No. 711,367. Patented Oct. 14, 1902.

F. R. TAISEY.

TERMINAL FOR PNEUMATIC DESPATCH TUBES.

(Application filed Oct. 17, 1901.)

(No Model.)

Fig. 1.

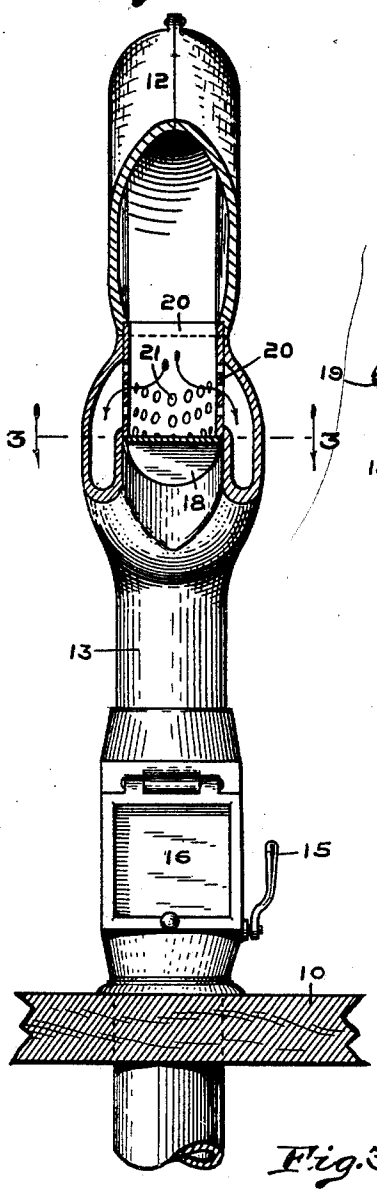


Fig. 2.

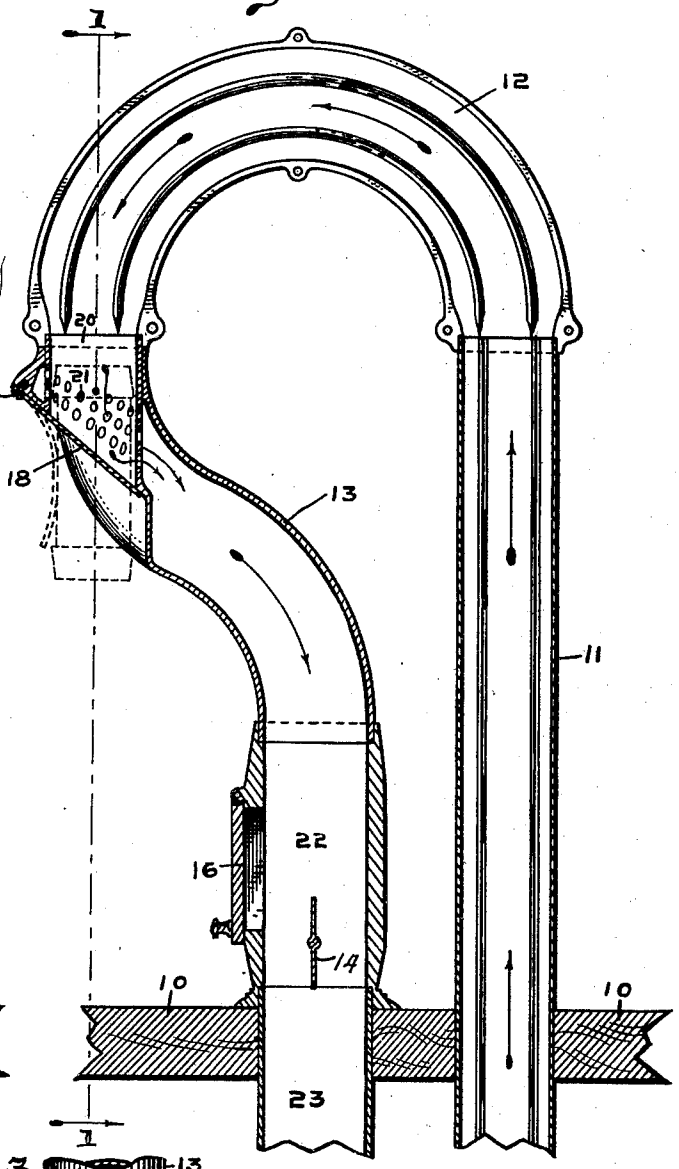
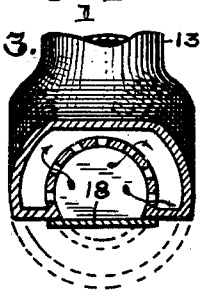


Fig. 3.



WITNESSES:

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FRED R. TAISEY, OF INDIANAPOLIS, INDIANA, ASSIGNOR TO THE TAISEY PNEUMATIC SERVICE COMPANY, OF INDIANAPOLIS, INDIANA, A CORPORATION OF INDIANA.

TERMINAL FOR PNEUMATIC-DESPATCH TUBES.

SPECIFICATION forming part of Letters Patent No. 711,367, dated October 14, 1902.

Application filed October 17, 1901. Serial No. 78,965. (No model.)

To all whom it may concern:

Be it known that I, FRED R. TAISEY, of Indianapolis, county of Marion, and State of Indiana, have invented a certain new and useful Terminal for Pneumatic-Despatch Tubes; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, in which like numerals refer to like parts.

The object of this invention is to prevent back suction on the carrier at the discharge-point in pneumatic-despatch tubes, whereby the carrier lingers and often fails to issue from the tube. This difficulty has been due to the current of air not continuing in substantially the same direction past the discharge-point in the tube and also creating a suction of outside air through the discharge-opening into the tube, whereby there was nothing to force the carrier out of the discharge-opening and the back suction tended to hold it in the tube.

The means whereby the above difficulty has been overcome in my invention and the various novel features thereof will be understood from the accompanying drawings and the following description and claims.

In the drawings, Figure 1 is a front elevation of a portion of a pneumatic-despatch tube, the terminal being in vertical section on the line 1 1 of Fig. 2, the lower end and the support being partly broken away. Fig. 2 is a central vertical section through the same looking at it sidewise, the lower end and the support being partly broken away. Fig. 3 is a horizontal cross-section of the same on the line 3 3 of Fig. 1.

In detail the transmission-tube, as herein shown, consists of the tube 11, extending up through the table or support 10, and the curve 12, that connects therewith, what is usually termed the "return air-tube" consisting of the ogee-shaped tube 13, leading from the curve 12, the air-valve section 22, and the tube 23 and leaves the transmission-tube with a curve or at an obtuse angle therewith. These tubes or sections form a continuous air-conduit, through which a continuous current of air may pass.

The composition of the conduit is immaterial to this invention. It suffices if there be a continuous air-conduit with a bend in it at the terminal or discharge-outlet.

The terminal or discharge passage-way 20 is located within the air-conduit at the curve and tangential therewith. It is an outlet continuation of the transmission-tube and is located in the return-tube, which leaves it at an obtuse angle. As here shown, it is a straight continuation of curve 22 and is located in section 13. Within the conduit the discharge passage-way 20 is perforated at 21, and about it the conduit is enlarged, so that the passage-way will not obstruct or reduce the air-current, and it will be continuous and very slightly changed in direction, so that it will act directly against the carrier until wholly discharged.

The outlet-opening of the discharge passage-way is preferably oblique with relation to such passage-way and substantially in alinement with the return air-tube as it leaves the discharge passage-way, being in the outer periphery of the curve of the conduit. It is closed by the check-valve 18, secured at its upper end with the screw 19. The carrier by impact against the valve throws it open, as shown by dotted lines. The suction through the return-tube holds the valve closed.

The air-current is regulated by a damper 14 in section 22, having a handle 15. Said section also has a hinge-door 16.

The invention is made to avoid appreciable leakage of air through the discharge-opening into the conduit and to overcome the difficulties experienced with the apparatus heretofore used where the return-tube leaves some distance from the outlet and at a right angle therewith and whereby the air-current ceases to act on the carrier before its complete discharge and the carrier is held or drawn back and the current is instantly weakened by suction of outside air through the discharge-opening, so that sometimes all the carriers are brought to a standstill until the carrier which is thus held suspended is forcibly withdrawn. In such case it is sometimes difficult to locate the terminal where the carrier is lodged, and the whole service is for the time deranged. This device also guides the car-

rier to the outlet, and there is no opportunity for it to get into the return-tube or lodge against an obstruction. The inclined opening reduces the movement of the valve, and the opportunity for air to leak is about one-half as compared with a rectangular valve.

What is claimed to be the invention, and to be secured by Letters Patent, is—

1. In a pneumatic-despatch apparatus, an air-conduit with a curve in it and an enlargement at the curve, and a discharge passage-way for the carrier located in and of less diameter than such enlargement and extending tangentially with the curve of the conduit.

2. In a pneumatic-despatch apparatus, an air-conduit with a curve in it, and a perforated discharge passage-way for the carrier located within the air-conduit and extending tangentially with the curve thereof, said conduit being enlarged about the perforated portion of said discharge passage-way.

3. In a pneumatic-despatch apparatus, a transmission-tube, a return air-tube leading therefrom in line with the transmission-tube and having an enlargement and a curve in it and a perforated discharge passage-way for carriers leading from the transmission-tube through the enlargement of the return-tube tangentially with the curve therein.

4. In a pneumatic-despatch apparatus, an air-conduit with a curve in it, a perforated discharge passage-way for the carrier located within the air-conduit and extending tangential with the curve thereof and having an outlet inclined with reference to the discharge passage-way, and a valve for closing said outlet.

5. In a pneumatic-despatch apparatus, an air-conduit with a curve in it, a perforated discharge passage-way for the carrier located within the conduit and extending tangentially with the curve thereof and having an outlet inclined with reference to the discharge passage-way, and a valve for closing said outlet, the seat for said valve being at the inner portion of a recess or depression in the convex surface of the conduit and at the outlet end of said discharge passage-way.

6. In a pneumatic-despatch apparatus, the ogee-shaped tube-section 13, the straight perforated discharge passage-way 20 located within said tube-section with an inclined outlet, and the valve 18, arranged substantially as shown and described.

7. In a pneumatic-despatch apparatus, the combination of the straight tube-section 11, the semicircular tube-section 12, the ogee-shaped tube-section 13 connected together, the straight perforated discharge passage-way 20 located within the section 13 and registering with the outlet end of section 12 and having an inclined outlet, and the valve 18 for closing said outlet.

In witness whereof I have hereunto affixed my signature in the presence of the witnesses herein named.

FRED R. TAISEY.

Witnesses:

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V. H. LOCKWOOD.