

A. Jones,
Steam Heater.

N^o 7,054.

Patented Jan. 29, 1850.

Fig. 1.

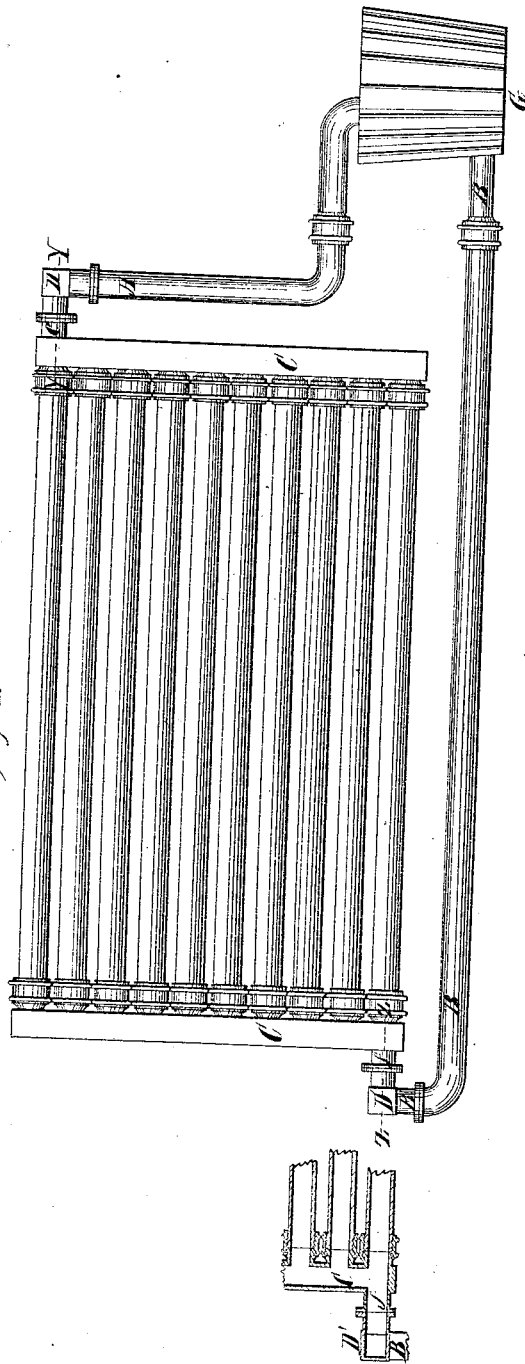


Fig. 2.

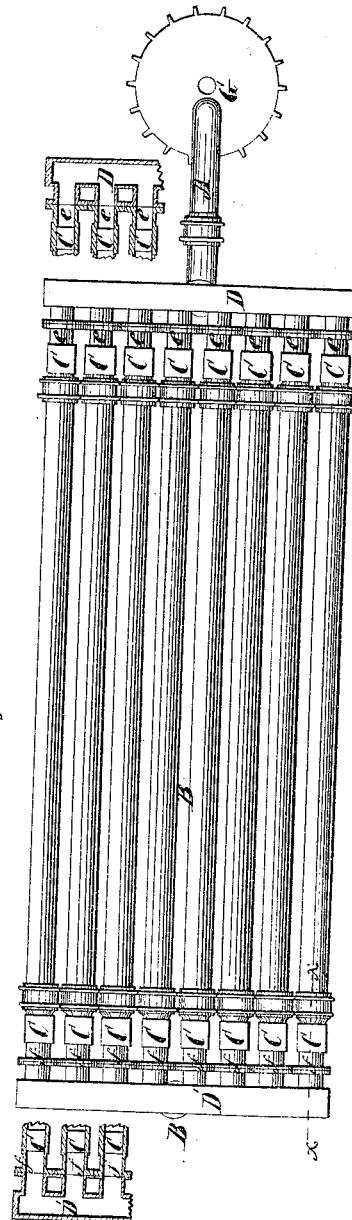


Fig. 3.



UNITED STATES PATENT OFFICE.

ADRIAN JANES, OF NEW YORK, N. Y.

APPARATUS FOR HEATING AIR BY HOT WATER.

Specification of Letters Patent No. 7,054, dated January 29, 1850.

To all whom it may concern:

Be it known that I, ADRIAN JANES, of New York, in the county of New York and State of New York, have invented certain
5 Improvements in the Construction of Apparatus for Heating Buildings, and that the following is a full, clear, and exact description of the principle or character which distinguishes them from all other things be-
10 fore known and of the usual manner of making, modifying, and using the same, reference being had to the accompanying drawing, in which—

Figure 1, is a side elevation; Fig. 2, a plan; Fig. 3, is a section representing the union box detached.

My improvement consists in the peculiar construction, combination and arrangement of a cluster of pipes for heating the sur-
20 rounding air by the passage of hot water through them. Great difficulty has been experienced in the practical application of water as a heating agent for heating buildings, on many accounts; first, the great ex-
25 pense when the water was carried through the rooms, as well as the disfigurement of them by the introduction of pipes. Secondly, when the water was only employed to heat the air in a chamber to be distributed
30 throughout the house, the pipe has been coiled or bent into very great lengths and of a small diameter; this is found to be inefficient and unequal in its action; the water gets too cool before it leaves the appa-
35 ratus, which of itself is very difficult to construct or repair. By my form of construction I have endeavored to correct these inconveniences, and have succeeded in producing a simple, cheap, and permanent ap-
40 paratus for heating buildings, that can be easily managed, and is not liable to derangement, or subject to want repair. I need not enlarge upon the advantages of heating by hot water, rather than by the direct ap-
45 plication of fire, as it is now so universally admitted.

The construction is as follows: A number of pipes are placed or cast close together, and form a gang, several of which gangs
50 are placed side by side, and form a cluster, which are inclosed in a nonconducting chamber into which external air is admitted, and from which it is drawn after being heated. This, however being like those de-
55 vices already in use, no further description is requisite. To form a gang, any number of straight pipes desired are united at their

ends in a parallel plane by what I denomi- 60
nate gang ends (C), which are hollow trunks or pipes, with as many sockets on one side of each as there are pipes in the gang, and on the other side there is an outlet or
65 an inlet pipe, according to the end of the gang on which they are placed, as will be presently described. Any number of gangs thus constructed, and each perfect in itself,
70 are placed side by side to form a cluster of the desired magnitude. These are all connected at one end of the vertical end pieces, near the top, by what I denominate a union box D, having as many connecting pipes and flanges to form joints with the end
75 pieces as there are gangs in the cluster; at the opposite end of the gangs there is another box (D') of the same construction, affixed to the gang ends near the bottom; the whole cluster is thus united into one;
80 from the upper union box to the boiler at the furnace a communication is opened by means of a connecting pipe A, called the flow pipe; and from the other box, D', a return pipe B, extends back to the boiler G,
85 (this is clearly represented in Fig. 1.) The water, when heated in the boiler, flows through the pipe A, to the union-box D, from whence it is distributed to the pipes in the several gangs through their ends, and
90 thence back to the boiler by the return pipe B. The circulation is thus properly kept up throughout.

Having thus fully described my improved apparatus, what I claim therein as new, and for which I desire to secure Letters Pat- 95
ent, is—

The peculiar construction and arrangement of the heating apparatus by uniting the series of straight horizontal pipes into gangs, by vertical end pieces, C, through
100 which the circulating water is conveyed to all the pipes in the gang in combination with the union boxes D, D', the series of gangs forming the cluster being united at one end at the top of the end pieces by the
105 union box D and at the opposite end, at the bottom by a similar box, D' through which the water circulates to all the pipes, by means of a flow and return pipe, connected with the boiler or heater at the furnace, as
110 herein clearly specified.

ADRIAN JANES.

Witnesses:

G. GAY,
WM. GREENOUGH.