No. 859,428. PATENTED JULY 9, 1907.

E. S. BROWN.

STOVE.

APPLICATION FILED NOV. 22, 1906.

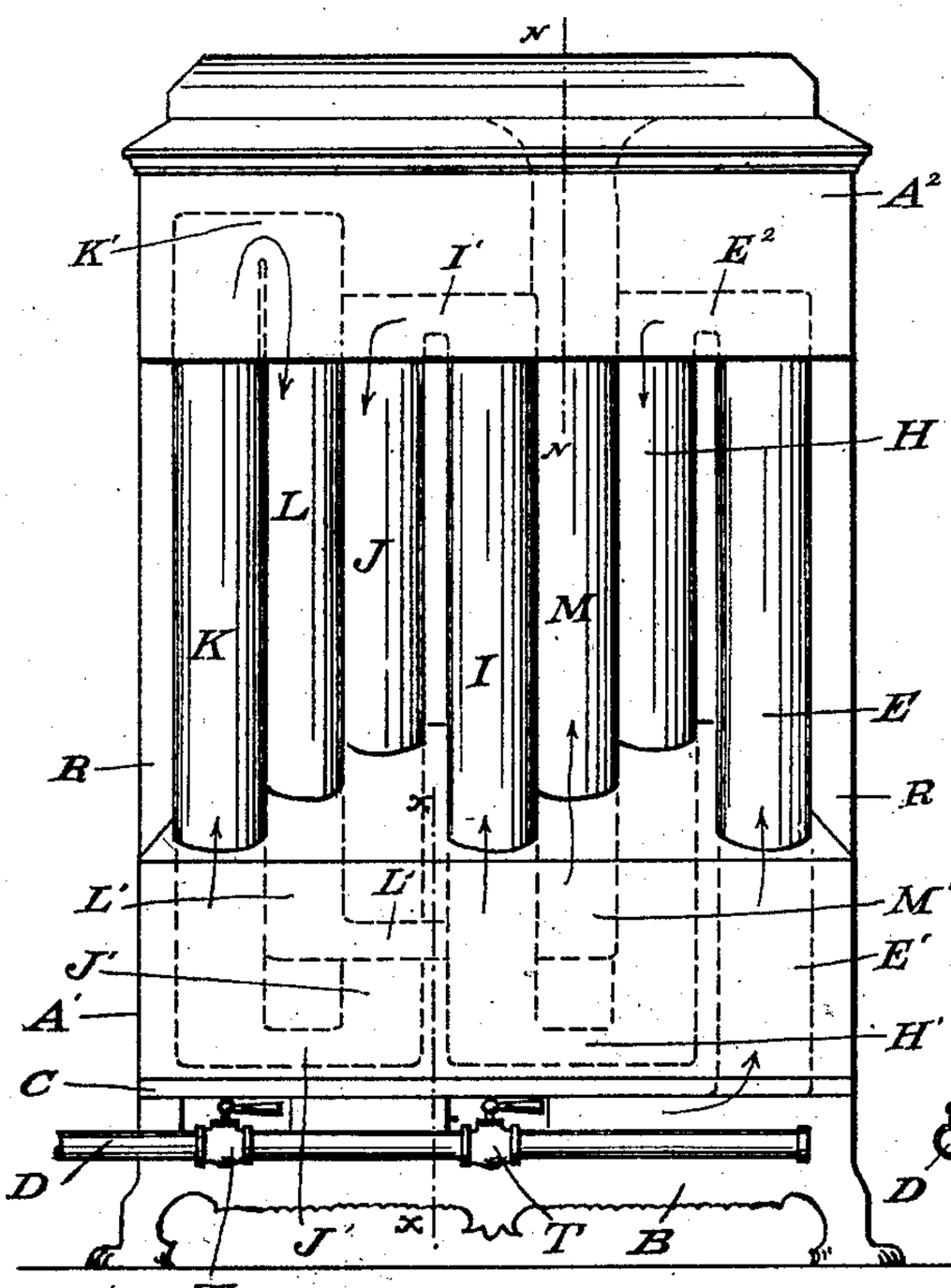

Fig. 1.

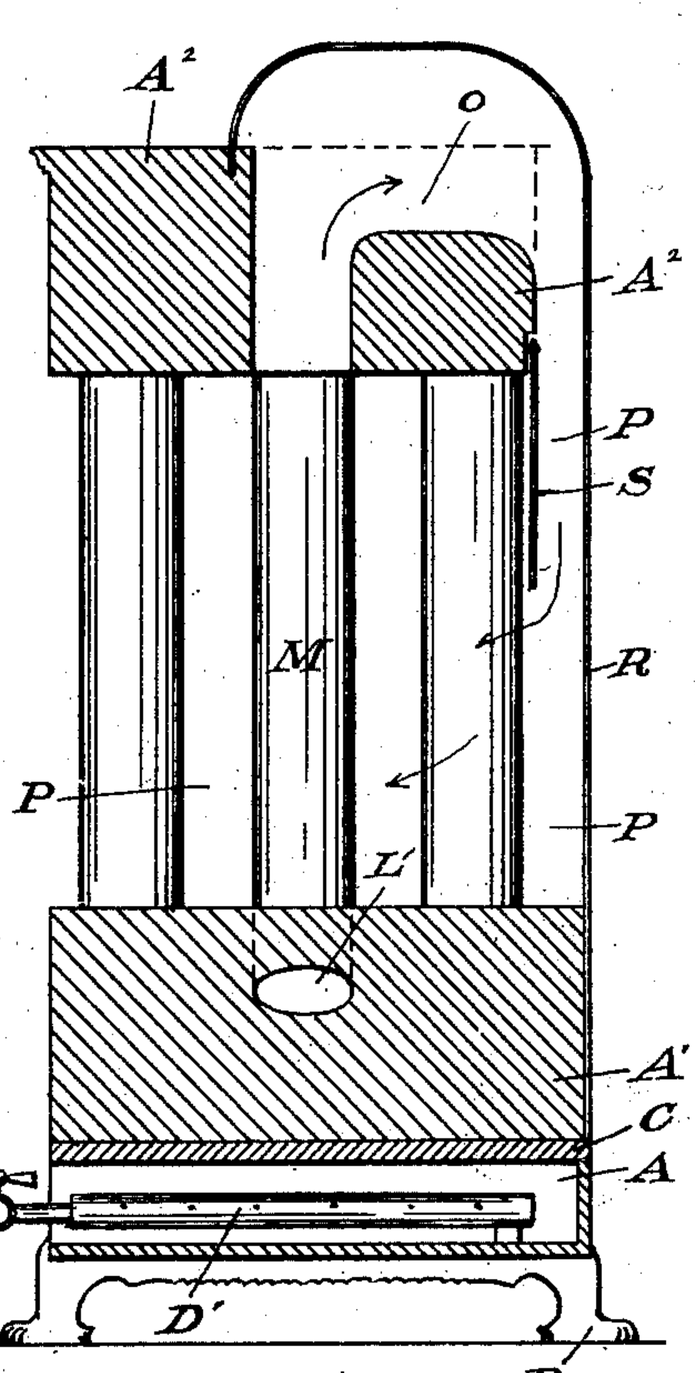

Fig. 2.

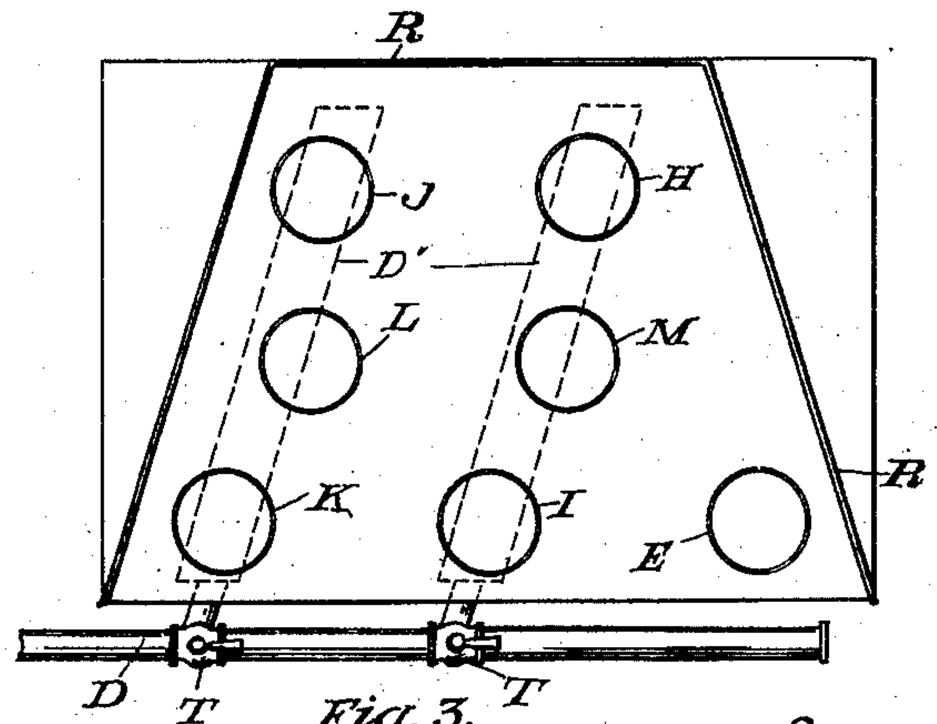

Fig. 3.

WITNESSES:

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STOVE.

No. 859,428. Specification of Letters Patent. Patented July 9, 1907.

Application filed November 22, 1906. Serial No. 344,624.

To all whom it may concern:

Be it known that I, EDMOND S. BROWN, a citizen of the United States, residing at St. Joseph, in the county of Buchanan and State of Missouri, have invented certain new and useful Improvements in Stoves; and I do 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 the letters and figures of reference marked thereon, which form a part of this specification.

My invention relates to stoves especially adapted to the use of gas as a fuel and my object is to provide a stove that is simple in construction, durable, economical, of light weight and that superheats the air and radiates the greater part of the heat downward and forward close to the floor, thus heating the lowermost and consequently coldest stratum of air in the room. I attain my object by the mechanism illustrated in the accompanying drawings in which

Figure 1 is a front view of the stove; Fig. 2 is an end elevation of the same shown on lines *x*—*x* and *n*—*n*, and Fig. 3 is a plan showing the position of the tubes for radiating the heat.

Similar letters indicate corresponding parts in the different figures of the drawing.

I construct the stove, preferably, about 30 inches in height, 22½ inches in width and 20 inches deep, but the size may be varied to suit the requirements of the space to be heated. In this construction A is the fire box; A′ the bottom casting and A² the top casting. While the top and bottom are described and shown as castings I desire to reserve to myself the right to construct them of sheet iron as such change would be mechanical only and in no way inventive. B is the base forming a rest for the entire stove at a slight elevation above the floor; C is a solid cast iron plate forming a top for the fire box; D is a supply pipe through which the gas is carried to burners D′ D′ in said fire box A. These burners are provided with a plurality of perforations from which the blaze bears upward against the bottom of plate C; E, H, I, J, K, L and M are metal tubes of varying lengths inserted and held in position in apertures of corresponding circumference in the top of casting A′ and bottom of casting A². Said castings are also provided with channels E′, H′, I′, J′, K′, L′, M′, and E² through which the heated air passes from tube to tube.

The gas being turned on from supply pipe D and burners D′ D′ lighted, the plurality of flames from the burners spread over the bottom of plate C. The heat from these flames not absorbed by the plate, passes up, as indicated by arrow, through channel E′ which is its only outlet, and thence up through tube E and channel E²; thence down tube H and through channel H′; thence up tube I and through channel I′; thence down tube J and through channel J′; thence up tube K and through channel K′; thence down tube L and through channel L′, and up tube M guided by channel O back into hot air chamber P; R is a metal jacket at the top, back and sides of stove forming said hot air chamber P and adapted to force the heat down and between the tubes and forward into the room; S is an apron to assist the draft in carrying the heat to the lower part of said air chamber; T T are valves. It will be perceived from the hereinbefore described course of the heat that the draft carries the hot air through both channels H′ and J′ over and in contact with the intensely heated upper surface of plate C thus superheating the air as it passes over said plate, the superheating eliminating the odor of the gas.

What I claim and desire to obtain by Letters Patent is:

In a heating stove the combination with a supporting base, a supply pipe, valves and necessary drafts, of a horizontally placed fire box, a cast iron plate forming the top of said fire box, and provided with a single opening, burners in said fire box provided with a plurality of perforations, upper and lower spaced castings provided with channels, a plurality of vertical tubes engaging with said castings and forming connection with said channels for the passage of a continuous stream of hot air from said box, a guide channel in the top casting, a jacket for the top, back and sides of the stove forming a hot air chamber between said castings and around said tubes for the forward distribution of hot air, and an apron back of said tubes to assist in the down draft, substantially as shown and described.

In testimony whereof, I affix my signature, in presence of two witnesses.

EDMOND S. BROWN.

Witnesses:
DAVID C. OSBORN,
THOS. J. COLEMAN.