

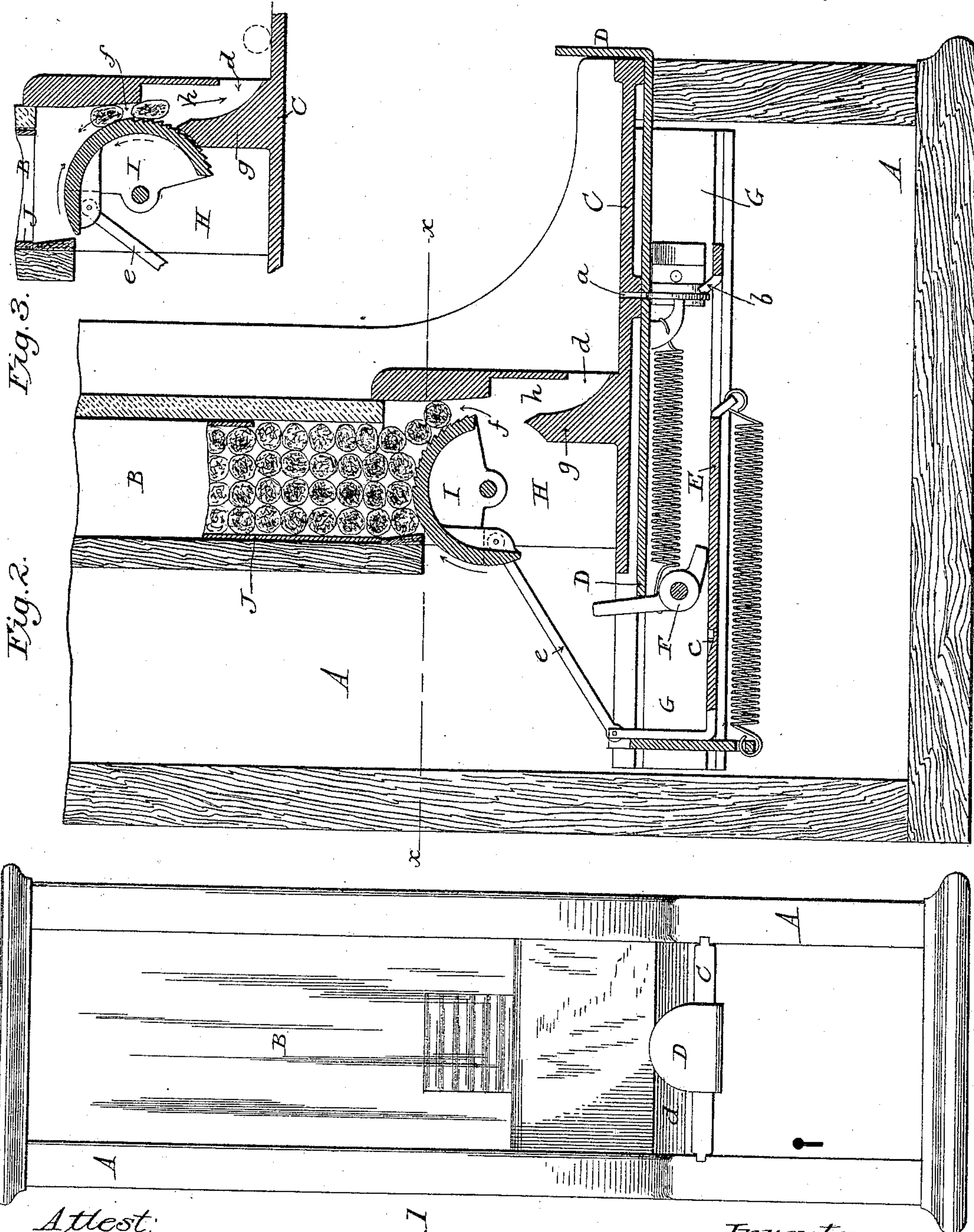
(No Model.)

2 Sheets—Sheet 1.

J. A. WILLIAMS.
VENDING MACHINE.

No. 430,498.

Patented June 17, 1890.



Attest:

Sidney P. Hollingsworth
Horace A. Dodge.

Fig 1

Inventor:
JOHN A WILLIAMS

by *Dodges Sons,*
Attorneys.

(No Model.)

2 Sheets—Sheet 2.

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Fig. 5.

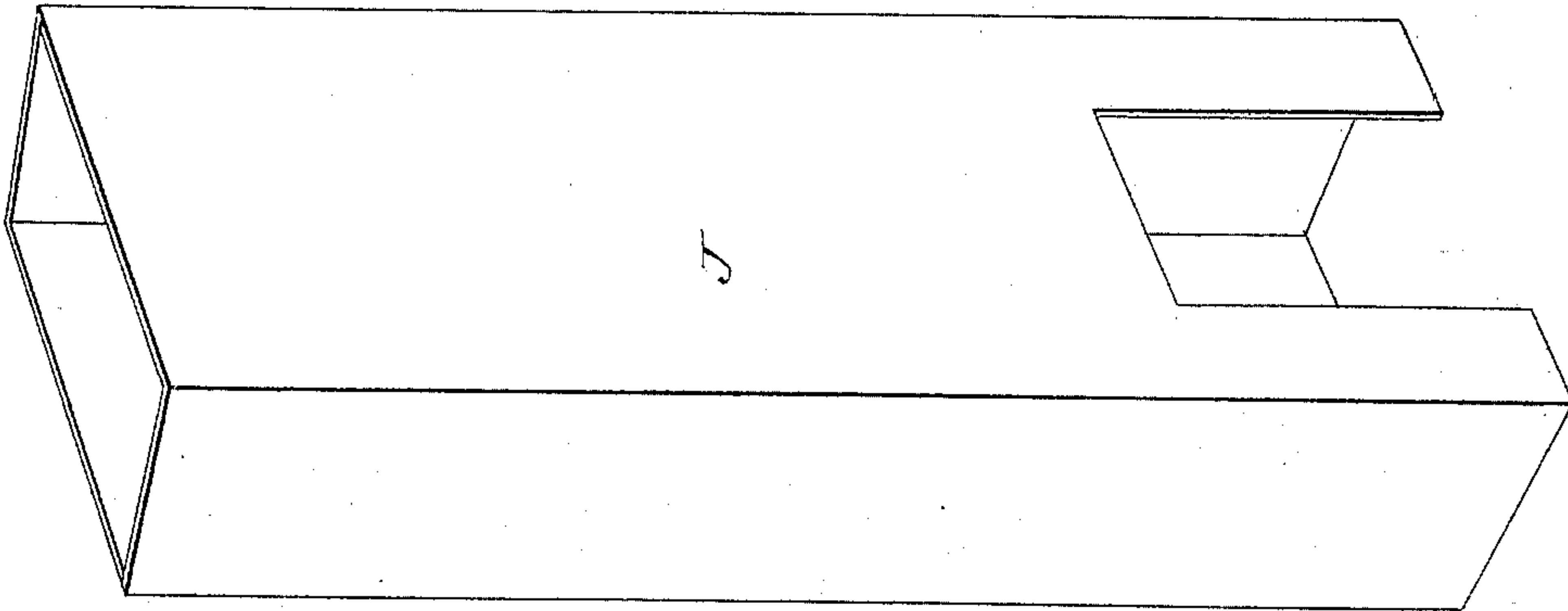
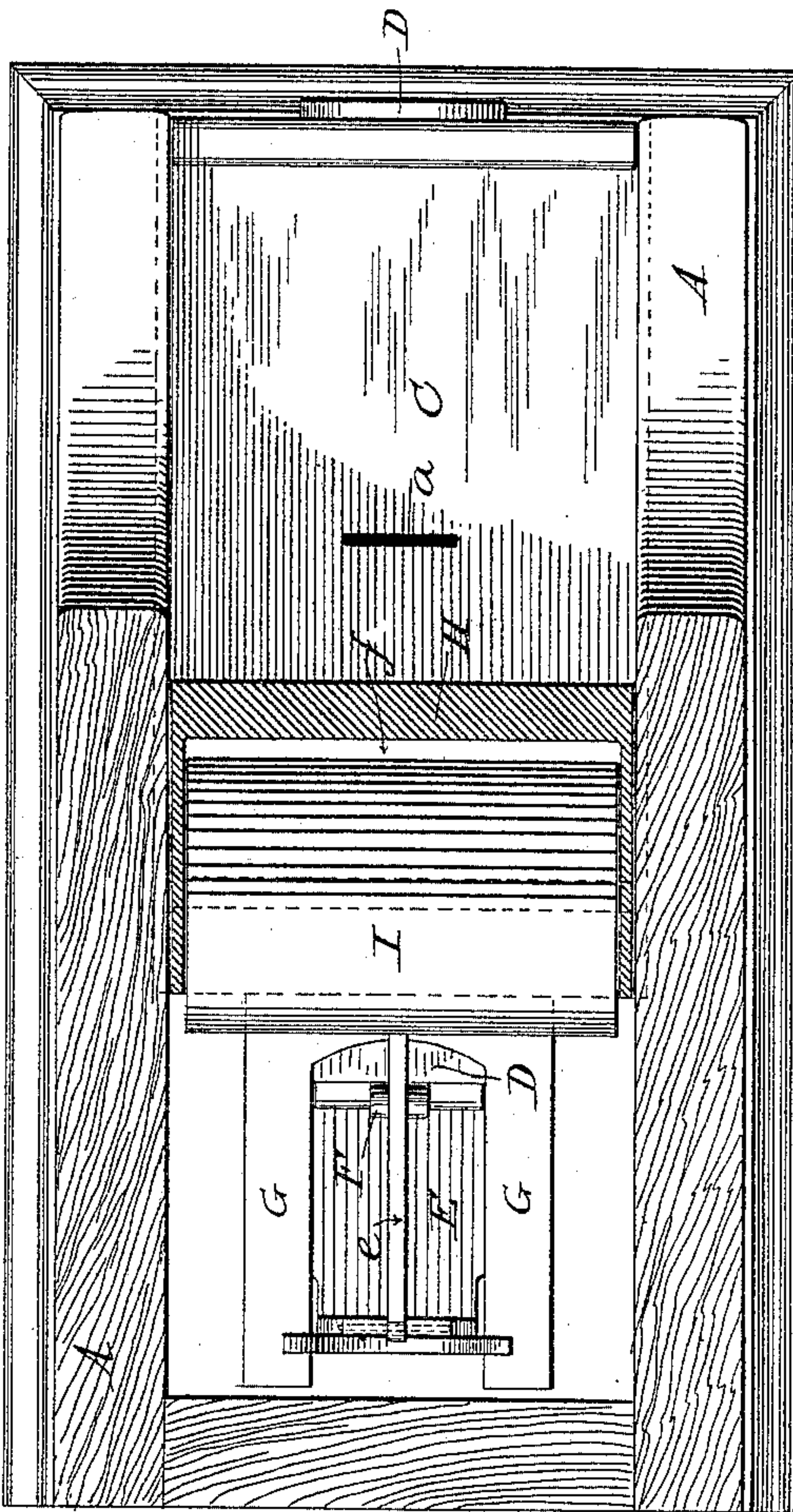


Fig. 4.



Attest:

Sidney P. Hollingsworth
Horace A. Dodge

Inventor:

JOHN A. WILLIAMS

by

Dodges & Sons,
Attorneys.

UNITED STATES PATENT OFFICE.

JOHN A. WILLIAMS, OF BROOKLYN, NEW YORK, ASSIGNOR TO THE WILLIAMS
AUTOMATIC MACHINE COMPANY, OF MOUNDSVILLE, WEST VIRGINIA.

VENDING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 430,498, dated June 17, 1890.

Application filed December 4, 1889. Serial No. 332,522. (No model.)

To all whom it may concern:

Be it known that I, JOHN A. WILLIAMS, a citizen of the United States, residing at Brooklyn, in the county of Kings and State of New York, have invented certain new and useful Improvements in Vending-Machines, of which the following is a specification.

My invention relates to vending-machines, and has reference more particularly to a machine for selling cigarettes and similarly-shaped articles.

In the accompanying drawings, Figure 1 is a front face view of my improved machine; Fig. 2, an enlarged vertical section from front to rear through the center of the machine; Fig. 3, a sectional view of the delivery mechanism, showing the position the parts occupy in discharging the articles from the machine; Fig. 4, a horizontal sectional view on the line xx of Fig. 2; and Fig. 5 a perspective view of the box or casing that receives the cigarettes removed from the machine.

A indicates a box or casing having at its base a receptacle to receive the coins and an upright chute or channel B to receive the articles to be sold or the box containing the articles, and between the coin-receptacle and the chute is a horizontal plate C, to which the actuating mechanism is secured.

D indicates the operating-slide, provided outside of the machine with an upturned end to serve as a handle, and with a slot to receive a coin, the slot in the slide being normally in alignment with a coin-slot a in the plate C.

E indicates a second slide below and parallel to the slide D, the slide E being provided near its forward end with an upwardly-projecting lug b and near its rear end with a seat or depression c to receive and seat a pawl F, which is journaled between the side plates G, which support and carry the slides, substantially as in my Patent No. 402,374, (to which reference is hereby made for a more detailed description of the construction and operation of the devices for locking and releasing the slides D E.)

The curved arm or finger secured to the under side of slide D and bearing against the rear face of the coin is not claimed by me

herein, as that forms the subject-matter of a separate application, filed December 4, 1889, Serial No. 332,521.

Formed integral with the plate C, or secured thereto in any suitable manner, is a hollow block H, which is designed to fit directly under the chutes or channels B, the said block being provided on its front face, close to the point where it joins the plate C, with an opening d , through which the cigarettes are discharged.

I indicates an oscillating feeder, which is journaled upon horizontal pivots in the block H, the feeder being constructed substantially in the form of a semi-cylinder and arranged directly beneath the articles to be sold. The rear wall of the block H is cut away to receive the feeder I, but that portion of the rear wall remaining fits so closely to the feeder I as to prevent the articles from passing out over the back of the said feeder.

The feeder is connected in rear of its pivot, by means of a link e , with the upwardly-turned end of the slide E, so that as the slide is carried forward the feeder will be rocked or oscillated upon its shaft or pivot. About one-half (more or less) of the outer face of the feeder is corrugated or grooved longitudinally, as shown in Figs. 2, 3, and 4, the abrupt faces of the corrugations or teeth thus formed being on the front side of the feeder, so as to take hold of the cigarettes and draw them downward into the space or channel f , formed between the feeder and the front wall of the block H. The upper part of the front wall of the block H is considerably thicker than the lower part, an offset or shoulder being formed in the front wall about on the line with the axis of the feeder, as clearly shown in Fig. 2. The inner face of the front wall above the shoulder is inclined slightly for a portion of its length, so as to facilitate the entrance of the cigarettes into the channel f .

Projecting upward in rear of the discharge-opening d and set away a distance from the front wall of the block H is a longitudinally-extending wall g , which has its front face curved, and which, in connection with the front wall of the block, forms a channel or passage h , which in effect acts as a continu-

ation of the channel *f* when the feeder is rocked, as will be apparent from an inspection of Fig. 3.

Assuming the parts to be in the position represented in Fig. 2, the operation of the machine is as follows: A coin of the requisite size is inserted through the coin-slot *a* and will drop down far enough to engage the lug *b* upon the slide E. The operator takes hold of the operating-slide D, and as it is drawn forward the coin, striking against the lug *b*, will carry the slide E forward; but as the slide E is connected with the feeder I the latter will be rocked or tipped forward upon its pivots, and in thus rocking the corrugations upon its upper front face take hold of the cigarettes and draw them into the channel *f*. Continuing the outward movement of the slides D E and the corresponding rocking or tipping of the feeder, the cigarette will be slightly compressed or flattened, as shown more clearly in Fig. 3, and by the time that the feeder has tipped far enough to carry the cigarette below the shoulder formed on the inner face of the front wall of the block it will also have come into such position relatively to the wall *g* as to form a portion of the rear wall of the channel *h*, and consequently as the cigarette leaves the channel *f* it will pass down the channel *h* and be discharged through the outlet *d*. The shoulder on the rear face of the front wall of the block allows the cigarette to expand and resume its normal shape before being delivered to the purchaser. As the slide E is pulled outward to operate the feeder I, the pawl F will seat itself in the depression *c* in the slide, which will prevent the return of the slide E and the feeder I to their normal positions until the pawl F is thrown out of engagement with the slide E, which is done by letting go of the operating-slide D and allowing its spring to draw it inward, so that it will strike the upper end of the pawl, as shown and described in my former patent, hereinbefore referred to. As the feeder I is returned to its normal position it raises all of the cigarettes that are above it, and by reason of the constant raising or loosening up of the cigarettes they are prevented from becoming jammed, so as to interfere with the proper operation of the machine.

The machine shown and described herein is designed particularly for the delivery of but one cigarette at a time; but it will be apparent that by varying the throw of the feeder the number of cigarettes discharged at each tipping or rocking of the said feeder may be varied without in any manner departing from the spirit of my invention.

J indicates a box, which may be made of pasteboard, wood, tin, or any other suitable material, and of a size to receive four rows or columns (more or less) of cigarettes. The box is cut away on its front face near its lower end, as shown in Figs. 1, 2, and 5, so as to

enable those having the machine in charge to see whether or not the supply of cigarettes is exhausted, the box or casing of the machine being provided with a glass front or door, as is usual in this class of machines.

While in the drawings I have represented the machine as provided with but one delivery apparatus, it is obvious that a series of these may be arranged side by side without in any manner modifying the construction of the machine.

I do not wish to be understood as limiting myself to the mechanism herein shown for operating the oscillating feeder, as it is obvious that many of the devices now in use may be employed for imparting the oscillating motion to the feeder. The construction shown is preferred, however, because of its simplicity and certainty of action.

Having thus described my invention, what I claim is—

1. In an automatic vending-machine, the combination, with a suitable frame-work, of a plate or support, as C, a hollow block H, mounted upon the upper face of the plate, an oscillating feeder mounted in said block, an operating-slide, and a delivery-slide connected with the oscillating feeder and adapted to be connected with the operating-slide by means of a coin or similar device.

2. In a machine for vending cigarettes and the like, the combination, with a frame or block H, of an oscillating feeder journaled therein and set away a distance from the front face thereof, so as to form a contracted throat or opening, and a series of narrow longitudinally-extending grooves formed in the face of the feeder, all substantially as shown.

3. In a machine for vending cigarettes and the like, the combination, with a frame or block H, of an oscillating feeder journaled therein and set away a distance from the front face thereof, so as to form a contracted throat or opening, and a series of narrow longitudinally-extending grooves formed in the face of the feeder and formed with abrupt front faces.

4. In a vending-machine, the combination, with the slides D and E and the hollow block H, of the oscillating or rocking feeder I, and a link *e*, connecting the feeder with the slide E, all substantially as shown and described.

5. In an automatic vending-machine, the combination, with a hollow block H, provided with a shouldered front wall, the discharge-opening *d*, and the wall *g* in rear of the discharge-opening, of an oscillating feeder I, journaled in the block and set away a distance from the inner face of the front wall of the latter.

6. In an automatic vending-machine, the combination, with a hollow block having a discharge-opening *d*, and a wall *g* in rear of said opening to form a channel *h*, of an oscillating feeder I, journaled in the block and set away from the inner face of the front wall of

the block and adapted, substantially in the manners shown, to form, in connection with the wall *g*, the back of the channel *h*.

7. In an automatic vending-machine, the combination, with a hollow block *H*, having a discharge-opening *d*, of an oscillating feeder *I*, mounted in said hollow block, a reciprocating slide or slides, and a connection between said slide or slides and the oscillating feeder.
8. In an automatic vending-machine, the combination, with a hollow block having a discharge-opening, of an oscillating feeder mounted in said block and set away from the front wall thereof, and a case or receptacle for containing the articles to be sold arranged directly above the oscillating feeder, so as to permit the articles contained in said receptacle to rest directly upon the upper face of the feeder.
9. In an automatic vending-machine, the combination, with a hollow block having a discharge-opening, of an oscillating feeder *I*, mounted in the block and set away from the front wall thereof to form a channel *f*, the channel being of a width less than the diam-

eter of the articles to be sold, substantially as and for the purpose set forth.

10. In an automatic vending-machine, the combination, with a hollow block having a discharge-opening *d*, of an oscillating feeder *I*, mounted in the block and set away a distance from the front wall of the latter to form a channel *f*, the front wall of the said block being provided with a shoulder about on a line with the axis of the feeder, so as to form an enlarged channel *h* immediately below the channel *f*.

11. In an automatic vending-machine, the combination, with a hollow block *H*, having its front wall beveled or inclined on its inner face, of an oscillating feeder *I*, mounted in the block and set away a distance from the inner face of the front wall, so as to form a tapering or inclined channel *f*.

In witness whereof I hereunto set my hand in the presence of two witnesses.

JOHN A. WILLIAMS.

Witnesses:

HENRY ROWLEY,
F. A. HUBBARD.