

No. 637,245.

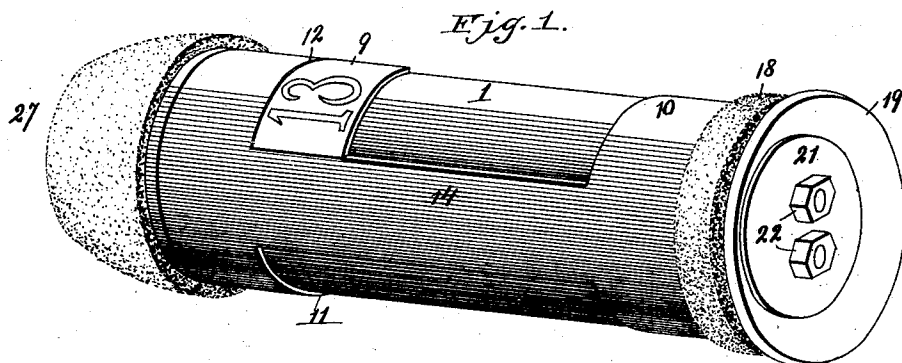
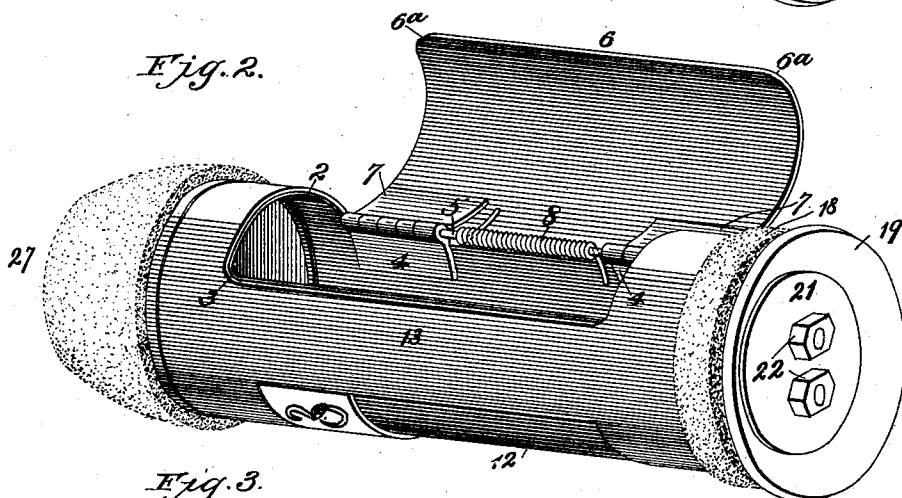
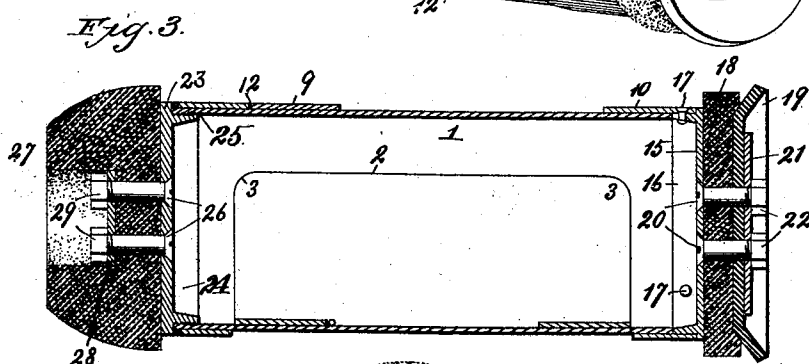
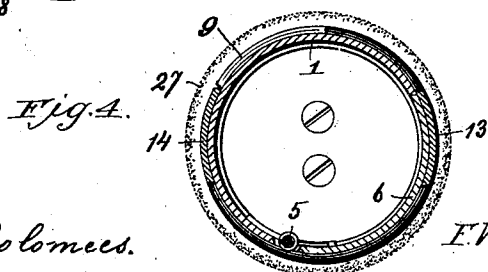
Patented Nov. 21, 1899.

F. W. GREMMELS & C. W. KELLER.

CASH CARRIER.

(Application filed Dec. 9, 1898.)

(No Model.)



WITNESSES

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# UNITED STATES PATENT OFFICE.

FREDERICK W. GREMMELS, OF KANSAS CITY, MISSOURI, AND CHARLES W. KELLER, OF CHICAGO, ILLINOIS.

## CASH-CARRIER.

SPECIFICATION forming part of Letters Patent No. 637,245, dated November 21, 1899.

Application filed December 9, 1898. Serial No. 698,711. (No model.)

*To all whom it may concern:*

Be it known that we, FREDERICK W. GREMMELS, of Kansas City, Jackson county, Missouri, and CHARLES W. KELLER, of Chicago, Cook county, Illinois, have invented certain new and useful Improvements in Cash-Carriers, of which the following is a full, clear, and exact description.

Our invention relates to cash-carriers for pneumatic cash-carrying systems, and our object is to produce a device of this character which can be opened or closed as easily and quickly at any period of its service as when first installed as a part of the system.

The great objectionable feature of the carriers as at present constructed is the fact that under constant and heavy service their front ends become mashed out of shape, with the result that a considerable effort on the part of the clerks is required to open or close them, this involving in the aggregate a great loss of time, and after their front ends thus begin to jam or telescope it is only a question of a very short time when they have to be replaced by new ends, the bodies being hammered back into shape.

The present invention, therefore, contemplates the use of a tube having a door-opening and provided with the usual pad and washer at its rear end, a door normally closing said opening, a spring to automatically open said door when unresisted, a clasp journaled upon the tube and provided with an opening of the same size and configuration as the door, through which the door may open, and a front end plate which is secured to the front end of the tube by screw-threads and is provided with a shoulder which bears firmly on said tube in order that the end of the latter, and not the threads, shall sustain the heavy impact incident to the arrival of each carrier at the cashier's desk, where they are arrested by their front ends, provided with the usual pad, striking with more or less force against a solid metal plate arranged for the purpose. It will be understood what strain these carriers are subjected to when the statement is made that sometimes when loaded with from ten to twenty silver dollars they

are forced straight down a distance of several stories and are arrested by striking said metallic plate. This strain obviously would soon bend or break the rivets usually employed in fastening the front end of the carrier and permit the cap-plate by telescopic action to cramp the clasp journaled on the tube and render it difficult to turn, as hereinbefore suggested.

With the further object in view of producing a cash-carrier of simple, strong, durable, and inexpensive construction the invention consists in certain novel and peculiar features of construction and arrangement of parts, as hereinafter described and claimed, and in order that it may be fully understood reference is to be had to the accompanying drawings, in which—

Figure 1 is a perspective view of the carrier when closed. Fig. 2 is a perspective view when open. Fig. 3 is a longitudinal section of the carrier when closed. Fig. 4 is a transverse section of the carrier when closed.

In the said figures, where similar reference-numerals designate corresponding parts, 1 designates a cylindrical tube constructed, preferably, of brass and provided with an opening 2, extending the greater portion of its length and around almost half its circumference in order that a coin the size of a silver dollar or paper money may be easily placed in or removed therefrom, and at the junction of one side margin of said opening with its ends the corners are preferably rounded, as shown at 3, while near the opposite corners of said opening hinge-plates 4 are secured internally to the tube in any suitable or preferred manner, said plates carrying a hinge-rod 5 of the same length as said opening.

6 designates a segmental door which is of size and configuration to fit snugly in the opening 2, and therefore is provided with the rounded corners 6<sup>a</sup> to snugly engage the corners 3 of the opening 2. At its inner side and opposite corners it is provided with the hinge-plates 7, which are fitted snugly into the plates 4 in the customary manner and pivotally upon the rod 5. A coil-spring 8, mounted upon said rod between the hinge-plates, has one end bearing against the inner side of

the tube and its opposite end against the inner side of the door; and therefore exerts continuously an outward pressure upon the latter. Secured externally to or formed integral with the tube at a suitable point is a segmental plate 9, the function of which is hereinafter explained.

10 designates a skeleton clasp of tubular form and fitting rotatably upon the tube 1. This clasp is provided with an opening 11 of the same or greater size than the door 6 in order that the latter may be automatically opened outward through said opening when the latter registers with the door-opening. The clasp is also provided with an opening or slot 12, which fits at one end at least squarely up against the front edge, with respect to the end of the tube, of the plate 9. By providing the clasp with these two large openings it is practically a skeleton, a pair of narrow strips 13 and 14 being the only connection between the end portions of the clasp. This slot or opening 12 is of such width that when the strip 13 bears at one edge against the plate 9 the edge of the said slot opposite to strip 13 coincides with the free edge of the door-opening, and therefore permits the spring to open the door so that cash may be placed in or removed from the carrier. After the door is closed it may be secured in such position by twisting the tube in the direction indicated by the arrow, Fig. 4, until such movement is arrested by the strip 14 striking against the opposite side of the plate 9. At this time the strip 13 bridges the joint between the tube 1 and the free edge of the door 6, holding the latter reliably closed, as shown at Fig. 4. To open the door, the clasp is turned in the opposite direction to that indicated by the arrow until such movement is arrested by strip 13 striking the plate 9, and thereby leaving the door free to open.

15 designates a circular plate provided with a forwardly-projecting annular flange 16 of the same diameter as tube 1 and fitting snugly in and riveted to the rear end of clasp 10 and bearing against the rear end of tube 1. This relation being established, it is obvious that the clasp may be turned on the tube, but that it cannot slide longitudinally thereon in one direction, while longitudinal movement in the other direction is prevented by the plate 9 fitting snugly against the front edge of slot or opening 12. This method of securing the clasp against longitudinal movement is old and is not claimed *per se* in this application. A circular pad 18 and flexible washer 19 are fitted against the rear side of rear end plate 15, and said pad and washer are mounted upon the bolts 20, projecting rearward from plate 15, and are secured thereon by means of the metallic washer 21 and clamping-nuts 22. This arrangement is also common in pneumatic-tube construction.

23 designates a circular plate which bears squarely against the front end of tube 1, but

does not contact with the front end of the clasp, and said plate is provided with a circular externally-threaded flange 24, which screws into the front end of said tube, as shown at 25. A pair of bolts 26 project forward through plate 23 and through the front pad 27, and said pad is secured thereon by the metallic plate 28, fitting in a recess in said pad, and the clamping-nuts 29, engaging the front ends of said bolts. The method of securing this pad to the end plate is also common in pneumatic-tube construction; but the method of securing the plate 23 to the tube is entirely new in this connection and eliminates all chance of said plate and tube telescoping under any service, and thereby jamming said plate against the front end of the clasp, as now happens, and making the turning of the latter a difficult and slow operation.

The mode of operating the clasp upon the tube having been explained, so as to permit the door to be opened by the spring or to secure the door in its closed position, further remarks along this line are unnecessary, except that it is obvious that it is absolutely impossible as long as the front plate 23 maintains its position on tube 1 for the clasp to be cramped. This carrier can be opened and closed with greater rapidity than the old-style carriers, which consist of two cylinders hinged together or a pair of tubes each having an opening, which makes necessary a rotatable operation of nearly one hundred and eighty degrees before the carrier is completely opened or closed. The object of rounding the corners at the free edge of the door is to eliminate any possibility of the clerk cutting or scratching her hand or tearing her apparel in manipulating the carrier.

From the above description it will be apparent that we have produced a cash-carrier for pneumatic cash-carrying systems which embodies the features of advantage enumerated as desirable in the statement of invention, and while the drawings illustrate the preferred embodiment of said invention we do not wish to confine ourselves to the exact form, proportion, or detail construction of the parts shown, but wish to include all changes properly falling within the spirit and scope of the invention.

Having thus described the invention, what we claim as new, and desire to secure by Letters Patent, is—

1. A cash-carrier, comprising a tube closed at both ends and provided with an opening in its side, a clasp rotatably mounted on the tube and provided with an opening adapted to register with the tube-opening, and a door controlling the tube-opening, substantially as described.

2. A cash-carrier comprising a tube having an opening, a door hinged in said opening, a spring tending to throw said door outward through said opening, and a clasp journaled upon said tube and provided with an opening

which is adapted to register with said tube-opening, and thereby permit said spring to open said door, substantially as described.

3. A cash-carrier, comprising a tube having  
5 an opening in its side and its rear end closed, a clasp journaled on the tube and provided with an opening adapted to register with the tube-opening, and a plate secured to and closing the front end of the tube and provided with  
10 a shoulder to cause the end of the tube to sustain endwise the pressure applied incidental to the stopping of the carrier, substantially as described.

In testimony whereof we affix our signatures in the presence of two witnesses.

FREDERICK W. GREMMELS.  
CHARLES W. KELLER.

Witnesses to the signature of Frederick W. Gremmels:

M. R. REMLEY,  
G. Y. THORPE.

Witnesses to the signature of Charles W. Keller:

M. J. GOTTHELF,  
J. F. PHELAN.