

(No Model.)

W. W. ALLEN.
DOOR ATTACHMENT.

No. 370,300.

Patented Sept. 20, 1887.

Fig: 1.

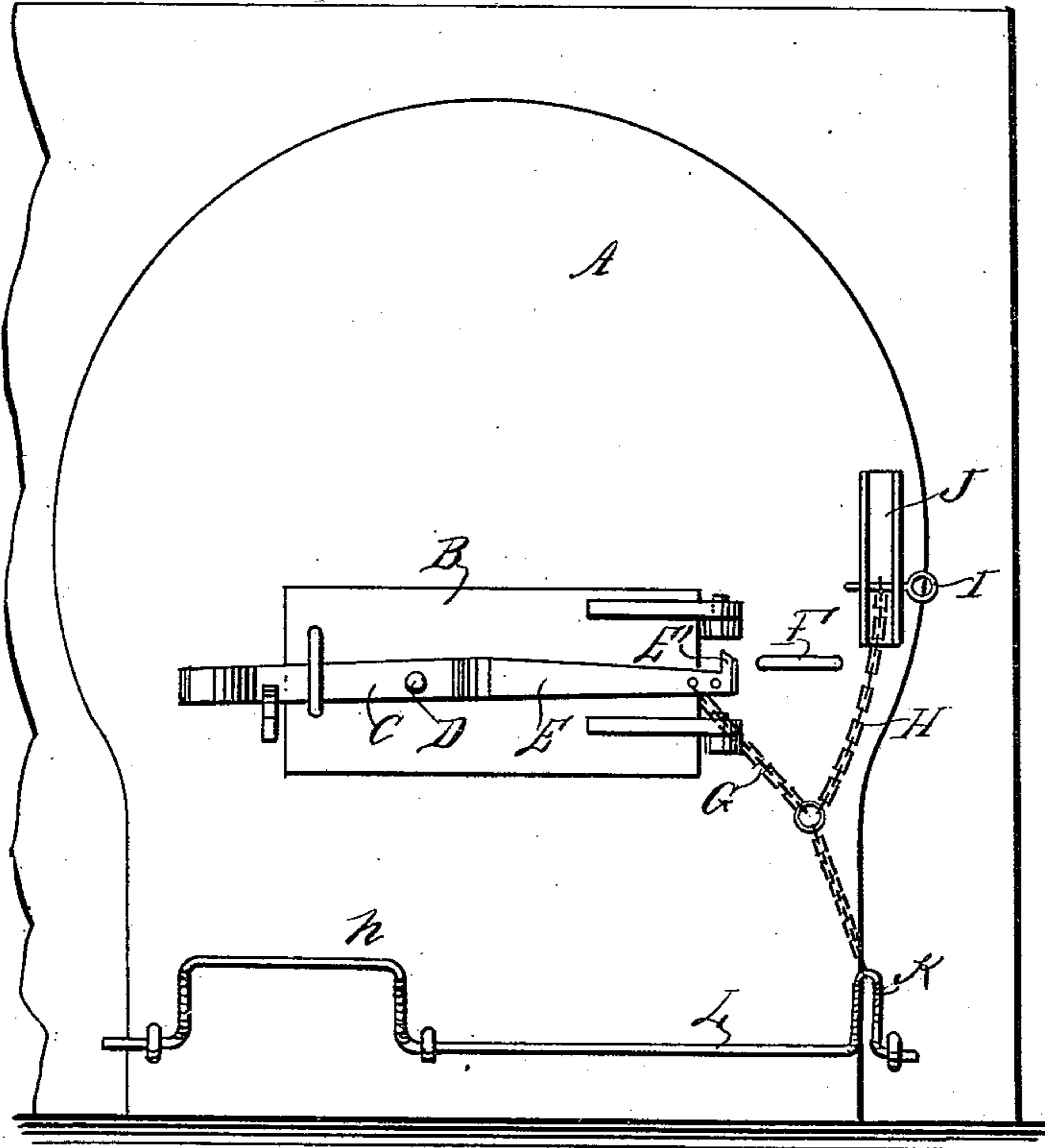


Fig: 2.

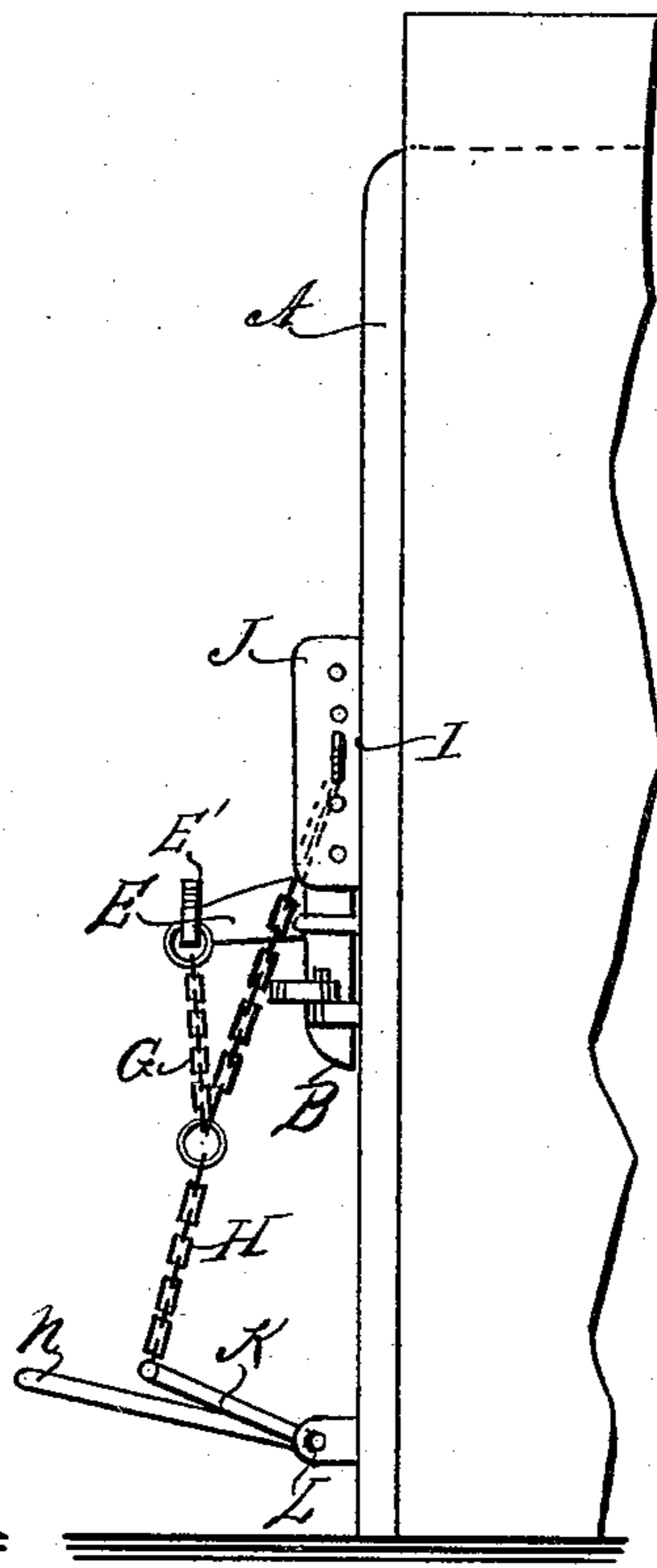
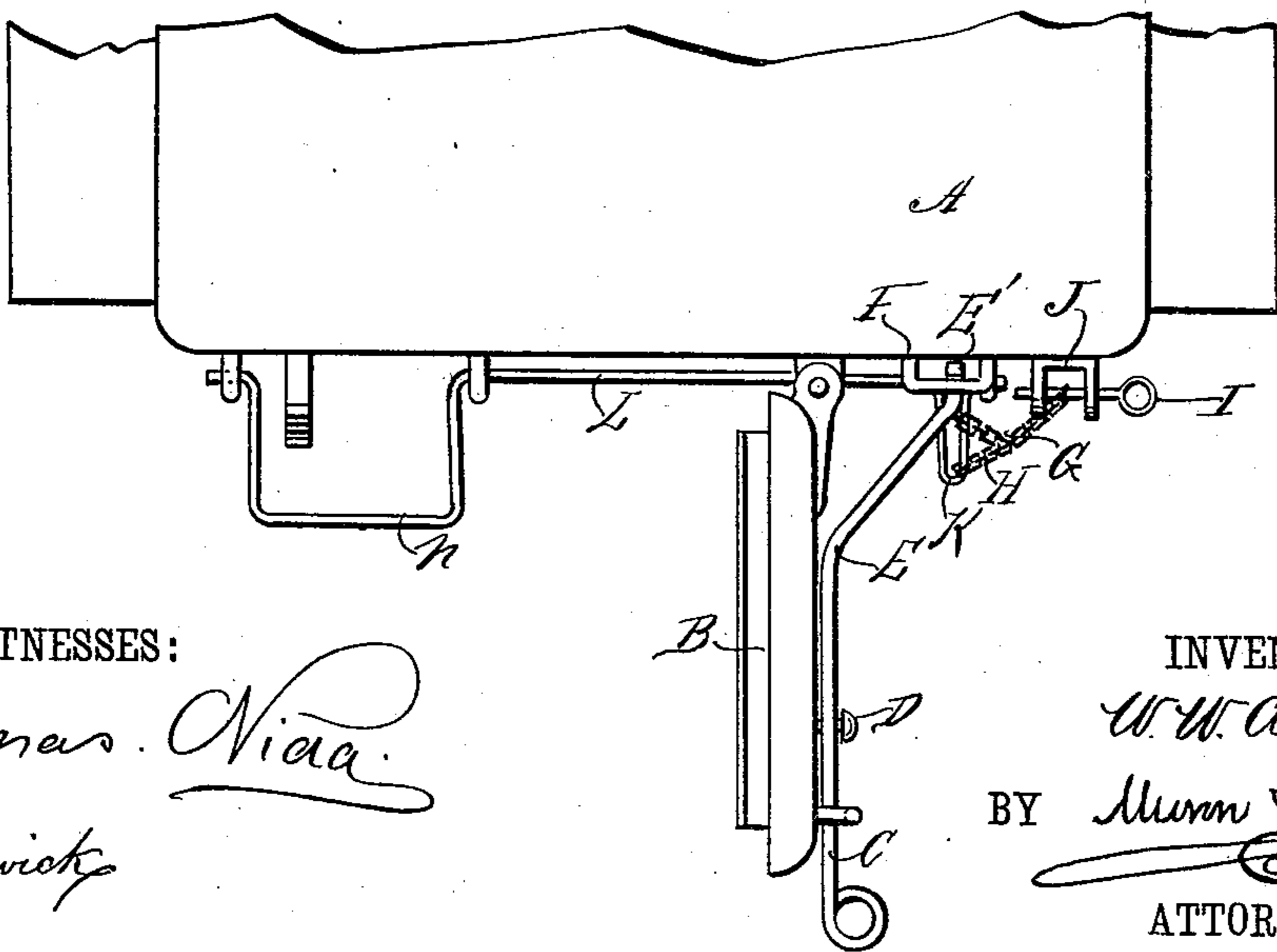


Fig: 3.



WITNESSES:

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UNITED STATES PATENT OFFICE.

WILLIAM W. ALLEN, OF EAST PEPPERELL, MASSACHUSETTS.

DOOR ATTACHMENT.

SPECIFICATION forming part of Letters Patent No. 370,300, dated September 20, 1887.

Application filed March 11, 1887. Serial No. 230,534. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM WALTER ALLEN, of East Pepperell, in the county of Middlesex and State of Massachusetts, have invented a new and Improved Door Attachment, of which the following is a full, clear, and exact description.

The object of my invention is to provide a new and improved attachment for doors by which the latter can be easily and conveniently opened and held locked when in an open position.

The invention consists in the construction and arrangement of various parts and details and combinations of the same, as will be described hereinafter, and then pointed out in the claims.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar letters of reference indicate corresponding parts in all the figures.

Figure 1 is a front elevation of my improvement attached to a furnace-door. Fig. 2 is a side elevation of the same, and Fig. 3 is a plan view of the same with the door in an open position.

My improvement is applicable to furnace-doors, iron shutters, pivoted skylights, ventilators, &c.

In the drawings I have illustrated the attachment in connection with a furnace for opening the furnace-door B, of the usual construction, and provided with a self-closing weighted latch, C, pivoted at D to the said door B. The latch C projects toward the hinges of the door, thus forming the extension E, which is bent outward, and is provided on its outer end with a hook, E', adapted to engage the staple or catch F, secured to the furnace-front A, next to the hinges of the door B.

On the outer part of the projection E is secured one end of the branch chain G, connected with the main chain H, secured at one end to the pin I, held vertically adjustable in the keeper J, secured to the front of the furnace A. The other end of the chain H is secured to the outer end of the arm K, projecting from the shaft L, held in suitable bearings on the furnace-front A, and provided with a treadle, N, for turning the said shaft L.

The operation is as follows: When the door B is in a closed position, as shown in Figs. 1

and 2, and the operator desires to open the said door, he then presses with his foot on the treadle N, so as to turn the shaft L, whereby the arm K is swung downward and pulls on the chain H, which is held in an angular position by the chain G, so that the pull on the main chain H is transmitted to the branch chain G, whereby the extension E of the latch C is swung downward, while the latch C is raised, and thus the door is unlocked. A further pressure on the treadle N causes the door to swing outward by the further pull of the chains H and G on the projecting extension E until the hook E' engages the staple or catch F, thus holding the door B locked in an open position. The door is unlocked in this position by raising the weighted latch C, so that the hook E' disengages the latch F, and the door is now swung inward and closed in the usual manner. The force of the pull of the chain H on the chain G, and consequently on the extension E, can be increased or diminished by adjusting the pin I up or down in the holder J, so that the chain H assumes either a very taut or a slack position.

Having thus fully described my invention, I claim as new and desire to secure by Letters Patent—

1. The combination, with a latch pivoted on the door and an extension formed on the said latch, of a branch chain connected with the outer end of the extension, a main chain fastened at both ends and held in an angular position by the said branch chain, which is connected with it, and means, substantially as described, for exerting a pull on the said main chain, as set forth.

2. The combination, with a latch pivoted on the door, an extension formed on the said latch, and a hook formed on the outer end of the said extension, of a branch chain connected with the outer end of the extension, a main chain fastened by both ends and held in an angular position by the said branch chain, which is fastened to it, means, as described, for exerting a pull on the main chain, and a catch adapted to engage the said hook on the extension, substantially as set forth.

3. The combination, with a latch pivoted on the door and an extension formed on the said latch, of a branch chain connected with the outer end of the said extension, a main chain

fastened at one end to a fixed pin, an arm on which the other end of the said chain is fastened, a shaft carrying the said arm, and a treadle for turning the said shaft, substantially as shown
5 and described.

4. The combination, with a latch pivoted on the door and an extension formed on the said latch, of a branch chain connected with the outer end of the said extension, a main chain
10 connected with the said branch chain, a vertically-adjustable pin on which one end of the said main chain is secured, an arm on which the other end of the said main chain is fastened, a shaft carrying the said arm, and a treadle for
15 turning the said shaft, substantially as shown and described.

5. The combination, with a latch pivoted on

the door, an extension formed on the said latch, and a hook formed on the outer end of the said extension, of a branch chain connected
20 with the outer end of the said extension, a main chain connected with the said branch chain, a pin on which the upper end of the said chain is secured, a holder for adjusting the said chain up or down, an arm on which the
25 other end of the said main chain is fastened, a shaft carrying the said arm, a treadle for turning the said shaft, and a catch adapted to engage the said hook on the extension, substantially as shown and described.

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Witnesses:

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