or receiver appended to the aforesaid smoke box is to hold water which from rain or condensed smoke or other cause may run down inside the box. The water may be drawn off at the faucet when required, or be guided by a tin or lead pipe to the rear of the building.

The regulators of the draft, consist of two or more dampers or trap doors E', a vertical plate F, and a wire screen or fender E. The dampers E' may be made of copper or other suitable material their position in the smoke box should be above the tubes D, for stove pipe. The dampers E' open upward and are so hinged to the fender E, that when open a space is left for soot, pieces of mortar &c. to fall down between the surfaces of the dampers and the sides of the box within. By shutting down either of the dampers the draft can be greatly lessened and in the case of burning of soot by accident in the chimney the most violent flame within may be deadened, if not quite suppressed by first quenching the fire in the stove below, and then closing both dampers E' or all of the dampers, if more than two are used, which may be done through the side door (J) of the smoke box; after which, the side door J should be shut, which will nearly close the draft of the chimney. The screen or fender H is used when the dampers are open, to arrest falling brick and prevent them from disarranging the stove pipe. A cap should be firmly set on either of the tubes D not occupied by the stove pipe. The fender E is in two parts that it may be taken out, or replaced through the side door J of the smoke box. The vertical plate F is hinged to the fender to equalize the draft of opposite pipes. In some cases the regulators may be fastened on rotating rods passing through the front of the box so as to be operated without opening the side door aforesaid.

The smoke-box device, described, forms a distinct intermediate chamber as it were, and the dampers E' E' above and the conical or other equivalently shaped receiver C below the point of entry of the smoke from the stove pipe D, combined, effect a considerable improvement in the draft et cetera,

as for instance, whatever snow, ice or water may pass, melt or run down the chimney, will be collected at the center of the receiver at the bottom (the conical shape of the receiver C drawing it from the sides thereof) where it may be readily drawn off before lighting the fire in the stove, and the smoke box B be made to form a dry chamber, both above and below the points of entry of the smoke, that will greatly facilitate the draft on starting the fire, and any after collection of wet, as the chimney becomes heated, may be allowed to remain in the receiver C from whence it will be evaporated by the action of the heat and warmth of the casting and thus be made to assist the draft by the vapor rising from below the entry of the smoke; or, by closing the dampers E', in case of fire in the chimney arising from and kept up by burning pieces of paper, rags, or such like, drawn by the draft in a flaming condition from the stove, the vapor rising from the water in the receiver will rapidly extinguish the burning particles or pieces and by their falling into the water below, as well as by the damping, by the vapor, of the smoke box B when closed, all risk of the fire in the

chimney being renewed or breaking out again, on prematurely or soon opening the dampers E' again, will be obviated. 30

I am aware that a narrow frame piece having a damper or valve has before been fitted in the chimney above the point of entry of the smoke, to regulate the draft and aid in extinguishing fire in the chimney; such therefore I do not claim. I am also aware that locomotive engine chimneys have been provided with water vessels or tanks to extinguish sparks carried up by the draft, this therefore also, separately considered, I do not claim; but 35 40

I do claim as new and useful and desire to secure by Letters Patent,

The smoke-box or chamber B arranged in the chimney as described and having dampers E' above and a conical or other equivalently shaped receiver C below the point or points of entry of the smoke as and for the purposes set forth. 45

GEORGE B. CLARKE.

Witnesses:

T. D. ELLISON,
WM. H. CRANDALL.