

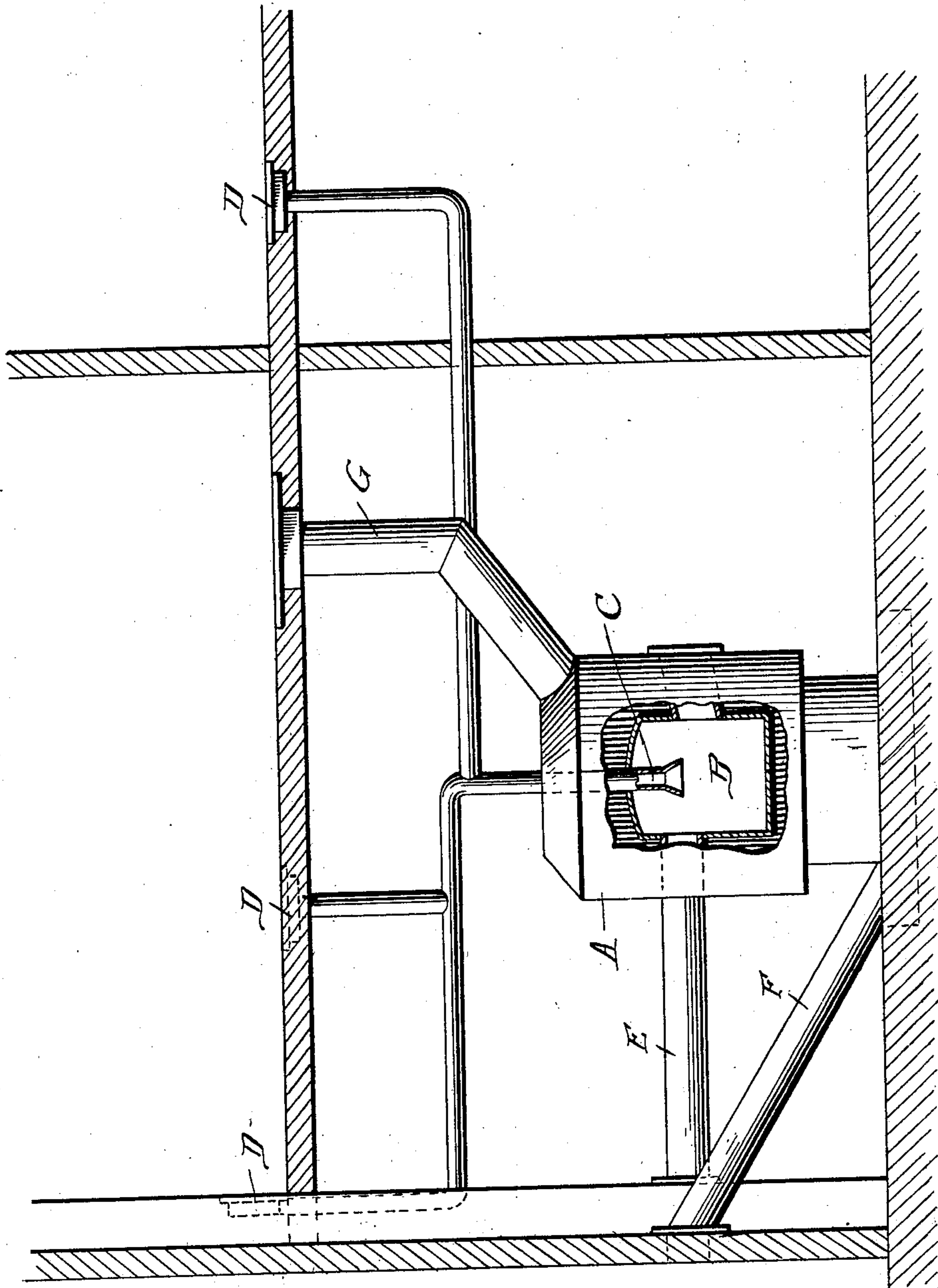
No. 745.365.

PATENTED DEC. 1, 1903.

R. MARTIN & J. F. BUSLEY.
FURNACE.

APPLICATION FILED JAN. 8, 1903.

NO MODEL.



Attest:
C. M. Mason
Edward Sarton

Inventors.
Robert Martin.
John F. Busley.
By Wm. Spear Company
Attys.

UNITED STATES PATENT OFFICE.

ROBERT MARTIN AND JOHN F. BUSLEY, OF ELKHART, INDIANA.

FURNACE.

SPECIFICATION forming part of Letters Patent No. 745,365, dated December 1, 1903.

Application filed January 8, 1903. Serial No. 138,284. (No model.)

To all whom it may concern:

Be it known that we, ROBERT MARTIN and JOHN F. BUSLEY, citizens of the United States, residing at Elkhart, Indiana, have invented certain new and useful Improvements in Furnaces, of which the following is a specification.

Our invention relates to smoke and dust consuming furnaces, and has for its object to provide a furnace which will not only consume its own smoke, but will also draw the dust and sweepings from the rooms above through air-pipes into the fire-pot.

With this object in view the invention consists of certain novel constructions and arrangements of parts hereinafter described.

The drawing is a side elevation, partly in section, showing the construction of the furnace and the cold-air pipes leading from the rooms above.

In the drawing, A is the furnace-casing; B, an air-tight fire-pot, through the top of which extends an air-pipe C. This pipe passes centrally through the top of the fire-pot and extends downward to a point a short distance above the normal level of the fuel, that portion of the pipe which is within the fire-pot being made of cast-iron to withstand the heat of the furnace. After leaving the fire-pot the pipe is made of lighter material, such as sheet-iron, and extends upward, branching into the various rooms, each branch terminating in a dust opening or receptacle D. This opening may be provided with an ordinary register, such as are used with hot-air furnaces, or it may be of a special construction better adapted to receive the dust.

E is the smoke-pipe.

F is a fresh-air pipe extending from the open air to the lower portion of the furnace, the fresh air passing through this pipe into the base of the furnace, thence into the casing A, where it is heated and passes out through the hot-air pipes G into the rooms to be heated.

When the furnace is in operation, the heat

in the fire-pot produces a strong downward draft through the pipe C, which is of sufficient strength to carry with it any dust or light waste material which may be swept or otherwise placed in the receptacle D and is directed with considerable force against the fuel, thus holding the dust and heavier products of combustion upon the fire until entirely consumed.

It will thus be seen that our improved furnace not only consumes the products of combustion, but also the dust and sweepings from the rooms above, and in addition provides a furnace upon which there is very little waste heat.

It has been found in practice that by closing the registers or dust-receptacles in all the rooms except the one which is being swept the draft produced by the furnace is strong enough to draw into the furnace all the sweepings which may be placed in the receptacle, the suction being such as to draw in the dust as soon as it approaches the register, thus preventing its scattering.

Having thus described our invention, what we claim is—

In a heating system a furnace having a suitable fire-pot and surrounding air-chamber, a cold-air-supply pipe to said chamber, hot-air pipes leading from said chamber to the rooms to be heated, a pipe leading into the fire-pot above the fuel-bed, dust-receptacles located on a level with the floor in the various rooms and branch pipes leading from said receptacles to the pipe communicating with the fire-pot, substantially as described.

In testimony whereof we affix our signatures in presence of two witnesses.

ROBERT MARTIN.
JOHN F. BUSLEY.

Witnesses:

JAMES F. CULVER,
JOHN I. SHOOK.