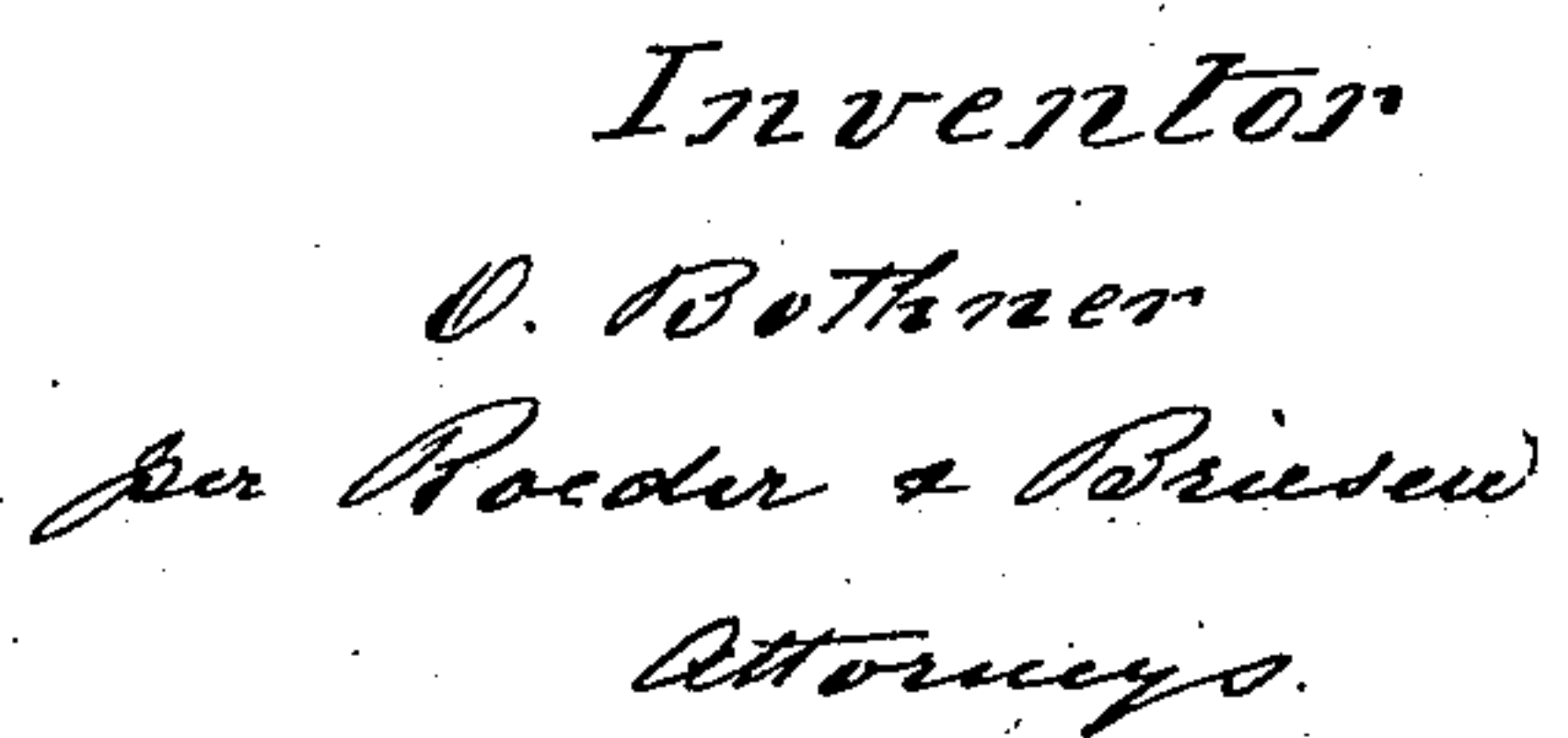


3 Sheets—Sheet 1.

SPRAYING APPARATUS FOR MALT FLOORS.

Patented Sept. 15, 1885.



(No Model.)

3 Sheets—Sheet 2.

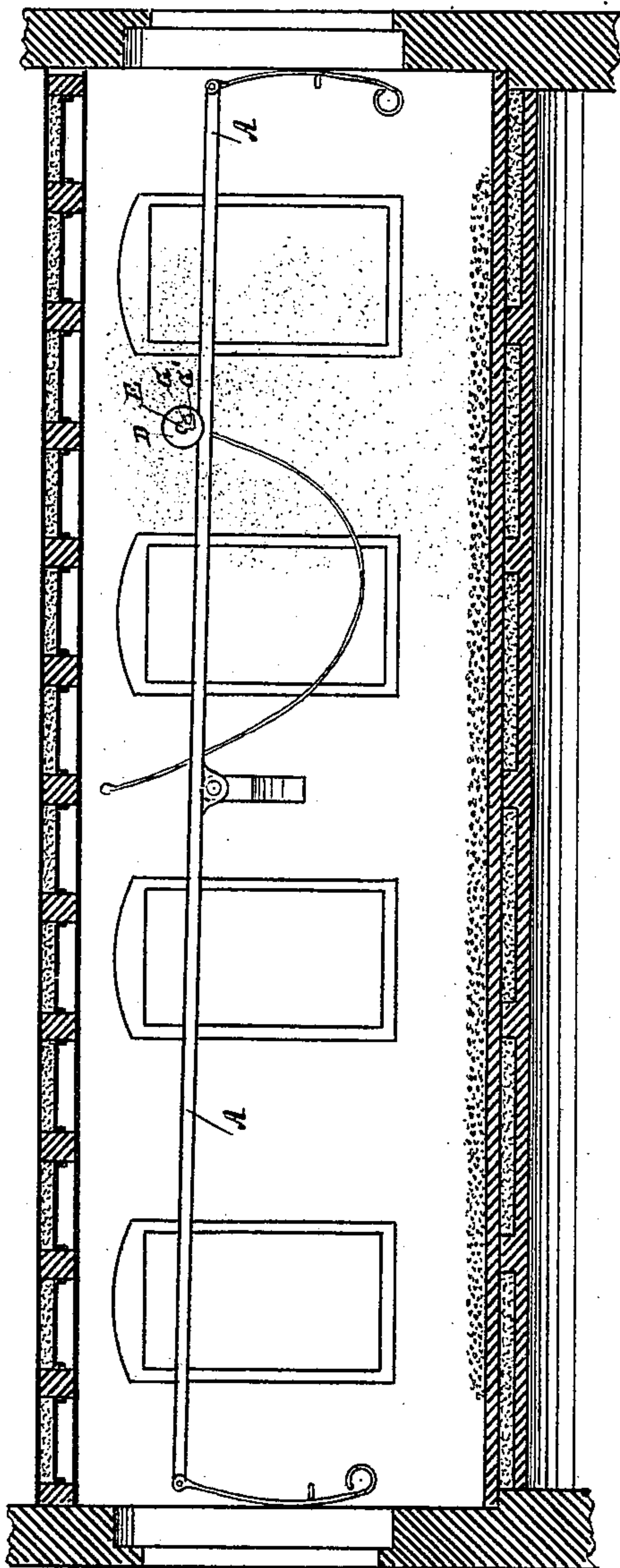
O. BOTHNER.

SPRAYING APPARATUS FOR MALT FLOORS.

No. 326,197.

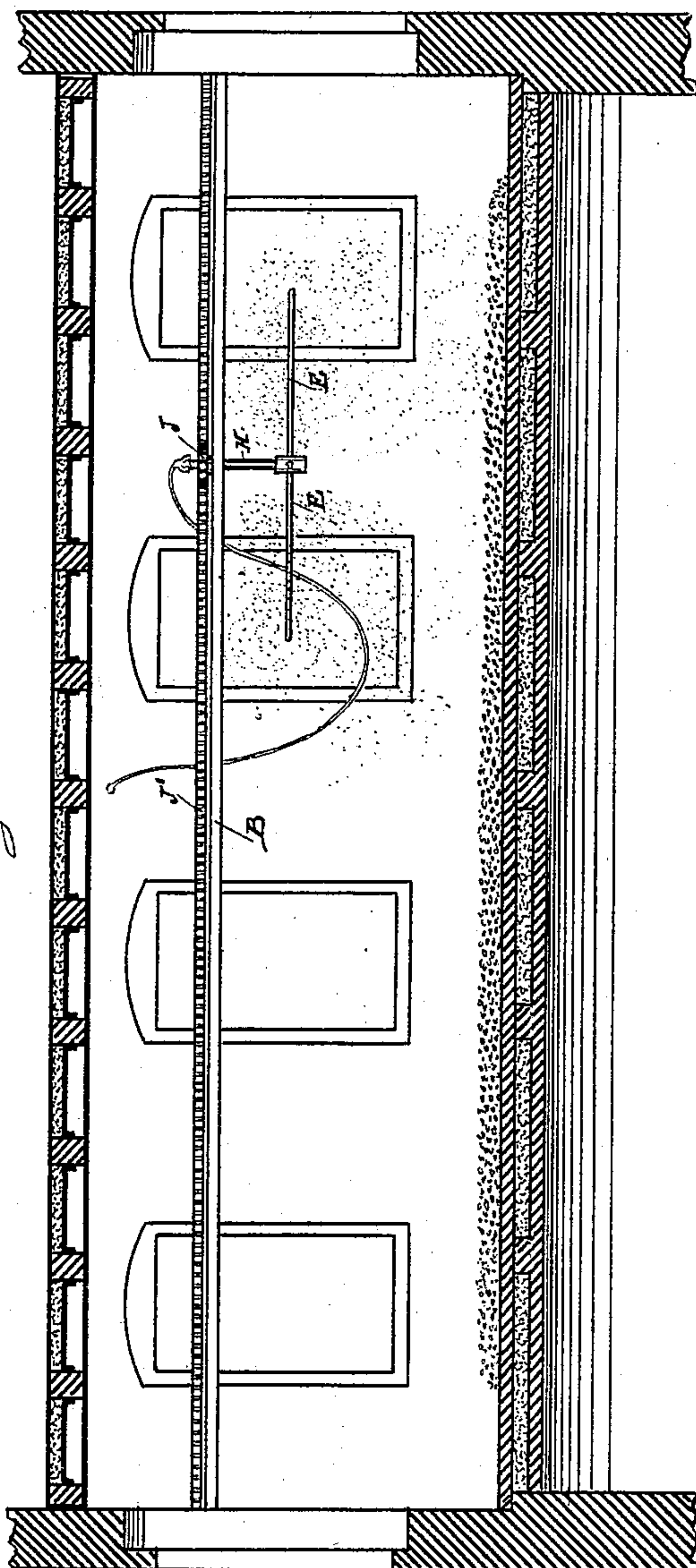
Patented Sept. 15, 1885.

Fig. II.

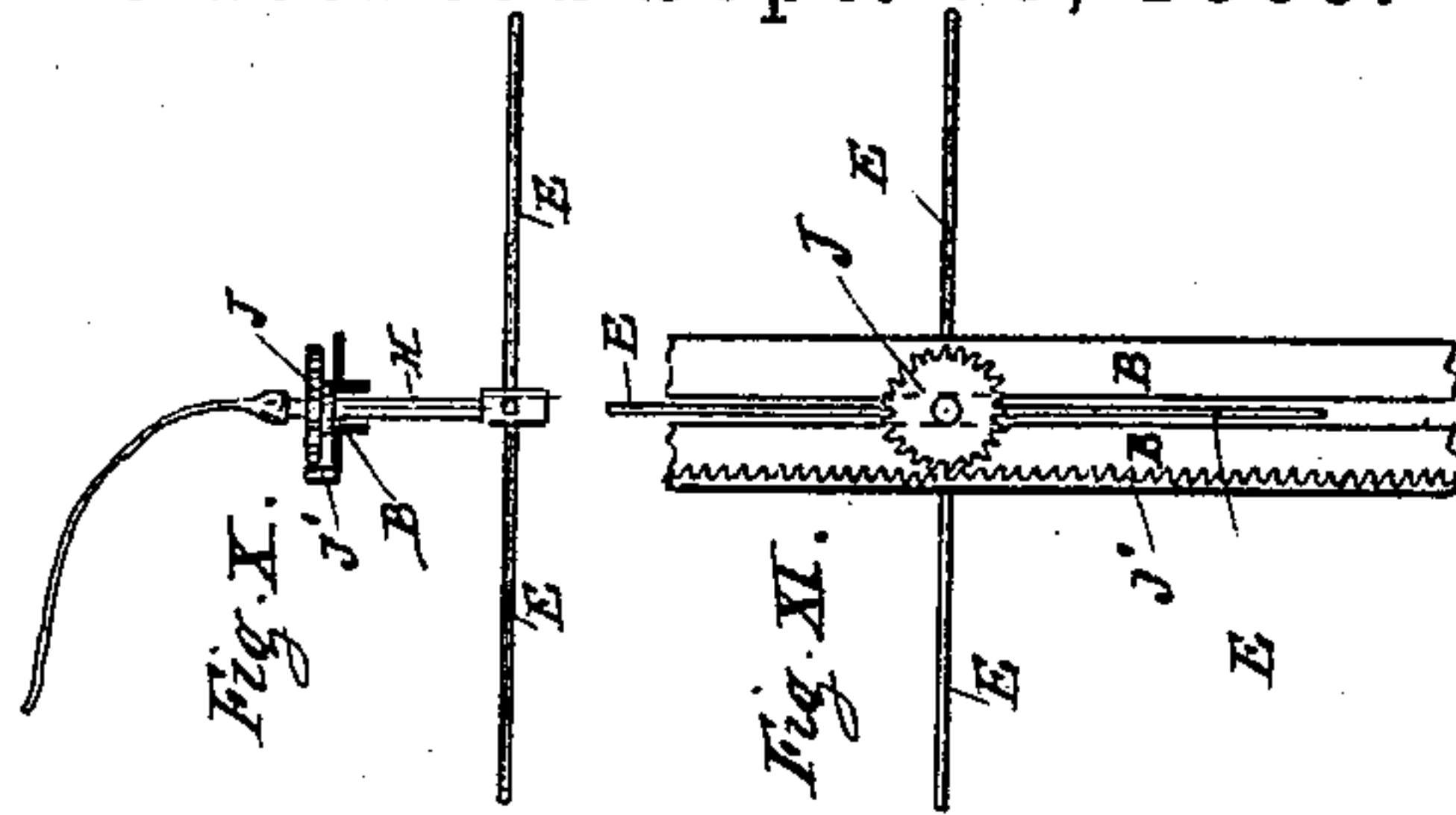


Witnesses.
Wm. A. Lowe
Robt Roy

Fig. II.



Inventor
O. Bothner
per Rodder & Bruden
Attorneys



(No Model.)

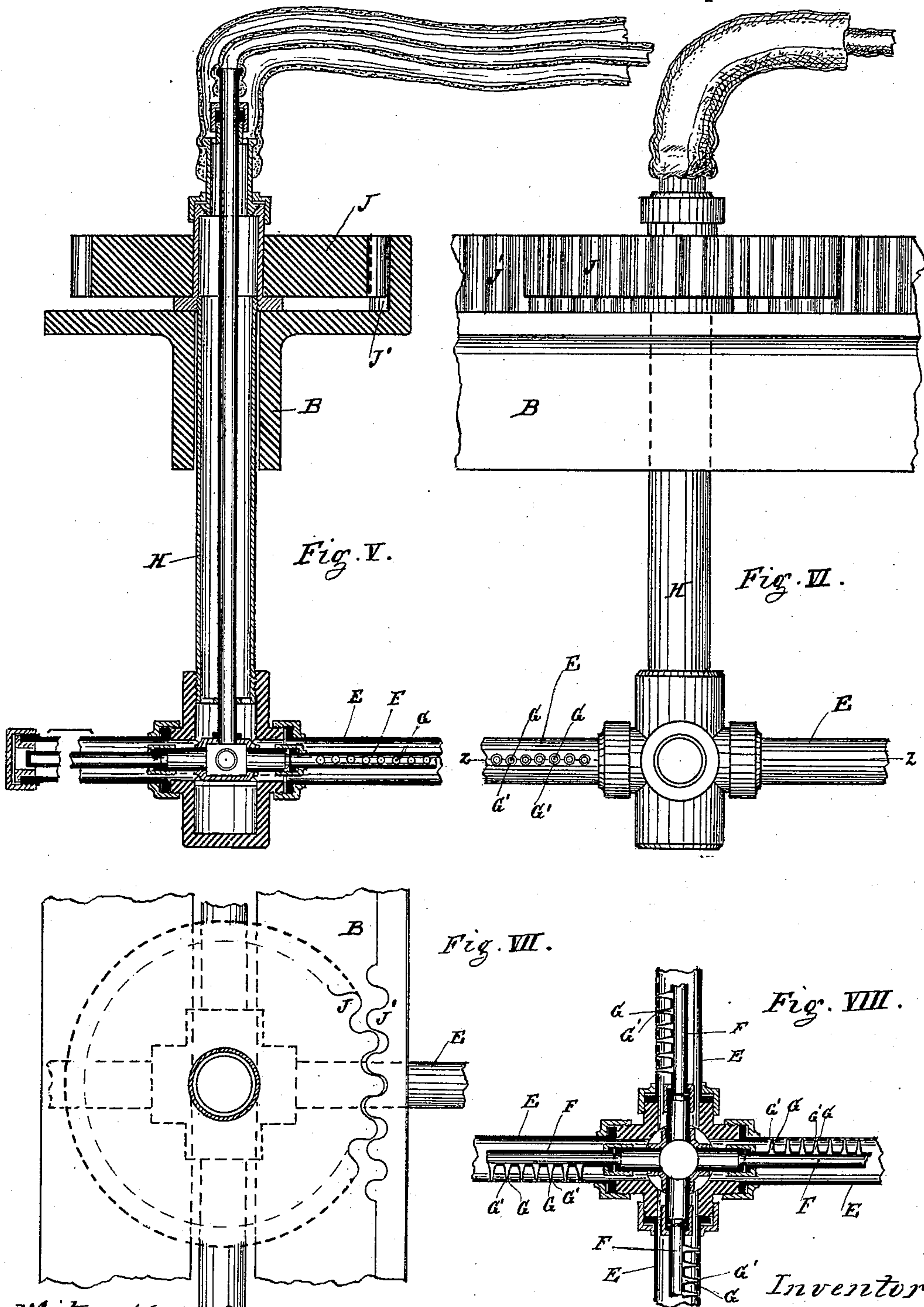
3 Sheets—Sheet 3.

O. BOTHNER.

SPRAYING APPARATUS FOR MALT FLOORS.

No. 326,197.

Patented Sept. 15, 1885.



Witnesses.

Wm. H. Lowe

Robt. Roy

Inventor.

O. Bothner
per Roeder & Brice
Attorneys.

UNITED STATES PATENT OFFICE.

OSCAR BOTHNER, OF LEIPSIC, GERMANY.

SPRAYING APPARATUS FOR MALT-FLOORS.

SPECIFICATION forming part of Letters Patent No. 326,197, dated September 15, 1885.

Application filed February 24, 1885. (No model.) Patented in Germany May 9, 1884, No. 29,293.

To all whom it may concern:

Be it known that I, OSCAR BOTHNER, of Leipzig, Germany, have invented a new and Improved Spraying Apparatus for Malt-Floors, of which the following specification is a full, clear, and exact description.

This invention relates to means for throwing a spray upon malt during the flooring process. The spray is designed to prevent molding and to facilitate proper germination.

To this effect the invention consists, principally, in the combination of a carriage adapted to travel over the malting-floor with a compressed-air and a water tube, which eject a fine spray over the malt.

The invention also consists in the details of construction hereinafter more fully pointed out.

In the accompanying sheets of drawings, Figure I is a side elevation, partly in section, of my improved apparatus. Fig. II is a horizontal section on the line *xx*, Fig. I; Fig. III, a vertical section on the line *yy*, Fig. I. Fig. IV is a side view of the apparatus on a reduced scale, showing it in operation. Fig. V is a longitudinal vertical central section through a modification; Fig. VI, a side view of the same; Fig. VII, a top view of the same; and Fig. VIII, a horizontal section on the line *zz*, Fig. VI. Fig. IX is a side view on a reduced scale, showing this modification in operation. Figs. X and XI are detail views of the driving-gear.

With special reference to Figs. I, IV, the letter A represents a rail running above the floor from end to end and supported by uprights or hangers. This rail is somewhat inclined, and upon it travel the wheels D of the spraying-carriage. This carriage is provided between its wheels with a tube, E, connected at one end to a compressed-air generator.

Within the tube E is inclosed the tube F, connected to a water-reservoir. The tube F is provided with lateral discharge-nozzles G, passing tight through the side of the tube E. The tube E is provided with small pipes G', bent in such a manner that the discharge-openings of said pipes G' come in line with the discharge-openings of the nozzles G, so that the water and air are ejected together and distributed upon the floor in the form of a fine spray.

In Figs. V, XI the apparatus is rotated as an æolipile, and is propelled by such rotation. In these figures the rail B has an upwardly-projecting shoulder, J', which is toothed on one edge, and engaged by a toothed wheel, J, attached to the spray-carriage. The apparatus is provided with four pipes, E, arranged at right angles to each other and provided with lateral discharge-openings G'. These pipes E are connected to a compressed-air generator. Within these pipes E the pipes F are arranged, connected to a water-reservoir, provided with lateral discharge-nozzles G, the mouths of which come in line with the discharge-openings G' in the pipes E, whereby the water and air are ejected together and distributed in the form of a fine spray. At the same time the reaction of this discharge of water and air will operate the apparatus and turn the same around its axis. In this modification the rail is not inclined.

The pipes are secured to the carriage in such a way that they may be revolved so as to turn the discharge-openings to either the right or the left side. The motion of the carriage is thus reversed by simply reversing the position of the nozzles.

I claim as my invention—

1. The combination of a carriage having wheels D with air-tube E and water-tube F, with discharge-nozzles G G', communicating near their discharge-openings, to discharge their contents in the form of a spray, substantially as specified.

2. The combination of rails A with spray-carriage having wheels D, and with tubes E F, that communicate near their nozzle, and with means for propelling the carriage above the floor, substantially as specified.

3. The combination of rail B, having rack J', with spray-carriage having toothed wheel J, and with tubes E F and nozzles G G', substantially as specified.

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

OSCAR BOTHNER.

Witnesses:

EDMUND BACH,
HEINRICH LUSKE.