

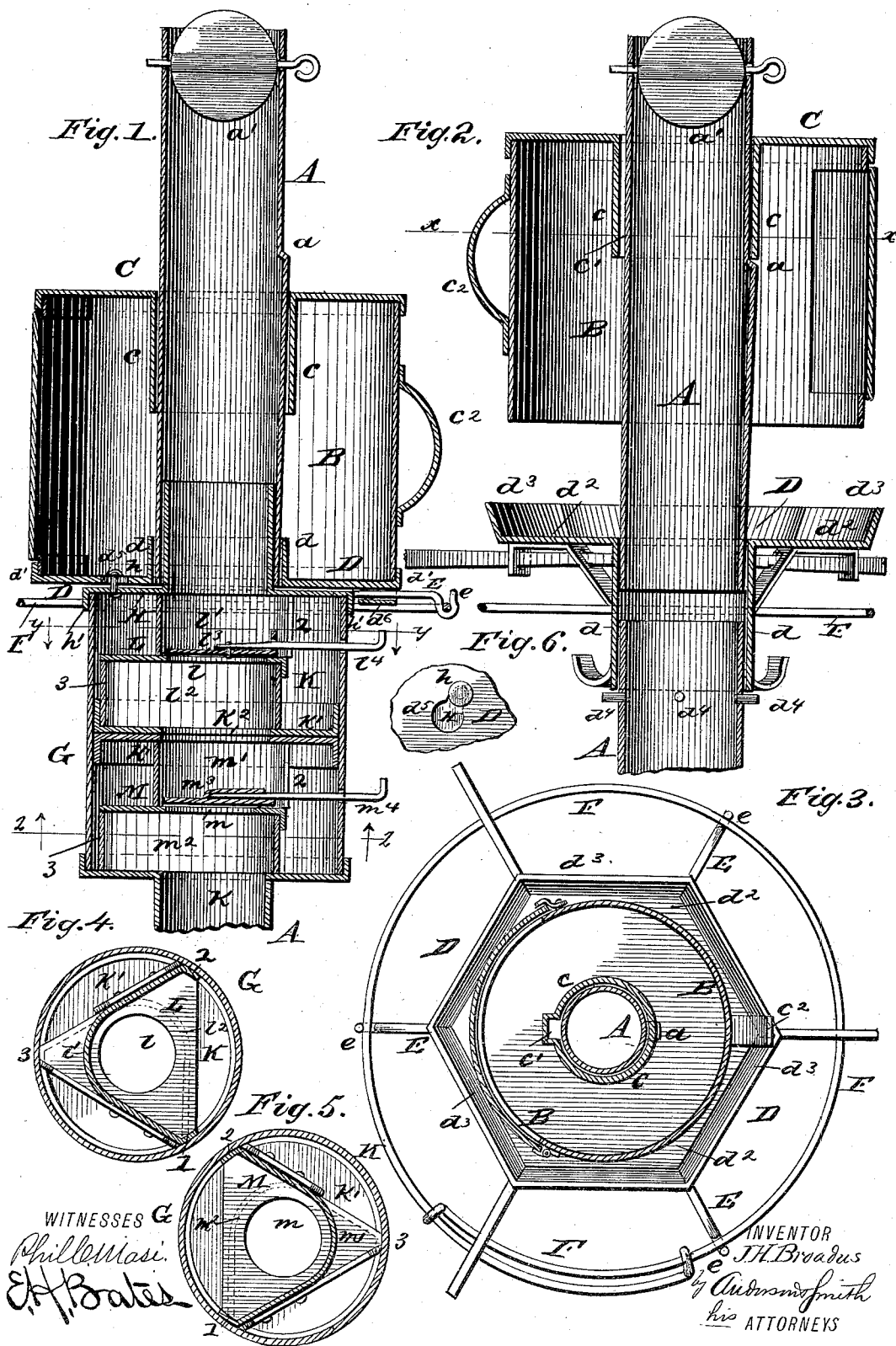
(No Model.)

J. H. BROADUS.

HEATING ATTACHMENT FOR STOVE PIPES.

No. 314,423.

Patented Mar. 24, 1885.



UNITED STATES PATENT OFFICE.

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HEATING ATTACHMENT FOR STOVE-PIPES.

SPECIFICATION forming part of Letters Patent No. 314,423, dated March 24, 1885.

Application filed July 9, 1884. (No model.)

To all whom it may concern:

Be it known that I, JEAN H. BROADUS, a citizen of the United States, and a resident of Manhattan, in the county of Riley and State of Kansas, have invented certain new and useful Improvements in Heating Attachments for Stove-Pipes; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to letters or figures of reference marked thereon, which form a part of this specification.

Figure 1 of the drawings is a vertical sectional view of my device. Fig. 2 is also a vertical sectional view. Fig. 3 is a transverse sectional view taken on line *xx*, Fig. 2; and Figs. 4, 5, and 6 are detail views.

The object of this invention is to construct a stove-pipe oven, of which a stove-pipe shelf shall form the bottom, the top or hood of the oven being detachable from the shelf when it is desired to use the latter alone.

A further object is to combine said oven with a stove-pipe heater situated below the same, that the two shall form one device.

The invention relates to that class of stove-pipe ovens in which the hood of the oven surrounds the pipe; and it essentially consists in making the said hood of cylindrical or other form, and with an internal collar snugly fitting around the pipe, so that it may be raised from the shelf, which forms its bottom, when desirable, and held up by any proper catch or stop attachment to the stove-pipe. The shelf is also provided with a collar surrounding the pipe, to which it is attached by any proper means, and forms the top of the heater, thus giving the oven the advantage of the heat from the top of the same, in addition to that which passes through it by way of the stove-pipe. The heater is of cylindrical form, surrounds the stove-pipe, and is provided within with two sets of flues to distribute the heat around its inner surface. The flues are similar to the ones shown in the patent granted to G. S. Walker and numbered 81,714.

The invention further consists in certain details of construction, hereinafter more fully described.

In the accompanying drawings, A represents a stove-pipe, having attached to it the oven B, composed of the hood C and shelf D, forming the bottom of the latter. The pipe has upon it, at a point some distance above the shelf, a detent, *a*, formed by depressing its seam at that point, as shown.

a' is a damper in the pipe, far enough above the oven to allow the drum to rise. The hood C is provided internally with a collar, *c*, depending from its top, fitting snugly around the stove-pipe, and having on its inner surface the longitudinal groove *c'*, to accommodate the seam of the pipe.

c'' is a handle fixed to the outer surface of the hood.

D is the shelf, provided with a collar, *d*, extending downwardly around the stove-pipe, and with a circumferential flange, *d'*, which extends upwardly around the hood when the latter is in contact with the shelf. In this case the shelf would have the same diameter as the hood; but it may be of greater diameter, as shown in the drawings, thus forming around the oven the shelf *d''*, provided with a proper upwardly-extending flange, *d'''*, at its edge. When thus formed, the flange *d'* may be dispensed with. The shelf D may be held in place upon the stove-pipe by short outwardly-extending pins *d''*, fixed to the latter; or it may rest immediately upon the top of the heater. In the latter case it is provided with the slots *d''*, &c., properly formed for attachment to headed pins standing up from the top of the heater.

d'', &c., are sockets fixed in any proper manner to the under surface of the shelf D, and extending inwardly on radial lines from its circumference. These sockets are for the accommodation of the inner ends of the similar rods, E, the outer ends of which are formed into depending hooks *e e*.

F is a circle or hoop, of wire or other suitable material, surrounding the device, and held in place by the hooks *ee*, in which it rests.

If desirable, straight bars may be used in place of the hooked rods, and the hoop F dispensed with; or every second rod may be straight, and the said hoop sustained by the remainder.

G is the heater, formed of the top H and

drum K. The top H is firmly fixed around the lower end of the stove-pipe A, and is provided on its upper surface with the upwardly-extending headed pins *h h*, which enter and engage with the slots *d^s d^s*, &c., thus securing the shelf D to the said top.

h' is a depending circumferential flange on the top H, which passes over and fits snugly around the upper edge of the drum K.

K is the drum of the heater opening into a lower section of stove-pipe, *k*, around which its bottom is securely fixed. The drum K is divided centrally into an upper and lower chamber by the transverse partition *k'*, provided with the central circular opening, *k²*. Each chamber of the drum contains a similar and similarly-situated device for causing the upflowing heat to circulate around the inner surface of the drum K; therefore the description of one only will be necessary, the letters *L l' l'*, &c., designating the parts of the one in the upper chamber, and *M m' m²*, &c., similar parts of the one in the lower chamber.

L is a plate of sheet-iron in the form of an equilateral triangle, and having the central circular opening, *l*. Firmly fixed to and extending vertically upward from said plate is the plate *l'*, which, beginning at one angle, 1, runs around the central opening and ends at the second angle 2. A similar plate, *l²*, is fixed to and depends from the lower surface of plate L, beginning at the third angle, 3, and ending at the first angle, 1. When in place in the upper chamber, the upper edge of the plate *l'* impinges upon the top of the heater, while the lower edge of the plate *l²* impinges upon the dividing-partition *k'*. The plates *m'* and *m²* in the lower chamber similarly impinge upon the dividing-partition and bottom of the heater, respectively. In both chambers the angles of the plates L and M touch the inner surface of the drum K.

l³ is a damper lying over and controlling the opening *l* and actuated by the rod *l⁴*, which passes through the wall of the drum K, between the ends of the plate *l'*. By this means the heated air is caused to circulate around the inner surface of the heater. When both dampers *l⁴* and *m⁴* are open, the heated air and products of combustion will ascend directly to the stove-pipe A.

When it is desired to make use of the oven, the damper *a'* in the stove-pipe above the oven is partially closed to retard the passage of heated air and cause increased radiation from that portion of the pipe within the oven, while at the same time the dampers in the heater are closed, bringing a larger surface of heated

air to bear upon the bottom of the oven, which by these combined means can be heated enough for all ordinary cooking purposes.

When it is desired to use the shelf alone, the damper *a'* is first opened. The hood C is slid up the stove-pipe by means of the handle *c²* until the lower edge of the collar *c* is on a level with the detent *a*. The hood is then rotated until the groove *c'* passes off the seam of the pipe, when the edge of the collar will engage upon the detent. Then, according to the degree of heat wished, the dampers in the heater are either left closed or partially or completely opened.

The arrangement for drying clothes may be used either with the oven or with the shelf alone.

Having thus fully described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. A stove-pipe oven composed of a hood closed at the top, bent over at the bottom, and a stove-pipe shelf forming a bottom thereto, the hood being detachable from the shelf by sliding up upon the stove-pipe, which passes centrally and longitudinally through it, substantially as specified.

2. In a stove-pipe oven, the combination of the shelf D, stove-pipe A, provided with stop or detent *a*, and hood C, provided with collar *c* and handle *c²*, substantially as specified.

3. The combination of the heater K, provided with pins *h h*, &c., and the stove-pipe A, with the oven B, composed of the hood C and shelf D, provided with slots *d^s d^s*, &c., to engage with said pins *h*, and thus prevent the shelf rising when the hood is lifted from it, substantially as specified.

4. The combination, with a stove-pipe, of the heater K, the ring F, shelf D, sockets *d^s*, secured to the under side thereof, and the arms supporting the said ring, having outer hooked ends, and extending from the shelf above the heater, substantially as specified.

5. The combination, with a stove-pipe and oven surrounding the same, of a heater arranged beneath said oven having dampers, whereby the hot air may be directed around and beneath the walls of the oven before discharging through the pipe, substantially as specified.

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

JEAN H. BROADÛS.

Witnesses:

GEO. S. GREEN,
A. H. BROUS.