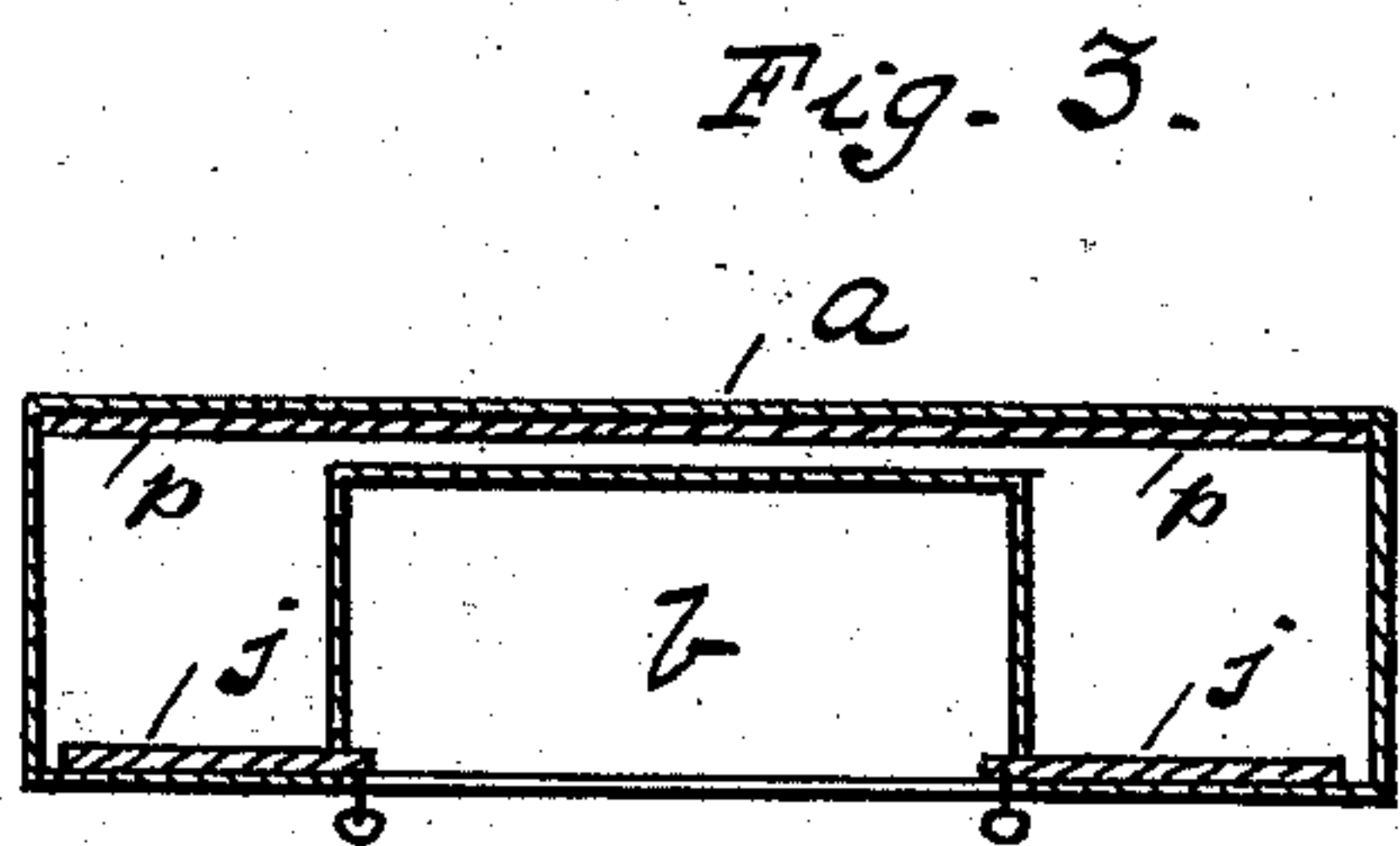
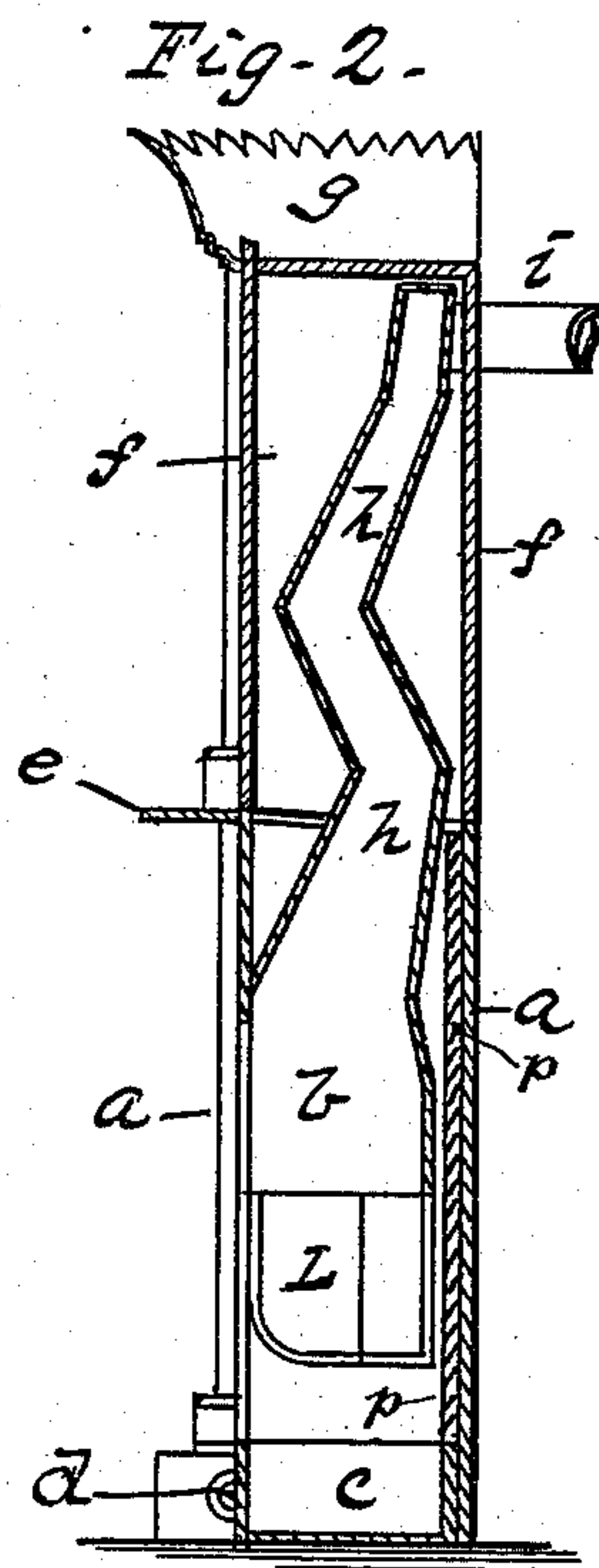
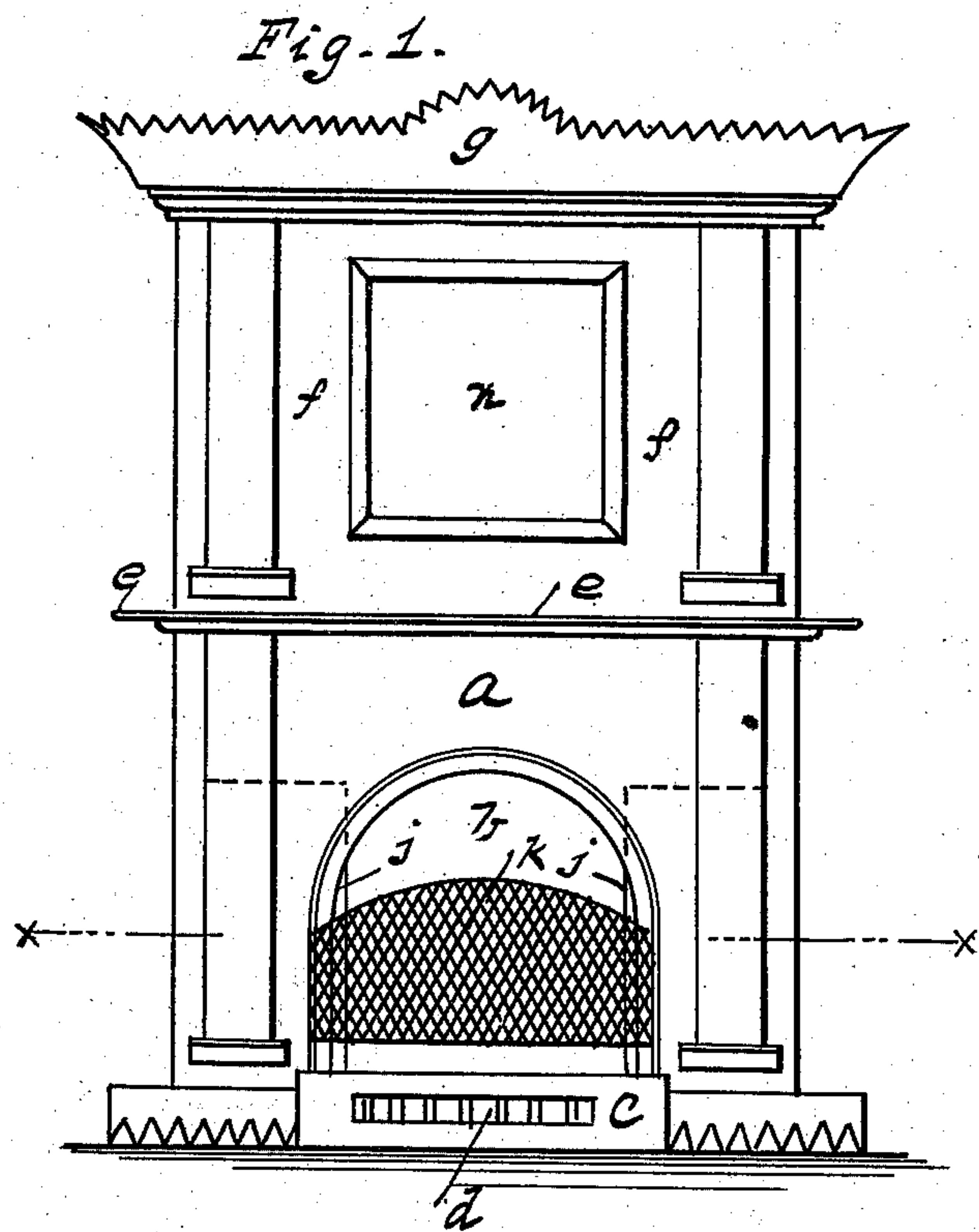


(No Model.)

F. VEIL.
STOVE

No. 400,612.

Patented Apr. 2, 1889.



Witnesses:
H. E. Harrison,
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UNITED STATES PATENT OFFICE.

FREDRICK VEIL, OF ALLEGHENY, PENNSYLVANIA.

STOVE.

SPECIFICATION forming part of Letters Patent No. 400,612, dated April 2, 1889.

Application filed September 23, 1886. Serial No. 214,375. (No model.)

To all whom it may concern:

Be it known that I, FREDRICK VEIL, a citizen of the United States, residing at Allegheny, in the county of Allegheny and State of Pennsylvania, have invented certain new and useful Improvements in Stoves; and I do hereby declare that the following is a full, clear, and exact description of the same, which will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to that class of heating-stoves having open fronts, commonly known as "fire-place stoves," which are designed to rest against the wall and serve both as a fire-place and mantel-piece. Its object is to furnish a stove that will produce the greatest amount of heat from a comparatively small amount of fuel; also, a stove that will be ornamental and at the same time take the place of the ordinary mantel-piece above the fire-place, and also one that will be simple in construction and effective in its operation; and to these ends my invention consists in certain details of construction and combination of parts, which will be hereinafter more fully described in the ensuing specification, and distinctly pointed out in the claims at the close thereof.

In the accompanying drawings, Figure 1 is a front elevation of my improved stove and mantel. Fig. 2 is a vertical central section of the same. Fig. 3 is a horizontal cross-section on the line *x x* of Fig. 1.

The stove embodies in its construction a metallic shell or casing, *a*, having an opening, *b*, in its front side near the bottom thereof and a projecting shelf, *e*, at its top, which shelf takes the place of the ordinary mantel. Upon this lower casing, *a*, is supported a detachable metallic casing, *f*, which is secured in place by any suitable means.

The top *g* of the casing may be constructed with any ornamental finish, as may also the front and sides; but I prefer to place a mirror, *n*, in the front side, as shown in Fig. 1.

Below the grate *L* is an ash-pan, *c*, of ordinary construction, fitting snugly in the opening *b* and having a sliding damper, *d*, in its front, by which the draft from below can be regulated at will.

The opening *b* in the front side of the cas-

ing *a* is provided with sliding doors *j j*, by which said opening may be either partly or entirely closed at pleasure. The opening *b* is also provided with a detachable wire screen, *k*, which serves as a fender. At the rear of the stove, between the fire-place *b* and the rear wall of the casing *a*, I place a lining, *p*, of mineral wool, asbestos, or other suitable fire-proof material, which prevents excessive heat from burning or scorching the wood or other material against which the stove is placed.

In the casings *a* and *f*, I place an upwardly-tapering zigzag flue, *h*, supported upon and directly over the grate *L* in front of the fire-proof lining *p* and provided at the top with a short pipe, *i*, leading to the chimney-flue. By constructing the flue *h* tapering as well as zigzag it serves to prolong the travel and escape of the products of combustion and thereby abstract substantially all the heat from the waste products. Moreover, the inclination of the flue tends to direct the heat down and out into the room in which the heater is located. The grate *L* is of basket form, open at front and rear, and is arranged in the casing *a*, with an air-space between it and the rear wall of the casing, so that the hot air in the casing *f* can pass down into the casing *a* and be fed to the fire and thereby produce a more uniform circulation than is the case where the grate rests against the rear wall of the casing.

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

1. The combination of an open grate, an upwardly-tapering zigzag flue supported on said grate, and a metallic casing in which said grate and flue are located and which constitutes a closed air-chamber around the zigzag flue, substantially as and for the purposes specified.

2. In a stove, the combination of an open grate, an upwardly-tapering zigzag flue supported thereon, and a metallic casing in which said parts are located, said casing being formed in two sections and having a shelf between them, substantially as and for the purposes specified.

3. In a stove, the combination of an open

grate, a flue or uptake leading therefrom, a
metallic casing in which said parts are lo-
cated, and a downdraft space which connects
the chamber inclosing the uptake with the
5 ash-pit, substantially as and for the purposes
specified.

4. In a stove, the combination of a basket
grate, a tapering uptake, and a metallic casing
inclosing the same, the grate being suspended

within the casing, so as to form a posterior to
air-flue leading from the casing to the rear of
the grate, substantially as and for the pur-
poses specified.

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