

G. Dewey.

Reservoir Cooling Stove.

N^o 70,077. Patented Oct. 22, 1867.

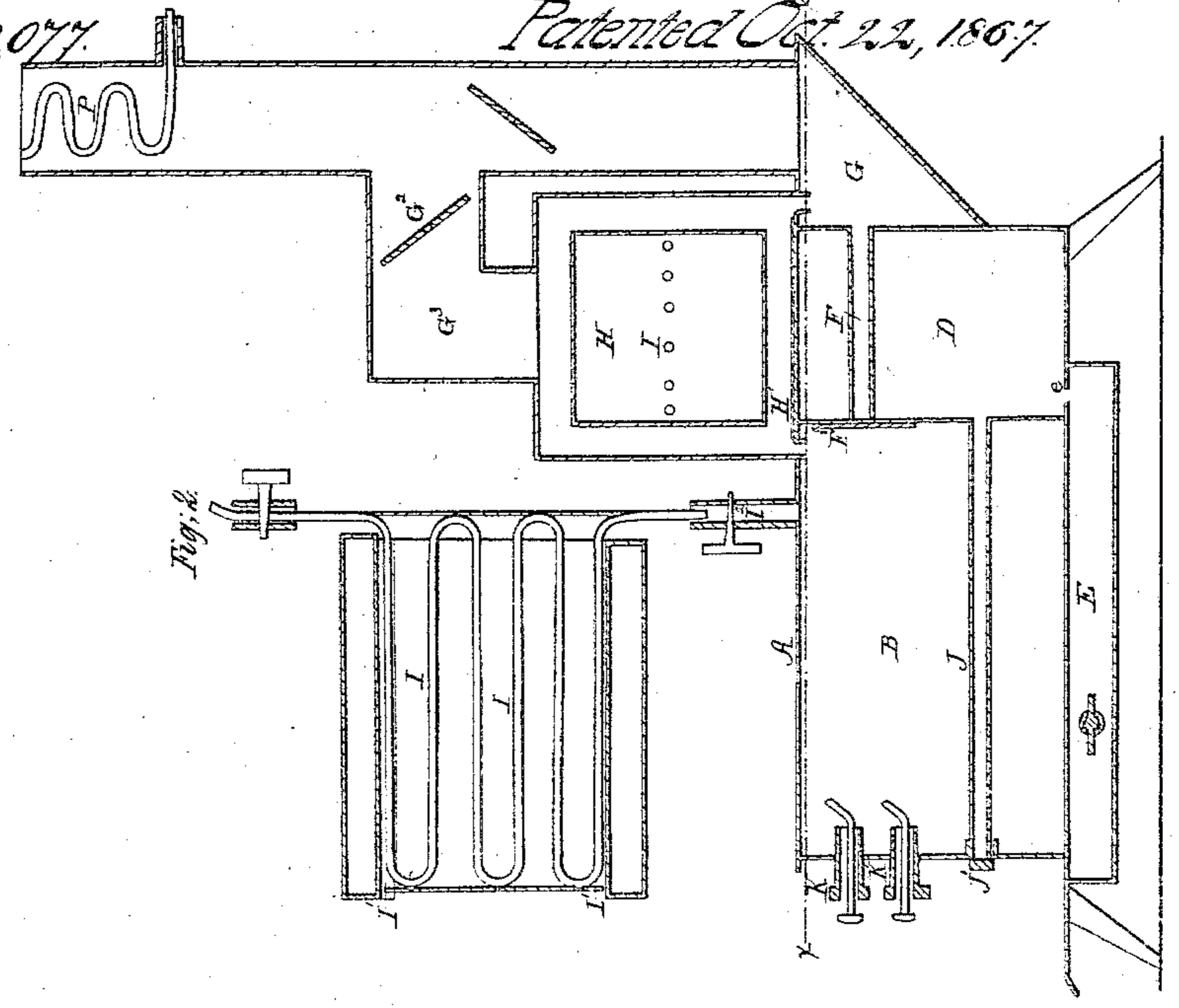


Fig. 2.

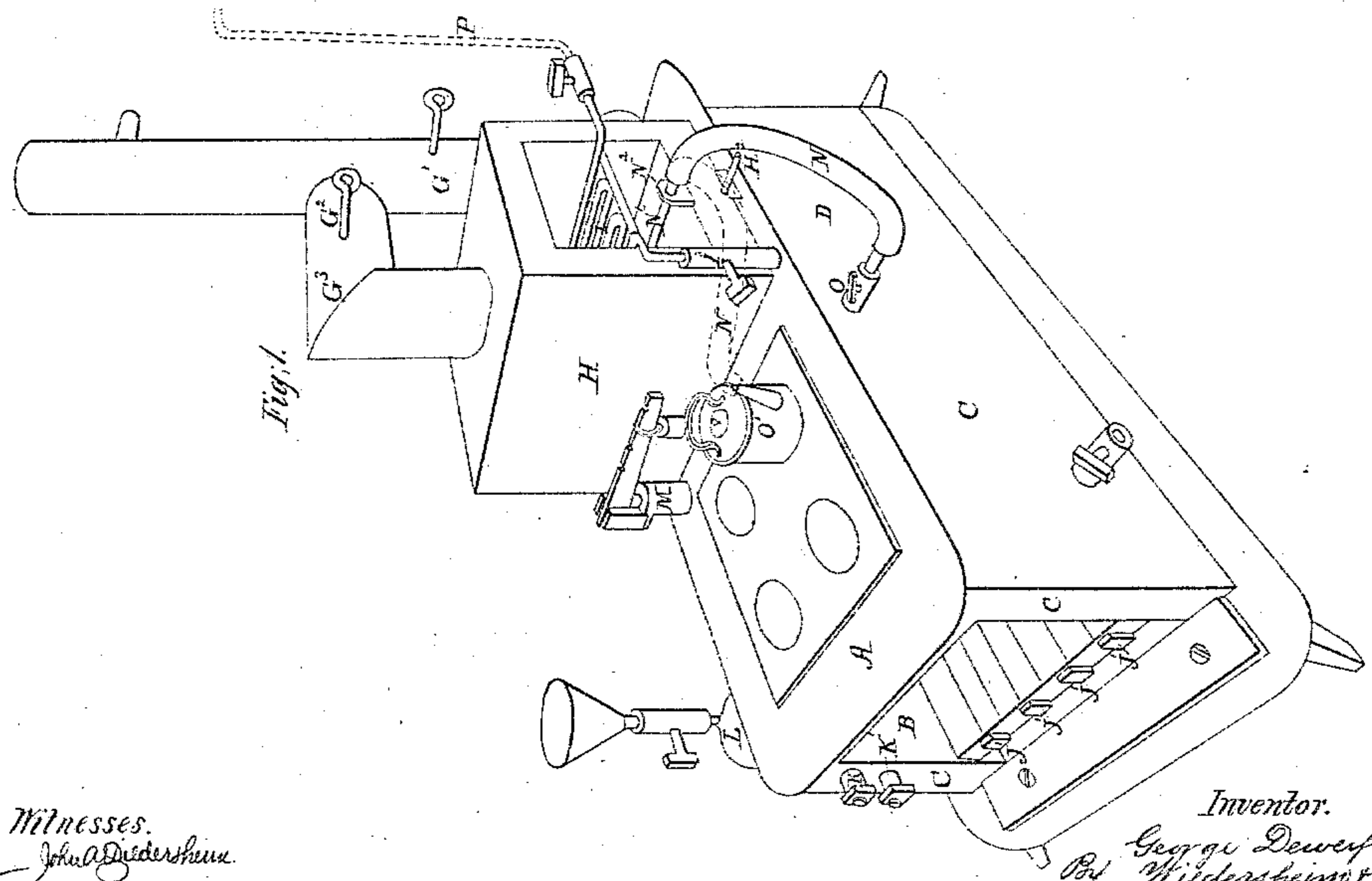


Fig. 1.

Witnesses.
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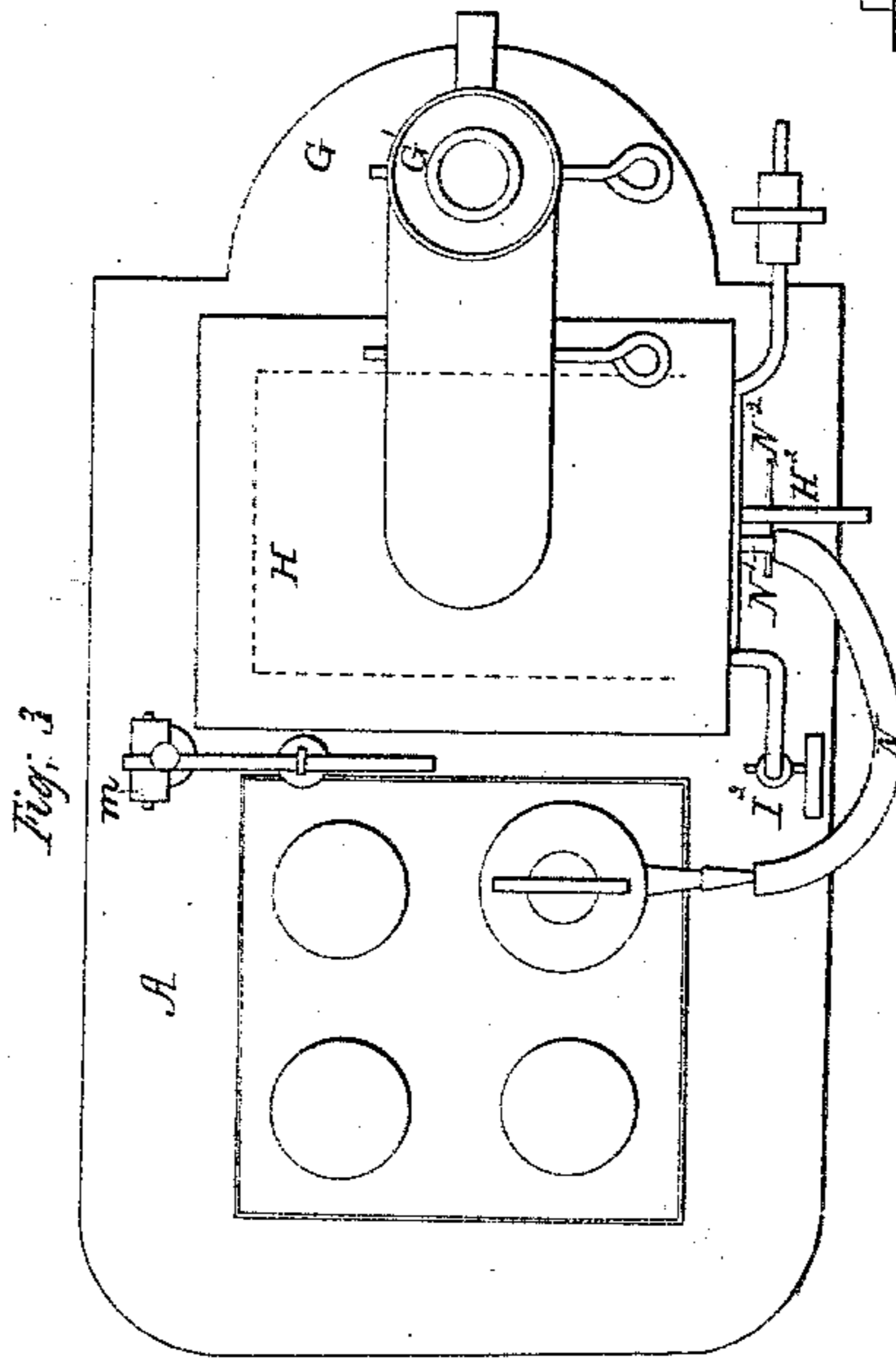
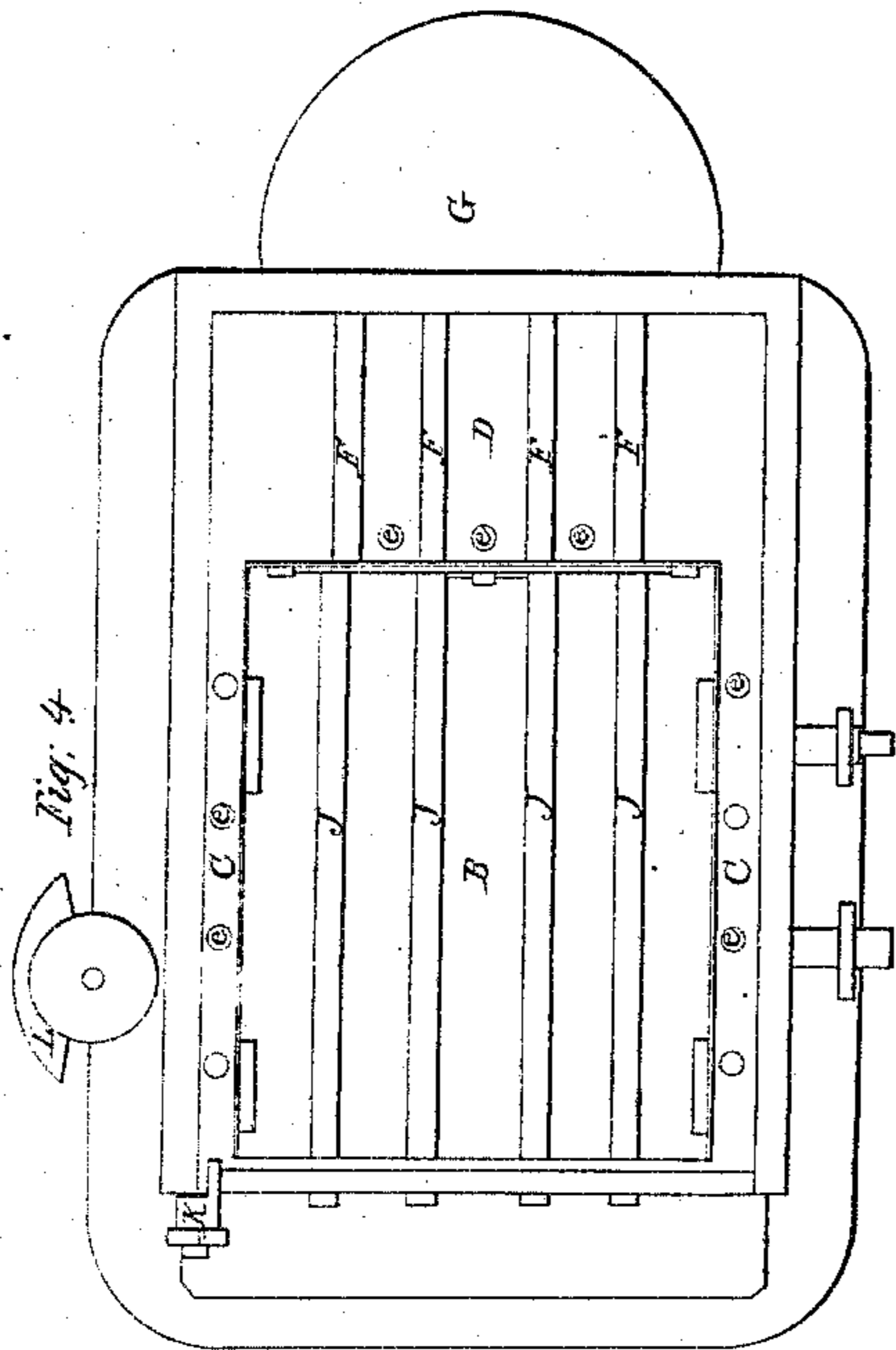
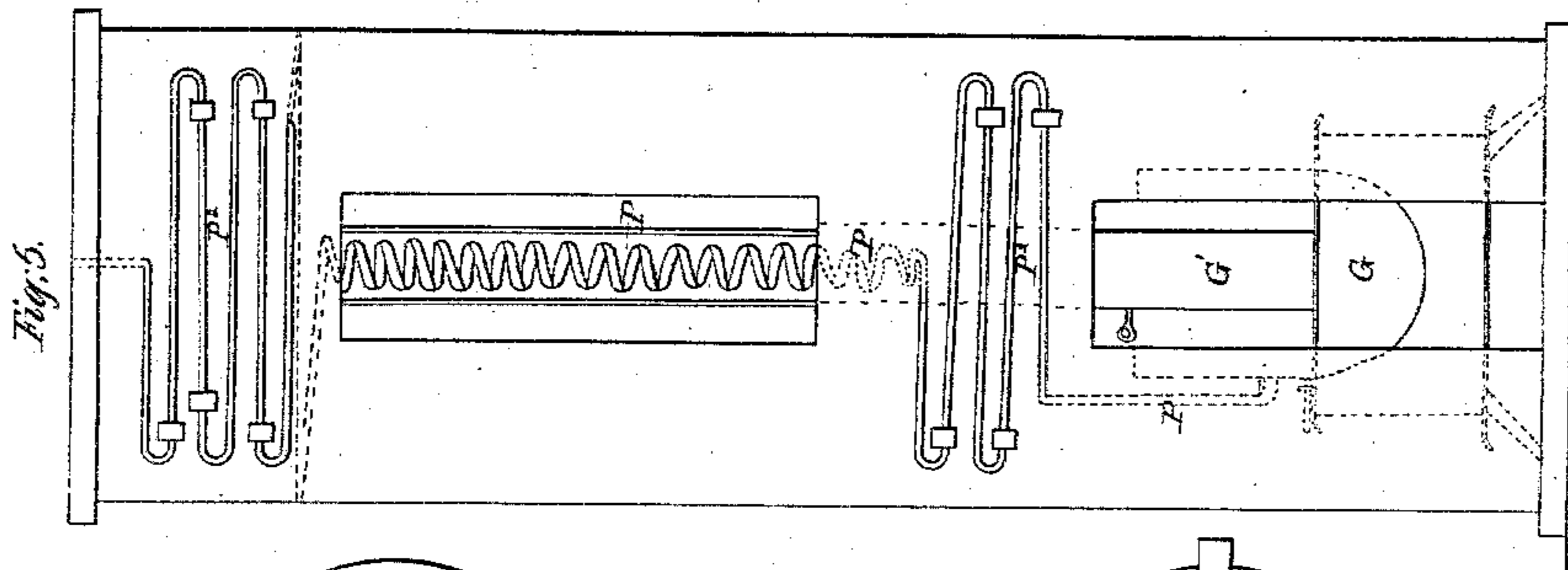
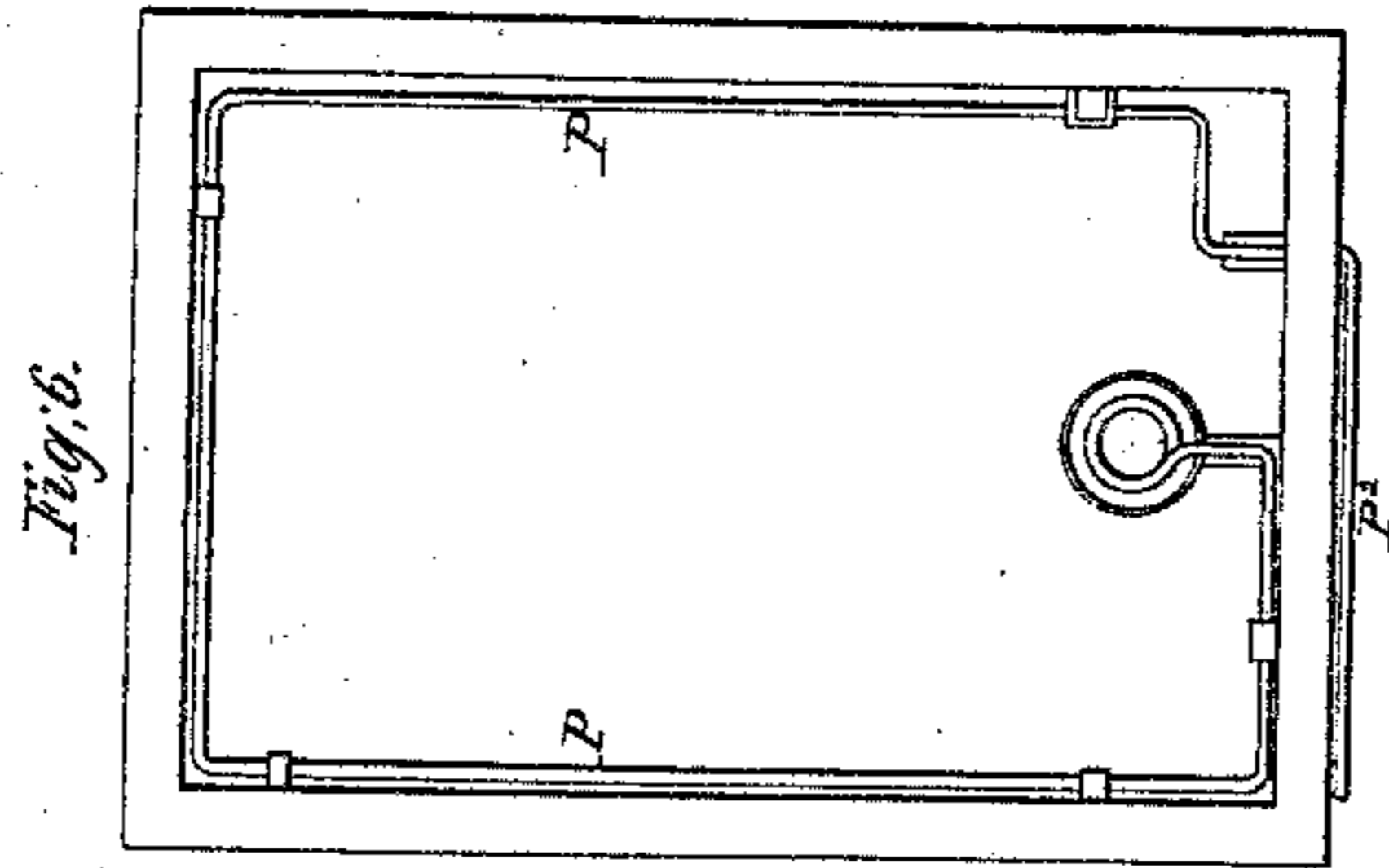
Street & A. Street

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Reservoir Cooking Stove

N^o 40,077

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Witnesses.
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United States Patent Office.

GEORGE DEWEY, OF BLOOMING VALLEY, PENNSYLVANIA.

Letters Patent No. 70,077, dated October 22, 1867

IMPROVEMENT IN WATER-BACKS AND GRATES OF COOKING AND HEATING-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, GEORGE DEWEY, of Blooming Valley, in the county of Crawford, and State of Pennsylvania, have invented new and useful Improvements in Combined Heating and Cooking-Stoves; and I do hereby declare the following to be a full and correct description of the same, sufficient to enable others skilled in the art to which my invention appertains to fully understand and construct the same, reference being had to the accompanying drawings, which make part of this specification, and in which—

Figure 1, sheet 1, is a perspective view of my improved stove.

Figure 2, sheet 2, is a vertical longitudinal section of the same.

Figure 3, sheet 3, is a top view of the same.

Figure 4, sheet 3, is a sectional plan in the line *x x*, fig. 2.

Figure 5, sheet 4, is a side elevation, and

Figure 6, same sheet, a plan view, showing the application.

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

The nature of my invention consists in providing a cooking-stove with a steam-jacket and boiler all around the same, and in peculiar means of using the steam for cooking and heating purposes both.

A, in the drawings, may represent the top plate of a cooking-stove. This stove is provided with a fireplace or box, B, around which is a steam-jacket, C, ending in a boiler, D, at the rear of the fire-box, communicating with the part E of the jacket situated under the fire-box by means of holes *e*, similar holes allowing this part E to connect with C. Flues F communicate the fireplace B with the port G of the stove, a damper, F', regulating the exit of the products of combustion to the pipe G¹. H is a double-walled bake-oven, the space between the two walls communicating at the forward end with the fire-box B, and at the rear end port G. H¹ is a sliding damper, operated by the handle H², by means of which communication with either the fire-box A or boiler D may be shut off from the bake-oven H. A hollow grate, I, made of tubing, rests on beads I¹ in the bake-oven, and connects with the steam-jacket C by means of the pipe I², which is provided with a stop-cock. J represent hollow grate-bars, connecting in the rear with the boiler D, and closed in front by screw-caps J'. K K' represent two try-cocks in the front end of the steam-jacket C, by means of which the height of the water in the same and boiler may be ascertained. L represents a valve through which water is filled into the jacket C and boiler B. M represents a safety-valve of any common construction to give warning when the water is low and the pressure of the steam gets too strong, when it may be drawn off by any of the stop-cocks on the jacket or boiler. N is an elastic steam-tight tube, the metallic end N¹ of which passes through a hole in the projection N² into the bake-oven under the grate I, its other end connecting with either a stop-cock, O, near the top of the boiler D, or the spout of the tea-kettle O'. The rear end of the grate I communicates with a pipe, P, which passes upward, as shown in fig. 5, through the wall, passes along the wall backward and forward a few times, as shown at P², back through the wall into the stove pipe G¹, upward through the same in a coil through the wall into the room above, around the room, as shown in fig. 6, back into the stove pipe, and so on, the stove pipe G¹ passing straight upward through the house. The fire-box being entirely surrounded by water except at the front, and provided with flues F, passing through the boiler D, the water will rapidly heat as soon as the fire is made, the grate-bars J being also filled with water from the boiler D. The steam, which is soon raised, passes through the pipe I², hollow grate I, and pipe P, through the pipes in the different rooms, and as these pipes, after running around one room, pass again into the stove pipe or chimney through which the products of the combustion escape, these latter again heat the steam in the pipes as it passes through their coils into the next room which it is intended to heat. Thus the rooms of a whole house may be heated by means of the steam from the cook-stove. My invention will be especially applicable to the small houses on the western farms, in which the chimney is situated in the centre of the house, and rooms are on each side of it. The products of combustion pass through the flues F into the port G and stove pipe G¹, when it is not desired to use the bake-oven, the damper F' being opened and the damper H' closed by its being pushed over the fireplace. If it is desired to use the bake-oven, the damper F' is closed, and the damper H' placed either entirely over the port G¹ of the stove, or, if the full heat is desired to be used, in such position as to allow both openings of the bake-oven to be free. In this case the damper G² in the pipe arm G³, connecting the bake-oven with the pipe G¹, is

closed, when the heat and smoke pass around the bake-oven through the port G into the stove pipe G¹. Additional heat is given by the steam passing through the grate J. To prevent the articles which are baking from burning, steam may be blown into the bake-oven by means of the pipe N attached either to a stop-cock on the boiler D, or, if it is not desirable to take the steam from the same, to the spout of the tea-kettle, as shown in dotted lines in fig. 1.

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

1. A cook-stove provided with a water and steam-jacket around the sides, back, and bottom of the fire-box, substantially as and for the purpose described.
2. The combination of the hollow grate-bars J with the water and steam-jacket, as described, substantially as and for the purposes set forth.
3. The heating pipe P, with its bent part I, which latter forms a shelf in the bake-oven H, and supplied with steam from the boiler D, arranged and operating substantially as described.
4. The pipe G¹, P, and P², arranged substantially as described, and the latter connected to the steam-jacket of the cooking-stove for the purpose of heating the rooms by means of the cooking-stove.
5. Passing the pipe through which the steam is led into the different rooms, in the shape of a coil, through the chimney or stove pipe, after leading it around one room and before passing it into the next, substantially as described.
6. The elastic pipe N attached to either a stop-cock on the boiler D or the spout of the tea-kettle, and leading into the bake-oven, substantially as and for the purposes described.
7. The combination and arrangement of the fire-box B, pipes F, port G, pipe G¹ G³, and hollow bake-oven H, substantially as and for the purpose described.

The above specification of my improvement in cooking and heating-stoves signed this 22d day of March, 1867.

GEORGE DEWEY.

Witnesses:

C. M. WOOD,
EDWARD JONES.