

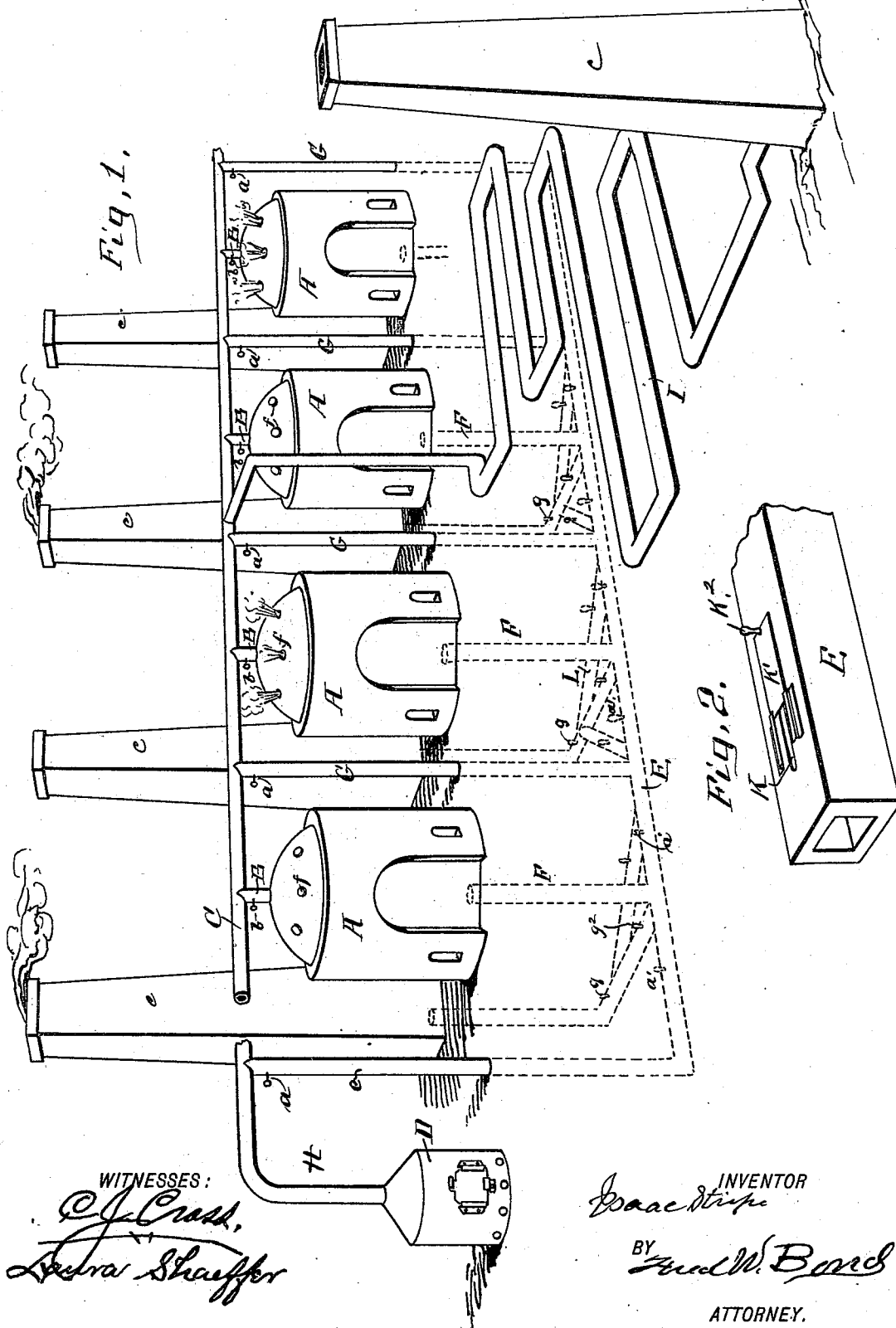
(No Model.)

2 Sheets—Sheet 1.

I. STRIPE.
BRICK DRIER.

No. 510,491.

Patented Dec. 12, 1893.



WITNESSES:

C. J. Crass,
Lena Shaffer

INVENTOR
I. Stripe

BY *Wm. W. Bond*

ATTORNEY.

(No Model.)

2 Sheets—Sheet 2.

I. STRIPE.
BRICK DRIER.

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Fig. 3.

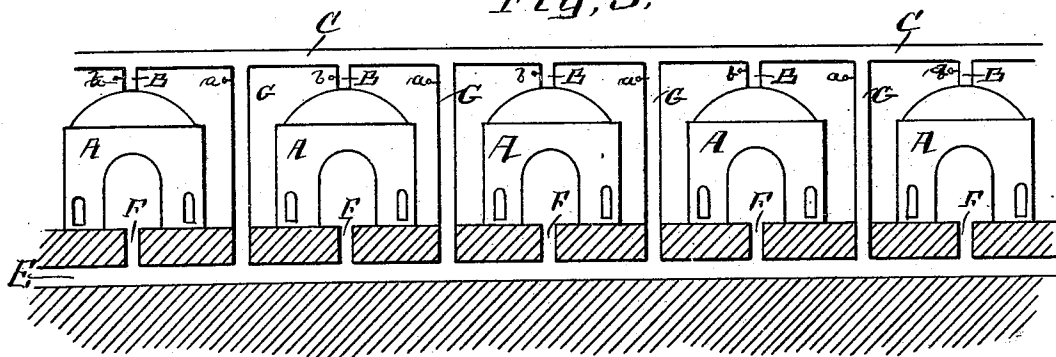


Fig. 4.

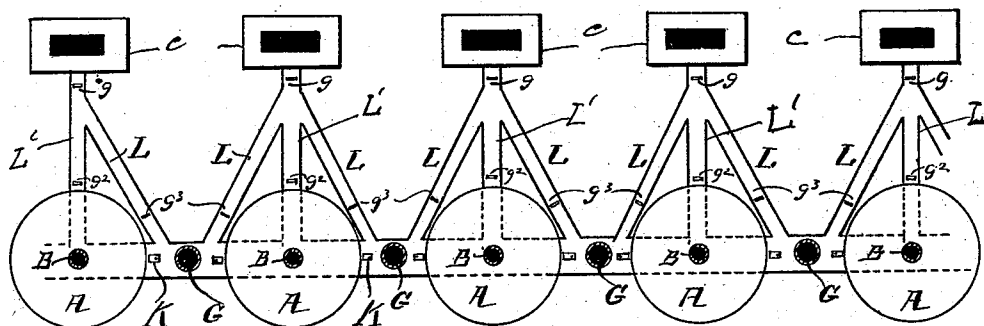
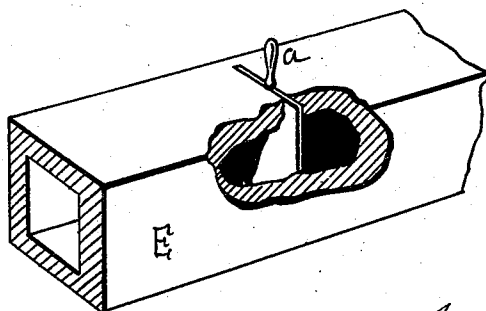


Fig. 5.



WITNESSES:

E. J. Cross
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Isaac Stripe INVENTOR

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UNITED STATES PATENT OFFICE.

ISAAC STRIPE, OF GREENTOWN, OHIO.

BRICK-DRIER.

SPECIFICATION forming part of Letters Patent No. 510,491, dated December 12, 1893.

Application filed March 18, 1892. Serial No. 425,400. (No model.)

To all whom it may concern:

Be it known that I, ISAAC STRIPE, a citizen of the United States, residing at Greentown, in the county of Stark and State of Ohio, 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 same, reference being had to the annexed drawings, making a part of this specification, and to the letters of reference marked thereon, in which—

Figure 1, is a view, showing my invention applied to a number of brick kilns, also illustrating a possible means provided for drying outside of the kiln. Fig. 2, is a view of a portion of an air pipe, showing slide attached thereto. Fig. 3, is a side elevation of a series of kilns, showing longitudinal section of the air pipes or conduits. Fig. 4, is a ground plan. Fig. 5, is a section of a pipe, showing damper properly located.

The present invention has relation to brick driers, and it consists in the different parts, and combination of parts, hereinafter described, and particularly pointed out in the claim.

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

In the accompanying drawings, A represents the brick kilns, which may be constructed as shown in the drawings, or they may be of any other desired style, and are provided with an ordinary door or opening, for the purpose of firing. To the tops or domes of the kilns A, are attached the pipes B, which pipes extend upward as illustrated in the drawings, and to the tops or upper ends of the pipes B, is attached the horizontal pipe C, which pipe extends over the top of each kiln, substantially as illustrated in the drawings, and leads to, and connects with, the fire box D, which fire box is for the purpose hereinafter described. Below the kilns A, is located the pipe or conduit E, from which pipe lead the pipes or openings F, and connect with the bottoms of the kilns. The pipe E, as shown is located beneath the bottoms of the kilns, and may be formed of brick, or other suitable material, and is connected to the horizontal pipe C, by means of the vertical pipes G.

In use, when it is desired to dry a kiln of brick

independent from the "cooling off" kiln, the fire box D, is provided, from which fire box leads the pipe H, which is connected with the horizontal pipe C, and in the event a down draft is desired for the purpose of drying the brick contained in the kiln, the damper *a*, is closed and the damper *b*, is opened, thereby providing a direct communication from the fire box to the top of the kiln; the hot air extends downward through the kiln and into the pipe E, from whence it is carried to the chimney *c*. In the event an upward draft is desired, the damper *b*, is closed, and the damper *a*, together with the damper *a'* are open, thereby providing a means for carrying or conveying hot air to the bottom of the kiln, through the pipe *e*, the pipe E, and the pipes or openings F. It will be understood that the fire box D, is to be brought into use only in drying the brick contained in a kiln, when there is no "cooling off kiln" to connect with. When it is desired to utilize the heat escaping from a kiln containing brick that have been sufficiently burned, the damper located in the pipe over the "cooling off kiln" is opened, and the damper located in the pipe leading from the horizontal pipe C, and the kiln containing the brick designed to be dried, is open, thereby conducting the escaping heat from the finished "hot kiln" to the kiln containing the brick designed to be dried. The heat entering the top of the kiln, passes downward, and is carried to one of the chimneys C, through one of the pipes connected with one of the chimneys. It will be understood that this connection will produce what is known as a down draft.

When it is desired to utilize the escaping heat from a finished kiln, in drying a kiln containing brick, and at the same time provide an upper draft, the proper damper located in the underground pipe E, is opened, the damper to be opened being the one situated between the "cooling off kiln" and the kiln to be dried; and the damper located above the kiln to be dried is closed; thereby connecting the "cooling off kiln" with the kiln containing the brick designed to be dried; the heat thus conducted, will extend upward through the kiln, and escape through the opened apertures *f*, which apertures are located in the dome of the kiln.

It will be understood that when a down draft is used, the apertures *f*, should be closed, thereby producing a draft by means of the chimneys *c*.

5 In the event it is desired to carry the escaping heat from a "cooling off kiln," to a kiln not adjacent to said "cooling off kiln," one of the dampers *g*, is closed and the damper directly below, or communicating with the
10 cooling off kiln, and the pipe *E*, is opened, thereby permitting the heat to extend downward through the opening *F*, into the pipe *E*, from whence it is conveyed to the horizontal pipe *C*, through the pipe *G*, and the proper
15 dampers opened, conveying the heated air to the kiln containing the brick designed to be dried.

It will be understood, that by closing the proper damper located in the top or upper
20 end of the proper pipe *G*, and opening the proper damper in the pipe *E*, an up draft will thereby be made, the heat escaping through the apertures *f*.

It will be understood that by my peculiar
25 arrangement I am enabled to convey heat from the "cooling off kiln" to any desired kiln and at the same time provide either an up or down draft.

For the purpose of providing a means for
30 drying brick and pottery ware, outside the kilns *A*, the side of the pipe *I* may be provided and properly adjusted to the horizontal pipe *C*, or at any other convenient pipe, and the pipe *I*, carried to any desired point;
35 or a series of pipes may be used if desired. In the event the air escaping from a "cooling off kiln" should be too hot the opening *K*, is provided, which opening is located in the pipe
40 *E*; and it will be understood that an opening should be provided in the pipe *E*, between each two kilns, thereby providing a means for regulating the heat, or in other words, tempering the air conveyed to the drying kiln.

For the purpose of regulating the quantity
45 of air to be received into the opening *K*, the slide *K'* is provided, which slide is provided with an operating handle, such as *k*, or its equivalent.

In Fig. 1, the pipe *E*, is shown some distance below the bottoms of the kilns. This is
50 done for the purpose of avoiding confusion, as it will be understood that the pipe *E*, is to be only a short distance below the bottoms of the kilns, substantially as illustrated in Fig. 3.

55 The branch pipes *L*, are situated substantially as shown in the drawings and are for the purpose heretofore described of passing or conveying the heat from a drying off kiln past, or by, the next adjacent kiln.

The several dampers located in the underground pipes should be provided with long
60 handles extended to the surface within reach of the operator.

It will be understood that when the "cooling-off kiln" is first connected by the pipes,
65 the air will be very hot; and for the purpose of tempering the air when first entering a kiln filled with green bricks, the slide *K'*, is provided, thereby regulating the degree of
70 heat; and as the bricks become dry, the slide *K'*, may be closed, thereby utilizing all of the heat escaping from the "cooling-off kiln." It will also be understood, that by my peculiar
75 arrangement, the heat thus conveyed from the "cooling-off kiln," can be utilized in burning the brick, thereby saving fuel.

In the event it is desired to convey the heat from the "cooling off kiln" to a kiln not adjacent to said "cooling off kiln," the branch
80 pipes *L*, are provided, which branch pipes are provided with the damper *g*³.

In use the damper *b*, above the kiln over which the heat is to pass is closed, which conveys the heat to the next adjacent pipe *G*, and the damper *g*², is closed in the pipe *L'*
85 leading to, and connecting with the kiln around which the heat is to pass thereby causing the heat to pass to the damper *g*, which damper is closed, from whence it extends through the opposite branch pipe *L*,
90 and is conveyed to the kiln containing the brick designed to be dried.

Having fully described my invention, what I claim as new, and desire to secure by Letters
95 Patent, is—

The combination of the series of kilns *A*, the horizontal pipe *C* communicating with the tops of said kilns through branch pipes provided with dampers, the fire box *D* communicating with said pipe *C*, the underground
100 pipe *E* provided with dampers and having an opening *K* provided with a slide *K'*, the vertical pipes *F* connecting the pipe *E* with the bottoms of the kilns, the vertical pipes *G* connecting the horizontal pipes *C* and *E* and provided with dampers, the pipe *e* through which
105 the underground pipe *E* communicates with the fire box, the chimneys *c*, and the pipes *L L'* connecting said chimneys with the underground pipe *E* and provided with dampers,
110 substantially as described.

In testimony that I claim the above I have hereunto subscribed my name in the presence of two witnesses.

ISAAC STRIPE.

Witnesses:

F. W. BOND,
CHAS. M. STANDS.