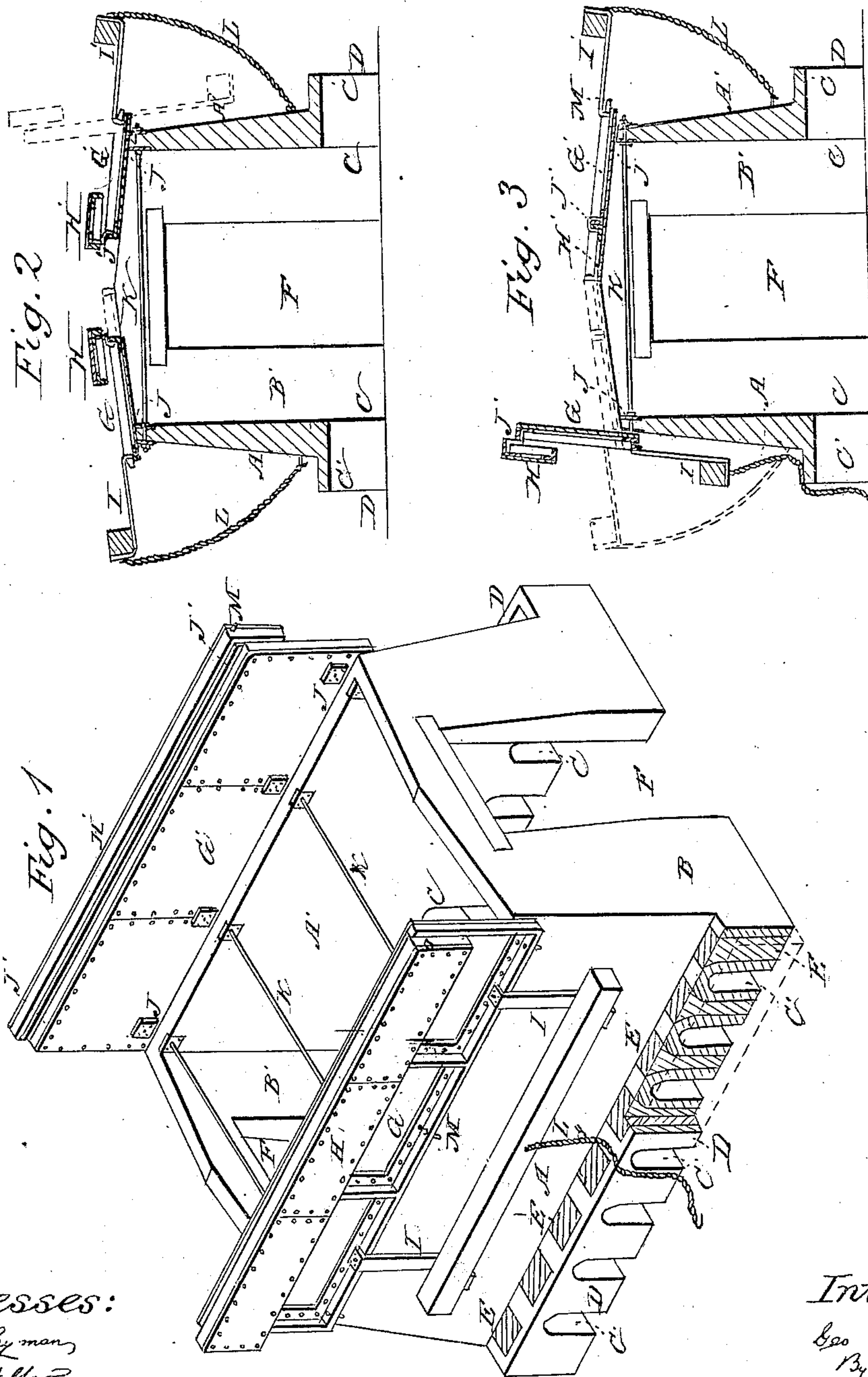


## Brick Kiln.

No. 61,149.

Patented Jan. 15, 1867.



*Witnesses:*

J. H. Layman,  
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# United States Patent Office.

GEORGE C. BOVEY, OF CINCINNATI, OHIO.

*Letters Patent No. 61,149, dated January 15, 1867.*

## IMPROVED BRICK KILN.

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

### TO WHOM IT MAY CONCERN:

Be it known that I, GEORGE C. BOVEY, of Cincinnati, in the county of Hamilton, and State of Ohio, have invented a new and useful Brick Kiln; and I hereby declare the following to be a full, clear, and exact description thereof, reference being had to the accompanying drawings making part of this specification.

This invention refers to a form or arrangement of kiln for burning bricks, insuring a uniform action at every part, so as to avoid loss and waste.

Figure 1 is a perspective view of a kiln embodying my invention, a portion of the arches being removed, and the top of the kiln being thrown open.

Figure 2 is a transverse section showing the middle flaps open for central settling, and by dotted lines showing the right-hand pair of flaps open for side settling.

Figure 3 is a transverse section showing the left pair of flaps open for settling the remaining side, and by dotted lines showing the kiln closed for completion of the burning.

A A' and B B' constitute respectively the side and end walls of the kiln. The side walls are pierced at the ground level with a series of arches, C, having an outside prolongation, C', which terminates flush with a curb or wall, D. The interstices between the arches are filled with clay, as shown at E. A large and high doorway, F, is provided in each end wall for the introduction of the unburnt and the removal of the burnt bricks. Hinged, J, to the top of each side wall, is a cover, G H, G' H', consisting of a broad leaf, G or G', having counterbalanced or weighted handles, I I', and a narrow leaf, H H' hinged, J', to the free edge of said broad leaf in such a manner as to exclude the rain when closed; each pair of leaves constituting respectively the right-hand and left-hand flap G H, G' H'. K are bolts which may answer the double purpose of staying the side walls and of securing thereto the hinges J. L are cords or chains by which the flaps are operated, the latter being just sufficiently heavier than the handles for that purpose. M are rain-water spouts.

The operation is as follows; The kiln being filled with unburnt brick, and proper openings being left for draught, and the doorways F built in with refuse brick and plastered in the customary manner, and the top of the kiln being thrown entirely open, as in fig. 1, fires are built in the arches, and as soon as the "water-smoke" is entirely dissipated, the large leaves are closed down, as shown in fig. 2, so as to leave the middle portion of the top open. This having proceeded long enough to "settle" the central portion of the clamp, the left flap is wholly closed and the right flap wholly opened, as shown by dotted lines in fig. 2, and kept in this condition until the right side becomes sufficiently settled, when the right flap is closed down, and the left flap thrown open to settle the left side. (See fig. 3.) The entire clamp having been thus equally settled at every part, the top is closed entirely down, (see dotted lines in fig. 3,) and the clamp left to become gradually and equally burnt throughout every part. The flaps may be formed of boiler-plates bolted to frames of angle-iron, so as to protect the latter from the direct action of the fire, and to be easily renewable.

This arrangement of clamp possesses several decided advantages over those of the customary forms; for example, being enabled to direct the draught in succession through the centre and either side, I insure an equal settling of every part, and prevent all unequal shrinkage and contraction of the unburnt bricks. The folding cover dispenses wholly with the "plating," or usual brick cover. The facility with which the entire top of the clamp can be thrown open, enables the complete expulsion of the vapor, or "water-smoke," before burning, thus avoiding the great destruction of brick now incident to sudden expansion of moisture within the substance of the brick. The external extension of the arches avoids the too direct contact of the brick with the intense heat of actual combustion. The heat pervading every part of the kiln alike, converts the entire charge into fair merchantable brick without loss, imperfection, or waste, and with an expenditure of less than half the fuel usually consumed.

I claim herein as new, and of my invention, a brick kiln entirely open at the top and provided with folding covers, substantially as and for the purposes set forth.

In testimony of which invention I hereunto set my hand.

GEO. C. BOVEY.

Witnesses:

GEO. H. KNIGHT,  
JAMES H. LAYMAN.