

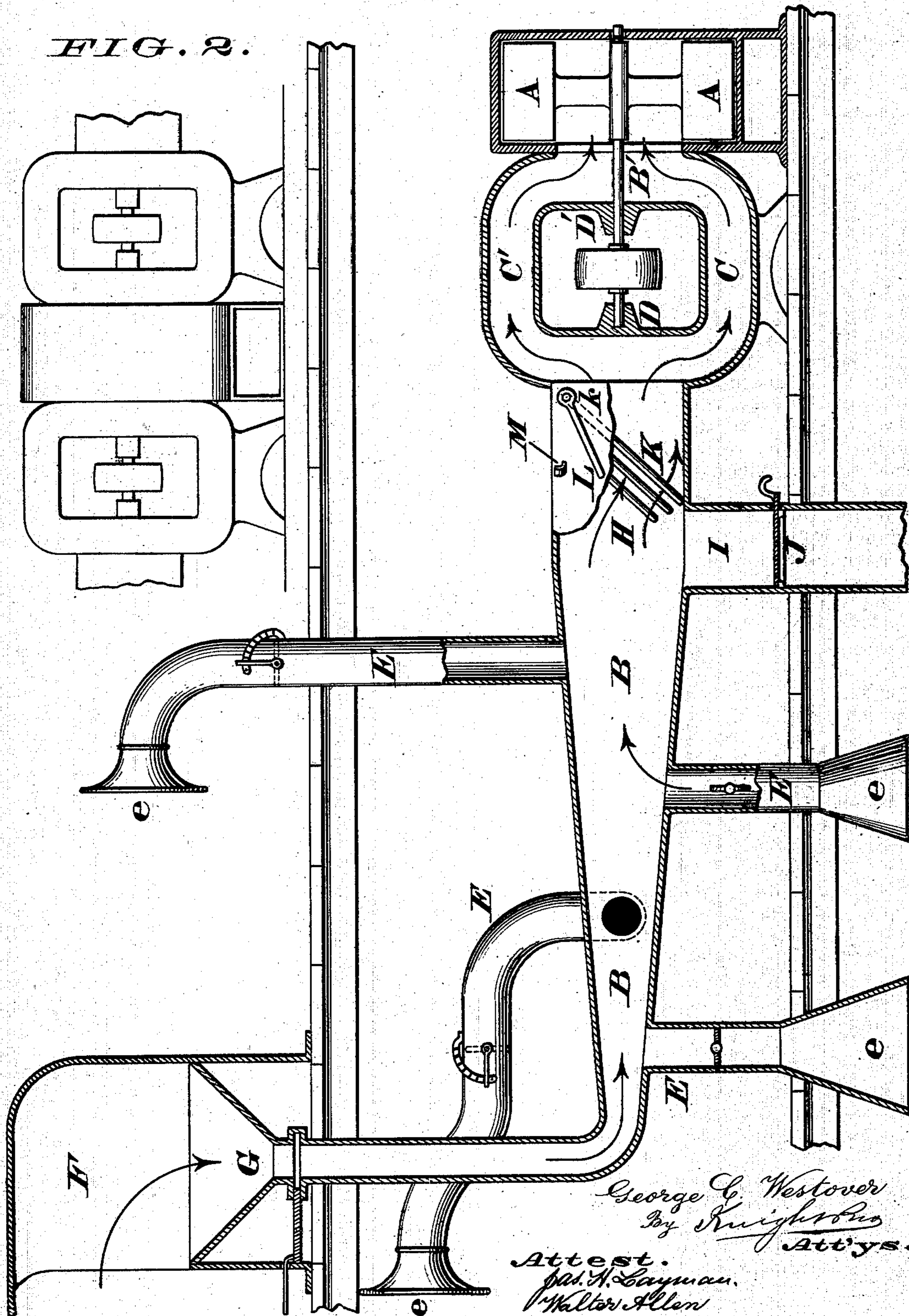
G. C. WESTOVER.

Suction-Tubes for Planing-Machines, &c.

No. 146,115.

Patented Dec 30, 1873.

FIG. 1.



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UNITED STATES PATENT OFFICE.

GEORGE C. WESTOVER, OF VERNON, INDIANA, ASSIGNOR OF ONE-THIRD
HIS RIGHT TO JAMES A. McCLELLAND, OF SAME PLACE.

IMPROVEMENT IN SUCTION-TUBES FOR PLANING-MACHINES, &c.

Specification forming part of Letters Patent No. **146,115**, dated December 30, 1873; application filed
October 27, 1873.

To all whom it may concern:

Be it known that I, GEORGE C. WESTOVER, of Vernon, Jennings county, Indiana, have invented a new and useful Suction for Conveying Dust and Shavings from Wood-Working Machinery, of which the following is a specification:

My invention relates to improvements in those devices for discharging dust and other light refuse of wood-working machinery, which comprise a tube or trunk in which a partial rarefaction is created by an exhaust-fan, so as to cause an atmospheric current to converge from every direction toward and into the mouth of the tube of sufficient force to carry with it such refuse as fast as it is thrown off by the machine; and my improvements include a construction of the inlet-tubes near the exhaust-fan, which secures a central, balanced, and equal current or suction on both sides of the fan-shaft, and at the same time secures bearings for the said shaft external to the dust-passage; a construction of the inlet-tube, which secures the precipitation, before reaching the fan, of fragments whose weight would be liable to injure it; a catcher or hooded mouth-piece for the reception and conduction of heavy chips or fragments.

In the accompanying drawings, Figure 1 is a vertical section of a dust-discharger embodying my improvements. Fig. 2 is an elevation of my branched inlet in duplicate.

A represents a suction or exhaust fan of any suitable construction. B is a tube-trunk or pipe, so connected to the fan as that its contained air is somewhat rarefied. In order to enable the air to enter the fan centrally, and thus secure the most efficient action, the tube, before it enters the fan, separates into two branches, C C', which again unite in a single passage, B', before entering the fan. Through the portion B' the fan-shaft extends centrally, and occupies bearings D D', so secured to the opposing walls of the branched portion as to be external to the dust-passage, and, consequently, free from liability to become choked by passing refuse; while, at the same time, accessible for inspection, lubrication, renewal, &c., without disturbing the fan, or even sus-

pending its operations. Located in convenient proximity to the planing or other wood-working machines, are the represented or any customary inlets E, having preferably, the usual flaring mouths e, such inlets being sufficient to carry off the refuse of most kinds of wood-working machines; but, for roughing-planers, and other machines which create heavy fragments, I provide a hooded catch-box, F, with hopper-bottom G, and, in order to secure the precipitation of such fragments before reaching the fan, I secure a slower blast by enlargement of the tube at some convenient point, H, from which such fragments, as they reach the slower current, drop into a catch-spout, I, whence they are discharged, from time to time, by means of a gate, J. A sloping grating, K, located beyond the spout, may be provided in addition to the above, so as, without obstructing the passage of dust, to intercept and precipitate any large fragments not otherwise arrested. This grating may be hinged at k, at its upper edge, and be capable of being raised clear of the passage by means of handle L engaging over a catch, M.

I claim herein as new and of my invention—

1. The suction-tube B, constructed with branches C C' reunited in a single central passage, B', and serving to support fan-shaft bearings D D' external to the dust-passage, as herein set forth.

2. In combination with the suction-fan A and tube B, the tube enlargement H, catch-spout I, and gate J, substantially as herein described, for the purpose specified.

3. In combination with the elements H I J, the oblique grating K, whether hinged or otherwise.

4. In combination with the suction-fan A and tube B, the hooded and hopped catch-box F G, constructed and operating as described, for the purpose specified.

In testimony of which invention I hereunto set my hand.

GEORGE C. WESTOVER.

Attest:

GEORGE H. KNIGHT,
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