May 9, 1933. H. F. VIEAU 1,908,492

PNEUMATIC DISPATCH CARRIER

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Fig. 2.

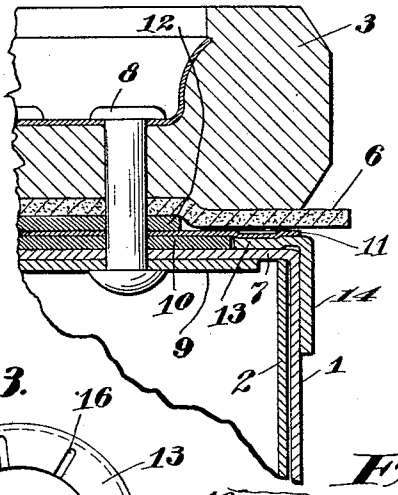

Fig. 5.

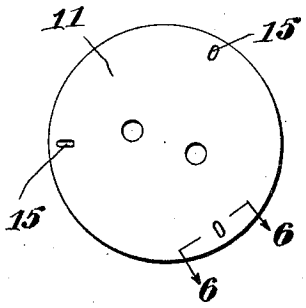

Fig. 3.

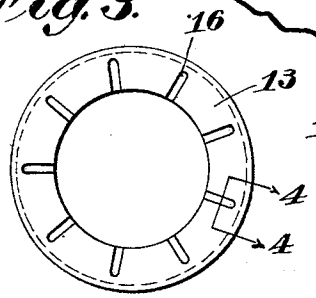

Fig. 4.

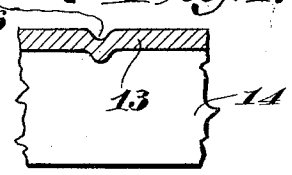

Fig. 6.

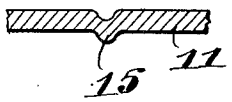

Fig. 1.

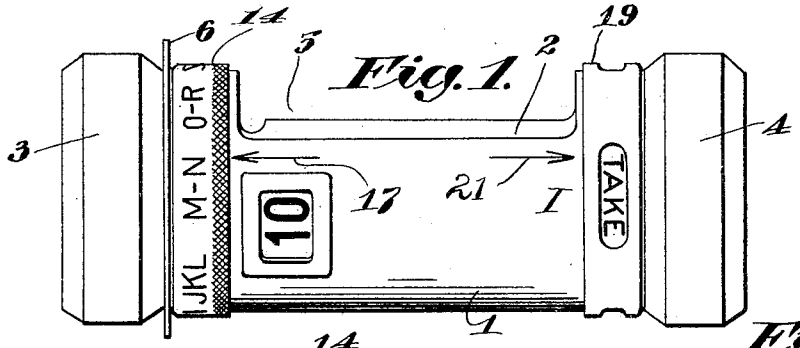

Fig. 7.

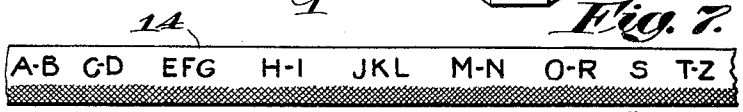

Fig. 9.

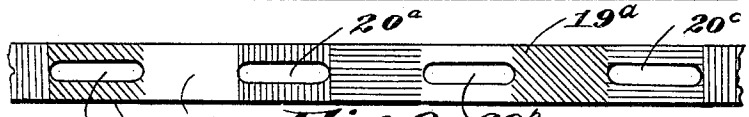

Fig. 8.

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Fig. 10

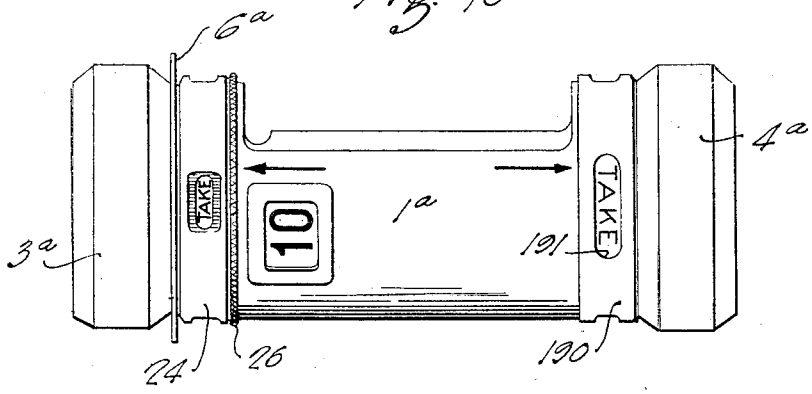


Fig. 11

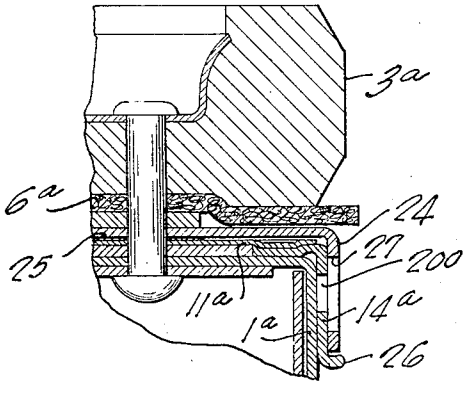
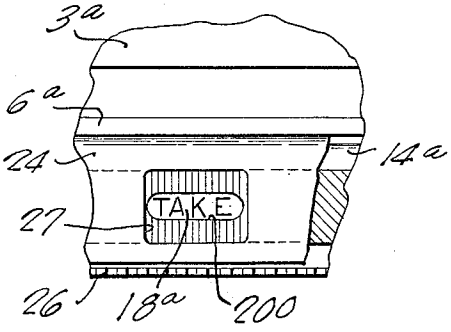


Fig. 12



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UNITED STATES PATENT OFFICE

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PNEUMATIC DISPATCH CARRIER

Application filed March 17, 1928. Serial No. 262,557.

This invention pertains to pneumatic dispatch systems and more particularly to carriers for use in such systems.

It has been customary to provide such carriers with distinguishing characteristics, for example a letter, number, or distinctively colored element in order to designate the point of origin of the carrier, the contents of the carrier,—for example cash or charge slip, or any other fact necessary to the proper handling of the carrier and the performance of the desired transaction. Under some circumstances it may become desirable to change this designating characteristic of the carrier from time to time, and sometimes at quite frequent intervals, and to this end carriers have been provided with movable index elements such as shown for example in the patents to Jennings No. 1,585,290, May 18, 1926 and Burns No. 1,195,651, August 22, 1916.

Modern pneumatic systems are frequently of very complex character comprising many outlying stations and employing many operators at the central station designated to perform special functions, so that it has become desirable to provide the carrier with means capable of indicating a great variety of matters independently one of the other. The usual cash carrier is of standard dimensions and can not be lengthened substantially if it is to traverse the bends of the ordinary transmission tubes. These cash carriers are provided with heads or bumpers at each end and have a large opening in the center giving access to the interior, and there is little space available for multiplication of designating devices of usual type.

In the patent to Burns, above noted, a plurality of indicator rings are mounted at one end of the carrier, and provision is made for positively locking the several rings in relatively adjusted position, but prior to and after adjustment it is necessary to actuate a locking element separate from the ring, and the release of one ring to permit adjustment releases the other so that there is danger of accidental movement of one ring while adjusting another. Moreover, this carrier is of that type which opens at one end so that a substantial portion of its length is available for the reception of such indicator rings. However, such a carrier is not adapted for use in transmitting cash or for like purposes.

In the Jennings patent a cash carrier of the usual type is shown as provided with a single indicator ring at one end, such ring being retained in proper position solely by friction.

In accordance with the present invention I provide an ordinary cash carrier, having heads at each end and a large central access opening, with a plurality of independently movable index devices so disposed that they do not interfere with the proper operation of the carrier and do not decrease the normal size of the access opening; and for retaining such index devices in proper adjusted position I furnish locking means of very simple character adapted effectively and certainly to retain each index device indefinitely in adjusted position, although permitting them to be adjusted independently at will merely by the application of sufficient force.

Preferably I employ color characteristics in connection with one at least of these indicator devices, and by an arrangement hereinafter described am thus able to provide for a large number of distinguishing combinations by the use of but a single moving part, if desired.

While I have herein shown a preferred embodiment of the invention together with a desirable modification thereof, I wish it to be understood that the invention is not confined in its broader aspects to the specific arrangement of parts herein disposed, but may be embodied in other arrangements and by the use of materials and proportions of parts different from those herein described and illustrated.

In the accompanying drawings,

Fig. 1 is a side elevation of a cash carrier of substantially usual type embodying the present improvements and showing the carrier open;

Fig. 2 is a fragmentary diametral section showing one end of the carrier to large scale;

Fig. 3 is a plan view of an indicator ring forming an element of the carrier;

Fig. 4 is a fragmentary enlarged section on the line 4—4 of Fig. 3;

Fig. 5 is a plan view of a resilient washer forming a part of the carrier;

Fig. 6 is an enlarged fragmentary section on the line 6—6 of Fig. 5;

Fig. 7 is a developed edge view of the ring shown in Fig. 3;

Fig. 8 is a fragmentary developed view of a portion of one end of the body of the carrier;

Fig. 9 is a fragmentary developed edge view of a second indicator ring;

Fig. 10 is a side elevation of a cash carrier provided with a modified construction of indicator ring;

Fig. 11 is a view similar to Fig. 2 showing a section of such carrier; and

Fig. 12 is a fragmentary elevation of parts shown in Fig. 11.

The carrier herein illustrated is of that general type more fully described in the patent to Holdsworth No. 1,585,289, May 18, 1926, although the invention is not necessarily limited to embodiment in this particular form of carrier. The carrier, as herein shown, comprises outer and inner concentric telescoping shells 1 and 2 forming the body of the carrier and the heads 3 and 4 secured to opposite ends of the body. The shells 1 and 2 are provided with openings which may be brought into registry to provide the access opening 5 through which articles may be introduced into the interior of the body. Preferably a driving washer 6 of usual construction is arranged between one of the heads, for example, the head 3, and the body of the carrier.

Referring to Fig. 2 for a more specific description, the numeral 7 designates the closed end of the outer shell 1. The head or bumper 3 is secured to the end member 7 of the shell 1 by means of a pair of rivets or bolts 8. In order to reinforce the parts, a plate 9 is interposed between the inner ends of the rivets 8 and the inner surface of the end 7 of the shell. At the outer side of the end 7 a spacer plate 10 is arranged, such plate having openings for the rivets 8, and above this spacer plate I provide a resilient or spring metal washer 11 constituting one element of the index retaining means as hereinafter more fully described. Above this resilient plate or washer 11 I provide a spacer plate 12 which underlies the driving washer 6, the bumper or head 3 being disposed in engagement with the upper surface of the washer 6. The rivets or bolts 8 hold all of the above parts in rigidly assembled relation.

In accordance with the present invention I provide a rotary index ring having an inwardly directed radial annular flange 13 of substantially the same thickness as the spacer 10, and which is interposed between the outer surface of the end member 7 and the under side of the spring washer 11. This index ring also comprises a cylindrical flange 14 which encircles the shell 1 at a point closely adjacent to the head 3, the overhang of the head providing protection for this ring so that the latter is not readily damaged during the use of the carrier.

The spring plate or washer 11 is preferably provided with one or more, preferably three, ribs, lugs, or bosses 15 conveniently produced by a stamping or punching operation. The radial flange 13 of the index ring is provided with a corresponding series of radial sockets or indentations 16 adapted to receive the ribs 15 of the spring washer. Obviously, the ribs or projections may be on the ring and the sockets or indentations in the washer, if desired.

The outer surface of the cylindrical flange 14 of the index ring is provided with a series of spaced index characteristics, and in Figs. 1 and 7 I have shown such characteristics as consisting of groups of letters of the alphabet. These groups are spaced at equal distances circumferentially of the flange 14 and are preferably centered on the radial planes of the several sockets 16. Upon the outer surface of the outer shell I provide a designating character or mark such, for example, as the arrow 17 adapted to cooperate with any of the index characters on the flange 14 to denote that character or group of characters which has been selected.

Normally the detent ribs 15 are seated in corresponding sockets 16 of the flange 13 and the resiliency of the washer 11 is such as to prevent escape of the detent ribs from the sockets, thus securely holding the index ring in adjusted position. However, as the ribs 15 are preferably rounded and the sockets 16 are likewise rounded, it is possible by application of sufficient force to the flange 14 to turn the index ring so as to bring another character or group of characters opposite to the arrow 17. The user of the carrier may thus vary the designated characteristic with the greatest ease and without employing tools or manipulating special and unusual elements not commonly found in carriers of this type, while at the same time the index ring is securely retained in the proper position. Moreover, the construction thus provided is of very simple character and adds but little to the cost or weight of the carrier, while it is of durable character and not subject to injury nor liable to fail even after long periods of use.

In order to provide a greater range of selection than is furnished by the single ring above described, I provide a second rotary ring. As here illustrated this ring is at the opposite end of the carrier, such ring being designated by the numeral 19. This ring is in general of the same construction as

the index ring previously described, is retained upon the end of the carrier in the same manner, and is provided with the same detent or locking means, and thus each ring may be adjusted without disturbing or accidentally changing the setting of the other.

As one example of the use of such a second ring I have indicated it as adapted to be used in connection with charge transactions wherein it is desirable for the charge authorizer to note at once whether the article purchased is to be taken away by the purchaser or is to be sent. When the article is to be taken by the purchaser, it is desirable to have the transaction completed more promptly than when the merchandise is to be sent, and thus I have arranged this second ring 19 so that the dispatching clerk can readily indicate to the authorizer whether the article is to be taken or sent. For this purpose I may provide the surface of the outer shell 1 at one or more points with the word "Take" suitably marked on or impressed in the metal or shell, and I then provide the ring 19 with a window which may be brought into registry with the word "Take" or which may be turned away from such word so that the latter is concealed. It is, of course, to be understood that this particular index characteristic, to wit, the word "Take" is merely illustrative of any designating characteristic which it may be desired to employ and which is to be rendered visible or alternately to be occulted at the will of the person dispatching the carrier.

In order further to extend the utility of the carrier and the permissive variation in indications which may be provided, I may form the ring with a plurality of windows indicated in Fig. 9 at 20, 20^a, 20^b and 20^c. I may also color the exterior surface of this ring designated as 9^a so as to form areas of distinctively different appearances, each of such color areas corresponding either to the length of one of the windows or to the space between adjacent windows. Thus in Fig. 9 I have indicated two series of colored areas, each series comprising the same colors but having any particular color in one series disposed in the space between adjacent windows while the same color of the other series extends along the apertured or windowed space. With this arrangement it is possible to obtain a wide variation of designations since any one of the colors may be combined with the word "Take" to indicate a certain fact or circumstance or alternately the same color may be employed as a blank at the position of the occulted word "Take", thus indicating another fact or circumstance. For convenience in indicating the position of the word "Take" when the latter is occulted by a blank space in the ring, I may provide an arrow or other mark 21 on the surface of the carrier. The number of combinations may further be increased by providing the surface of the shell with as many of the index characteristics (for example, occurrences of the word "Take") as there are windows in the ring, designating each of these several characteristics by a distinctive numeral or letter as, for example, the roman numerals I, II, etc.

Other and further modifications in carrying forward the underlying principles herein exposed will doubtless occur to those familiar with the art.

Figs. 10, 11 and 12 illustrate a carrier having at the head end an index ring assembly which embodies the use of such colored areas. Since with the arrangement shown in Fig. 9 the colored areas are exposed throughout the entire circumference of the ring, it may not be as easy as desirable to determine the color which has been selected, and to facilitate the ready recognition of the chosen color I employ the arrangement shown in Figs. 10, 11 and 12. In these figures the shell is indicated at 1^a, the spring lock washer at 11^a, the head at 3^a, and the driving washer at 6^a. In this instance the index ring is provided with the flange 14^a and may have the windows, etc. above described with respect to the ring 19. Preferably the free edge of this flange 14^a is turned outwardly at 26 and its outer edge is knurled, providing a convenient gripping surface for the fingers of the user. The outer surface of this flange 14^a may be colored as previously described, but in this instance such outer surface is protected by means of a secondary ring, here illustrated as stationary, comprising a flange 24 overlying the flange 14^a, such secondary ring having a radial flange which may if desired be secured in fixed position by means of the head attaching bolts or rivets. Preferably a spacer 25 may be introduced between this secondary ring and the washer 11^a to provide sufficient space for the movements of the latter. The protector ring 24 is furnished with a window 27 through which any one of the colored areas of the ring 14^a may be exhibited, and if this flange has windows, such as the window 200 of Fig. 12, it is possible to see index characteristics such as 18^a upon the outer surface of the shell of the carrier. The opposite end of the carrier may be plain or have a rotary ring and is here shown provided with a ring 190 having windows 191 through which the word "Take" or other index characteristic is exposed similar to the ring 19 on the carrier shown in Fig. 1.

It is evident from consideration of the above description that a great variety of designating combinations of index characteristics can be provided upon this carrier and that such combinations can be made up at the will of the user without especial ef-

fort and with a minimum expenditure of time and without substantially complicating the carrier, adding to its weight, or cutting down the normal area of the access opening.

I claim:

1. A pneumatic dispatch carrier having a cylindrical body portion and an index ring embracing said body portion and turning relatively thereto, said ring having a flange provided with a plurality of circumferentially spaced indentations therein, and detent means including a spring washer having a boss engageable with the indentations in the ring and exerting force in an axial direction tending to keep the boss engaged with a selected indentation.

2. A pneumatic dispatch carrier having a cylindrical body portion and an index ring embracing said body portion and turning relatively thereto, said ring having a flange, detent elements on the ring flange, and a spring washer provided with cooperating detent elements, said washer exerting pressure in an axial direction upon the flange thereby normally holding the detent elements thereon in engagement with those on the ring flange.

3. A pneumatic dispatch carrier having a cylindrical body portion and an index ring encircling said body portion and rotatable relatively thereto, said ring having an annular flange extending radially over one end of the body portion, and resilient detent means movable in an axial direction and normally engaging the flange to retain the ring in selected position said flange having elements thereon with which the detent means engage.

4. A carrier for pneumatic dispatch systems comprising a cylindrical body portion and a rotatable ring encircling said body portion, said ring comprising a radially extending annular flange and a cylindrical flange, and a resilient plate engaging the radial flange, said plate and flange having cooperating detent elements normally operative to retain the ring in selected position, said detent elements slipping to permit rotation of the ring when sufficient rotative force is applied to the latter.

5. A carrier for pneumatic dispatch systems comprising a cylindrical body portion and a rotatable ring encircling said body portion adjacent one end thereof, said ring comprising an annular flange extending radially over that end of the body portion and a cylindrical flange, a resilient plate engaging the radial flange, the plate having a detent tooth and the radial flange having a socket engageable by the tooth for retaining the ring in selected position.

6. A carrier of the class described comprising a cylindrical body and a bumper or head at the end of the body, a rotatable ring encircling the body at a point adjacent to the head, said ring comprising a cylindrical flange having a series of distinctive index characteristics upon its outer surface and a radial annular flange having a series of sockets therein and interposed between the end of the body and the bumper or head, and a resilient washer interposed between the bumper and said radial flange, the washer having a detent tooth engageable with any of a series of sockets in said radial flange, the sockets corresponding in number and spacing with the series of index characteristics on the cylindrical flange.

7. A carrier of the class described comprising a cylindrical body and a head secured to the end of the body, a rotatable ring encircling the body at a point adjacent to the head, said ring having a cylindrical flange provided with a window opening and a radial annular flange interposed between the body and head, a resilient washer between the head and said radial flange, the flange and washer having cooperating detent elements axially movable and normally operative to hold the ring in selected position, but permitting it to rotate when subjected to sufficient rotative force, and designating characteristics upon the outer surface of the body beneath the cylindrical flange of the rotary ring.

8. A carrier of the class described comprising a body provided with a head at each end and an access opening in its side wall intermediate the heads, a movable indicator mounted between said heads, said indicator having a plurality of differently colored areas, and a relatively fixed shield, said shield having a window, the shield concealing all of the colored portion of said indicator except such as is exhibited through the window.

9. A carrier of the class described comprising a body provided with a head at each end and an access opening in its side wall intermediate the heads, a rotary ring encircling said body, said ring having a series of windows therein separated by blank spaces, the body having a distinguishing index characteristic visible through any selected one of said windows when the ring is properly positioned, but invisible when the ring is turned to an intermediate position, and series of differently colored areas upon the ring, there being one area of each color corresponding to each window whereby the color of the area through which the characteristic is visible may be determined by the window selected to register therewith.

10. A pneumatic dispatch carrier comprising a cylindrical body portion having thereon an index characteristic, a relatively movable ring surrounding the body portion over said characteristic and having a window therein through which such characteristic may be exposed and a stationary ring sur-

rounding said movable ring and having a window therein registering with said characteristic, whereby the characteristic will be visible when the window in the stationary ring coincides with the window in the movable ring.

11. A pneumatic dispatch carrier comprising a cylindrical body portion having thereon an index characteristic, a relatively movable ring surrounding the body portion over said characteristic, and having a series of windows therein through any of which the characteristic on the body portion may be exposed, the surface of the ring at each window being treated, and a second ring surrounding said first ring and having a window therein larger than the windows of the first ring and adapted to register with said characteristic whereby when the windows in the two rings register the characteristic on the body portion and the treated surface at the window of the first ring may be visible.

12. A pneumatic dispatch carrier comprising a cylindrical body portion having thereon an index characteristic, a relatively movable ring surrounding the body portion over said characteristic, and having a series of windows therein through any of which the characteristic on the body portion may be exposed, the surface of the ring at each window being provided with color which contrasts with the color at the other windows, and a second ring surrounding said first ring and having a window therein larger than the windows of the first ring and adapted to register with said characteristic whereby when windows in the two rings register, the characteristic on the body portion and the color at the selected window of the first ring may be visible.

13. A pneumatic dispatch carrier comprising a cylindrical body portion having thereon an index characteristic, a relatively movable ring surrounding the body portion over said characteristic, and having a series of windows therein through any of which the characteristic on the body portion may be exposed, the surfaces of said ring between the windows being treated, and a stationary ring surrounding said first ring and having a window therein which registers with the characteristic whereby when windows in the two rings coincide, the characteristic on the body portion will be visible and when the windows do not coincide one of the treated surfaces of the first ring will be visible.

14. A pneumatic dispatch carrier comprising a cylindrical body portion having thereon an index characteristic, a relatively movable ring surrounding the body portion over said characteristic, and having a series of windows therein through any of which the characteristic on the body portion may be exposed, the surfaces of the ring at each window being provided with color which contrasts with the color at the other windows, and the surfaces of the ring between the windows being similarly provided with contrasting colors, and a stationary ring surrounding said first ring and having a window therein larger than the windows of the first ring and which registers with the characteristic whereby when windows in the two rings register the characteristic on the body portion and the color at the selected window of the first ring will be visible and when the windows in the two rings do not register the color of a selected surface of the first ring will be visible.

Signed by me at Syracuse, New York, this 15th day of March, 1928.

HAROLD F. VIEAU.