A. A. PÜTZ.

STOVE.

No. 177,272. Patented May 9, 1876.

Fig. 1.

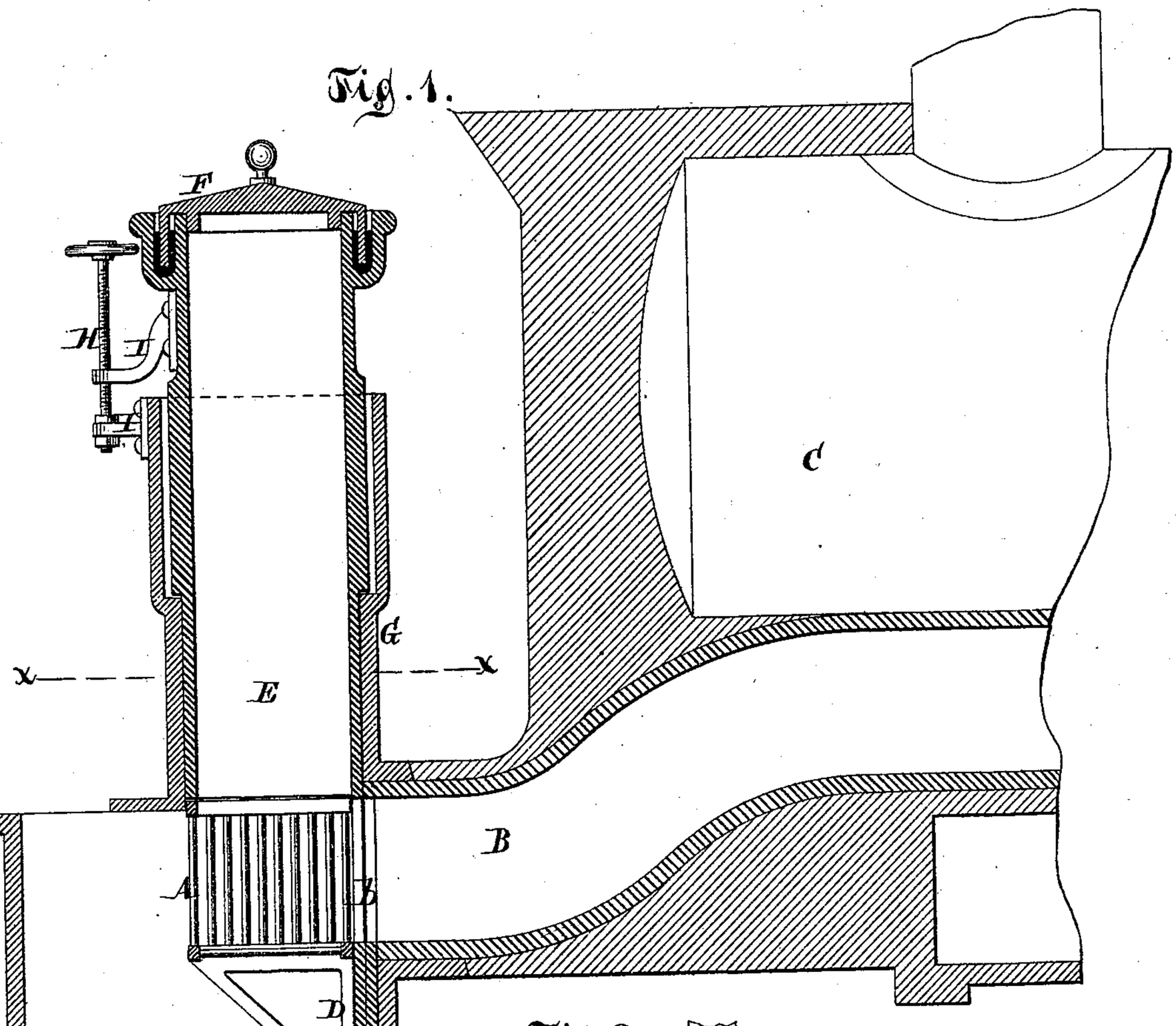


Fig. 2.

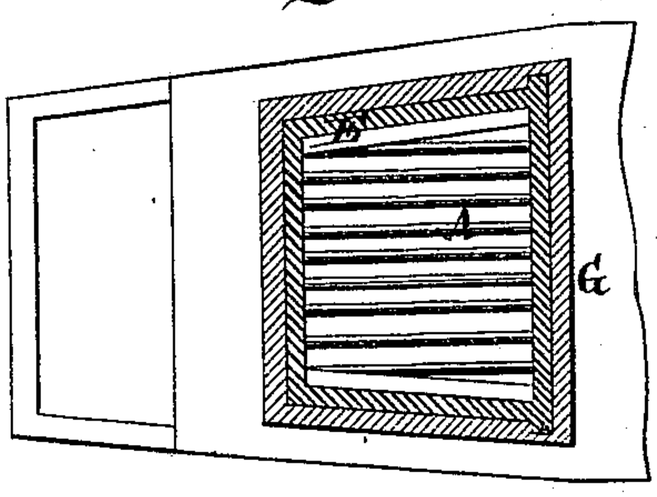


Fig. 3.

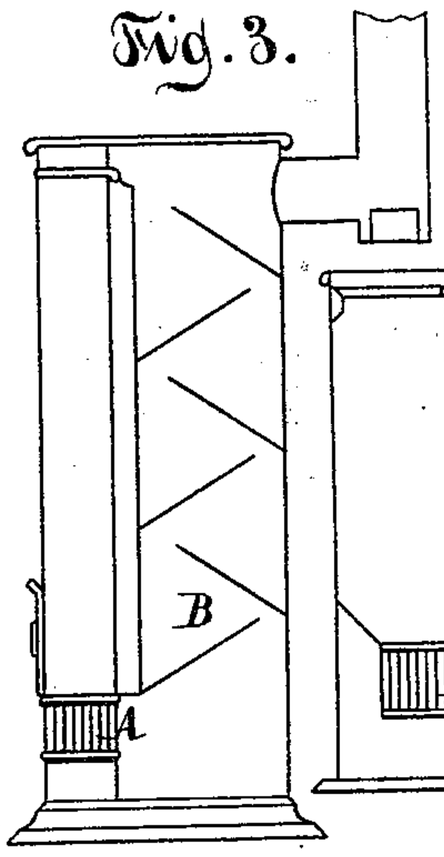
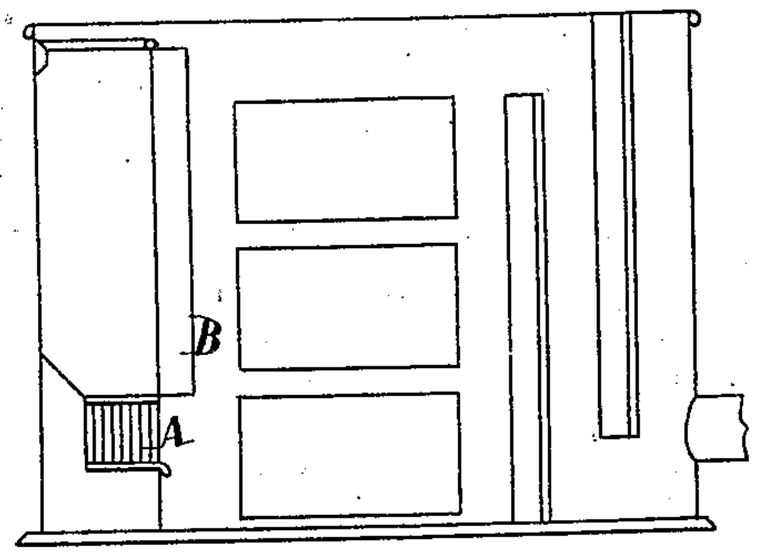


Fig. 4.



Witnesses.
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UNITED STATES PATENT OFFICE.

ANDREW A. PÜTZ, OF VIENNA, AUSTRIA.

IMPROVEMENT IN STOVES.

Specification forming part of Letters Patent No. **177,272**, dated May 9, 1876; application filed April 6, 1876.

To all whom it may concern:

Be it known that I, ANDREW A. PÜTZ, of Vienna, Empire of Austria, have invented a new and useful Improvement in Furnaces and Stoves, which improvement is fully set forth in the following specification, reference being had to the accompanying drawing, in which—

Figure 1 represents a vertical central section of my improvement applied to a boiler. Fig. 2 is a horizontal section in the line *x x*, Fig. 1. Fig. 3 shows my improvement applied to a heating-stove. Fig. 4 shows it applied to a cooking-stove.

Similar letters indicate corresponding parts.

My invention relates to a certain novel arrangement of parts, which is applicable to furnaces as well as stoves; and the invention consists in the combination, in a furnace or stove, of a flue for carrying off the products of combustion, a fuel-magazine, and a basket-grate arranged at the mouth of said flue, and constructed to have a vertical and a swinging motion imparted to it, for the object hereinafter specifically described.

The invention also consists of certain other improvements in the construction and arrangement of parts, which will be fully described, and specifically pointed out in the claims.

In the drawing, the letter A designates a grate arranged according to my invention. This grate has the form of a basket, and is similar in form to an ordinary fire-place grate, being open at the top and also partly at the side. The letter B designates a flue, at the mouth of which the grate is situated, the grate being so placed that the open part of its side faces this flue. It is obvious that this flue B may lead under a steam-boiler, C, as shown in Fig. 1, or through a heating-stove, as seen in Fig. 3, or through a cooking-stove, as represented in Fig. 4. The grate is attached to a frame, D, which is hinged as at *a*, and thereby the grate is made susceptible of being swung outward for the purpose of clearing it of cinders, &c. The frame D, which supports the grate, is hinged to the wall of a magazine, E, a part of which wall is to this end made to project downward beyond the point of the grate, as at E′. (See Fig. 1.) The grate is thus brought under the lower and open end of the magazine E, and, if the magazine is filled with fuel, the grate is kept constantly supplied therewith. The downwardly-projecting part E′ of the magazine is provided with an opening, *b*, opposite to the grate, for the passage of the products of combustion to the flue B. The upper end of the magazine E is closed by a cover, F, which is made air-tight, so as to prevent the escape of smoke or gases. The magazine is placed in a vertical "way," G, and arranged to move up and down in this way, while the way is made to form a part of the furnace or stove to which the whole may be applied. The magazine and the way G are connected together by a screw, H, working in brackets I I, which are affixed to these parts respectively; but, if seen fit, a lever, rack, and pinion or other contrivance may be substituted for the screw. It is obvious that, by turning the screw H in one or the other direction, the magazine E is moved up or down, while the grate A partakes of such movement, and hence can thereby be adjusted in any desired position with relation to the flue B. By this adjustment of the grate I am enabled to regulate the amount of live fire contained in it at any time, and, as a consequence thereof, to regulate the quantity of fuel consumed, inasmuch as, according to the area of the grate presented to the flue, a greater or less quantity of fuel is brought under the scope of the draft. By placing the grate at the mouth of the flue B, whether or not it is made adjustable, a very effective draft is obtained, while the draft is conducted through live fire, and the smoke is consumed.

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

1. In a furnace or stove, the combination of a flue, B, for carrying off the products of combustion, a magazine, E, and a basket-grate, A, arranged at the mouth of said flue, and constructed to have a vertical and a swinging motion imparted thereto, substantially as and for the object specified.

2. In combination with the grate A and flue B, a magazine, E, to the lower and open end of which the grate is affixed, and an adjusting-screw, H, or other equivalent device, the whole being adapted to operate substantially as described.

A. A. PÜTZ.

Witnesses:

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WULLSCHLEGER FLOZ.