

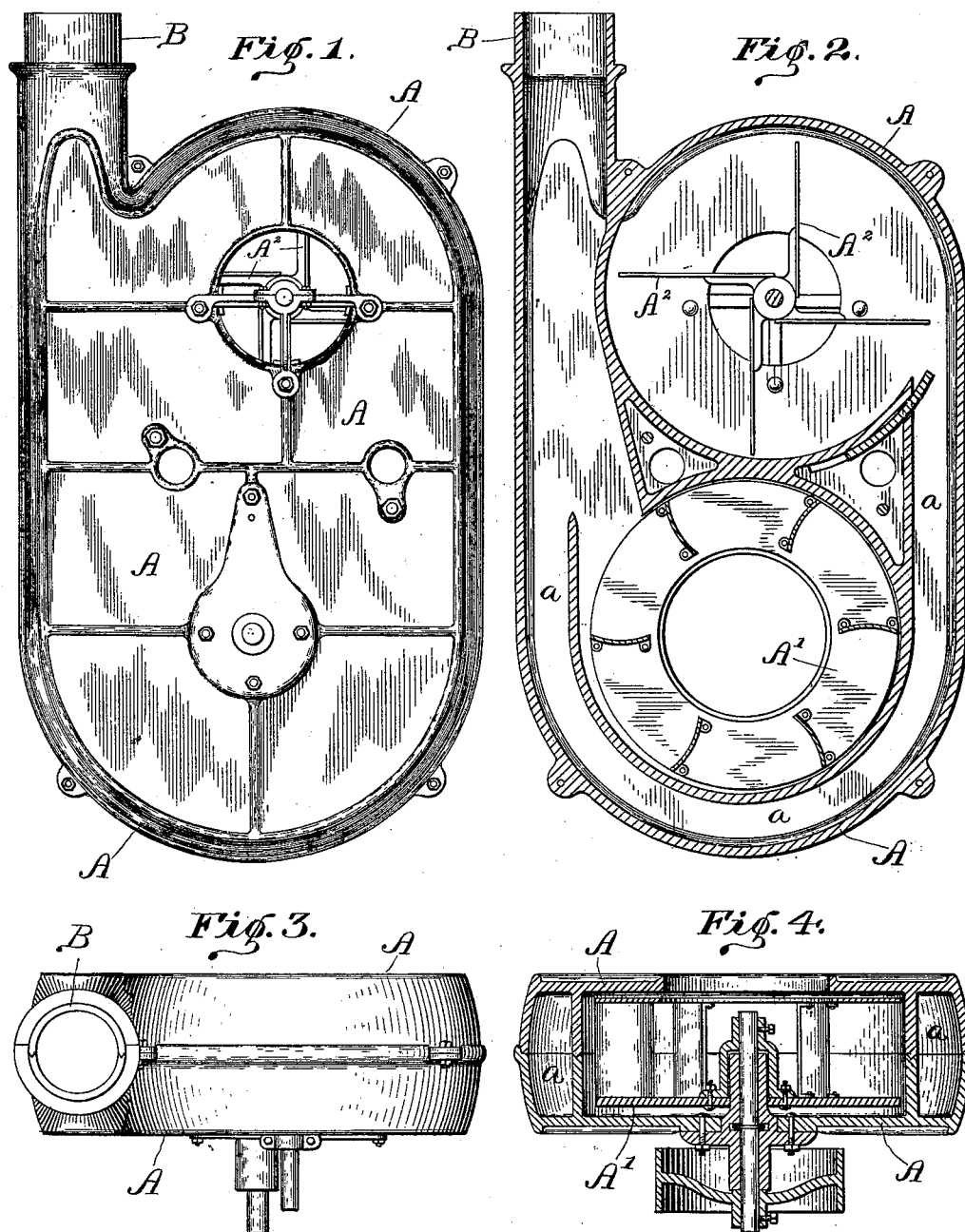
No. 646,877.

Patented Apr. 3, 1900.

J. B. SCHUMAN.
PNEUMATIC ELEVATOR.

(Application filed Sept. 27, 1898.)

(No Model.)



WITNESSES:

C. S. Frye.
J. A. Walsh.

INVENTOR

James B. Schuman,
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UNITED STATES PATENT OFFICE.

JAMES B. SCHUMAN, OF COLUMBIA CITY, INDIANA, ASSIGNOR TO THE
PNEUMATIC ELEVATOR AND WEIGHER COMPANY, OF INDIANAPOLIS,
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PNEUMATIC ELEVATOR.

SPECIFICATION forming part of Letters Patent No. 646,877, dated April 3, 1900.

Application filed September 27, 1898. Serial No. 691,990. (No model.)

To all whom it may concern:

Be it known that I, JAMES B. SCHUMAN, a citizen of the United States, residing at Columbia City, in the county of Whitley and State of Indiana, have invented certain new and useful Improvements in Pneumatic Elevators, of which the following is a specification.

My present invention consists in certain improvements in the construction and arrangement of the elevator-boot of the pneumatic elevator forming the subject-matter of Letters Patent No. 603,925, granted May 10, 1898, upon my application, whereby the air-blast is applied to the grain or material to be elevated behind or under the same as it leaves the throwing-wheel instead of having such grain or material thrown into the blast at a point above or beyond the fan. As indicated in said Patent No. 603,925, elevators of the character in question are especially designed for use in connection with threshing-machines, in which situation it is highly necessary that the throwing-wheel shall be low enough to receive the grain from the grain-delivering spout of the separator, and thus quite near the ground, so that it is impossible to position the blast-fan below the throwing-wheel. At the same time it is obviously an advantage that the blast shall be applied to the grain at as low a point as possible and as soon after it leaves the throwing-wheel as the structure will permit.

My present invention consists in such an arrangement of the boot and the air-passages therein as to cause the air-blast to pass from the fan around and below the throwing-wheel and join the grain as it is leaving the throwing-wheel at a point low down in the boot.

Referring to the accompanying drawings, which are made a part hereof, and on which similar letters of reference indicate similar parts, Figure 1 is a side elevation of the boot of a pneumatic elevator embodying my present invention; Fig. 2, a central vertical sectional view; Fig. 3, a top or plan view, and Fig. 4 a horizontal sectional view on the plane of the throwing-wheel.

The boot A, as in my before-mentioned Letters Patent, is, generally speaking, a duplex wheel-receptacle and includes two substan-

tially-cylindrical cases, within one of which is the throwing or delivery wheel A' and in the other of which is the blast-fan A². The action of the throwing-wheel is the same as in my said former patent; but it is not required to throw the grain so high, and consequently can be run at a comparatively-low speed and with the expenditure of less power and less danger of breaking the grain.

The blast-fan A² delivers the air-current generated thereby into a channel *a*, which continues around outside the casing which immediately incloses the throwing-wheel A' until its discharge-opening is immediately alongside the discharge-opening from the throwing-wheel, so that the grain from the throwing-wheel and the air from the blast-fan unite at a common point, which point is much lower down in the structure than was possible with my former construction.

After the discharge-openings from the throwing-wheel and blast-fan unite they develop into or are joined onto the elevating-tube B, which leads thence to whatever point it is desired to discharge the grain or other material being elevated.

Having thus fully described my said invention, what I claim as new, and desire to secure by Letters Patent, is—

The combination, in a pneumatic elevator, of an elevating-tube, a boot attached to the lower end of said tube and containing two wheel-receptacles and suitable air-passages as described, a material throwing or delivery wheel in the lower receptacle adapted to throw the material up said tube, and a blast-fan mounted in the upper wheel-receptacle and delivering its blast into an air passage or channel which passes around said lower wheel-receptacle to the opposite side thereof, whereby the discharge-openings from the throwing-wheel and the blast-fan are brought together at a low point in the structure, substantially as set forth.

In witness whereof I have hereunto set my hand and seal, at Indianapolis, Indiana, this 10th day of September, A. D. 1898.

JAMES B. SCHUMAN. [L. S.]

Witnesses:

CHESTER BRADFORD,
JAMES A. WALSH.