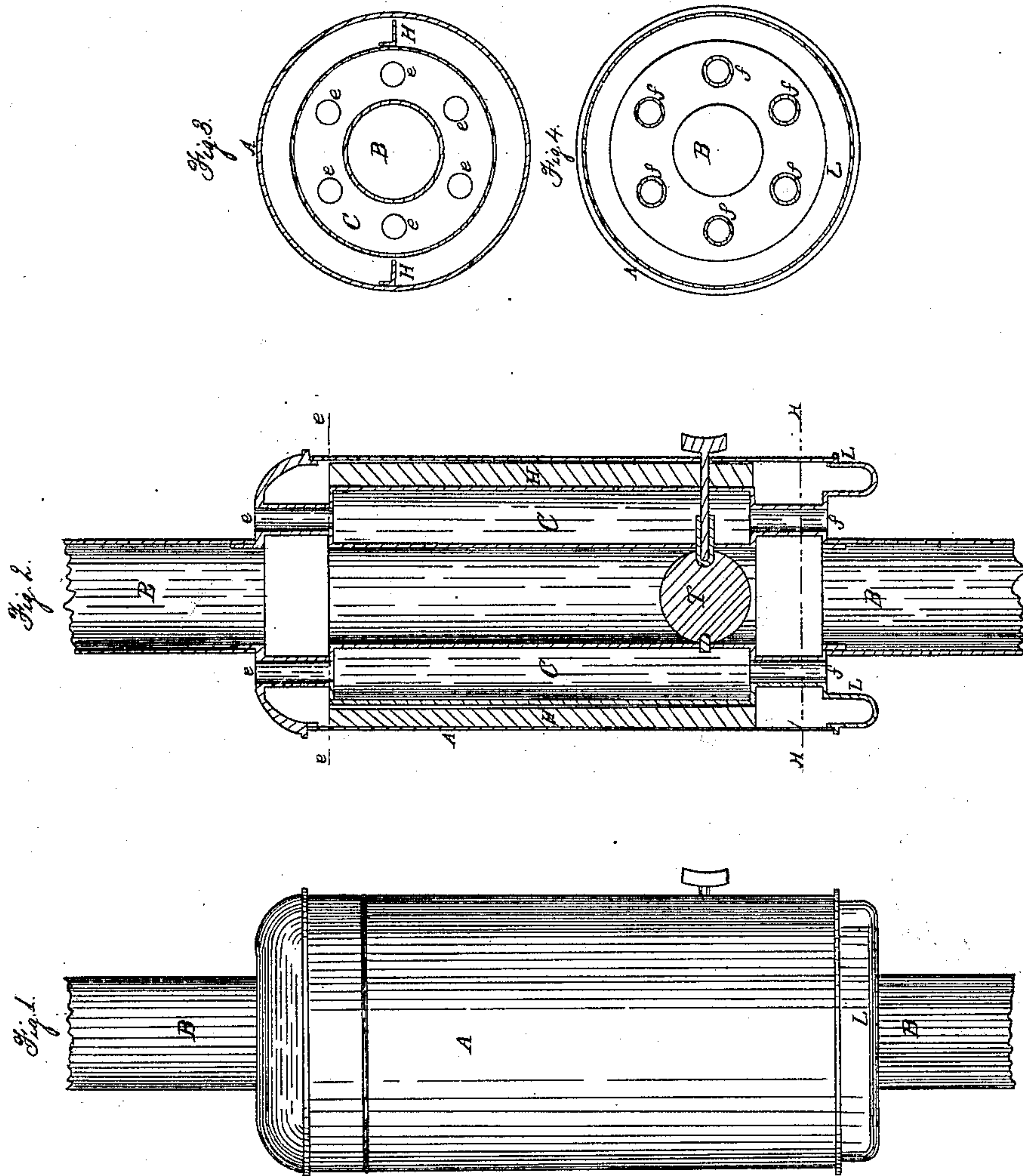


M. S. MORGAN.
STOVE DRUM.

No. 73,990.

Patented Feb. 4, 1868.



Witnesses.
W. H. Sherburne
E. W. Waring

M. S. Morgan

United States Patent Office.

M. S. MORGAN, OF CLINTONVILLE, ILLINOIS, ASSIGNOR TO HIMSELF AND
GEORGE C. COFFEE, OF SAME PLACE.

Letters Patent No. 73,990, dated February 4, 1868.

IMPROVEMENT IN STOVE-DRUMS.

The Schedule referred to in these Letters Patent and making part of the same.

TO ALL WHOM IT MAY CONCERN:

Be it known that I, M. S. MORGAN, of Clintonville, in the county of Kane, and State of Illinois, have invented a new and useful Improvement in Stove-Drums; and I do hereby declare that the following is a full and exact description of the construction and operation of the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon, making a part of this specification, in which—

Figure 1 is a perspective view.

Figure 2 is a vertical transverse section of the same.

Figure 3 is a transverse section on line *e e*.

Figure 4 is a transverse section on line *x x*.

Similar letters of reference, where they occur in the separate figures, denote like parts in each of the drawings.

My invention consists, first, in so constructing the drum as to form an air-chamber between the outer casing and the pipe, around which the fire from the stove may pass, in combination with a system of vertical flues passing through the lower and upper end of the outer casing into said chamber, whereby a great amount of heat may be obtained by means of the cool air passing into said chamber through the lower system of flues, and being heated and thrown off into the room through the upper system of flues; thus the greatest possible amount of heat can be obtained; second, constructing the outer casing so as to be capable of a rotating movement, in combination with two or more vertical springs or scrapers, attached, one to the inner side of the outer casing, the other to the outer side of the casing of the air-chamber, and extending the entire length of the latter, whereby, as the outer casing is given a rotating movement, the springs or scrapers coming in contact with or against the opposite sides or casings, the accumulated soot is removed therefrom and is caught in the soot-box below, thus leaving the surface of the drum clean, thus admitting of greater amount of heat passing through the same.

To enable others skilled in the art to make and use my invention, I will proceed to describe the same with reference to the drawings.

A represents the outer casing of the drum, which may be of any thin metallic substance, said casing being supported at the lower end by means of flanges protruding outward from and around the outer sides of the soot-box L, which is coupled to pipe B of the stove. Within said casing is a second drum or air-chamber, C, its size being such transversely as to leave a vacant space between its sides and the sides of the outer casing, of from one-half to three-fourths of an inch, said chamber having also a cavity through its centre vertically, of the size of the cavity in pipe B, which may be closed at any given time by means of damper T. The object of leaving the cavity through and around said chamber is to give a greater heating-surface. Attached to the inner side of case A is a vertical spring or scraper, H, which extends across the cavity and against the sides of chamber C, said chamber having also attached to its side a like spring or scraper, H'', that extends across and against the side of case A, whereby, when said outer case is rotated once around, the edges of said scrapers come in contact with or against the opposite sides, thus removing the soot which may collect within said cavity. The same is caught in the soot-box L. Said air-chamber is provided with two systems of air-flues, the lower system of flues, *f*, extending downward from said chamber C through the lower end of the outer casing or soot-box L, the upper system *e* passing upward from said chamber through the upper end of said casing, as shown by fig. 2. The object of this style of air-chamber, with its relative combination of flues, is to allow a current of cool air to pass into said chamber through the lower system of flues, which is heated and thrown off into the room by means of the upper system, whereby all the heat is saved, and a room can be heated and kept to a more even temperature with a less amount of fuel than with any of the heretofore-known similar arrangements.

Having thus described the nature and object of my invention, what I claim as new, and desire to secure by Letters Patent, is—

Rotating case A, in combination with soot-box L, scrapers H and H'', substantially as and for the purpose described.

M. S. MORGAN.

Witnesses:

N. H. SHERBURNE,

E. W. VINING.