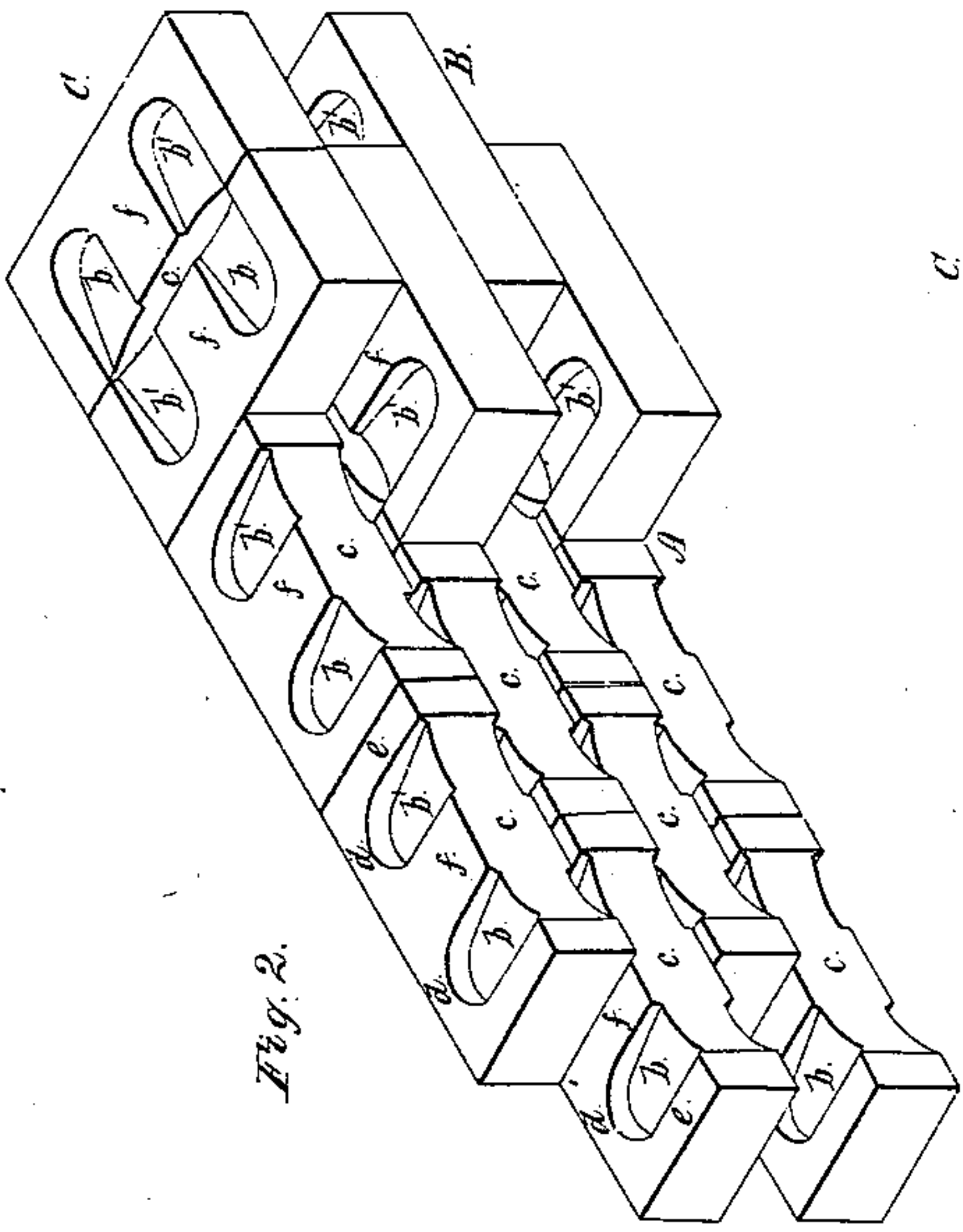


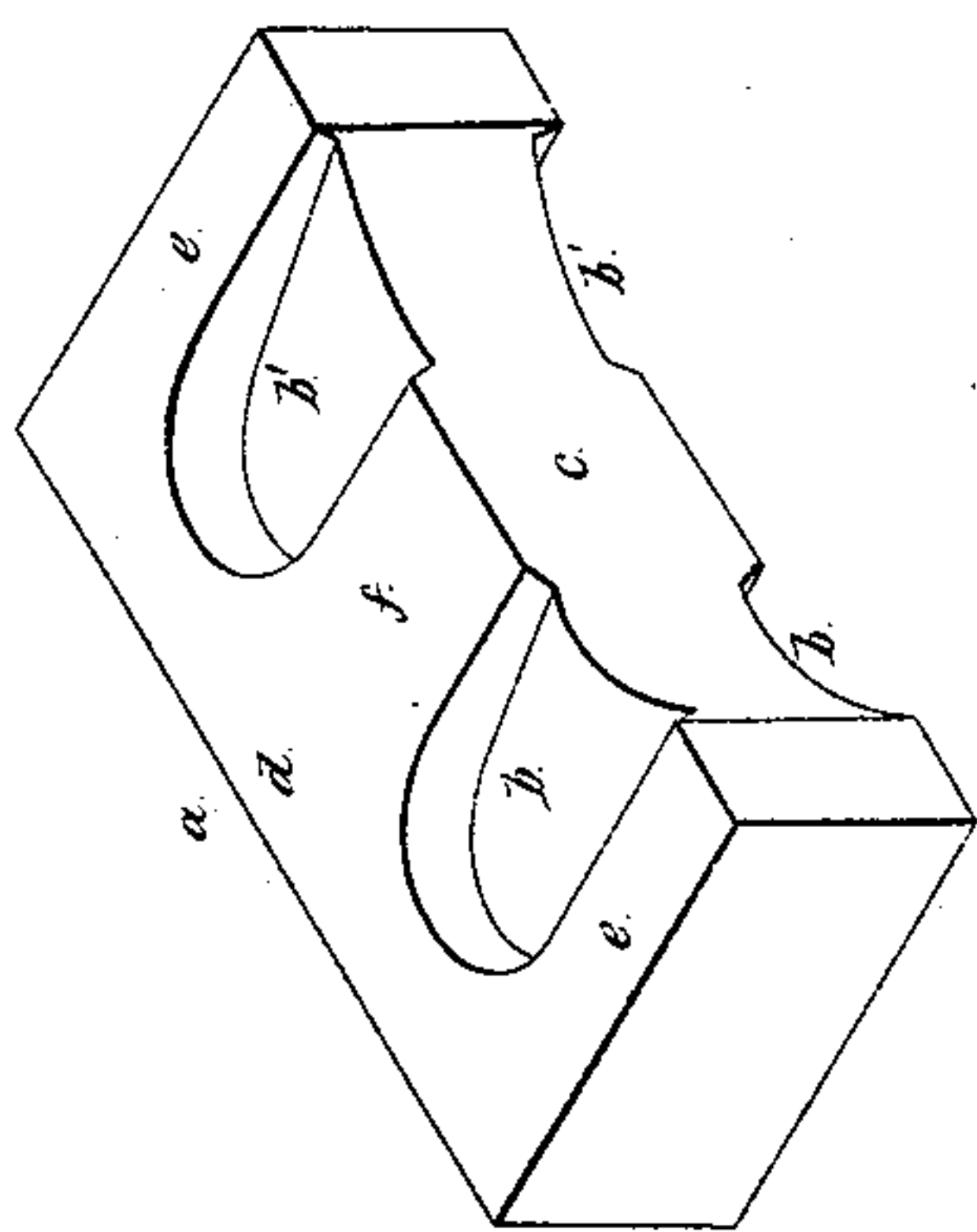
*E. Conkling.*  
*Building Blocks.*

*N<sup>o</sup> 14,052.*

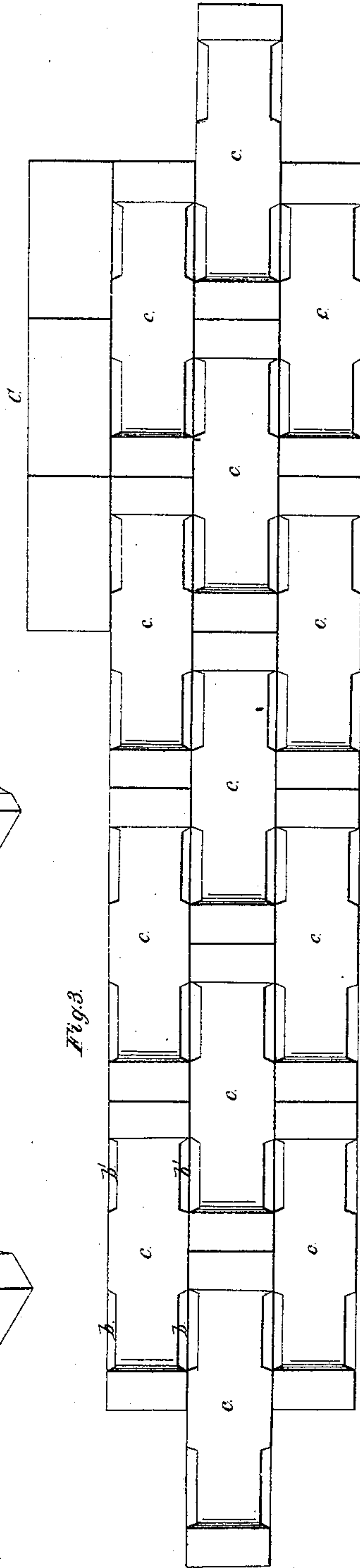
*Patented Jan. 8, 1856.*



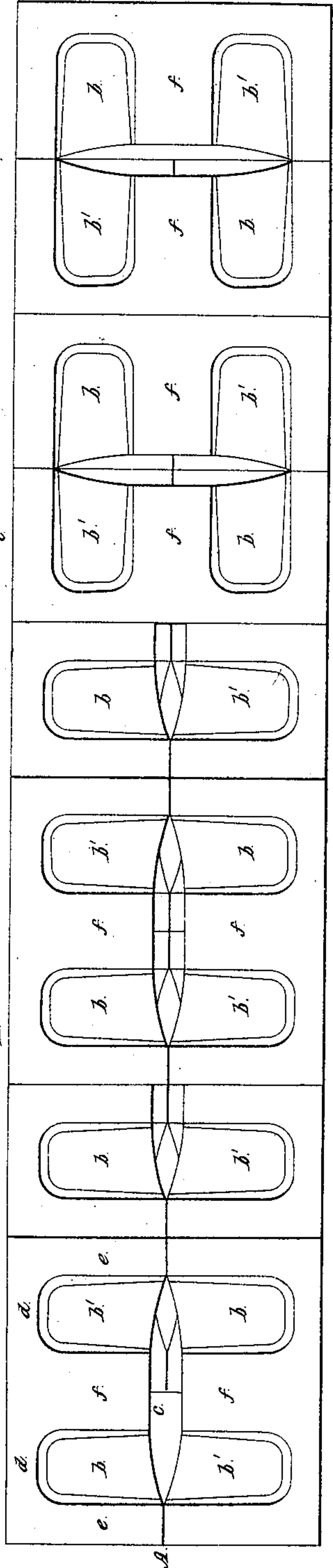
*Fig. 2.*



*Fig. 1.*



*Fig. 3.*



*Fig. 4.*



# UNITED STATES PATENT OFFICE.

EDGAR CONKLING, OF CINCINNATI, OHIO.

## FORM OF BUILDING-BRICKS.

Specification of Letters Patent No. 14,052, dated January 8, 1856.

*To all whom it may concern:*

5 Bt it known that I, EDGAR CONKLING, of Cincinnati, Hamilton county, Ohio, have invented a new and useful Form of Brick; and I do hereby declare the following to be a full, clear, and exact description thereof, reference being had to the annexed drawings, making part of this specification.

10 The nature of my invention consists, in a form of brick that affords improved facilities for grouting one or several courses of brick after laying; and enables the bricks to be laid either wholly without the use of a trowel, or with mortar courses so thinly spread, as to exclude the disintegrating ac-  
15 tion of the weather, and thus to attain greater strength and durability, and a neater and more lasting finish.

20 In the annexed drawings Figure 1 is a perspective view of one of my bricks viewed at its inner edge. Fig. 2 represents per- spective view of a fragment or portion of wall- ing on my plan of construction, some of the inner tiers being removed to expose  
25 more clearly the internal arrangement, espe- cially as regards facility for grouting. Fig. 3 represents an inner elevation of an outer tier. Fig. 4 is a top view of a portion of walling constructed with my bricks.

30 (a) represents a brick of customary ex- ternal dimensions, formed on my improved plan namely, with a pair of cavities or de- pressions (*b b'*) in each top and bottom surface; these depressions communicate with  
35 a cove or notch (*c*) left in the inner edge of the brick in the act of molding. The squared surface level of the brick, on the top and bottom respectively consists in each case, of a rib (*d e f*), skirting the front and  
40 each end and crossing the middle so as to present the figure of the letter E. The cen- tral rib (*f*) should be twice the width of either of the skirt ribs (*d e*); thus, where the latter in a usual sized brick wall are  
45 one inch wide, the former should be two inches wide. The depressions (*b b'*) may deepen toward the side rib if preferred, in order to serve the double purpose of facili- tating the flow of cement and enhancing its  
50 service as a bond.

55 A course of bricks being laid in double tiers as at A (Figs. 2 and 4) another and similar course B, is laid thereon so as to break the joints of the former course, that is so that the contiguous end ribs rest upon and occupy in each instance the mid rib

of the brick below. This arrangement brings the depressions of the adjacent bricks immediately over each other, so as by their united capacity to present a cavity double  
60 the depth of either singly.

By inspection of the drawings it will be perceived that the cavities thus formed have free communication with those above and below by means of the side covings (*C*).  
65

After several courses of bricks have been laid, properly prepared grouting is poured into the upper cavities, and from them de- scends through the vertical covings to those  
70 below.

The consistence of the grouting must be such as that while it will flow readily into the cavities, it shall not be able to escape through the closely fitting joints between the squared surfaces of the bricks.  
75

The natural tendency to absorption and consolidation of those portions of the grout- ing which come in contact with the brick will make this result easily attainable, while any intervals that may occur from slight  
80 irregularities of bearing surfaces will be- come filled up by the grouting, and thus a complete and uniform bearing be afforded throughout the joints of the structure.

It will be seen that the marginal and  
85 central ribs afford an aggregate bearing of solid masonry, nearly equal to two-thirds of the whole face of the brick, and present- ing a firm and reliable bearing, free from the settling which takes place with mortar  
90 courses. A heading course C, may be intro- duced as an additional bond at proper in- tervals. A modification of this form of brick may be employed, in which the cavities  
95 (*b b'*) are confined to the under side, the upper side being molded plain, so as to adapt it when laid to receive a slight bed of mortar, as a bed for the next course above, the bricks of which, bearing by their salient  
100 ridges only, are easily pressed down and squared to their true bearing, even in a very thin bed of mortar. The cavities *b b'* when existing only on the lower side are sunk to double the represented depth.

The plan heretofore proposed of bricks  
105 having holes running vertically through them, which being in the construction of the wall brought over each other afford con- tinuous vertical tubes into which the mortar being true acts feebly like dowel pins in  
110 holding the bricks together, is impracticable from the following causes: Mortar such as



commonly employed acts with efficiency only in a stratum or course applied between the bricks, with large areas of adhesion on opposite sides in proportion to the thickness of the stratum. If run down through the substance of the brick, the portion within the brick can be of no appreciable service as a bond; and the portion which crosses the seam would be liable to transverse rupture if the mortar or cement were of any kind in ordinary use by builders. Such perforations if of small caliber would clog with any grouting sufficiently stiff not to ooze out through the external joints, and if of large caliber, would subtract too much from the horizontal bearing and cohering surfaces of the bricks. By my plan, the whole of the grouting passages being between the bricks, their walls are formed by the very surfaces which are required to be cemented together, and the grouting being applied in as thin and widely spread layers as practicable and everywhere to large adhering areas of the contiguous bricks is presented in the most favorable manner for effectively cementing the parts of the wall together.

The marginal ridges are useful as afford-

ing a square bearing and serving to confine the cement, and the depressions (while they do not lessen the adhering surfaces) enable the grouting to penetrate easily into and fill the joints. I therefore disclaim forming bricks with holes running vertically through them such having been proposed in the English patent of Caleb Hitch—but

I claim as new and of my invention and desire to secure by Letters Patent:

I claim as new and of my invention the brick as described, having marginal ribs (*d e*) skirting three sides; and a central rib (*f*) across the middle of the bottom surface (or of the top and bottom surfaces thereof); said ribs inclosing cavities (*b b'*) adapted for the reception of grouting; in combination with coving on the inner edge, affording passage for the grouting from above, to the cavities (*b b'*) below the bricks; or devices substantially equivalent.

In testimony whereof, I hereunto set my hand before two subscribing witnesses.

EDGAR CONKLING.

Witnesses:

GEO. H. KNIGHT,  
J. B. BENNETT.