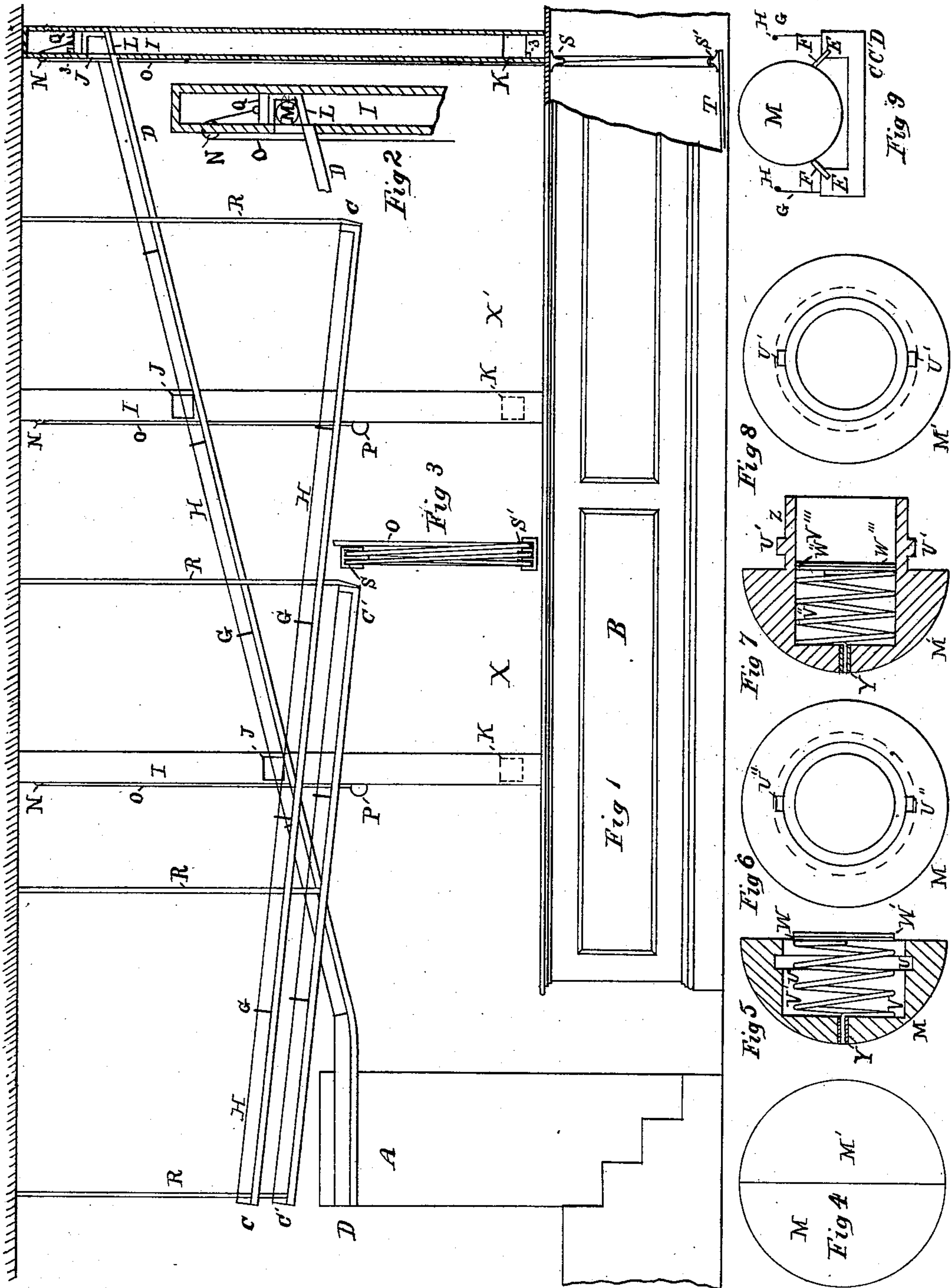


(No Model.)

W. S. LAMSON.  
Automatic Cash Carrier.

No. 243,451.

Patented June 28, 1881.



Witnesses -  
Kirkley Hyde.  
John O. Fryer

Inventor -  
William S. Lamson,  
By Albert M. Moore,  
His Attorney.



# UNITED STATES PATENT OFFICE.

WILLIAM S. LAMSON, OF LOWELL, MASSACHUSETTS.

## AUTOMATIC CASH-CARRIER.

SPECIFICATION forming part of Letters Patent No. 243,451, dated June 28, 1881.

Application filed February 14, 1881. (No model.)

*To all whom it may concern:*

Be it known that I, WILLIAM S. LAMSON, of Lowell, in the county of Middlesex and Commonwealth of Massachusetts, have invented certain new and useful Improvements in Automatic Cash-Carriers, of which the following is a specification.

My invention consists in means for lessening the noise of the carriers traveling on their ways; also, in means for preventing the carriers from leaving their ways; also, in means for elevating the carriers to the ways and discharging said carriers from said elevator upon said ways; also, in means for opening and closing said carriers; also, in means for retaining in the center of said carriers money or other articles placed within them.

In the accompanying drawings, Figure 1 is a view of one side of the interior of a store with cashier's desk, counter, ways, and elevators. Fig. 2 is an enlarged view of an elevator and its box or shaft. Fig. 3 is an enlarged end view of a treadle and pulleys, such as are shown in Fig. 1. Fig. 4 is a plan of the carrier. Figs. 5 and 7 are vertical sections of the hemispheres, respectively at right angles to the plane of opening. Figs. 6 and 8 are plans of the hemispheres respectively. Fig. 9 is a cross-section of one of the ways with a carrier resting upon such way.

A is a cashier's desk, and B is a counter. From said desk A run as many inclined ways C or C' as there are stations for salesmen at the counter B, the upper ends of the ways being at the desk, and the lower end of each way ending at a salesman's station, X or X'. A single way, D, leading from the farther end of the counter or store, inclines downward toward and leads into the desk A. The amount of incline is such as to cause the spherical carriers described below to roll when placed on either of said ways C, C', or D. A cross-section of either of said ways is shown in Fig. 9, and is seen to be provided with a groove, E E, along which are inserted strips F, of leather, rubber, or other similarly elastic material, leather being preferred. These strips F deaden the noise made by the rolling of the carriers on the ways. A guard on each side of the groove, and consisting of posts G, of wire, and a wire, H, strung through holes in said posts G, prevents the carriers from jumping the ways.

In order that the ways C C' may be inclined, it is desirable that the cashier's desk should be somewhat elevated above the stations of the salesmen. This requires the end of the way D farthest from the cashier's desk to be some ways above the reach of the salesmen, in order to get a sufficient incline to roll the carriers into the cashier's desk where the store is a long one. Accordingly, at each station X, or at such stations as may be necessary, I erect a vertical shaft or box, I, in which I place an elevator, L, the same being the top, one side, and bottom of a box—or, in other words, a box with three sides removed. This elevator just fits the shaft I, and its bottom is made slanting, as shown, so that if a carrier of spherical form be placed in the elevator through the opening K in the shaft I, and the elevator be raised until the bottom of the same reaches the bottom of the opening J in said shaft I, the carrier will roll out into the way D and along said way D to the cashier's desk. The opening J is on the side of the shaft next the lowest edge of the bottom of the elevator in all cases, of course, and the opening K is on the side of the shaft next to the side, in the last shaft, and on the same side in the others, in which the opening J is made. A weight, Q, causes the elevator to fall, and the elevator is raised by a cord, O, passing over a pulley, N, in the side of the shaft I, the cord being pulled by passing the hand into the ring P; or the elevator may be raised by pressing the foot upon the treadle T, the cord O passing over the pulley N, as above described, and also through the pulley-block S, secured to the under side of the counter B, and through the movable pulley-block S' attached to the treadle T. The treadle T is secured by a hinge at one end to the floor of the store, and the number of movable pulleys in the block S' is such that depressing the lever or treadle T is sufficient to raise the elevator the required distance. Stops 3 3 are provided, which limit the distance traversed by the elevator. These stops consist of cleats secured to the inner side of the shaft I.

The carrier used consists of a hollow sphere, M M', one half or hemisphere M being provided with two grooves, U'' U'', at right angles to and leading into an internal annular groove, U, the latter groove, U, being parallel to the plane which separates the hemispheres, and



the other hemisphere, M', being provided with a hollow cylindrical part, Z, which stands at right angles to said plane and has on its outer surface two ears, U' U', at diametrically opposite points. The cylindrical part Z of the hemisphere M' enters a cylindrical opening, V, in the other hemisphere, M, the ears U' U' entering the grooves U'' U'' until the flat surfaces of the hemispheres, respectively, touch each other, at which time the ears U' U' are in the groove U, and the hemispheres, being turned slightly on each other, are securely locked together, and may, with their contents, be rolled over the way D to the cashier, or from the cashier to the salesman over the way C or C'. The hemispheres, being turned on each other until the ears U' U' enter the grooves U'' U'', may be separated and the box M M' emptied. In order that the center of gravity of the spherical box M M' and its contents may be as near the geometrical center of said box as possible, each hemisphere M M' is provided with a disk or follower, W W'', supported upon a spring, V' V'', one end of which spring is secured to the hemisphere at Y. These disks are small enough to enter freely the hollow of the cylindrical part Z of the hemisphere M', and when brought together hold anything placed between them (or rather on the outer face of either one of them) in the center of the carrier. In order that the disks may have a firmer hold on the contents of the box, the disks are cushioned with wash-leather W' W''' or other suitable elastic material. The necessity of keeping the contents of the carrier at or near its center, in order that it may roll freely, is evident from the fact that a large proportion of

its contents will be specie, while the ball is made of wood, hard rubber, or other comparatively light material. 40

I claim as my invention—

1. The combination of the way C, C', or D and strips of elastic material F, as and for the purpose specified.

2. The combination, with the way C, C', or D, provided with grooves E E, of strips of elastic material F, as and for the purpose specified. 45

3. The combination, with the way C, C', or D, provided with grooves E E, of strips of leather F, as and for the purpose specified. 50

4. In combination with the way C, C', or D, the guards G H, as and for the purpose specified.

5. The combination of the way D and the elevator L, provided with a sloping bottom, as and for the purpose specified. 55

6. The combination of the inclined way D, and the elevator L, provided with a sloping bottom, and means for raising said elevator L, as and for the purpose specified. 60

7. The carrier consisting of hemispheres M M', one of said hemispheres, M, being provided with grooves U U'' U'', and the other, M', being provided with the central hollow projection Z, and the ears U' U', as and for the purpose specified. 65

8. The combination of the interlocking hemispheres M M', the springs V' V'', and the disks W W'', as and for the purpose specified.

WILLIAM S. LAMSON.

Witnesses:

ALBERT M. MOORE,  
H. P. YOUNG.