

(No Model.)

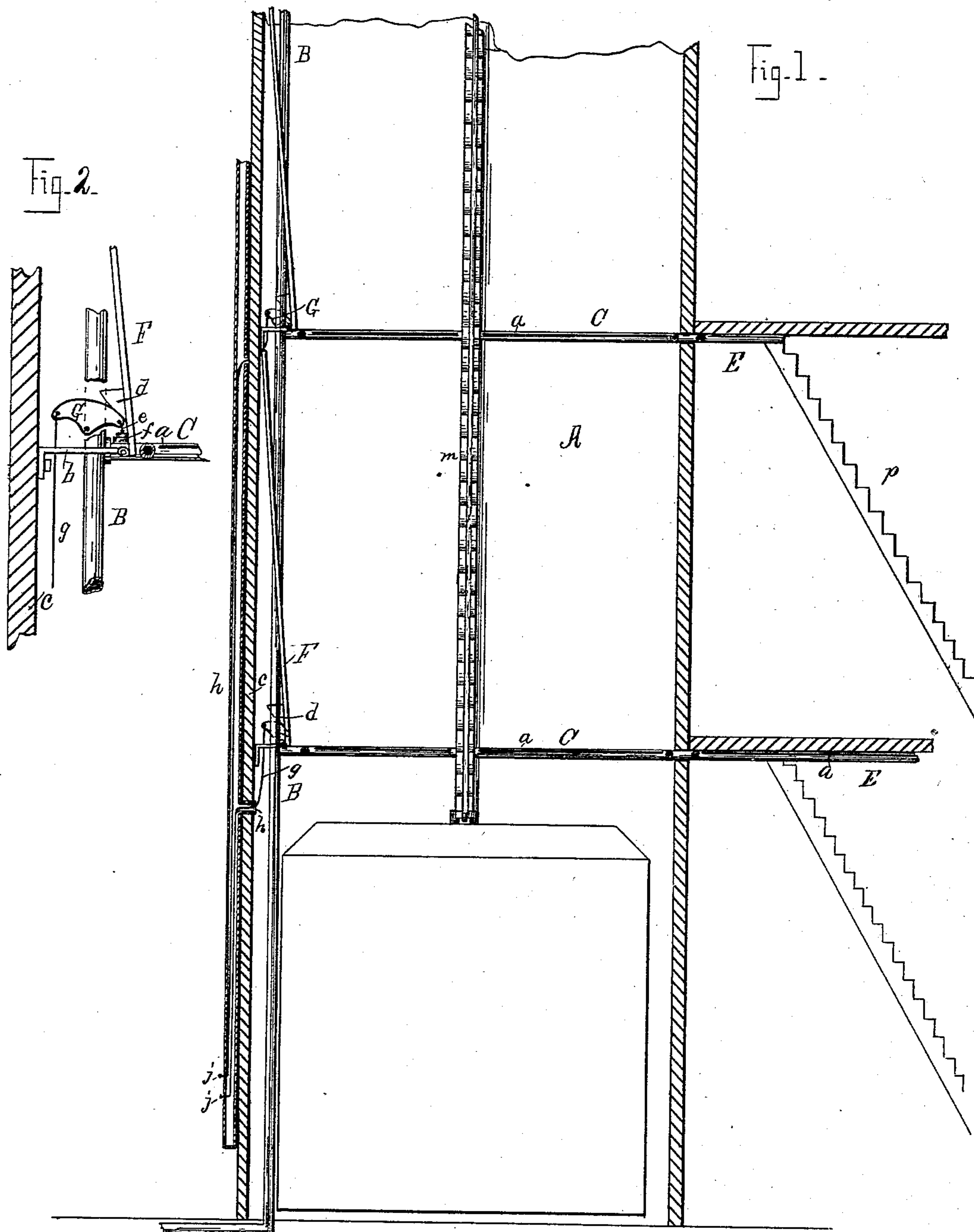
2 Sheets—Sheet 1.

E. PERELES.

FIRE EXTINGUISHING APPARATUS.

No. 379,282.

Patented Mar. 13, 1888.



Witnesses.

C.B. Nash,

J. B. Fay.

Inventor,

Edward ^{John} Peres.

By *his* Attorney,

Attorney
Thos B Hall

(No Model.)

2 Sheets—Sheet 2.

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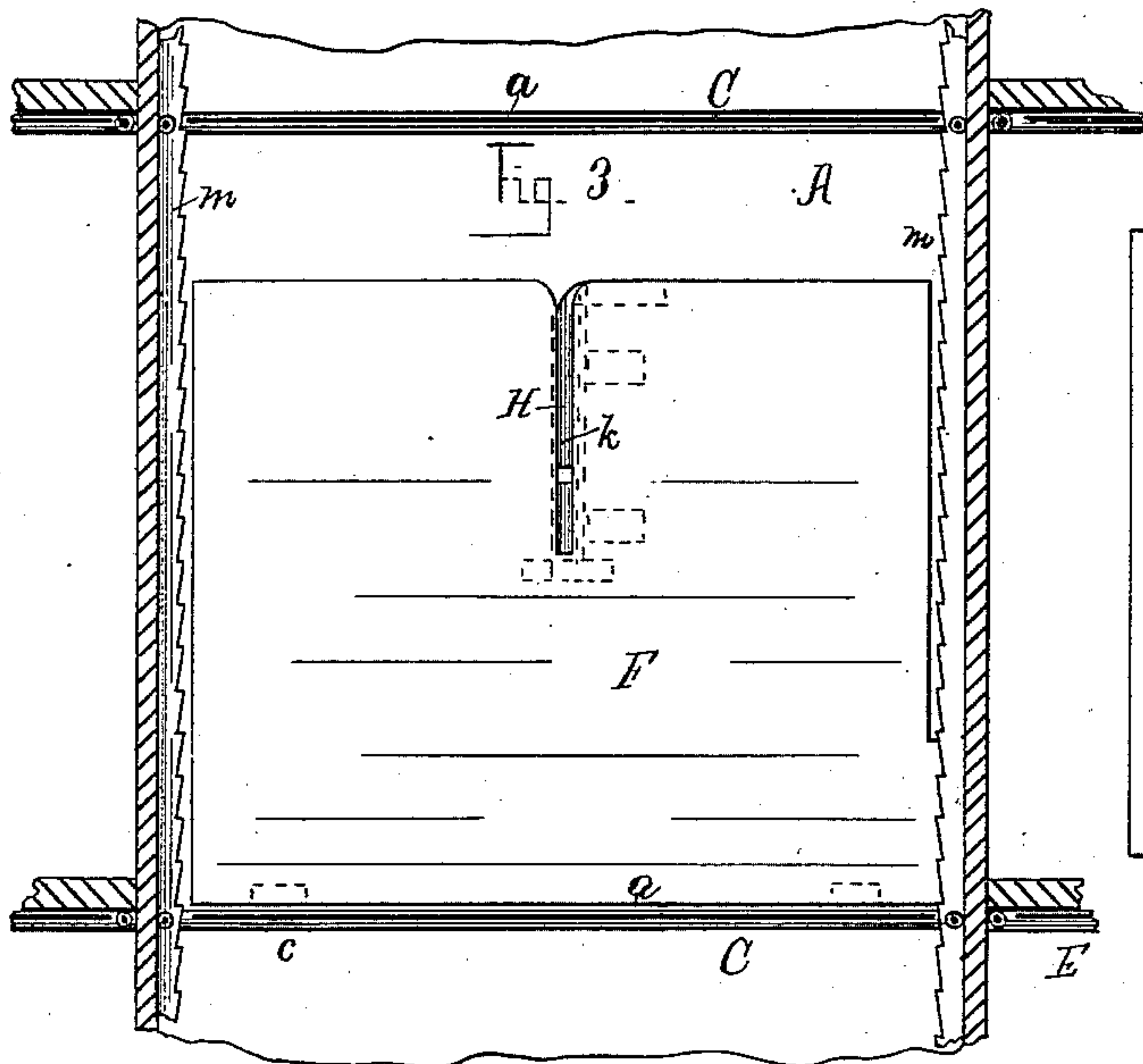


Fig. 3.

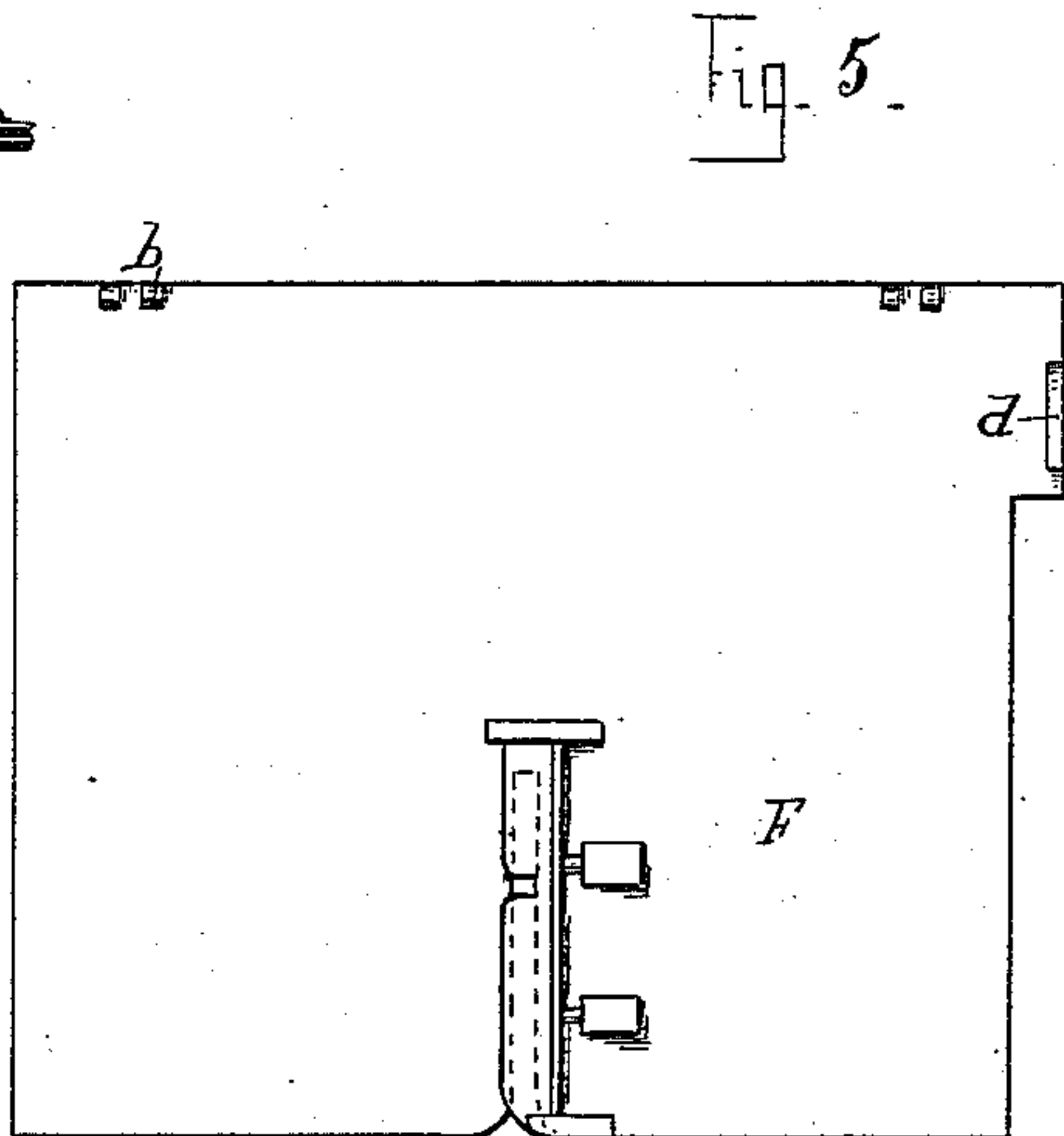


Fig. 5.

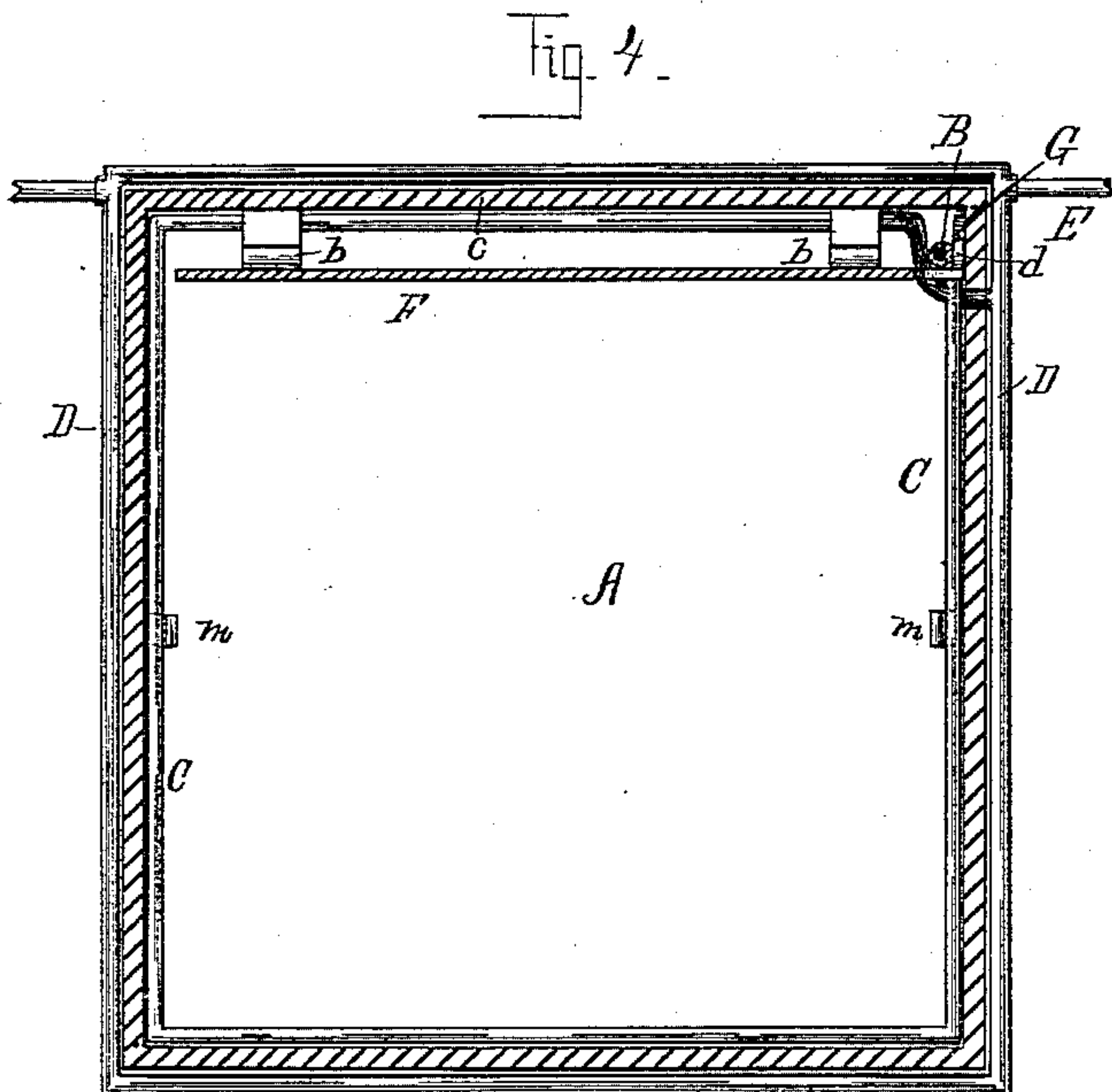


Fig. 4.

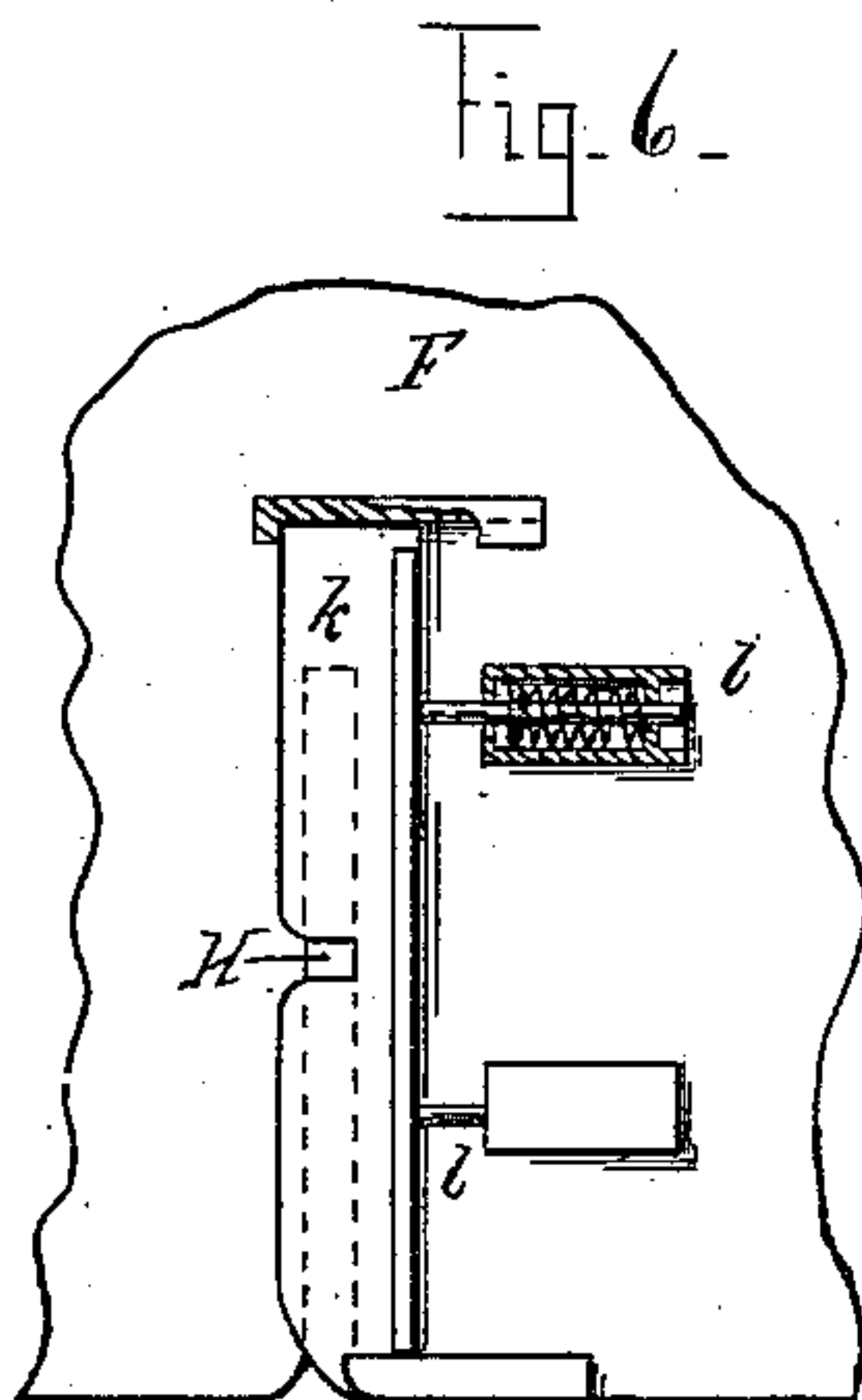


Fig. 6.

Witnesses.
C. B. Nash.
J. D. Fay.

Edward Perches, Inventor.
By his Attorney,
Thos J Hall

UNITED STATES PATENT OFFICE.

EDWARD PERELES, OF CLEVELAND, OHIO.

FIRE-EXTINGUISHING APPARATUS.

SPECIFICATION forming part of Letters Patent No. 379,282, dated March 13, 1888.

Application filed April 22, 1887. Serial No. 235,733. (No model.)

To all whom it may concern:

Be it known that I, EDWARD PERELES, a citizen of the United States, residing at Cleveland, county of Cuyahoga, and State of Ohio, have invented certain new and useful Improvements in Fire-Extinguishing Apparatus; and I do hereby declare the following to be a description of the same and of the manner of constructing and using the invention, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it appertains to construct and use the same, reference being had to the accompanying drawings, forming a part of the specification, the principle of the invention being herein explained and the best mode in which I have contemplated applying that principle, so as to distinguish it from other inventions.

The object of my invention is to provide an apparatus to extinguish fires in buildings, and particularly in elevator-shafts.

The nature of the invention consists of the construction set forth in detail in the following description, and finally summarized in the claims.

Figure 1 is a vertical section of an elevator-shaft fitted with my fire-extinguishing apparatus. The elevator-shaft is represented as adjoining the wall of the building on one side; therefore the pipe extending around the outside of the shaft is shown as encircling but the three open sides. Fig. 2 is a detail view of a portion of the trap-door, water-pipe, and connecting mechanism. Fig. 3 is an elevation view of the trap-door as it appears in position to be dropped. Fig. 4 is a horizontal sectional view of elevator-shaft and extinguishing apparatus. Fig. 5 is a plan view of the trap-door. Fig. 6 is a detail view of the slot in the trap and the spring-valve covering the same.

A is the elevator-shaft, provided with a vertical main water-supply pipe, B, the latter having the horizontal branch pipes C at every floor. These extend around the four sides of the interior of the shaft, while on the exterior of the same are the branch pipes D, connected with the branch pipes C. Branch pipes are shown in Fig. 1 as passing around but the three open sides of the elevator-shaft, the fourth side being represented as abutting the outside wall of the building. Also connected

to pipes C are the pipes E, with which the ceilings of the different stairways are provided, or which are placed under the stairways, as represented in upper stairway, *p*, of Fig. 1. These several branch pipes are provided with longitudinal slots *a*, through which water may be emitted when the pipes are filled.

F are trap-doors, hinged by hinges *b* to the sides *c* of the elevator-shaft. When not in use, the upper part of the doors rest against the sides of the shaft, as represented in Fig. 1. Near its hinge end the door is provided with the slanting lug *d*. A two-armed lever, G, is pivoted so that its one end engages with lug *d*, and is provided with a wire, *e*, which as this end of the lever is elevated opens valve *f*, that controls connection between the main and branch pipes, respectively, B C D E. The opposite end of the lever is also provided with a wire, *g*, which is placed in pipe *h*, that leads down to the ground floor on the outside of the building, or in any suitable location, and terminates in handle *j*. As each floor is provided with trap door, lever, valve, &c., a description of one is a description of every other.

A transverse slot, H, is cut into the trap-door from its outer edge to a point near its center, that in falling permits the elevator-cable to pass through it. This slot is covered by the spring-pressed valve *k*, which the force of the door striking the cable in falling causes to move back, and which the spring-bolts immediately move forward when the door has fallen, closing the slot. The side of the trap-door on which the lug is placed is cut away somewhat from its outer side to its center, to permit the trap-door to clear the rack-faced safety-bar *m*, which extends vertically up the side of the shaft. On the opposite side the trap-door is sufficiently removed from the side of the elevator-shaft to permit its falling clear of corresponding rack-faced bar.

In practice I may use a valve similar to valve *k* to close the opening formed in the trap-door, to permit it to clear the rack-bar *m*.

The operation of the device is as follows: The trap-doors are in their normal elevated position. A fire occurs on any floor—for instance, on the second floor—and by reason of the great draft in the elevator-shaft will make rapid headway unless the draft is checked.

An employé rushes to that point in or outside of the building where the handles *j* of the different wires are located. He turns on the water by any suitable valve from street-mains into the main pipe B. He then pulls the handle attached to the lever on second floor. This causes the outer end of the lever to be depressed and the inner end to be raised. This inner end engages with slanting lug *d*, and as it raises gradually throws trap-door out of perpendicular line and causes it to fall across the shaft, the spring-pressed valve in trap-door opening by the pressure and permitting cable to enter slot; but when the trap-door has reached horizontal position the spring-bolts cause valve to close. Thus the draft is cut off, at the same time and by the same movement the valve *f*, leading from main pipe to the several branches, is opened, and the water in the main pours into the branches and out of the slots *a*, with which they are provided, flooding the shaft both inside and out, as well as the stairways, effectually checking the fire. If thought wise, the traps of all the floors may be dropped and the water turned on throughout the building.

I may use the branch pipes C without the pipes D or E, or any two without the third, or any one without the remaining two.

I claim—

1. In a fire-extinguishing apparatus, the combination of a hinged elevator-shaft trap-door, water-pipes for flooding the shaft, an operating-lever, and intermediate a valve controlling opening in said pipes and connected with said lever, said lever engaging with said door, whereby the operation of said lever simultaneously closes said trap and opens the water-connection to said pipes, substantially as set forth.

2. In a fire-extinguishing apparatus, the combination of the water-pipe C, encircling the interior of the elevator-shaft, the water-

pipe D, passing outside the same, water-main connecting with the two, hinged elevator-shaft trap-door F, lever G, engaging with said door, and a valve controlling opening in said pipes and connected with said lever, substantially as set forth.

3. In a fire-extinguishing apparatus, the combination of the water-pipes C D E, water-main connecting with them, hinged elevator-shaft trap-door F, lever G, engaging with said door, and a valve controlling opening in said pipes and connected with said lever, substantially as set forth.

4. In a fire-extinguishing apparatus, the combination of elevator-shaft A, the trap-door F, hinged at its lower end and provided near its hinged end with lug *d*, the water-pipes B C D, the valve *f*, controlling the connection between pipe B and pipes C D, and lever G, engaging at one end with said lug and connecting with said valve, whereby simultaneously the trap is dropped and the valve opened when said lever is operated, substantially as set forth.

5. In a fire-extinguishing apparatus, the combination of elevator-shaft A, the trap F, hinged at its lower end and provided near its hinged end with lug *d*, the water-pipes B C D, the valve *f*, controlling the connection between pipe B and pipes C D, and lever G, said lever engaging at one end with said lug, and having wire *e*, connecting with said valve, and having at its opposite end wire *g*, whereby simultaneously the trap is dropped and the valve opened when said lever is operated, substantially as set forth.

In testimony that I claim the foregoing to be my invention I have hereunto set my hand this 14th day of April, A. D. 1887.

EDWARD PERELES.

Witnesses:

E. J. CLIMO,
J. B. FAY.