(No Model.)

J. W. FLAGG.

AUTOMATIC CASH CARRIER.

No. 283,768. Patented Aug. 28, 1883.

FIG. 1.

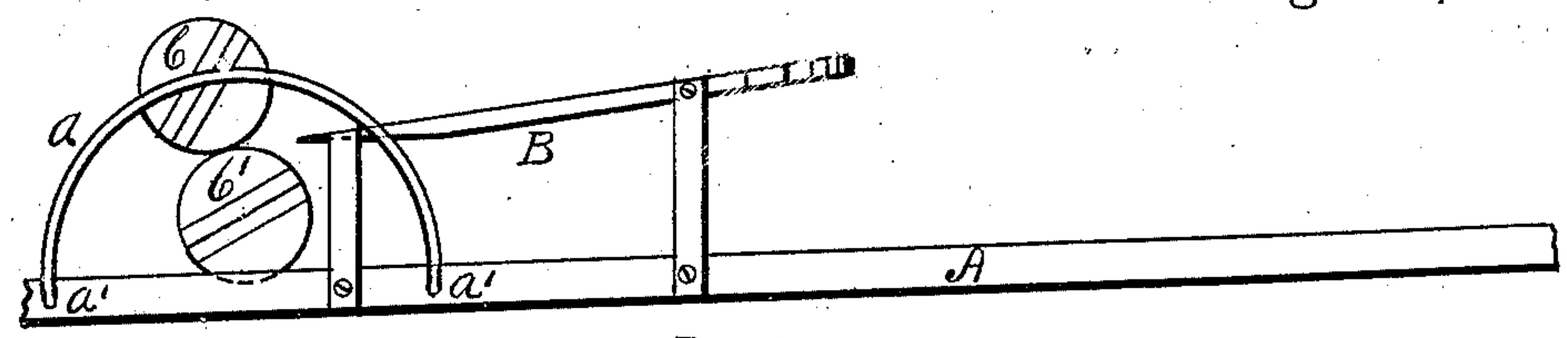


FIG. 2.

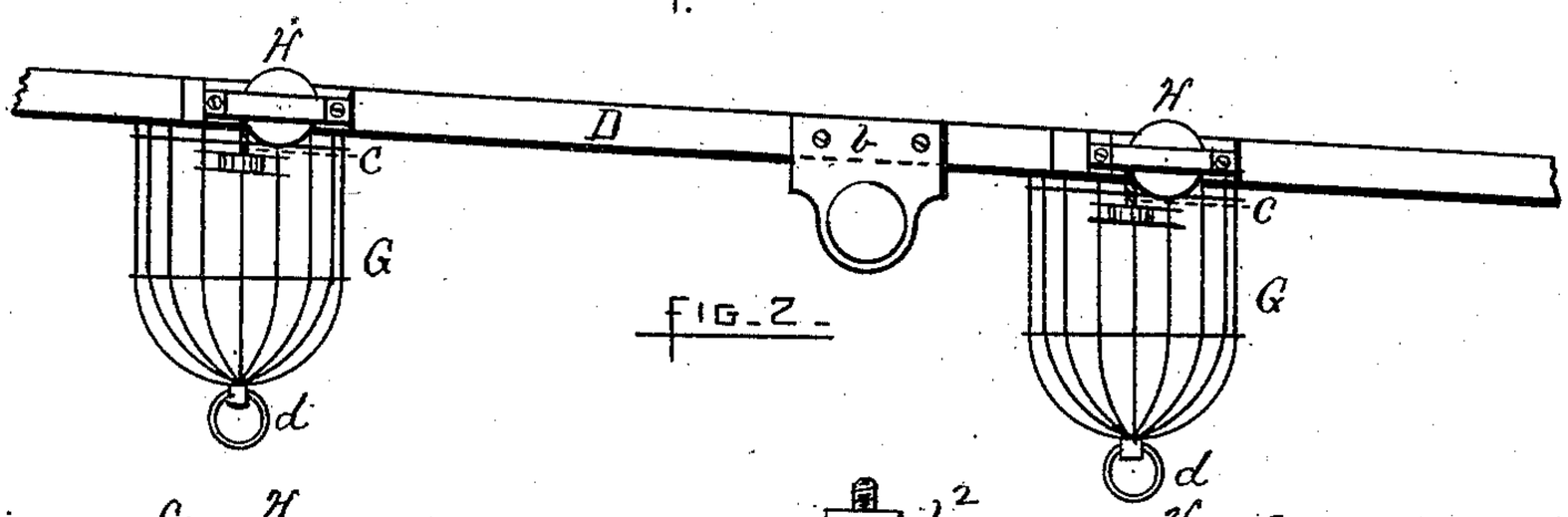


FIG. 3.

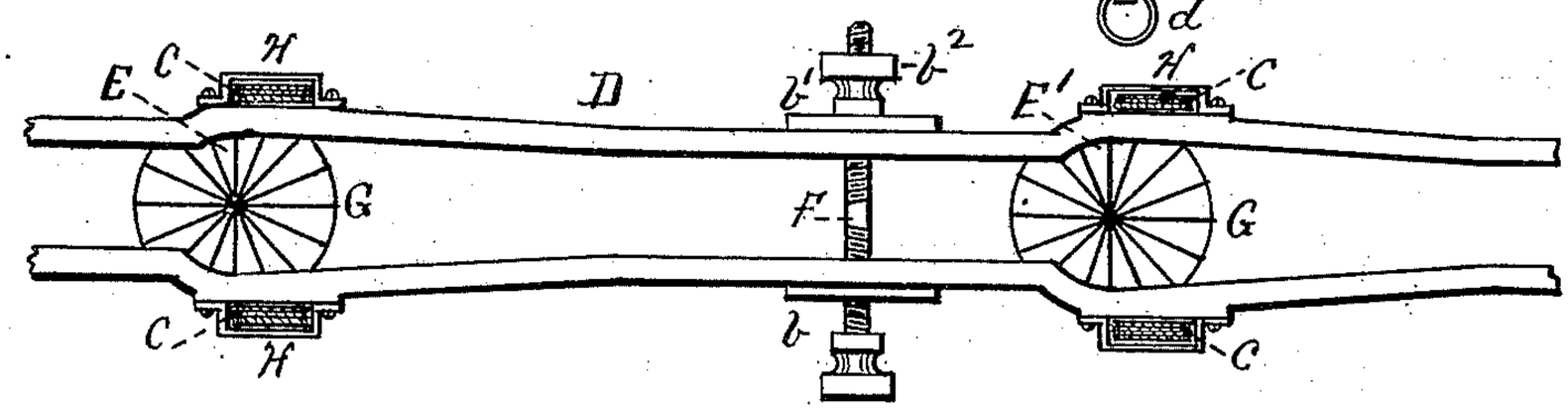


FIG. 4.

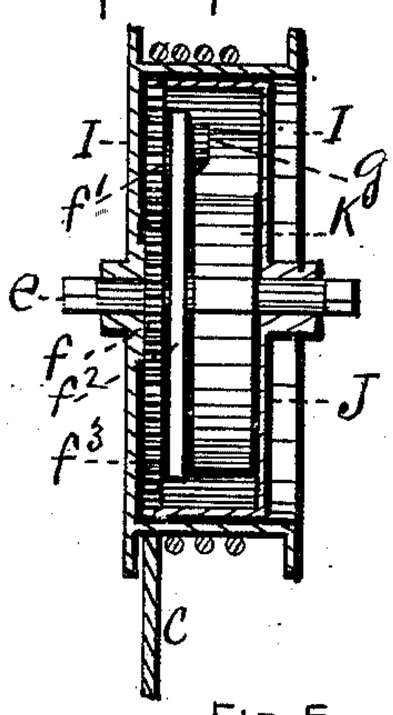


FIG. 5.

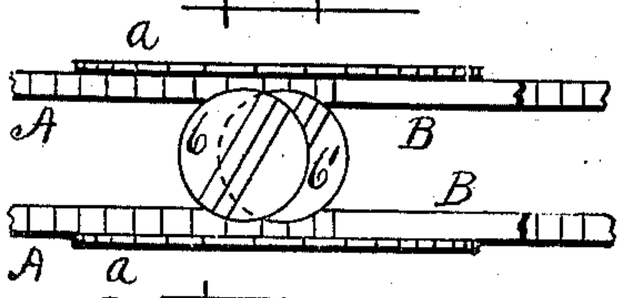


FIG. 8.

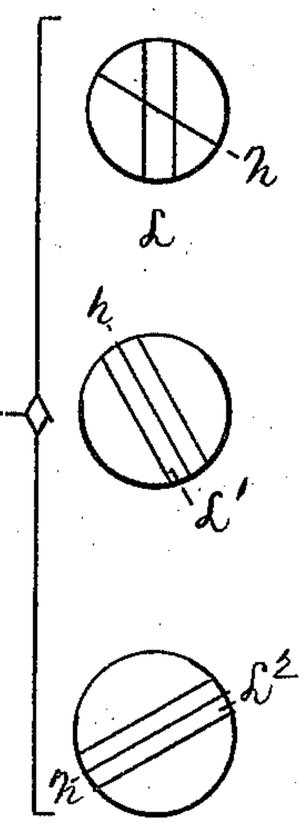
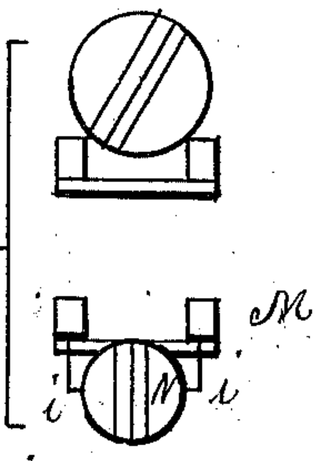


FIG. 7.



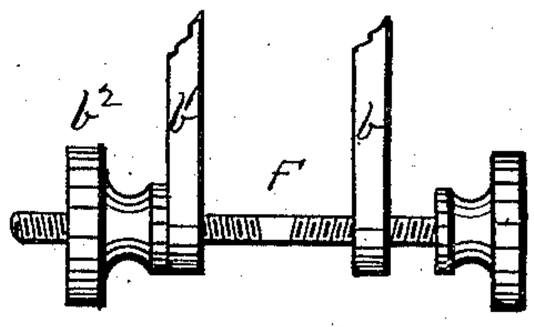


FIG. 6.

WITNESSES.

Rufus B. Fowler,
H. M. Fowler

INVENTOR.

J. Walter Flagg

N. PETERS. Photo-Lithographer. Washington, D. C.

UNITED STATES PATENT OFFICE.

J. WALTER FLAGG, OF WORCESTER, MASSACHUSETTS.

AUTOMATIC CASH-CARRIER.

SPECIFICATION forming part of Letters Patent No. 283,768, dated August 28, 1883.

Application filed July 12, 1883. (No model.)

To all whom it may concern:

Be it known that I, JOSEPH WALTER FLAGG, a citizen of the United States, residing at Worcester, in the county of Worcester and State of Massachusetts, have invented a new and useful Improvement in Automatic Cash-Carriers, of which the following is a specification.

My invention relates to that class of "cash-carriers" in which a series of inclined tracks or ways and hollow rolling carriers are used, and in which the distribution of the carriers is effected by means of graduated openings in the outward track and a series of graduated carriers adapted thereto; and it consists in combining guards with the elevated receiving-tracks; in adjusting and maintaining the size of the openings in the distributing-tracks; in means for drawing up and sustaining the delivery baskets or cages, and in a method of designating the carriers and their corresponding outward tracks, so as to facilitate the distribution of the carriers.

The accompanying drawings represent portions of a cash-carrying system embodying my invention, in which Figure 1 shows a section of the inward receiving-track; Fig. 2, a section of the outward or distributing track. Fig. 3 is a top view of the same; Fig. 4, a sectional view of the device for drawing up and holding the baskets; Fig. 5, a top view of a part of the receiving and inward tracks, showing the guards. Fig. 6 shows the adjusting-screw for regulating and maintaining the proper width of the openings in the outward track. Fig. 7 is an end view of the inward and outward tracks, and Fig. 8 represents three of the cash-carriers.

Similar letters refer to similar parts in the several views.

The construction and operation of the cash-carrying system to which my present invention relates was made the subject of and is fully set forth and described in Letters Patent granted to me March 20, 1883, and No. 274,302, to which reference may be had.

A, Fig. 1, shows the main inward inclined track, leading from the store-counter to the cashier's desk, and B is one of the elevated receiving-tracks, at the lower end of which I place the curved rods or wires *a a*, one on each side of the track, with their lower ends, *a' a'*, attached to the main track. These guard-wires should be placed in proper position and of such height that a carrier, C, in rolling off the elevator-track B and striking against a carrier, C', on the main track will be prevented from leaving the track. The outward track, D, Figs. 2 and 3, have graduated openings E and E', in order to distribute the graduated carriers at the proper stations, as is fully described in the Letters Patent above mentioned.

Between and near to the openings in the outward track I attach the lugs *b b'*, one containing a right and the other a left hand screw-thread, in which the screw F works. Upon the screw F, I place the check-nut b^2.

In order to accurately adjust the width of the openings E E', I withdraw the check-nut b^2 from the lug *b'*, and by means of the right-and-left-hand screw F, adjust the width of the track, as desired, when the check-nut b^2 is brought against the lug *b'*, thereby holding the screw from turning.

Instead of the screw F, a screw may be used passing through holes in the lugs *b b'*, and the lugs held in proper position by means of check-nuts; or other well-known methods for the purpose may be used.

As the carriers fall through the openings E E' they are received in a wire cage or basket, G G, or other suitable receptacle held up against the under side of the track D by cords *c c*, attached to the sides of the baskets and wound several times about the rotating drums H H. These drums contain a coiled spring so arranged that when the baskets are drawn down by means of the rings *d d* the spring will be coiled up, and by releasing the basket the tension of the spring will draw it up in the position shown in Figs. 2 and 3. I construct the drum H as shown in section in Fig. 4, so the motion of the spring will be multiplied at the surface of the winding-drum.

I represents the drum, having the cord *c* wound upon it, and revolving on the fixed spindle *e*. Attached to the inside of the drum I is the pinion *f*, which drives the intermediate pinion, *f'*, revolving on a stud in the arm f^2, which is rigidly attached to the fixed spindle *e*. The intermediate pinion, *f'*, drives the internal drum, J, by means of the internal

gear, f^3, so the rotation of the winding-drum I, caused by uncoiling the cord *c*, will produce a slower rotation of the inner drum, J.

Inclosed in the drum J is the coiled spring K, with its inner coiled end attached to the fixed spindle *e* and its outer end attached, by means of the pin *g*, to the drum J, so the operation of unwinding the cord *c* will coil up the spring, several revolutions of the winding-drum I producing but a single revolution of the drum J and spring K.

In use it is often necessary that several tracks should diverge from the cashier's desk, and care is required to cause the several carriers to be returned upon the proper outward track. This becomes an arduous task in large stores during the busy portions of the day, and certain marks or letters are usually affixed to the carriers, corresponding with the designating-mark attached to the track to which they belong.

Instead of the usual method, I paint the carriers some distinguishing-color, and when the number of the tracks exceed the number of colors, affording a sufficiently-marked contrast with each other, I paint a band of color around the center of the carrier, as at L L′ L², Fig. 8, preferably placing the color on each side of the line *h*, dividing the halves of the carrier, so when the carriers are separated one half of the band will appear on one half and one half of the band on the other half of the carrier. In this method of arranging the distinguishing-color the band will always be presented to the eye of the cashier as he holds the carrier for the purpose of putting the two halves together.

At the inner end of the outward tracks, as at M, Fig. 7, I attach by wires *i i*, or by other suitable means, a ball, N, representing in exact duplicate the carriers belonging to that track so far as their outward appearance is concerned, except in size. By this method of designating the carriers and the tracks the cashier is able to determine intuitively without conscious comparison the proper track upon which the several carriers should be distributed; or, instead of a ball, N, a disk or hemisphere may be used.

I am aware that the rails of an automatic cash-carrying system, having a series of graduated openings in order to effect the proper distribution of a series of graduated carriers, have been heretofore supported by ties, bridges, hangers, or cross-bars, which have also held the two rails together and at a certain distance apart. I do not claim such, broadly. I use instead an adjustable tie, which allows the rails to be adjusted as to the distance between them with great accuracy when the track is first put up, and afterward changed at will to suit any variation in the size of the carriers.

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

1. The combination, with the main inward track, A, and elevated receiving-track B, of the guards *a a*, as shown, and for the purpose set forth.

2. The combination, in a cash system, with an outward track having suitable means of distribution of the carriers and receiving-baskets or other receptacles, of a winding device attached to said baskets, and consisting of a drum I, gears *f* and *f′*, inner drum, J, with an internal gear, f^3, spring K, and fixed spindle *e*, as and for the purpose set forth.

3. The combination of drum I, pinions *f* and *f′*, arm f^2, drum J, and internal gear, f^3, spring K, attached to the drum J and to the fixed spindle *e*, as described, and for the purpose set forth.

4. The combination, with an outward distributing-track having a series of graduated openings and a series of graduated carriers adapted thereto, of means for adjusting or varying the width between the rails at will, as and for the purpose set forth.

5. In combination with tracks D, having openings E E′, the adjusting-rod F, with a right and left hand screw-thread, lugs *b b′*, and check-nut b^2, as and for the purpose set forth.

6. In a cash system, the combination, with two or more outward distributing-tracks, of a series of cash-carriers having a designating band of color around the center, and arranged in about equal spaces on either side of the dividing-line *h*, as and for the purpose set forth.

7. The combination, with the outward track of a cash system having appropriately-designated cash-carriers, of a ball, N, or body attached to end of the outward track, and presenting the similitude in form and color of one of the cash-carriers belonging to said track, as and for the purpose set forth.

8. In a cash system, the combination, with a distributing-track and receiving-baskets, of the winding-drums H, and their springs K, said springs being so attached to the drums that their tension will sustain the basket against the tracks, as and for the purpose set forth.

9. In a cash-carrying system having outward tracks designated by different colors, the hollow rolling carriers each having a designating-mark, consisting of a band of color passing around the carrier, as and for the purpose set forth.

J. WALTER FLAGG.

Witnesses:
R. B. FOWLER,
GEO. E. SMITH.