

(No Model.)

R. A. GARDNER.

AUTOMATIC DRAFT REGULATOR FOR OIL AND GAS STOVES.

No. 254,633.

Patented Mar. 7, 1882.

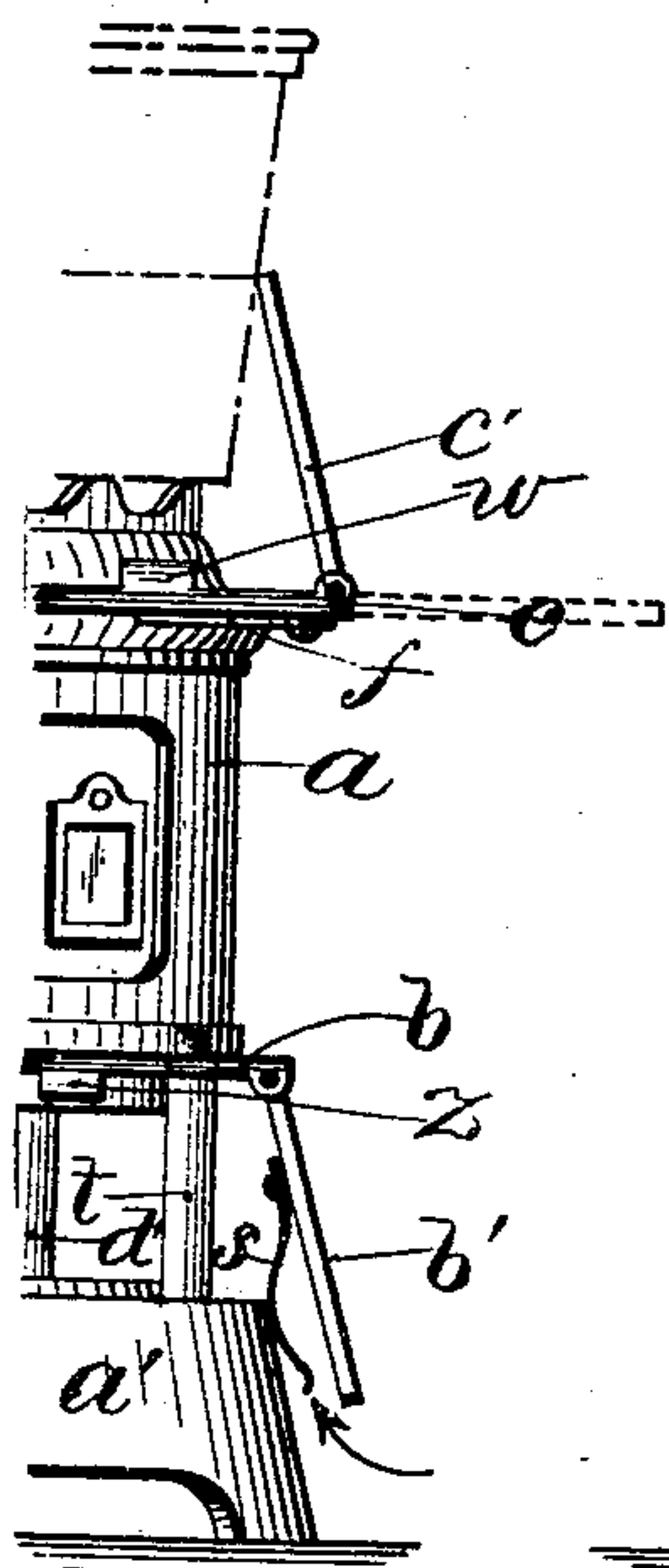


FIG. 6.

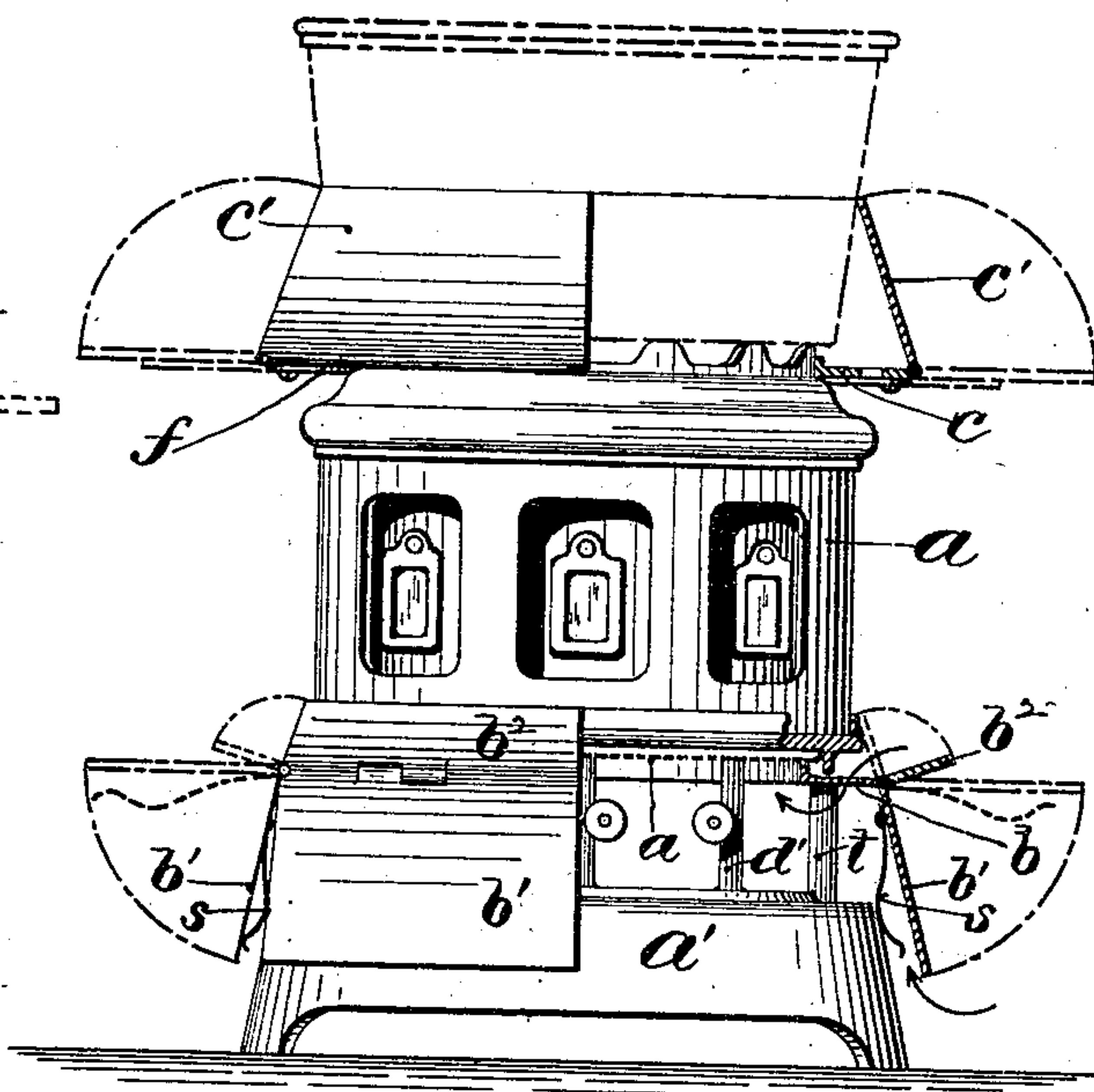


FIG. 1.

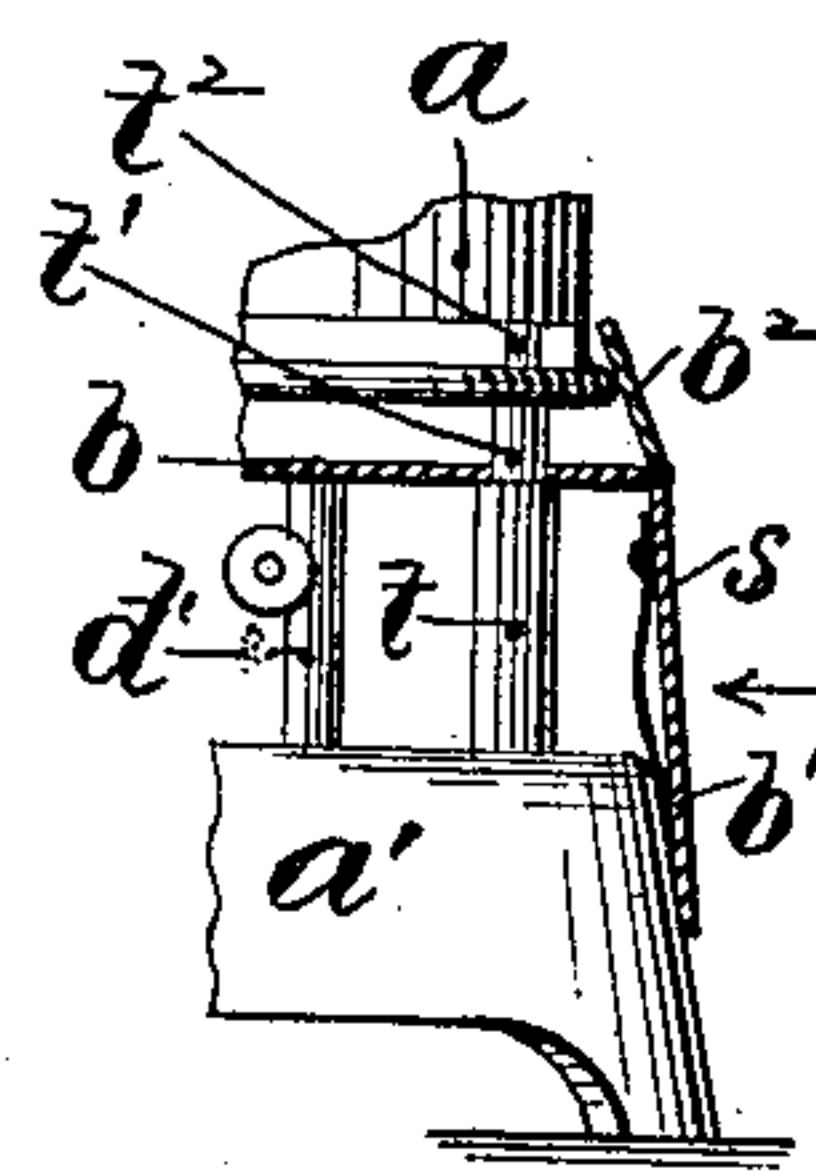


FIG. 5.

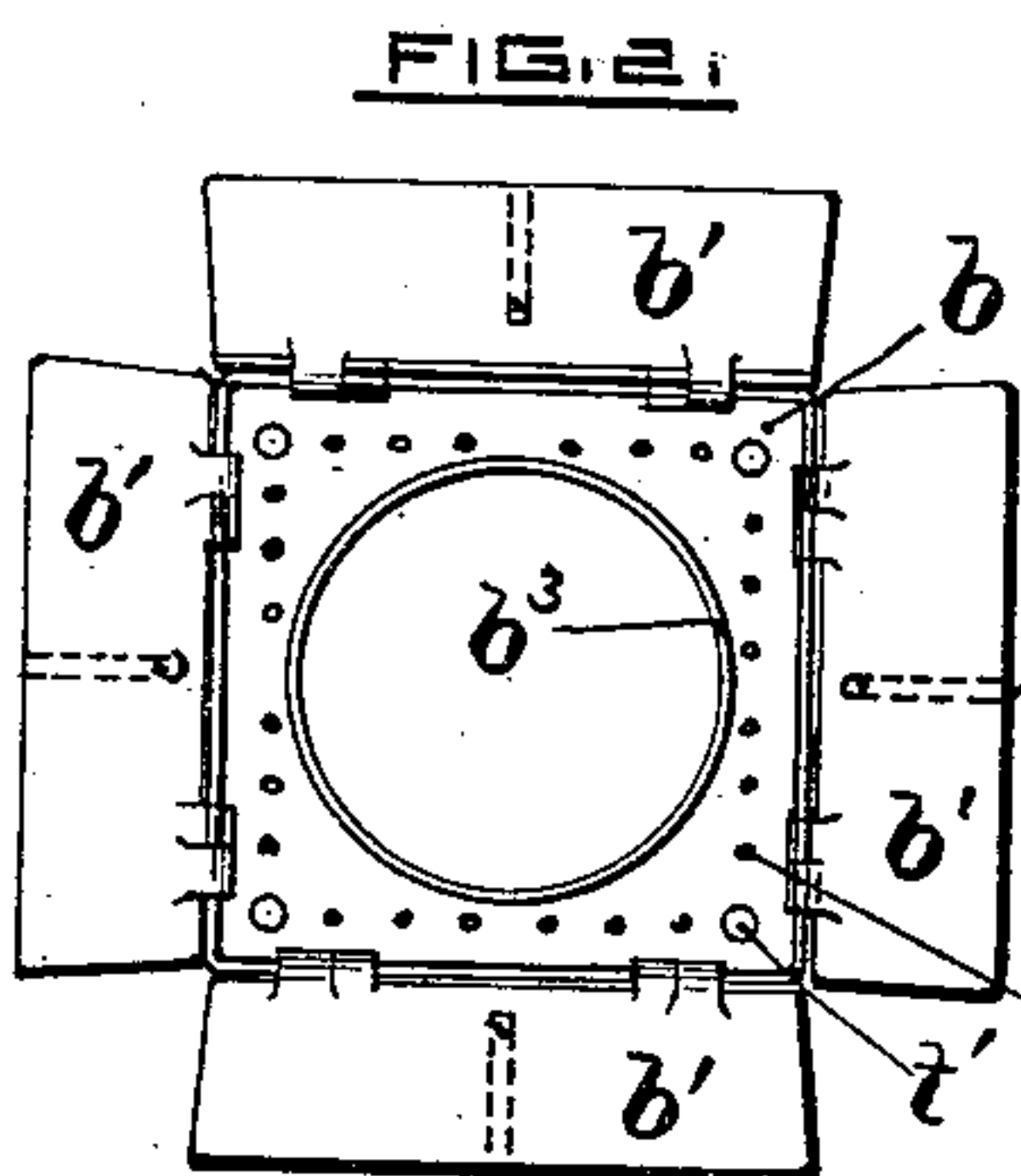


FIG. 2.

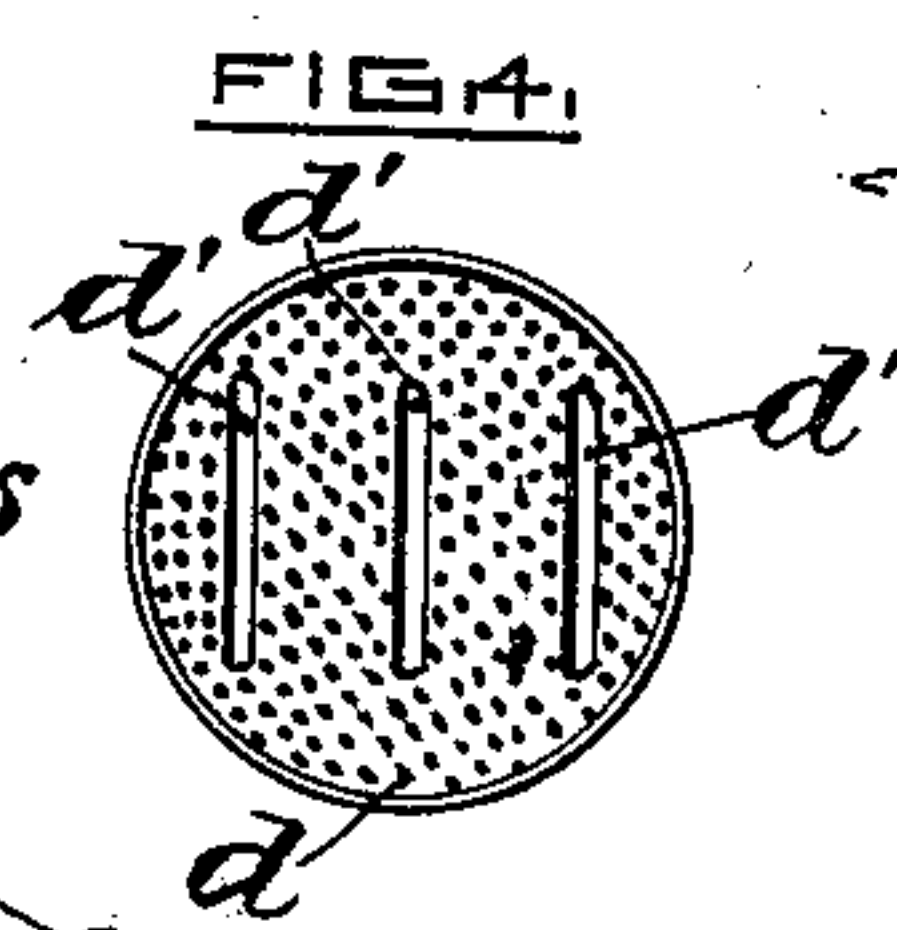


FIG. 4.

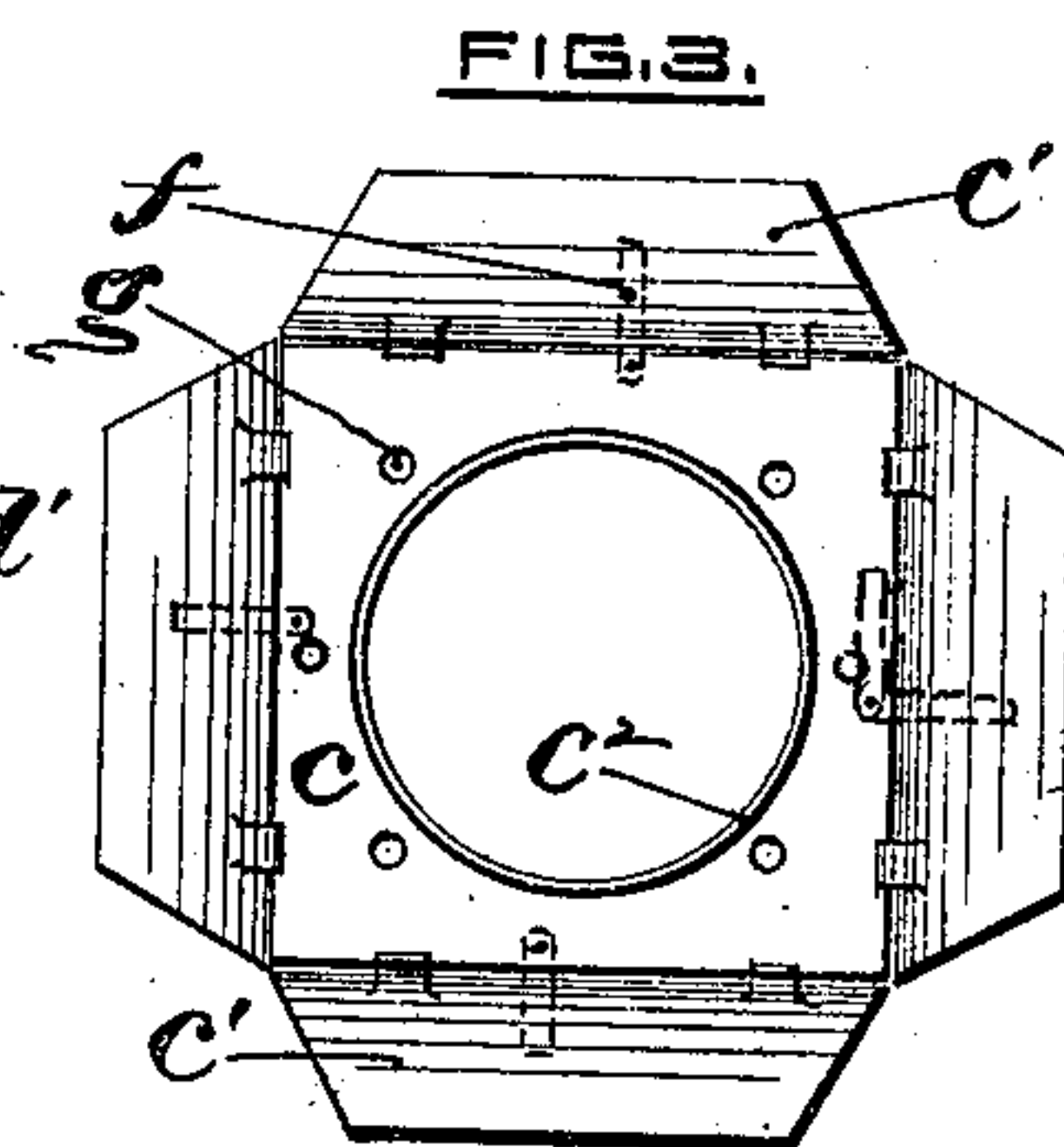


FIG. 3.

WITNESSES,

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UNITED STATES PATENT OFFICE.

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AUTOMATIC DRAFT-REGULATOR FOR OIL AND GAS STOVES.

SPECIFICATION forming part of Letters Patent No. 254,633, dated March 7, 1882.

Application filed January 13, 1882. (No model.)

To all whom it may concern :

Be it known that I, ROBERT A. GARDNER, a citizen of the United States, residing at Providence, in the county of Providence and State of Rhode Island, have invented certain new and useful Improvements in Automatic Draft-Regulators for Oil and Gas Stoves; and I do hereby 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.

The object of my invention is to produce an improved attachment for oil or gas stoves, whereby the draft or effects of sudden and changeable currents of air upon the blaze from the wicks or burners is automatically regulated.

Heretofore in the use of oil and gas stoves much difficulty has been experienced by reason of changeable air-currents increasing and diminishing the draft, thereby causing the stoves to smoke and to seriously interfere with the proper combustion of the oil or gas. With my invention this difficulty is practically removed and the best results obtained from the combustion, which is free from smoke, and is therefore better adapted for culinary purposes.

My invention consists in attaching a series of guards or deflectors to the stove above and below the wicks, the lower ones being arranged to act automatically.

Figure 1 is a perspective view of an ordinary oil-stove with my improvement attached, the latter partly in section. Fig. 2 represents a plan view of the lower series of deflectors, and the plate to which they are hinged. Fig. 3 represents a plan view of the top series of deflectors, and the plate to which they are hinged. Fig. 4 represents a perforated disk, through which the wick-tubes extend. Figs. 2, 3, and 4 are drawn to a reduced scale. Fig. 5 represents a partial section of the lower deflectors, showing the mode of attaching to the stove. Fig. 6 shows the manner of hinging the deflectors to flanges or rims cast or formed upon the stove.

To the plate *c*, which is cut away at *c*² to allow the free egress of the hot air, are hinged

four or more deflectors, *c'*, which are prevented from dropping to more than a right angle with the side of the stove by the pivoted arms *f*. The plate *c* is perforated at *g* and adapted to fit nicely the top of the stove.

To the plate *b* are hinged two series of deflectors, *b'* and *b*², which together are of sufficient width to cover or close in the entire opening between the bottom or base and the upper or movable portion of the stove.

To the inner side of the deflectors *b'* are secured light springs *s*, the free ends of which rest against the stove base or reservoir, and are adjusted to maintain a short distance or space between the stove-base and said deflectors when the latter are not affected by air-currents, as shown in Fig. 1.

The deflectors *b*² serve the purpose of closing the space between the plate *b* and the lower part of the movable top or cylinder of the stove. The plate *b* has perforations *o* near its outer edges, and is adapted to fit upon the base of the stove at or near the level of the wicks, and is cut away at *b*³ to allow the disk *d* to be properly inserted.

The operation of my invention is as follows: The stove being lighted, the deflectors *b*² are closed, the vessel containing water or other substance is placed upon the top of the stove, and the deflectors *c* closed against the vessel at the same time. Should the atmosphere be undisturbed by air-currents, the deflectors *b'* would remain in their normal position, as shown in Fig. 1; but if a sudden gust or current of air be impinged against the stove, one or more of said deflectors would be closed, as shown in Fig. 5, and the space between the cylinder and base of the stove is also closed, thereby preventing the current from continued action upon the burning wicks. Upon the current ceasing to act the springs *s* react and the deflectors *b'* return to their normal position again. The spaces between the top of the stove and the cooking-vessel, and the cylinder of the stove and base are closed by the series of deflectors *c'* and *b'*, before described, thereby protecting the burning wicks and the bottom of the vessel from air-currents. The plates *c* and *b*, Fig. 6, are represented as cast or formed upon the stove, said plates having a series of ears, *w*, and *z*, which serve to connect the deflectors *c'* and *b'*, respectively, to said plates.

I claim as my invention—

1. In combination with an oil or gas burning stove, the series of hinged deflectors b' , provided with springs s , arranged to control
5 the action of air-currents upon the burners, substantially as shown and described.
2. In combination with the top portion of an oil or gas burning stove, a series of deflectors, c' , arranged to close against the cooking-ves-
10 sel, substantially as and for the purpose specified.
3. In combination with an oil or gas burning

stove the top portion of which is provided with deflectors c' , the deflectors b^2 and b' , the latter provided with springs s , the whole constructed
15 and arranged substantially as and for the purpose specified.

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

ROBERT A. GARDNER.

Witnesses:

GEO. H. REMINGTON,
BENJAMIN HOLLAND, Jr.