(No Model.)

W. S. LENNON.

VENDING APPARATUS.

No. 427,093. Patented May 6, 1890.

Fig. 1.

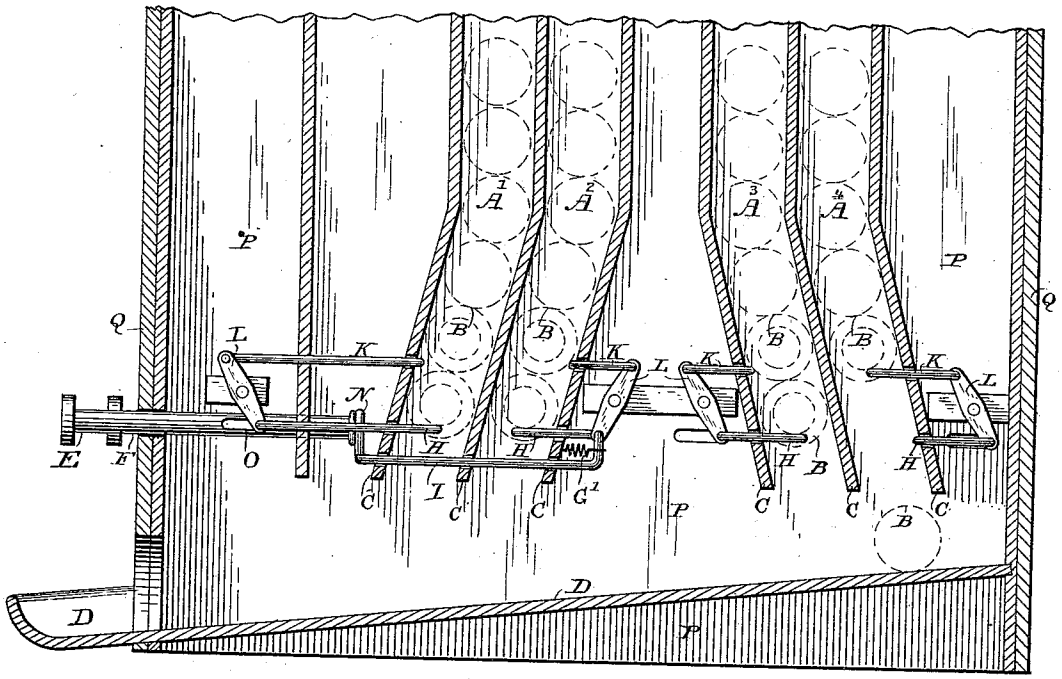
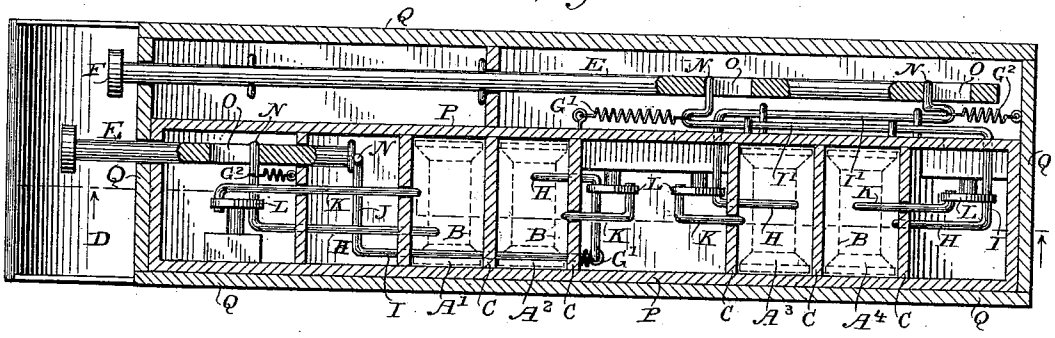


Fig. 2.



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VENDING APPARATUS.

SPECIFICATION forming part of Letters Patent No. 427,093, dated May 6, 1890.

Application filed January 10, 1890. Serial No. 336,502. (No model.)

To all whom it may concern:

Be it known that I, WATSON S. LENNON, of Hardinsburg, in the county of Breckinridge and State of Kentucky, have invented new and useful Improvements in Vending Apparatus, of which the following is a specification.

This invention relates to vending apparatus wherein articles of merchandise of different characters are delivered upon the manipulation of an operating delivery slide or rod.

More particularly this improved apparatus is designed as a spool-cabinet for containing a plurality of columns of spools of thread, each of which columns contains spools of thread of a particular color and number, the cabinet being so arranged that on the manipulation of one of the delivery slides or rods in either direction one spool only will be delivered.

The improved vending apparatus is illustrated in the accompanying drawings, in which—

Figure 1 is a vertical longitudinal section of the apparatus, and Fig. 2 is a horizontal section thereof.

A′ A^2 A^3 A^4 are a series of package-compartments for containing the articles to be delivered by the apparatus—such as spools of cotton—indicated at B B. There are by preference four of these compartments across the apparatus, as indicated in Fig. 1. Each compartment is of any desired height for containing any desired number of spools, and each is designed to contain spools having thread of a predescribed character. The several compartments have inclined separating-walls C C, and each is open at its bottom. Beneath the open bottoms of the several package-compartments is an inclined chute D, onto which drop the spools from the four compartments. This chute conveys the spools outside of the apparatus. The deposit of the spools from the two front compartments A′ A^2 onto the chute is controlled by one reciprocating delivery rod or slide E, and the deposit of the spools from the two rear compartments A^3 A^4 is controlled by a second reciprocating delivery rod or slide F, the two slides E F being side by side. The mechanism controlled by the two slides E and F may be the same; but there are shown two such mechanisms, one being a modification of the other. These two mechanisms will be separately described.

The reciprocating rod E controls the two front compartments A′ A^2 in such manner that when it is pushed inward beyond its normal position one spool will be delivered to the delivery-chute D from the inner compartment A^2, and when it is pulled out beyond its normal position one spool will be delivered by the outer compartment A′. The rod E is insured against displacement by passing through guide-apertures in the casing of the apparatus, or by other suitable means, and it is maintained in its proper normal position by two oppositely-acting springs G′ G^2.

The column of spools in the inner compartment A^2 are supported therein by a sliding stop H, which extends centrally partly across the lower part of the compartment. This stop extends through a guide-aperture in the rear wall C of the compartment A^2, and it preferably is the bent end of a wire rod I, which extends alongside of the two compartments A′ A^2. The forward end of this wire I is bent in front of the compartment A′ to constitute a movable arm J, which stands directly in the path of the slide E, but is unconnected therewith. When, therefore, the slide E is pushed in, it abuts against the arm J, and so moves the rod I inward, thus withdrawing the stop H from beneath the column of spools in the compartment A^2 and permitting the spools to drop by gravity upon the delivery-chute D. In order, however, to permit only one spool at a time to drop onto the chute, a sliding retaining-bar K is provided, which at the same time that the stop H is withdrawn is projected across the compartment A^2 above the lowermost spool and beneath all the superimposed spools, and hence only the lowermost spool is delivered. This retaining-bar K is operated from the stop H by means of a lever L, centrally pivoted to a stationary part of the apparatus and pivotally connected at opposite ends to the stop H and the bar K, respectively. When the lowermost spool has been discharged, the parts are restored by the spring G′ to their normal positions, the

retaining-bar K being withdrawn from the compartment A^2, permitting the column of spools to descend, while the stop H is simultaneously projected across the bottom of the compartment, thus maintaining the spools therein. It is evident that when the slide E is pulled out beyond its normal position no effect will be produced upon the bar K and stop H, since there is no connection between arm J and slide E.

Sliding across the bottom of the front compartment A′ and upholding the spools therein is a stop H, which projects out through the front wall C of this compartment. The forward end of this stop (which is composed of wire) is bent to form a tongue N at right angles to the length of the stop. This tongue enters a longitudinal slot O in the slide E, said slot having a length equal at least to the entire extent of the rearward movement of the slide E beyond its normal position, so that said tongue and the stop H are not affected by such rearward movement. When, however, the slide E is pulled outwardly, then the rear margin of the slot O encounters the tongue N, thus moving it forward, and so withdrawing the stop H from beneath the column of articles in the compartment A′. Thus it will be seen that the stops H H of the two compartments move in opposite directions to accomplish the same result. A retaining-bar K is provided in the front compartment A′, connected to the stop H by a lever L and operating in exactly the same manner as the corresponding parts in the compartment A^2. After the slide E has been pulled out the parts are restored to their normal positions by the spring G^2, which acts in a direction opposite to that of the spring G′.

The modified mechanism for operating the two rear compartments A^3 and A^4 is in principle and mode of operation the same as that already described. Both of the rear compartments are controlled by the delivery rod or slide F, which in the drawings is shown pushed in, the compartment A^3 being affected when the slide is pulled outward, and the compartment A^4 being affected when the slide is pushed inward. Each compartment is provided with a sliding stop H and a retaining-bar K, operated therefrom by a lever L, and the stops H, bars K, and slide F are maintained in their normal positions by two springs G′ and G^2, all as in the first-described construction. The only differences lie in the connection of the stops H H with the manipulating-slide F. The stops H H are the bent ends of wire rods I I′, respectively, which extend alongside each other in opposite directions, the wire rod I of the stop H in the compartment A^4 extending forward, and the rod I′ of the stop H in the compartment A^3 extending backward. Each of the rods I I′ has its other end bent to constitute a tongue N, the two tongues entering, respectively, into two longitudinally-extending slots O in the slide F. Each of these slots is at least as long as the movement of the slide in one direction, so that when the slide is moved backward it will only affect the forward tongue, and when it is moved forward it will only affect the rear tongue.

In constructing the apparatus the several package-compartments are inclosed by side walls P P, and the slide F is located outside of these walls, while the slide E is located between these walls. The whole is contained in an outer casing Q. A cabinet can be constructed capable of holding any number of characters of packages by simply multiplying the described apparatus and inclosing all in a common exterior casing Q.

I claim as my invention—

1. In a vending apparatus, two columnar package-compartments and two stops closing the bottoms thereof, respectively, and moving in opposite directions to deliver articles, in combination with a single manipulating rod or slide capable of movement in opposite directions and co-operating with both of said stops to actuate the same independently, according to the direction in which said slide is moved, substantially as set forth.

2. In a vending apparatus, two columnar package-compartments and two stops closing the bottoms thereof, respectively, and moving in opposite directions to deliver articles, in combination with a single manipulating rod or slide capable of movement in opposite directions and co-operating with both of said stops to actuate the same independently, according to the direction in which said slide is moved, and two oppositely-acting springs for restoring said stops and slide to their normal positions, substantially as set forth.

3. In a vending apparatus, two columnar package-compartments, two oppositely-moving stops closing the bottoms thereof, respectively, and a single double-acting manipulating slide or rod therefor, in combination with two sliding retaining-bars for each compartment, respectively, each bar being located in a plane above the stop in its compartment, the distance between the planes of the stops and bar being determined by the height of the articles contained in said compartments, and a lever-connection between each retaining-bar and its stop, whereby each bar will be projected across its compartment when the stop therefor is withdrawn, and vice versa, substantially as set forth.

In witness whereof I have hereunto signed my name in the presence of two subscribing witnesses.

WATSON S. LENNON.

Witnesses:
C. L. BEARD,
ALLEN GUTHRIE.