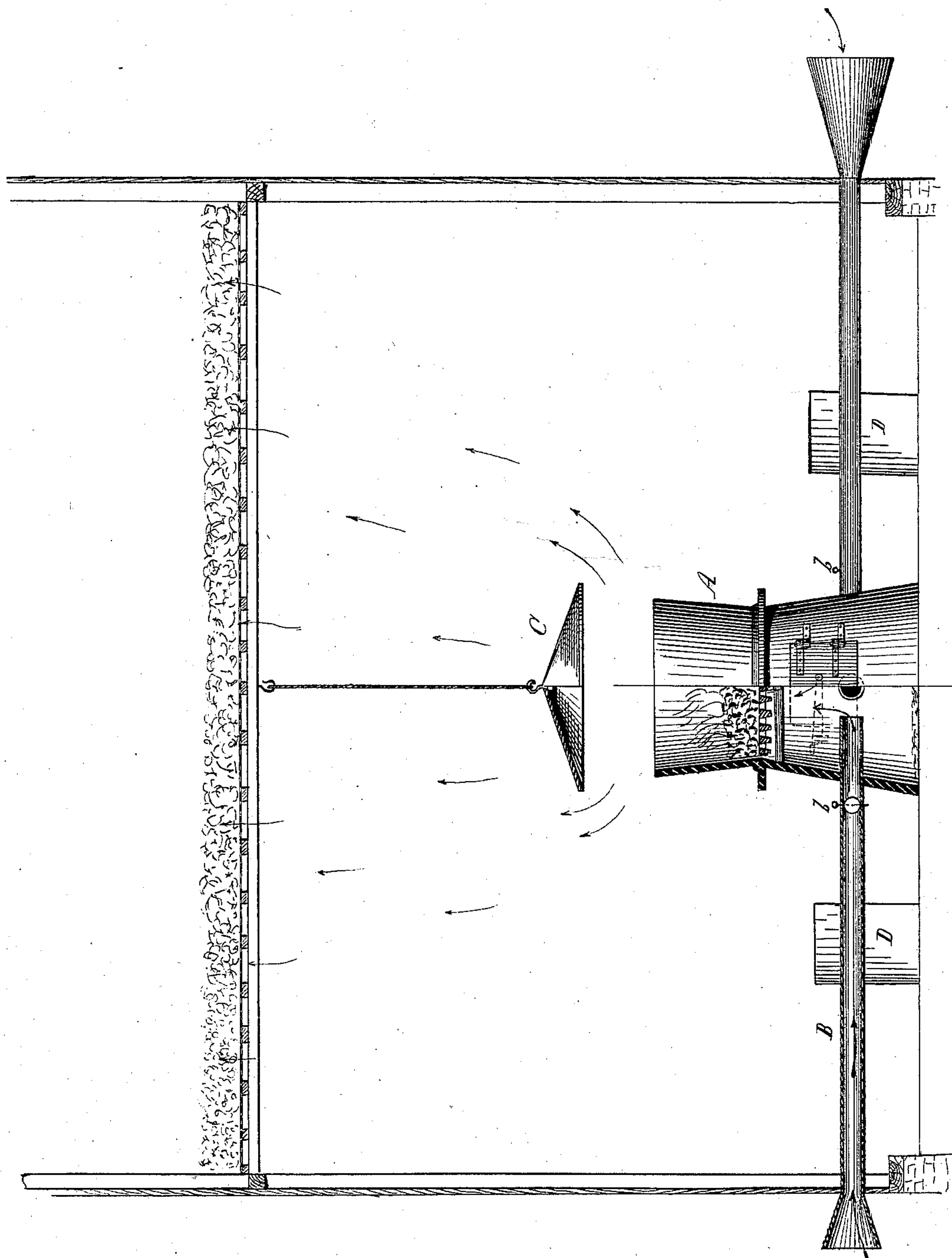


W. W. EDGARTON.
Art of Curing Hops and Furnaces used Therefor.

No. 198,875.

Patented Jan. 1, 1878.



Attest
H. L. Perrine
Notary Public

By.

Inventor.
W. W. Edgerton
R. J. Calkins
Attorney.

UNITED STATES PATENT OFFICE.

WILLIAM W. EDGARTON, OF BOUCKVILLE, NEW YORK.

IMPROVEMENT IN ART OF CURING HOPS, AND FURNACES USED THEREFOR.

Specification forming part of Letters Patent No. **198,875**, dated January 1, 1878; application filed May 22, 1877.

To all whom it may concern:

Be it known that I, WILLIAM W. EDGARTON, of Bouckville, in the county of Madison and State of New York, have invented a new and useful Improvement in the Art of Curing Hops, and in Furnaces used for that purpose, of which the following is a full, clear, and exact description.

The common method of curing hops by drying and sulphurization is defective, because, to effect a proper curing, the hops have to be copiously sulphurized, which is not only expensive, but subject to other serious objections.

The object of my invention is to dispense with the use of sulphur-fumes, as much as possible, in the art of curing hops as commonly practiced; also to reduce the expense of drying by utilizing all the heat generated in the furnace employed to practice my improved process. These objects are accomplished by curing the hops by means of the direct heat and the gases arising from an open coal fire. I have found in practice that well-grown and ripened hops can be effectually cured in this way without any sulphurization, while less perfect hops will require some little sulphurization in addition, not so much to cure them as to bleach them to the desired color.

The improvement in the open furnace used to practice my improvement in the art consists in providing it below the grate with pipes extending through the walls of the curing-chamber, to conduct fresh air to the fire; also, in combining with the furnace a cone-shaped deflector suspended over the open top of the furnace, to prevent any hops or siftings from falling into the fire, as well as, in a measure, to regulate the draft of the furnace, which can be effected by raising or lowering the deflector.

The annexed drawing represents a hop-kiln or curing-chamber with an open furnace and appendages of my invention.

The kiln or curing-chamber does not materially differ from those now made use of.

The open furnace A, which may be of any preferred construction, is placed in the center

of the chamber, underneath the lattice-work on which the hops are spread for curing.

Several pipes, B, lead from the outside of the curing-chamber to the furnace, entering its ash-pit near the center, so that their inner ends may be exposed to the downward rays of heat from the fire, to cause influx of air for the support of a bright combustion in the furnace. The outer ends of these air-pipes are flaring or bell-mouthed to facilitate the entrance of air. The pipes are also provided with dampers *b* to regulate the supply of air.

A cone-shaped deflector, C, is suspended over the open top of the furnace, being sufficiently large in diameter to prevent particles of hops that may fall from overhead from falling into the fire or onto the hot furnace, where they would otherwise be burned, and cause an objectionable odor to attach to the hops. The draft of the open furnace may also be regulated, in some measure, by adjusting the deflector vertically. The deflector also serves to diffuse the heat and gases more evenly. It will be observed that approximately all the heat generated in the furnace is utilized in the drying of the hops.

The manipulation of the hops is the ordinary one. The furnace having been charged with anthracite coal and a bright fire started, the hops are spread on the lattice-work overhead, and subjected to the heat and gases arising from the open coal fire.

The carbonic-acid gas given out abundantly by the combustion of the coal will effectually cure good qualities of hops. In curing inferior hops some little sulphur should be burned off in the ordinary manner in the curing-chamber to give the desired color to the hops.

Near the floor holes D are made in the walls of the kiln, as usual, to admit the required amount of fresh air. The draft-pipes B may pass through these air-holes, sufficient space being left around the pipes for the ingress of air around them.

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

1. As an improvement in the art of curing

hops, subjecting them to the heat and gases from an open anthracite-coal fire, substantially as specified.

2. The combination, substantially as specified, of the open furnace and the vertically-adjustable combined damper and deflector suspended over it.

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

WM. W. EDGARTON.

Witnesses:

G. B. MARTIN,
SETH HOWARD.