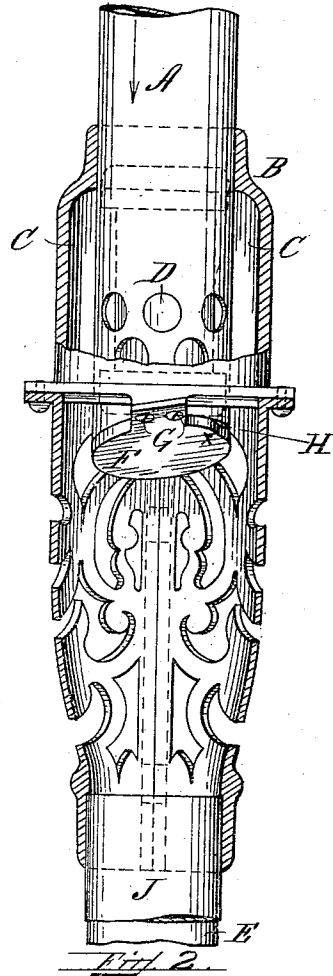
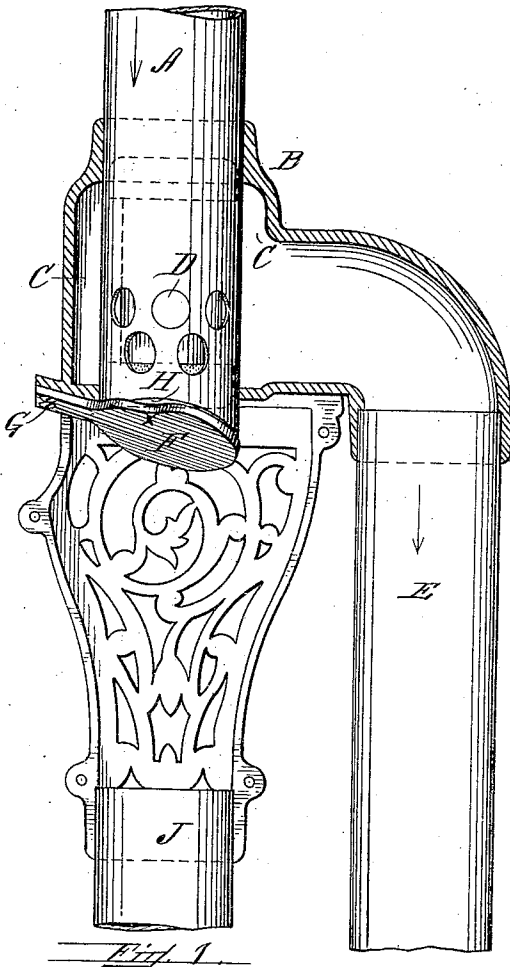


I. W. LITCHFIELD.
PNEUMATIC DESPATCH TUBE APPARATUS.
APPLICATION FILED JAN. 13, 1906.

944,680.

Patented Dec. 28, 1909.



Witnesses:
A. J. Messer
L. E. Bartlett

Inventor:
Isaac W. Litchfield
By E. C. Sullivan
J. S. Kunkle atty

UNITED STATES PATENT OFFICE.

ISAAC W. LITCHFIELD, OF BOSTON, MASSACHUSETTS, ASSIGNOR TO LAMSON CONSOLIDATED STORE SERVICE COMPANY, OF NEWARK, NEW JERSEY, A CORPORATION OF NEW JERSEY.

PNEUMATIC-DESPATCH-TUBE APPARATUS.

944,680.

Specification of Letters Patent.

Patented Dec. 28, 1909.

Application filed January 13, 1906. Serial No. 295,897.

To all whom it may concern:

Be it known that I, ISAAC W. LITCHFIELD, of Boston, in the county of Suffolk and State of Massachusetts, have invented certain new and useful Improvements in Pneumatic-Despatch-Tube Apparatus, of which the following is a specification.

My invention relates to improvements in pneumatic despatch tube apparatus and particularly to the construction of the valves or doors controlling the delivery openings of said apparatus.

The object of my invention is to provide means for localizing the impact of the carrier upon the valve or door at one point, preferably near the valve seat, thereby providing an initial opening for the admission of air. The initial opening thus formed greatly facilitates the opening of the valve by the carrier with reduced retardation of said carrier. This is accomplished either by mounting the valve at double angles to the delivery tube, or, by mounting a small lug or projection on the inner face of the valve close to the valve seat and projecting slightly into the mouth of the delivery opening, in either case localizing the point of impact of the carrier upon the valve.

In the following drawings, in which a construction embodying my invention is set forth: Figure 1 is a side elevation of a terminal with the tube partly broken away, showing an initial opening in the valve caused by the localized impact of a carrier thereon. Fig. 2 is a rear elevation of Fig. 1.

Like letters of reference refer to like parts throughout the several views.

The delivery tube A being an extension of the transmission tube is inserted in the casing B which surrounds said tube A and is connected with the source of power.

The chamber C which surrounds the delivery tube A is connected to said tube by perforations D and the vacuum tube E connects with said chamber C and with the tube

A through perforations D. The delivery edge of the tube A is cut at a bevel to the tube so that the delivery edge of the tube lies in a plane inclined to the longitudinal axis of the tube and the delivery edge is controlled by the flexible flap valve F, which is secured at G and mounted to closely fit the delivery edge of the tube. The carriers after passing the valve F are discharged into a suitable receiver J secured to the casing B.

A carrier (see Figs. 1 and 2) entering the delivery tube A in the direction indicated by the arrow impinges upon the inner face of the valve at X. The impact of the carrier being localized at point X near the edge of said valve causes it to be lifted from its seat nearest that point, forming an initial opening H for the admission of air. The force of impact required to make the initial opening H is much less than would be required to lift the entire valve from its seat. The pressure upon the valve F is quickly equalized and the valve opens, allowing the carrier to discharge into the receiver J.

Having thus described the nature of my invention, and set forth a construction embodying the same, what I claim as new and desire to secure by Letters Patent of the United States is:

In a pneumatic despatch tube apparatus, a terminal, a delivery tube therein, and a valve controlling the opening of said delivery tube and mounted in a plane inclined to the longitudinal axis of the delivery tube and adapted to localize the point of impact of a carrier thereon.

In testimony whereof, I have signed my name to this specification in the presence of two subscribing witnesses, this fourth day of January A. D. 1906.

ISAAC W. LITCHFIELD.

Witnesses:

F. A. SEIB,
H. V. LAWSON.