S. R. GRIFFITH.

FRUIT-DRIER

No. 193,243. Patented July 17, 1877.

Fig. 1.

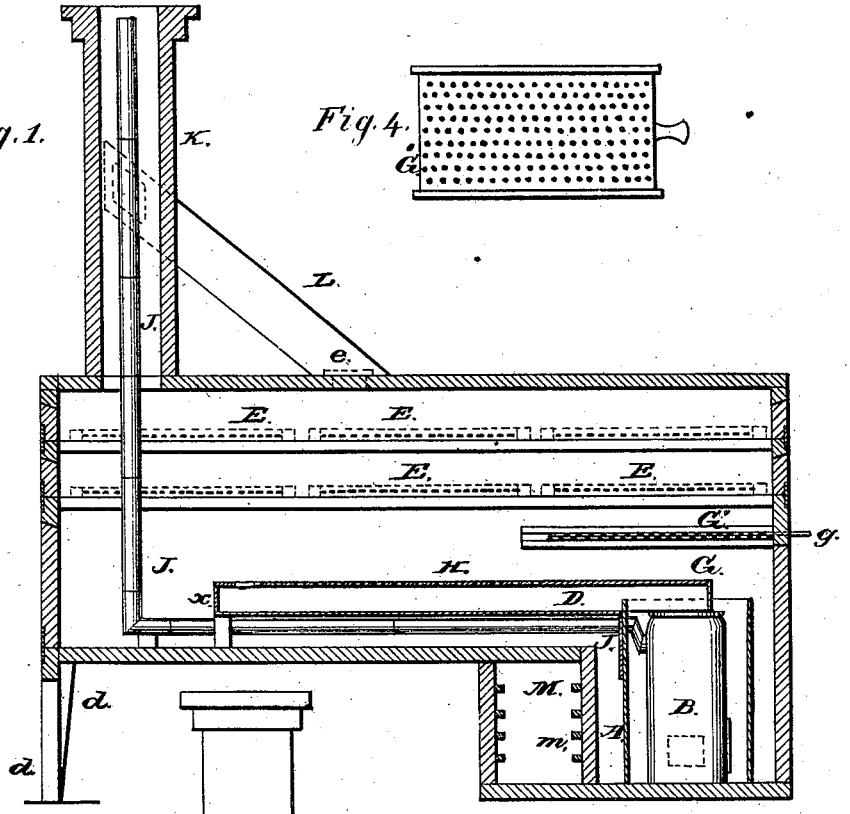


Fig. 4.

Fig. 2.

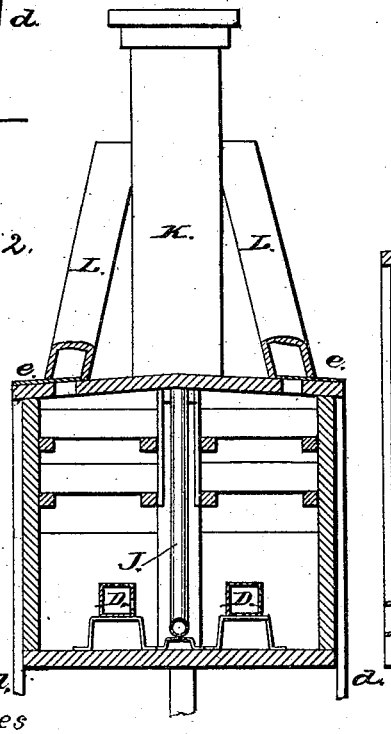
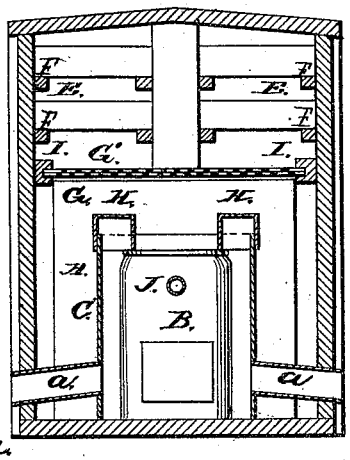


Fig. 3.



Witnesses
John A. Tauberschmidt
A. L. Allen

Inventor
Samuel R. Griffith
by DeWitt C. Allen,
atty.

UNITED STATES PATENT OFFICE.

SAMUEL R. GRIFFITH, OF BLOOMINGTON, ASSIGNOR TO JOHN R. DODGE, JR., AND WM. T. SHURTLEFF, OF NORMAL, ILLINOIS.

IMPROVEMENT IN FRUIT-DRIERS.

Specification forming part of Letters Patent No. 193,213, dated July 17, 1877; application filed June 27, 1877.

To all whom it may concern:

Be it known that I, SAMUEL R. GRIFFITH, of Bloomington, in the county of McLean and State of Illinois, have invented certain new and useful Improvements in Driers; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being made to the accompanying drawings, forming a part of this specification, in which—

Figure 1 is a longitudinal section of my improved drier; Figs. 2 and 3, cross-sections of the same; Fig. 4, a detail view.

This invention relates to improvements in apparatus for drying and bleaching fruit, and relates more particularly to improvements upon the patent to John R. Dodge, Jr., dated May 15, 1877, and No. 190,748; and the invention consists in the construction and arrangement of parts, as will be hereinafter more fully described.

In the drawing, A represents the heating-chamber, provided with a stove, furnace, or other heating device, B, having a surrounding jacket, C. Said jacket is provided with pipes *a a*, communicating with the open air, for supplying fresh air to the apparatus. Above the chamber A is a double horizontal chamber, D D, one end being supported by said chamber, and the other by legs *d d*. E E are screens for the reception of the material to be dried, and are inserted through doors at both ends of the drying-chamber, said screens being supported upon side rails F.

H H represent two partly-perforated pipes or conductors extending longitudinally along under the screens in the drying-chamber, each pipe being closed at its end *x*, and having a small elongated opening in the top near said end *x*. Each of said pipes is also provided with a mouth enveloping a portion of the top of the surrounding jacket C of the heating device, said pipes conducting and distributing a portion of the heated air throughout the entire length of the drying-chamber, thus giving an equable and advantageous diffusion of heated air throughout said drying-chamber.

The heating-chamber communicates directly with the front end of the drying-chamber, and directly over the heating device, and under the first screens in the drying-chamber are arranged two perforated metal plates, G G′, one arranged above the other, and one plate being stationary, while the other one is movable, and which is provided with a handle, *g*, whereby the perforations in the plates can be opened or closed for regulating the draft of hot air, thereby preventing the too rapid drying, and especially the scorching of the fruit in the screens immediately above the heating device, resulting from careless overheating of the heating device. These plates are supported in side grooves in the side rails I I.

J is a pipe connecting with the heating device, and through which the products of combustion may escape. This pipe extends longitudinally through chamber D, and passes into and up through the exhaust-shaft K, which communicates with the drying-chamber through the top, near the further end thereof.

L L are two exhaust-pipes communicating from the top of the double drying-chamber, with the exhaust-shaft K, and which draw off the steam arising from the fruit or other material being dried, and said pipes are each provided with a slide or cut-off, *e*, whereby the flavor from the material being dried can be kept in the drying-chamber as long as desired.

M represents a bleaching-chamber arranged in rear of the heating-chamber, for the fumigation of the fruit. The screens of fruit are placed or supported upon the side rails *m*, and are subjected to the fumes of a burning compound, composed of sulphur, charcoal, and alum, such as is described in patent to John R. Dodge, Jr., dated June 5, 1877.

The bleaching-chamber, being arranged in rear of the heating-chamber, and under the drying-chamber, is kept in a heated or dry state from said chambers, and its close proximity to said drying-chamber makes it very convenient in transferring the fruit from one chamber to the other.

I do not desire to confine myself to the use of two heating pipes or conductors, as one might be used with nearly equal effect; nor do I wish to confine myself to the two perforated plates shown, as each side of the drying-chamber might be provided with them.

I claim as my invention—

1. The combination, with the drying and

heating chambers, of the bleaching-chamber M, arranged in rear of said heating-chamber, and under said drying-chamber, substantially as and for the purpose specified.

2. The combination, with the drying and heating chambers and heating device, of the longitudinal perforated air-conducting pipes H, perforated plates G G′, longitudinal flue or pipe J, exhaust-shaft K, and exhaust-pipes L, the several parts constructed and relatively arranged substantially as herein shown and described.

3. The combination, with the drying and heating chambers and heating device, of the longitudinal perforated air-conducting pipe or pipes H and perforated plates G G′, arranged in the front end of the drying-chamber and directly over the heating device, whereby the heated air is equally distributed throughout the drying-chamber, substantially as specified.

In testimony that I claim the foregoing I have hereunto set my hand this 20th day of June, 1877.

SAMUEL R. GRIFFITH.

Witnesses:
THOS. SLADE,
RANDOLPH A. PIKE.