

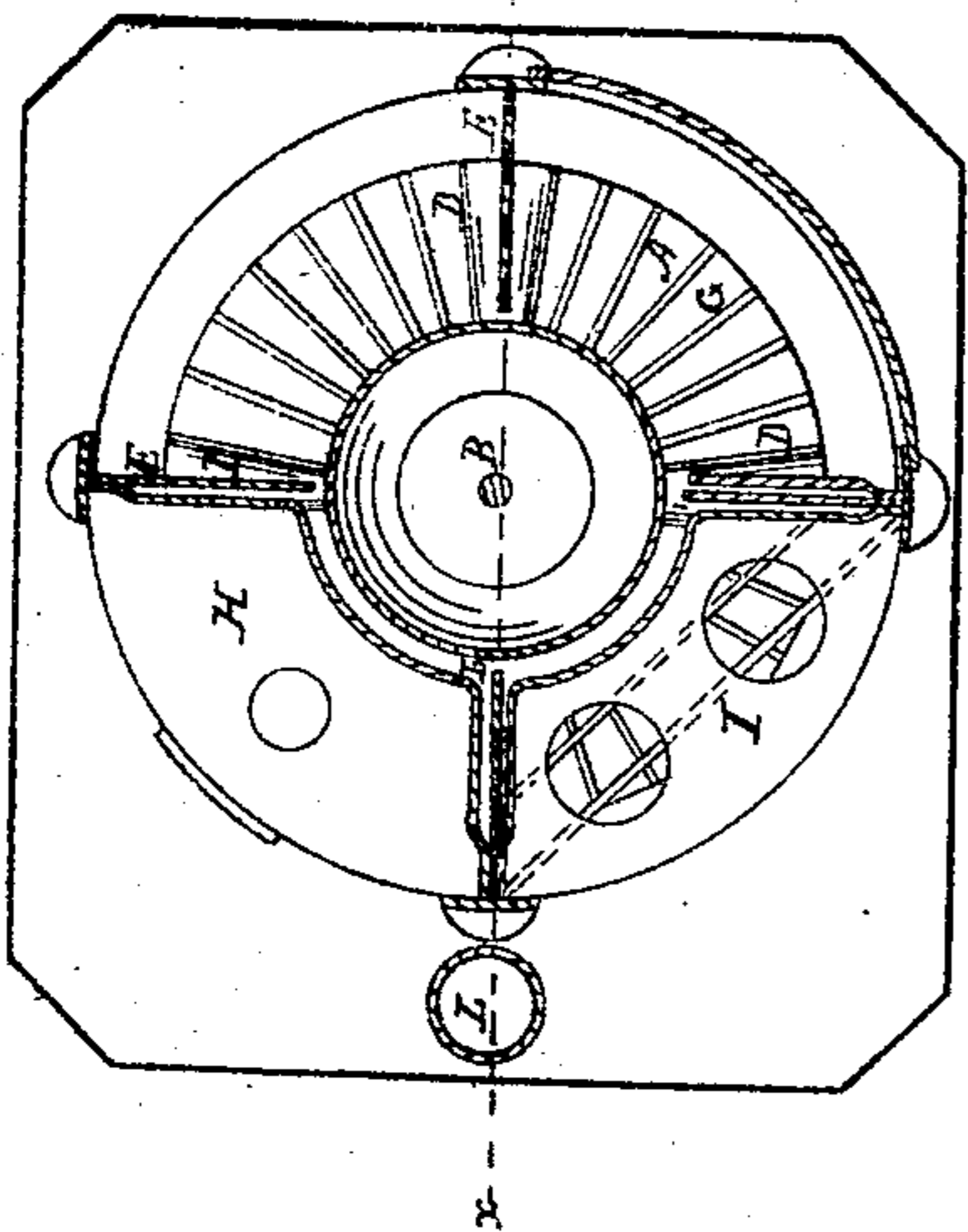
*S. B. Stewart.*

*Grate for Stoves & Heaters.*

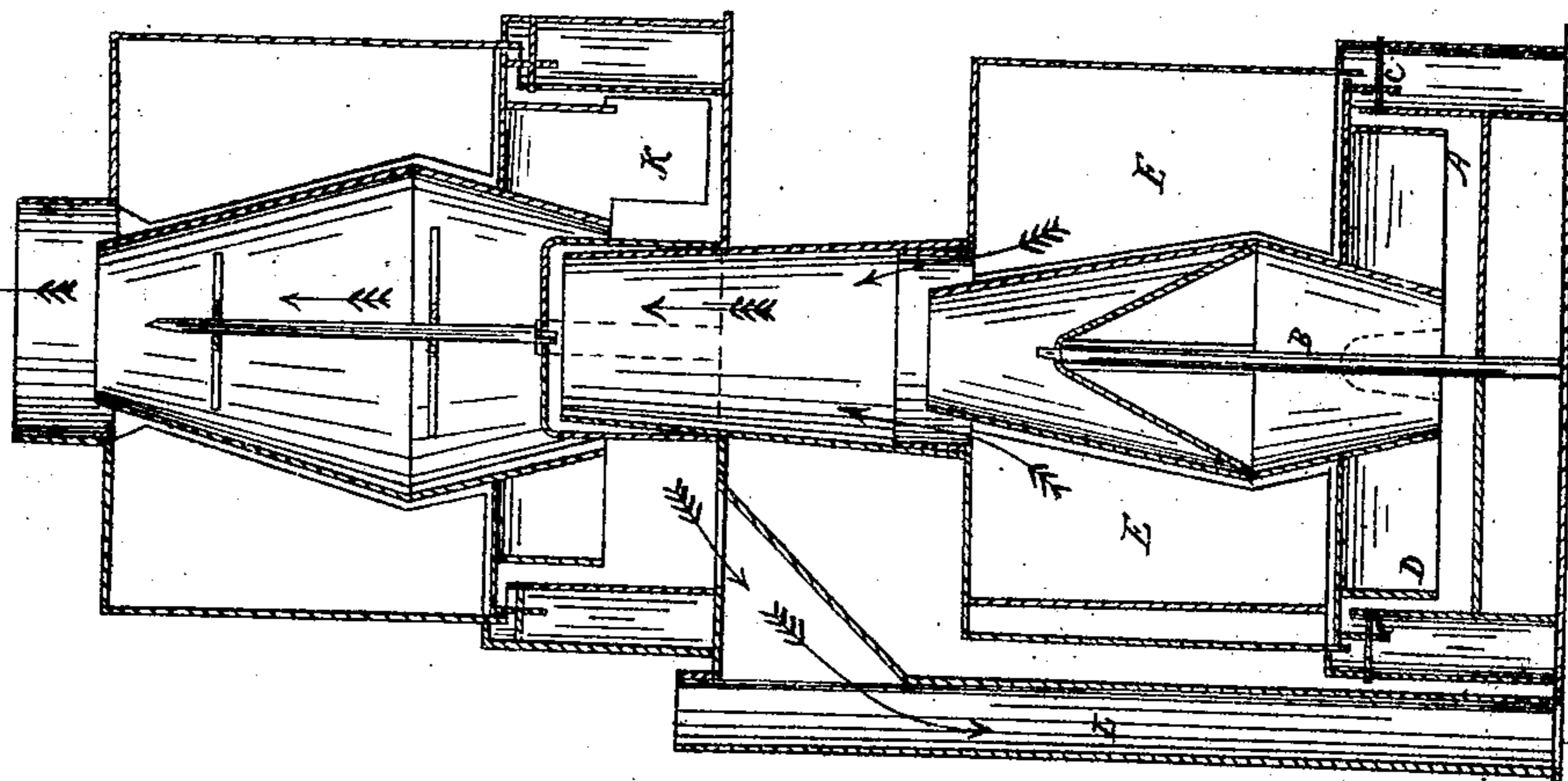
*N<sup>o</sup> 71659*

*Patented Dec. 3, 1867.*

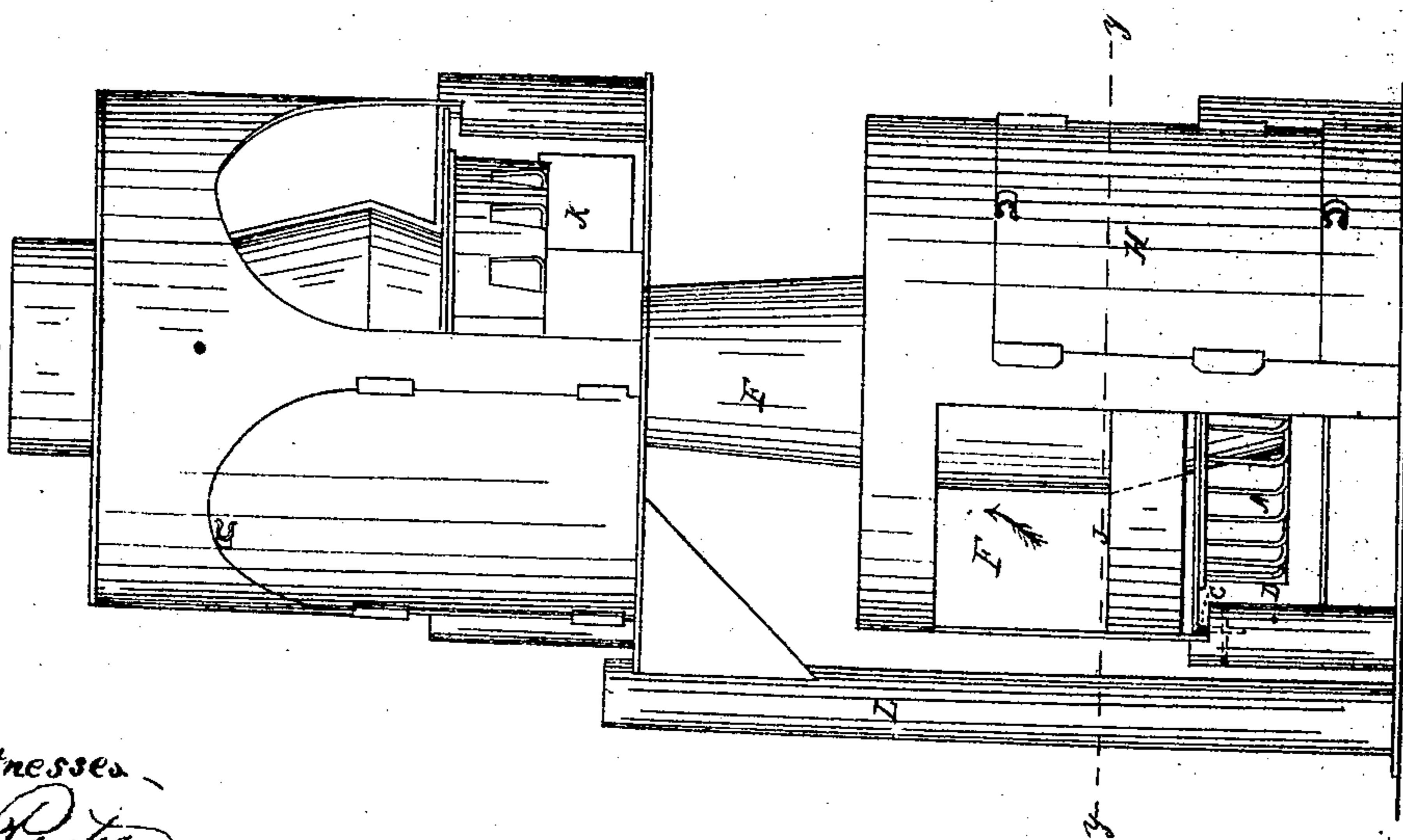
*Fig. 3.*



*Fig. 2.*



*Fig. 1.*



*Witnesses -*  
*Peyton*  
*O. Long*

*Inventor*  
*Samuel B. Stewart*  
*by his atty,*  
*Baldwin & Son*

# United States Patent Office.

SAMUEL B. STEWART, OF BRUSH VALLEY, PENNSYLVANIA.

*Letters Patent No. 71,659, dated December 3, 1867.*

## IMPROVEMENT IN GRATES FOR STOVES AND OTHER HEATERS.

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, SAMUEL B. STEWART, of Brush Valley, in the county of Indiana, and State of Pennsylvania, have invented a new and useful Improvement in Grates, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, which make part of this specification, and in which—

Figure 1 represents a view in elevation of so much of my improved apparatus as is necessary to illustrate my invention.

Figure 2 represents a vertical central section through the same, at the line *x x* of fig. 3; and

Figure 3 represents a horizontal section through the same, at the line *y y* of fig. 1.

It is the object of my invention to use the heat from a single fire in two or more rooms successively, or to apply the heat from a single grate in several rooms simultaneously, and my improvement consists in the use of a grate moving on a pivot, substantially in the manner hereinafter shown.

In the accompanying drawings I have represented my improvement, as adapted to a two-story house, in order to show some of the modifications of which it is susceptible. It is obvious, however, that it is equally adapted to warming a single story. I shall, therefore, first describe the invention in this latter form, and then show the modifications. In this instance, a grate, A, of suitable form, is mounted on a vertical pivot, B, so as to revolve freely thereon in a horizontal plane. The grate is prevented from tipping by a series of friction-rollers, C, under its outer edge, and is divided into four compartments by radial partitions D, extending the full depth of the grate, and touching similar partitions E in the fireplace or flue F. Separate flues may be provided for each compartment, or all the flues may unite in a common flue above the fireplace. The ash-pit is also to be divided into compartments by partitions corresponding with those of the grate. By arranging this grate in the partition between the corners of four adjacent rooms, with a fireplace opening into each, all four could be successively warmed by kindling a fire in one compartment of the grate, and revolving it so as to diffuse its heat through each room in turn, or, by kindling a fire in all four compartments, all the rooms would be simultaneously warmed. Of course, if a fire were kindled in but one compartment, and the grate remained stationary, the corresponding room only would be warmed.

As in most parts of this country very little fire is sufficient for comfort during the greater portion of the year, it is obvious that my invention would save the use of three fires.

My invention also possesses the additional advantage of applying the same fire, in succession, to an open grate, G, a radiator or air-tight stove, H, or a cooking-stove, I, as shown in the drawings, each situated in a different room. The same arrangement may be adopted in successive tiers of grates, as shown in the drawings. The partitions K, in the ash-pit, instead of being stationary, are attached to and revolve with the ash-pit, so as to sweep the ashes into a discharge-spout, L, leading to the cellar or other suitable receptacle.

The grate may be revolved by power applied in any suitable manner. For instance, a circular rack might be placed under or on the edge of the grate, and worked by a crank and pinion. The red arrows show the course of the products of combustion, and the blue ones that of the ashes.

I am aware that revolving grates have heretofore been used in smoke-consuming furnaces. I am also aware that two rooms have heretofore been warmed simultaneously from a single stationary stove in the partition wall, and do not, therefore, claim such devices.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. A grate swinging horizontally, and communicating successively with two or more separate flues, substantially in the manner described, for the purpose of warming different rooms in succession by a single fire.
2. A revolving grate, divided into compartments, each communicating with an independent flue, substantially in the manner described.
3. The combination, substantially in the manner described, of a revolving grate, divided into compartments by vertical radial partitions, and revolving on a vertical axis, with a flue having corresponding partitions, for the purposes set forth.
4. The combination, substantially in the manner described, of a revolving grate, with a heating or cooking-stove, and one or more open grates, for the purpose of applying the heat successively to each, or simultaneously to all, as set forth.
5. The combination, substantially in the manner described, with a revolving grate having radial partitions or wings attached to and revolving with it, in the ash-pit, of a discharge-spout, for carrying off the ashes swept into it by the wings in their revolution.

In testimony whereof, I have hereunto subscribed my name.

SAMUEL B. STEWART.

Witnesses:

SILAS M. CLARK,  
J. I. PEYTON.