

No. 649,351.

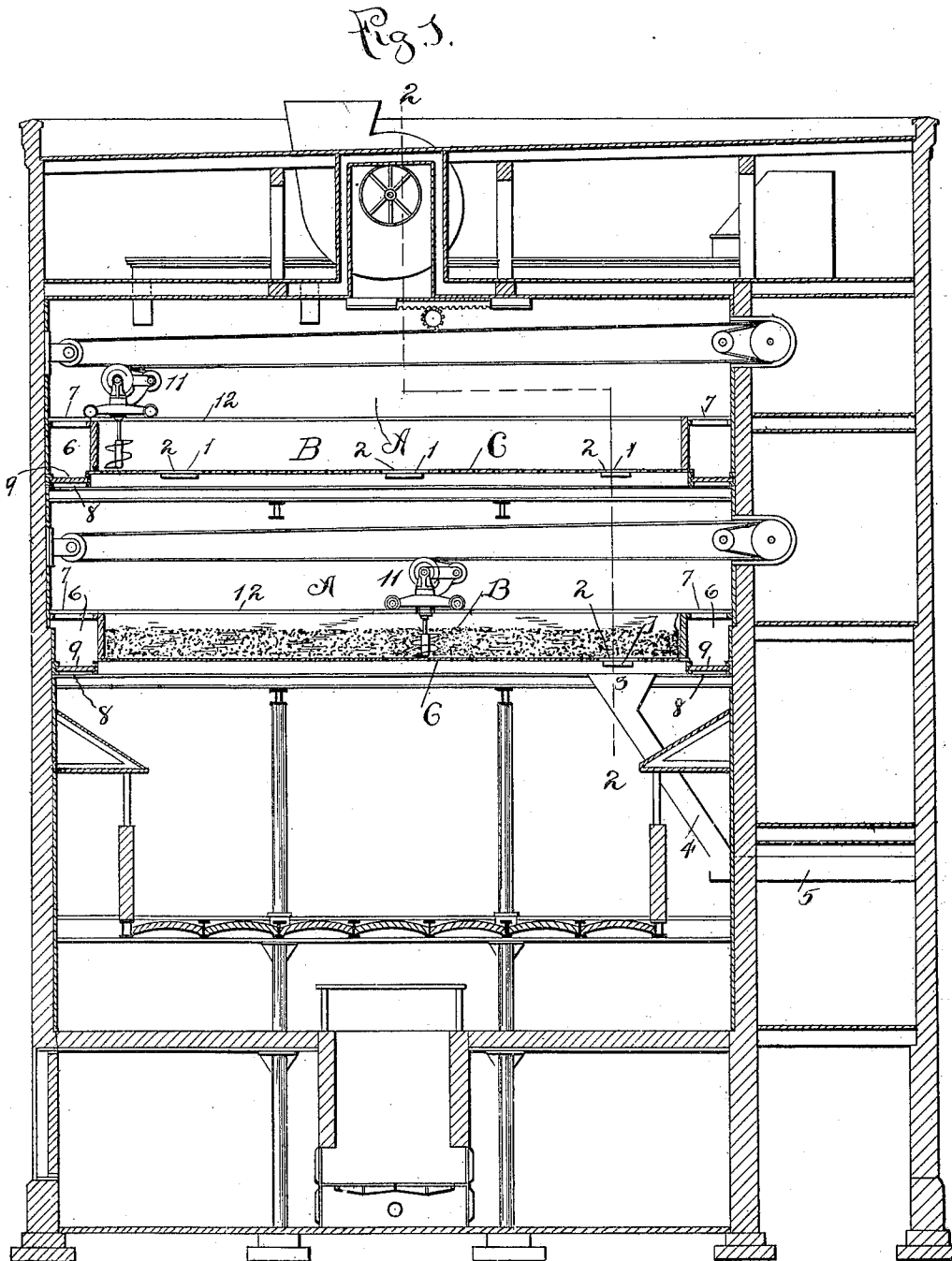
Patented May 8, 1900.

W. H. PRINZ.  
APPARATUS FOR DRYING MALT.

(Application filed Apr. 20, 1898.)

(No Model.)

3 Sheets—Sheet 1.



Witnesses.  
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Inventor.  
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By *Rudolph H. [Signature]*  
Att'y

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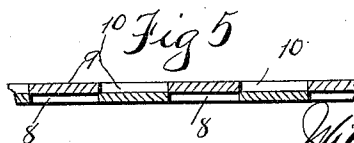
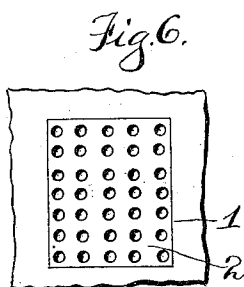
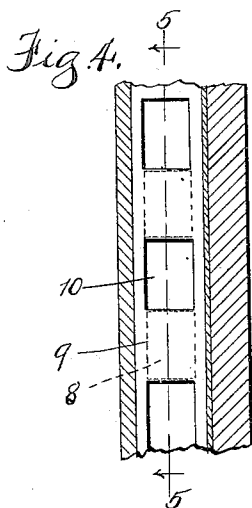
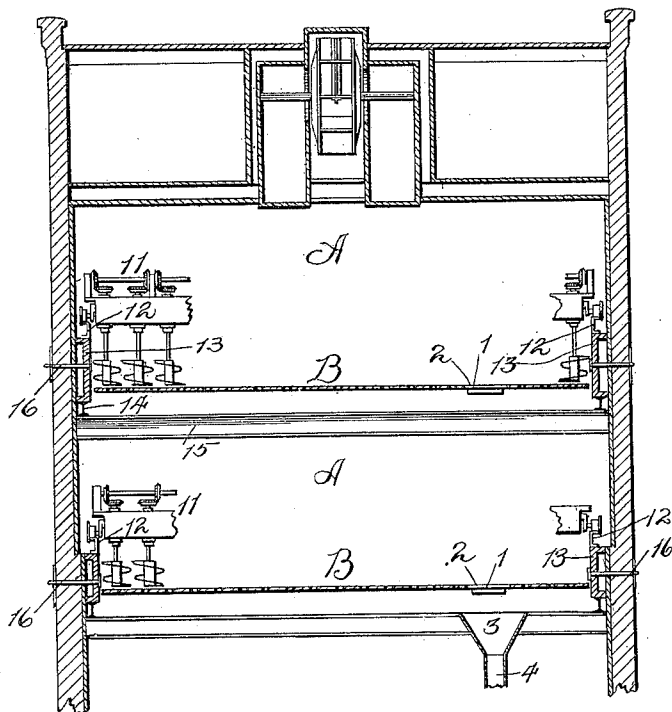
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3 Sheets—Sheet 2.

Fig. 2.



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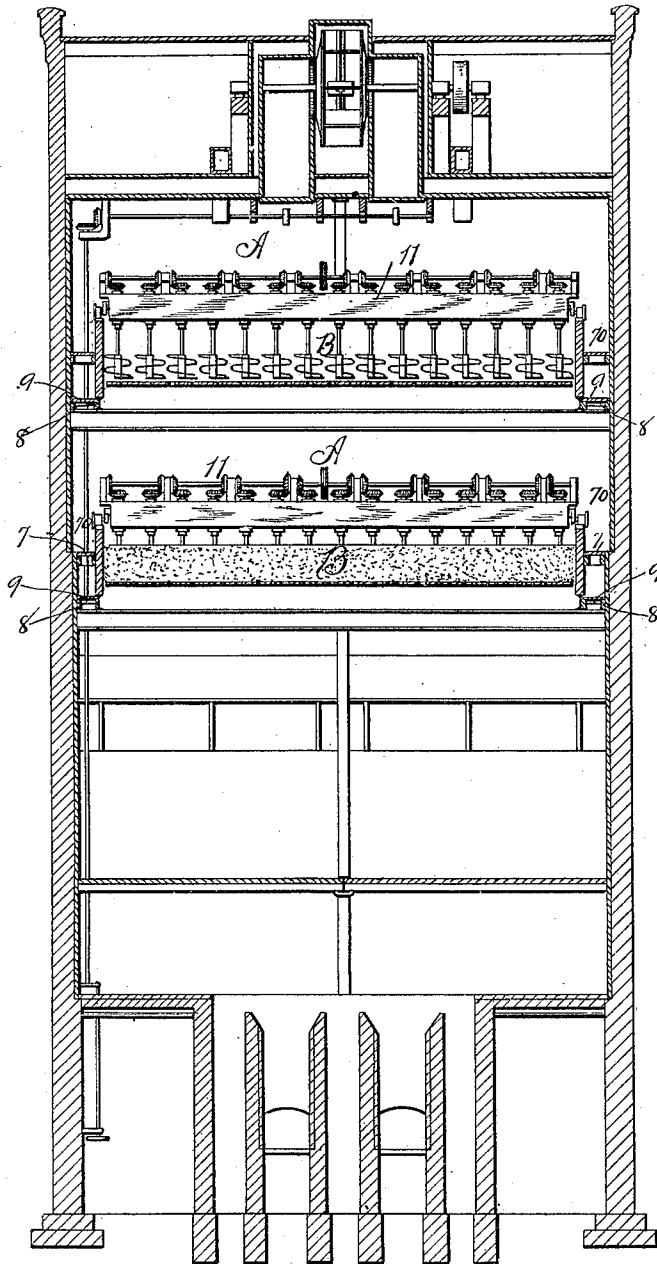
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3 Sheets—Sheet 3.

Fig. 3.



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# UNITED STATES PATENT OFFICE.

WILLIAM H. PRINZ, OF CHICAGO, ILLINOIS, ASSIGNOR TO THE SALADIN PNEUMATIC MALTING CONSTRUCTION COMPANY, OF SAME PLACE.

## APPARATUS FOR DRYING MALT.

SPECIFICATION forming part of Letters Patent No. 649,351; dated May 8, 1900.

Application filed April 20, 1898. Serial No. 678,251. (No model.)

*To all whom it may concern:*

Be it known that I, WILLIAM H. PRINZ, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Apparatus for Drying Malt; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to a novel construction in an apparatus for drying malt, the object being to provide a device of this character of simple, durable, efficient, and cheap construction; and it consists in the features of construction and combinations of parts herein-after fully described and claimed.

In the accompanying drawings, illustrating my invention, Figure 1 is a vertical longitudinal section of an apparatus for drying malt constructed in accordance with my invention. Fig. 2 is a fragmentary section of the same on the line 2 2 of Fig. 1. Fig. 3 is a vertical transverse section of a slightly-modified form of construction. Fig. 4 is a fragmentary plan view showing the valve adapted to control ventilating-openings in the drying-floors. Fig. 5 is a sectional view on the line 5 5 of Fig. 4. Fig. 6 is a fragmentary plan of the malt floor, showing a register in place through which the malt is discharged from the lowermost drying-floor. Fig. 7 is a fragmentary plan showing the slat walk at the sides or ends of the compartment.

The present invention is designed as an improvement upon my apparatus for drying malt forming the subject of Letters Patent No. 580,672, granted to me on April 13, 1897, the apparatus herein shown being of a different form from that shown in said Letters Patent and therefore requiring a different disposition of the ventilating-openings. It is also designed to reduce the cost of construction of the kiln.

In the drawings I have illustrated an apparatus provided with two drying-floors A, each provided with a compartment B, adapted to receive the malt. Each of said compartments is provided with a perforated floor C, which in the case of the upper compartment may be

either a dumping or stationary floor. In the latter event said floor is provided with openings 1, adapted to be closed by registers 2 of perforated metal. The floor of the lower compartment is provided with a single opening 1 adjacent one end, underneath which is the flaring or hopper-formed mouth 3 of a spout 4, leading to a conveyer 5, which is adapted to transport the finished malt from the drier. Said compartments B are preferably made to extend over the entire width of the building, as shown in Figs. 1 and 2, but are of less length, so as to leave passages 6 at their ends which are covered with a walk 7 of parallel slats for the operator. Underneath said walk 7 the floor is provided with a plurality of openings 8, which are adapted to be closed by means of a slide-valve 9, having openings 10, corresponding in size and relative location with said openings 8. Said valves 9 may be operated by any suitable means, as will be obvious, though I have not illustrated such means.

The malt-turning machine 11 is supported upon rails or channel-beams 12, mounted upon the brackets 13, supported upon the I-beams 14, which are mounted upon the floor-beams 15. Said brackets 13 are secured to the walls of the building by means of bolts 16. spaces on each side, which are likewise covered with slat walks 7 and with valve-controlled openings in the floor.

In Fig. 3 I have illustrated another form of single compartment, which instead of extending over the entire width of the building extends over the entire length of the drying-room and is of sufficiently-less width to leave spaces on each side, which are likewise covered with slat walks 7 and with valve-controlled openings in the floor.

When it is desired to ventilate the malt on the upper floor without ventilating the malt on the lower floor, the openings 9 in the lower floor are uncovered, thus permitting the free passage of the air therethrough without passing through the malt, while the openings in the upper floor remain closed, thus forcing the air to pass through the malt. To ventilate the malt on the lower floor without ventilating the malt on the upper floor, the operation is reversed.

The hopper-mouth 3 of the spout 4 is preferably of greater area than the opening 1 above it, so as to prevent the by-passage of

malt while discharging the lower floor. A space of some width is also maintained between the upper edge of the mouth 3 and the floor C to permit ventilation of the malt immediately over said register 2.

It will be obvious that the number of malt-floors may be varied without departing from the spirit of my invention.

I claim as my invention—

1. In an apparatus for drying malt, a floor having a compartment for drying malt extending almost over its entire area, said compartment being provided with a perforated floor on which malt is adapted to lie and through which hot air is adapted to pass to dry said malt, leaving only spaces beyond two of the sides of said compartment, said floor being provided with valve-controlled

openings in said spaces, whereby the air can be made to by-pass the malt in said compartment, substantially as described.

2. In an apparatus for drying malt, a perforated malt-floor provided with an opening for discharging the malt, said opening being adapted to be closed by a register, perforations in said register, a flaring mouth of a spout below said opening adapted to receive the malt therefrom and lead it to a conveyer, and a space between said flaring mouth and the malt-floor, substantially as described.

In testimony whereof I affix my signature in presence of two witnesses.

WILLIAM H. PRINZ.

Witnesses:

KARL WESSEL,  
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