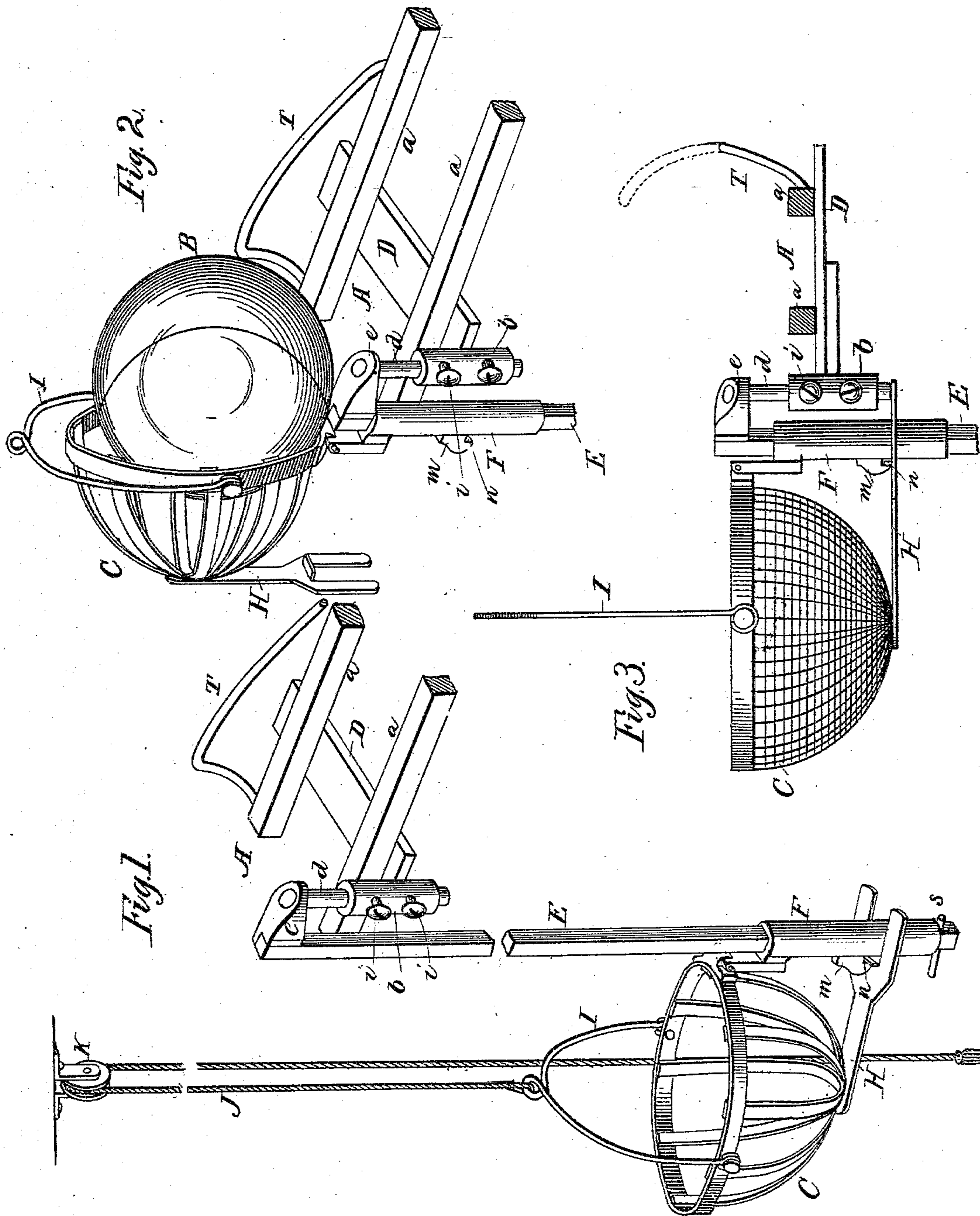


(No Model.)

H. H. HAYDEN.
ELEVATOR FOR CASH CARRIERS.

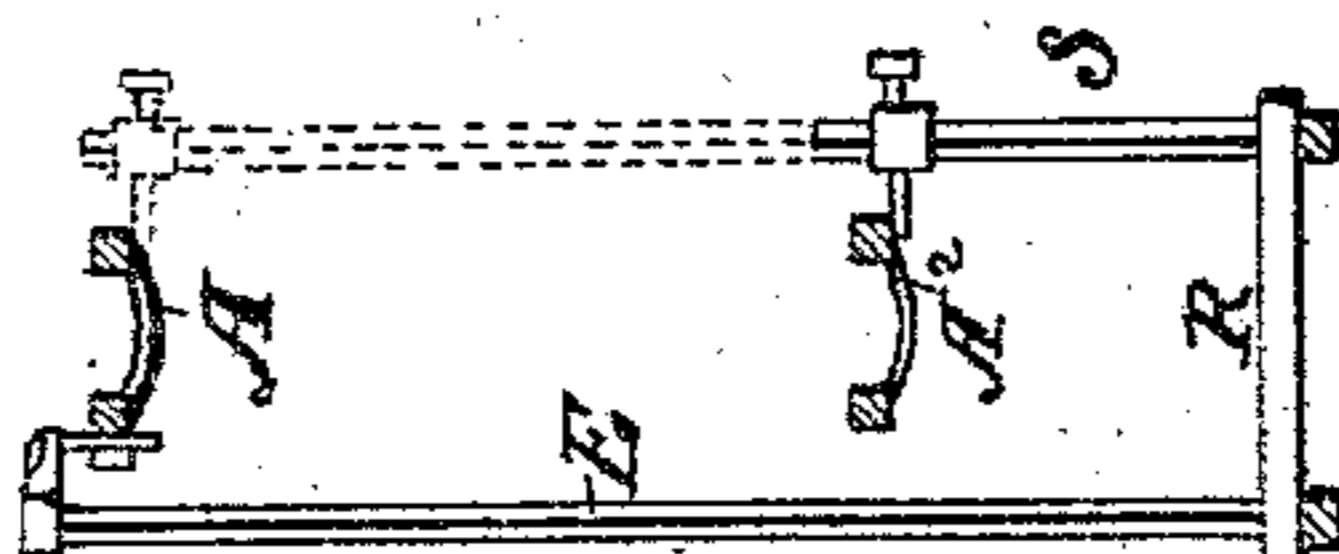
No. 295,393.

Patented Mar. 18, 1884.



Witnesses:
John Hinkel
Glenn Campbell

Fig. 4



Inventor:
H. H. Hayden
By Foster & Sullivan
attys.

UNITED STATES PATENT OFFICE.

HARRIS H. HAYDEN, OF NEW YORK, N. Y.

ELEVATOR FOR CASH-CARRIERS.

SPECIFICATION forming part of Letters Patent No. 295,393, dated March 18, 1884.

Application filed December 27, 1883. (No model.)

To all whom it may concern:

Be it known that I, HARRIS H. HAYDEN, of the city, county, and State of New York, have invented certain new and useful Improvements in Elevators for Cash-Carriers, of which the following is a specification.

My invention relates to that class of store-service apparatus in which rolling carriers move upon ways back and forth from counters to a desk; and my invention consists in appliances constructed and operated, as fully hereinafter described, to elevate and place the carriers upon the ways.

In the drawings, Figure 1 is a perspective view of sufficient of a store-service apparatus to illustrate my improvement. Fig. 2 is a perspective view, showing the parts in a different position. Fig. 3 is a side view of part of the device.

In the class of apparatus to which my improvement relates there is always a way or track, A, of suitable construction, to receive the rolling carriers which travel thereon. In the present instance the track consists of parallel rails *a*, and the carriers are spherical hollow balls B. To raise these balls from the salesman's desk to the way which runs toward the central desk, elevating appliances have heretofore been employed, which as generally constructed are heavy and unsightly, occupy considerable space, and are not in many respects as efficient as desirable, many of them necessitating the placing of the balls either at the end of the line or, where there are intermediate stations, upon branches communicating with the main line.

In connection with the track I employ an elevator consisting of a tilting receptacle suitably guided so as to rise and fall vertically between the track and counter, and swinging, when in an elevated position, in such manner as to discharge the ball at an angle upon the track in the direction in which it is to travel, thereby carrying it laterally to the track, but without any branch track, and projecting it with an impetus which greatly facilitates its movement. The receptacle consists of a basket, G, of any suitable shape, and the guide consists, preferably, of a single rod, E, to which is adapted the slide F, the basket be-

ing hinged at the edge to the upper end of the slide, and the hinge being so set that the basket, when turning thereon, will move in a plane at an angle to the track, so that the ball discharged from the basket is projected at an angle toward the track, instead of being thrown in a line across the latter, as is the case with many elevators in use. This reduces the liability of throwing the ball over the track, and, when the latter is not inclined to a very great degree, imparts a very desirable impetus, insuring the rapid travel of the ball. The guide E is connected to the track by adjustable connections, so that the angle to which the ball is thrown may be varied. Different adjusting connections may be employed, those shown being effective, and consisting of a cross-plate, D, carrying a hollow sleeve, *b*, and secured to the rails at the under side, the sleeves receiving a pin, *d*, projecting from a lug, *e*, at the upper end of the guide E. By swinging the guide upon the pin *d*, it may be brought to any desired angle to the way, and at any desired height thereto, and there secured by means of set-screws *i*.

The basket is provided with a spring-plate, H, extending from the bottom in a plane parallel to that of the upper edge of the basket, and a lip, *n*, upon the said plate H catches in the notch *m* in a projection upon the sleeve, thereby holding the basket in the position shown in Figs. 1 and 3. The end plate, H, is forked so as to extend past the sleeve on both sides, that one of the fingers may, when the basket reaches the upper position, strike a suitable stop—for instance, the end of the pin *d*—thereby throwing the lip *n* out of the notch and releasing the basket so that it can swing upon its pivot.

The vertical movement of the slide and basket and the swinging of the latter may be imparted by different appliances. I prefer, however, to use a yoke or bail, I, pivoted to the sides of the basket, and a cord, J, extending from the bail over a guide-pulley, K, and downward to the operator's station. By these means the operator, drawing upon the cord J, lifts the slide and basket until the plate H strikes the stop *d* or other projection, when the basket will be released, and, swinging upon

its pivot, will discharge the ball upon the track at an angle thereto. Upon releasing the draft upon the cord the slide and basket will fall until the slide strikes a stop-pin, *s*, when the basket will again take the position shown in Figs. 1 and 3.

To secure absolute certainty in preventing the ball from falling from the way, I combine with the latter a guard, *T*, at the side opposite that from which the ball is discharged.

To prevent any possibility of projecting the ball over the guard by the use of too much force, the guard may be carried higher, as shown in dotted lines in Fig. 2, and curved inward toward the point at which the ball is discharged, thus forming a sort of hood or cage.

It will be apparent that the basket may be made of any suitable shape and in any desirable manner; that, instead of the catch-plate *H*, a friction or other suitable retainer device may be used, and that the cord *J* may be connected to the slide *F*, in which case the basket is provided with an arm arranged to strike a stop to tilt the basket at the proper time.

To prevent lateral swinging of the basket, various devices may be employed, such as one or more steadying-wires or light rods suitably connected with the basket or slide. As shown, I use a square rod with a slide having a square opening, which prevents it from turning.

It will be seen that by using a single guide-rod and slide, and by pivoting the receptacle directly to the latter, I avoid the use of the cumbrous and unsightly devices heretofore employed for elevating cash-carriers, and that by projecting the ball at an angle upon the way I secure many advantages, especially in securing a forcible start without being obliged to use the tilting bridges and other devices heretofore used for this purpose.

If it is desired to steady the lower track by connecting it with the elevator-rod, I accomplish it by the use of a cross-piece, *R*, extending from the bottom of the elevator-rod *E* inward, and connected with a second rod, *S*, which is fastened to the lower track, *A*², and may, if desired, extend to the upper track, as shown in dotted lines.

Without limiting myself to the precise construction and arrangement of parts shown, I claim—

1. The combination, with the way of a store-service apparatus, of an elevator for the carriers, provided with a receptacle, connected and arranged, substantially as described, to discharge the carrier upon the track at an angle thereto, for the purpose set forth.

2. The combination, in an elevator for store-service apparatus, of a vertical guide, a receptacle for the carriers, pivoted to a slide moving upon said guide, to swing at an angle to the way, substantially as specified.

3. The combination of the guide-rod, slide moving thereon, basket pivoted thereto, and an elevating-cord for moving the parts vertically upon the guide, substantially as set forth.

4. The combination, with the slide and vertical basket, of a catch device for retaining the basket horizontally in connection with the slide, and a stop arranged to be struck by the catch, to release the basket and permit it to turn upon its pivot, substantially as set forth.

5. The combination of the guide, slide, pivoted basket, catch device, and cord connected to the basket, substantially as specified.

6. The combination, with the way, of a pendant guide-rod carrying a slide to which the receptacle is connected, and adjusting means for securing the rod adjustably to the way, substantially as specified.

7. The combination, with the way and device for placing the carrier thereon, of a guard, for the purpose specified.

8. The combination, with the way, of the elevator-rod, the cross-piece *R*, and a steadying-rod, *S*, adjustably connected to one or both of the ways, as and for the purpose set forth.

9. The guide-rod connected to a pin, *d*, capable of being turned and secured in its bearing, substantially as described.

10. The combination of the slide, carrier pivoted thereto, catch device, elevating-cord, and means for releasing the catch, substantially as described.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

HARRIS H. HAYDEN.

Witnesses:

WM. TRUSLOW,
CHAS. REUSHBROOK.