

(No Model.)

P. KENNEDY, Jr.  
SWITCH FOR PNEUMATIC DISPATCH TUBES.

No. 406,447.

Patented July 9, 1889.

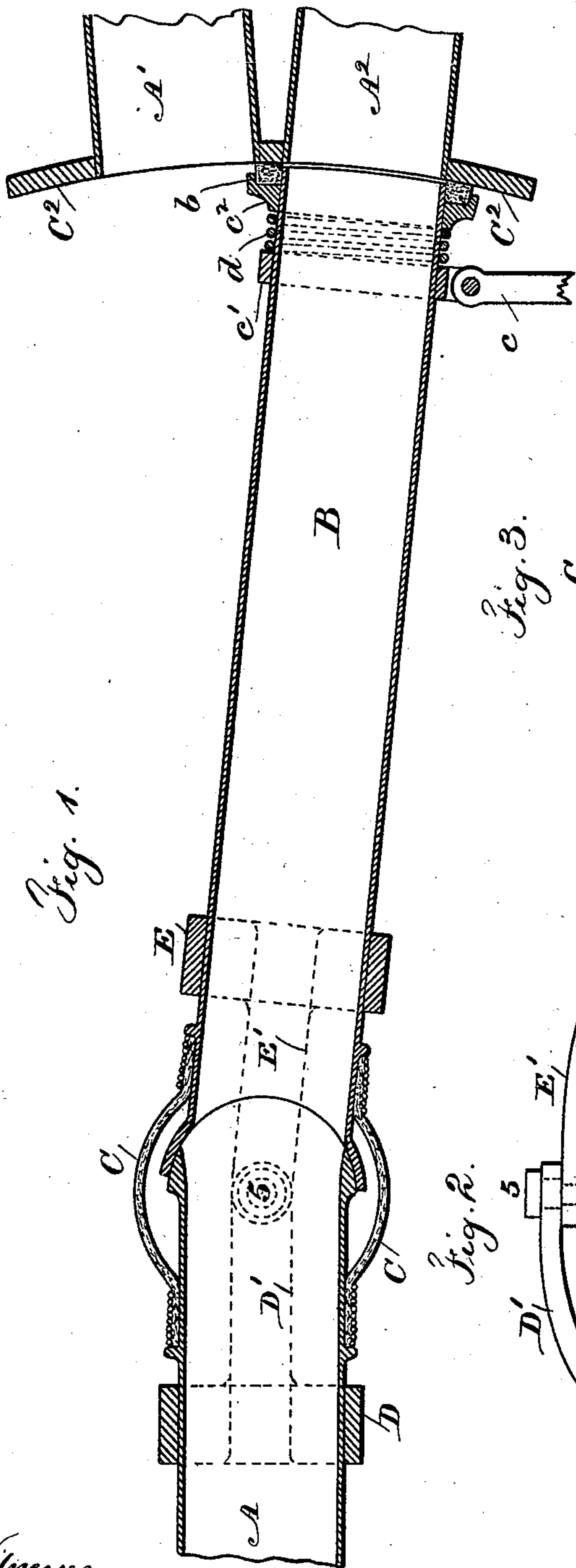


Fig. 1.

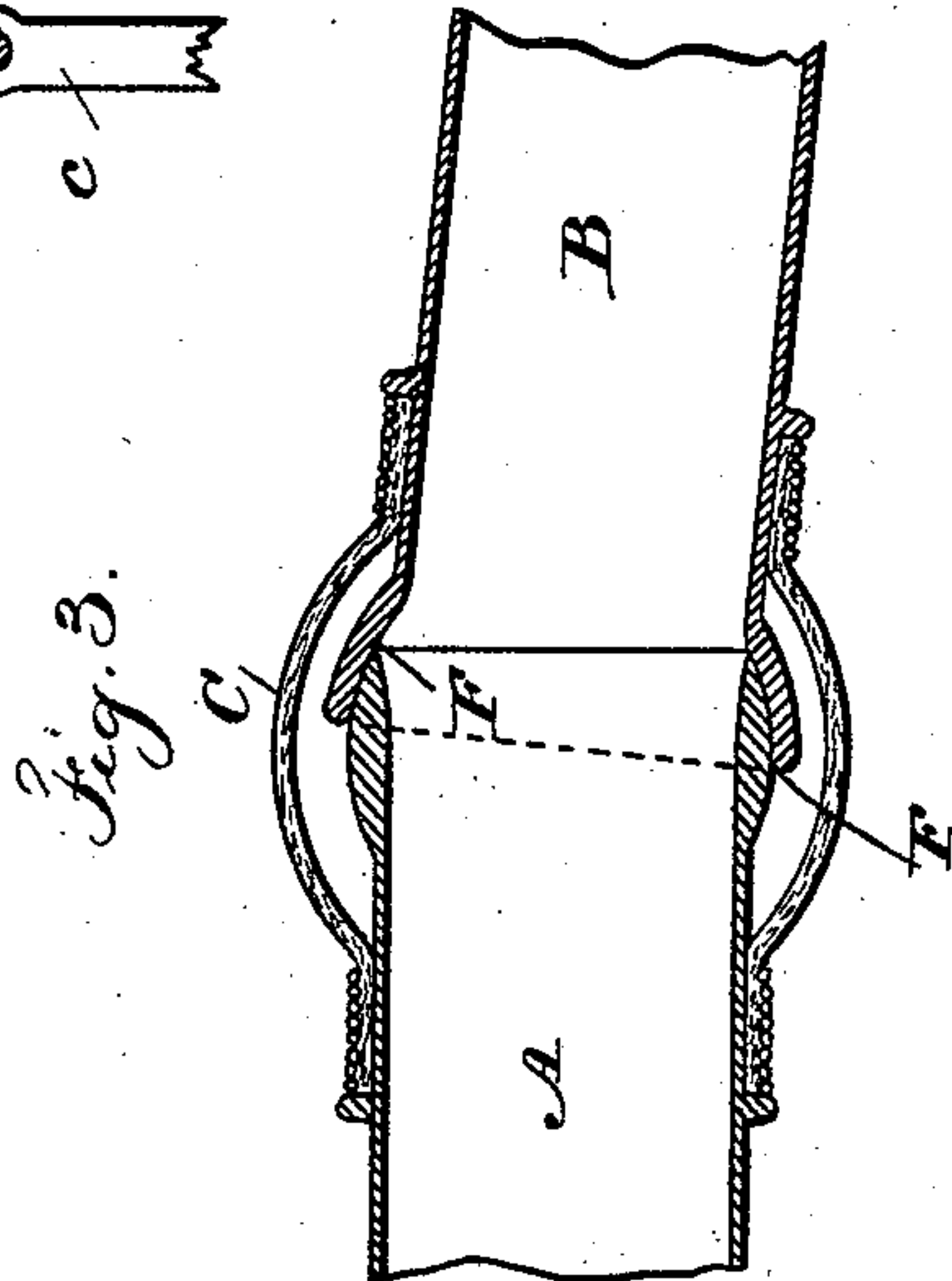


Fig. 3.

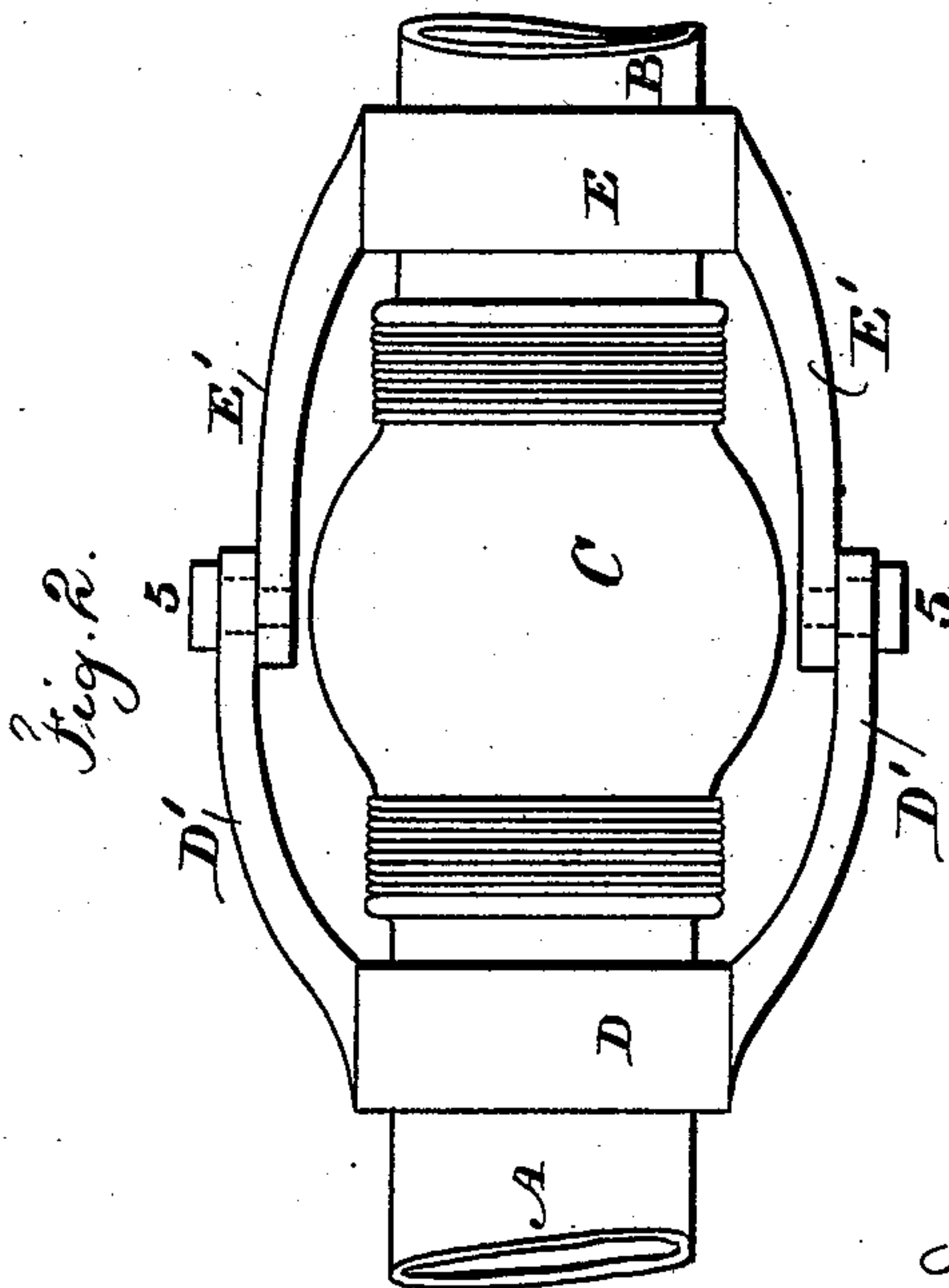


Fig. 2.

Witnesses

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# UNITED STATES PATENT OFFICE.

PATRICK KENNEDY, JR., OF BROOKLYN, NEW YORK, ASSIGNOR TO HIMSELF  
AND CHARLES J. DISS, OF SAME PLACE.

## SWITCH FOR PNEUMATIC DISPATCH-TUBES.

SPECIFICATION forming part of Letters Patent No. 406,447, dated July 9, 1889.

Application filed October 29, 1888. Serial No. 289,376. (No model.)

*To all whom it may concern:*

Be it known that I, PATRICK KENNEDY, Jr., of Brooklyn, in the county of Kings and State of New York, have invented an Improvement in Pneumatic Switches, of which the following is a specification.

Pneumatic tubes for message-carriers have heretofore been constructed with switches to divert the path of the message-carrier, and said switches have been made as a pivoted arm movable at one end, and the same has been swung into one or another position at the junction of the main tube with the diverging tubes, so as to make a continuous path for the message-carrier in either one direction or the other.

My invention relates to an improvement in pneumatic switches; and my improved device consists of a movable length of tube, which is pivotally secured at one end to the main pneumatic tube, the other end of the switch-tube being movable into position with either one or the other of the diverging tubes, the diverging tubes being connected together by a segmental piece, and the end of the switch-tube having around it an air-tight collar, which bears against the surface of the segment.

Any device desirable may be employed for operating my improved switch. I have, however, shown a device capable of operating said switch in an application for Letters Patent, Serial No. 288,110, filed by me October 15, 1888.

In the drawings, Figure 1 is a sectional plan of my improved pneumatic switch. Fig. 2 is a side elevation of the same, and Fig. 3 is a sectional plan of a modification of the form of joint connecting the switch-tube with the main tube.

A A' A<sup>2</sup> represent the pneumatic tubes, through which the dispatch-carrier is projected in the usual manner, A being the main tube, and A' A<sup>2</sup> the diverging tubes.

B represents the pneumatic switch, which is a short length of tube corresponding in size with the main tubes, and this switch is pivotally fastened to the main tube A as follows:

The opposing ends of the main tube A and switch-tube B are cut in the segment of a cir-

cle, the end of the main tube A being slightly flaring and the opposing end of the switch-tube fitting therein, and this joint is covered with a rubber sleeve or gasket C, which forms an air-tight joint around the meeting end of the main tube and switch-tube. Surrounding the main tube A is a collar D, and extending out from said collar are arms D'. Around the switch-tube B is a collar E, and extending out from said collar are arms E', and the ends of the arms E' pass within the ends of the arms D', and pivot-pins 5, in line with each other, connect the ends of these respective arms, the center line of said pivots 5 passing through the moving center of the junction of the main tube A and switch-tube B. These collars D E and their arms D' E', and the pivots connecting the same, serve to hold the main tube and switch-tube rigidly together and to provide for the swinging movement of the switch-tube upon the main tube.

A modification of this construction is shown in Fig. 3, wherein the ends of the main and switch tubes are made as a ball-and-socket joint at F, the rubber sleeve or gasket C surrounding the tubes and forming an air-tight joint, as in the former case.

The ends of the diverging pneumatic tubes A' A<sup>2</sup> are connected together by a segmental piece C<sup>2</sup>, the curved surface of which is the arc of a circle struck from the center of the pivots 5. Surrounding the switch-tube B near the end is a collar c', and connected to said collar is a link c, and this link is adapted to be connected to any desirable device for moving the pneumatic switch-tube B. Surrounding the extreme end of the switch-tube B is an air-tight collar c<sup>2</sup>, connected with which collar is a packing-ring b. This air-tight collar c<sup>2</sup> is free to move upon the periphery of the switch-tube B, and between said collar c<sup>2</sup> and the collar c' there is a helical spring d, which acts to press the collar c' and its packing-ring b against the segment C<sup>2</sup>, to form an air-tight joint. The edge of the pneumatic tube B and the surface of the ring C' and its packing are formed on the arc of a circle corresponding with the surface of the segment C<sup>2</sup>.

In the drawings the pneumatic switch-tube



B is shown as connecting the main tube A with the diverging tube A<sup>2</sup>, and the dispatch-carrier would be projected in the usual way through these tubes; but when it is desired  
 5 to divert the path of the message-carrier into the tube A' the pneumatic switch-tube B is moved over into line with the tube A' by any desirable mechanism, which mechanism forms no part of my present application.

10 I claim as my invention—

1. The combination, with the pneumatic tube A, of the pneumatic tubes A' A<sup>2</sup>, the segment-piece C<sup>2</sup>, connecting the ends of the tubes A' A<sup>2</sup>, the pneumatic switch consisting of  
 15 a length of tube B, pivotally connected to the tube A, and a ring and packing surrounding the end of the tube B and adapted to bear against the segment-piece C<sup>2</sup>, for forming an air-tight joint, substantially as set forth.

20 2. The combination, with the pneumatic tubes A A' A<sup>2</sup>, of the pneumatic switch consisting of a length of tube B, the collar D and arms D', connected to the tube A, the collar E and the arms E', connected to the switch-  
 25 tube B, the pivots 5, connecting said arms, the

rubber sleeve or gasket C, surrounding the junction of the main and switch tubes A B and forming an air-tight joint, the segment C<sup>2</sup>, the collar c<sup>2</sup> and its packing, and a helical spring that holds the same against the seg- 30  
 ment to form an air-tight joint, substantially as set forth.

3. The combination, with the pneumatic tubes A A' A<sup>2</sup>, of the pneumatic switch consisting of a length of tube B, the meeting ends 35  
 of the tubes A and B being curved and the one adapted to set within the other, the rubber sleeve or gasket C, surrounding and connecting the tubes A and B and forming an air-tight joint, the segment C<sup>2</sup>, the ring c<sup>2</sup> and 40  
 its packing, and a helical spring adapted to press the ring and its packing against the segment to form an air-tight joint, substantially as set forth.

Signed by me this 25th day of October, 1888. 45

PATRICK KENNEDY, JR.

Witnesses:

GEO. T. PINCKNEY,  
 WILLIAM G. MOTT.