

No. 637,260.

Patented Nov. 21, 1899.

J. E. HUNT.
RANGE.

(Application filed Dec. 27, 1898.)

(No Model.)

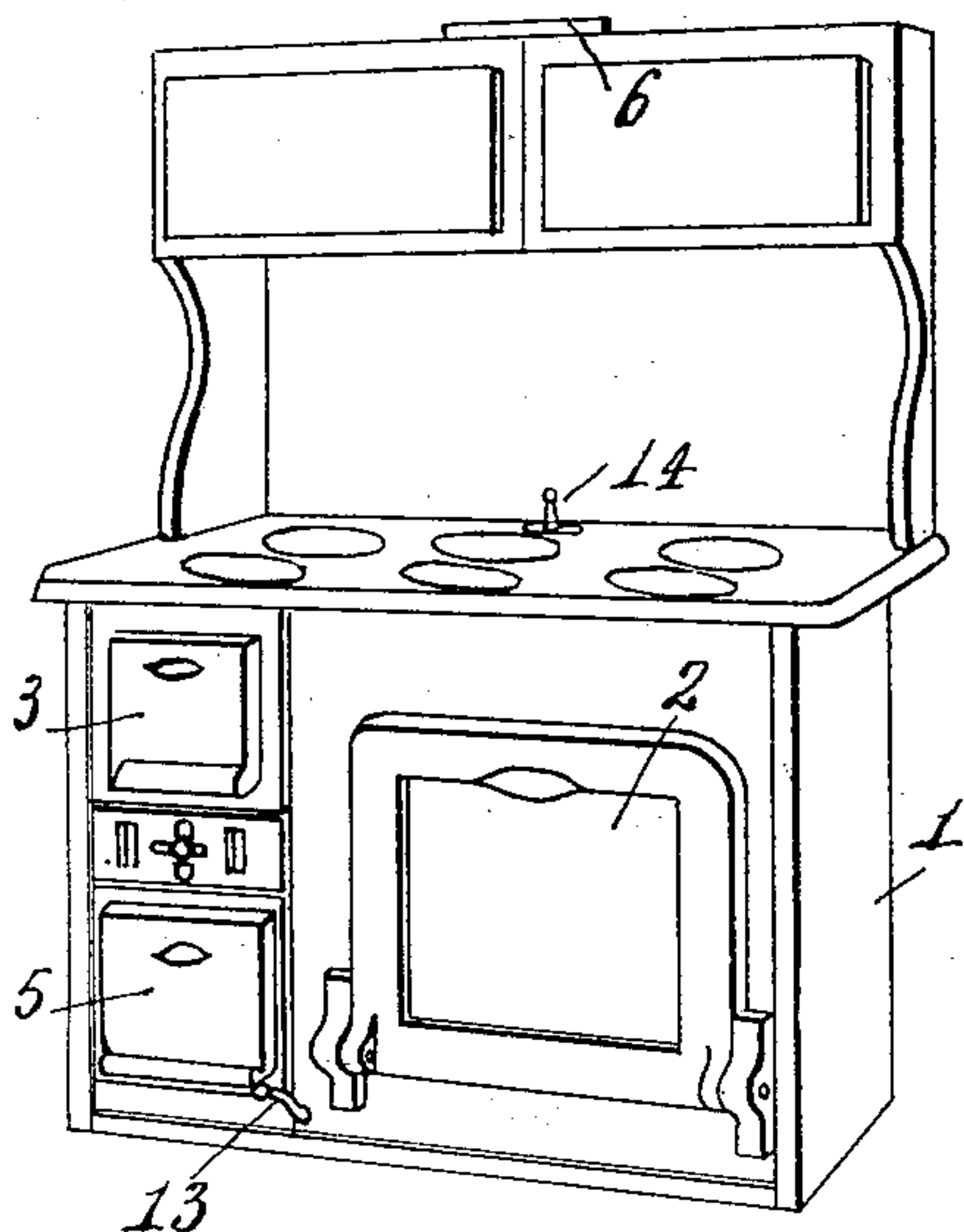


FIG. 1.

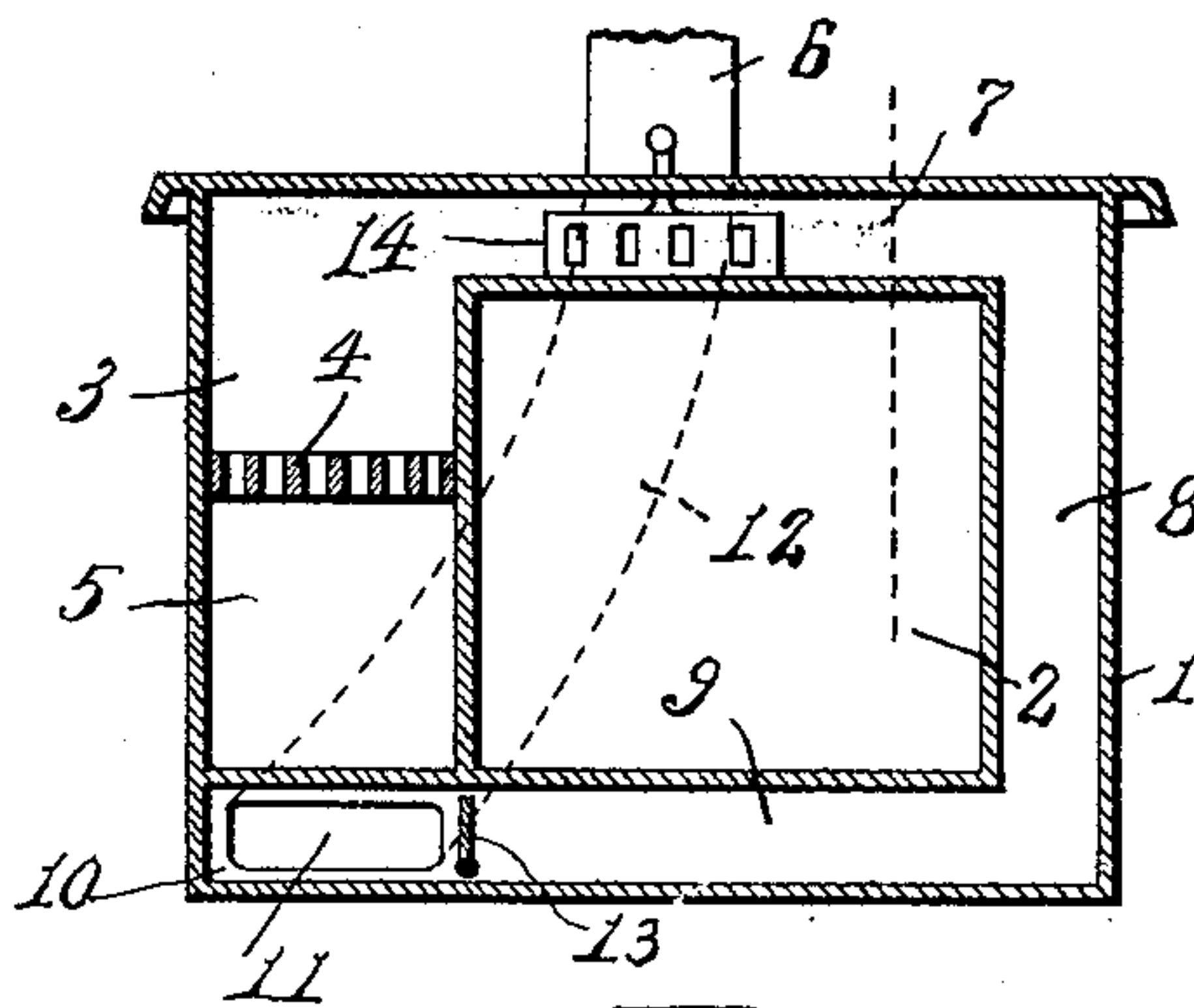


FIG. 3.

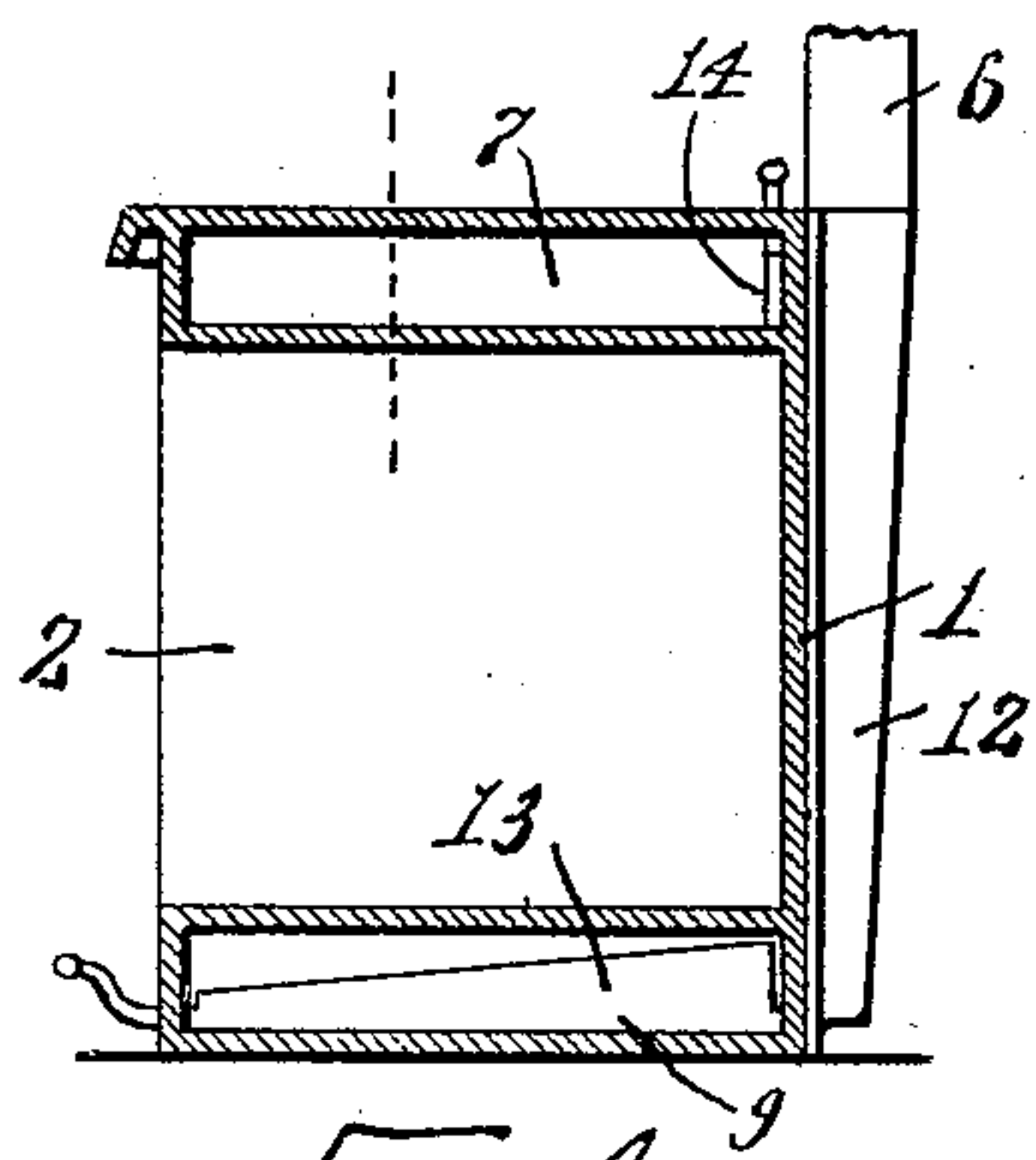


FIG. 4.

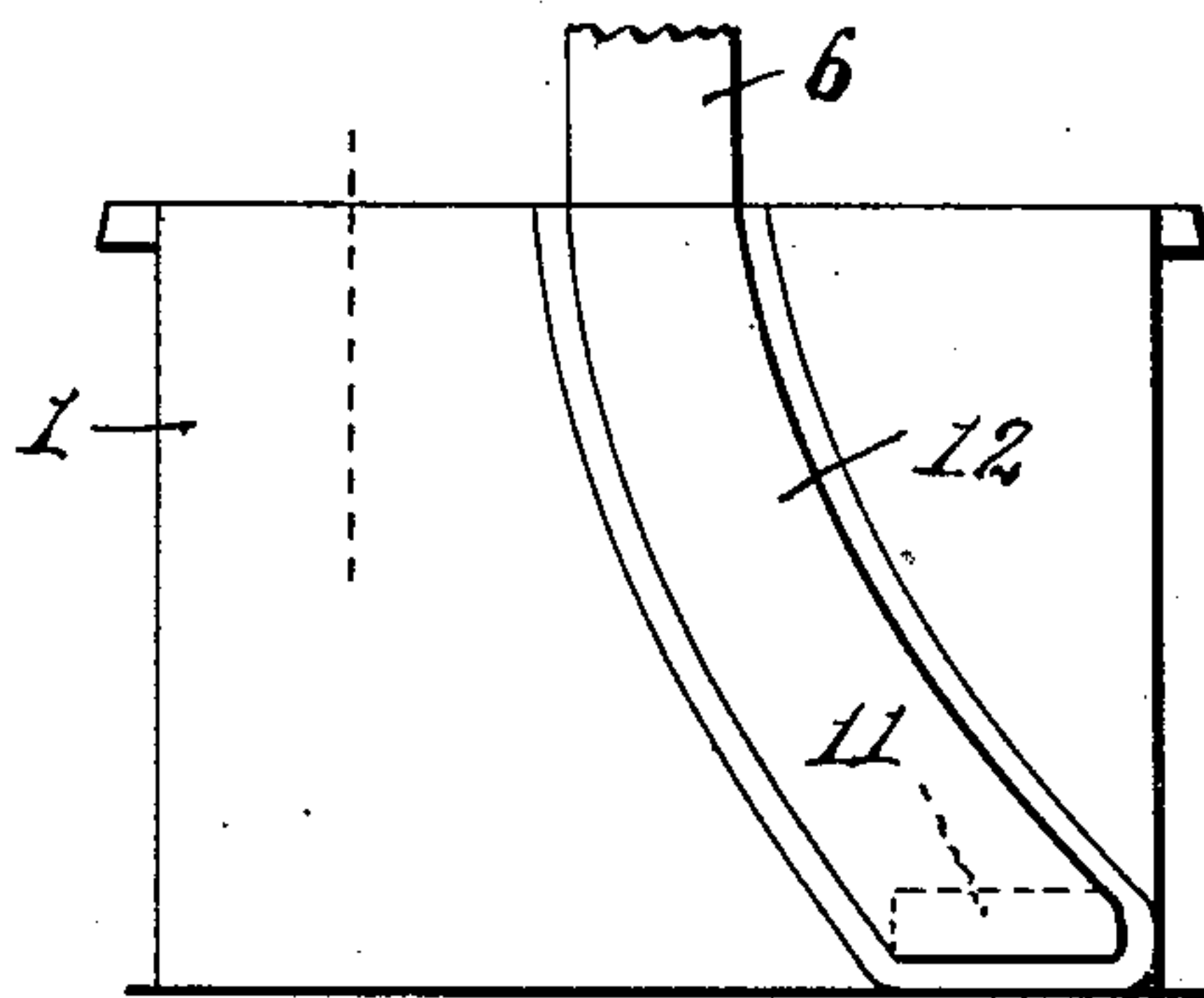


FIG. 2.

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JAMES E. HUNT, OF PORTLAND, OREGON.

RANGE.

SPECIFICATION forming part of Letters Patent No. 637,260, dated November 21, 1899.

Application filed December 27, 1898. Serial No. 700,305. (No model.)

To all whom it may concern:

Be it known that I, JAMES E. HUNT, of Portland, Multnomah county, Oregon, have invented certain new and useful Improvements in Ranges, of which the following is a specification.

This invention pertains to cooking-ranges; and the improvement will be readily understood from the following description, taken in connection with the accompanying drawings, in which—

Figure 1 is a perspective view of a range exemplifying my improvement; Fig. 2, a rear elevation of the same; Fig. 3, a vertical longitudinal section of the range; Fig. 4, a vertical transverse section of the same. The top closet is omitted from Figs. 2, 3, and 4.

In the drawings, 1 indicates the body of the range; 2, the oven; 3, the fire-box, disposed in the upper portion of the body of the range immediately at one side of the oven; 4, the grate; 5, the ash-box; 6, the smoke-pipe centrally disposed at the rear of the body of the range; 7, the top passage leading from the fire-box over the oven; 8, the down-passage at the side of the oven opposite the fire-box and ash-box, its upper end communicating with top passage 7; 9, bottom oven-passage under the oven, its initial end communicating with the lower end of down-passage 8; 10, a flue under the ash-box and extending from front to rear of the range and forming, normally, a prolongation of the discharge end of bottom oven-passage 9; 11, an opening in the rear wall of the body of the range under the fire-box and forming an outlet from flue 10; 12, a diagonal flue at the back of the range, leading from opening 11 to smoke-pipe 6; 13, a damper disposed across the discharge end of bottom oven-passage 9 and extending from the rear to the front of the range, this damper separating passage 9 from flue 10, the damper standing normally vertical, but being adapted to turn to horizontal position, the free edge of the damper being inclined, as seen in Fig. 4, so that when the damper is in vertical position there is a passage by it, which passage increases in vertical width toward the front of the range, and 14 the usual direct-draft damper, by means of which top passage 7 can be placed in direct communication with the smoke-pipe.

Referring to Fig. 3 and assuming damper 14 to be closed, the products of combustion pass from the fire-box to the right over the oven, then down through passage 8, then to the left through passage 9, then through the tapering opening past damper 13 into flue 10, then through opening 11, and then through diagonal flue 12 to the smoke-pipe. The tendency of the draft in flue 10 is rearward, owing to the location of opening 11, and if the passage by damper 13 were of equal area front and rear then the tendency of the rearward draft in flue 10 would be to swerve rearwardly the current in passage 9, the result of which would be the overheating of the left-hand rear corner of the oven and the underheating of its left-hand forward corner. The tapering form of the passage by damper 13 favors the front portion of the current passing under the oven and secures uniformity of heat at the bottom of the oven, notwithstanding the rear location of opening 11. Damper 13 is obviously never a completely-closed damper, for while it is in vertical position the gases have liberty to pass it through the tapering opening; but if a freer passage by the damper is required then the damper may be adjusted to angular position, the effect being to increase the area of the passage by it still maintaining the tapering character of the passage, the taper lessening, however, the more the damper is turned to the horizontal position, the passage by the damper becoming a parallel one when the damper is in a horizontal position. The stronger the draft is upon the range the more should the damper be turned toward the vertical, and the more the damper is turned toward the vertical the greater the taper of the passage by the damper and the greater the favoring of the draft toward the front of the range.

It is to be observed that the bottom oven-passage 9 is left clear of all deflectors or the like, thus permitting of ready cleaning.

When the oven is not to be heated, then direct-draft damper 14 is to be opened and the condition of damper 13 becomes immaterial.

I claim as my invention—

1. In a range, the combination, substantially as set forth, of an oven, a fire-box disposed at one side of the oven, an ash-box disposed at one side of the oven under the fire-

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box, a passage leading from the fire-box over
the oven and then down that side of the oven
farthest away from the fire-box and then un-
der the oven, a flue under the ash-box and
5 having at its rear end a communication with
the smoke-pipe of the range, and a partition
disposed at the juncture of said passage and
said flue and extending from the front to the
rear of the range and having through it a pas-
10 sage-way increasing in area from the rear to-
ward the front of the range, whereby the prod-
ucts from the fire-box pass around the oven
in a flat stream without horizontal turnings
while in contact with the oven-walls.
15 2. In a range, the combination, substan-
tially as set forth, of an oven, a fire-box dis-
posed at one side of the oven; an ash-box dis-
posed at one side of the oven under the fire-
box, a passage leading from the fire-box over

the oven and then down that side of the oven 20
farthest away from the fire-box and then un-
der the oven, a flue under the ash-box and
having at its rear end a communication with
the smoke-pipe of the range, and a pivoted
damper disposed at the juncture of said pas- 25
sage and said flue and extending from the
front to the rear of the range and forming an
adjustable partition between said passage and
flue, the free edge of said damper being in-
clined so as to form a tapering passage past it, 30
whereby the horizontal turnings of the prod-
ucts from the fire-box take place only after the
products have passed from beneath the oven.

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