

No. 708,781.

Patented Sept. 9, 1902.

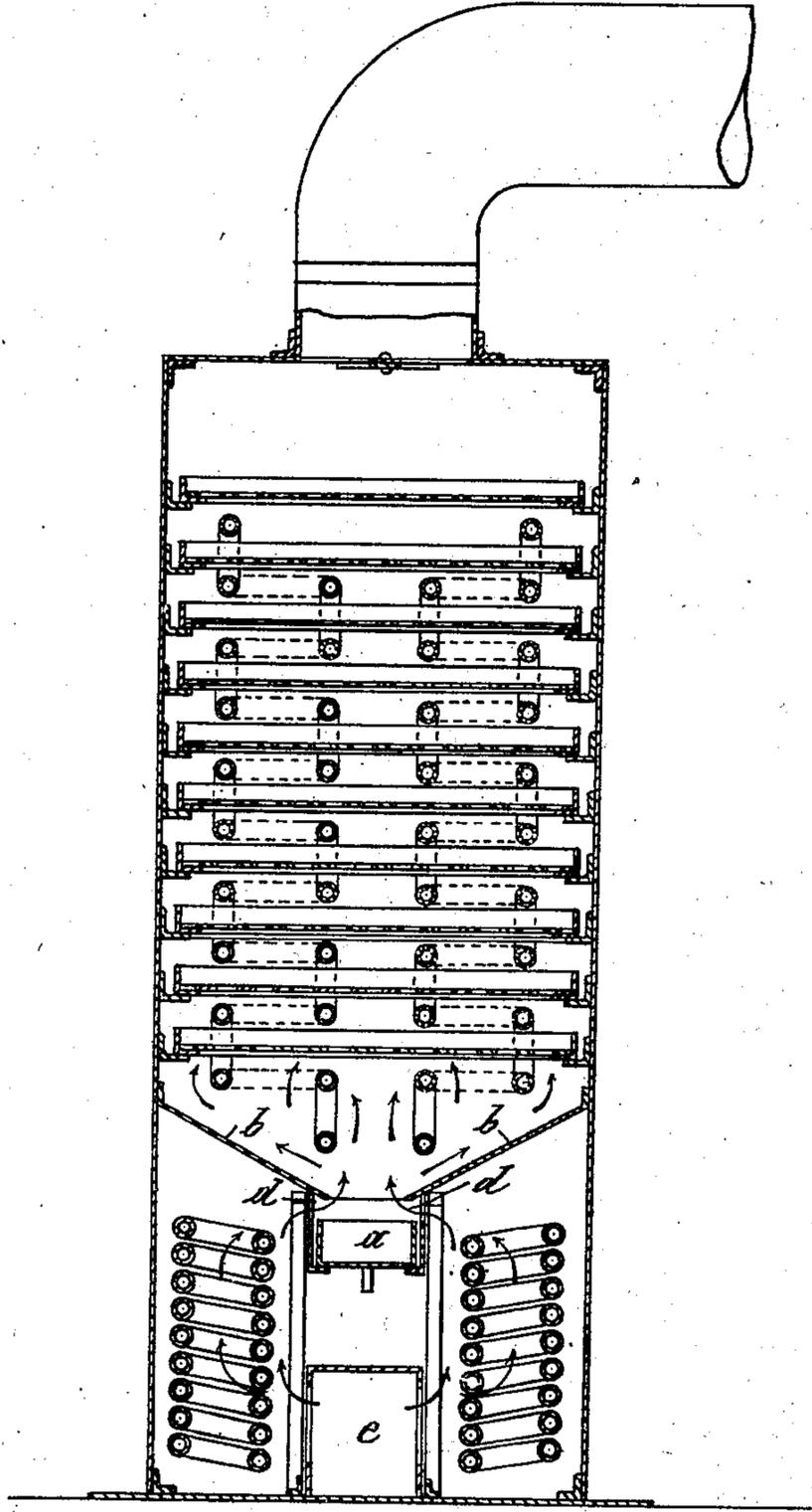
A. PRAWATKE.
APPARATUS FOR DRYING VEGETABLES, FRUITS, &c.

(Application filed Oct. 16, 1901.)

(No Model.)

3 Sheets—Sheet 1.

Fig. 1.



Witnesses
Henry Gillman, Jr.
J. J. McCarthy.

Inventor
August Prawatke
by Joseph Freeman
Attorney

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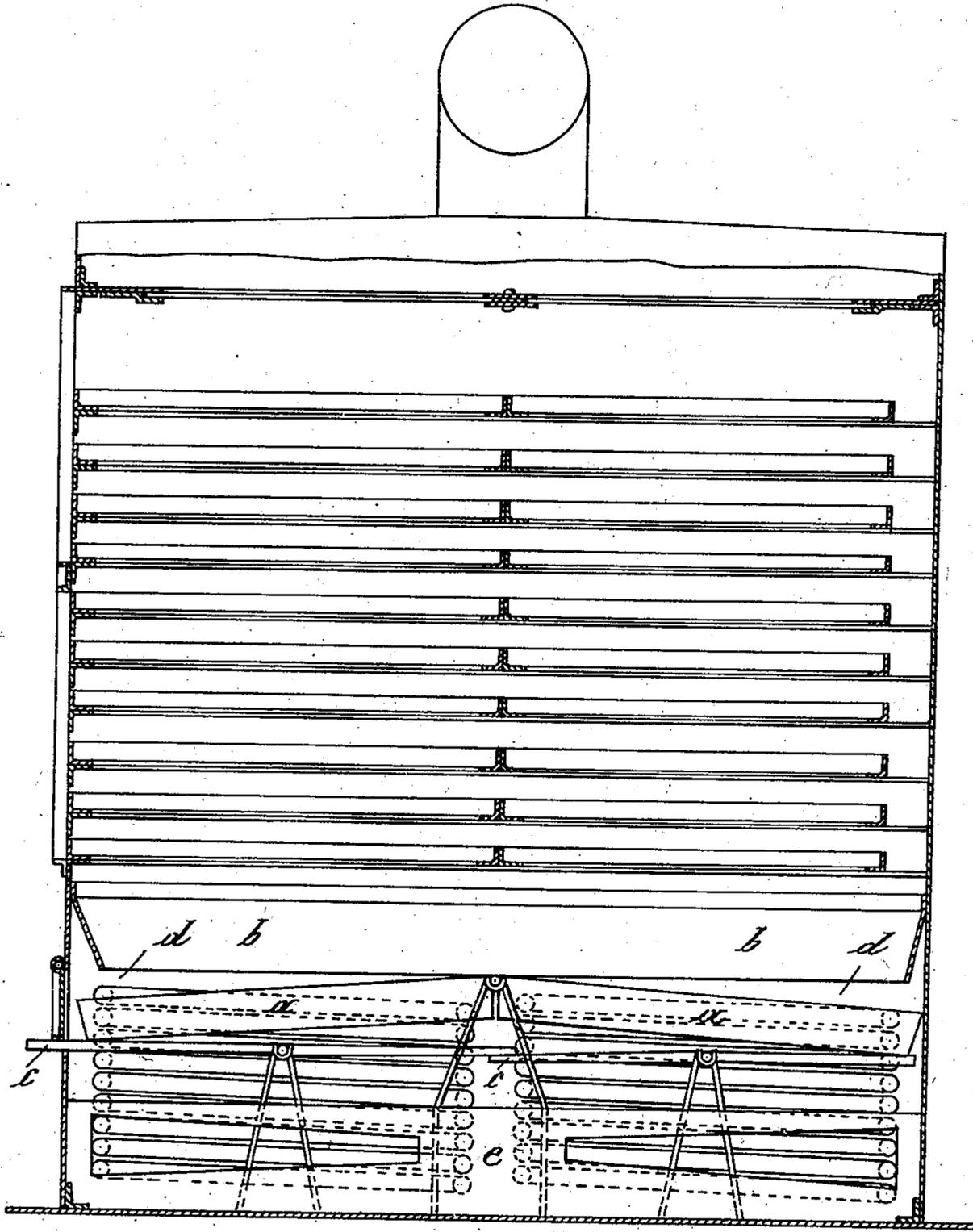
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Fig. 2.



Witnesses
Hon. Gillman, Jr.
J. J. McCarthy.

Inventor
August Prawatke
by
Foren & Lamm
Attorneys

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Fig. 3.

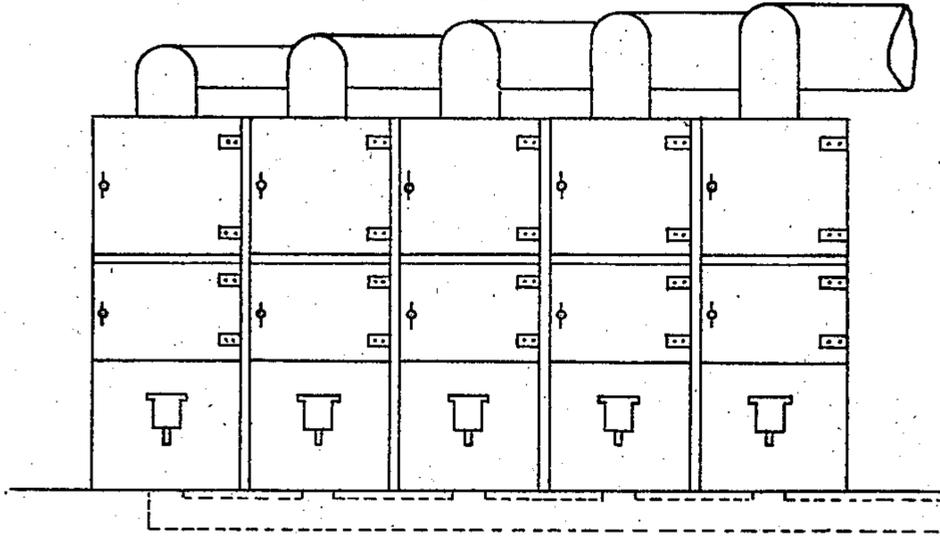
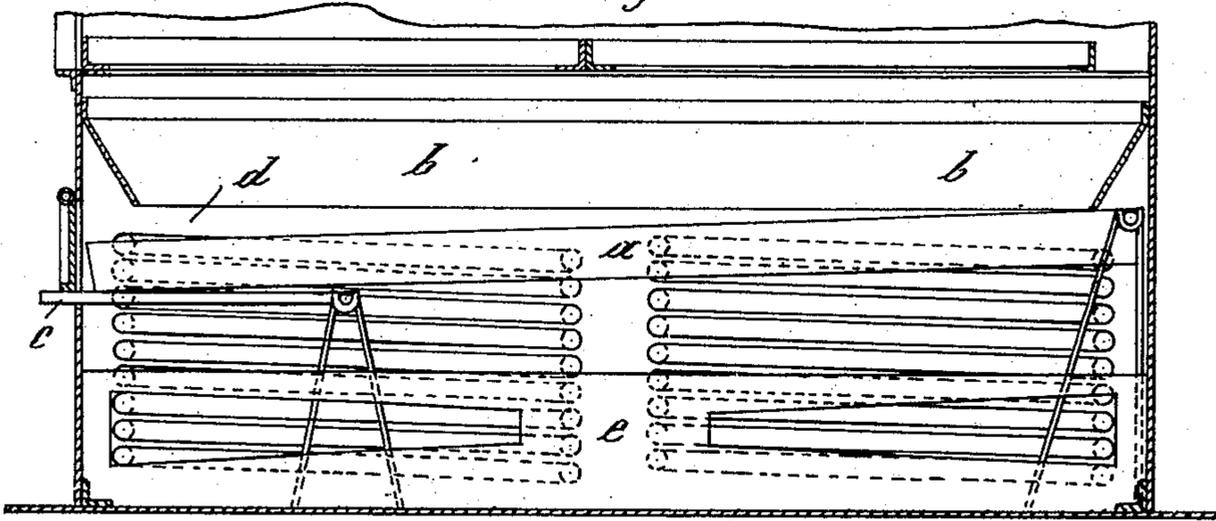


Fig. 4.



Witnesses
Horn Gillman, Jr.
J. J. McCarthy.

Inventor
August Prawatke
by John Freeman
Attorneys

UNITED STATES PATENT OFFICE.

AUGUST PRAWATKE, OF DRESDEN, GERMANY.

APPARATUS FOR DRYING VEGETABLES, FRUITS, &c.

SPECIFICATION forming part of Letters Patent No. 708,781, dated September 9, 1902.

Application filed October 16, 1901. Serial No. 78,883. (No model.)

To all whom it may concern:

Be it known that I, AUGUST PRAWATKE, a subject of the King of Prussia, German Emperor, residing at Burgerwiese 23, Dresden, in the Kingdom of Saxony, German Empire, have invented certain new and useful Improvements in Apparatus for Drying Vegetables, Fruits, Blood, or the Like on Hurdle-Work, of which the following is a specification.

The present invention relates to an apparatus for drying vegetables, fruits, blood, and other products which can be dried on hurdle-work. The same consists of one or more collecting-boxes located below the hurdle-work for receiving the parts of the products which may fall through the hurdle-work and also serving at the same time to regulate the admission of heated air to the drying-chamber. The regulation is effected by adjusting the position of said collecting-boxes according to the quantity of air necessary.

In order to make my invention more clear, the same is illustrated in the accompanying drawings, in which similar letters denote similar parts, and in which—

Figure 1 is a vertical section through the drying-chamber; Fig. 2, a longitudinal section of the same; Fig. 3, a front view of an apparatus comprising several drying-chambers. Fig. 4 is a sectional view illustrating a modification.

The apparatus consists, as seen from Fig. 3, of several independent and adjacent chambers in which the hurdles are arranged above each other. Each chamber is independent of the other, so that by locating a greater or smaller number of chambers adjacent to each other the efficiency of the apparatus can be regulated. Each chamber may be disconnected or cut out at will and independently regulated. The drying is effected by heated air passing through the chamber. On the bottom of each chamber the heating device is arranged, which may consist of heating-tubes about which the air circulates. Through the tubes may be passed, according to the product to be dried, high-pressure steam, which may be supplied from any steam-generator, or low-pressure steam produced in a special small low-pressure generator; but instead of steam hot gases may be employed

and carried in closed-up flues, so as to prevent the gases from coming in contact with the material to be dried. The top part of the drying-chamber is separated from the bottom heating part by bottom plates *b*, supported to leave a space between their opposing edges, and through this space the hot drying-air passes into the hurdle-room and, saturated with humidity, is carried from the top part to the outside. The flow of the air is effected by natural draft, the air saturated with humidity being carried from each drying-chamber through a pipe connection into a channel with gradually-increasing capacity, which is in communication with a funnel; but a draft artificially produced or increased could also be employed.

In drying apparatus of similar type there is the evil that the parts of the drying products falling through the hurdles enter the fire-box and get lost. This evil is obviated by the present invention, in which a collecting-receptacle *a* is used, which is arranged below the space between the opposing edges of the plates *b*. In the example shown the bottom of the hurdle-room is formed by the two plates *b*, which are made sloping toward the center, with a free space or slit between their opposing edges, and any material falling through the hurdles will fall either directly into the receptacle *a* or onto the plates *b*, from which it will slide into the receptacle.

In Fig. 2 the receptacle *a* is in two sections, the opposing ends of which are hinged on a common axle. The arrangement is such that the hinged ends of the collecting-boxes touch the bottom plates *b*, and the boxes incline downwardly to the front and rear of the drying-chamber, thereby leaving free spaces *d* between them and the bottom plates *b*, through which spaces the heated air is allowed to pass from the fire-box into the drying-room. In this arrangement the width of the wedge-shaped spaces *d* can be regulated by raising and lowering the free ends of the collecting-boxes. The regulation may, for instance, be attained by double levers *c*, the outer arms of which carry the boxes, while the inner arms are adapted to press upon each other. By depressing one end of the double lever, which projects to the outside of the drying-chamber, Fig. 2, the free ends of the collect-

ing-boxes can be lowered, whereby the width of the spaces *d* and the quantity of the heated air passing through said spaces becomes increased. By raising said end of the lever the admission of air can be decreased or completely checked. When the admission of air is checked, the respective drying-chamber is cut out. The collecting-box is thus adapted to receive such material as may drop through the hurdles and also serves to regulate or control the admission of the air.

In Fig. 4 the collecting-box *a* is in one section, hinged at its rear end, which latter is in contact with the bottom plates *b*. The front end of the box is supported by a hinged lever *c*, which can be raised or lowered to raise or lower the free end of the box *a*, and thereby regulate the admission of air through the spaces *d*.

Having described the invention, I claim—

1. In apparatus for drying vegetables, fruit, blood, and the like, the combination with a chamber having a bottom provided with an opening through which material may pass from the chamber and air may pass into the

chamber, of a collecting-box supported below said opening to receive material passing therethrough, and means for moving said box to control the admission of air through said opening, substantially as set forth.

2. In apparatus for drying vegetables, fruit, blood and the like, the combination of a drying-chamber having a bottom formed of inclined plates and provided with an opening through which material may pass from the chamber, and air may pass into it, of a collecting-box hinged at one end and arranged below said opening to receive material passing therethrough, and means for moving the free end of said box to control the admission of air through said opening into the chamber, substantially as set forth.

In witness whereof I have hereunto signed my name in the presence of two subscribing witnesses.

AUGUST PRAWATKE.

Witnesses:

MAX ARDMANN,
HENRY HASPER.