

H. HOWARD.
Improvement in Kilns.

No. 128,228

Patented June 25, 1872.

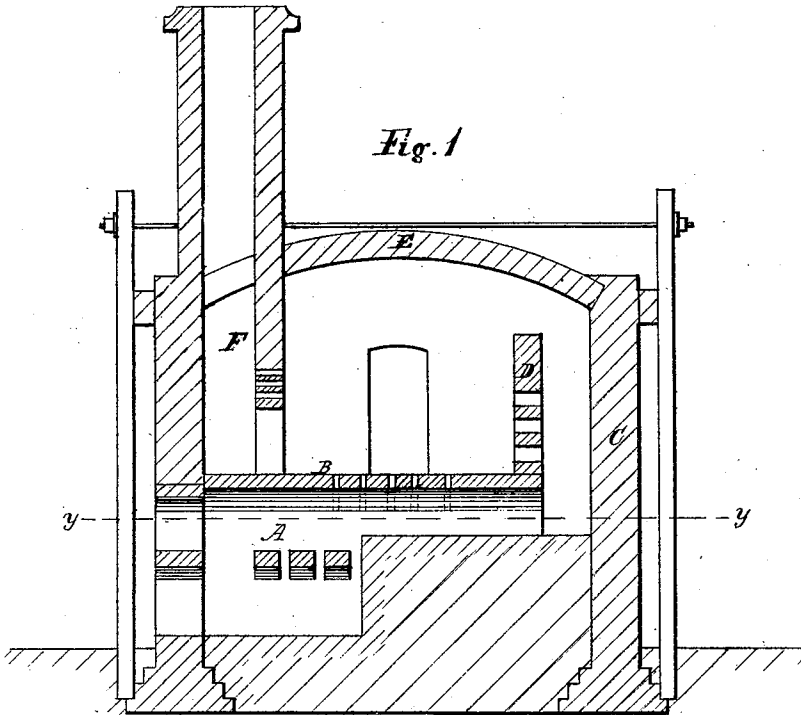


Fig. 2

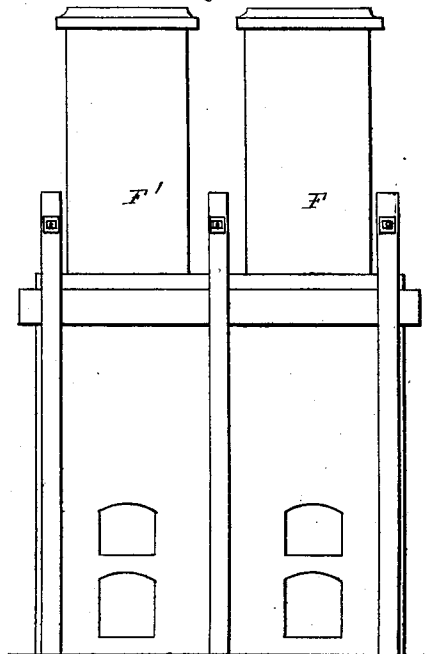
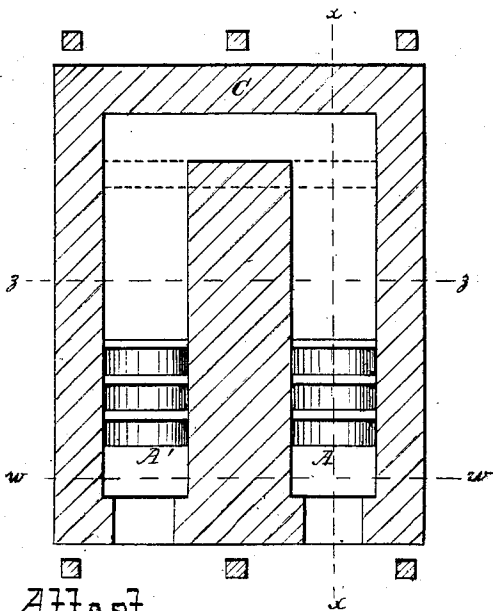


Fig. 3



Attest
A. Ruppert

H. Howard
Inventor
D. R. Holloway & Co.
A. C. C.

H. HOWARD.

Improvement in Kilns.

No. 128,228.

Patented June 25, 1872.

Fig. 4

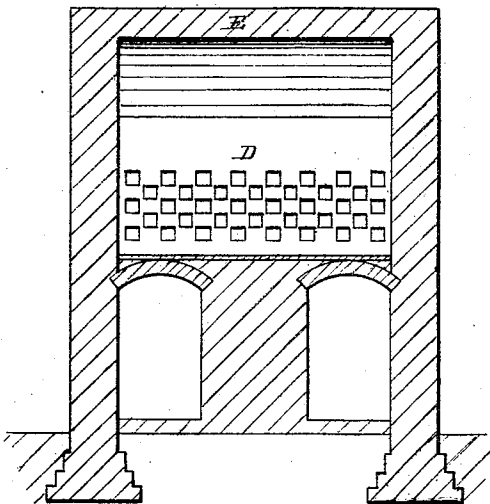
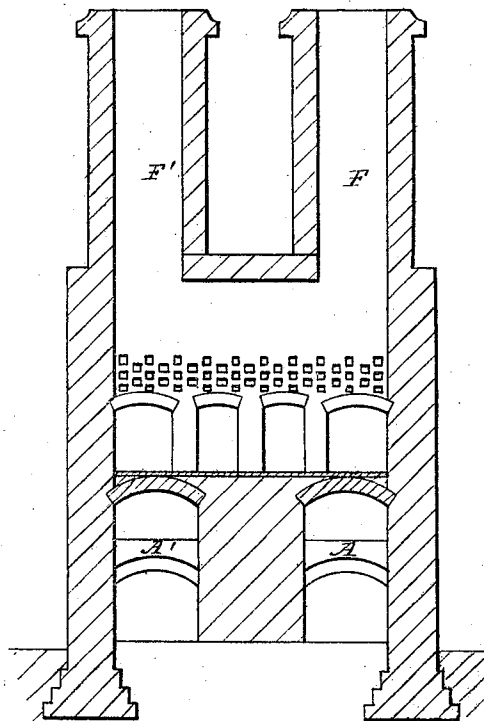


Fig. 5



Attest
Geo. J. Cile
A. Ruppert,

H. Howard
Inventor
D. P. Holloway & Co
Atty

UNITED STATES PATENT OFFICE.

HOMER HOWARD, OF BRAZIL, INDIANA.

IMPROVEMENT IN KILNS.

Specification forming part of Letters Patent No. 128,228, dated June 25, 1872.

Specification describing a certain Improvement in Kilns, invented by HOMER HOWARD, residing at Brazil, in the county of Clay and State of Indiana.

This invention relates to kilns more especially designed for burning earthenware; and my improvement consists in placing the furnace or furnaces beneath the floor of the kiln, and causing the heated gases and products of combustion to pass beneath such floor to the back end of the kiln, and thence upward, between the back wall and a partition wall, to the vaulted roof, and into the burning-chamber, from which they finally escape through uptakes at the front, the object being to utilize all the heat possible.

Figure 1 is a vertical section in a plane indicated by the broken line *xx* in Fig. 3. Fig. 2 is a front elevation. Fig. 3 is a horizontal section in a plane indicated by the broken line *yy* in Fig. 1. Fig. 4 is a vertical section on line *zz* of Fig. 3. Fig. 5 is a vertical section on line *ww* of Fig. 3.

The same letters of reference are employed in all the figures in the designation of identical parts.

In the example illustrated in the annexed drawing I have shown two furnaces, A and A', which are built under the floor B of the kiln. The burning gases and hot products of combustion pass from the furnaces to the back wall C, and upward between the latter and the vertical partition-wall D, which forms the rear

wall of the chamber in which the earthenware to be baked is placed. This wall D does not extend up to the vaulted roof E of the kiln, so that a space will be left between its top and such roof, through which the flame and gases enter the burning-chamber, passing through the interstices between the articles forward to the uptakes F and F', from which the smoke escapes. The uptakes extend down into the chamber of the kiln in such manner as to compel the smoke and hot gases not utilized to enter them near the floor of such chamber.

The floor B and wall D may be provided with pigeon-holes, as shown, to admit some of the burning gases into the chamber of the kiln in a more direct way. The rear walls of the uptakes may be pigeon-holed in similar manner, as illustrated.

What I claim as my invention, and desire to secure by Letters Patent, is—

The combination of the furnace or furnaces, built beneath the floor of the kiln, partition-wall D at the rear of the burning-chamber, and uptake or uptakes at the front thereof and extending down into the same, substantially as and for the purpose specified.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

HOMER HOWARD.

Witnesses:

W. R. ABBOTT,
C. B. SEYMOUR.