J. A. Marden.

Steam Engine Governor.

No. 88,496. Patented Mar. 30, 1869.

Fig. 2.

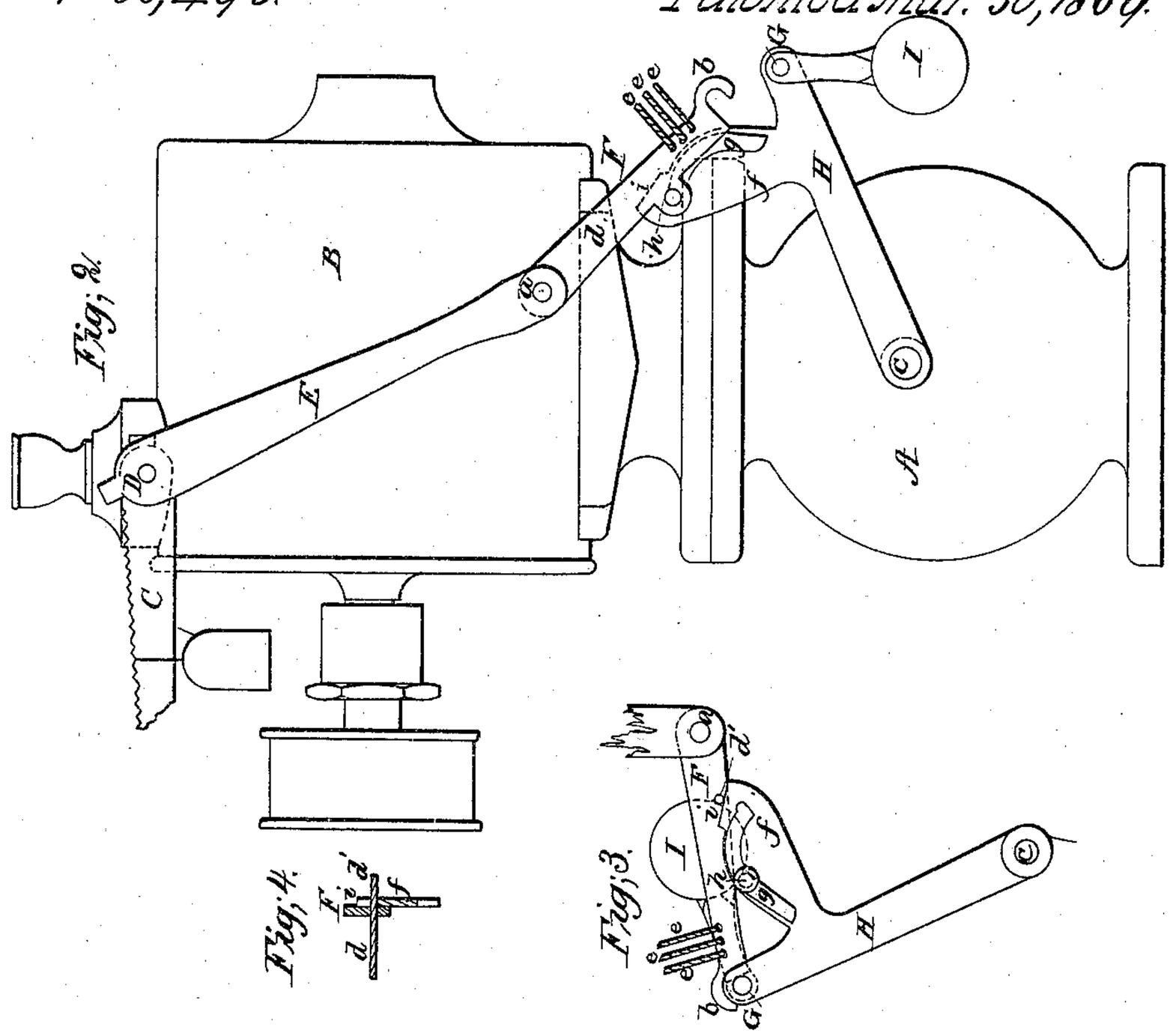
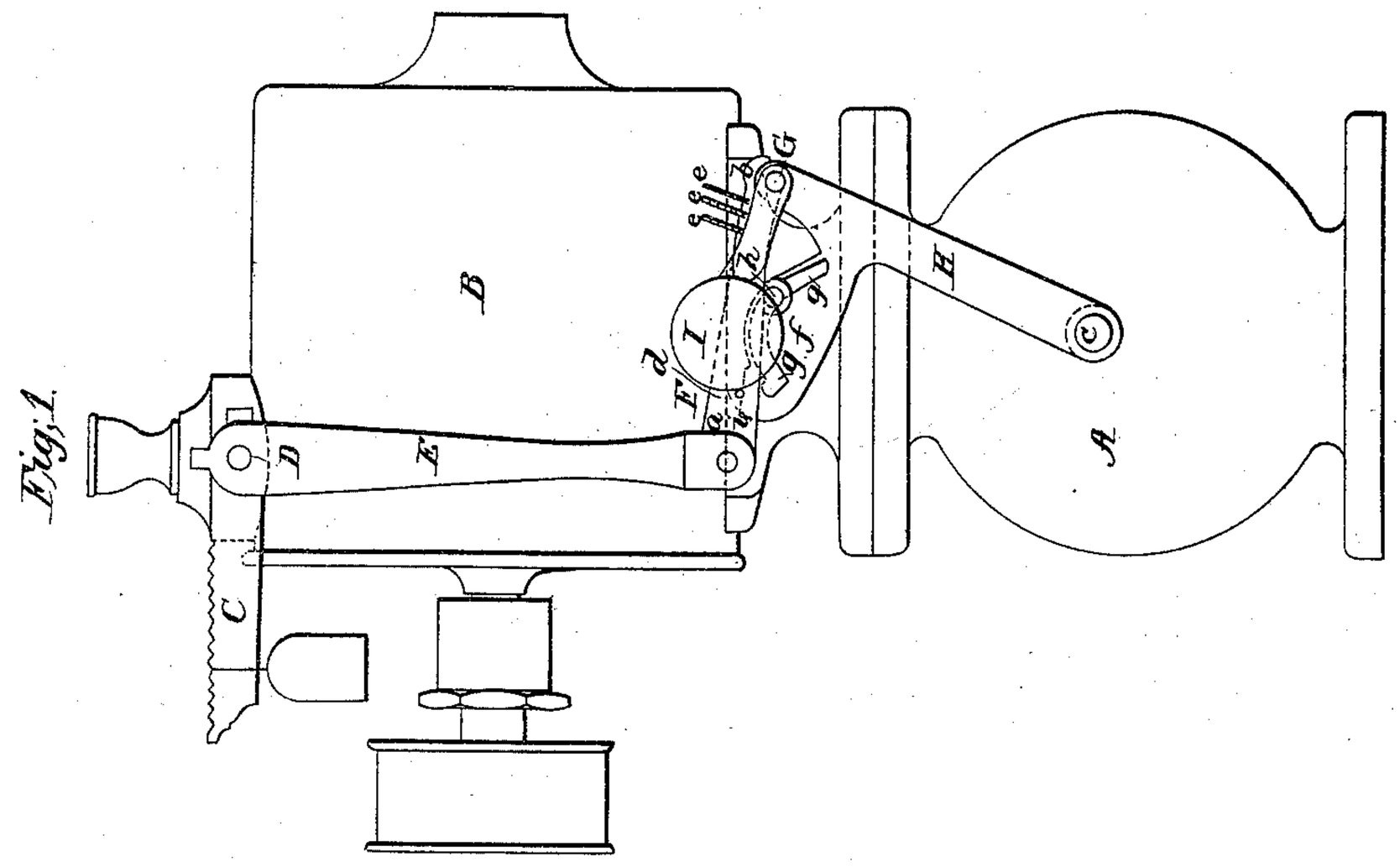


Fig. 4.

Fig. 3.

Fig. 1.



Witnesses;
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JEREMIAH A. MARDEN, OF BOSTON, MASSACHUSETTS, ASSIGNOR TO CHARLES E. AND JOHN H. ABBOTT, OF SAME PLACE.

Letters Patent No. 88,496, *dated March* 30, 1869.

IMPROVEMENT IN STEAM-ENGINE GOVERNORS.

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, JEREMIAH A. MARDEN, of Boston, in the county of Suffolk, and State of Massachusetts, have invented certain Improvements in the Stop-Motion of Steam-Engines, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, making part of this specification, in which—

Figure 1 is an elevation representing the position of my improvements when the valve is open and the engine running.

Figure 2 is an elevation showing my improvements in the position they occupy when the valve is closed to stop the engine.

Figures 3 and 4, details to be referred to.

In the event of an accident occurring in a building where a steam-engine is employed, it is frequently of great importance to stop the machinery with as little delay as possible. This may be done by the engineer in the engine-room as soon as knowledge of the accident is communicated to him. Where, however, the accident occurs at a point remote from the engine-room, considerable delay is incurred in thus communicating with him.

The object of my invention is to provide a ready means for instantly closing the valve from any remote point in the building; and

My invention consists in so constructing the series of levers which connect the governor with the valve, that one of the levers may be raised by a wire or cord leading from a point outside of the engine-room, so as to release and allow one of the levers, which is connected with the valve, to drop, and instantly close it, as required.

And my invention also consists in a device for automatically releasing the levers so as to close the valve in the event of the breakage of the belt which drives the governor, thereby preventing the running away of the engine.

To enable others skilled in the art to understand and use my invention, I will proceed to describe the manner in which I have carried it out.

In the said drawings—

A is the casing which encloses the valve, the base of the casing being secured to the steam-chest over the induction-passage, while the upper end of the casing supports the receptacle B for containing oil or other fluid, and any suitable devices for regulating the speed of the engine, which, as they form no part of my present invention, are not here represented.

C is the weighted scale, or graduated lever, secured to the rocker-shaft D connected with the devices for governing the speed within the receptacle B.

To the outer end of this rocker-shaft is secured the upper end of a lever, E, to the lower end of which is pivoted the inner end *a* of a lever, F, the outer end of this lever F being provided with a hook, *b*, which fits over a short stud or pin, G, projecting from the side of the outer and upper end of a lever, H, which is firmly secured at *c* to the end of the valve-stem.

Upon the outer end of the stud G is pivoted an arm, to which is connected a weight, I.

Projecting in front of the lever F is a pin, *d*, upon which rests the weight I, when the levers are moved back and forth while performing their ordinary office of controlling the valve to govern the rate of speed.

To the outer end (near the hook *b*) of the lever E is connected a series of cords or wires, *e e e*, which lead upward into the various apartments of the building containing the machinery driven by the steam-engine. When the engine is running at a uniform rate of speed, the levers for governing the valve are about in the position shown in fig. 1, the weight I resting on the pin *d*.

Should any accident occur within any apartment outside the engine-room, the wire leading to this apartment, on being pulled, will raise the hook *b* of the lever F out of contact with the stud G, causing the weight I to fall from the pin *d*, and the lever H to drop into the position seen in fig. 2, thus closing the valve, the lever H being retained in this position by an arm, *f*, provided with a curved slot, *g*, into which works a pin, *h*, projecting from the inside of the lever F. When it is again desired to start the engine, the parts are returned into the position seen in fig. 1.

In the event of the breakage of the belt which drives the devices for governing the speed within the receptacle B, their motion will be arrested, allowing the weighted lever C to drop, and deflect the lever E, so that the pin *d'*, on the inner side of the lever F, is caused to ride up on the inclined end *i* of the slotted arm *f* sufficiently to raise the lever F, and disengage the hook *b* from the stud G when the weight I falls off of the pin *d*, and the lever drops, as above described, into the position seen in fig. 2, thus automatically closing the valve.

Claims.

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

The device for closing a valve by means of cords or wires, substantially on the principle and in the manner herein set forth.

Also, the arrangement with the above, of the pin *d'* and arm *f*, with its inclined end *i*, for automatically closing the valve on the breakage of the governor-belt, substantially as described.

JEREMIAH A. MARDEN.

Witnesses:

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