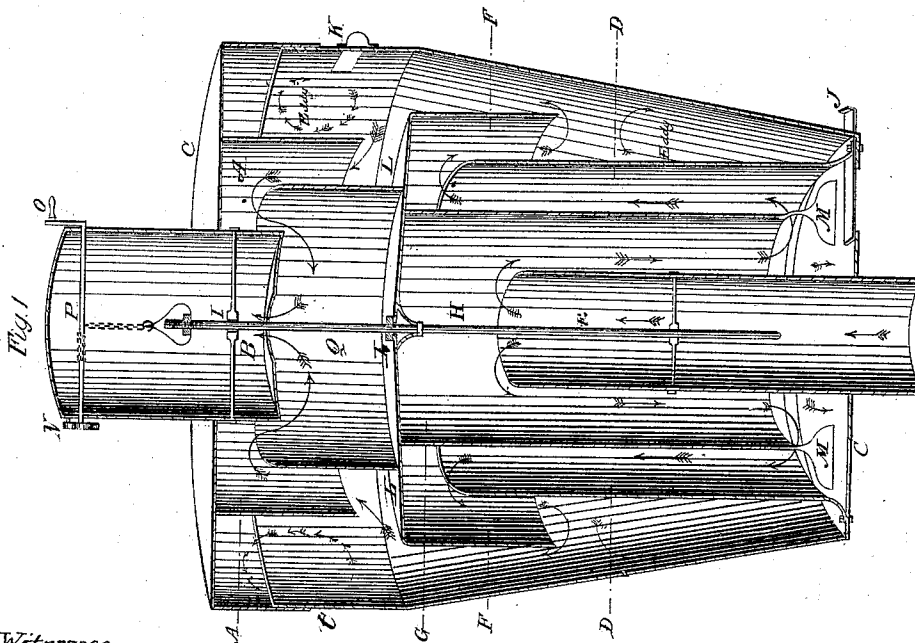
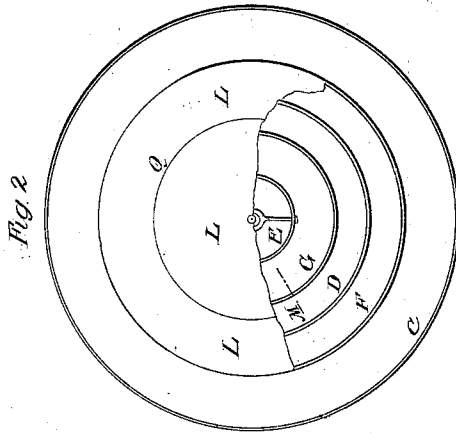


W. A. Peaslee,

Spark Arrester.

N^o 22,887.

Patented Feb. 8, 1859.



Witnesses

John H. Walton
Charles J. Pratt

Inventor:

W. A. Peaslee

UNITED STATES PATENT OFFICE.

W. A. PEASLEE, OF INDIANAPOLIS, INDIANA.

SOOT AND SPARK ARRESTER.

Specification of Letters Patent No. 22,887, dated February 8, 1859.

To all whom it may concern:

Be it known that I, WASHINGTON ABRAM PEASLEE, of Indianapolis, in the county of Marion and State of Indiana, have invented
5 a new and useful Improvement in Soot and Spark Arresters and Heat-Radiators, of which the following is a full and exact description, reference being had to the accompanying drawings and the letters of reference marked thereon.

Figure 1 is a transverse section showing the internal construction. Fig. 2 is a vertical section showing the cover taken off and a part of the cap L, L, L, cut away exposing
15 the walls F, D, G and E.

The following is a description of the construction and operation of the soot and spark arrester and heat radiator.

I construct a drum or case C, C, C, C, I place the flue E, and wall D, which are firmly attached to the bottom of the same; and the wall A, and flue B, which are firmly attached to the top or cover. In the flue B,
20 I place the windlass or rod P, which is operated by the handle O, and ratchet and pawl N, for the purpose of raising and lowering the rod H, which slides and turns in the collars I and I, and to which is attached the cap or circular plate L, L, L, which holds
25 the walls F and G, beneath and the wall Q, above.

M and M, are scrapers or brushes attached to the bottom of the wall G, for the purpose of sweeping the soot and ashes around to the
35 opening caused by the withdrawal of the slide J. The slide K, being withdrawn admits for the purpose of operating or turning the plate L, L, L, and scrapers M, M.

The effect of this arrangement, will be
40 seen by tracing its operation when the same is placed upon a stove and the heated current or smoke passed into the flue E. Curving over the top of the same it passes down between the flue E, and wall G, forming a
45 curve at the bottom of the wall G, it passes up between the walls G, and D, over the wall D and passing down under the wall F, it rises between the wall F, and the casing or outer wall C, passing under the wall A, over
50 the wall Q, and out at the flue B. The force

of the current or draft is regulated by operating the windlass P, thereby increasing or lessening the passage between the plate L, L, L, and wall A, or D, and the bottom of the case C. It will be seen by this description that the circumference of the current
55 as it passes out from the center increases while the wall and outer case absorb and conduct off the heat thereby condensing and throwing off by centrifugal force everything
60 heavier than the heated air of the current, dropping the same into the bottom of the apparatus, from which it is taken out at the slide J, as before described.

In my first experiment with a complete
65 apparatus in the tin and hardware store of I. S. Pratt of this place upon a number 3 cannon stove, less than one half the coal was consumed, heating the room better than before using the same. A slight snow having
70 fallen upon the roof of the building the contrast was easily seen between the flues having no radiator and soot collectors attached to their stoves and the one where the radiator and soot collector was used, the snow
75 around it being free from soot, while around them it was entirely blackened. Upon opening the radiator and soot collector there was found a large amount of soot and ashes in the bottom of the same. At the State house
80 I have put seven in operation, which are found to operate with the same effect. While putting them up two stoves of the same kind were tested, showing by actual measurement that less than one half of the
85 amount of coal is required to give a superior heat in the room.

What I claim and desire to secure by Letters Patent is—

The combination and arrangement of the
90 cap L, rod H, walls G, F, and Q, with the case or outer wall C, flues B and E, and wall D, when constructed, arranged and operated substantially in the manner and for the purposes set forth.

W. A. PEASLEE.

Witnesses:

J. R. GATES,
EDWIN W. BROWNELL.