

No. 696,219.

Patented Mar. 25, 1902.

P. WILLEMAIN.

BUILDING CONTAINING ACETYLENE GAS GENERATING APPARATUS.

(Application filed Aug. 23, 1901.)

(No Model.)

2 Sheets—Sheet 1.

FIG. 1.

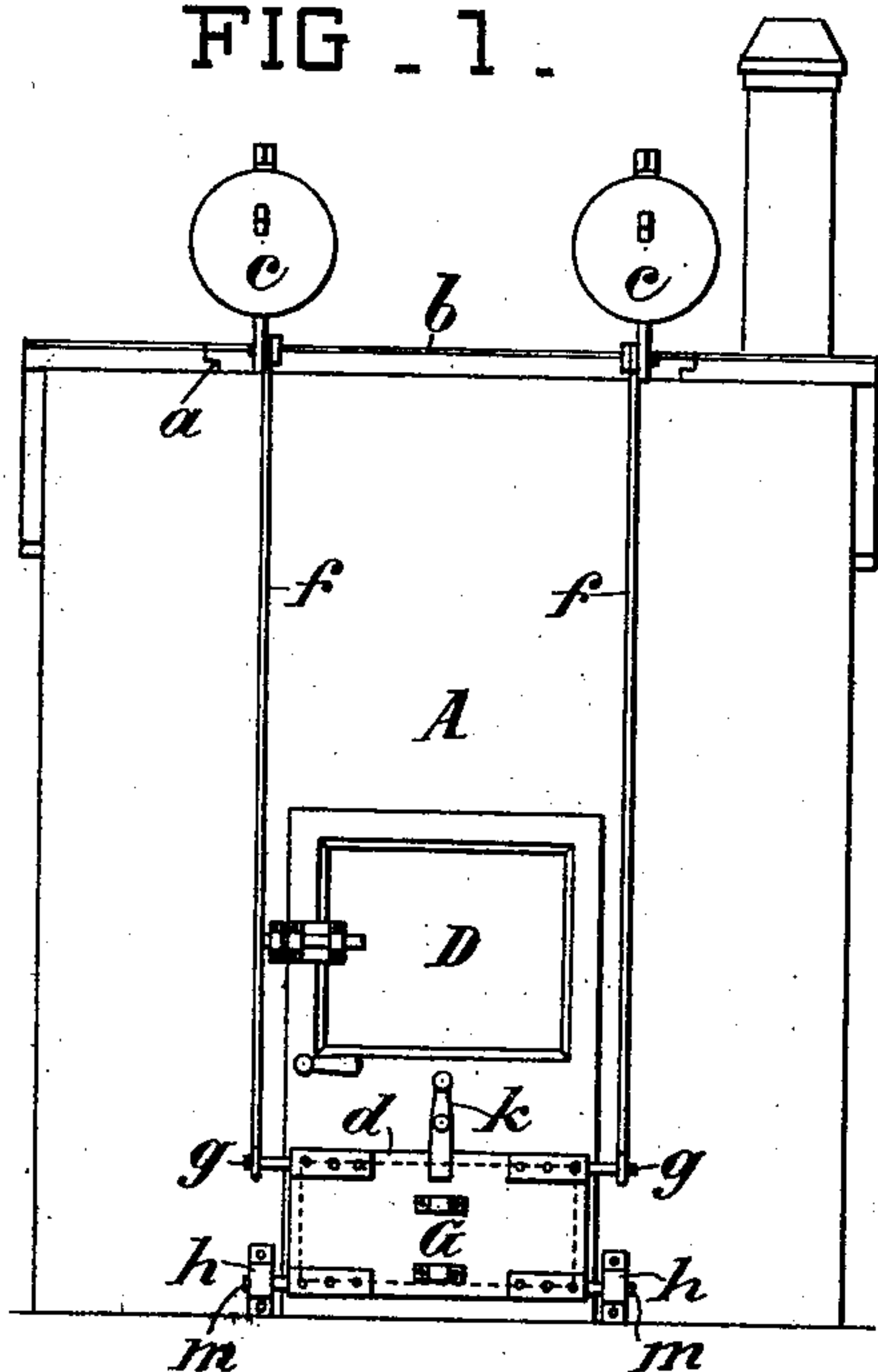


FIG. 2.

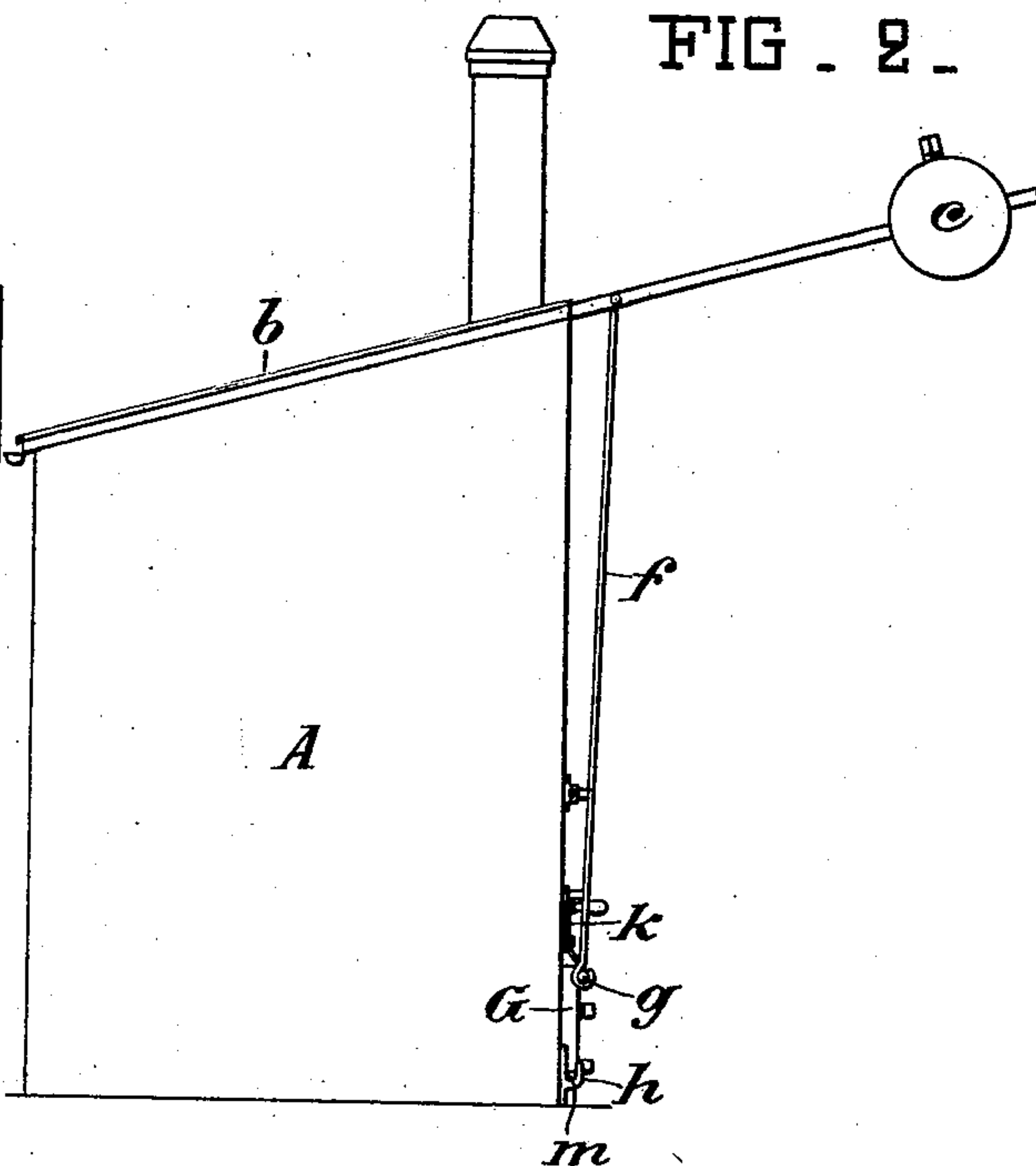
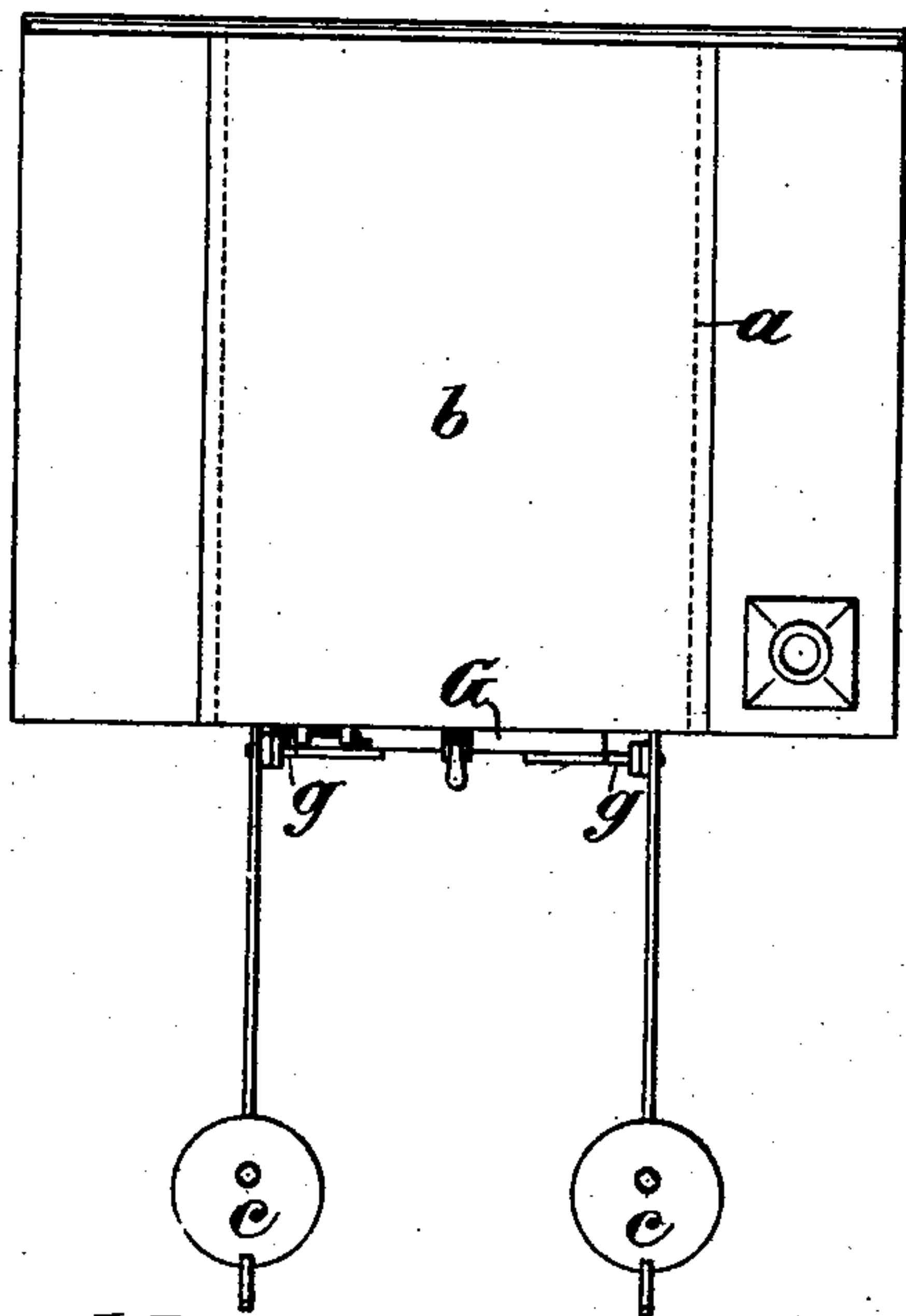


FIG. 3.



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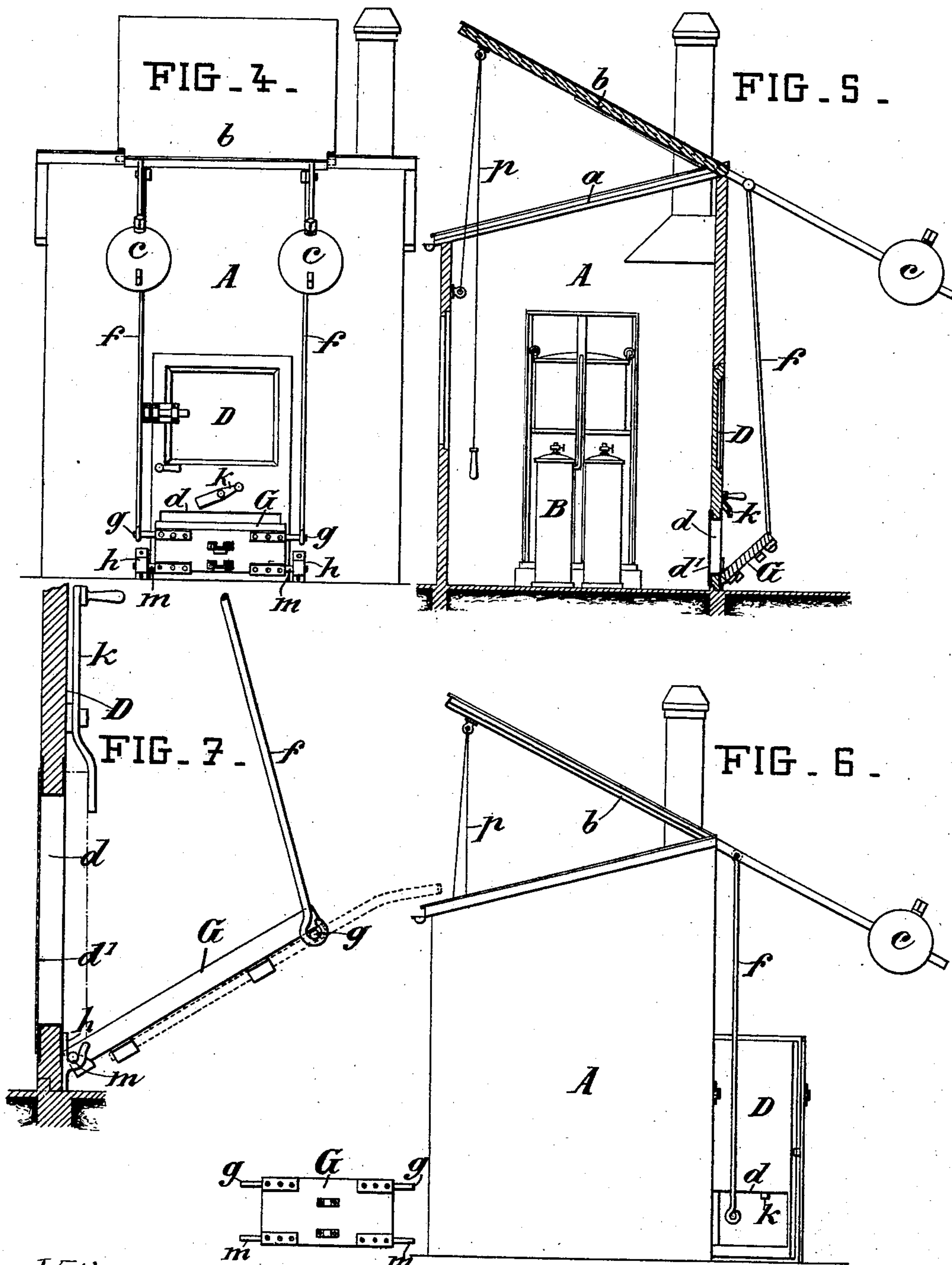
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2 Sheets—Sheet 2.



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# UNITED STATES PATENT OFFICE.

PAUL WILLEMAIN, OF MULHOUSE, GERMANY.

BUILDING CONTAINING ACETYLENE-GAS-GENERATING APPARATUS.

SPECIFICATION forming part of Letters Patent No. 696,219, dated March 25, 1902.

Application filed August 23, 1901. Serial No. 73,015. (No model.)

*To all whom it may concern:*

Be it known that I, PAUL WILLEMAIN, a citizen of the French Republic, residing at Mulhouse, Alsace, Germany, have invented 5 new and useful Improvements in Buildings Containing Acetylene-Gas-Generating Apparatus, of which the following is a specification.

The invention which forms the subject of 10 this application has for its object to prevent in places containing one or more apparatuses for generating acetylene gas the direct contact of a light carried by a person desiring to enter the place with any gas which may have 15 escaped into the air through a leak or the like from the apparatus or from a cock inadvertently left open.

To this end the invention comprises a large shuttered opening in the roof or in the upper 20 part of one of the side walls of the room containing the acetylene apparatus and a device for bolting the door of the room in its closed position, these two devices being connected in such a manner that the unbolting of the 25 door to permit of entrance into the room simultaneously opens the said shutter, thereby allowing any gas which may be present in the room to escape before a person can enter. With this construction it becomes impossible 30 for a person carrying a light in his hand to enter the room while it contains explosive gases, so that the disastrous explosions so often occasioned by carelessness or inattention of the attendant or attendants in having 35 a light in the hand are avoided.

The diagrammatic drawings annexed hereto illustrate by way of example one mode of carrying out the invention.

In said drawings, Figure 1 is a front elevation, Fig. 2 a side elevation, and Fig. 3 a plan, 40 of the closed building. Fig. 4 is a view similar to Fig. 1, but showing the gas-outlet and air-inlet open. Fig. 5 is a sectional elevation showing the gas-outlet and air-inlet open. 45 Fig. 6 is a side elevation similar to Fig. 2, but showing the gas-outlet and the door open, the locking or bolting plate being seen detached. Fig. 7 is a detail view, on a larger scale, showing the locking-plate open.

50 A is a building or room inclosing an apparatus B for generating acetylene gas, Fig. 5. In the roof of this building or room there is

formed a large opening *a*, normally closed by a shutter *b*, which is provided with rods carrying adjustable counterweights *c*. To the 55 shutter *b* there are hinged two rods *f*, which pass down on the outside of the building and on either side of the door *D* of the same, which said door opens outwardly, the lower ends of the said rods engaging two pins *g*, 60 fixed to an outer bolt-plate *G*, carried in pivots in two fixed supports *h* and arranged in front of an opening *d* on the lower part of the door *D*. When the latter is bolted, the plate *G* closes the opening *d*, being held applied 65 against the door *D* by a catch *k*, pivoted to the said door. In this position of the bolt-plate the shutter *b* is held closed, being retained by the rods *f* against the action of the counterweights *c*, which tend to open it. The 70 different parts of the installation then are in the position indicated in Figs. 1, 2, and 3 of the drawings.

When it is desired to enter the building, the catch *k* is turned to disengage the bolt- 75 plate, which under the action of the counterweights is swung on the pivots *m*, and thereby uncloses the opening *d* of the door. At the same time the shutter *b* is opened and a current of air is consequently set up, the 80 said air entering through the opening *d* and issuing through the opening *a*, so as to remove any gas which may have escaped into the interior of the building from a leak or any other cause. The door is still closed, and to 85 open it the rods *f* are unhooked from the pins *g* and the bolt-plate is removed by withdrawing its pivots from the support *h* to enable it to be moved away from the inlet. Figs. 4, 5, and 6 explain the mode of unbolt- 90 ing the door. To again bolt the door *D*, the bolt-plate *g* is replaced in position, its pivots being inserted in the supports *h*. The rods *f* are then hooked upon the pins *g* and the plate *G* raised and applied against the door 95 and fixed by the catch *k*. The shutter *b* follows this movement of the plate *G*, being connected to it by the rods *f*, so that it is closed.

In the case where the closing of the shutter *b* and of the plate *G* would be difficult by 100 reason of the counterweights a lever (indicated by dotted lines in Fig. 7) may be utilized to facilitate this operation, the said lever being arranged so as to be removable at



will. A cord or chain *p*, Fig. 5, passing over a guide formed in the shutter *b*, enables the latter to be closed from the interior of the building. Furthermore, the unbolting of the door can be made more easy and more rapid by applying other suitable mechanism; but the arrangement shown in the drawing is to be preferred for the simple reason that the person desiring to enter the building is forced to remove the bolt-plate, and therefore to give sufficient time for the gas to completely escape.

It is obvious that the opening for the escape of the gas can also be made in the upper part of the walls of the building, the connection between the closing-shutter and the plate or other bolting device being then effected, for example, by a system of suitable levers.

The opening *d* of the door *D* may be furnished with a sheet of fine gauze *d'*, Fig. 7, to prevent the flame passing to the interior of the building before the door is opened.

I claim—

1. Means for avoiding explosion in a building or room containing one or more acetylene-gas-generating apparatus, comprising a large shuttered opening in the upper part of the building or room containing the acetylene apparatus, a device for locking the entrance-

door into the room in its closed position and a device connecting the said bolting device to the shutter of the aforementioned opening in such a manner that the unbolting of the door to give access to the room simultaneously opens the shutter to allow the escape of any gas which may have collected in the room before a person can enter therein.

2. Means for avoiding explosion in a building or room containing one or more acetylene-generating apparatus comprising a large shuttered opening in the upper part of the room containing the acetylene apparatus and a device for bolting the door in its closed position comprising a pivot-plate connected to the hinged shutter of the escape-opening and placed in front of an opening *d* in the lower part of the door in such a manner that to open the latter it is necessary to unclosethe opening *d* in the door and thus to cause a current of air to pass through the room to assist the escape of the gas from the said room.

In witness whereof I have hereunto signed my name, this 13th day of August, 1901, in the presence of two subscribing witnesses.

PAUL WILLEMAIN.

Witnesses:

GEO. GIFFORD,  
AMAND RITTER.