

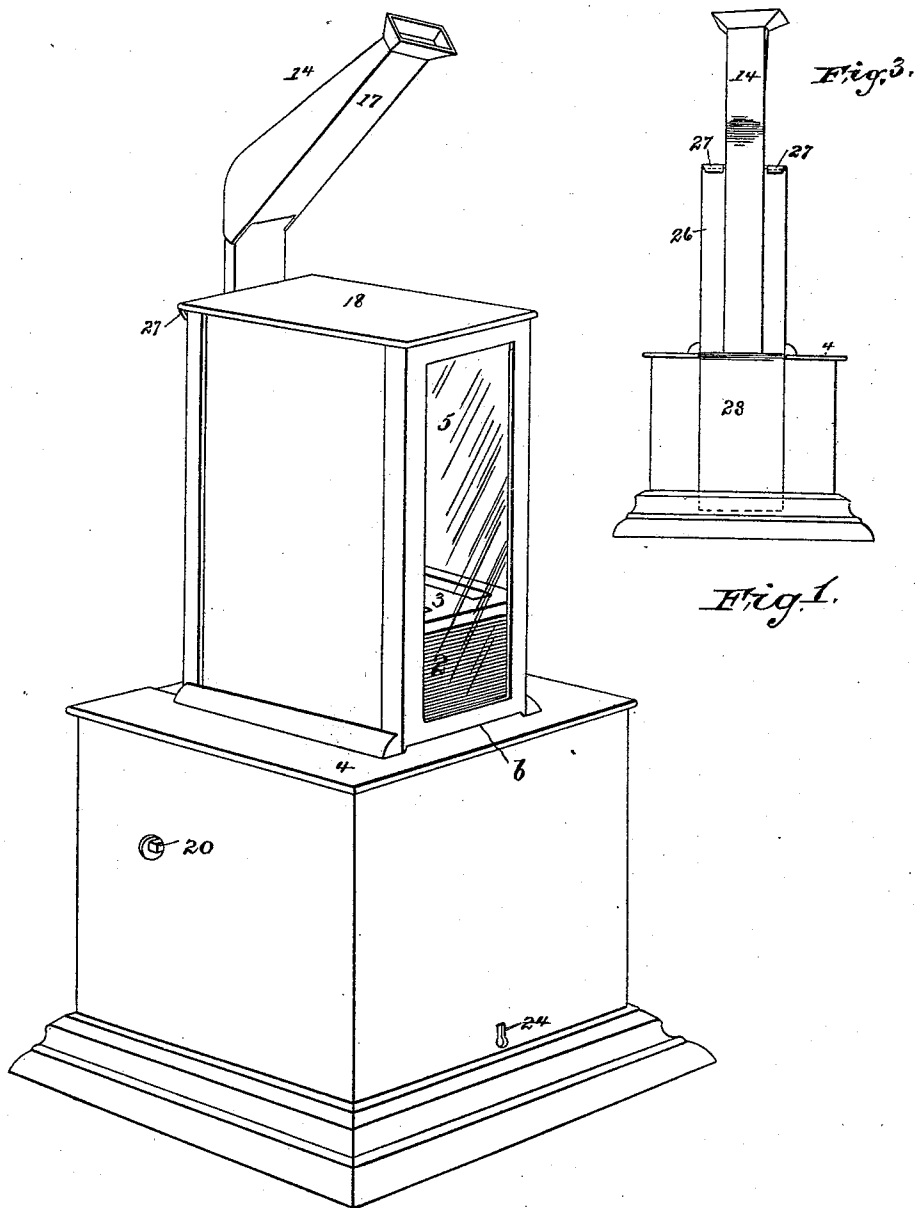
(No Model.)

2 Sheets—Sheet 1.

V. A. KREPPS.
VENDING MACHINE.

No. 479,005.

Patented July 19, 1892.



Attest;
W. H. Benjamin
E. C. Krigg.

Inventor;
Virgil A. Krepps
by Read & Price
his Attorneys

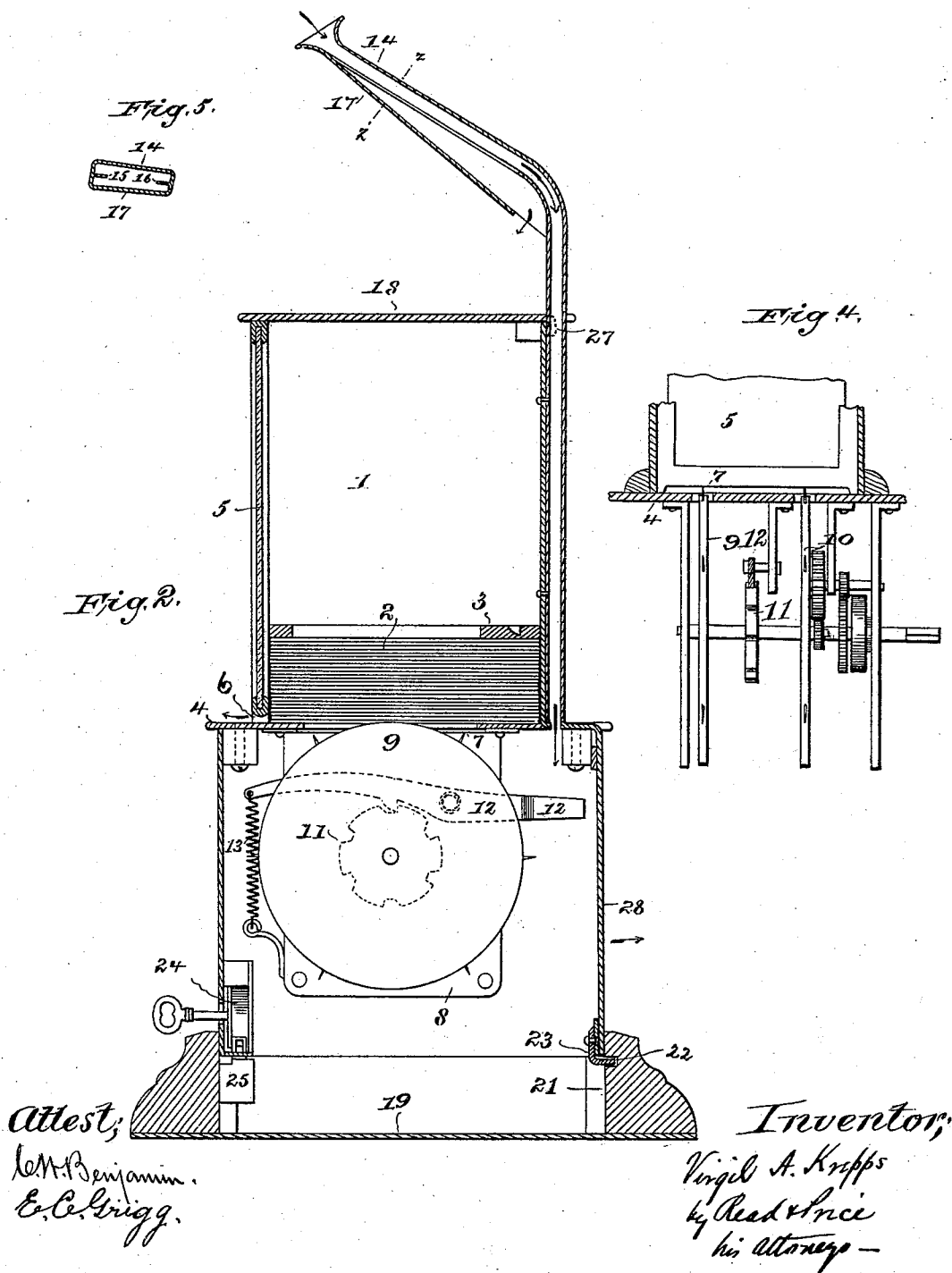
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UNITED STATES PATENT OFFICE.

VIRGIL A. KREPPS, OF KENSICO, NEW YORK, ASSIGNOR, BY MESNE ASSIGNMENTS, TO DANIEL I. CALDWELL, OF LYNN, AND ROBERT MILLS, OF NEWTON, TRUSTEES, AND HARRY W. MASON, OF NEWTON, MASSACHUSETTS.

VENDING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 479,005, dated July 19, 1892.

Application filed November 9, 1891. Serial No. 411,285. (No model.)

To all whom it may concern:

Be it known that I, VIRGIL A. KREPPS, a citizen of the United States, residing at Kensico, in the county of Westchester and State of New York, have invented certain new and useful Improvements in Vending-Machines; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to a device of that class which is used to vend commodities upon the introduction of a coin of a required value into the apparatus.

The invention is designed more particularly to automatically supply postage-stamps to the purchaser on the introduction of the coin; but it is also applicable to other commodities, as will be understood from the explanation hereinafter following.

The device comprises an apparatus containing a receptacle for the commodity, in the bottom of which is a spring-actuated wheel-train or other suitable motor provided with a disk or wheel arranged to be driven by said train, normally held inactive by a detent which is released upon the introduction of a coin of the proper value, when the wheel will turn a definite distance and expel a package of the commodity. In order to insure the expulsion of the package, the disk or wheel is permitted to project through a slot in the bottom of the receptacle.

In the accompanying drawings, which illustrate the invention, Figure 1 is a perspective view of the apparatus. Fig. 2 is a central vertical section. Fig. 3 is a rear elevation on a reduced scale. Figs. 4 and 5 are detail sectional views.

1 represents a receptacle for the commodity, which in the case illustrated in the drawings is postage-stamps. These stamps are inclosed in small envelopes, which are arranged in a pile, as indicated at 2, and upon the top is a weight 3, which fits loosely in the chamber and is sufficiently heavy to press the envelopes firmly against the bottom 4 of the chamber.

In the front of the chamber 1 is a glass panel

5, through which the stock of merchandise can be seen from time to time and the necessity of renewal without opening the box ascertained. Beneath the glass panel is a narrow opening 6, just large enough to permit the ejection of a single package of merchandise— in this instance of a single envelope containing postage-stamps. The bottom of the chamber 1 is slotted, as indicated at 7 in Fig. 4, and as many slots as may be necessary may be made in the box. In the case illustrated in the drawings two slots are made, as indicated in Fig. 4.

Secured to the bottom and beneath the chamber 1 is supported a spring-actuated wheel-train, (indicated at 8,) upon one of the shafts of which are mounted two disks 9 and 10, rigidly secured thereto. Upon the shaft is mounted a ratchet-wheel 11, with which co-operates a detent 12, having an arm projecting in the path of travel of a coin inserted into the machine and held against the ratchet-wheel with a light tension by means of a spring or other equivalent device 13. Each of the disks 9 10 is provided upon its periphery with a series of needle points or spurs, which in the travel of the wheel pass through the slot in the bottom of chamber 1 and penetrate the lowermost package of the commodity, so that in the forward sweep of the wheel the package is forced out through the opening 6, whence it may be removed by the purchaser. There are as many teeth in the ratchet-wheel 11 as there are points on the periphery of the wheel 9 or 10, and their number is preferably limited, so that the arc between two teeth will be long enough to expel a package far enough to insure its possibility of removal by the purchaser. The coin-conduit terminates at the upper part in a throat 14, the bottom of which is slotted so as to form ways, (indicated at 15 16, Fig. 5,) upon which the coin slides by gravity after insertion. The slot is of proper width to reject a coin of a smaller denomination than the one required for the package of merchandise.

In the machine illustrated the apparatus is designed to operate upon the introduction of a five-cent piece. If a cent or dime be intro-

duced into the throat, it will fall through the slot and drop upon the platform 17, whence it will fall upon the top 18 of the receptacle, thus indicating to the purchaser that an improper coin has been deposited and enabling him to recover the same. The throat is of such a width that a coin of greater value, as a quarter, cannot be inserted into the machine. The projecting arm of the lever 12 lies immediately under the lower end of the coin-conduit, so that when the coin falls from the conduit it strikes the arm, releases the detent, and unlocks the wheel-train. The release is only momentary, as of course the coin immediately rolls from the arm and drops upon the bottom 19 of the apparatus. The spring 13 then forces the detent to lock in the next tooth of the ratchet-wheel. The wheel-train may thus be given any desired range of movement by providing a ratchet with a proper number of teeth. The spurs should correspond in number to the teeth of the ratchet.

Opposite the winding-post of the wheel-train is an opening 20, (indicated in Fig. 1,) through which a key may be inserted and the spring wound without necessitating the opening of the machine.

In order to permit of the convenient insertion of new packages of merchandise and the removal of the cash, a central panel at the rear of the machine may be almost instantly removed by reason of the following structure.

The base of the apparatus is provided with a heavy flange 21, in which a groove, as indicated at 22, is made. A bent lip 23 is secured to the lower part of the frame which houses the wheel-train, and a lock 24, co-operating with a keeper 25, serves to fasten the parts together. When the lock is opened, the apparatus may be tilted in the direction indicated by the arrow, when the upper portion may be withdrawn from the base and the cash removed. The rear side of the chamber 1 is secured to the coin-conduit, as is also a portion of the chamber in which the clock-movement is housed. The top of the chamber 1 is provided with overhanging lugs or flanges 27, under which the back may be slid. The seg-

ment 28 of the lower chamber is locked in place by the flange 21. In case it is desired to insert more packages in the chamber 1, the lock 24 is released and the apparatus withdrawn from the base in the manner hereinbefore indicated. As the lower end of the strip 28 is then free to be moved outwardly, the panel 28 and the rear wall of the chamber 1, which are secured to the coin-conduit, can be instantly removed. It will thus be seen that the action of the device is entirely automatic after the coin has been introduced. The needle-points insure a forcible expulsion of the envelope containing the stamps. In case more bulky merchandise were to be vended—as, for example, confections—the spurs could be extended so as to press against the rear side of the bottom package. With a package so small as a folded paper containing stamps, however, the construction shown and described is much more certain in operation. It will be noticed that the weight 3 is slotted, also. This prevents injury to the spurs in case the stamps should be exhausted and a coin introduced. It will also be noted that the spurs normally lie out of contact with the merchandise, so that the wheel-train has no load at the starting, but can acquire momentum before acting on the merchandise.

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

A vending apparatus comprising a receptacle for the merchandise, provided with a slot or opening in line with the bottom package, a spring-actuated wheel-train, a series of radial spurs driven by a shaft of the train and adapted to sweep through an opening in the bottom of the receptacle and engage the bottom package, said spurs being out of contact with the package when the apparatus is inactive, and a coin-operated detent to release the train.

In testimony whereof I affix my signature in presence of two witnesses.

VIRGIL A. KREPPS.

Witnesses:

VICTOR E. BURKE,
E. C. GRIGG.