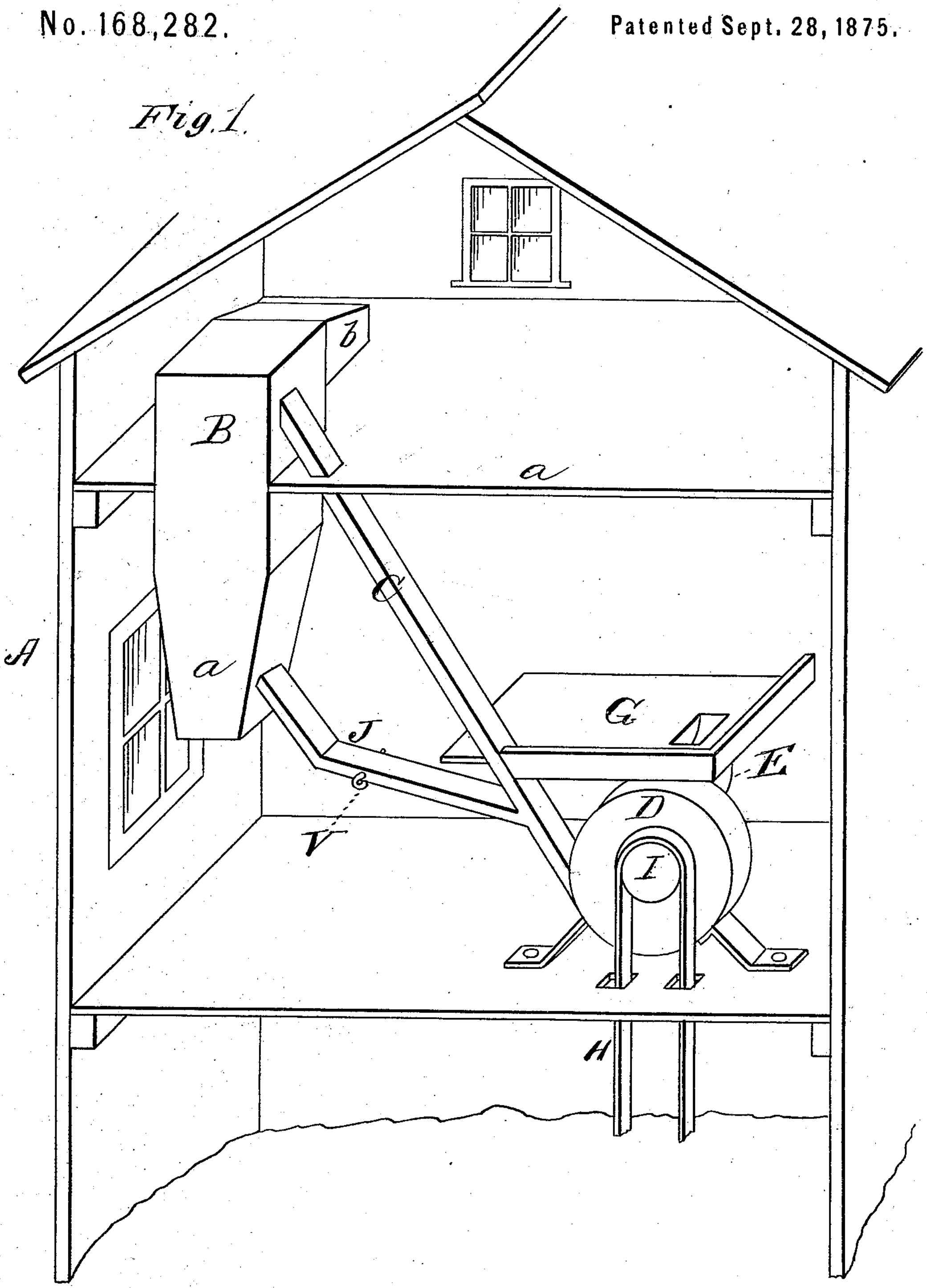
A. C. PEARCE.
Cotton-Cleaner.

No. 168,282. Patented Sept. 28, 1875.

Fig. 1.



WITNESSES
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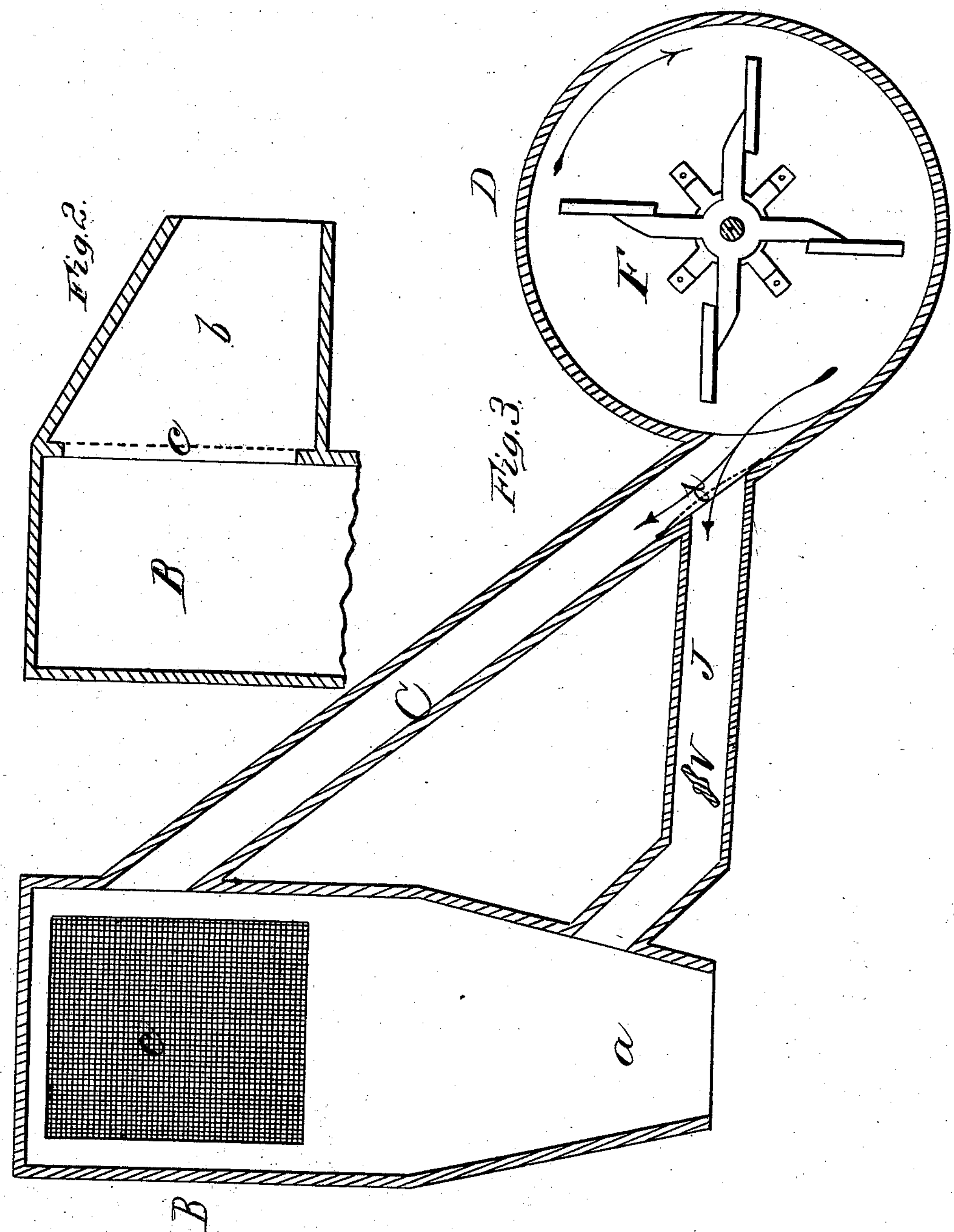

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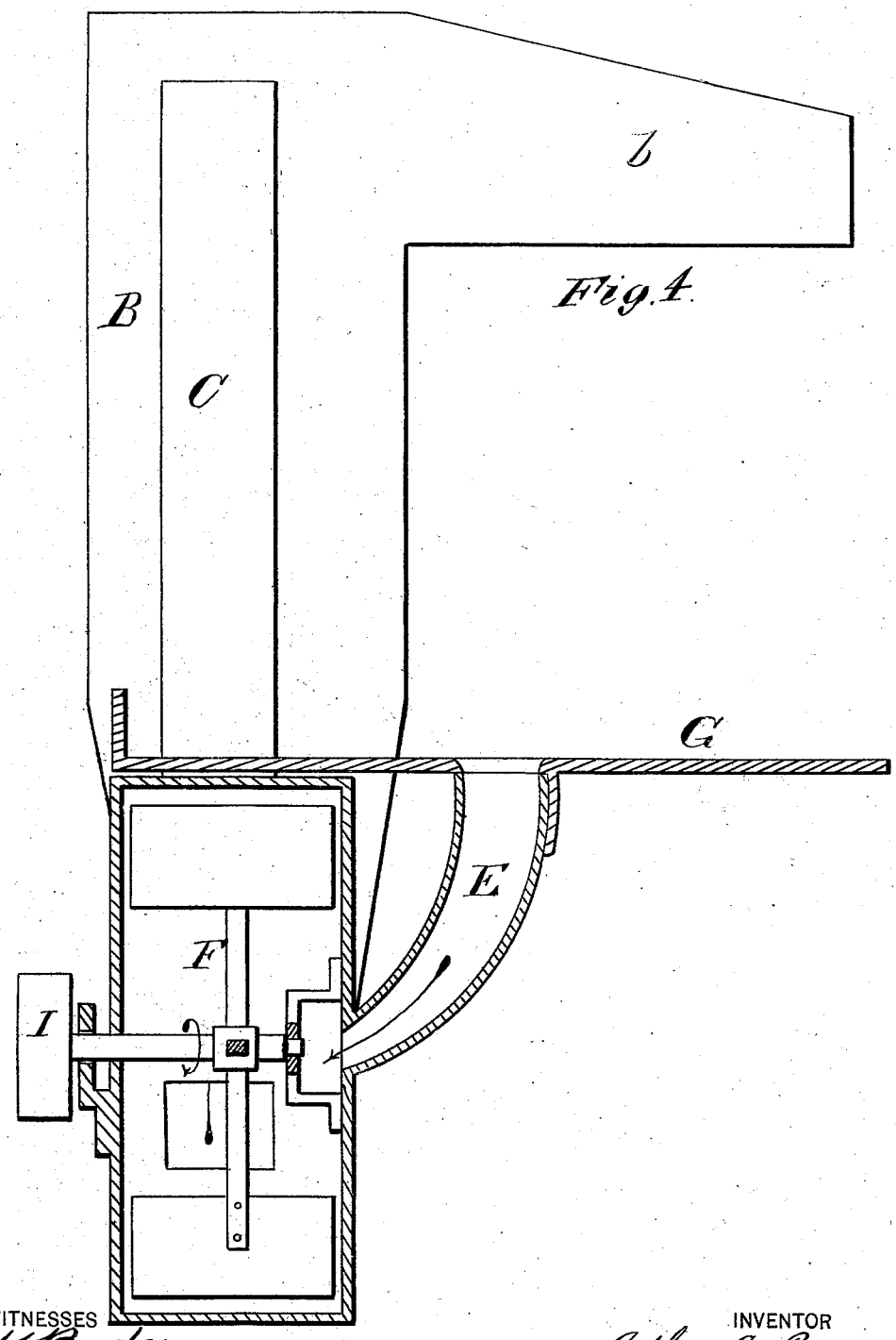

Fig. 4.

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UNITED STATES PATENT OFFICE.

ARTHUR C. PEARCE, OF MILAN, TENNESSEE.

IMPROVEMENT IN COTTON-CLEANERS.

Specification forming part of Letters Patent No. **168,282**, dated September 28, 1875; application filed July 3, 1875.

To all whom it may concern:

Be it known that I, ARTHUR C. PEARCE, of Milan, in the county of Gibson and State of Tennessee, have invented a new and valuable Improvement in Cotton-Cleaners; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the annexed drawings, making a part of this specification, and to the letters and figures of reference marked thereon.

Figure 1 of the drawings is a representation of a front view of my cotton-cleaner. Fig. 2 is a sectional detail view of the same, and Fig. 3 is a longitudinal vertical sectional view thereof. Fig. 4 is a sectional detail view.

This invention has relation to devices which are designed to remove dust, trash, or other foreign substances from cotton previously to being ginned; and the nature of the invention consists in the combination of a blower arranged in a suitable casing, and a feed-table, connected therewith by a suitable chute, with a trunk, designed to receive the cotton, and connected with the said blower, whereby, in ascending the conduit connecting the said trunk and blower, the cotton will be deprived of dust and the like, which will be blown out of the trunk, while the cotton will fall out of the trunk; and in a secondary pipe, communicating with the first and with the discharge-spout of the trunk, whereby a second current, of less power than the first, will be obtained, as will be hereinafter more fully explained.

In the annexed drawings, A designates a two-story building, in connection with which I propose to illustrate the use and application of my improved device for cleaning cotton before it is ginned. This building is divided by a close flooring, *a*, into two stories, as shown in Fig. 1. In this building is arranged a receiving-trunk, B, which is partly in the upper and partly in the lower story, which trunk is provided upon its lower end with a tapering discharging-spout, *a*, and upon its upper end with an eduction-spout, *b*, which is also of tapering form, and is separated from the body of the trunk by means of a reticulated screen or sifter, *c*, for a purpose hereinafter explained. The upper part of trunk B is in the loft of the building, and communicates, by means of a pipe, C, of suitable dimensions, with the cylindrical casing D of a blower-wheel, F, arranged in suitable bearings in the said casing, which is situated in the lower part of the said building. Casing D communicates, by means of a conduit, E, with a feed-table, G, which is in the nature of a hopper, and serves to receive the unginned cotton. Motion is imparted to blower F through the medium of an endless belt, H, passing over an actuating-pulley, I, keyed upon the end of the shaft of the said fan by means of a suitable motor; and if, during the rotation of the said fan-blower, unginned cotton be placed upon the feed-table, it will be sucked down conduit E, and forced up pipe C to trunk B, being subjected during its ascent thereto to a strong blast of air, which will effectually remove dust, grass, or other foreign substances, and will gravitate downward through discharging-spout *a*.

When the cotton under treatment is discharged from pipe C into receptacle B, reticulated screen *c* will prevent it from being discharged through spout *b* into the open air, but will allow the dust to have free egress thereto.

With a view to subjecting the descending cotton to a second cleansing before being allowed to escape from the lower end of spout *a*, I make use of a second conduit, J, which communicates with pipe C and with the tapering spout *a* of the receiving-trunk B, up which a constant current of air is driven by a fan-blower, F, thereby effectually driving the remaining impurities in the cotton upward through sifter *c* and eduction-spout *b* into the open air. Conduit J and pipe *c* are separated by means of a screen, *d*, from each other, which screen is of a suitable reticulated material, and will allow the air to pass freely through it, while it will prevent the exit of cotton, which is thereby directed up pipe C into receiving-trunk B. The cotton will, under ordinary circumstances, gravitate through trunk B and its tapering spout *a* in spite of the current of air driven into the latter through conduit C; but as, under certain conditions, this blast might be of a strength sufficient to retard the escape of the substance treated, conduit J is provided with a regulating-valve, V, by means

of which the power of the blast may be increased or diminished, as the circumstances of the case may require.

What I claim as new, and desire to secure by Letters Patent, is—

1. The combination, with the trunk B, having discharge-chute *a*, of the primary blast-pipe C and secondary pipe J, the latter provided with regulating-valve V, substantially as specified.

2. The combination, with a receiving-trunk, B, a primary blast-pipe, C, a secondary air-conduit, J, and screen *d*, of a regulating-valve, V, and a blowing-fan, F, substantially as specified.

3. The combination, with a primary blast-pipe, C, and a secondary conduit, J, of the reticulated screen *d* and valve *v*, substantially as specified.

In testimony that I claim the above I have hereunto subscribed my name in the presence of two witnesses.

ARTHUR CRAWFORD PEARCE.

Witnesses:

A. B. CHRISTIAN,

S. H. HALE.