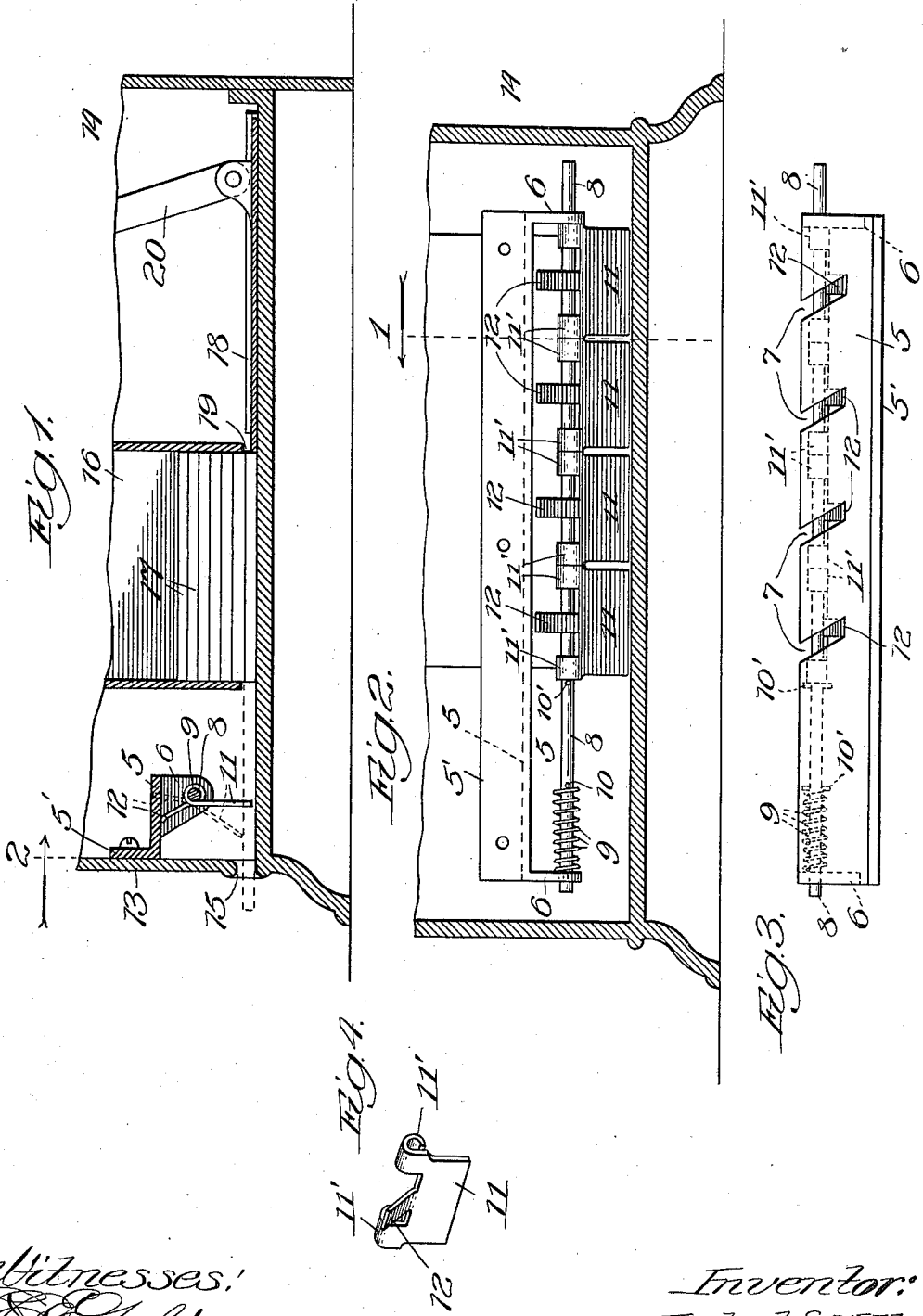


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 DELIVERY PROTECTOR FOR VENDING MACHINES.
 APPLICATION FILED JAN. 25, 1912.

1,024,140.

Patented Apr. 23, 1912.



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DELIVERY-PROTECTOR FOR VENDING-MACHINES.

1,024,140.

Specification of Letters Patent.

Patented Apr. 23, 1912.

Application filed January 25, 1912. Serial No. 673,342.

To all whom it may concern:

Be it known that I, HERBERT S. MILLS, a citizen of the United States, residing at Oak Park, in the county of Cook and State of Illinois, have invented a new and useful Improvement in Delivery-Protectors for Vending-Machines, of which the following is a specification.

In any vending machine wherein the article to be vended is of a kind adapted to be stacked in a magazine in the casing to be delivered by pushing it out from underneath the stack, and wherein the delivery is made through an opening in the casing unprovided with suitable protection, the machine is liable to be robbed as by inserting a wire or other suitable instrument through the delivery-opening. This is particularly the case where the opening is required to lead straightway from the base of the stack, to permit articles of more or less flimsy character to be pushed through it, such as folded paper drinking-cups, envelopes, and the like, which are more usually pushed, by operating the machine, only part way through the delivery-opening and require the purchaser to grasp the protruding end of the article and pull it out of the machine.

The object of my invention is to provide in the path of delivery a protecting device which shall not interfere with the legitimate operation of such a machine, but which will effectually prevent its being robbed.

In the accompanying drawing, Figure 1 is a broken view in sectional side elevation of a vending machine equipped with my improved protector, and showing only so much of such a machine as is required for understanding my improvement, the section being taken on line 1, Fig. 2; Fig. 2 is a section on line 2, Fig. 1; Fig. 3 is a plan view of the protector, and Fig. 4 is a perspective view of a shield-detail thereof.

The detector, in the preferred detail-construction thereof illustrated, comprises a flat metal bar 5 formed with ears 6 on the ends; in the bar is provided a series of cams formed of parallel inclined slots 7 extending from the edge of the bar constituting its inner edge, when in the operative position hereinafter described, short of its opposite edge. In the ears is supported, near its ends, a hanger-rod or shaft 8, which need not be rotary but is lengthwise shiftable in its bearings under the control of a spring 9 confined about it against the inner face of one

of the ears by a pin 10 on the rod. Between another pin 10¹ on the rod and the opposite ear are confined, against undue shifting, a series of shields 11, each being formed with a pair of eyes 11¹ at which it is loosely hung on the rod, and, between the eyes, with a tongue 12 to engage with an inclined slot 7 and bent to project slightly in a forward direction toward its end.

To adapt the protector to be rigidly fastened in its operative position to the front wall 13 of a vending machine 14, it is provided with an angle-section 5¹ through which to screw it to the inner face of the wall in position to cause the shields 11 to hang in the path to the delivery-opening 15 of the machine, of which a magazine 16 is shown containing a stack of articles 17 to be vended, and a push-bar 18 worked through an opening 19 in the base of the rear wall of the magazine and operated by a suitable lever 20.

Vending machines of the kind herein exemplified are too well-known to require a more extensive showing than that illustrated in the drawing, particularly as my improvement is adaptable to all such machines.

With each operation of the push-bar, it advances the lowermost article 17 from the stack through the delivery-opening 15 far enough, as indicated in Fig. 1, to adapt it to be pulled out by hand the rest of the way. In passing the series of shields 11 depending in its path, it raises them out of its way to the dotted position represented in Fig. 1, which it does with immaterial resistance from them, since the tongue on each registers with and works in a slot 7, permitting it to turn therein and the shields to be raised on their supporting-rod. In the rise of the shields the cam-action of the slots against the tongues causes the eyes 11¹, which abut one against the other, as represented in Fig. 2, to force the eye at the inner end of the shield-series against the pin 10¹ and thus shift the rod 8 against the resistance of the spring 9, the recoil of which returns the rod and shields to normal position when the article being delivered has been withdrawn.

The device prevents robbing the machine, as through the medium of a suitable wire, as follows: If such a wire be bent to adapt it to be inserted behind the entire row of hanging shields, the wire may be manipulated to raise them out of the delivery path,

as does an article undergoing delivery, as described; but then the wire itself obstructs the delivery, being in the path thereof so that it frustrates the attempt at robbery. Should the attempt be made by using any suitable implement to raise any one of the shields, the turning of its tongue in the respective cam-slot will cause that shield to shift the rod 8 far enough to take the tongue on each remaining shield out of registration with its respective actuating slot and thus cause it to register with the bar to one side of the slot, whereby it and the shield provided with it are obstructed against turning, so that the other shield or shields are locked against being raised by an article attempted to be withdrawn, because the latter can not pass them.

I realize that considerable variation is possible in the details of construction thus specifically shown and described, and I do not intend by illustrating a single, specific or preferred form to limit my invention thereto; my intention being in the following claims to claim protection upon all the novelty there may be in the device as broadly as the state of the art will permit.

What I claim as new, and desire to secure by Letters Patent, is—

1. A delivery-protector for vending machines, comprising a support, a series of abutting independently-swinging shields hanging on said support to be turned, when depending in the path of delivery, out of said path by the delivery-operation, and independently-actuating cam-operated shifting means for each shield in so turning, whereby the turning of one shield will shift and lock against such turning the other or others in the series.

2. A delivery-protector for vending machines, comprising a bar provided with a

series of cams, a support on said bar, and a series of shields hung to abut and swing independently on said support, with tongues on the shields normally registering with said cams to engage therewith, for the purpose set forth.

3. A delivery-protector for vending machines, comprising a bar provided with a series of inclined slots, a spring-pressed rod shiftably supported on said bar, and a series of shields hung to abut and swing independently on said rod and confined thereon to shift with it, with tongues on the shields normally registering with said slots to engage therewith, for the purpose set forth.

4. A delivery-protector for vending machines, comprising a bar provided with a series of inclined slots, a longitudinally spring-pressed rod shiftably supported on said bar, and a series of shields having eyes, at which they are swingingly and abuttingly hung on said rod, and tongues normally registering with said slots to engage therewith, the shields being confined on the rod to shift with it, for the purpose set forth.

5. In combination with a vending machine, a delivery-protector therefor comprising a bar provided with a series of cam-slots and secured in place to extend over the delivery-opening of the machine, a longitudinally spring-pressed rod shiftably supported on said bar, and a series of shields abuttingly hung to swing independently of each other on said rod and confined thereon to shift with it, and tongues on the shields normally registering with said slots to engage therewith, for the purpose set forth.

HERBERT S. MILLS.

In presence of—

A. U. THORIEN,

R. A. SCHAEFER.