A. D. GROVER & E. E. BARBER.

EJECTOR FOR VENDING MACHINES.

APPLICATION FILED FEB. 6, 1908.

982,812.

Patented Jan. 31, 1911.

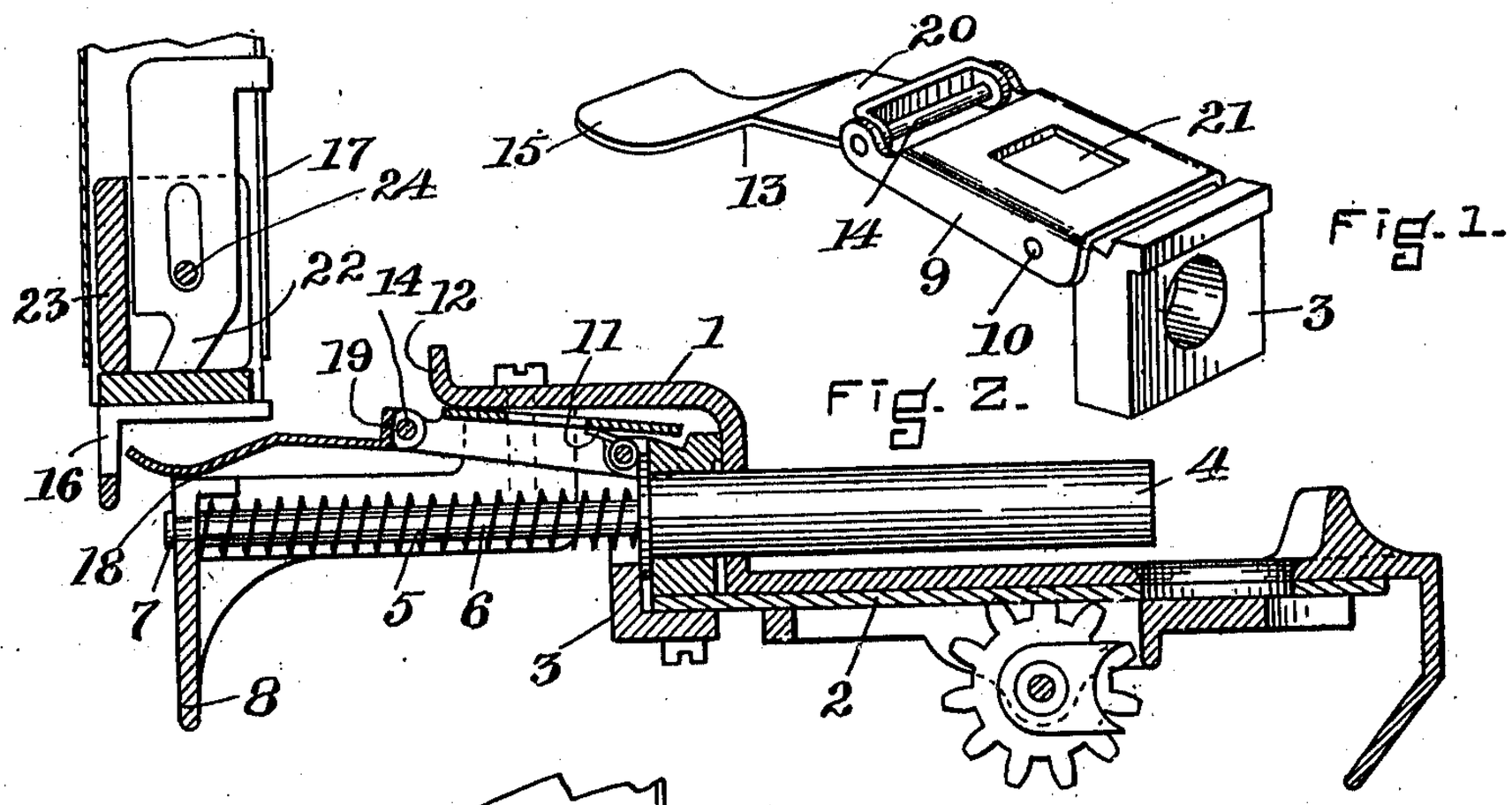

Fig. 1.

Fig. 2.

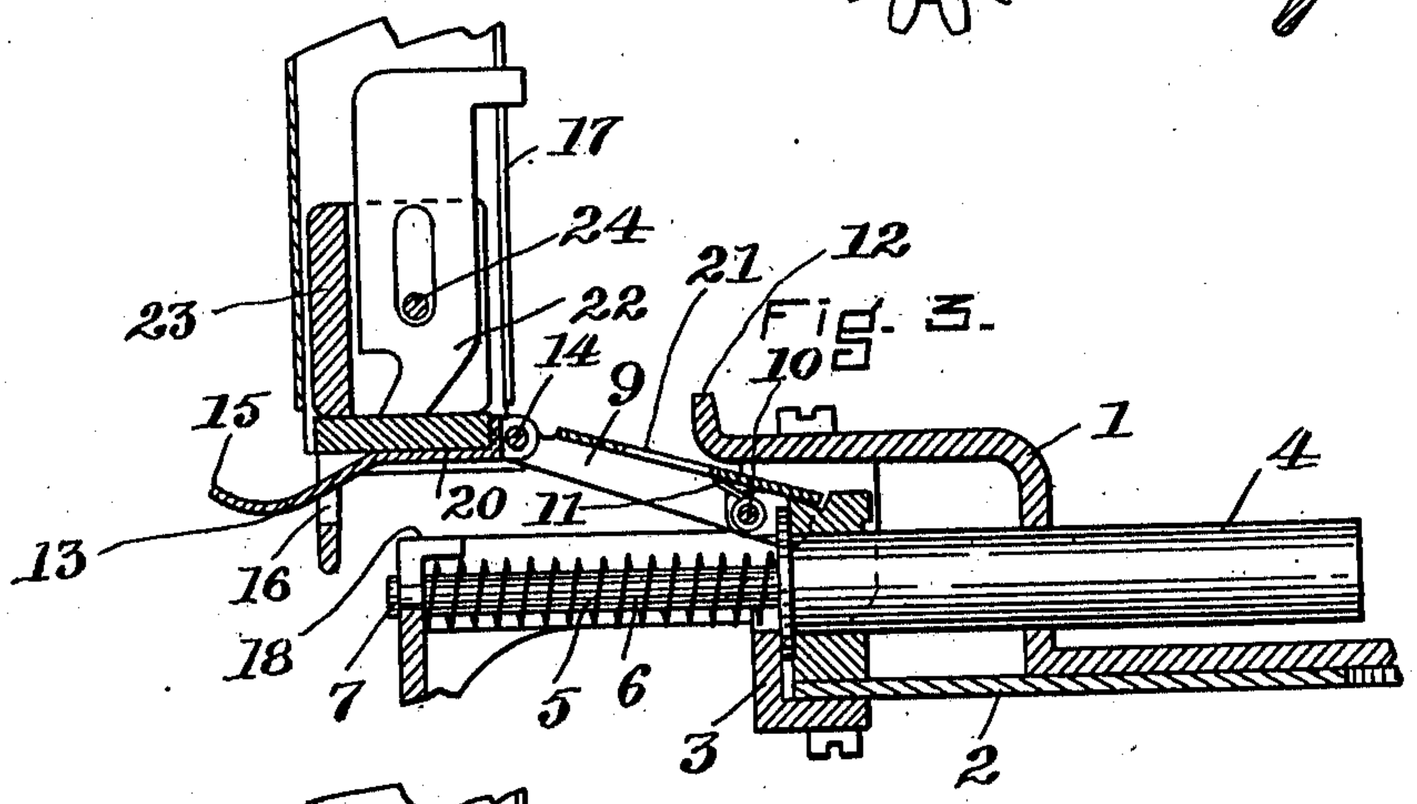

Fig. 3.

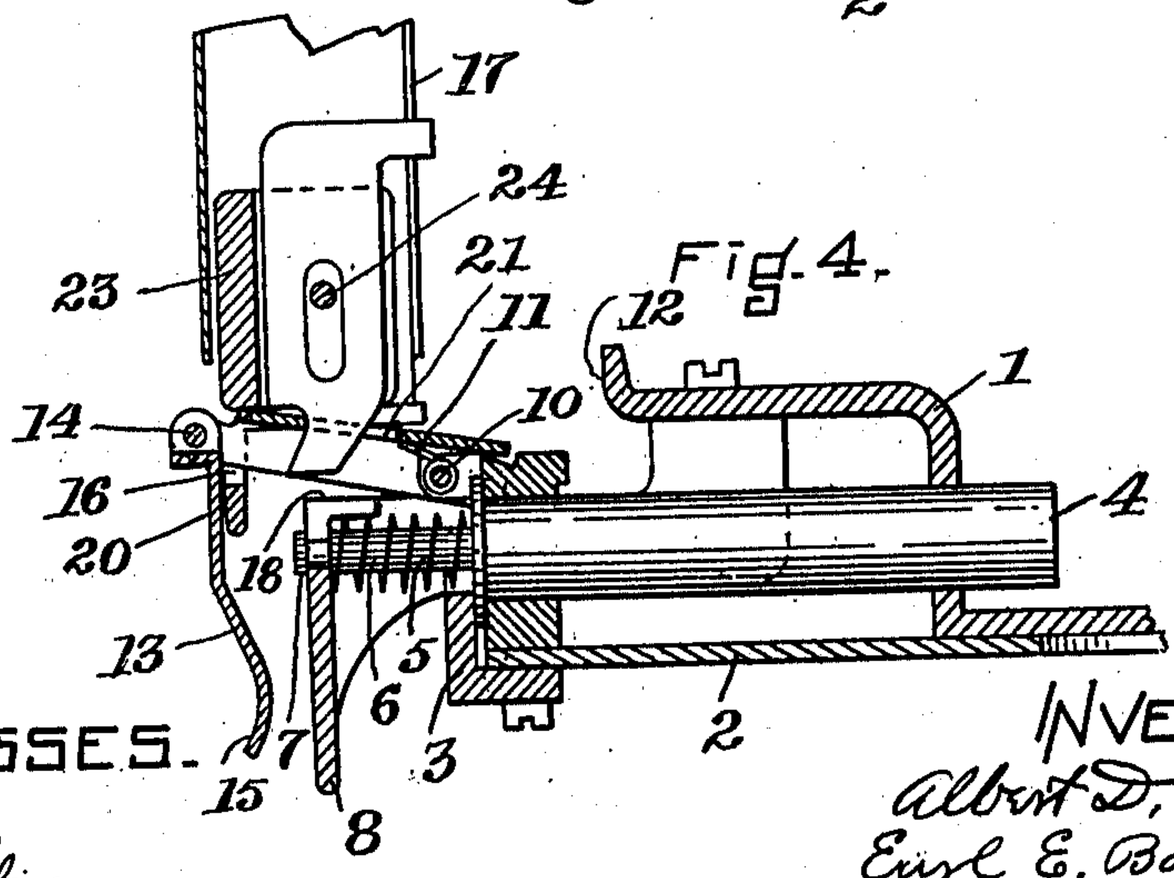

Fig. 4.

WITNESSES.

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UNITED STATES PATENT OFFICE.

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EJECTOR FOR VENDING-MACHINES.

982,812. Specification of Letters Patent. **Patented Jan. 31, 1911.**

Application filed February 6, 1908. Serial No. 414,532.

To all whom it may concern:

Be it known that we, ALBERT D. GROVER, of Malden, county of Middlesex, and State of Massachusetts, and EARL E. BARBER, of Boston, county of Suffolk, and State of Massachusetts, citizens of the United States, have invented certain new and useful Improvements in Ejectors for Vending-Machines, of which the following is a specification, reference being had to the drawings accompanying the same and forming a part thereof.

Our invention relates to a device for ejecting packages of goods from a coin controlled vending machine.

The object of our invention is to provide a yielding goods ejector, means to prevent the ejector from ejecting more than one package of goods at each operation of the coin slide to which it is attached, to prevent the ejector from coming in contact with the receptacle containing the goods, and means for locking the coin slide in its inmost position when the last package of goods has been ejected.

In the drawings accompanying this specification and forming a part thereof—Figure 1 is a perspective of the goods ejector detached from the plunger and coin slide. Fig. 2 is a sectional elevation of the goods ejector attached to the plunger and coin slide, a section of the frame in which same is mounted, and a partial section of the stack or goods receptacle. Fig. 3 is a sectional elevation of the same parts with the plunger pushed inward to a point where the goods ejector contacts with the package of goods in the receptacle; and Fig. 4 is a sectional elevation on the same line as Fig. 2, with the plunger at its inmost position, the last package of goods ejected, and the plunger and slide locked against operation.

In the drawings, 1 represents the frame in which the coin slide 2 is mounted to slide freely in and out. The coin slide 2 has a block 3 attached to its inner end and a plunger 4 mounted in said block 3. The spring 5 is mounted upon the rod 6 which is secured at the point 7 in the portion 8 of the frame 1, the spring 5 serving to return the coin slide and plunger to their normal position after a package of goods has been ejected. To the upper edge of the block 3 the goods ejector 9 is yieldingly pivoted by means of the pivot 10 in such manner as to partially rotate upon said pivot 10, and is kept in its uppermost position by means of a spiral spring 11 which is wound upon and one end of it attached to the pivot 10, its free end contacting against the under side of the goods ejector 9. The portion 12 limits the upward movement of the goods ejector.

13 is a guide pivoted to the goods ejector 9 by means of the pivot pin 14 and is arranged to partially rotate upon said pivot. The free end 15 projects through the opening 16 attached to the bottom of the goods receptacle 17. This opening 16 serves to keep the portion 13 in alinement and keep it from dropping downwardly when the plunger is pushed in as shown in Fig. 3. The portion 13 is so arranged and formed as to lie upon the surface 18 when the plunger and coin slide are at their outmost position so that when the plunger and goods ejector are moved inwardly the outer end of said portion 13 will contact with the lower wall of the opening 16 and hold the parallel portion 20 upwardly against the underside of the lowermost package of goods, as shown in Fig. 3. The vertically projecting part 19 will contact with the forward edge of the goods to push it outwardly from the stack. The contact of the parallel portion 20 with the under side of the goods prevents the ejector from being thrown upwardly to contact with the inner wall of the goods receptacle. An opening 21 is formed in the goods ejector 9, designed to receive the lower end of a sliding cam 22 which is pivoted in a slot in the weight 23 by means of the pivot 24. The weight 23 rests upon the uppermost package of goods and follows down with the goods as they are ejected. When the last package of goods is ejected the point 22 will drop downwardly below the lower surface of the weight 23 and the hook portion 22 catch in the opening 21, thus locking the goods ejector in its most inward position.

We do not limit ourselves to the exact form of yielding goods ejector or guide, nor to the form of locking device shown, as the form or shape may be varied without departing from the spirit of our invention.

What we claim is—

1. In a goods ejector for vending machines and the like, an ejector consisting of two portions yieldingly pivoted to each other; a block secured to a plunger, the inner portion of the yielding ejector being yieldingly pivoted thereto; a spring for maintaining the inner portion in its normal

upward position; and means for guiding the outer portion of the goods ejector to limit its contact to the lowermost package of goods, and to eject the same from the goods receptacle.

2. A goods ejector for vending machines and the like, comprising two yieldingly pivoted portions, the inner portion being yieldingly pivoted to a block secured upon a slidable plunger; said plunger; means for holding the inner portion in its normal upward position, the outer portion being rotatively pivoted to the inner portion in such manner as to contact with the under side of the lowermost package of goods to prevent the ejector from contacting with or ejecting more than one package of goods at each complete movement of the plunger and ejector.

3. A goods ejector for vending machines and the like, comprising two rotatively pivoted portions; a block secured to a slidable plunger; said plunger, the inner portion of said plunger being rotatively pivoted to said block; a spring co-acting with said block and said inner portion to retain it in its normal upward position; the outer portion of the ejector comprising a guide surface and an ejector surface; the guide surface serving to limit the contact of the ejector to the lowermost package of goods; a goods receptacle; and means secured to the goods receptacle for guiding the outer portion of the ejector.

4. In a goods ejector for vending machines, the combination of two yieldingly pivoted portions; a block secured to a slidable plunger; said plunger; the inner portion of the two yieldingly pivoted portions being pivoted to the block; a spring for holding said portion in its upward position; means for limiting the upward movement of said portion; an outer portion rotatively pivoted to said inner portion; means for guiding the outer portion to limit its vertical movement; and means co-acting with the said inner portion to lock the plunger inwardly when the last package of goods has been ejected.

In witness whereof, we have hereunto set our hands, in the presence of two subscribing witnesses, this the 4th day of February, A. D. 1908.

ALBERT D. GROVER.
EARL E. BARBER.

Witnesses:
R. P. ELLIOTT.
H. W. KELSO.