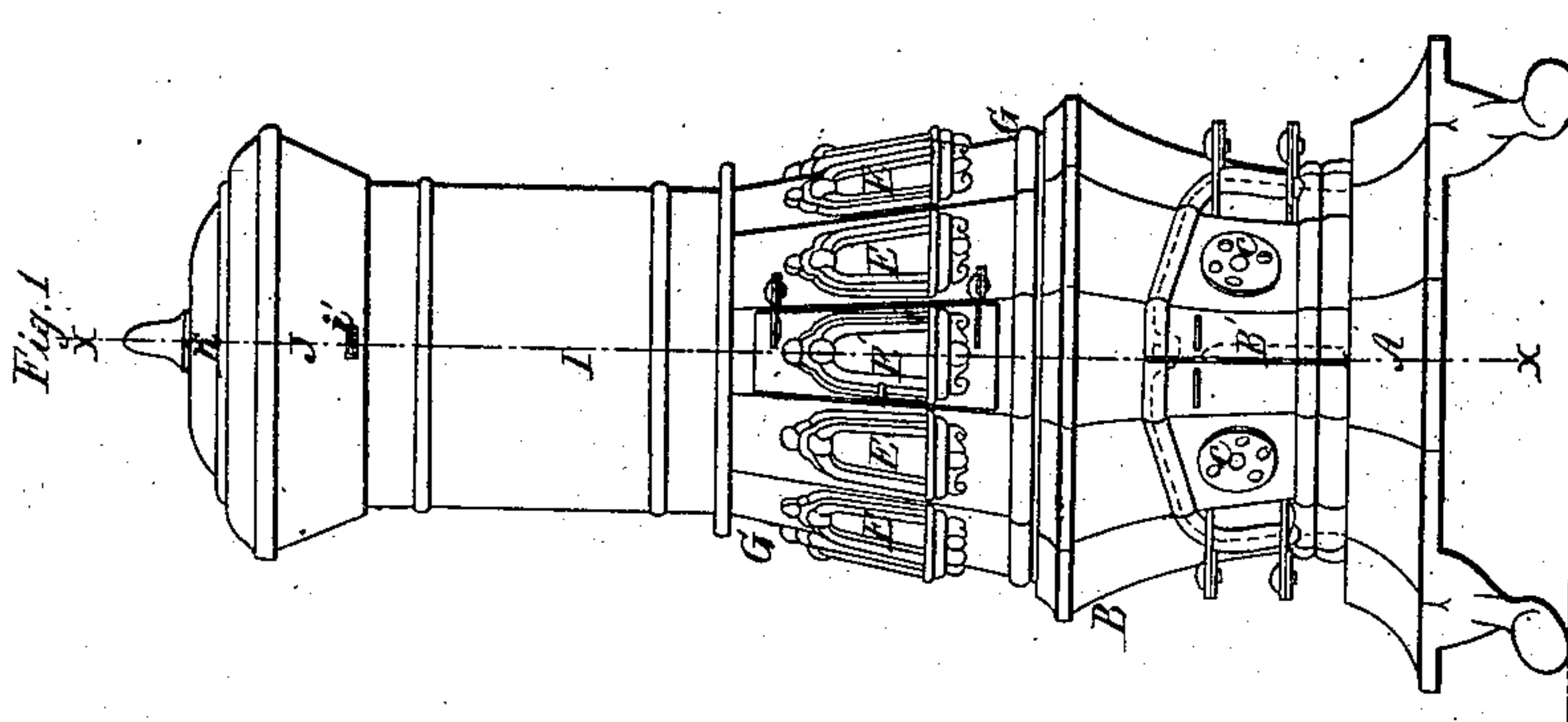
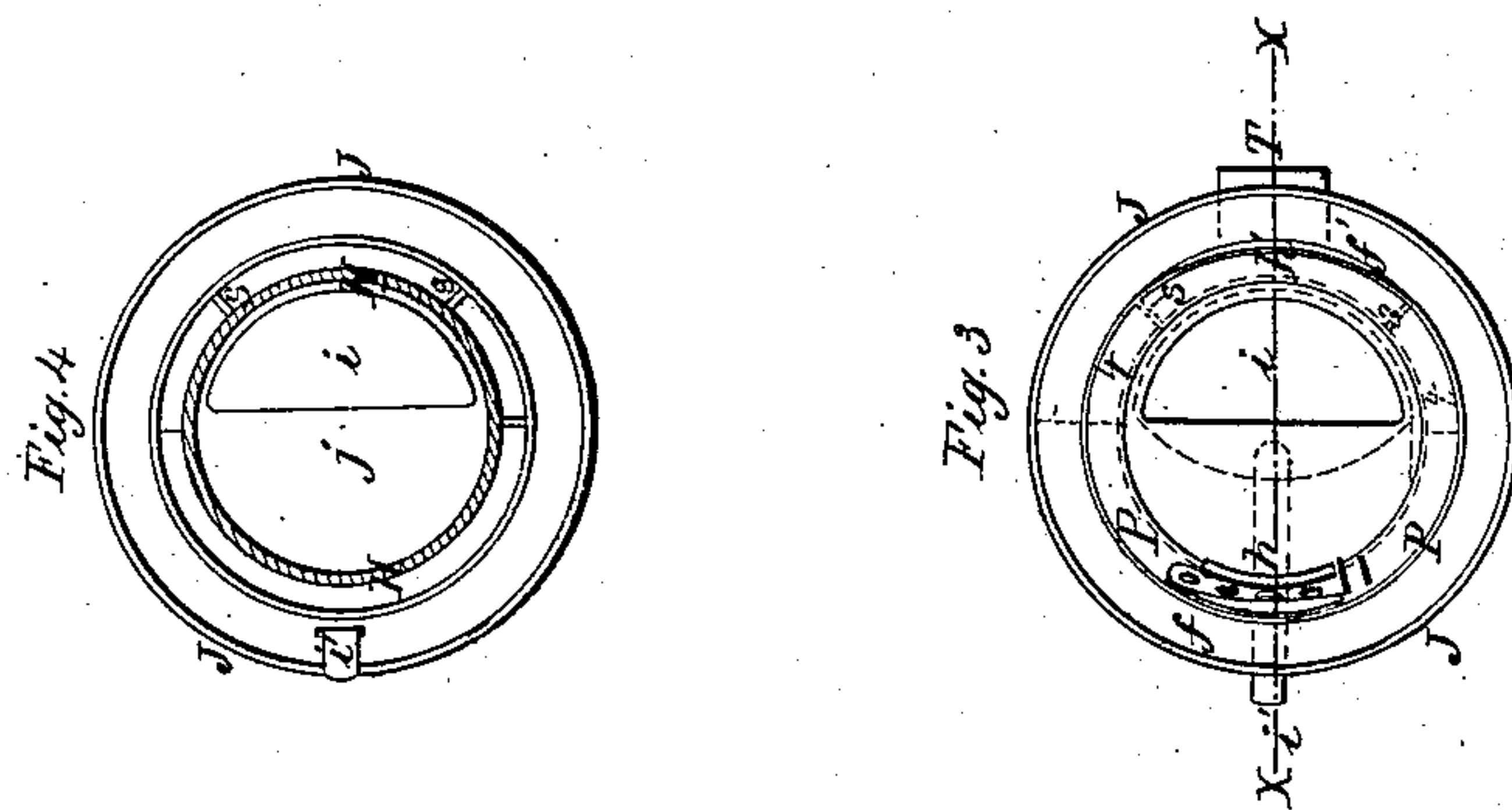
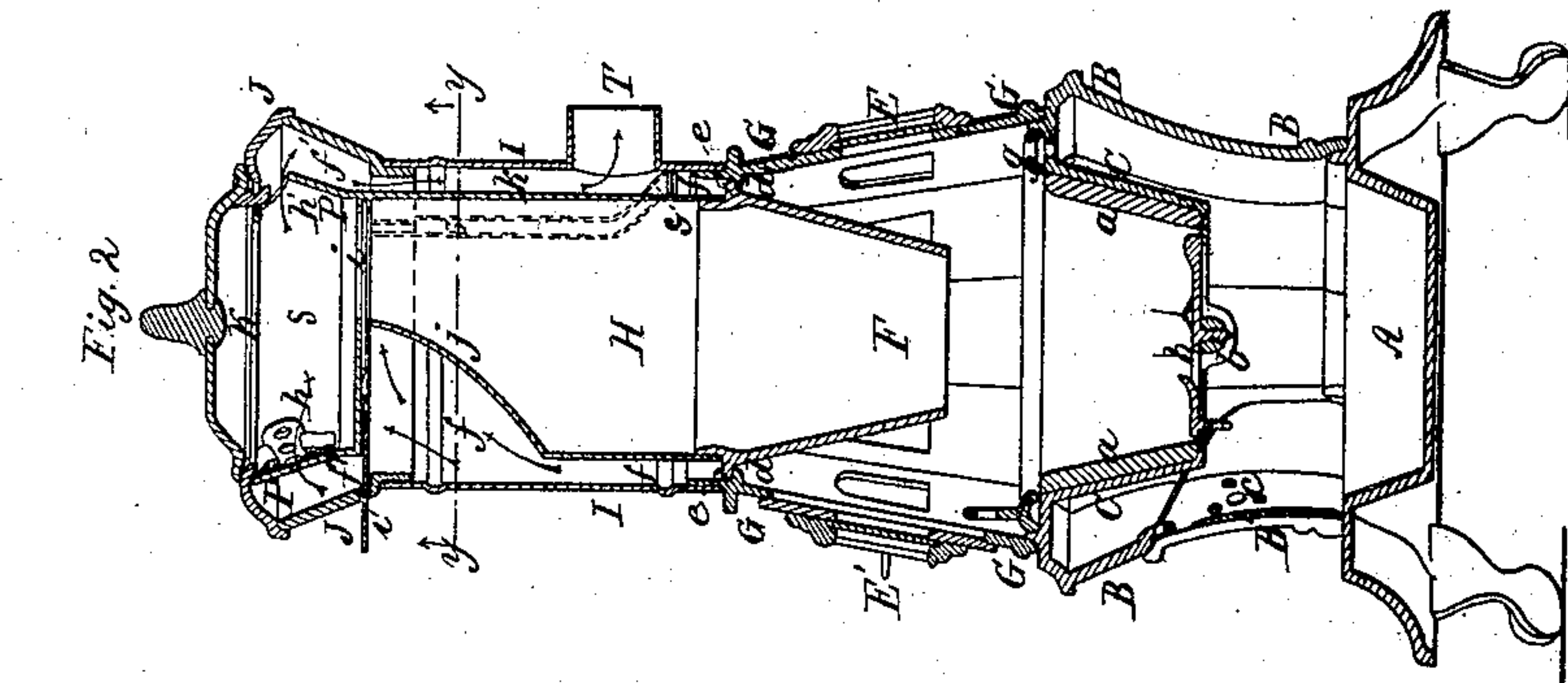


A. Spitzmiller,
Base-Burning Stove.
N^o 19,607.
Patented July 7, 1868.



Witnesses
J. Campbell
R. J. Campbell

Inventor
A. Spitzmiller
Wm. Henschelmann

United States Patent Office.

AMBROSE SPITZMILLER, OF BUFFALO, NEW YORK, ASSIGNOR TO JOHN S. PERRY, TRUSTEE AND EXECUTOR, AND NATHAN B. PERRY.

Letters Patent No. 79,607, dated July 7, 1868.

IMPROVEMENT IN OVENS IN BASE-BURNING STOVES.

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, AMBROSE SPITZMILLER, of Buffalo, in the county of Erie, and State of New York, have invented an Improved Elevated Oven Base-Burning Stove; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, making a part of this specification, in which—

Figure 1 is a front elevation of the improved stove.

Figure 2 is a diametrical section through the stove, taken in the plane indicated by red lines *x x*, in figs. 1 and 3.

Figure 3 is a view of the top section of the stove, as it would appear with the cover removed.

Figure 4 is a horizontal section taken at *y y*, in fig. 2, looking upward.

Similar letters of reference indicate corresponding parts in the several figures.

This invention relates to an improvement on base-burning coal-stoves, having oven-chambers applied at the upper ends of the coal-magazines, and openings through the bottoms of said chambers, for supplying the magazines with coal.

The object of the invention is to so construct an oven-chamber over the coal-magazine of a base-burner wherein there is a direct or indirect communication from the fire-chamber through the flue *f*, so that a portion of the bottom, as well as the side wall of the oven, shall be exposed to the action of the heated products of combustion on their way to the escape-pipe, as will be hereinafter explained.

The invention also consists in providing an elevated oven of a base-burning stove with openings through its side walls, one of which has a damper applied to it, so that, when desired, a portion of the heated products of combustion can be conducted through the oven on their way to the escape-pipe, as will be hereinafter explained.

To enable others skilled in the art to understand my invention, I will describe its construction and operation.

In the accompanying drawings, A represents the base-section of the stove, which serves, in conjunction with the section B, to enclose and form the ash-pit. The section B is supported upon and secured to the base, A, and provided with doors B', which allow access to the fire-pot C, and its grate, *b*, and also to the ash-pit. The fire-pot C is constructed so as to flare upward, and it is supported at its upper end by means of a flange resting upon suitable projections, extending inward from the upper contracted end of the section B. The fire-pot C is provided with a grate, *b*, which rests upon a cross-bar, *b'*, and is allowed to oscillate freely. It may also be provided at pleasure with a lining, *a*. A ring, *g*, which is suitably perforated, is arranged upon the flange of the fire-pot, or upon the ring upon which the latter rests, and is adapted to serve as a register for regulating the supply of air to the combustion-chamber above said pot, said air entering the stove through register-openings, *c*, made through doors B', leading into the space below the fire-pot, as shown in fig. 2.

The conical section, G, which is supported upon the contracted upper end of the section B, is perforated in a suitable manner, and provided with illuminating-windows, E, and one or more illuminating-doors, E', for exposing the light of the fire. The door E' allows access to the fire-pot for starting a fire, and for any other purpose.

Within the contracted upper end of the illuminating-section, G, stirrups or concave chairs, *d*, are formed at equal distances apart, for receiving lugs, *e*, which are cast upon the upper enlarged portion of the inverted conical base, F, serving as means for sustaining this base in a central position over the fire-pot, as shown in fig. 2.

This inverted conical base, F, forms the lower end of the cylindrical coal-magazine H, and receives upon it this cylinder H, thereby supporting the latter in proper position within a cylindrical casing, I, and leaving an ascending-flue space, *f*, between said cylinders, as shown.

The casing I is secured to and supported upon the upper contracted end of the illuminating-section G, and receives upon its upper end the flaring ring J, which forms the top section of the stove, and which is provided with a central hole through its cap-plate, closed when desired by a removable cover, K.

The upper end of the magazine H terminates at the base of the wall P, and is covered by means of a horizontal plate, which forms the bottom of an oven, S, which oven is surrounded by an annular flaring wall, P, shown in figs. 2 and 3.

An opening, of a semicircular or other form, is made through the bottom plate of the oven S, on one side of the centre thereof, which opening leads into the upper end of the coal-magazine H, and is designed for allowing coal to be supplied to this magazine.

The said opening is provided with a sliding valve, *i*, or a drop-door or valve, having a rod, *i'*, projecting from it, and extending through the front or other part of the section J, as shown in figs. 2 and 3.

It will be seen, by reference to figs. 2, 3, and 4, that the opening through the bottom of the oven S is made on one side of the centre thereof, and that the upper end of the coal-magazine is contracted at *j*, so as to leave about one-half of the bottom of the oven exposed to the action of the heated currents rising through the flue *f* or into the drum, as the case may be. By this means the oven will be subjected to heat impinging against its bottom, as well as against its side wall P.

Through the front part of the oven-wall P, perforations are made, which can be entirely or partially closed by means of a sliding damper, *h*, and diametrically opposite this damper *h*, an opening, *h'*, is made through the oven wall P. When the damper *h* is open, a portion of the products of combustion will pass through the oven on their way to the escape-pipe T, but when this damper *h'* is closed, all the products will pass around the space *f'*, between the walls J P.

In order to cause the heated products of combustion to rise in the space *f'*, division-plates, *s*, are applied around the escape-pipe T, and carried up as high as the base of the oven, where they unite with horizontal deflecting-plates, *t*, shown in figs. 3 and 4. These division-plates cause the products to ascend through space *f* into space *f'*, and thence descend into the chamber *k'*, from whence they pass off through pipe T; or if the escape is closed, they will remain in the chamber.

I have shown and described my invention applied to a stove having a direct ascending flue leading from the fire-chamber, but it is obvious that the invention is applicable to revertible-flue base-burning stoves, or to stoves wherein the products of combustion descend below the fire-pots before escaping.

Having described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. In a base-burning stove, having an oven arranged over the coal-magazine, providing for exposing a portion of the bottom of such oven to the action of ascending currents of heat, substantially as described.
2. An oven, S, in combination with ascending flue *f*, and a coal-magazine having its upper end contracted, substantially as described.
3. An oven, S, in combination with the flue *f*, when used as a drum or dead-chamber, and a coal-magazine having its upper end contracted, substantially as described.
4. Providing the elevated oven S of a base-burning stove with openings through its side wall, one of which openings has applied to it a damper, *h'*, substantially as described.

Witnesses:

HEINRICH KRAFT,
CHARLES HUETTER.

AMBROSE SPITZMILLER.