July 26, 1932. C. S. JENNINGS 1,868,903

CARRIER FOR DISPATCH SYSTEMS

Filed April 8, 1930

Fig. 1

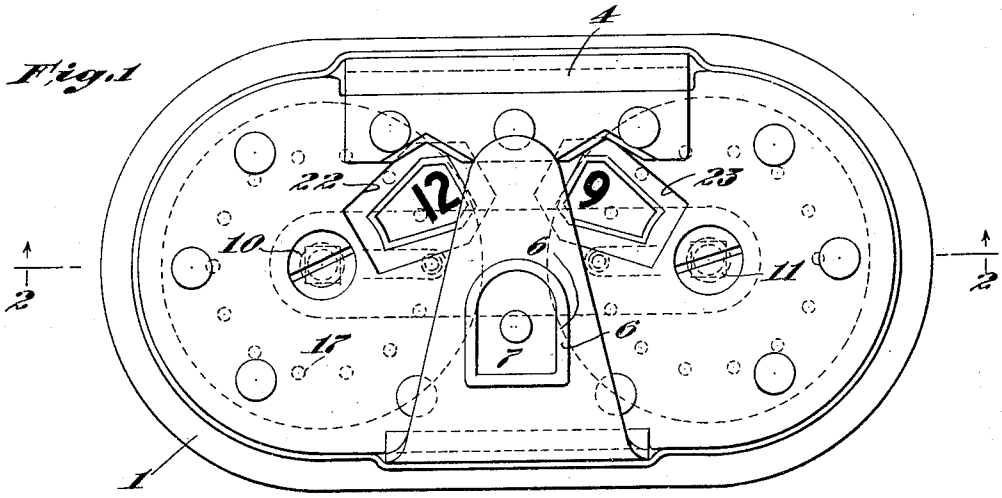
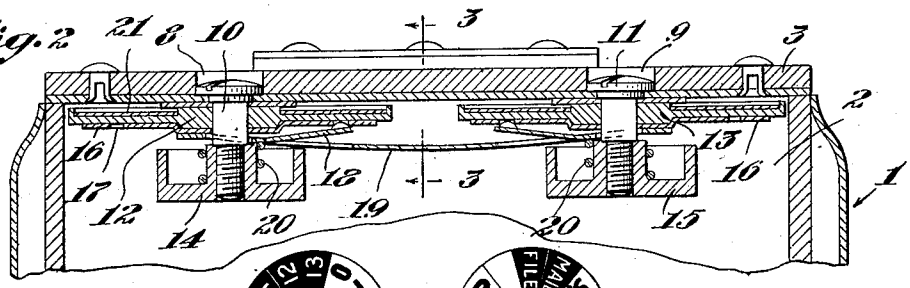
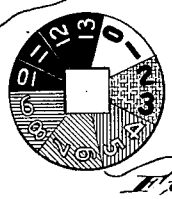


Fig. 2





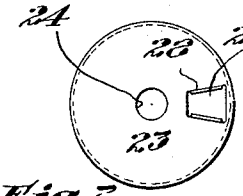


Fig. 7

Fig. 9

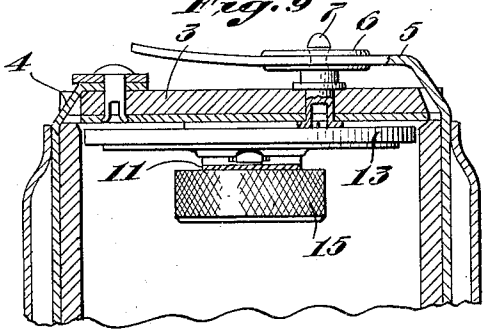
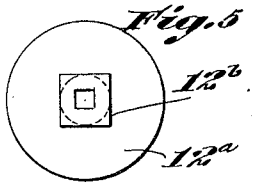


Fig. 5



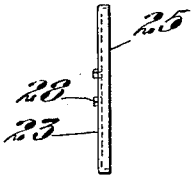


Fig. 8

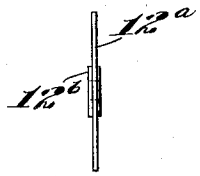


Fig. 6

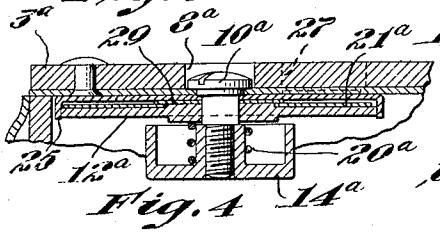


Fig. 4

Fig. 3

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UNITED STATES PATENT OFFICE

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CARRIER FOR DISPATCH SYSTEMS

Application filed April 8, 1930. Serial No. 442,515.

This invention pertains to carriers for use in carrier dispatch systems and relates more particularly to index means for such carriers. Modern business and industrial establishments are now served to an increasing extent by carrier dispatch systems providing intercommunication between various officials, departments, etc., and in recent years such systems have become highly complex and comprise a great number of stations. In order that carriers may be identified as to destination or origin, it is necessary to provide each carrier with suitable index means, and since, as above stated, present systems embody a great number of possible destinations, or points of origin, it is essential to provide index means having wide capability of adjustment so as to indicate any of a large number of stations or groups of stations. On the other hand, the index means provided must be of such character and so located that it will not interfere with the transmission of the carrier by usual means, while at the same time, the index characteristics must be readily observable by the operator without special handling of the carrier. Heretofore pneumatic carriers of circular cylindrical type have been furnished with index means consisting of two or more rings concentric with the carrier body and movable circumferentially with respect to each other so as to permit various combinations of the index characteristics carried by each ring. On the other hand, the non-circular (usually flattened or more or less elliptical) carriers now in use in many systems for transporting folded documents, small machine parts, etc., is not well adapted to the provision of such rotary index rings, and the present invention, while broadly applicable to carriers of circular cylindrical form, finds its particular utility in connections with carriers of non-circular type. In accordance with the present invention, I provide index means which may be made of great capacity so far as combinations of indicia is concerned, which may readily be applied to the flat side wall of a carrier or to the end closure of a carrier, whether such end closure be a fixed head or a hinged or otherwise movable cover, and which does not interfere with the normal function of the carrier or add greatly to the cost of manufacture.

In the accompanying drawing certain desirable embodiments of the invention have been disclosed by way of example, and in the drawing,

Fig. 1 is an end elevation of a non-circular carrier embodying the present invention;

Fig. 2 is a section to larger scale, on the line 2—2 of Fig. 1;

Fig. 3 is a section on the line 3—3 of Fig. 2;

Fig. 4 is a fragmentary section similar to Fig. 2 but illustrating a modification;

Fig. 5 is a plan view, to smaller scale, of an index carrying disk as used in the structure of Fig. 4;

Fig. 6 is an edge view of the disk of Fig. 5;

Fig. 7 is a plan view, to small scale, of an index protecting cup employed in the structure of Fig. 4;

Fig. 8 is an edge view of the cup of Fig. 7; and

Fig. 9 is a diagrammatical plan view illustrating one desirable mode of marking a pair of index disks.

Referring to the drawing, the carrier to which my improved index means is applied comprises a hollow body 1 of any suitable material and of appropriate shape for use in the system to which it appertains. As here shown, the carrier is of flattened elliptical contour and comprises a chamber 2 for the reception of material to be conveyed, for example money, mail, documents, articles of merchandise, etc. The end of the body of the carrier is provided with a suitable closure or cover 3 which is movable to give access to the chamber 2. As here shown, the cover is hinged at 4 to the body of the carrier and is furnished with suitable retaining or locking means for holding it in closed position. A convenient form of locking means comprises a flexible flap 5 attached at one end to the body of the carrier, said flap being provided with one element 6 of a snap fastener of suitable type, the cooperating element 7 being secured to the cover 3.

In accordance with the present invention one wall of the carrier, for example the cover

3, is provided with a plurality of sockets, two sockets 8 and 9 being illustrated, and each socket houses the head of a rotary stud adapted to support index means. As here shown the studs 10 and 11 are provided with heads disposed within the sockets 8 and 9 respectively, and with elongate body portions which are of square section adjacent to the heads and adapted to fit within square holes in the index-carrying disks 12 and 13 respectively. The end portions of the studs 10 and 11 are screw threaded for the reception of nut members 14 and 15 respectively, which bear against shoulders at the junctions of the squared and threaded portions of the studs. These nuts are formed as knurled cup-like disks and constitute means for rotatably adjusting the studs 10 and 11 with the disks carried thereby. Each disk preferably comprises an inner plate 16 having a circular series of sockets or openings 17 which are adapted selectively to receive a detent carried by a resilient finger 18 struck up from or otherwise secured to a yoke member 19 having openings at its opposite ends 19^a for the free passage of the studs 10 and 11. In order to press the fingers 18 with their detent elements into retaining engagement with the openings in the plates 16 and hold the ends 19^a in frictional contact with the plates, I provide compression springs 20 which are conveniently disposed with the cup-like adjusting members 14 and 15 and which press against the end portions of the yoke 19 so as to force the fingers 18 toward and the ends 19^a against the plates 16 with resilient pressure.

The outer surfaces of the index-carrying disks, that is to say, those surfaces which are opposed to the inner surfaces of the cover 3, are preferably slightly cupped and support dial members of suitable type, for example paper, celluloid, or the like, each of which is furnished with suitable indicia, for example a series of numbers, letters or the like. Alternatively, the dial may consist of index characters printed on or otherwise applied to the disk, and if desired, the dials may be of different colors or the several numeral or other index characteristics may be placed upon fields of color differing one from another in order that various combinations of numbers, colors, etc. may be made.

As indicated in Fig. 1, the studs 10 and 11 are disposed symmetrically at opposite sides of the fastening means, and the cover 3 is furnished with openings or windows 22 and 23 respectively through which the indicia carried by the respective disks may be exposed to view.

In the use of this device, either or both of the index-carrying disks may be adjusted, when the cover is open, simply by turning its corresponding knurled adjusting member 14 or 15 respectively, and in this way any desired combination of the index arrangements carried by the two disks may be made. It will be noted that the index disks with the operating and retaining means therefor are arranged wholly within the chamber 2 of the carrier so that they do not in any way interfere with the normal mode of operation of the carrier or require the use of a special transmission tube, track, or other means for transmitting the carrier from station to station. As the index dials are disposed wholly within the carrier, the index characteristics are not exposed to rapid wear either through handling or through contact with parts of the system through which the carrier may pass and thus the index devices are durable and require little adjustment or repair.

While two index disks have been shown as mounted upon the cover, it is obvious that a single disk might be employed or a greater number than two, as desired, and I contemplate that any suitable number within the limits of the space available may be made use of as circumstances may require.

It is further to be noted that while, as here shown, the index devices are mounted upon the movable cover, it is within the broad scope of the invention to mount similar index means upon some portion of the fixed wall of the carrier body, for example, on the flattened side walls or at the fixed head end of the carrier, as might be preferred. And while certain specific elements are herein described as useful in retaining the index-carrying disks in adjusted position, I wish it to be understood that other and equivalent means may be employed as desired.

Thus in the arrangement disclosed in Figs. 4 to 8 inclusive, the head 3^a of the carrier is provided with a recess 8^a for the reception of the head of the rotary stud 10^a. This stud has a square shank portion adapted to fit within a square hole in an index carrying disk 12^a. Preferably this disk has a square boss 12^b projecting from its upper face and adapted to fit within a square opening in a dial member 21^a resting upon the upper surface of the disk. The end portion of the stud 10^a is screw threaded for the reception of a nut 14^a which bears against a shoulder on the stud. A spring 20 supported by the nut bears against the under surface of the disk 12^a and tends to force the latter upwardly toward a fixed cup member 23. This cup member has a central circular opening 24 adapted to permit the square portion of the stud 10^a to turn freely therein, and the cup member is also provided with a marginal flange 25 which overlaps the edge of the disk 12^a. The cup member 23 is furnished with an opening or window 26 adapted to register with a window 27 in the cover and with a similar window in a stiff plate 23^a fixed to the inner side of the cover. The cup member has flanges 28 at the edges of the opening 26

which engage opposite edges of the window in plate 23[a] to prevent the cup member from turning. Preferably a washer 29 of suitable material, for example, hard fiber or leather, may be interposed between the cup member and the central boss 12[b] of the disk 12[a], and the pressure exerted by the spring 20[a] produces enough friction between the parts to retain the index carrying disk in adjusted position, it being noted that the edge of the disk is protected by the flange 25 of the cup member 23 which substantially lessens liability of accidental turning of the disk. Obviously other and equivalent means for retaining the disk in adjusted position may be substituted for the specific means hereinabove described.

In Fig. 9 I have shown a pair of index disks illustrating one desirable system of marking. As shown, these disks are divided into sectors, each bearing a numeral adapted for example to indicate the ultimate station to which the carrier is to be sent, while certain sectors of one of the disks, for example the left hand disk as shown, may be grouped in color fields for convenience, for example, in assorting the carriers with respect to a plurality of dispatchers, stations comprised in a transfer or relay station of the system.

I claim:

1. A pneumatic dispatch carrier having a body and a hinged end closure, fastening means disposed at the central part of the closure, the closure having a window at each side of the fastening means, and a pair of index carriers mounted at the inner side of the end closure and having index characteristics which may be exposed through the respective windows.

2. A carrier and index means therefor, said index means comprising a pair of rotary index carrying disks, means for turning each disk, a plate having detent elements cooperable with the respective disks for retaining the latter in adjusted position, and spring means urging each detent element into operative engagement with its respective disk.

3. A pneumatic dispatch carrier including a closure at one end having two openings therein and index means including a pair of rotatable disks supported by said closure and having indicia thereon, means for rotating said disks independently to bring the desired indicia thereon into register with the windows in the closure, means in frictional engagement with said disks for retaining them in the adjusted position and resilient means carried by said disk rotating means for holding said retaining means in contact with the disks.

4. A pneumatic dispatch carrier including a closure at one end having two openings therein and index means including a pair of rotatable disks supported by said closure and having indicia thereon, means for rotating said disks independently to bring the desired indicia thereon into register with the windows in the closure, each of said disks having recesses therein, means in frictional engagement with said disks and detents carried by said last named means for engaging said recesses whereby said disks are retained in the adjusted positions.

5. A pneumatic dispatch carrier including a closure at one end having two openings therein and index means including a pair of rotatable disks supported by said closure and having indicia thereon, means for rotating said disks independently to bring the desired indicia thereon into register with the windows in the closure, each of said disks having recesses therein, means in frictional engagement with said disks, detents carried by said last named means for engaging said recesses whereby said disks are retained in the adjusted positions and resilient means carried by said disk rotating means for yieldably holding said frictionally engaging means in contact with said disks and said detents in said recesses.

6. A pneumatic dispatch carrier including a closure at one end having a window therein and index means including a rotatable disk having a plurality of sectors of various colors, means for rotating said disk to expose the sector of the desired color through the window in the closure and means for frictionally retaining the disk in any adjusted position including a resilient element carried by said disk rotating means.

7. A penumatic dispatch carrier including a closure at one end having a window therein and index means including a rotatable disk having a plurality of sectors of various colors, a cupped member for rotating said disk to expose the sector of the desired color through the window in the closure and means for frictionally retaining the disk in any adjusted position including a resilient element carried by the member within the cup thereof.

8. A pneumatic dispatch carrier including a closure at one end which may be opened to permit access to the interior of the carrier and has a window therein, and index means including a stud rotatable in said closure adjacent said window, a disk carried by and rotatable with the stud, and means accessible when said closure is opened to rotate said stud and disk, said disk having an annular band of indicia thereon whereby any one of these indicia may be brought into register with the window by the rotation of the disk.

9. A pneumatic dispatch carrier having a hollow body portion, a closure therefor, said closure having a window therein, a rotary index disk mounted at the inner side of the closure, a member for rotating said disk to expose a selected indicia upon the disk

through the window in the closure, and means resiliently held in contact with the disk by said member for holding the disk in such position during the travel of the carrier.

10. A pneumatic dispatch carrier having a hollow body portion, a closure therefor, said closure having a window therein, a rotary index disk mounted at the inner side of the closure, a member for rotating said disk to expose a selected indicia upon the disk through the window in the closure, a detent element, and spring means urging said element into operative engagement with the disk, said spring means being held in effective position by said turning means to hold the disk against rotation during the travel of the carrier.

11. A pneumatic dispatch carrier having a hollow body portion, a closure therefor, said closure having a window therein, a rotary index disk mounted at the inner side of the closure, a member for rotating said disk to expose a selected indicia upon the disk through the window in the closure, and means for yieldably holding said disk against rotation during the travel of the carrier including a detent element, and spring means in frictional engagement with said disk, said spring means supporting said detent element and holding it in effective position.

12. A pneumatic dispatch carrier having a hollow body portion, a closure therefor, said closure having a window therein, a rotary index disk mounted at the inner side of the closure, a member for rotating said disk to expose a selected indicia upon the disk through the window in the closure, and means for yieldably holding said disk against rotation during the travel of the carrier comprising a detent element, spring means in frictional contact with said disk, said spring means supporting said detent element and holding it in effective position and means carried by said member and yieldably bearing against said spring means.

13. A pneumatic dispatch carrier including a closure at one end having two windows therein, and index means including two rotatable disks, each disk being associated with a window and having indicia therein, a member for each disk by which the disks are rotated to expose the selected indicia through the closure windows, and a yoke member yieldably held by both disk rotating members in frictional contact with said disks to hold the disks against rotation during the travel of the carrier.

14. A pneumatic dispatch carrier including a closure at one end having two windows therein, and index means including two rotatable disks, each disk being associated with a window and having indicia therein, a member for each disk by which the disks are rotated to expose the selected indicia through the closure windows, each disk having a series of sockets, a yoke member yieldably held by both disk rotating members in frictional contact with the disks and detents carried by said yoke member and adapted to engage the recesses in the disks, said yoke member and detents coacting to hold the disks against rotation during the travel of the carrier.

Signed by me at Syracuse, N. Y., this 6th day of March, 1930.

CHESTER S. JENNINGS.