G. A. CARLSON.

Brick-Drier.

No. 217,339. Patented July 8, 1879.

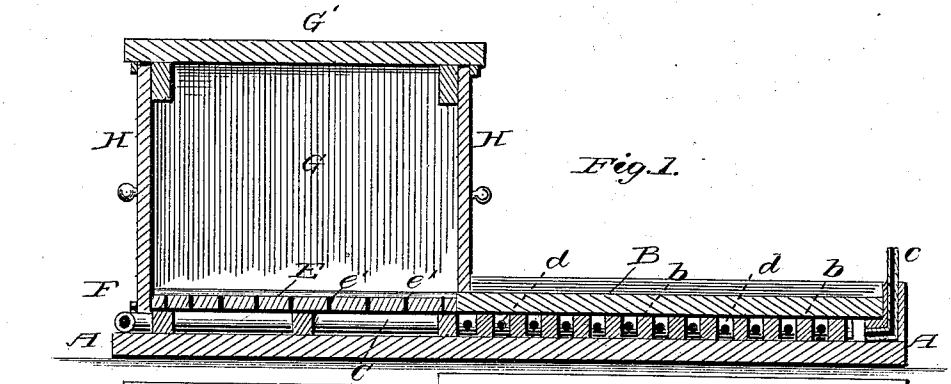


Fig. 1.

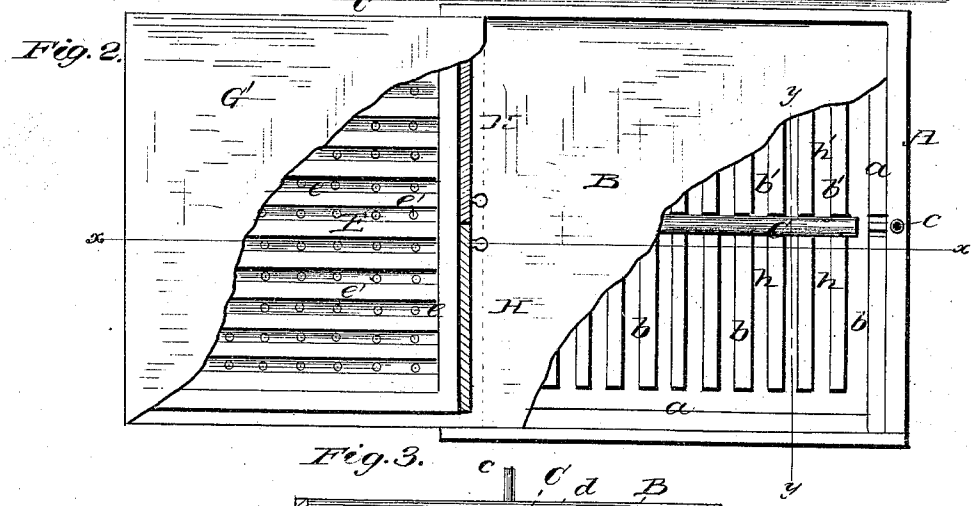


Fig. 2.

Fig. 3.

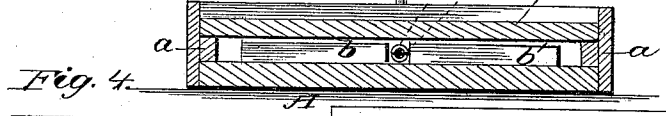
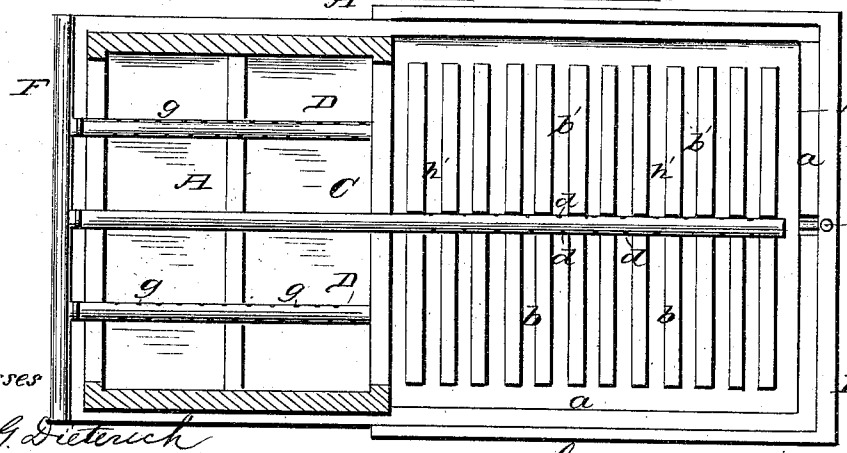


Fig. 4.



Witnesses

Jno. G. Dieterich

George Binkenburg

Inventor

Gustaf Adolph Carlson

by Louis Bagger & Co.

Attys.

N. PETERS, PHOTO-LITHOGRAPHER, WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

GUSTAF A. CARLSON, OF RED WING, MINNESOTA.

IMPROVEMENT IN BRICK-DRIERS.

Specification forming part of Letters Patent No. **217,339**, dated July 8, 1879; application filed December 18, 1878.

To all whom it may concern:

Be it known that I, GUSTAF ADOLPH CARLSON, of Red Wing, in the county of Goodhue and State of Minnesota, have invented certain new and useful Improvements in Brick-Driers; 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, and in which—

Figure 1 is a longitudinal vertical section. Fig. 2 is a top plan, with some of the parts broken away to show the construction and arrangement of the drying-floors, the line *x x* in this figure indicating the vertical plane on which the section represented in Fig. 1 is taken. Fig. 3 is a transverse vertical section on line *y y*, Fig. 2; and Fig. 4 is a top plan of the apparatus for heating the drying floor and chamber.

Similar letters of reference indicate corresponding parts in all the figures.

This invention relates to brick-driers; and consists in certain improvements in the construction and arrangement of parts, having for its object to provide for an even distribution of heat, economy, and facility in handling and drying the green brick preparatory to burning.

In the drawings, A is the base or bottom of the drier, which may be made of masonry or wood, and is preferably rectangular in shape. One part of this has a closed chamber, G, provided with a roof, G′, and closely-fitting sliding doors H H, while the part exterior to the chamber G is provided with a raised ledge, *a*, supporting the exterior removable drying-floor B.

At one end of the base or platform A, back of the closed chamber G, is a pipe, F, which branches off at right angles into three pipes, D C D, the middle one of which extends the entire length of chamber G and platform A, while the two others, D D, are only the length of the floor in chamber G, being closed at their ends. Each of the parallel pipes D C D is provided with a stop-cock for shutting it off from communication with pipe F, and the two pipes D D are provided each with a series of perforations, *g g*, while the central pipe, C, is intact, or without any perforations, for that part of its length or section which passes through chamber G, but is perforated on both sides, as shown at *d d*, in that part which traverses platform A, and closed at its end, like the short pipes, D D.

Arranged upon each side of pipe C, between its perforations *d*, is a series of parallel ribs, *b b′*, forming grooves or channels *h h′* between them, at right angles to pipe C. Above the pipes D D, within chamber G, is placed a floor or platform, E, provided with a series of longitudinal parallel grooves or channels, *e*, perforated as shown at *e′ e′*, the front end of this perforated floor or platform being laid flush or even with platform B.

From the foregoing description, taken in connection with the drawings, the operation of my improved brick-drier will be readily understood. The soft green bricks are first placed upon the platform B, arranged in rows, and the hot air turned on from pipe F, air being shut off from pipes D D. The heated air, passing through pipe C and escaping through the lateral orifices *d d*, enters the channels *h* and *h′* under the floor or platform B, heating this uniformly throughout its entire length and width. The hot air, passing through channels *h h′*, enters the channel along the edges of platform A, escaping through a narrow branch pipe, *c*, at the end of the platform.

As a rule, about three hours exposure on platform B is sufficient to dry the green brick enough to permit of their being handled, when they are picked up and stacked or placed upon shelves in the chamber G. The ridges in floor E will leave open spaces or channels under the brick piled on the floor, into which the hot air enters through the perforations *e′*, the stop-cock of pipe C having been shut and those of D D opened. After chamber G has been piled with brick, the doors H H are closed, and the brick left there until sufficiently hard to be placed in the kiln for burning.

The hot air employed in drying I obtain from the kiln, which is in close proximity to the drier, by an arrangement of air-pipes placed in the wall of the furnace, as described in my

application for Letters Patent on certain improvements in brick-kilns of even date herewith.

By the employment of heated air in the manner described all moisture is avoided, and such as will collect from the brick during the process of drying is rapidly evaporated and driven off.

Having thus described my invention, I claim and desire to secure by Letters Patent of the United States—

1. In a brick-drier, the construction and arrangement of the branch pipe F, short pipes, D D, having perforations *g g*, and central pipe, C, made in tact for a length corresponding to that of its neighboring pipes D D, but provided with a series of lateral perforations, *d d*, in its extending length or section, substantially as and for the purpose herein shown and described.

2. The combination and arrangement of the base or platform A, having a double series of parallel ribs, *b b'*, and escape-pipe *c*, central pipe, C, having lateral perforations *d*, opening out into the channels *h h'* between said ribs *b b'*, and drying-floor B, substantially as and for the purpose herein shown and described.

3. The combination and arrangement of the base or platform A, parallel perforate pipes D D, platform E, having channels *e* and perforations *e'*, and closed chamber G, substantially as and for the purpose herein shown and described.

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

GUSTAF A. CARLSON.

Witnesses:

LOUIS BAGGER,

AUGUST PETERSON.