

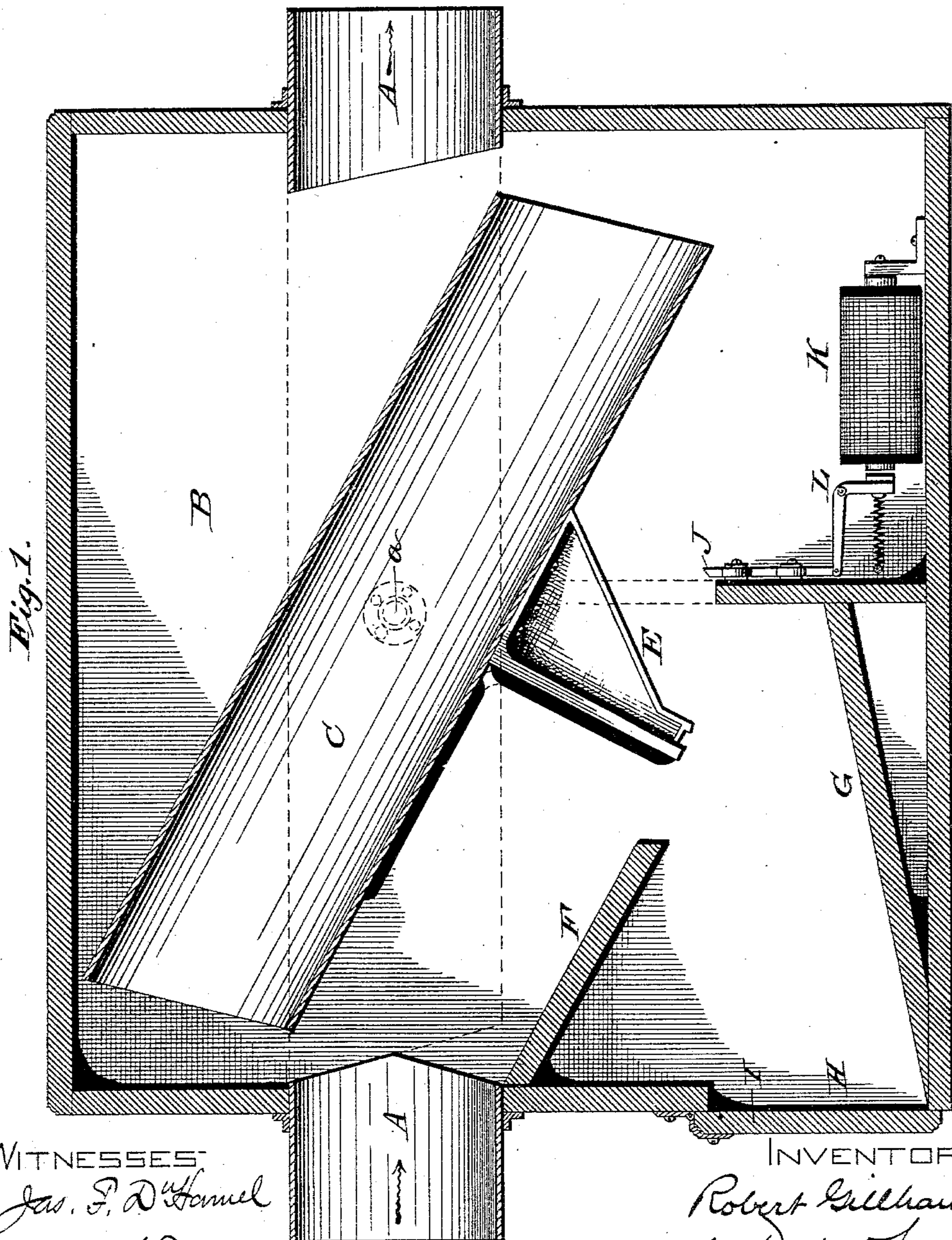
(No Model.)

2 Sheets—Sheet 1.

R. GILLHAM.
PNEUMATIC CARRIER.

No. 303,836.

Patented Aug. 19, 1884.



WITNESSES

Jas. F. Duffin
Walter S. Dodge

INVENTOR:

Robert Gillham,
by Dodge & Son,
Attys.

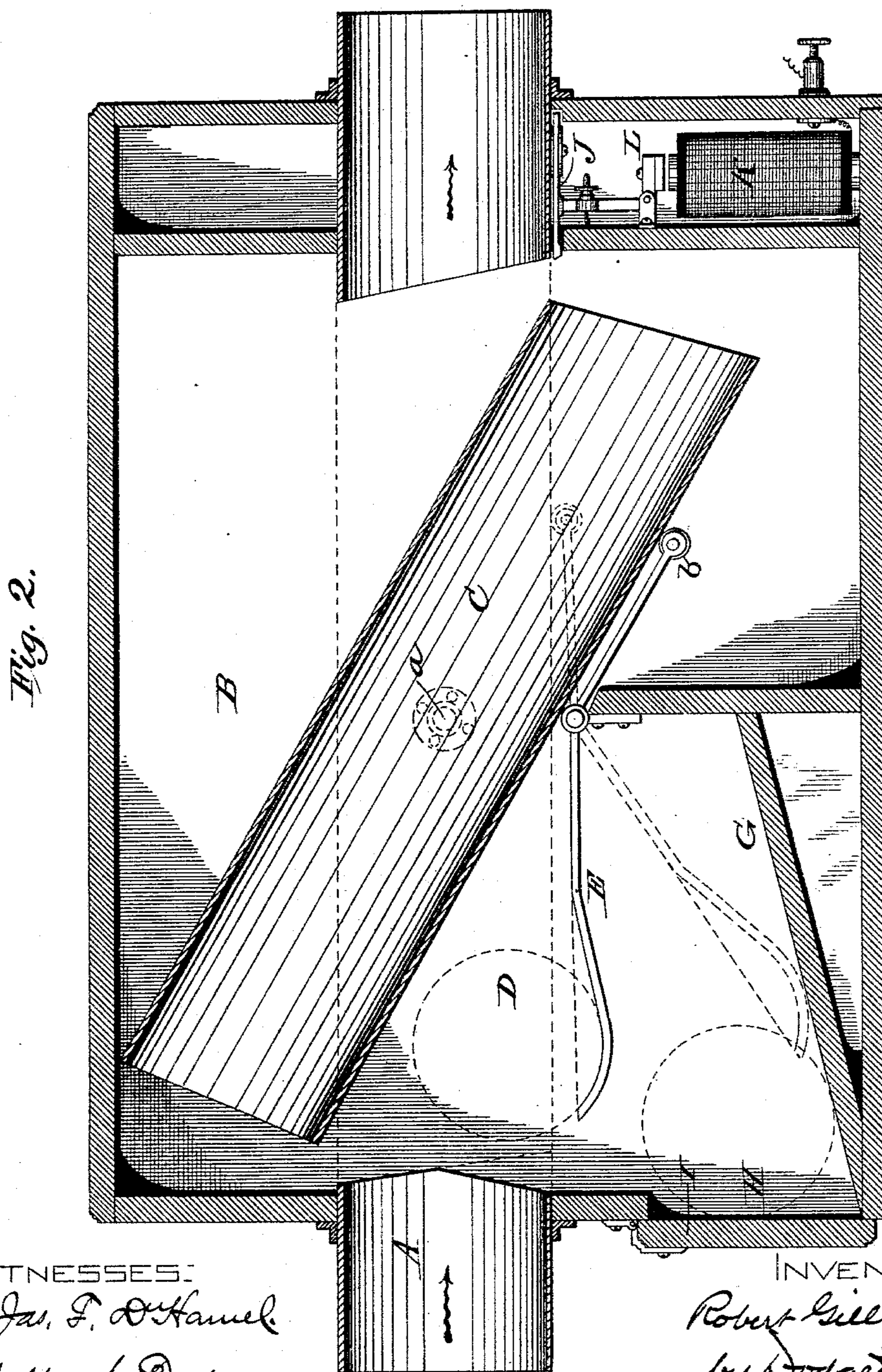
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UNITED STATES PATENT OFFICE.

ROBERT GILLHAM, OF KANSAS CITY, MISSOURI.

PNEUMATIC CARRIER.

SPECIFICATION forming part of Letters Patent No. 303,836, dated August 19, 1884.

Application filed November 17, 1883. (No model.)

To all whom it may concern:

Be it known that I, ROBERT GILLHAM, of Kansas City, in the county of Jackson and State of Missouri, have invented certain Improvements in Pneumatic Carriers, of which the following is a specification.

This invention relates to pneumatic carrier systems of the character described and shown in an application for patent filed by Albert Brisbane and myself on the 19th day of March, 1883, the present improvements relating merely to the manner of discharging the carrier or car at any desired station, and automatically restoring the switch-section of the tube to its normal position.

In the annexed drawings, Figure 1 represents a longitudinal section through one of the switch boxes or stations, and Fig. 2 a similar view showing a slightly modified form of the same.

The present invention is in the nature of an improvement upon or modification of certain analogous devices for which I have heretofore applied for patent, and has for its object the production of a simple and efficient means of discharging the carriers at any desired station with expedition and certainty.

In the drawings, A indicates the tube or conductor; B, the box or chamber into and from which said conductor passes, and C a bridge or switch section connecting the incoming and outgoing ends of the tube or conductor. This section is pivoted near its mid-length on center pins or pivots, *a*, which permit it to rock or tip with great freedom, the outgoing end being made to slightly overbalance the receiving end, so that when not held up by means provided for the purpose the bridge or switch section C will occupy the position shown in the drawings, in which position it will fail to conduct the carrier D across the box, but will permit it to pass beneath the receiving end of the bridge-section, as indicated in Figs. 1 and 2.

Beneath the bridge or section C is an arm, E, which may be made upon or as part of a bracket, and secured to the under side of the section C, as in Fig. 1, or in the form of a pivoted lever, bearing at one end against said section, as in Fig. 2. In either case the carrier D, entering the box while the section C is tipped out of line with the main conductor, will come into contact with the arm E, and, acting partly

by impact and partly by gravity, will cause the section to assume a horizontal position, or whatever other position may be necessary to cause it to complete the conductor through the box or chamber. When attached to the switch or bridge section, as in Fig. 1, the arm E should be faced with rubber or other elastic or yielding material to deaden the sound and relieve the arm of the concussion that would otherwise occur. This may also be done when the arm is made in the form of a pivoted lever, as in Fig. 2, but ordinarily that will not be necessary. A chute or incline, F, serves to conduct the carrier properly to the arm E, and an inclined bottom board, G, directs the carrier downward to an outlet-opening, H, closed by a gravitating door, I, which opens outward. The current of air passes constantly through the conductor A in the direction indicated, being advisably produced by suction; and so long as the bridge-section C is in line with the main tube or conductor the case or chamber B will be free from the effect of such current; hence the door I will open freely outward. As the carrier when allowed to pass beneath instead of through the section C automatically raises the section again into line with the conductor in the act of descending to the bottom board, G, it will be apparent that when the carrier reaches said bottom board it will roll down the same, and, coming into contact with the door, push it open and escape from the box; but so long as the switch or bridge is tipped out of line with the conductor the current of air passes through the conductor and the box in a nearly direct line from the incoming to the outgoing end of the tube, and consequently creates a suction in the box, which holds the door I tightly closed, and prevents any interference with the current in the tube or conductor back of the particular box or station. A latch, J, controlled by an electro-magnet, K, in a normally-open circuit, serves to hold the section C in its elevated position, except when by closing the circuit the operator causes the magnet to be energized and to attract its armature L, which, being connected with the latch J, withdraws the latter and permits the section to fall. The latch may be applied to the arm E, as in Fig. 1, or arranged to engage with one end of the section C, as in Fig. 2, the two arrangements being equivalents. It will of

course be understood that a battery and line wire are provided for the electro-magnet, and a switch or key by which the circuit may be closed when necessary.

5 The lever E, when used, will preferably be provided with an anti-friction roller, *b*, at the end, which bears against section C, and will be made concave or spoon-shaped at the other end.

10 Having thus described my invention, what I claim is—

1. In combination with box B and the tube or conductor A, gravitating pivoted section C, extending across the box between the incoming and outgoing ends of said tube, and an arm, E, beneath the pivoted section, adapted to be acted upon by the carrier passing beneath said section C, and to rock the same into

line with the tube or conductor, substantially as set forth. 20

2. In combination with tube A, the box B, having inclined bottom board, G, and gravitating door I, pivoted section C, and means, substantially such as shown and described, for throwing said section into line with the tube A, 25 and retaining it in such position.

3. In combination with a pneumatic tube or conductor, A, a box, B, provided with pivoted section C, arm E, inclined bottom board, G, door I, latch J, and electro-magnet K, arranged, 30 substantially as shown and described, to control the latch, as and for the purpose set forth.

ROBERT GILLHAM.

Witnesses:

ALBERT BRISBANE,
CHAS. L. DOBSON.