(No Model.)

J. W. FLAGG & C. R. B. CLAFLIN, Jr.

CASH CARRIER.

No. 351,506. Patented Oct. 26, 1886.

FIG. 1

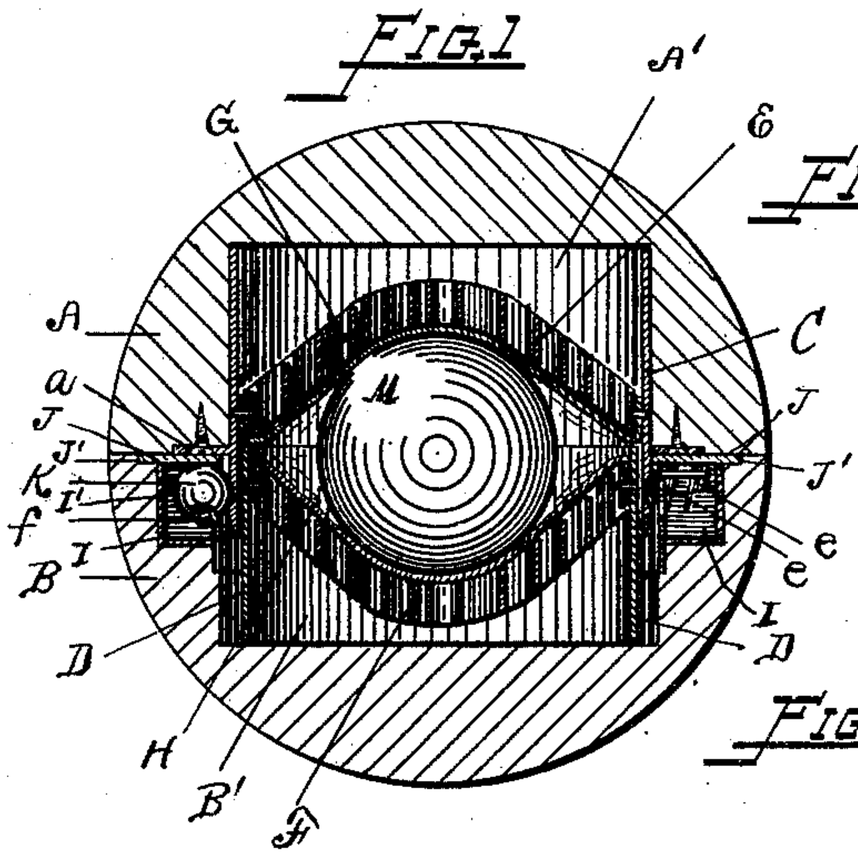


FIG. 2

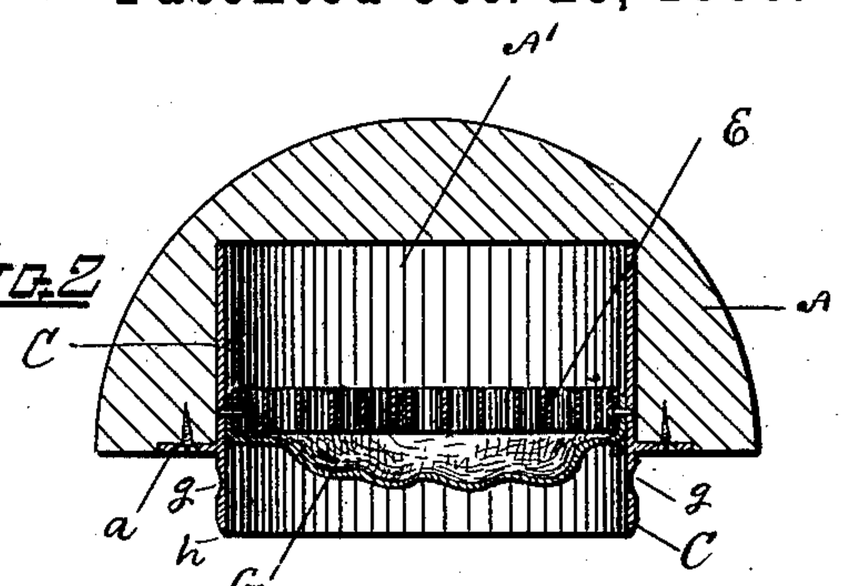


FIG. 3

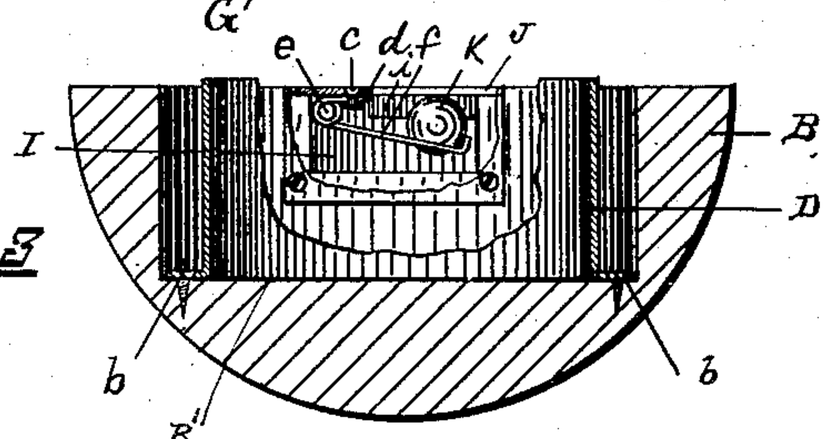


FIG. 4

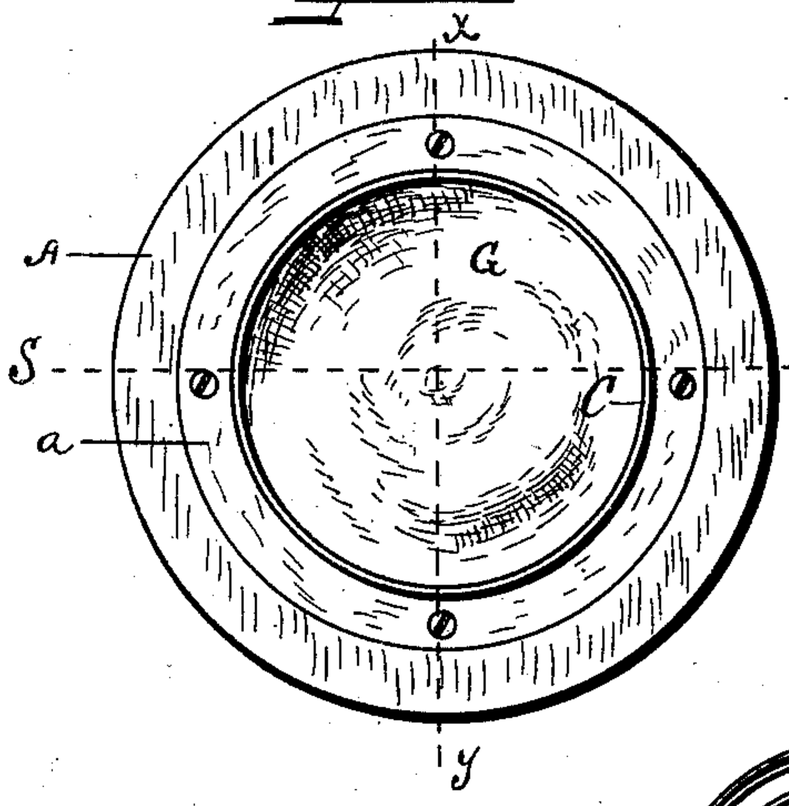


FIG. 5

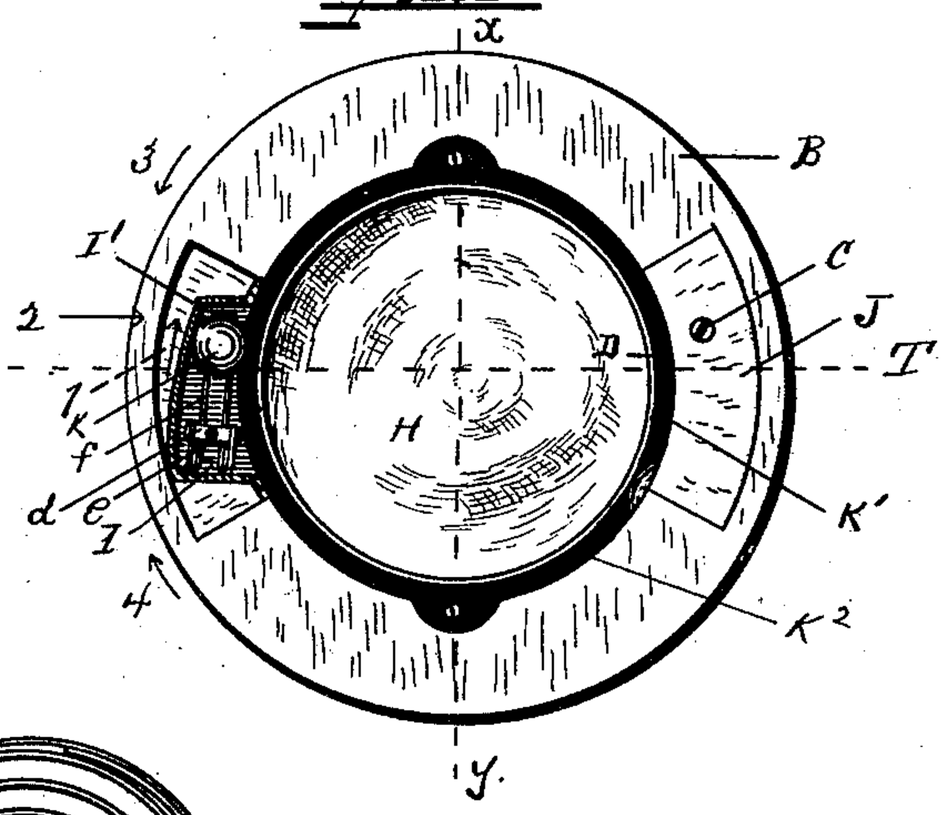
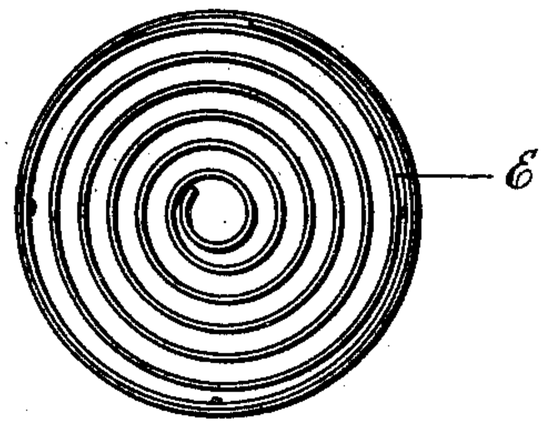


FIG. 6



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UNITED STATES PATENT OFFICE.

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CASH-CARRIER.

SPECIFICATION forming part of Letters Patent No. 351,506, dated October 26, 1886.

Application filed May 27, 1886. Serial No. 203,398. (No model.)

To all whom it may concern:

Be it known that we, JOSEPH WALTER FLAGG and CHARLES R. B. CLAFLIN, Jr., citizens of the United States, residing at Worcester, in the county of Worcester and State of Massachusetts, have invented a new and useful Improvement in Cash-Carriers, of which the following is a specification, reference being had to the accompanying drawings, in which—

Figure 1 represents a cash-carrier embodying our invention, shown in sectional view on lines S T, Figs. 4 and 5, and with a body held concentrically in the carrier. Figs. 2 and 3 show the two halves of the cash-carrier slightly separated and in sectional view on lines *x y*, Figs. 4 and 5. Figs. 4 and 5 represent plan views of two halves of the carrier, with Fig. 5 partly in section, and Fig. 6 is a detached view of one of the helical springs.

Similar letters refer to similar parts in the several views.

Our invention relates to the rolling cash-carriers adapted to be used in those cash-carrying systems employing inclined ways or tracks.

The carrier, which is illustrated in the accompanying drawings as embodying our invention, consists of a ball composed of two hemispheres, which may be made of wood, paper, pulp, leather, or similar material; and our present invention consists in providing improved means for attaching the hemispheres together and for "centering" the cash in the ball.

The hemispheres A and B are recessed at A′ and B′ to form cavities to receive the cash. In the recess A′ we place the tube C, projecting beyond the plane surface of the hemisphere, to which it is attached by means of the flange *a*. In the recess B′, which is large enough to receive the projecting tube C, we place the tube D, attached at the bottom of the recess by the flange *b*. The outer diameter of the tube D is less than the inner diameter of the tube C, and enters the tube C when the two hemispheres are placed together.

Within each of the tubes C and D we place helical springs E and F, preferably made of flat steel wire, attached by their outer coils to the tubes and lying just below the plane surfaces of the hemispheres. Between the springs and tubes we fasten the edges of disks G and H, made of wash-leather, silk, or some flexible material, with the circular disk resting on the springs of greater diameter than the internal diameter of the tubes, causing the flexible disks to assume the baggy form shown in section in Fig. 2. When the hemispheres are brought together, the springs E and F approach within a short distance of each other, leaving room for the surplus material in the disks G and H.

When cash or the article to be transmitted is placed in the projecting tube C and the two hemispheres brought together, the springs E and F are depressed into recesses A′ and B′, and the disks G and H expanded, as shown in Fig. 1, where a ball, M, is represented as being held between the two hemispheres and maintained concentrically with the cash-carrier by the tension of the springs E and F, the disks or bags G and H covering the spaces between the several coils of the springs, and in case loose change is placed in the ball preventing it from working through the springs into the recesses A′ and B′.

It will readily be seen that the form of springs shown might be employed to advantage without the bags G and H were the interposed body enveloped in a wrapper or of such form as would be supported by the coils of the springs E and F, and the disks or bags G and H may be used with other forms of supporting-springs—as, for instance, a metallic disk, lying in the plane formed by the opposing surfaces of the springs E and F—and a spiral spring employed, resting on and attached to the bottom of the recess, and having its free end attached to the metal disk. The flexible disks or bags G and H would then serve to keep the loose pieces of cash from working between the edges of the metal disk and the surrounding tubes.

We deem the arrangement of helical springs and disks preferable; but the use of a bag or disk, with surplus material to admit of expansion by the interposed body with an elastic body whose tension supports the interposed body concentrically in the ball, would obviously come within the scope of our present invension so far as it relates to the employment of the flexible disks G and H, for the purposes described.

Upon opposite sides of the recess B′ in the hemisphere B we insert metallic pockets I, whose outer sides, I′, form an oblique angle with the concentric recess B. The upper side, J, of the pocket is flanged, as shown at J′, Fig. 1, and placed flush with the plane surface of the hemisphere B. To the upper side, J, of the pocket we attach the two ends of a U-shaped wire, *f*, by means of the screw *c* and nut *d*. The U-shaped wire is coiled at *e e*, forming two spiral springs, and the U-shaped end *f* forms a support for the metal ball K, which is held against the upper side, J, of the pocket by the tension of the coiled springs *e e*, and also forced in the direction of the arrow 1 to the end of the U-shaped wire *f*, being at the same time carried inward by the inclination of the outer side, I′, of the pocket, causing the side of the ball to project, as at K′, into the annular space K², into which the projecting end of the tube C enters. The beveled edge *h* of the tube C forces the ball K back along the U-shaped wire *f* and outward, permitting the tube C to enter the annular space K². We form a curved groove, *g*, around the projecting end of the tube C, which is brought into the same plane as the ball K when the plane surfaces of the hemispheres are brought into contact, allowing the tension of the springs *e e* to again force the ball K forward along the inclined side I′, by which it is carried inward into the curved groove *g*, thus securely locking the two hemispheres together.

In order to separate the hemispheres, they are turned in opposite directions, the hemisphere A in the direction of the arrow 3 and the hemisphere B in the direction of the arrow 4, the friction of the ball K upon the tube C serving to roll the ball back along the U-shaped wire *f*, the two hemispheres being at the same time drawn apart. The outward motion of the ball K will release the tube C and allow the hemispheres to be separated.

By using a U-shaped wire, *f*, we form a trough for the ball K; but a blade-spring might be used instead, with a slit in the center or with upturned edges.

We do not confine ourselves to the particular form or angle of the outer or inclined side, I′. Any form which serves to press the ball K inward as it is forced along by the tension of an impelling-spring will substantially embody the essential features of this portion of our invention.

In order to hold the ball down against the side of the groove *g* nearest the end of the tube, we place a plate, *i*, across the upper and rear corner of the pocket at an angle of forty-five degrees to the plane surface of the hemisphere, thereby taking up any lost motion arising from wear or other causes.

What we claim as our invention, and desire to secure by Letters Patent, is—

1. In a cash-carrier, the combination, with the two hemispheres having recesses in each to receive the cash and springs placed in each recess to center the cash in the carrier, of a flexible expansible diaphragm attached at its edge to the hemisphere and resting on the cash-supporting spring, substantially as described.

2. In a cash-carrier, the combination, with the hemispheres having recesses therein to receive the cash, of helical springs attached by their outer coils to the hemispheres, said springs extending across the cash-holding recesses with their inner ends free, substantially as described.

3. In a cash-carrier, the combination, with the hemispheres having cash-holding recesses, of helical springs attached by their outer coils to the hemispheres and extending across the cash-holding recesses, and flexible expansible diaphragms attached at their edges to the hemispheres and resting on said helical springs.

4. In a cash-carrier, the combination, with the two hemispheres, one of said hemispheres having a tube grooved on its outer surface, of a ball sliding in ways placed obliquely to said grooved tube, and an impelling-spring by which said ball is forced into said groove, as and for the purpose set forth.

5. In a cash-carrier, the combination, with the two hemispheres, one of said hemispheres having a tube grooved on its outer surface attached to the plane surface of the hemisphere and the opposite hemisphere having a recess to receive said grooved tube, of a ball adapted to engage the groove in said tube, a spring acting on said ball to force it forward, and an inclined surface along which said ball is moved by the spring and by which it is carried toward the grooved tube, as and for the purpose set forth.

6. In a cash-carrier, the combination, with the two hemispheres having recesses to receive the cash, of the tube C, ball K, springs *e e*, and inclined surface I′, as described.

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