(No Model.)

W. A. HOEVELER.

APPARATUS FOR DRYING GLUE, &c.

No. 276,405. Patented Apr. 24, 1883.

Fig. 1.

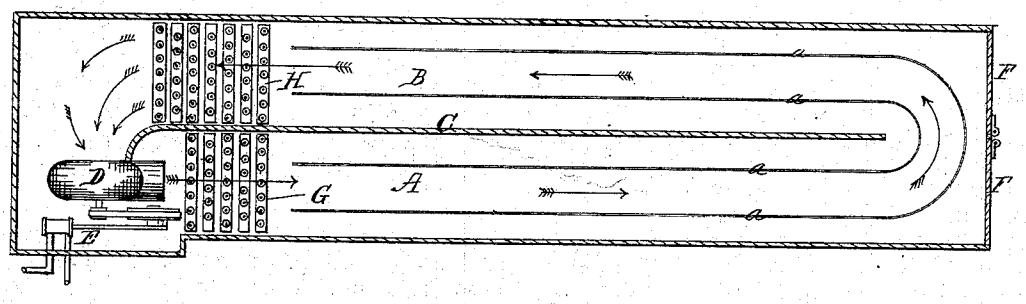


Fig. 2.

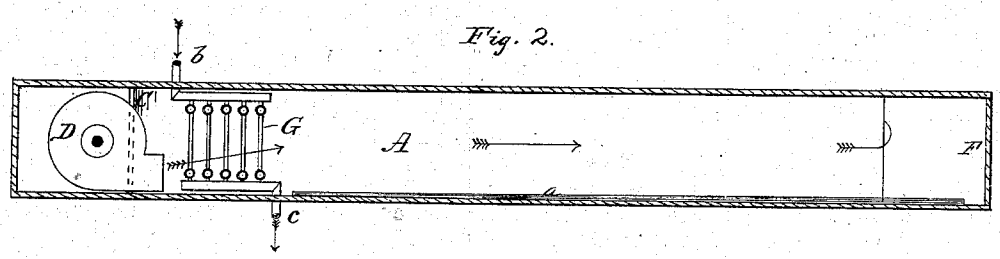
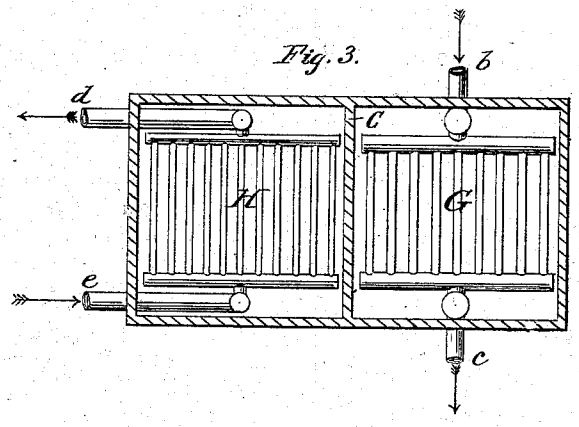


Fig. 3.



Witnesses.
John M. Patterson
Thomas J. Patterson

William A. Hoeveler,
by Connolly & Root & McTighe
Attorneys.

N. PETERS. Photo-Lithographer, Washington, D. C.

UNITED STATES PATENT OFFICE.

WILLIAM A. HOEVELER, OF PITTSBURG, PENNSYLVANIA.

APPARATUS FOR DRYING GLUE, &c.

SPECIFICATION forming part of Letters Patent No. 276,405, dated April 24, 1883.

Application filed December 30, 1882. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM A. HOEVELER, of Pittsburg, in the county of Allegheny and State of Pennsylvania, have invented certain new and useful Improvements in Apparatus for Drying Glue, &c.; and I do hereby declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, which form a part of this specification, in which—

Figure 1 is a plan section, and Fig. 2 a side elevation in section, of my improved drying-alley. Fig. 3 is an end view in section.

The object of this invention is to facilitate the drying of glue, tankage, &c., in glue-works.

The invention consists in the combination and arrangement of devices, as hereinafter fully described and claimed.

The form and arrangement are as follows:

A B represent the two parts of the alley, separated by the partition C, which is shorter than the alley, so as to leave a communicating space at both ends.

At the front of section A, I locate a blower, D, actuated by a steam-engine or other motor, E, also located within the walls of the alley. The whole current from blower D is directed through section A of the alley, whence it turns into section B and comes back through it, to be again drawn into and forced out of the blower into section A. By this means the contained air of the alley is set in continuous motion around and around through the two sections successively, and as the structure is made as air-tight as practicable in such cases the air remains unchanged until the doors F or either of them is opened to discharge the vitiated air and let in fresh air.

In sections A and B, I place the railway *a a*, to admit of the convenient movement of the contents in process of drying, which are generally set on cars or buggies.

In section A, in front of blower D, I place a steam or other heating device, G, which may be of any form or design adapted to allow the air from blower D to pass through it and to heat such air while passing therethrough. I prefer the radiating coil for such purpose, the steam entering at *b* and emerging at *c*. At the other end of the alley, which by my double construction is in section B just back of the blower and heating-coil, I place a condensing-coil, H, of a construction similar to coil G, and having inlet *d* and outlet *e*. Through this condenser I keep flowing a refrigerating liquid or brine, which renders the condenser very cold. The continuous current of air from the blower passes over the contents of the cars or trays in the alley and takes up moisture in its passage. After such passage the air is charged with moisture and comes in contact with the coils of the condenser H, upon which the charge of moisture is condensed, and the air emerges dry again, enters the blower, and is again made the vehicle by which the moisture of the glue or other contents is transported to and deposited on the condenser.

In drying glue by this method I do not use the steam-coil at the first stage of drying a charge, as the drying should not be effected too rapidly; but as soon as the product begins to stiffen properly I admit the steam to coil G, and thereafter the operation is continuous, as above described.

By doubling up the alley into two sections, as shown, I am enabled to erect the alley in a more contracted space. In a length of ninety feet I get the benefit of a single alley one hundred and eighty feet long. Section B may, if desired, be located on top of section A. Doors may be located wherever desired, to facilitate the movement of the trays or cars and the placing of them into and their removal from the alley.

By the above apparatus I can perfect the drying in a very much shorter time than can be done by the old alleys, and I can operate in hot weather without hinderance from the condition of the atmosphere.

In cases where the atmosphere is dry enough to dispense with the heater and the condenser, I can throw the doors F wide open, extend the partition C out to that end of the alley, and then preserve a continuous forced draft of sufficiently dry air in both alleys for the purpose. As there are many days during the year fine enough to give reasonably dry air, I can operate with the blower alone in this way, and thus economize the steam and the refrigerating-brine.

I claim as my invention—

1. A drying-chamber, substantially air-tight, having a power-driven air-circulating device and a motor therefor, located both within said chamber, substantially as described.

2. In a drying apparatus adapted to the continuous movement of its contained air, the combination of two twin alleys intercommunicating at the ends only, and adapted to receive the material to be dried, an air-forcing apparatus at one end of one alley, and a surface-condenser at the same end of the other alley, substantially as described.

3. The drying apparatus consisting of the alleys A B, blower D, heating-coil G, and condensing-coil H, substantially as described.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in presence of two witnesses.

WILLIAM A. HOEVELER.

Witnesses:
T. J. McTIGHE,
THOMAS J. PATTERSON.