

No. 705,217.

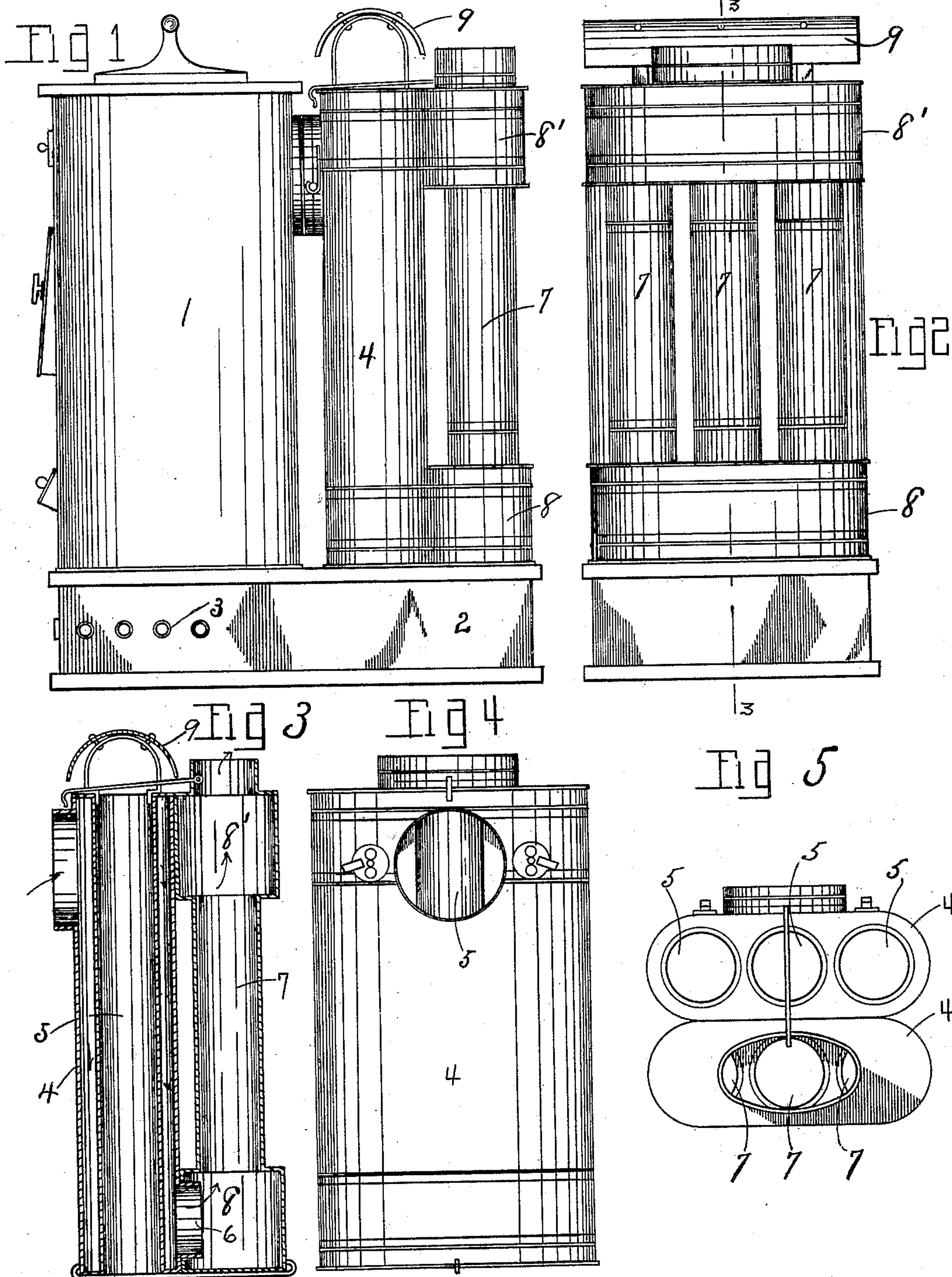
Patented July 22, 1902.

C. W. DAVIDSON.

HEATING DRUM.

(Application filed Aug. 31, 1901.)

(No Model.)



Witnesses
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UNITED STATES PATENT OFFICE.

CHARLES W. DAVIDSON, OF TONTI, ILLINOIS.

HEATING-DRUM.

SPECIFICATION forming part of Letters Patent No. 705,217, dated July 22, 1902.

Application filed August 31, 1901. Serial No. 74,022. (No model.)

To all whom it may concern:

Be it known that I, CHARLES W. DAVIDSON, a citizen of the United States, residing at Tonti, in the county of Marion and State

5 of Illinois, have invented certain new and useful Improvements in Heating-Drums, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming a part hereof.

10 My invention has relation to combined heating stoves and drums; and it consists in the novel arrangement and construction of parts more fully set forth in the specification and pointed out in the claims.

15 In the drawings, Figure 1 is a side elevation of the device. Fig. 2 is a rear elevation. Fig. 3 is a vertical section on line 3 3 of Fig. 2, taken through the drum. Fig. 4 is a front elevation of the drum detached, and Fig. 5

20 is a top plan of the drum detached with top hood removed.
The object of my invention is to construct a combined heating stove and drum which shall be simple in construction, one developing

25 a maximum amount of efficiency, one utilizing the fuel to the best advantage, and one possessing further and other advantages better apparent from a detailed description of the invention, which is as follows:
30 Referring to the drawings, 1 represents an ordinary wood-stove mounted on a base 2, having draft ducts or openings 3, the exit-flue of the stove coupling to the forward section 4 of a heating-drum, also resting on the base

35 2. The section 4 is provided with a series of air-flues 5, opening at the top and bottom, the air reaching said tubes through the ducts 3 of the base, the products of combustion passing around these tubes downward to and

40 through the pipe-sections 6, which latter serve as means of connecting the lower portion of the outer section 4' of the drum to the inner section 4, as seen in section in Fig. 3. The

products eventually escape through the series of flues 7, which, together with the chambers 8 8', constitute collectively the rear section 4' of the drum. The air-flues 5 are surmounted by a hood or deflector 9 for deflecting and properly spreading the air-currents throughout the room. By the time the products reach the outer air they have been practically and wholly consumed and no smoke whatever issues from the drum. I do not, of course, limit myself to the character of fuel employed; but I preferably use wood, which leaves little or no ash. The arrows in Fig. 3 fully indicate the course of the products of combustion after they have left the stove 1.

Having described my invention, what I claim is—

60 A combined heating stove and drum comprising a hollow base having air-ducts, a stove and drum mounted on said base, the drum comprising an inner and outer section, the inner being coupled to the exit-flue of the stove, a series of vertical air-flues open at both ends formed in the inner section of the drum and communicating at their bottom with the outer air through the ducts of the hollow base, a hood surmounting the series of air-flues, a series of flues and upper and lower chambers coupled together and collectively forming the outer drum-section, the products passing from the stove around the air-flues of the inner drum-section, to the bottom of the drum, thence upward through the lower chamber of the drum, the flues, and upper chamber respectively, and finally out into the atmosphere, substantially as set forth.

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

CHARLES W. DAVIDSON.

Witnesses:

JAS. A. LUCAS,

WILL C. KILLEEN.