No. 884,589. PATENTED APR. 14, 1908.

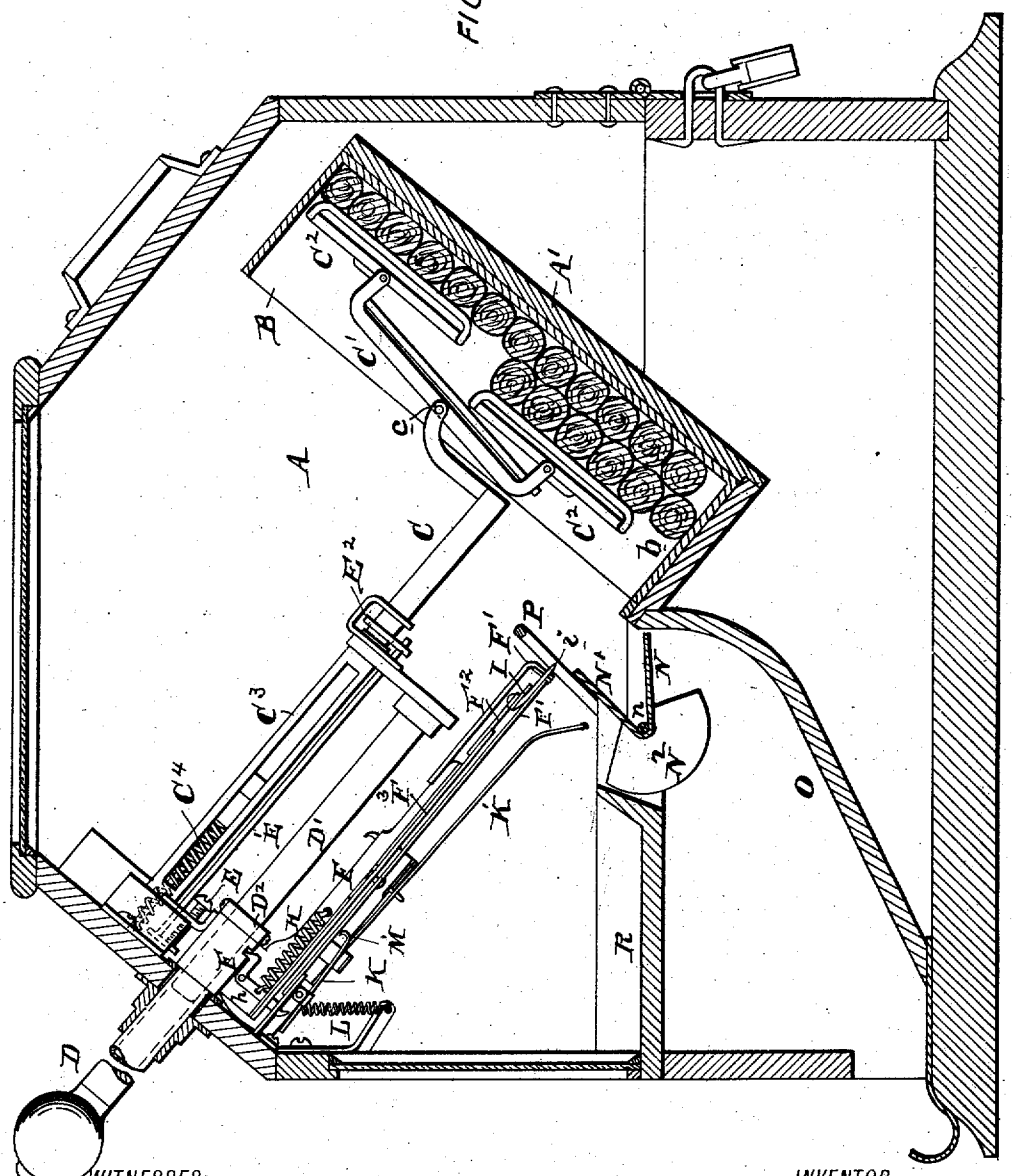
S. JENKINS.

VENDING MACHINE.

APPLICATION FILED DEC. 29, 1904.

3 SHEETS—SHEET 1.

FIG. 1



WITNESSES:

Lowelston, Jr.

Wm. Rooney.

INVENTOR

Sylvester Jenkins

BY

ATTORNEY

THE NORRIS PETERS CO., WASHINGTON, D. C.

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3 SHEETS—SHEET 2.

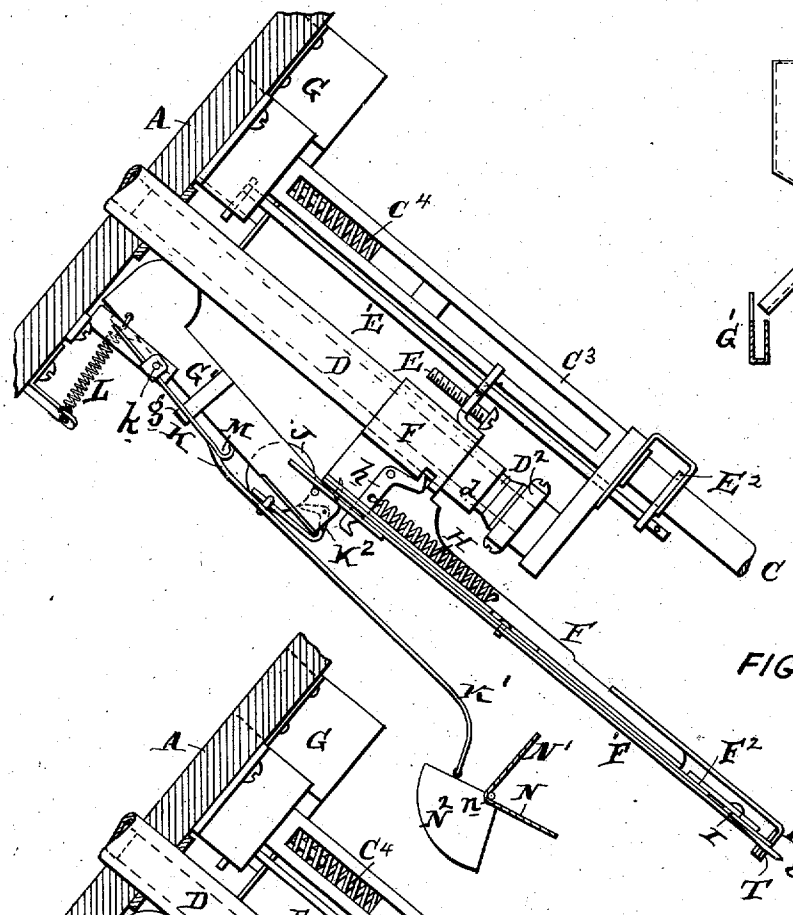

FIG. 2

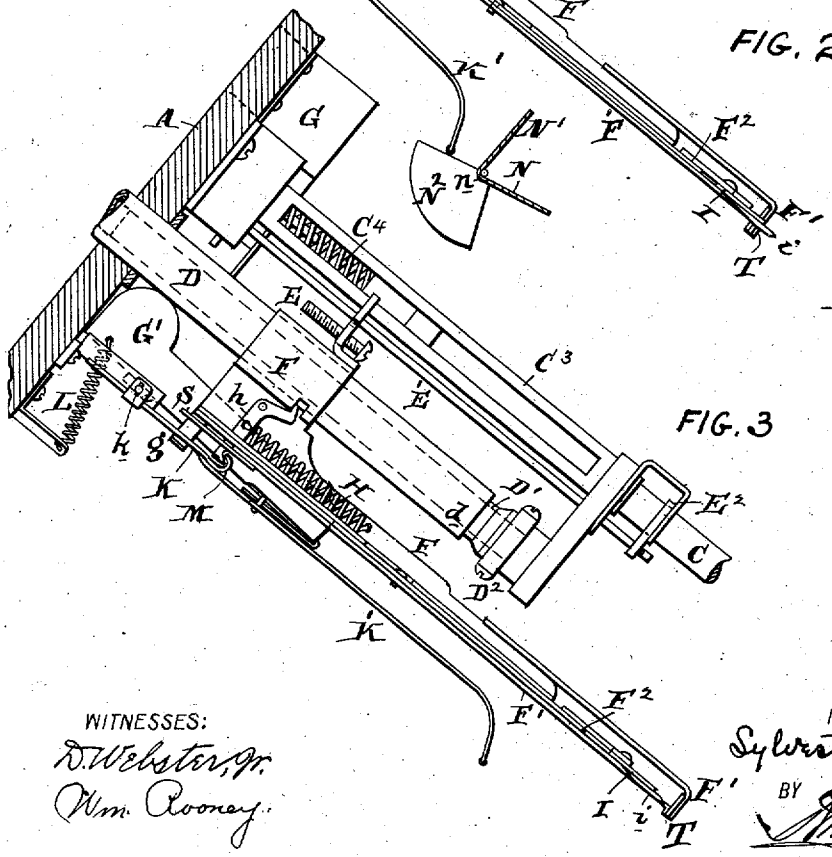

FIG. 3

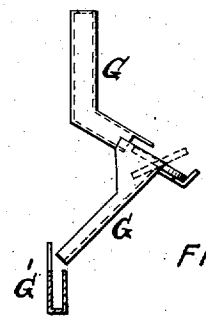

FIG. 6

WITNESSES:

D. Webster, Jr.

Wm. Rooney.

INVENTOR

Sylvester Jenkins

BY

ATTORNEY

THE NORRIS PETERS CO., WASHINGTON, D. C.

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3 SHEETS—SHEET 3.

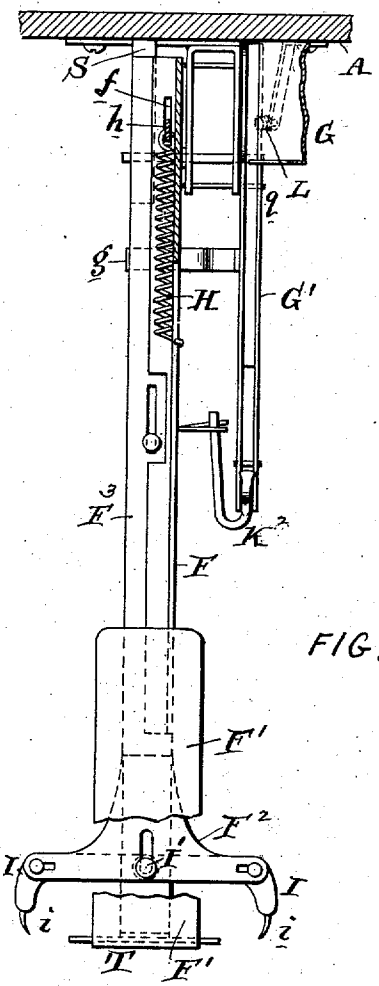

FIG. 4

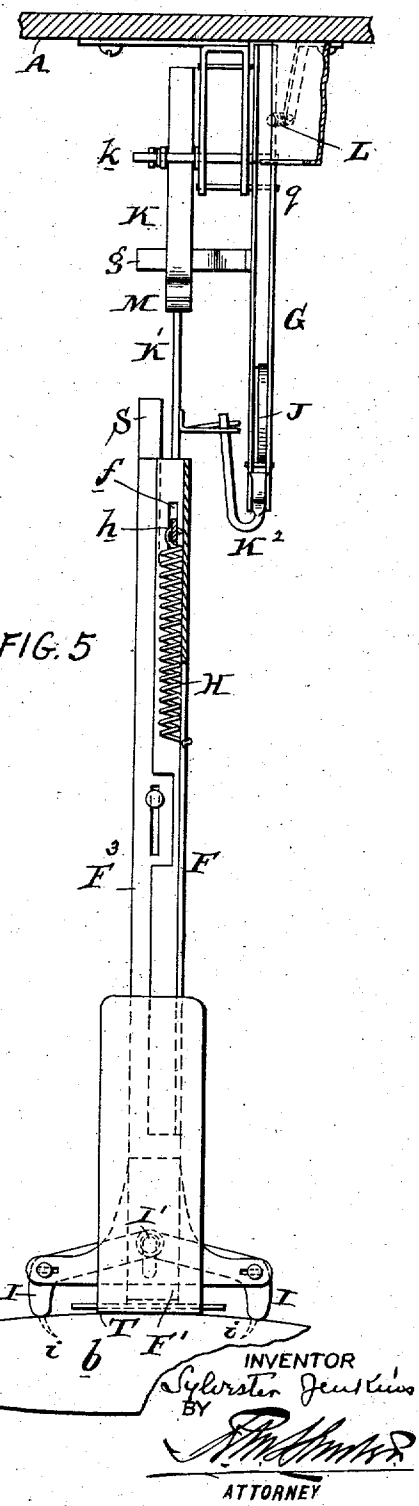

FIG. 5

WITNESSES:

D. Webster Jr.

Wm. Rooney.

INVENTOR

Sylvester Jenkins

BY

ATTORNEY

THE NORRIS PETERS CO., WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

SYLVESTER JENKINS, OF LANSDALE, PENNSYLVANIA.

VENDING-MACHINE.

No. 884,589. Specification of Letters Patent. Patented April 14, 1908.

Application filed December 29, 1904. Serial No. 238,750.

To all whom it may concern:

Be it known that I, SYLVESTER JENKINS, of Lansdale, county of Montgomery, and State of Pennsylvania, have invented an Improvement in Vending-Machines, of which the following is a specification.

My invention has reference to vending machines and consists of certain improvements which are fully set forth in the following specification and shown in the accompanying drawings, which form a part thereof.

The object of my invention is to provide a suitable construction of hand controlled vending machine which shall have a capacity of positively picking an article out of the original box or case and deliver the same.

My invention has special use in the vending of cigars, which, under the law, must be sold directly from the box.

My invention consists of hand controlled devices for spearing the cigar or other article while in the box and then withdrawing and discharging it; and more specifically, my invention comprehends such device combined with coin controlled mechanism which prevents the operation of the spearing devices except when a suitable coin has been deposited.

My invention also includes many details of construction, which, together with the above features, will be better understood by reference to the drawings, in which:

Figure 1 is a sectional elevation of a vending machine embodying my invention; Figs. 2 and 3 are enlarged views of portions of same with the parts moved to different positions; Figs. 4 and 5 are sectional plan views of the spearing devices before and after spearing a cigar; and Fig. 6 is a sectional elevation of a portion of the coin guide.

A is the case and may be of any suitable shape.

A′ is an oblique support for sustaining the cigar box B upon an incline so as to cause the cigars *b* to roll down to the bottom when left to themselves.

C is a plunger guided in a fixed guide C^3 and forced downward by a spring C^4. The lower end of this plunger has pivoted to it at *c* a rock arm C′, to the ends of which are pivoted clamping frames C^2 C^2 for holding the cigars in place at the moment of spearing the lowermost one. An ordinary ring lifter E^2 surrounds the plunger C and by rod E′ is caused to lift the plunger slightly (when the spearing device is withdrawn) to raise the frames C^2 to liberate the cigars so that one of them shall be free to roll down into position to be next speared. This rod E′ is pulled upward by the screw E moved by the spearing mechanism and operates to rock the ring lifter to grip the plunger and raise it a small distance. When the spearing devices are again moved forward the screw E releases the rod E′ and allows the plunger C to move downward to again apply the clamping frames C^2.

D′ is a guide rod and upon it slides the tubular handle D which is adapted to be reciprocated by hand. F is a frame sleeved upon the handle D and adapted to be coupled with it by a pawl *h* adapted to catch over the end *d* so that when the handle is moved downward the frame F will be moved down by means of the pawl. The lower end of this pawl will catch upon the hook M of the lever K and be disengaged from the handle D except when a coin J depresses the coin lever G′ and lowers the arm *g* to allow the hook M to drop out of the path of the pawl *h*. A spring H connects the pawl *h* with the frame F and acts to pull the pawl into engagement with the end of the handle D.

The frame F carries upon its lower ends the spearing devices which consist of the two pivoted bell crank arms I I having slender needle points *i* which are caused to pierce the cigar and thus positively takes hold of it as shown in Fig. 5. These arms I are hinged to the frame F^2 having a rear extension F^3 secured rigidly to the frame F. An abutment frame F′ is guided upon the frame F and adapted to be reciprocated thereon. As shown, the plate F′ rests against the underside of the plate F^3 of frame F and is held in place by a pin and slot which permits the frame F′ to be reciprocated relatively to the said frame F and its plate F^3. It is provided with a plate T between the needle points *i i* which is adapted to be brought into contact with the cigar when moved downward and thereby be held at rest while the frames F and F^2 are moved downward still further. This has the effect of moving the hinge points of the bell crank levers I downward and cause them to swing about the pin I′ on the abutment frame as shown in Fig. 5, with the result that the needle points *i* are forced into the cigar. These movements are only permitted when the hook M of the lever K is lowered so as to permit the pawl to lock itself, upon the handle D. When the cigar *b* is speared, the handle D is withdrawn and

the collar D^2 on the handle causes the frame F to be raised also. As the cigar ascends, it is brought into contact with the stripper frame P by which it is pushed off the needle points. At this time, the upper end S of the frame F′ strikes the wall of the case and said frame ceases to move and the continued movement of the frame F causes the levers I to be oscillated to withdraw the needle points so as not to injure the cigar.

When the cigar is liberated, it falls upon the pivoted door N hinged at *n* and passes down through the delivery passage O. A counter weight N^3 normally keeps the door N closed to prevent the insertion of wires or devices to illegally extract cigars from the box. A second door N′ may also be employed so as to close the passageway when the cigar is in the act of descending. If a wire is attempted to be thrust up at this time, it will push up the second door N′ and this will lift the door N and close it upon the wire so as to prevent pilfering of the machine.

The coin J passes through the coin guides G and is delivered in the slot of the pivoted lever G′ pivoted at *g* and rolls down to the free end thereof causing said free end to be depressed against the action of the spring L as shown in Fig. 2. This lowers the catch M of the lever K and permits the handle D to push the frame F downward as before explained to spear a cigar. When the cigar drops upon the door N it causes the counterweight N^3 to lift and strike the end of the arm K′ to lift it. When lifted, it trips the coin catch K^2 on the pivoted lever G′ and liberates the coin which falls into the coin receptacle R.

The essential feature of my invention resides in the means for spearing the cigar or article to be withdrawn and after lifting it, causing its disengagement to permit discharge. It is immaterial what the details of such devices may be, so far as the general feature of my invention is concerned, as the spearing or gripping of the article may be accomplished in many ways without departing from the spirit of the invention. I therefore do not confine myself to the details herein set out, as they may be modified as found convenient or desirable.

The particular coin controlled mechanism shown is only given as an example of such a device and it is to be understood that the coin controlled devices may be made in a variety of ways, as may suit the desire of the manufacturer and hence I do not confine myself to the mechanism shown.

Having now described my invention, what I claim as new and desire to secure by Letters Patent, is:

1. In a vending machine a case and a reciprocating plunger, combined with automatic spearing mechanism carried by the plunger and located wholly within the case whereby the pressure of the plunger against the article will cause the spearing mechanism to penetrate and hold it.

2. In a vending machine a case and a reciprocating plunger, combined with automatic spearing mechanism carried by the plunger and located wholly within the case whereby the pressure of the plunger against the article will cause the spearing mechanism to penetrate and hold it, a stripper device in the path of the article when the plunger is withdrawn, and means independent of the plunger for withdrawing and resetting the spearing mechanism.

3. In a vending machine, a case, in combination with a reciprocatable frame extending through the walls and into the interior space of the case, movable means upon the end of the frame within the case for penetrating an article for lifting it, and operating devices wholly within the case for automatically causing a movement of the penetrating means relatively to the reciprocatable frame.

4. In a vending machine, a case, in combination with a reciprocatable frame extending through the walls and into the interior space of the case, movable means upon the end of the frame within the case for penetrating an article for lifting it, operating devices wholly within the case for automatically causing a movement of the penetrating means relatively to the reciprocatable frame, and means for automatically discharging the article from the penetrating means by the art of withdrawing the reciprocatable frame.

5. In a vending machine, the combination of a support for a receptacle of vendible articles, clamping devices for holding the articles with an intermittent pressure to liberate the articles successively, a hand operated reciprocatable frame, lifting means on the frame independent of the clamping device to penetrate the article to lift it, and means to discharge the article from the lifting means.

6. In a vending machine, the combination of a spring actuated frame having clamping devices adapted to be pressed upon the articles to be vended, hand operated means for removing the articles in succession, and means actuated by the hand operated means for intermittently removing the pressure of the clamping devices upon the articles.

7. In a vending machine, the combination of a spring actuated frame having clamping devices adapted to be pressed upon the articles to be vended and consisting of a pivoted rock arm C′ having at its ends clamping frames C^2 C^2, hand operated means for removing the articles in succession, and means actuated by the hand operated means for intermittently removing the pressure of the clamping devices upon the articles.

8. A vending machine having a hand operated spearing mechanism for penetrating the article and lifting it, combined with a

stripper device for stripping the article from the spearing mechanism, a discharge chute, and a pivoted counterweighted door at the top of said chute upon which the article falls having two flaps N N′ to respectively close the chute before the article is discharged and during the passage of the article through the chute.

9. A vending machine having a hand operated spearing mechanism for penetrating the article and lifting it, combined with a stripper device for stripping the article from the spearing mechanism, a discharge chute, and means for controlling the time of action of the spearing mechanism operated by the article.

10. In a vending machine, the combination of reciprocating means having devices for penetrating the article to be lifted, a hand operated part, and a catch for temporarily locking the hand operated part to the reciprocating means to move it.

11. In a vending machine, the combination of reciprocating means having devices for penetrating the article to be lifted, a hand operated part, a catch for temporarily locking the hand operated part to the reciprocating means to move it, and means actuated by the article during its discharge for causing the catch to lock the reciprocating means against movement.

12. In a vending machine, lifting means for lifting an article to be discharged consisting of a reciprocating frame, pivoted arms having penetrating needles to pierce the article to be lifted, and a reciprocating abutment plate carried by the reciprocating frame and adapted to operate the pivoted arms.

13. In a vending machine, a hand operated reciprocating frame, combined with a point to penetrate the article movably carried on the end of the reciprocating frame, and an abutment adapted to be pressed into contact with the article for moving the penetrating point to make it penetrate the article.

14. In a vending machine, a hand operated reciprocating part, a second reciprocating part substantially parallel to the first mentioned part, penetrating devices carried upon the end of the second reciprocating part, and a device for temporarily locking the two reciprocating parts together when vending an article.

15. In a vending machine, a case, a hand operated reciprocating frame extended through the wall of the case, and means to penetrate the article to be vended located wholly within the case, combined with means for connecting or disconnecting the hand operated frame and the means to penetrate the article, and devices for putting the connecting or disconnecting means into or out of operation.

In testimony of which invention, I hereunto set my hand.

SYLVESTER JENKINS.

Witnesses:
ERNEST HOWARD HUNTER,
R. M. KELLY.