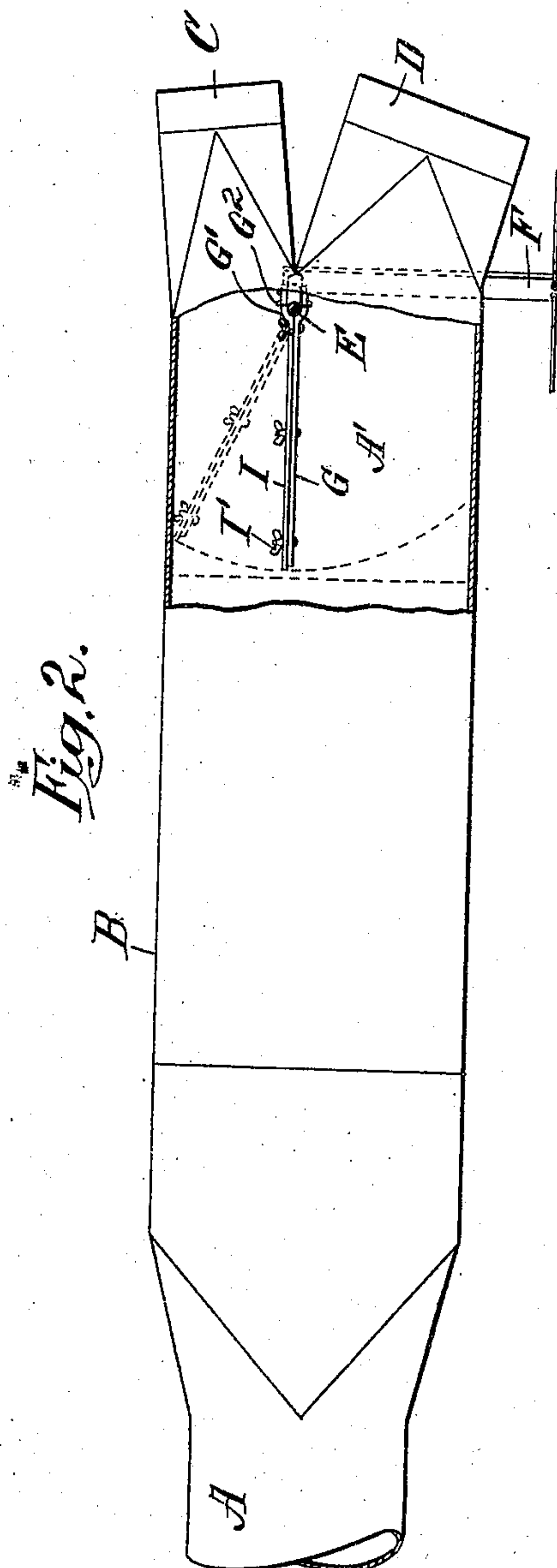
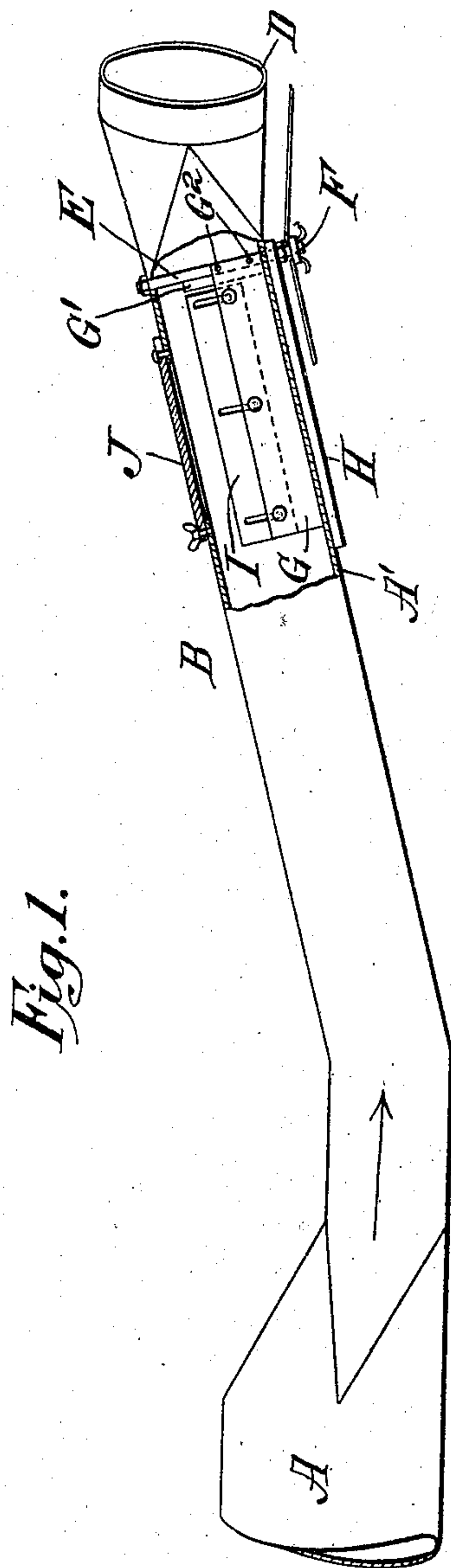


No. 815,965.

PATENTED MAR. 27, 1906.

A. C. LYNCH.
PNEUMATIC CONVEYING APPARATUS.

APPLICATION FILED AUG. 7, 1905.



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UNITED STATES PATENT OFFICE.

ARTHUR C. LYNCH, OF RICHMOND HILL, NEW YORK, ASSIGNOR TO STERLING BLOWER & PIPE MANUFACTURING COMPANY, OF NEW YORK, N. Y., A CORPORATION OF CONNECTICUT.

PNEUMATIC CONVEYING APPARATUS.

No. 815,965.

Specification of Letters Patent.

Patented March 27, 1906.

Application filed August 7, 1905. Serial No. 272,969.

To all whom it may concern:

Be it known that I, ARTHUR C. LYNCH, a citizen of the United States, and a resident of Richmond Hill, in the county of Queens and State of New York, (whose post-office address is the same,) have invented certain new and useful Improvements in Pneumatic Conveying Apparatus, of which the following is a full, clear, and concise specification.

My invention relates to apparatus for pneumatically conveying loose material—such as sawdust, shavings, and similar comminuted solid matter—and more especially has to do with a valved apparatus for adjusting the relative deliveries of such material into and through two or more branch passages; and the invention consists in the novel arrangement and construction of the several parts, as will be hereinafter fully explained, and more particularly pointed out in the accompanying claims.

Referring to the drawings, which form a part hereof, Figure 1 is a side elevation of a portion of a pneumatic conveying apparatus embodying my invention with the near side wall removed to illustrate the interior construction, and Fig. 2 is a plan view of Fig. 1 with a portion of the top wall removed.

The reference character A represents a main conveying-pipe, such as is usually employed for carrying shavings by means of an air-blast. This main conduit opens into a comparatively wide and flat conduit-section B, which is preferably rectangular in cross-section and inclined upwardly or at least provided with a bottom wall or floor A' which is so inclined. At its upper end the conduit-section B terminates or leads into two branch passages C and D, which may be of equal or different sizes, according to the circumstances and purposes for which the apparatus is to be used. At the junction of the two branch passages a hinge-post E is located, being held in proper position by means of the nuts shown, and the lower end of the post where it extends below the inclined floor A' carries a crank-arm F or lever, by means of which the said post may be rotated. A movable partition G of about half the vertical height of the conduit-section B is rigidly secured to the post E, so as to be turned therewith when the lever F is operated, the mode

of attachment being shown herein as effected by means of a clamp-plate G' and a number of rivets G² passing therethrough and through the post E. The movable partition G extends a suitable distance down the inclined floor A', so as to serve as a deflector or dividing-valve for the material which is carried up the floor by the air-current. The conduit-section B is usually and most conveniently made of sheet material, and in order to provide a uniform flat surface for the bottom edge of the dividing-valve G to ride upon the floor A' of said section is reinforced underneath the path of the valve by means of a stiff board H appropriately secured thereto.

The height of the valve G is adjustable by means of an extension-plate I, which is of about the same length as the valve G and slotted, as shown in Fig. 1, whereby it may be secured to said valve in different positions. The thumb-nuts I', secured in the plate G and passing through the slots in the plate I, serve to hold the latter plate in its adjusted position. The top wall of the conduit-section B is apertured above the valve and covered by a removable hand-hole plate J, whereby the extension-plate I may be reached for adjustment.

In operation the shavings or other air-impelled solid particles which pass through the main conduit A and into the inclined section B impinge against the inclined floor A' thereof by reason of the natural tendency of moving bodies to continue their movement in straight lines, so that the bulk if not all of the shavings passing through the conduit-section B travel in a continuous stream up the inclined floor, while the air above them is comparatively free of such particles. As the stream of shavings reaches the valve G it becomes divided in the proportions represented by the angular adjustment thereof, part passing into one or the other, or both, of the branch passages, and by reason of the space left between the top of the valve G and the roof of the conduit a sufficient quantity of air is admitted to the branch passages for adequately conveying the shavings therethrough regardless of the angular position of the said valve. The strength of this blast may, however, be regulated by the appropriate adjustment of the height of the extension I.

Having described my invention, what I claim, and desire to secure by United States Letters Patent, is—

1. In pneumatic apparatus for conveying shavings, &c., a main conduit having a conduit-section with a floor inclined to the direction of travel in said main conduit and branch passages leading from the upper end thereof, in combination with a movable deflecting-partition of less height than said conduit-section, located nearer the said inclined floor than to the top of the conduit-section, so as to provide a space for the passage of air above said partition, and adapted to determine the relative deliveries of shavings into said branch passages.

2. In pneumatic apparatus for conveying shavings, &c., a main conduit having a conduit-section with a floor upwardly inclined with respect to said main conduit and branch passages leading from the upper end thereof, in combination with a dividing-valve of less height than said section, pivoted at the junction of the branch passages to swing over and in proximity to said inclined floor, whereby an open space is left above the valve for the passage of air into said branch passages.

3. In pneumatic apparatus for conveying shavings, &c., a conduit-section of sheet metal provided with a floor inclined inwardly to the general travel of said shavings, the said floor being reinforced by an exterior stiffening member, in combination with branch passages leading from the upper end

of said floor and a dividing-valve adapted to ride over said reinforced floor and being of less height than said section, to provide a space above said valve for the passage of air into the said branch passages.

4. In pneumatic apparatus for conveying shavings, &c., a main conduit having a section with an upwardly-inclined floor and branch passages leading therefrom, in combination with a dividing-valve for determining the relative deliveries into said branch passages and means for adjusting the vertical height of said valve to regulate the relative quantities of air passing into said branch passages.

5. In pneumatic apparatus for conveying shavings, &c., a main conduit having a conduit-section provided with an inclined floor and branch passages leading therefrom, in combination with a dividing-valve for determining the relative deliveries into said branch passages pivoted to ride upon said inclined floor, and an extension-plate adjustably secured to said valve for regulating the relative quantities of air delivered into said branch passages.

In testimony whereof I have signed my name to the specification in the presence of two subscribing witnesses.

ARTHUR C. LYNCH.

Witnesses:

CHARLES NORLIN,
LOUISE FICKINGER