(No Model.)

2 Sheets—Sheet 1.

R. SCOTT.

AIR BOX FOR RADIATORS.

No. 585,708. Patented July 6, 1897.

fig. 1.

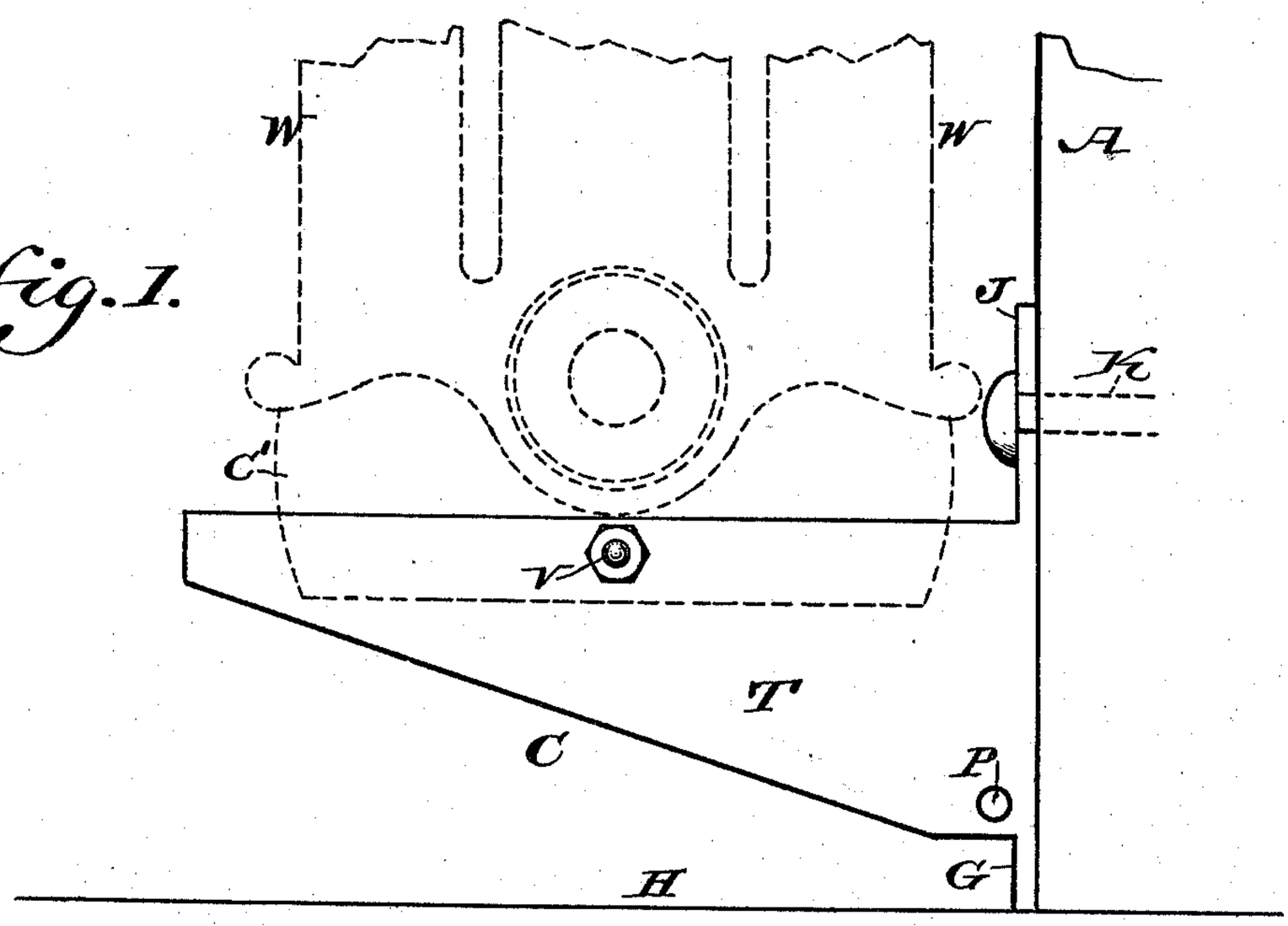
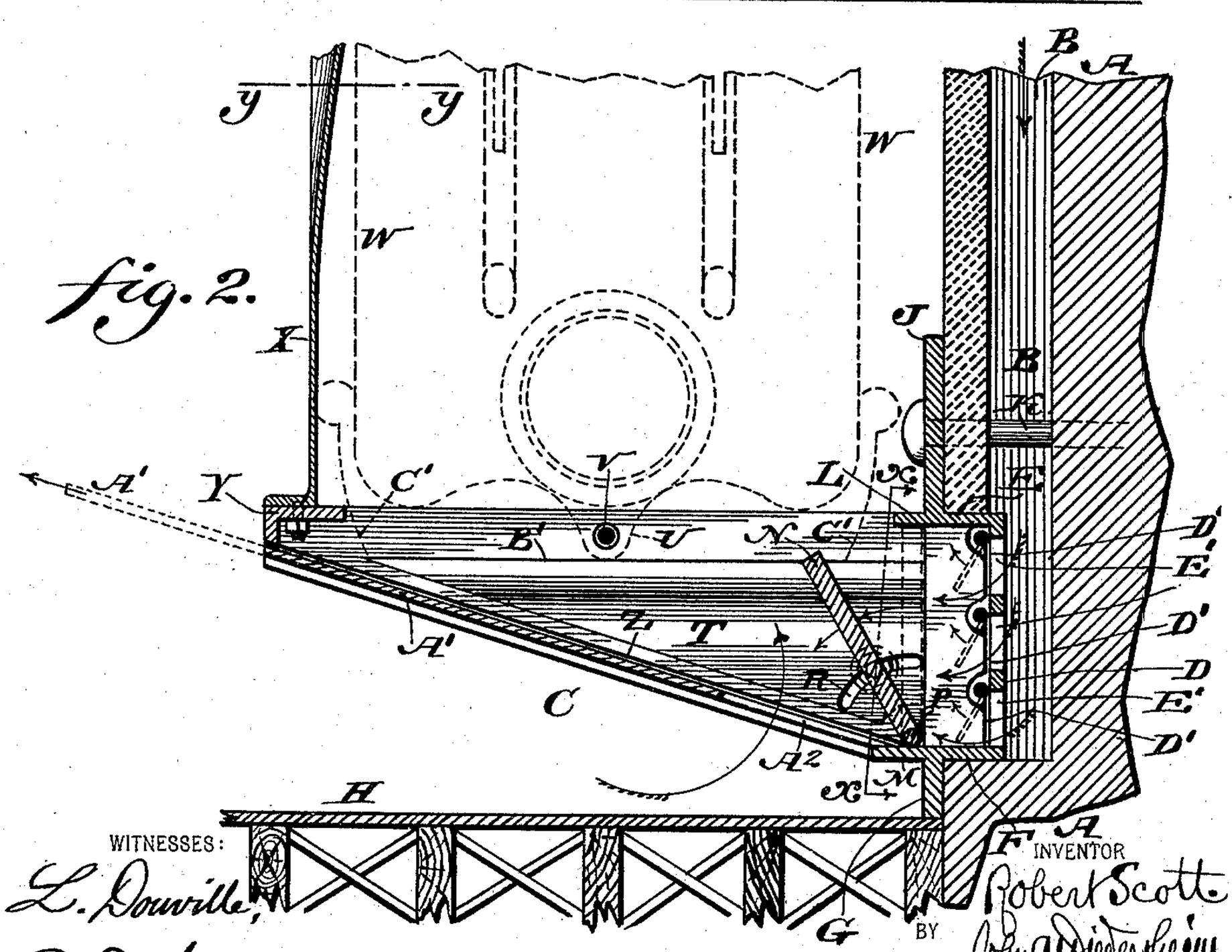


fig. 2.



WITNESSES:

L. Dourville,

P. F. Eagle.

INVENTOR

Robert Scott.

BY Joshua Wiedersheim.

ATTORNEY.

(No Model.) 2 Sheets—Sheet 2.

R. SCOTT.

AIR BOX FOR RADIATORS.

No. 585,708. Patented July 6, 1897.

Fig. 3.

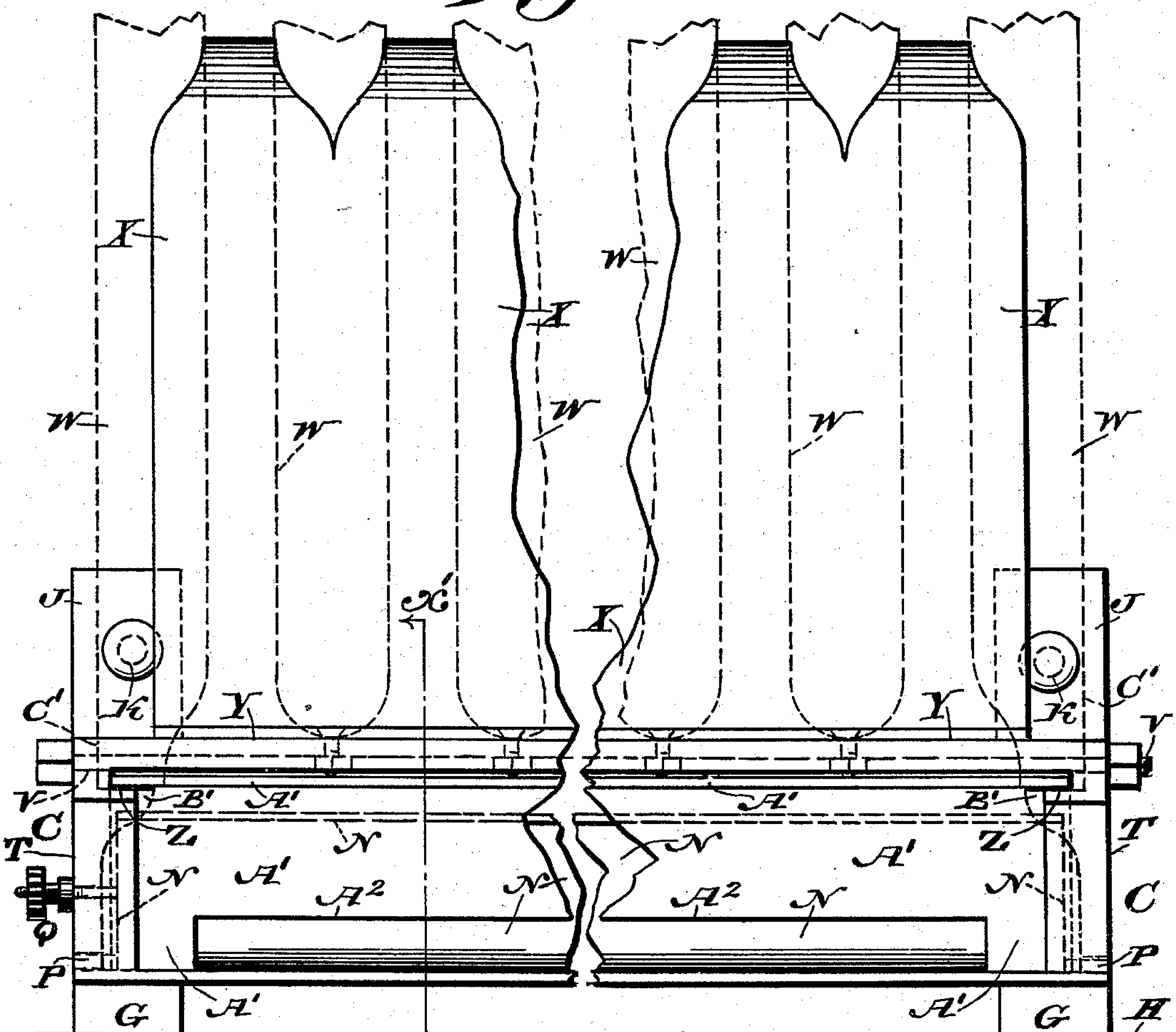
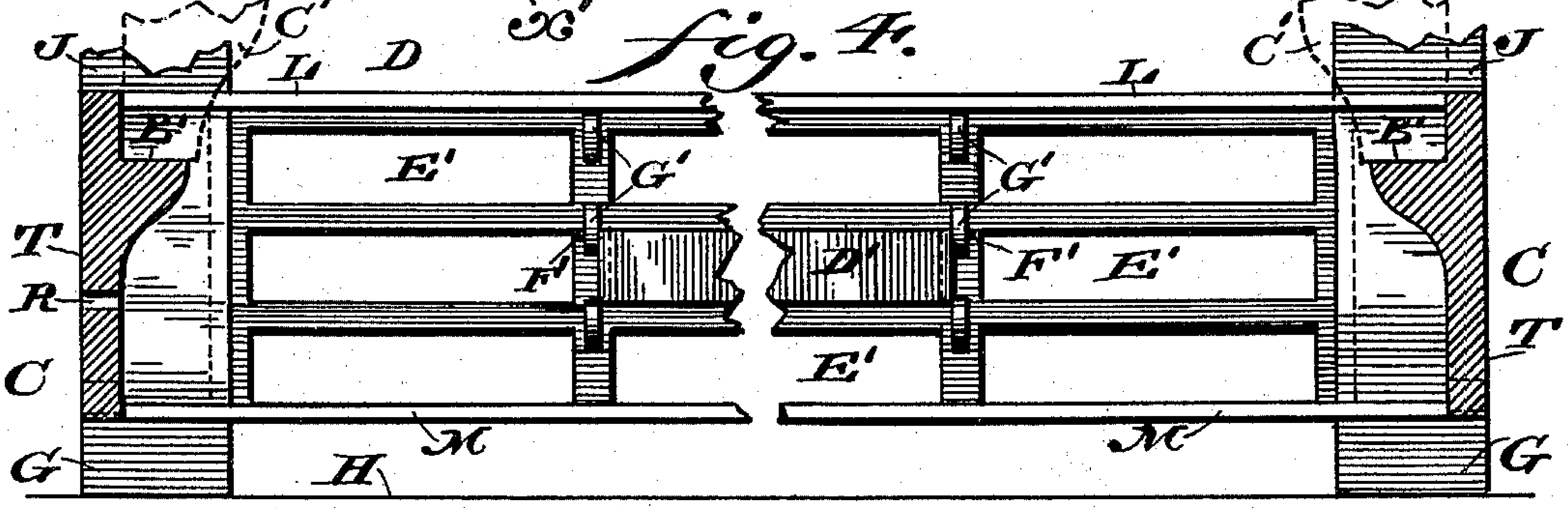


Fig. 4.

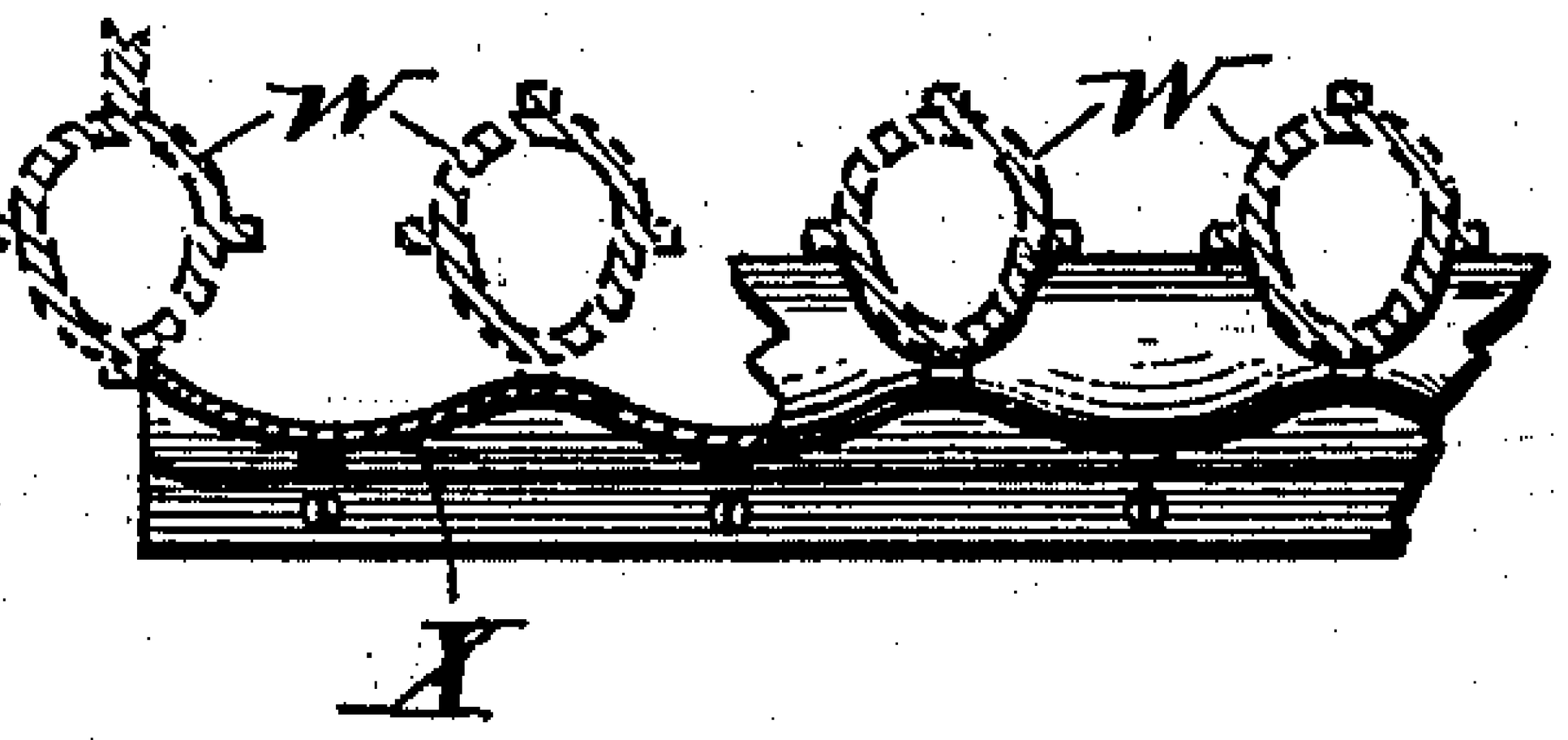


WITNESSES:

L. Douville.

P. Fr. Sargle

Fig. 5.



INVENTOR

Robert Scott

BY John A. Wiedersheim

ATTORNEY.

UNITED STATES PATENT OFFICE.

ROBERT SCOTT, OF GLENSIDE, PENNSYLVANIA, ASSIGNOR TO THE H. B. SMITH COMPANY, OF MASSACHUSETTS.

AIR-BOX FOR RADIATORS.

SPECIFICATION forming part of Letters Patent No. 585,708, dated July 6, 1897.

Application filed July 14, 1896. Serial No. 599,144. (No model.)

To all whom it may concern:

Be it known that I, ROBERT SCOTT, a citizen of the United States, residing at Glenside, in the county of Montgomery, State of Pennsylvania, have invented a new and useful Improvement in Air-Boxes for Radiators, which improvement is fully set forth in the following specification and accompanying drawings.

My invention consists of a novel construction of air-box for radiators which is automatic in its action and possesses means by which access can be readily had to the interior for the purpose of inspection or repairs, all as will be hereinafter set forth, and specifically pointed out in the claims.

Figure 1 represents a side elevation of an air-box for a radiator embodying my invention and a portion of a radiator to which the same is applicable. Fig. 2 represents a vertical section on line x' x', Fig. 3, showing the air-box and its adjuncts in operative position. Fig. 3 represents a front elevation of Fig. 2. Fig. 4 represents a section on line x x, Fig. 2. Fig. 5 represents a section on line y y, Fig. 2.

Similar letters of reference indicate corresponding parts in the several figures.

Referring to the drawings, A designates a portion of a wall, and B a passage or flue therethrough, the same extending downwardly in the present instance and terminating in a passage extending laterally into the interior of the apartment to be heated.

C designates an air-box which consists of a casing having the upright portion or back D and the laterally-extending top and bottom flanges E and F, which are adapted to be inserted into a passage communicating with the flue B.

G designates a member attached to the flange F, said member being adapted to rest upon the floor H and thereby assist in sustaining the air-box in position, the latter being also supported by means of auxiliary feet or posts under its front portion, if desired.

J designates an upwardly-extending member or portion which is attached to the flange E and is adapted to contact with the interior of the wall in the present instance and to be sustained with respect thereto by means of the bolt K, the relative position of the latter being evident from Figs. 1 and 2, the said flange or top E being provided with an outwardly-extending lip L, around which the incoming air is compelled to pass.

M designates a laterally-projecting lip or ledge in line with the flange F, on which a damper or deflector N is pivotally mounted. P designates journals for said damper N, which latter has a stem suitably attached thereto and passing through the slot R in a side T of the box A, said stem being engaged by the thumb-nut Q, whereby it will be evident that by the proper manipulation of said nut the damper or deflector can be adjusted to any desired position.

U designates a lug which forms part of the radiator-sections W and through which passes the bolt V, said bolt also passing through the sides T of the air-box and being held in position relative thereto by means of a nut or other device.

X designates a shield or deflector which is mounted upon a ledge Y, which extends intermediate the sides T, it being, of course, apparent that a similar deflector may be employed between the rear portions of the radiator-sections and the wall A, if desired.

Z designates inclined ways in the under portion of the air-box C, which latter has a beveled or inclined under surface, so that access can be readily had to points underneath the box for the purpose of sweeping, inspection, &c.

A′ designates a sliding plate or gate which is movable in the ways Z, as will be evident from Fig. 2, whereby the passage A^2 can be created in the under portion of the air-box, thus enabling air to pass to the interior of the latter, as indicated in Fig. 2.

B′ designates a ledge which is attached to the interior of each of the sides T, upon which ledges the legs C′ of the radiator are adapted to rest, said box thus serving a double function—namely, in providing means for the introduction and heating of fresh air from the exterior and in addition forming a cheap and serviceable support for the radiator.

E′ designates a series of ports or passages through the back D, the relative arrangement of which will be evident from Figs. 2

and 4, said passages being provided with the movable valves or gates D′, which hang normally in a substantially vertical position and serve to control the ingress of air through the passages E′, as will be understood from Fig. 2, the said gates or valves D′ being sustained in any suitable manner relative to the ports E′, which they control, and being composed of mica or other suitable material. The supporting means preferred by me, however, consist in providing each damper with journals F′, which rotate in the lugs G′, as indicated in Fig. 4, in which one of said gates only is shown, the others being omitted for the sake of clearness of illustration. It will, however, be apparent that other means may be employed for supporting the dampers, according to requirements.

The operation is as follows: The dampers D′ depend normally in a vertical position, as indicated in Fig. 2, and if the radiator be in operation the air around the same will be heated and by reason of the difference in specific gravity will rise and cause a suction or vacuum in the space within it and the air-box, thereby causing the dampers or valves D′ to move inwardly and admit air through the passages or ports E′ to the interior of the air-box and thence around the radiator and into the apartment to be heated, the air being also drawn into the air-box through the opening A^2, while the flow of air can be entirely cut off by turning the deflector N upwardly into the position seen in dotted lines in Fig. 2, said deflector when closed preventing the incoming air from passing into the air-box. It will be apparent that any other construction of deflector may be employed, if desired, and that various changes may be made by those skilled in the art which will come within the scope of my invention, and I do not therefore desire to be limited in every instance to the exact construction I have herein shown and described.

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

1. An air-box for a radiator consisting of a suitable casing having openings in its rear wall and in its base, a sliding gate for controlling said opening in its base, a deflector mounted near the rear wall of said casing within the latter, a series of dampers supported upon the rear wall of said casing for controlling the openings therein and means for conducting air thereto, said deflector being between said sliding damper and said series of dampers.

2. An air-box for a radiator consisting of a casing, having an apertured back, top and bottom flanges projecting therefrom, an inclined bottom portion provided with a gate, sides attached to said back, having ledges thereon, dampers pivotally mounted adjacent said back and a movable deflector located intermediate of said dampers and gate.

3. An air-box for a radiator consisting of a casing, an apertured back therefor, having dampers pivotally mounted adjacent thereto, sides for said casing having interiorly-projecting lugs, a deflector within said casing, a gate controlling an opening in the lower portion thereof said deflector being between said dampers and gate and an upright deflector attached to the front of said casing.

4. An air-box for a radiator, consisting of a casing having openings in its back and base, dampers controlling the openings in its back, and a gate controlling the opening in its base, and a deflector between said dampers and gate and pivoted at its lower end and provided with a stem projecting through a slot in a side of said casing, and a clamping-nut on said stem.

5. An air-box for a radiator, consisting of a casing having an apertured back, automatic dampers therefor, the sides of said casing being provided with supporting-ledges, a base having a sliding gate, controlling and opening therein, and a movable deflector located within said box intermediate said gate and dampers.

6. An air-box having a back provided with passages therein, inwardly-swinging dampers adjacent thereto, the top and bottom flanges E and F, the upwardly and downwardly extending members J and G, the sides T having the ledges B′, the base having the sliding plate A′, a swinging deflector within said box, means for locking the same in position, and an upright deflector, in combination with radiator-sections supported upon said ledges and fastening devices common to said sections and sides substantially as described.

7. An air-box for a radiator consisting of a casing having a back with openings therein, automatic dampers for said openings, said back having laterally-extending top and bottom flanges, a depending member connected with said bottom flange, said casing having an inclined lower portion with an opening therein, a gate controlling said opening, a deflector pivoted within said casing between said automatic dampers and said gate and means for locking said deflector in the desired position.

8. An air-box for a radiator consisting of a casing with a back portion having an opening therein provided with an automatic damper, a base with an opening therein, having a controlling-gate and sides with ledges for supporting a radiator thereon, in combination with an adjustable deflector pivoted in said sides between said automatic damper and said gate.

9. An air-box for a radiator consisting of a casing having a back with openings therein, provided with automatic dampers, said back having the top and bottom ledges E and F, the depending member G connected with said bottom ledge the member J extending upwardly from said top ledge, the inwardly-

projecting flanges L and M, an inclined base with an opening therein having a gate therefor and the deflector N pivoted in the sides of the casing between said automatic dampers and said gate.

10. An air-box for a radiator having a casing with a front ledge and a vertically-extending guard or deflector connected therewith, said box having interiorly-extending ledges adapted to support said radiator.

ROBERT SCOTT.

Witnesses:
JOHN A. WIEDERSHEIM,
E. H. FAIRBANKS.