

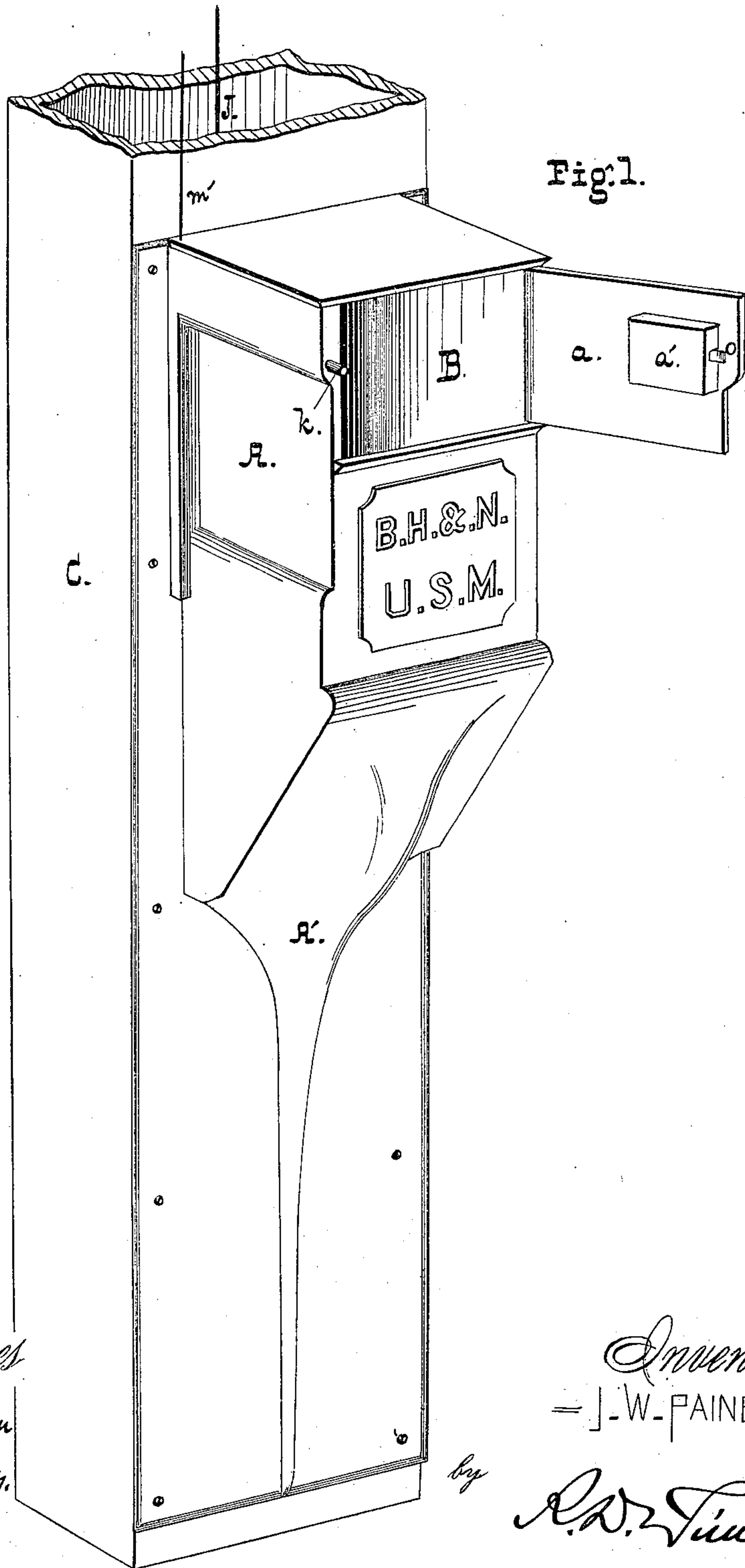
(No Model.)

3 Sheets—Sheet 1.

J. W. PAINE.  
MAIL ELEVATOR.

No. 258,668.

Patented May 30, 1882.



Witnesses  
W. A. Buttram  
J. H. Bailey.

Inventor  
—J. W. PAINE—

by

A. D. Tinnius  
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(No Model.)

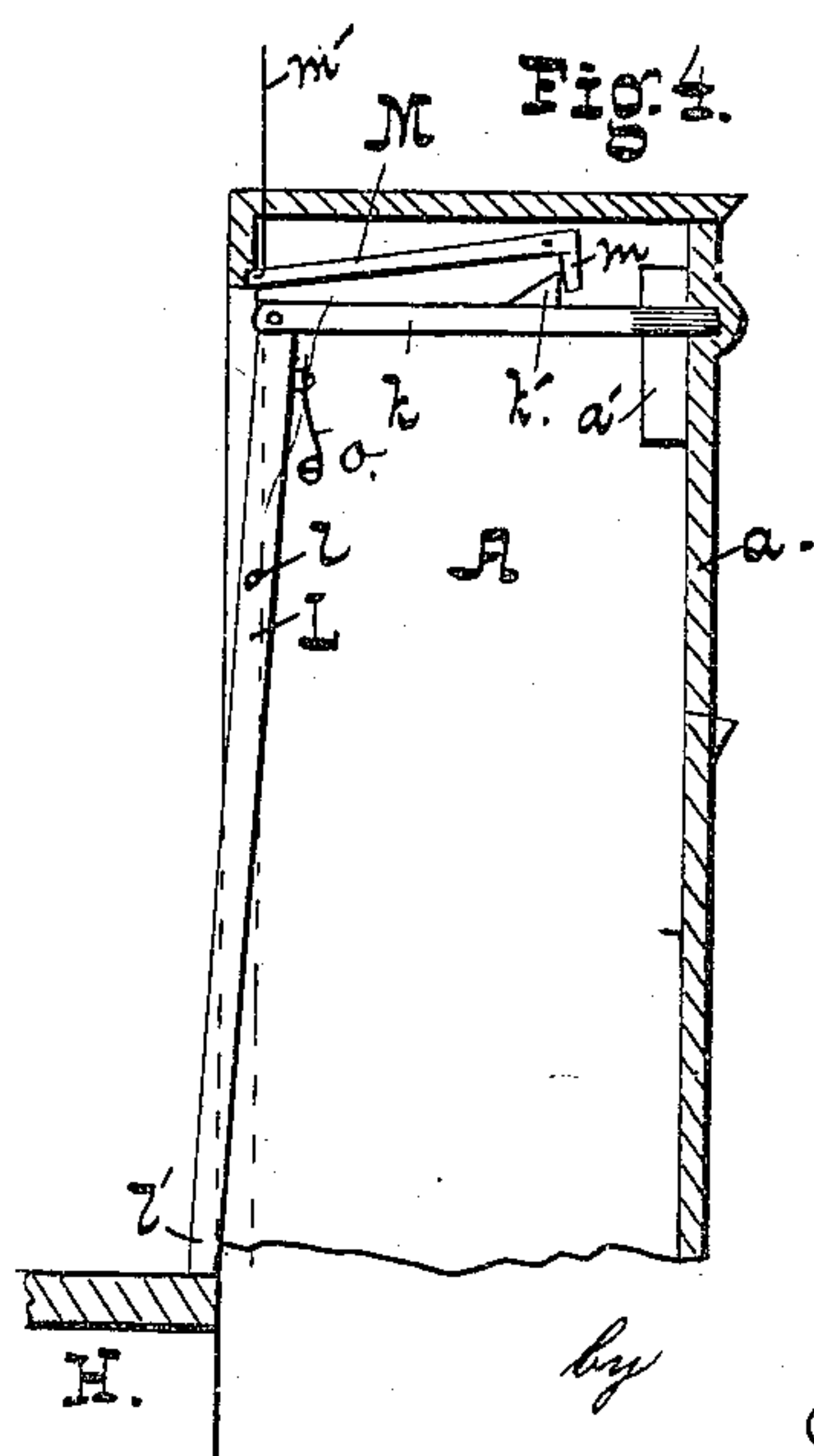
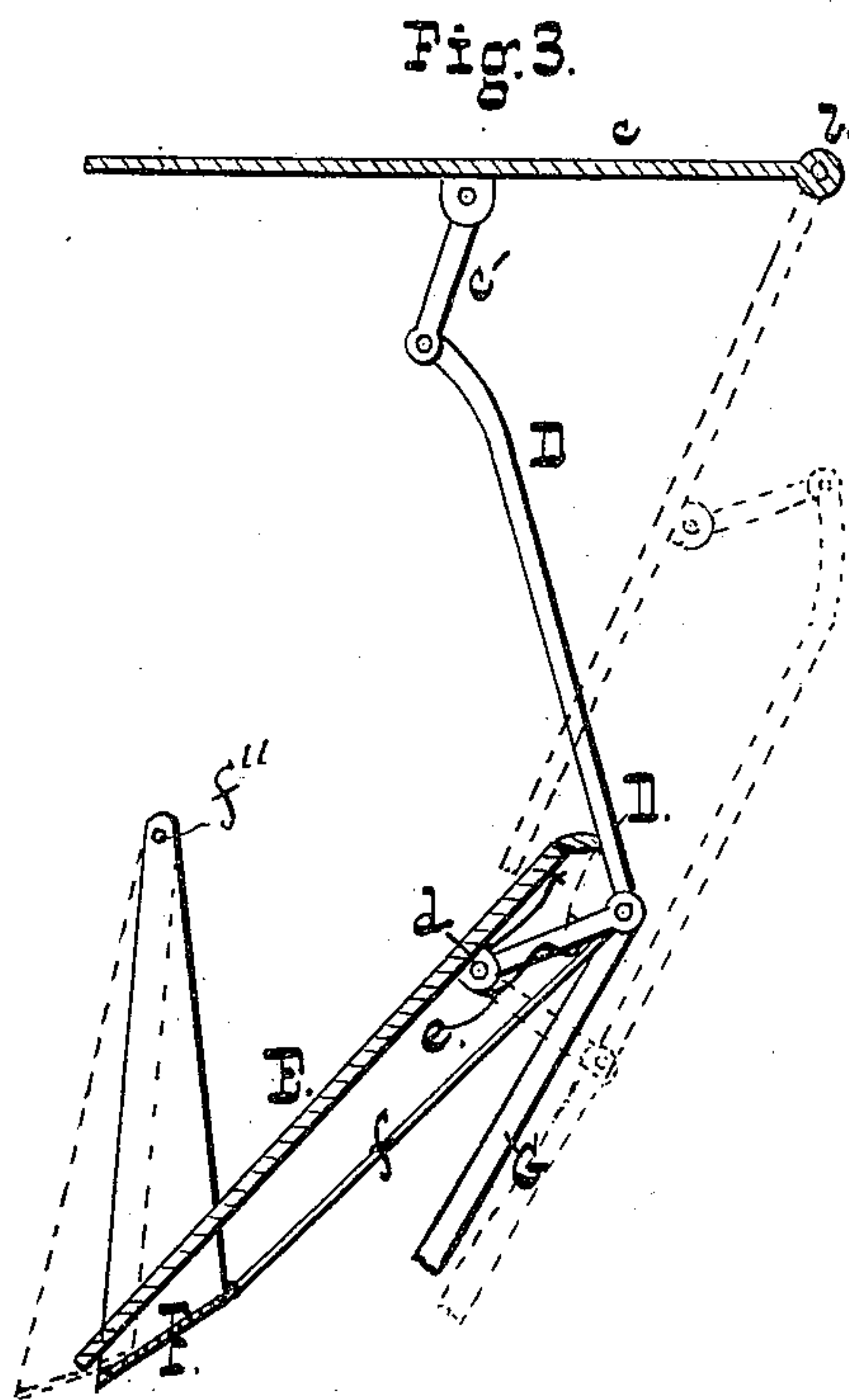
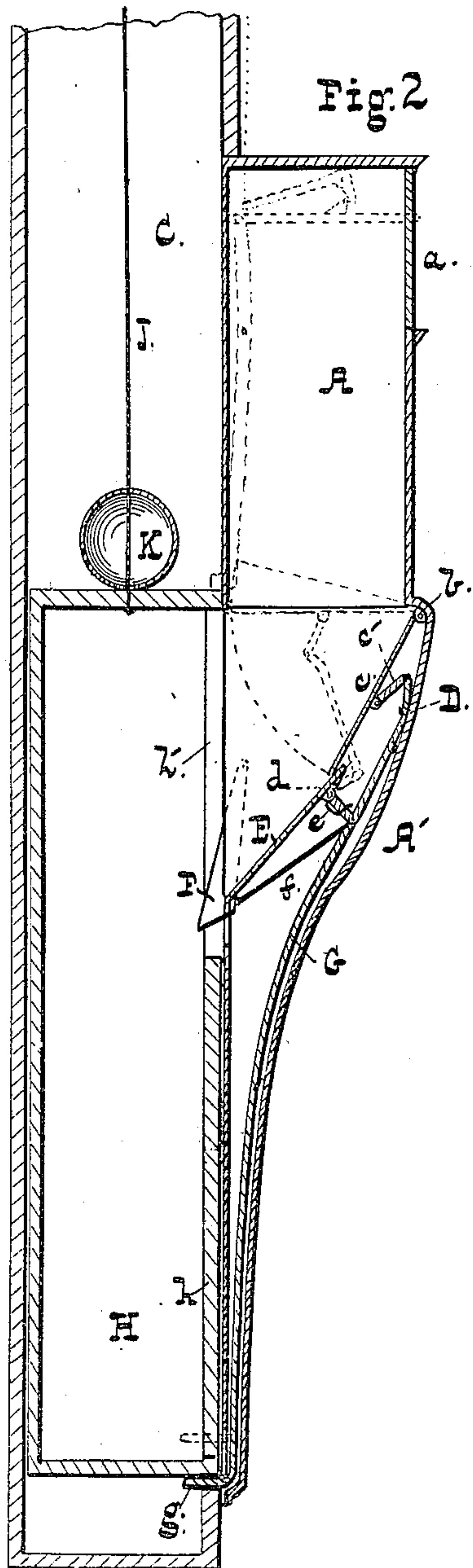
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No. 258,668.

Patented May 30, 1882.



Witnesses  
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(No Model.)

3 Sheets—Sheet 3.

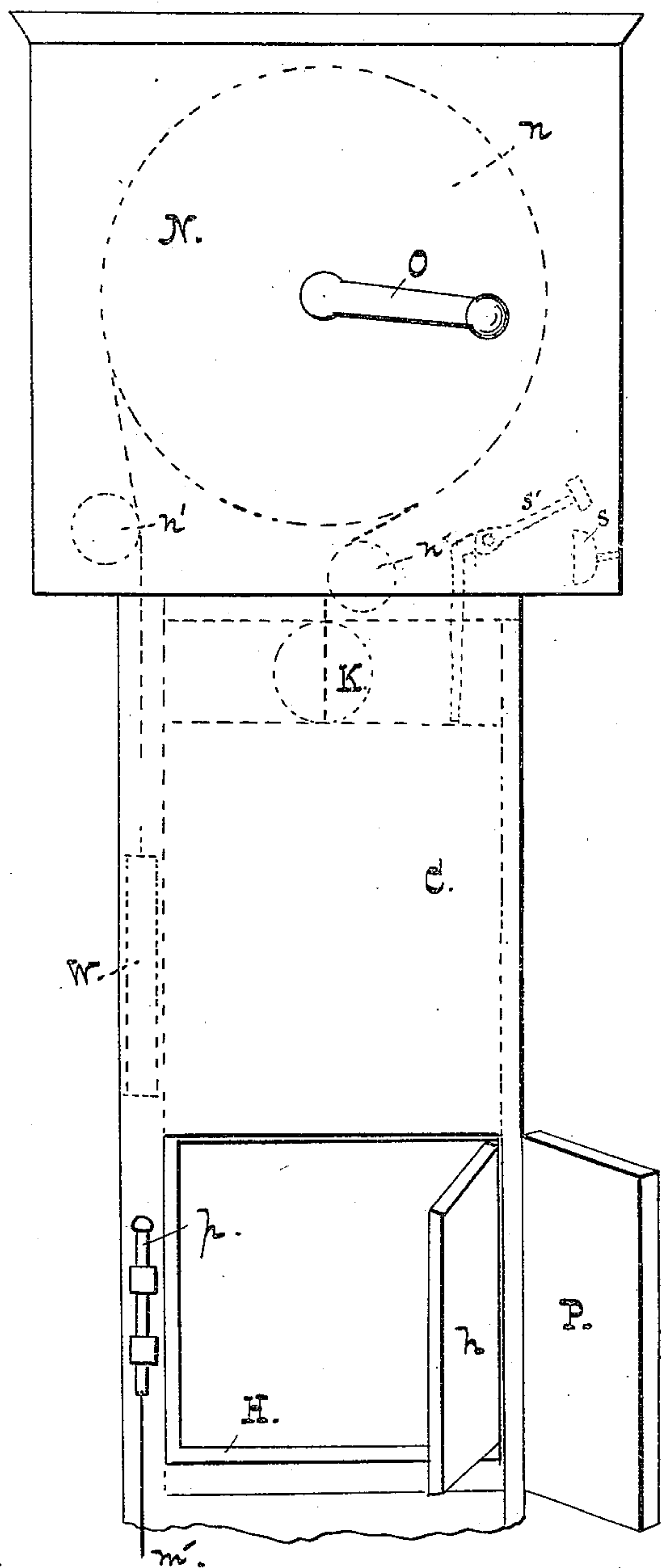
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Fig. 5.



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# UNITED STATES PATENT OFFICE.

JOHN W. PAINE, OF BALTIMORE, MARYLAND.

## MAIL-ELEVATOR.

SPECIFICATION forming part of Letters Patent No. 258,663, dated May 30, 1882.

Application filed April 22, 1882. (No model.)

*To all whom it may concern:*

Be it known that I, JOHN W. PAINE, of Baltimore city, State of Maryland, have invented certain new and useful Improvements in Mail-Elevators; and I hereby declare the same to be fully, clearly, and exactly described as follows, reference being had to the accompanying drawings, in which—

Figure 1 is a perspective view of the receiving-box and shaft. Fig. 2 is a central vertical sectional view of the same. Fig. 3 is a sectional elevation on an enlarged scale of the tilting platform of the receiving-box and its actuating mechanism. Fig. 4 is a similar view of the trigger for releasing the elevator-car, and Fig. 5 is an elevation of the delivery-box.

My invention has for its object to supply a long-felt want by furnishing a device adapted to deliver mail-matter to upper stories of a building and obviate the necessity of sending down a messenger to receive the mail from the carrier, or of compelling the latter to bring the mail up stairs. In all cases where the destination of a letter is on an upper floor—and in most instances, especially among the business-houses of large cities, this is the case—one of the means named must be resorted to, causing much inconvenience and trouble and unnecessary delay to the carrier. To obviate this I have provided a simple device, under the control alike of the carrier and the occupant of the upper apartment, adapted to receive and transmit the mail, and so constructed that the mail-matter cannot be tampered with, or even seen, by unauthorized persons from the time it is deposited by the carrier until it reaches its destination.

The invention will first be described, and then pointed out in the claims.

In the drawings, A is a box, by preference formed of metal, having a door, *a*, provided with a lock, *a'*. The locks on all the boxes are by preference made alike, so as to be opened by a common key carried by the letter-carrier. The box A is secured to a shaft, C, which is formed against the wall and leads to the upper apartment. A platform, *c*, is hinged in the box at *b*, and to lugs on its bottom is pivoted a bar, *c'*, which is hinged to a bent lever, D, that is pivoted to lugs *d* on the under side of a stationary chute, E. A spring, *e*, coiled about the lever D, tends to lift it normally to

the position shown in Fig. 3 in heavy and in Fig. 2 in dotted lines, causing the platform *c* to close the bottom of the box A. To the elbow of the lever D is hinged a rod or bar, G, that extends down through the lower part, A', of the box, and is bent at right angles at *g*, entering the shaft C through a suitable slot. A supplemental chute, F, is pivoted at *f''*, and is attached to the elbow of the lever D by a rod, *f*, as shown, so that when the platform *c* is horizontal the chute F swings under the chute E; but when the platform descends the chute F is swung forward. (See Fig. 2.)

H is the elevator car or box, having an opening, *h'*, and door *h*. It is suspended by a cord or wire, J, on which is strung, by preference, a rubber ball, K.

The shaft C extends, as before stated, to the upper apartment, where it is surmounted by a box, N, in which is mounted a wheel, *n*, over which the wire J is led, a weight, W, heavier than the car H, being attached to the other end. This weight descends in a shaft partitioned off from the shaft C, the wire J being led over little pulleys *n' n'*, so as to enter the shafts centrally. The shaft C is provided with a door, P, opposite which the door *h* comes when the car H is at the top. A crank, O, serves to turn the wheel *n* to lift the weight.

L is a trigger or catch, pivoted at *l* in the box A, and to it is attached a bar, K, which projects through the front of the box and into a recess formed on the door *a*. A lug, *k'*, is formed on the bar *k*, against which the end *m* of a bent lever, N, is arranged to bear. A wire, *m'*, leads from the end of this lever to a handle, *p*, on the shaft C, in the apartment above. A spring, *o*, serves to normally thrust the lower end, *l'*, of the lever L outward into the shaft C.

Such is the construction of the device. When used in business-houses it is most conveniently secured against the elevator-post, which is almost always near the front door, it being only necessary to cut a square hole in the ceiling for the passage of the shaft; or the device may be secured against the front or side wall. The carrier, as stated, is furnished with a key for the lock *a'*, and on his arrival opens the door *a* and deposits the mail in the box A through the opening B. If the elevator-car H is down, as shown in Fig. 2, (and it normally is so,) the



platform *c* is depressed and the chute *F* is thrown forward by reason of the bottom of the car resting on the arm *g* and drawing down the rod *G*. The box *H* is secured at the bottom of the shaft by the catch *L* engaging with the top of the box, as shown in Fig. 4. As soon as the mail has been deposited in the box *A* and has slid down over the chutes into the car *H* the carrier pushes on the bar *k* and shuts the door *a*. On pushing the bar *k* backward the catch *L* is disengaged from the top of the car, and the latter immediately rises in the shaft *C*. As it reaches the top it encounters a hammer, *s'*, that is thereby made to strike a bell, *s*, signaling the arrival of the mail. The doors *P* *h* being opened, the latter is removed, after which the doors are closed and the box or car *H* is lowered by turning the crank *O*. Now, it will have been observed that as soon as the car *H* rises in the shaft the platform *c* rises and closes the bottom of the box *A*. The object of this is to prevent any mail-matter from finding egress from the box *A* unless the car *H* is at the bottom of the shaft to receive it. This is important, because otherwise the letters would fall into the bottom of the shaft *C*. The descending car strikes the lug *g* as it reaches the bottom of the shaft, causing the platform *c* to fall and projecting the chute *F* forward. This movement of the chute *F* is designed to prevent the possibility of a letter falling between the car and the walls of the shaft, the chute constituting, when thrown forward, practically an extension of the chute *E* over the joint between the car and shaft.

In case the occupant of the upper apartment finds the car at the top of the shaft on his arrival, he immediately lowers it to the bottom by means of the crank *O*, and in case there may have been a second delivery of mail subsequent to the sending up of the car by the carrier, the handle *p* is lifted, causing the release of the catch *L* through the medium of the lever *M* and lug *k'*, and the car again rises.

The peculiar arrangement of the bent lever *D* and arm *c'* is such that direct pressure on the platform *c* will not cause it to fall, and it can only be lowered by drawing the bar *G* downward.

As the box *A* is locked and the bar *k*, which actuates the catch *L*, is covered by the door, all meddling with the device is prevented, its

interior being only accessible to a party furnished with a proper key.

I have described and shown what I believe to be the best form of device embodying my invention; but it is obvious that the details of construction may be varied in many ways without departing from the spirit of my invention; and

I therefore claim—

1. In a mail-elevator, a box adapted to receive the mail and discharge the same into a suitable car, in combination with a hoisting device and means for lowering the car to a position to receive the contents of the box.

2. In a mail-elevator, a box adapted to receive the mail, a car provided with suitable hoisting and lowering mechanism, and means for retaining mail-matter placed in the box until the car is lowered into position to receive it, as set forth.

3. In a mail-elevator, a receiving-box, a hoisting-car, suitable elevating and lowering mechanism, and a slide or bottom which normally closes the bottom of the receiving-box, and is automatically operated to open by the descent of the car, as set forth.

4. In a mail-elevator, a receiving-box, a hoisting-car, suitable elevating and lowering mechanism, a latch for securing the car in position to receive mail-matter placed in the box, and a cover for the bottom of the box which automatically closes as the car rises and opens as it descends, as set forth.

5. In combination with the receiving-box and hoisting-car, a latch for securing the car concealed when the box is closed, and an automatically-operating delivery-chute, as set forth.

6. In combination with the receiving-box and hoisting-car, the swinging bottom and supplemental chute automatically operated, as set forth.

7. In combination with the receiving-box and shaft, the hoisting-car and automatically-operating delivery-chute and bottom, and mechanism at the top of the shaft for sounding an alarm on the arrival of the car and for lowering the same, as set forth.

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Witnesses:

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