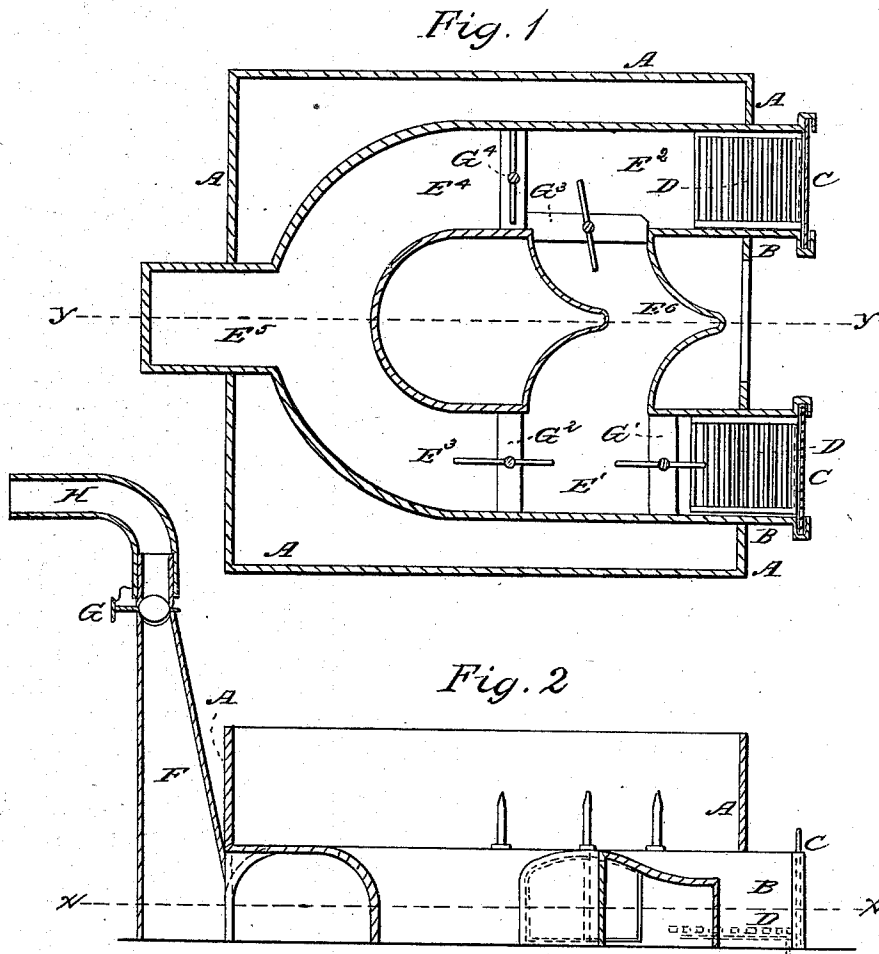


W. B. HIX.  
Fruit Drier.

No: 100,530.

Patented March 8, 1870.



Witnesses:  
A. W. Almgren  
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per *[Signature]*  
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# United States Patent Office.

WILEY B. HIX, OF ROME, GEORGIA.

Letters Patent No. 100,530, dated March 8, 1870; antedated March 2, 1870.

## FLUE FOR DRY-HOUSES.

The Schedule referred to in these Letters Patent and making part of the same

To all whom it may concern:

Be it known that I, WILEY B. HIX, of Rome, in the county of Floyd, and State of Georgia, have invented a new and improved Flue for Dry-Houses; and I do hereby declare that the following is a full, clear and exact description thereof, which will enable others skilled in the art to make and use the same, reference being had to the accompanying drawings forming part of this specification, in which—

Figure 1 is a horizontal section of my improved flue, taken through the line *x x*, Figure 2.

Figure 2 is a longitudinal section of the same taken through the line *y y*, fig. 1.

Similar letters of reference indicate corresponding parts.

My present application is for certain improvements upon the patent of January 8, 1861, but which may be applied with equal benefit to driers of a different construction.

On bringing that invention into public use I have discovered that it is defective in three points, and to remedy these has been the object to which my attention has been directed for several years.

The chimney did not work satisfactorily, coal could not be used conveniently, and the flues were made to commence even with the wall instead of extending three feet outside thereof.

My invention consists in an improved flue, in the arrangement of detachable coal-grates, and in an improved chimney.

A represents the dry-house, which may be of any desired size or capacity.

B are the furnaces, the forward ends of which should project a little beyond the front walls of the dry-house, and should be provided with sliding gates, C, to regulate the draught.

The furnaces B should also be provided with sliding grates D, for use where coal is to be used for fuel, but which may be removed when wood is to be used.

E<sup>1</sup> E<sup>2</sup> E<sup>3</sup> E<sup>4</sup> E<sup>5</sup> E<sup>6</sup> is the flue.

The parts E<sup>1</sup> and E<sup>2</sup> of the flue are made straight, and are connected with each other by a cross-flue, E<sup>6</sup>, which is made in about the form shown in fig. 1; that is to say, with an angle by which the heated products of combustion passing through said part E<sup>6</sup> of the flue will be projected toward the forward part of the dry-house before escaping from said part of the flue.

The parts E<sup>3</sup> and E<sup>4</sup>, which pass through the rear

part of the dry-house curve toward each other, and unite with the part E<sup>5</sup> of the flue, which passes out through the rear wall of the dry-house, A, and connects with the chimney F.

G<sup>1</sup> is a damper which is placed in the part E<sup>1</sup> of the flue, just before the point at which the cross-flue E<sup>6</sup> unites with the said part E<sup>1</sup>.

G<sup>2</sup> is a damper placed in the part E<sup>1</sup> of the flue, a little beyond the point at which the cross-flue E<sup>6</sup> unites with the said part E<sup>1</sup>.

G<sup>3</sup> is a damper placed at or near the point at which the cross-flue E<sup>6</sup> unites with the part E<sup>2</sup> of the flue.

G<sup>4</sup> is a damper placed in the part E<sup>2</sup> of the flue, just beyond the point at which the cross-flue E<sup>6</sup> unites with the said part E<sup>2</sup>.

By these dampers the passage and distribution of the heated products of combustion, as they pass through the flue, may be regulated and controlled at will, so as to distribute the heat through the dry-house, as may be required.

F is a chimney which is placed outside the dry-house, and which I usually prefer to make about five feet high.

G<sup>5</sup> is a damper placed in the upper part of the chimney F, and which also assists in regulating and controlling the passage of the heated products of combustion through the flue, and consequently assists in regulating the distribution of the heat.

H is an elbow or bent section of pipe, which is connected with the top of the chimney F, in such a way that it may be conveniently turned about, according to the direction of the wind.

Having thus described my invention,

I claim as new, and desire to secure by Letters Patent—

1. The arrangement in the furnace of a fruit-dryer of sliding and detachable coal-grates D D, as and for the purpose specified.

2. The arrangement of the flues E<sup>1</sup> E<sup>2</sup> E<sup>3</sup> E<sup>4</sup> E<sup>5</sup> E<sup>6</sup>, as shown and described, for distributing the heat in the manner set forth.

3. The combination of the base F, having valve G<sup>5</sup> therein, with the rotary pipe H, all as shown and described, to form a suitable chimney.

WILEY B. HIX.

Witnesses:

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