

C. K. CLARK.
HOT AIR REGISTER.
APPLICATION FILED OCT. 10, 1907.

914,791.

Patented Mar. 9, 1909.

FIG. 1

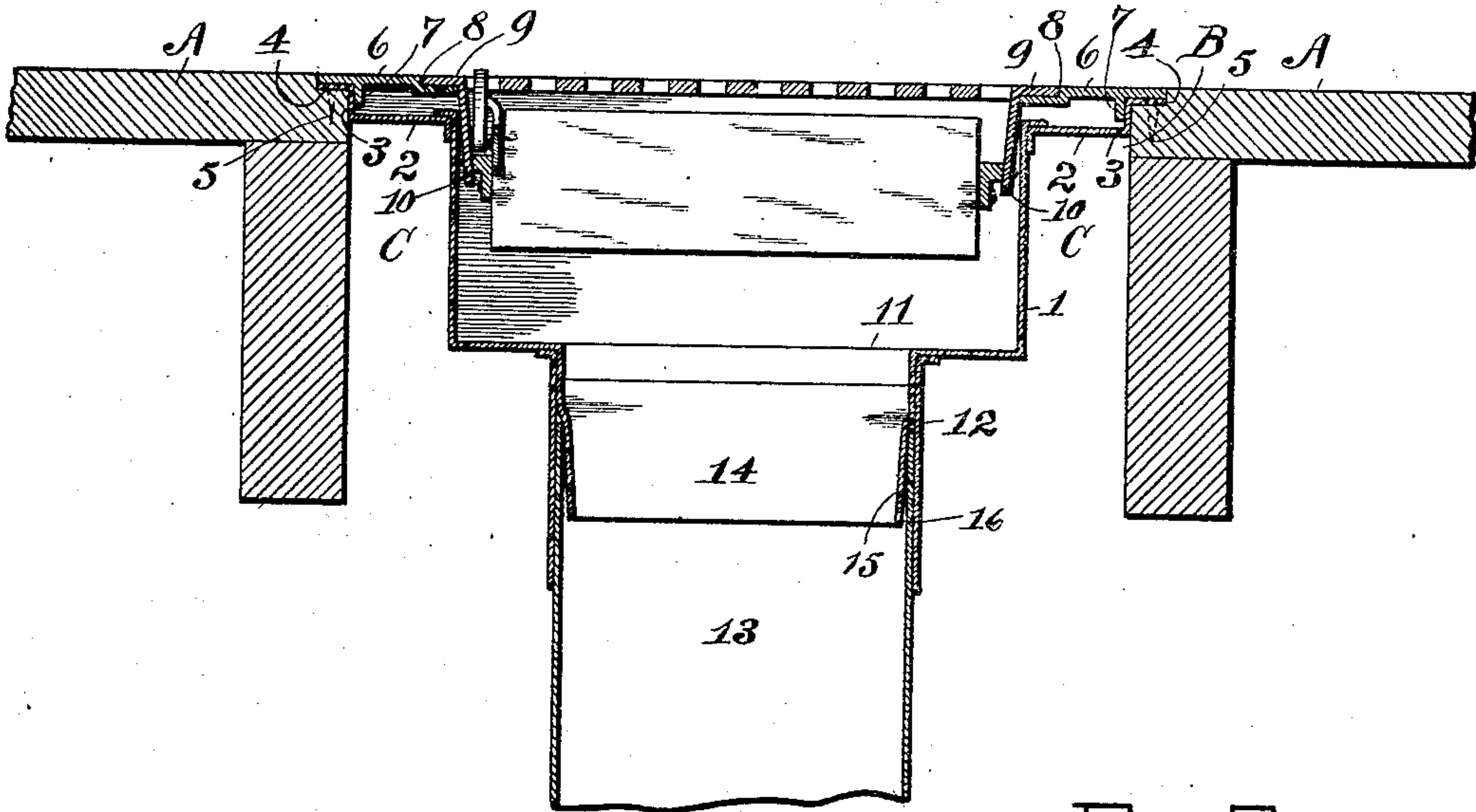
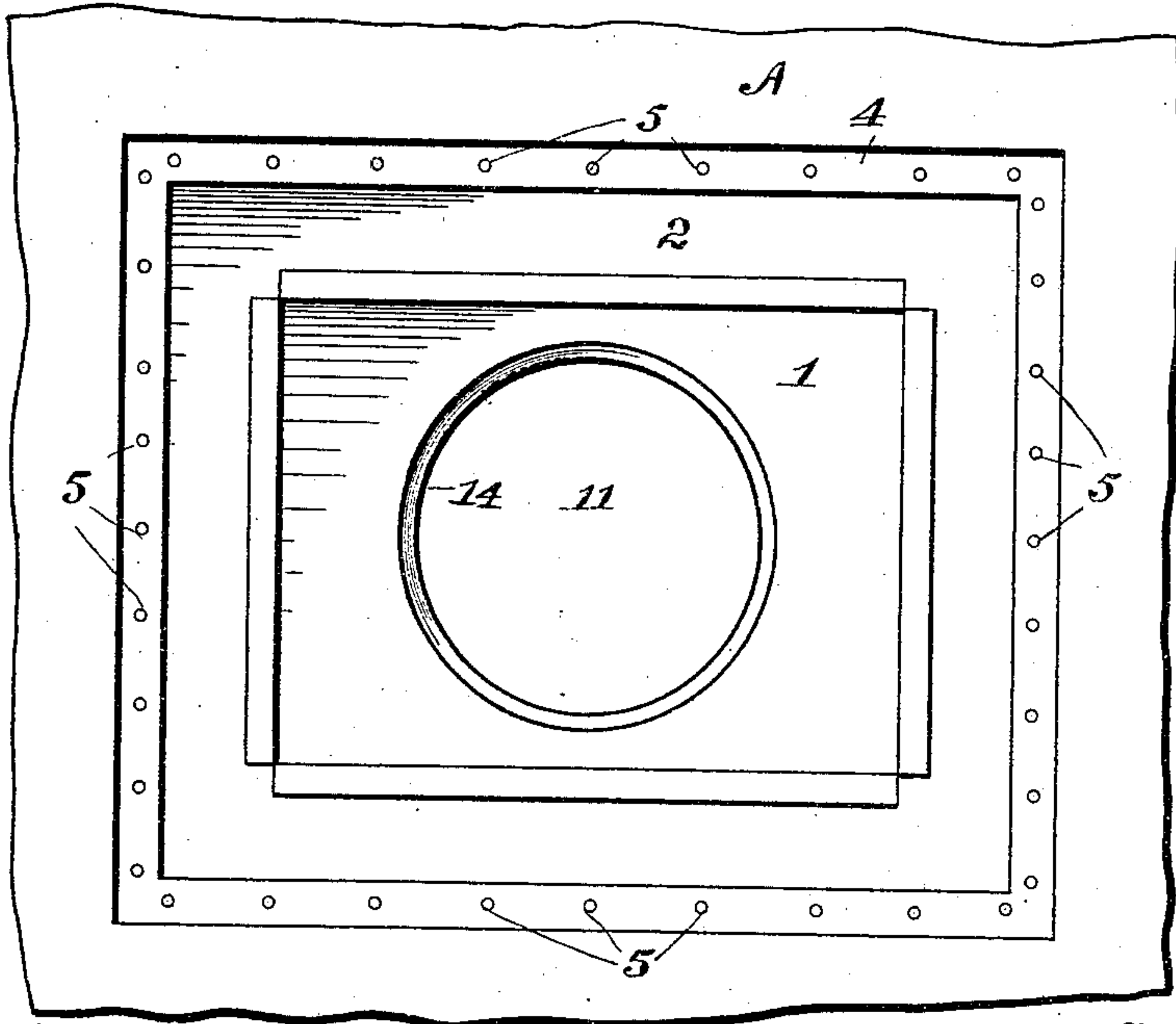


FIG. 2



Witnesses:
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UNITED STATES PATENT OFFICE.

CHARLES K. CLARK, OF PULASKI, NEW YORK.

HOT-AIR REGISTER.

No. 914,791.

Specification of Letters Patent.

Patented March 9, 1909.

Application filed October 10, 1907. Serial No. 396,794.

To all whom it may concern:

Be it known that I, CHARLES K. CLARK, a citizen of the United States, and resident of Pulaski, in the county of Oswego, in the State of New York, have invented new and useful Improvements in Hot-Air Registers, of which the following, taken in connection with the accompanying drawings, is a full, clear, and exact description.

This invention pertains to registers of heating-systems, and it relates to the well known hot-air boxes disposed under the registers and to which the heat-conducting pipes are connected.

The main object of the present invention is to provide a register with a box which shall be especially adapted to be placed under the floors of apartments which are next above the room in which the furnace is located, wherein it effectually prevents dust, collecting in the furnace-room, from passing up through the register into the said apartments.

Other objects of the invention will be apparent by the novel construction and arrangement of the register-box hereinafter fully described and set forth in the claims.

In the accompanying drawings Figure 1 represents a sectional view of a portion of a floor and a hot-air register provided with my improvements, and Fig. 2 is a plan view of a portion of a floor, the register-frame and its border or supporting-plate being removed to show the box.

Referring to the drawings —A— denotes the floor which is provided with the usual rectangular opening —B— for the register.

—1— denotes the hot-air box which is disposed in the opening and is shaped correspondingly. Said box is composed of tin or other suitable sheet metal as usual and its horizontal dimensions are considerably less than the dimensions of the opening so as to completely surround the box with a cold-air circulating-space as indicated at —C— in Fig. 1. The top of the box —1— is provided with an outwardly projecting horizontal flange —2— which may be formed integral with the walls of the box, or formed separately therefrom and soldered or otherwise securely fastened thereto. The marginal portion of said flange is deflected upwardly at right angles to form a wall —3— which is tightly fitted to the opening —B—, and terminates in an outwardly extending horizontal lip —4— which is seated on the floor, and

through said lip are driven nails as indicated at —5—5—, whereby the box is rigidly supported.

—6— denotes the usual so-called border or supporting-plate of the register, which plate has its marginal portion resting upon the lip —4— and is sustained laterally by means of a rib —7— or lugs formed on its underside and abutting against the wall —3— of the flange, and thus the plate can be removed independently of the hot-air box. The inner edge portion of the said border-plate —6— is provided with the usual depression —8— which forms a seat for the usual horizontal flange —9— surrounding the top of the register-frame —10—, whereby the said frame is supported removably and independently of the hot-air box. In some instances I prefer to countersink the lip —4— and superposed marginal portion of the plate —6— in the floor —A— so as to cause the plate to lie flush with the surface of the floor, especially in case a room is provided with a hard-wood floor, as shown in Fig. 1.

The bottom of the box —1— is formed with the usual annular opening —11— and is provided thereat with a downwardly extending thimble —12— to which is connected the hot-air conducting pipe —13— leading from the furnace.

To more effectually exclude dust which might enter through the joint of the pipe and thimble, and to provide a secure attachment for the pipe, I place within the thimble a suitably fastened telescoping sheet metal ring —14— which has its lower portion contracted as indicated at —15— so as to form a wedging socket —16— into which the pipe is inserted.

What I claim as my invention is:—

1. In a hot-air register, the combination with a hot-air box provided with an outwardly extending supporting-flange secured in the floor-opening and disposed below the upper surface of the floor, a border-plate supported independently of the said flange and removable independently of the box, and a removable register-frame formed with a horizontal flange seated upon the border-plate independently of the flange of the hot-air box as set forth.

2. In a hot-air register, the combination with a hot-air box provided with a horizontal top flange having a marginal wall fitted to the floor-opening and terminating in a

horizontally extending lip for supporting the box on the floor, said box having a cold-air space extending completely therearound, a border-plate resting on the floor at the edge
5 of the opening and removable independently of the hot-air box, said border-plate having the aforesaid lip interposed between it and the floor and formed on its lower face with means bracing the wall of the flange, and the register-frame supported removably on the 10 border-plate and independently of the hot-air box as set forth.

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Witnesses:

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