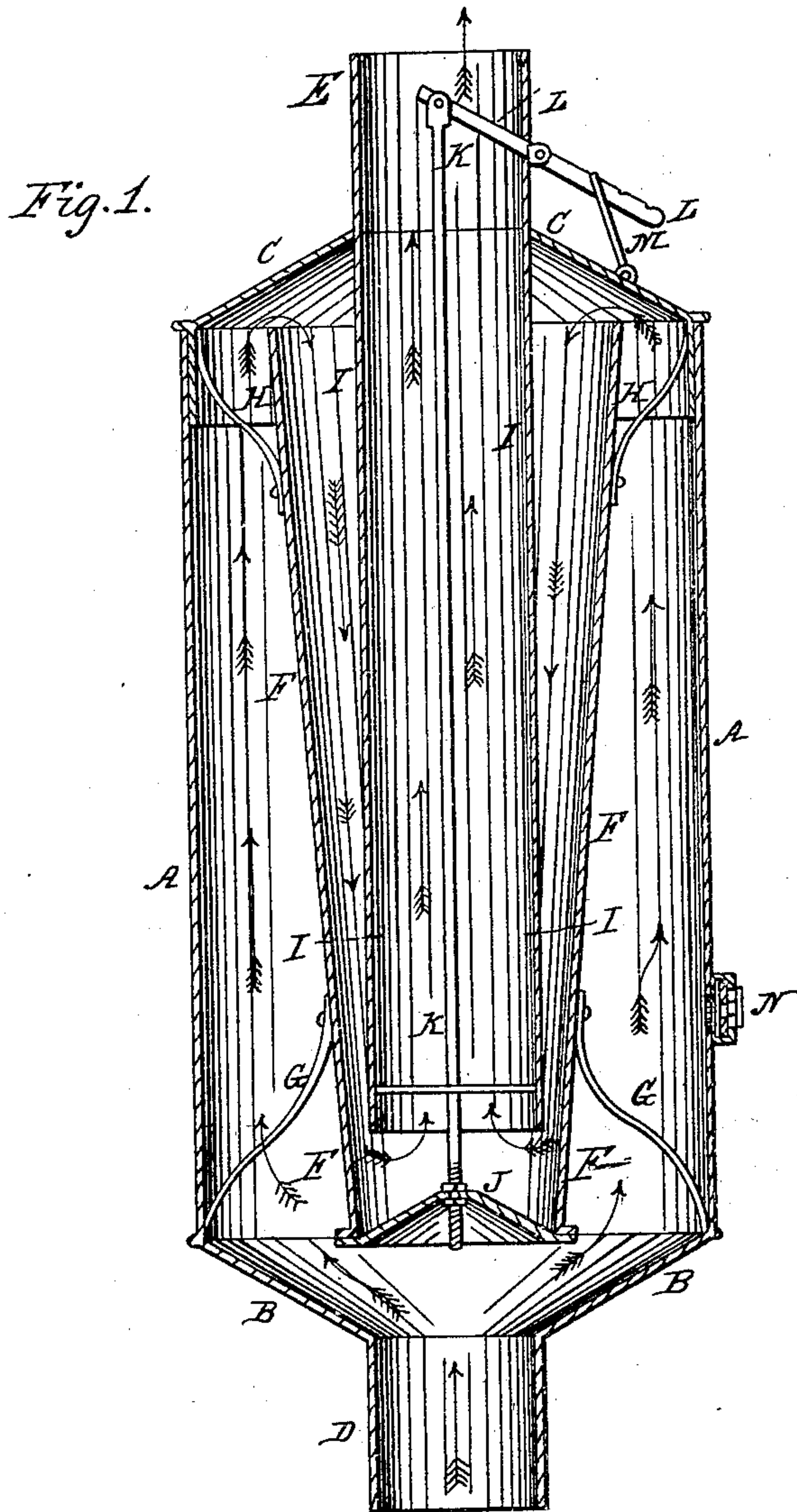


RUTH & DE LONG.

Stovepipe Drum.

No. 57,572.

Patented Aug. 28, 1866.



Witnesses:

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UNITED STATES PATENT OFFICE.

FRANCIS E. RUTH AND JOSEPH DE LONG, OF UPPER SANDUSKY, OHIO.

STOVE-PIPE DRUM.

Specification forming part of Letters Patent No. 57,572, dated August 28, 1866.

To all whom it may concern:

Be it known that we, FRANCIS E. RUTH and JOSEPH DE LONG, of Upper Sandusky, Wyandot county, and State of Ohio, have invented a new and useful Improvement in Stove-Pipe Drums; and we do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to make and use the same, reference being had to the accompanying drawing, forming part of this specification, in which—

Figure 1 is a vertical longitudinal section of our improved stove-pipe drum.

Similar letters of reference indicate like parts.

Our invention has for its object to furnish an improved drum or radiator for attachment to a vertical stove-pipe, to assist in warming a room by utilizing the heat escaping with the smoke; and it consists, first, in the combination of an interior tapering or thimble-shaped tube with the exterior drum and interior central pipe, for the purpose of forcing the heat against the outer cylinder; second, in the combination of a dish-shaped damper, rod, and lever with each other, with the outer cylinder, the tapering tube, and the interior pipe; and, third, in the combination of a damper with the outer drum, by means of which the air may be admitted to the drum to cool it off when it may have become too hot.

A is the outer cylinder of the drum, and it may be made of sheet-iron in the ordinary manner.

B is the lower end or cap of the drum. This cap may be made of sheet or cast iron, as may be most convenient. This cap B is attached to the upper end of the pipe D leading from the stove.

C is the upper end or cap of the drum, which may be made of sheet or cast iron, and is connected with the pipe E leading to the chimney, as shown.

F is a tapering or thimble-shaped tube placed within the cylinder A with the smaller end downward, as shown in Fig. 1. This tapering tube is supported free from the drum by feet or braces G, attached to the sides of the said tube and resting against the bottom

or lower cap, B, of the drum, as shown in the drawing. It is kept in its proper upright position by the braces H, attached to its sides, and their ends resting against the sides of the outer cylinder, as shown.

I is the continuation of the pipe E, which extends downward nearly to the lower end of the tube F, as shown.

J is a dish-shaped damper, which is attached to the lower end of the rod K. This rod passes up through the pipe I, and at or just above the top of the drum it is pivoted to the end of the lever L. The other end of the lever L passes out through the side of the pipe E, and is held in any desired position by the link M, as shown in Fig. 1.

When the damper J is in the position shown in the drawing it closes the lower end of the tube F closely, forcing the smoke and heat from the stove against the side of the drum A. The smoke and heat then pass up through the gradually-contracting space between the cylinder A and tube F, imparting heat to the said cylinder A, and thence it is radiated through the room.

When the damper is fully lowered it rests upon the bottom of the cap B, shutting off the draft of the stove.

When the damper is partly lowered part of the smoke and heat will pass up directly through the pipe I without circulating through the drum or heating it to any great extent.

N is a slide-damper, opening or closing openings through the side of the cylinder A. By this means, if the drum should become too hot, cold air from the room may be let into said drum, cooling it, and at the same time ventilating the room.

It will be observed that the smoke while circulating through the drum is always passing through gradually-contracting spaces. This construction causes it to part almost entirely with its heat while within the drum, which heat is thus communicated to the room.

It will also be observed that the drum is a complete spark-arrester, thus effectually guarding against fire from this cause.

We claim as new and desire to secure by Letters Patent—

1. The combination of the interior tapering

or thimble-shaped tube, F, with the exterior drum, A, and interior central pipe, I, substantially as herein described, and for the purpose set forth.

2. The combination of the dish-shaped damper J, rod K, and lever L with each other and with the outer cylinder, A, the interior tapering tube, F, and the interior pipe, I, substan-

tially as described, and for the purpose set forth.

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