(No Model.)

T. A. & F. D. SIMONS & A. BEACH.

STORE SERVICE APPARATUS.

No. 382,010. Patented May 1, 1888.

FIG. 3

FIG. 2

FIG. 1

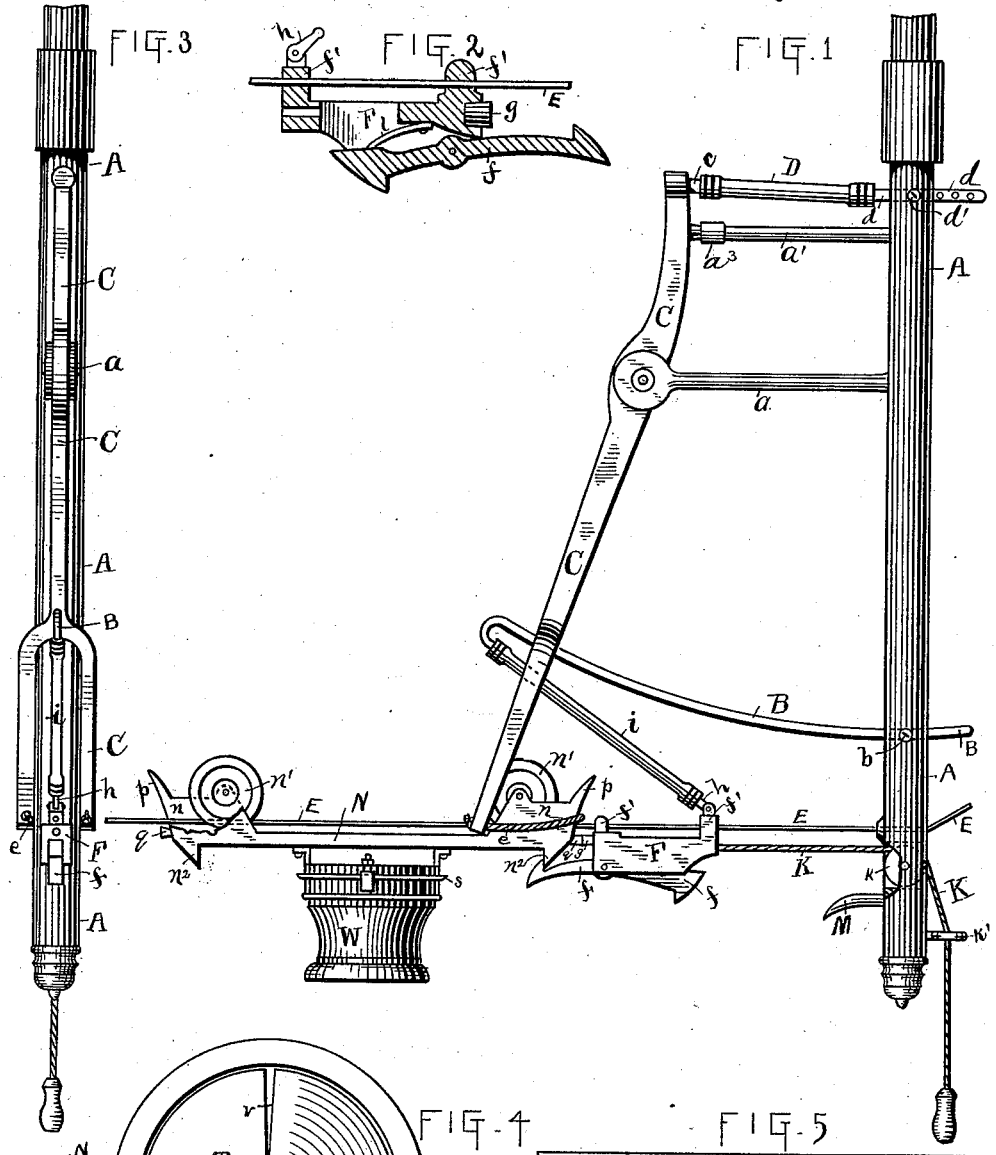


FIG. 4

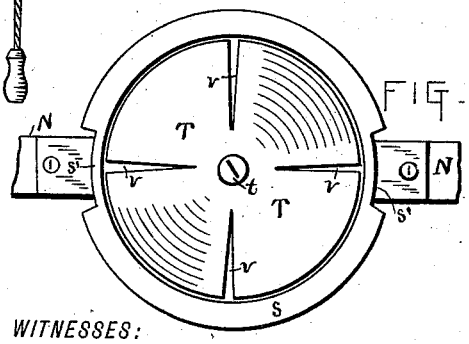
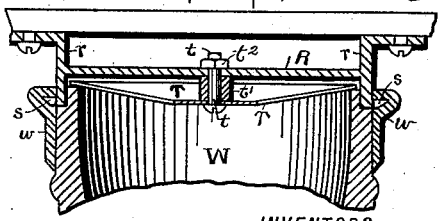


FIG. 5



WITNESSES:

Geo. B. Travel.

Ira C. Kochner

INVENTORS,

Thomas A. Simons,

Frank D. Simons,

Adam Beach,

By C. L. Shepherd,

THEIR ATTORNEY.

UNITED STATES PATENT OFFICE.

THOMAS A. SIMONS, FRANK D. SIMONS, AND ADAM BEACH, OF COLUMBUS, OHIO.

STORE-SERVICE APPARATUS.

SPECIFICATION forming part of Letters Patent No. 382,010, dated May 1, 1888.

Application filed February 27, 1888. Serial No. 265,422. (No model.)

To all whom it may concern:

Be it known that we, THOMAS A. SIMONS, FRANK D. SIMONS, and ADAM BEACH, citizens of the United States, residing at Columbus, in the county of Franklin and State of Ohio, have invented a certain new and useful Improvement in Store-Service Apparatus, of which the following is a specification.

Our invention relates to the improvement of store-service apparatus such as is used in store-rooms and other similar places for the transmission of cash and packages; and the objects of our invention are to produce an apparatus of this class by means of which cash may be easily and rapidly transmitted from one point to another and to construct the same in a simple and inexpensive manner. These objects we accomplish in the manner illustrated in the accompanying drawings, in which—

Figure 1 is a side elevation of our improved apparatus. Fig. 2 is a central horizontal section of the catch-block. Fig. 3 is a front view of the apparatus. Fig. 4 is a view of the under side of the cash-cup cover, and Fig. 5 is a sectional view taken through the central portion of the cash-cup cover and the upper portion of the cup.

Similar letters refer to similar parts throughout the several views.

A represents a metallic hanger, which depends vertically from the ceiling or from some other high point in a room. Projecting forwardly from the hanger A, at right angles therewith, is an arm, *a*. A short distance above the arm *a* is made to project from the hanger A a second forwardly-extending arm, *a'*, preferably slightly shorter than the arm *a*, and having projecting from its outer end a bumper or cushion, a^3, of rubber or other suitable material. At a point below the arm *a* is made to extend forwardly from the hanger A a metallic rod, B, which, being preferably curved upward and having its outer end bent downwardly and rearwardly, has its rear portion passing through a hole formed in the hanger A, and is adjustably held therein by a set-screw, *b*, entering a screw-hole in the hanger A at right angles with said rod B.

C represents a lever-arm pivoted at a point in its upper half to the outer end of the arm *a*. The upper end of this lever-arm extends slightly above the arm *a'*, and is provided with a short rearwardly-extending pin, *c*. The lower portion of the lever C is forked, as shown, the extremities of said fork being connected by a cord-loop, *e*.

The hanger A is provided at a point opposite the upper end of the lever-arm C with a transverse pin-hole, through which extends loosely a bar, *d*, which is made adjustable horizontally by means of a set-screw, *d'*, made to enter a screw-hole in the arm A at right angles with said bar and adapted to be made to bear against the latter at the desired point. The forward end of this bar *d* and the lever-pin *c* are connected by an elastic rubber tube, D. The tension of the tube D is adapted to cause the lever-arm C to bear normally against the bumper a^3 of the arm *a'*.

E represents a track-wire, which extends horizontally from station to station, and having its respective ends passing through holes formed in the lower portions of the hangers A and attached to any desired points in rear thereof.

F represents an oblong metallic catch-block, having its front and rear end formed solid, and having a portion of its sides extending slightly below said solid portions, as shown. Between the downward extensions of the side of the block, near the front end thereof, is pivoted the central portion of a curved catch-trigger, *f*, having its front end extending beyond the front end of the block, and having the upper side of its front end and the lower side of its rear end provided with a shoulder or catch-lug, as shown.

Secured to the under side of the solid portion of the block F is the upper side of a spring-strip, *l*, the lower end of which is adapted to bear against the upper surface of the trigger *f* near its rear end, as shown in Fig. 2 of the drawings.

The block F is provided at each end with an upwardly-projecting lug, *f'*. Through holes formed in these lugs passes loosely the track-wire E. The front end of the block F is provided with a rubber bumper, *g*. To the upper side of the rear block, *f'*, is pivoted one end of a short pin, *h*. This pin *h* is connected with the outer end of the rod B by means of an elastic rubber tube, *i*.

Secured to the rear end of the block F is one end of a cord, K, which, extending rearwardly, passes over a small pulley-wheel, *k*, pivoted within an open slot formed in the lower portion of the hanger A, and from thence passes downwardly through a suitable keeper, *k'*, projecting from the rear side of the hanger A, and terminates within a convenient reaching distance from the floor.

M represents a tripping-pin, which projects from the front side of the hanger A at a point below the wheel *k'*, its upper side being beveled forwardly and downwardly.

N represents an oblong car, consisting of a metallic bar having two upwardly-projecting flanges, *n*, at each end, between each pair of which is pivoted a grooved track-wheel, *n'*, adapted to rest and be made to run upon the track-wire E. The outer end of each of the flanges *n* is formed with upwardly-extending fingers *p*, as shown. The lower side of the car at each end is provided with a downwardly-projecting shoulder, n^2, while each end of the car has projecting therefrom a bumper, *q*, of rubber or other suitable material.

R represents a disk-shaped cup-cover supported beneath the center of the car by means of lugs *r*, projecting upwardly from said cup-cover and secured to the under side of the car.

The cover R is provided with a peripherical shallow rim having a peripherical flange, *s*, the latter being cut away at opposite points, *s'*, as shown.

Loosely fitting within the rim of the cup-cover is a thin disk, T, formed of any suitable spring metal and held in such position that its lower surface will be about flush with the lower edge of said rim by means of a bolt, *t*, passing through said disk, thence through a collar, *t'*, fitting between the disk and the cover top plate, and thence through said top plate, where it is held by a nut, t^2. The disk T is, as shown, provided with two or more cuts, *v*, from its outer edge inward toward its center.

W represents the cash-cup, which is formed, in the usual manner, with two oppositely-located upwardly-projecting side connecting-strips, *w*, each of the latter having a hook-shaped upper end adapted to fit over and bear upon the flange *s* of the cup-cover. The circumference of the upper end of the cup being of such size as to fit loosely within the rim of the cup-cover, said cup and cover may be connected in the usual manner—*i. e.*, by inserting the upper end of the cup within the rim of the cup-cover in such manner that the upper ends of the connecting strips will enter the openings *s'* of the flange *s*. The cup is then turned until the hook-shaped ends of the strips *w* engage with the flange *s* of the cover-rim.

The cup-cover being provided with the spring-disk T, it will be seen that in connecting the cup and cover the upper end of the cup will bear against and force upward the outer portion of said disk, as shown in Fig. 5 of the drawings. As will readily be seen, the pressure of the disk thus caused upon the upper end of the cup will operate to overcome any tendency of the cup to turn in its place and become disconnected by any jar which may occur.

The operation of our apparatus is as follows: For convenience we will suppose the car to be approaching a station. The car traveling upon the wire E passes between the fork-arms of the lever C, and, taking up the cord-loop *e*, continues onward until the shoulder *n'* of the car comes into contact and engages with the upwardly-projecting catch-lug f^2 of the trigger *f*. It will be seen that the bumper *q* of the car and the bumper *g* of the block F will thus be brought together and prevent any injury to the parts which might be caused by the forcible contact of the block and car ends, while the tension of the rubber tubes *i* and D will limit the movement of the car. The car having thus been secured at the station, the cup W may be turned, and thus disconnected from its cover, the contents removed, and again connected with said cover, as heretofore described. The car may then be returned by pulling upon the cord K, operating to draw back the block F, car N, and lower portion of the pivoted propeller-arm C until the contact of the rear trigger-lug and the tripping-pin M operates to lower the front end of the trigger *f* until it is disengaged from the shoulder n^2 of the car. The increased tension of the rubber tubes D and *i*, caused, respectively, by the movement of the propeller C and block F, will impart to the car, when released, sufficient force to cause it to travel to the remaining end of the line.

It will be observed that the tension of the rubber tube D may be regulated by drawing the pin *d* outward or inward, as desired, and fixing it in the desired position by means of the set-screw *d'*, while the tension of the tube *i* may be changed by a similar operation of the rod B and set-screw *b*. The pin *h*, being pivoted to the lugs *f'* of the car, admits of the tube *i* being held at all times in a direct line between the car-lug and end of the rod B.

We are aware that cash-cups similar to that herein shown have been used and that they have been connected with their cover in a manner similar to that herein described. Our device differs, however, from said known devices in having combined therewith the spring-disk T.

Having now fully described our invention, what we claim, and desire to secure by Letters Patent, is—

1. In a store-service apparatus, the combination of the hanger A, having the outwardly-projecting arm *a*, the propelling-lever C, pivoted to the arm *a* and provided with the loop *e* on its lower end, the elastic tube D, and the connecting-bar *d*, adapted to be adjusted on the hanger A, all substantially as and for the purpose specified.

2. In a store-service apparatus, the combination of the hanger A, having the outwardly-projecting arm *a*, the propelling-lever C, piv-

oted to the arm *a* and provided with the loop *e* on its lower end, the elastic tube D, and the connecting-bar *d*, with the track-wire E, the catch-block F, loosely mounted thereon and having a spring-actuated and pivoted trigger, the rod B, and the elastic rubber tube *i*, connecting said block and rod, substantially as and for the purpose described.

3. In a store-service apparatus, the combination of the hanger A, having the outwardly-projecting arm *a*, the propelling-lever C, pivoted to the arm *a* and provided with the loop *e* on its lower end, the elastic tube D, and the connecting-bar *d*, with the track-wire E, secured to the hangers, the pulley K and tripping-pin M in the lower end of said hangers, the catch-block F, having a cord passing over said pulley and a pivoted trigger, the adjustable rod B, and the elastic rubber tube *i*, connected with said block, and a car mounted upon the track-wire, substantially as and for the purpose described.

4. In a store-service apparatus, the combination of the hanger A, having the outwardly-projecting arm *a*, the propelling-lever C, pivoted to the arm *a* and provided with the loop *e* on its lower end, the elastic tube D, and the connecting-bar *d*, with the track-wire E, secured to the hangers, the pulley K and tripping-pin M in the lower end of said hangers, the catch-block F, having a cord passing over said pulley and a pivoted trigger, the adjustable rod B, and the elastic rubber tube *i*, connected with said block, and a car mounted upon the track-wire and having the shoulders n^2 and the upwardly-extended fingers *p* and bumper *q*, substantially as and for the purpose described.

THOMAS A. SIMONS.
FRANK D. SIMONS.
ADAM BEACH.

In presence of—
FRANK A. DAVIS,
C. C. SHEPHERD.