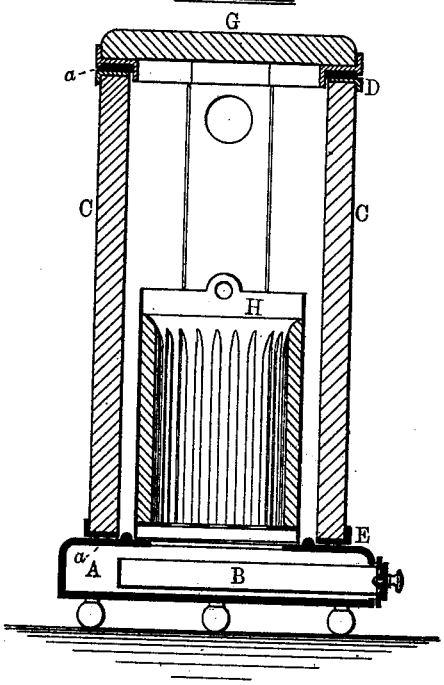
3 Sheets—Sheet 1.

T. GEMMELL.

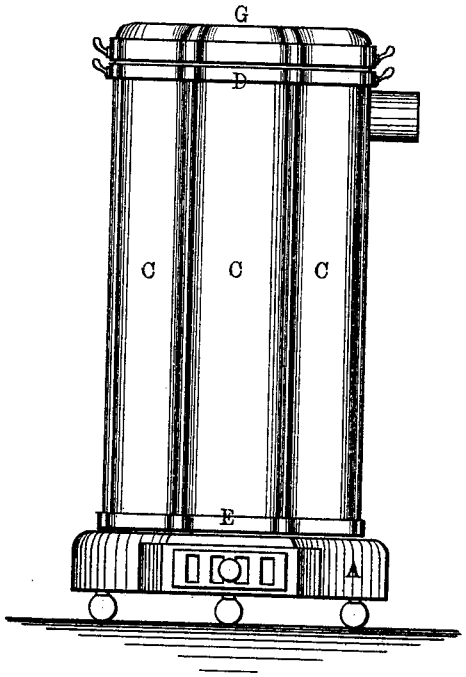
Heating-Stoves.

No. 196,007. Patented Oct. 9, 1877.

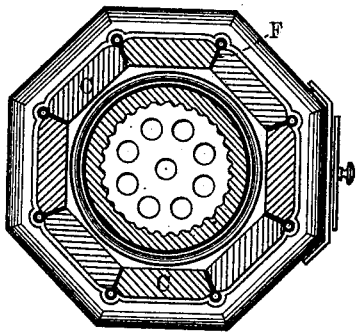
—FIG. I.—



—FIG. II.—

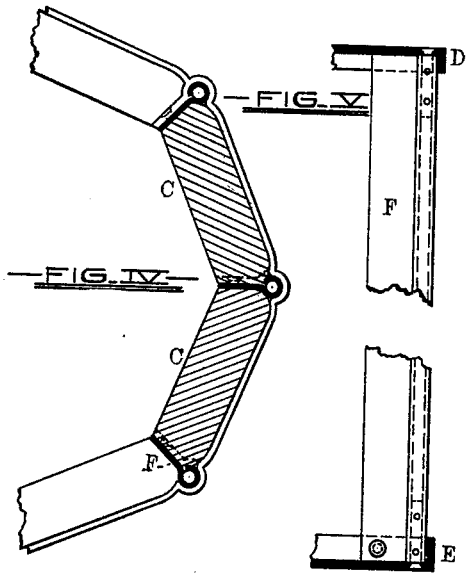


—FIG. III.—



—FIG. V.—

—FIG. IV.—



—WITNESSES.—

Wm. W. Towson

W. W. Wharton

—INVENTOR.—

Thomas Gemmell,

by G. H. & W. T. Howard

Attys.

3 Sheets—Sheet 2.

T. GEMMELL.

Heating-Stoves.

No. 196,007. **Patented Oct. 9, 1877.**

FIG. VI

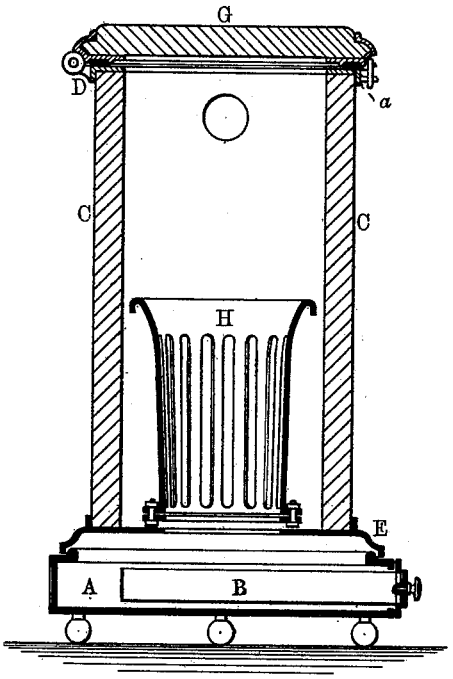


FIG. VII

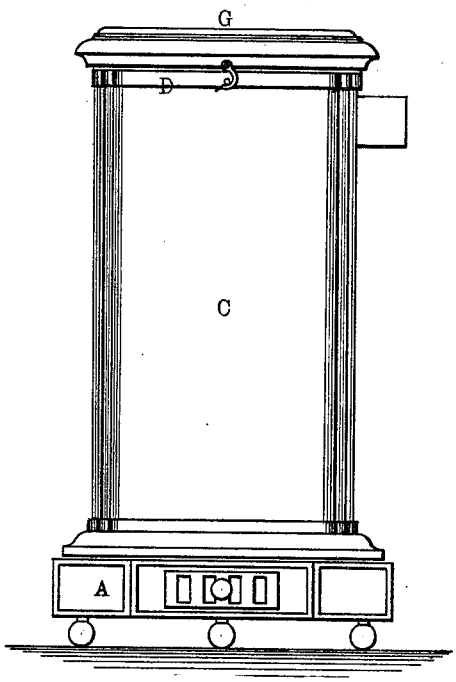


FIG. VIII

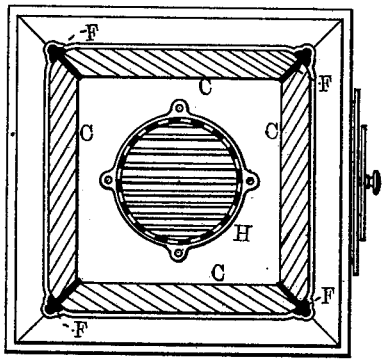


FIG. IX

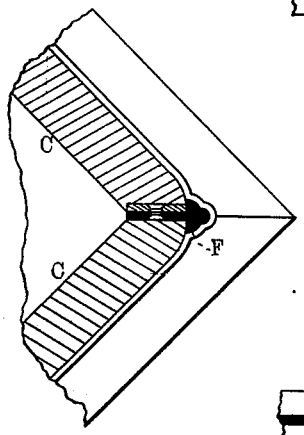
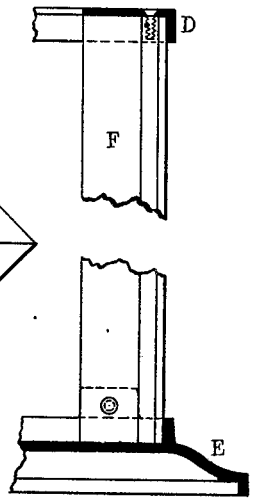


FIG. X



WITNESSES.

Wm. H. Towson

W. W. Wharton

INVENTOR.

Thomas Gemmell

by Gatty & T. Howard, Attys.

3 Sheets—Sheet 3.

T. GEMMELL.

Heating-Stoves.

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FIG. XI

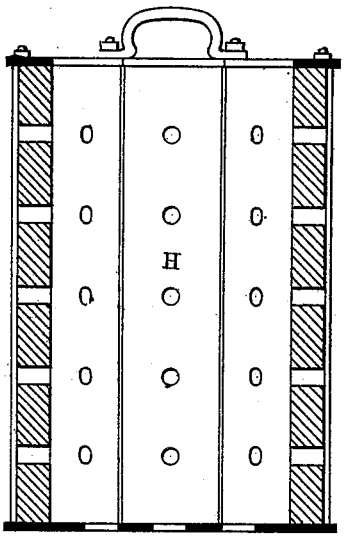


FIG. XIII

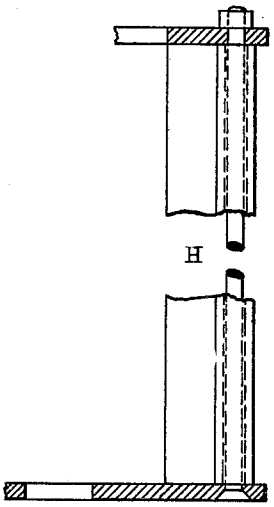


FIG. XII

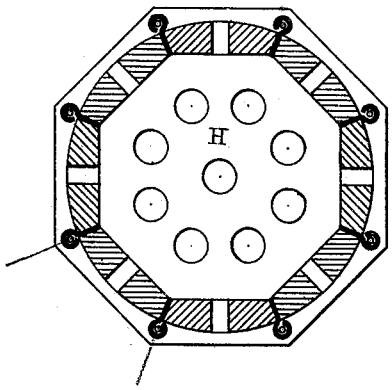
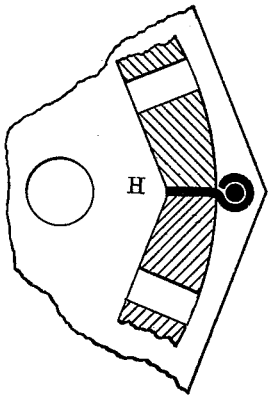


FIG. XIV



WITNESSES.

Wm. H. Towson

F. E. Hewlett

INVENTOR.

Thomas Gemmell,

by G. H. W. J. Howard

attys.

UNITED STATES PATENT OFFICE.

THOMAS GEMMELL, OF BALTIMORE, MARYLAND.

IMPROVEMENT IN HEATING-STOVES.

Specification forming part of Letters Patent No. **196,007**, dated October 9, 1877; application filed August 17, 1877.

To all whom it may concern:

Be it known that I, THOMAS GEMMELL, of the city of Baltimore and State of Maryland, have invented certain Improvements in Heating-Stoves, of which the following is a specification; and I do hereby declare that in the same is contained a full, clear, and exact description of my said invention, reference being had to the accompanying drawing, and to the letters of reference marked thereon.

The first part of my invention has reference to certain improvements in that class of stoves wherein heat radiated from the fuel is stored up and gradually emitted in an equal and uniform manner from a casing composed mainly of terra-cotta, soap-stone, or other heat-retaining substance.

In the further description of the invention which follows, reference is made to the accompanying drawing, forming a part hereof, and in which—

Figures I and II are, respectively, a vertical section and an exterior elevation of the improved stove. Fig. III is a sectional plan of the invention. Figs. IV and V are sectional views of parts of the invention on an enlarged scale. Figs. VI, VII, VIII, IX, and X illustrate certain modifications in design of the stove. Figs. XI, XII, XIII, and XIV illustrate the preferred construction of the fire-pot or fire-holder, which is shown on an enlarged scale.

Similar letters of reference indicate similar parts in all the figures.

A is the hollow base of the stove, containing the ash receptacle or pan B, and supporting the stove-body or outer casing. The said stove-body or outer casing consists of blocks, C, of terra-cotta, soap-stone, or other material having similar heat-retaining properties, confined within and by a metallic frame or skeleton formed of an upper and a lower metallic frame-plate or ring, (represented, respectively, by D and E.) The said rings or plates are connected by vertical metallic ribs F, having their outer edges flanged or beaded, so as to form shoulders, by means of which the blocks C are held in place.

A cover or lid, G, constructed, in like manner, of a block of terra-cotta or other similar heat-retaining substance, contained by a ring or frame of metal, is made either separate and removable, or preferably hinged to the stove-body or outer casing.

A close joint is formed between the stove-casing and the cover or lid, and between the casing and the hollow base, by means of gaskets *a*, of lead or other soft metal, or of asbestus felt or other compressible incombustible substance.

The gasket placed between the body and base of the stove is held in place by the weight of the former; but, if desired, it may be secured in some suitable way to one of the parts.

The following description of the fire-pot or holder used in connection with this stove is given in order that the action of the stove may be the better understood; but the said fire-pot is not claimed as a part of the invention herein described, but may form the subject of a separate application for Letters Patent. The fire-pot or fire-holder H, containing the fuel, is placed centrally in the outer casing, resting upon the hollow base, and is separate and removable. The fire-pot is fitted with lugs or flanges to assist in its withdrawal from, and its replacement in, the stove-body, and its bottom is perforated or divided by spaces for the admission of air. The body of the fire-pot is either made of sheet-iron, in which case it is lined with terra-cotta or fire-clay, to prevent the burning and wasting of the metal, and perforated, or of wrought or cast iron bars, forming a frame-work adapted to hold terra-cotta or fire-brick in any desired form. The preferred construction of the fire-pot is, however, as follows: To a perforated plate, forming the bottom or base, there are attached, by bolts or rivets, or by other suitable means, a series of vertical flanged iron ribs or strips of sheet-iron, having their outer edges expanded or turned over, so as to form a bead, head, or flange. Blocks of terra-cotta or fire-brick are inserted between the bars or sheet-iron strips, and are held in place by the beads or flanges on the vertical sheet-metal strips or ribs before referred to. The upper ends of the sheet-metal strips or ribs are connected by a ring, which, to facilitate the lifting of the fire-pot, is provided with lips, handles, or with a bail. The fire-brick blocks are preferably perforated, to admit of the direct radiation of heat

from the fuel to the stove-body without interfering materially with the heat-retaining properties of the fire-pot. The stove is further provided with registers, to regulate the admission of air to the interior of the hollow base, and thence to the fire-pot, and with a smoke-pipe, to conduct the products of combustion to a chimney or flue.

Having thus described my invention, what I claim as new, and wish to secure by Letters Patent of the United States, is—

1. The combination of the base A of the stove, the body thereof consisting of the terra-cotta or soap-stone blocks C, rings D and E, and frame-work F, and the lid formed of the terra-cotta or soap-stone block G, having an inclosing metallic ring, all constructed substantially as herein shown and described.

2. In combination with the base A and body of the stove, the gasket *a*, composed of soft metal, asbestus felt, or other similar substance, and placed between the said body and base, as shown, whereby the gasket is held in place by compression, as and for the purposes specified.

In testimony whereof I have hereunto subscribed my name this 7th day of August, in the year of our Lord 1877.

THOMAS GEMMELL.

Witnesses:

N. L. BURKE,

THOS. MURDOCK.