

J. H. BICKSLER.
HEATING DRUM.
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964,082.

Patented July 12, 1910.

Fig. 1.

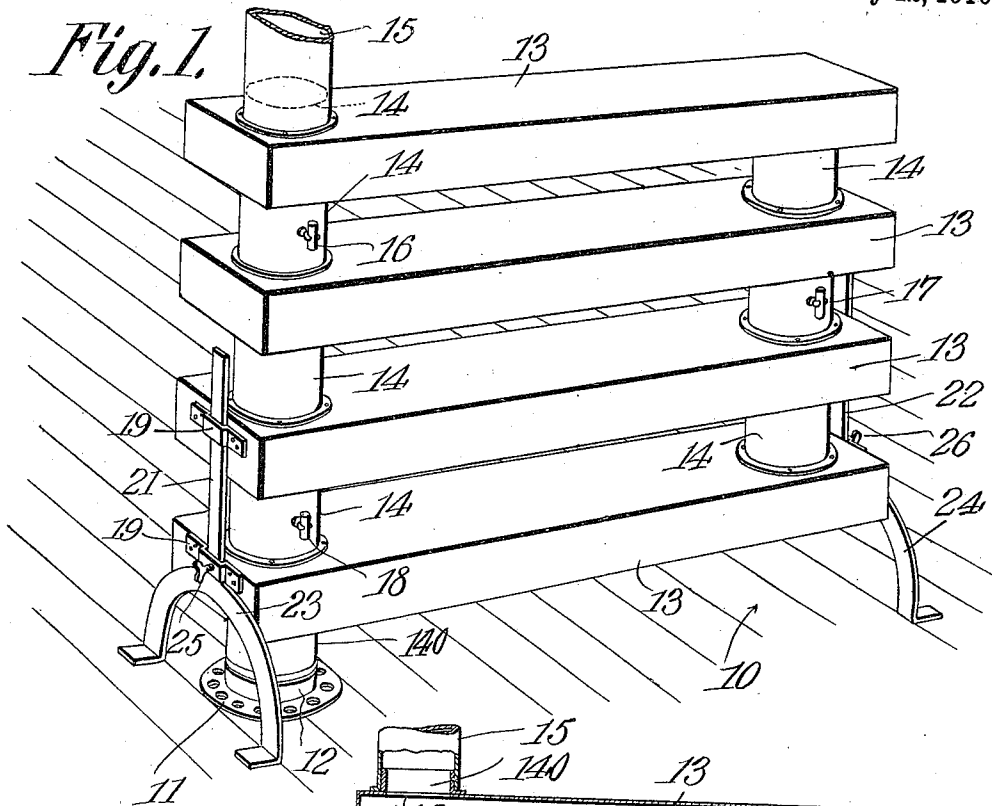
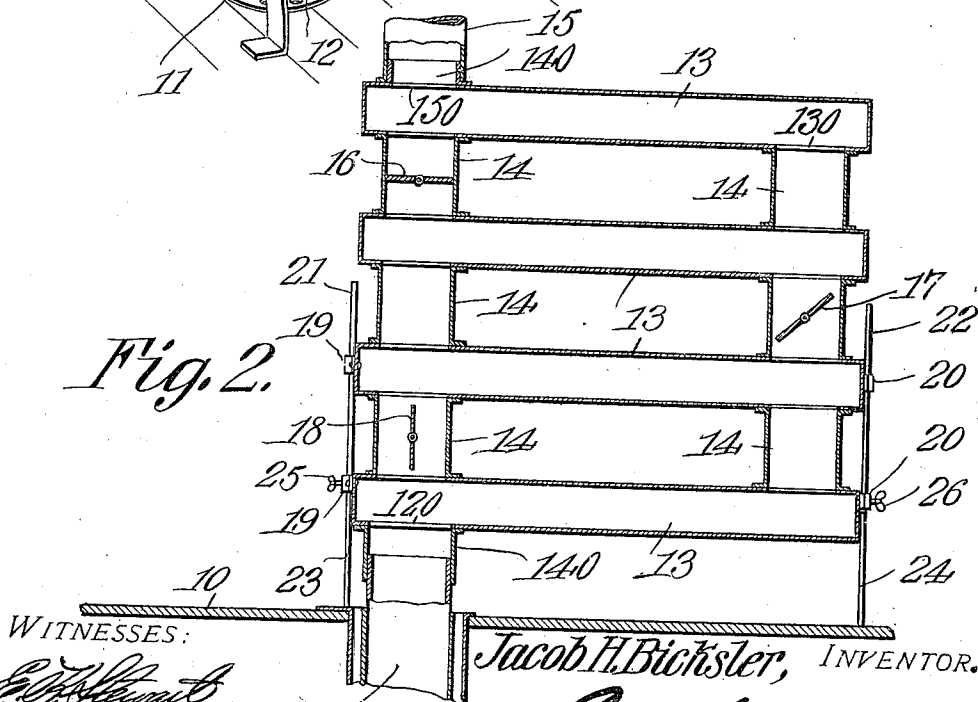


Fig. 2.



WITNESSES:

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UNITED STATES PATENT OFFICE.

JACOB H. BICKSLER, OF PALMYRA, PENNSYLVANIA.

HEATING-DRUM.

964,082.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, JACOB H. BICKSLER, a citizen of the United States, residing at Palmyra, in the county of Lebanon and State of Pennsylvania, have invented a new and useful Heating-Drum, of which the following is a specification.

This invention relates to stoves and furnaces and more especially to heating drums; and the object of the same is to produce a drum intended to be heated from a room below and designed in such manner that the heat thrown off by the drum may be from different parts thereof according as conditions in the apartment to be heated may demand.

It often occurs, as for instance in waiting rooms of railway stations or on wharves, in halls and hallways, and in other places more or less open to drafts either in the apartment in question or in those above and below, that at different times the different conditions make it desirable to have the heat either near the floor or at a higher point, and of course sometimes to have more heat, or less, or none; and the object of the present invention is to design a drum adapted to meet these conditions.

To this end the invention consists in the details of construction described below and shown in the drawings wherein,

Figure 1 is a perspective view of this drum set up; Fig. 2 is a longitudinal vertical section thereof.

In the drawings, the numeral 10 designates the floor, and 12 is a heat inlet pipe leading from a source below the floor through a thimble register 11 therein, while 15 is a smoke pipe leading from this drum upward and eventually into the chimney.

The drum itself comprises an even number of horizontally arranged radiator sections herein shown as rectangular metal boxes 13 disposed one above another in a vertical series and having openings 130 in their adjacent faces at each end, and two sets of aligned vertical sections of flues 14 connecting these openings 130 as best seen in Fig. 2. At one end of the series of sections the upright flue thus produced is closed by the upper wall of the upper section and the lower wall of the lower section; but at the other end of the series said upper and lower walls are provided respectively with

openings 150 and 120, the former communicating through a thimble 140 with the smoke pipe and the latter through another thimble 140 with the inlet pipe 12. This results in a construction whereby there is a vertical passage completely through the drum from the inlet pipe to the smoke pipe, and at its other end there is a vertical passage through the intermediate radiator sections but closed at its upper and lower ends as shown. Between the first two lowermost sections 13 and in the direct line of draft from the inlet to the outlet is located a damper 18 within the flue 14, between the next two sections a similar damper 17 is located within the flue at the remote end of the drum, between the next two is located a similar damper 16 within the direct line of the draft, and so on upward throughout the series. The construction of these dampers is immaterial, excepting that their handles must project within reach of the user, as seen in Fig. 1, but by disposing them alternately in the two sets of flues as shown and described, this improved drum is caused to possess possibilities explained below. The whole is supported in any suitable manner, but preferably by means of keepers 19 and 20 secured to the ends of two of the lowermost sections, through which project standards 21 and 22, branched at their lower ends as at 23 and 24 so as to rest upon the floor, and set screws 25 and 26 through certain of the keepers engage the standards as will be understood. This form of support is well adapted for use in setting up the drum, and it will hardly be likely that after it is once set up it needs adjustment.

In the use of this improved drum, if the dampers 16 and 18 are opened the direct draft will pass completely through the drum and heat it but very little. If they are both closed and the damper 17 is opened the heat will pass lengthwise through the lowermost section, thence up the outermost set of flues 14, thence lengthwise through the uppermost section, and finally out the chimney, thus heating the top and bottom of the drum. If the dampers 16 and 17 are closed and 18 is opened, the two uppermost sections will be heated. If the dampers 17 and 18 are closed and 16 is opened the two lowermost sections will be heated; and so it will

appear that by properly setting the dampers the operator may heat different parts of this drum in proportion to the heat supplied through the pipe 12, though other parts will doubtless remain warm; and when he becomes skilful he may open certain dampers and set others half way open which will produce variations too numerous and complicated to describe herein. The result will be that when the apartment needs heat near the floor he can cause the drum to supply it, when it is too cold in a stratum higher up in the room he can set the dampers accordingly, and if the room is quite cold he may cause the heat to flow through all the sections, or of course he can pass it directly to the chimney without heating the drum anywhere to a great degree.

It will not be necessary to elaborate on the fact that liquids and foods may be more or less warmed by placing them on the radiator sections at different points when the sections are constructed in the shape of boxes as shown herein.

The device will be entirely of metal, and its proportions are immaterial, although it should be large enough to rise quite some distance from the floor.

What is claimed is:

A heating drum comprising an even number of horizontally arranged radiator sections spaced one above another, a set of alined vertical flues connecting the sections at one end, another set connecting them at the other end, the upper wall of the uppermost section and the lower wall of the lowermost section having openings alined with the last named set of flues, a smoke inlet pipe leading to the lower opening, a smoke outlet pipe leading from the upper opening, means for supporting the drum above the floor, and dampers disposed in the two sets of flues in alternate relation between the sections whereby two contiguous sections or all of the sections may be supplied with smoke, or the smoke may be passed up the last named set of flues without traversing any of the sections.

In testimony that I claim the foregoing as my own, I have hereto affixed my signature in the presence of two witnesses.

JACOB H. BICKSLER.

Witnesses:

H. E. SCHRIVER,
CHAS. W. SCHRIVER.