

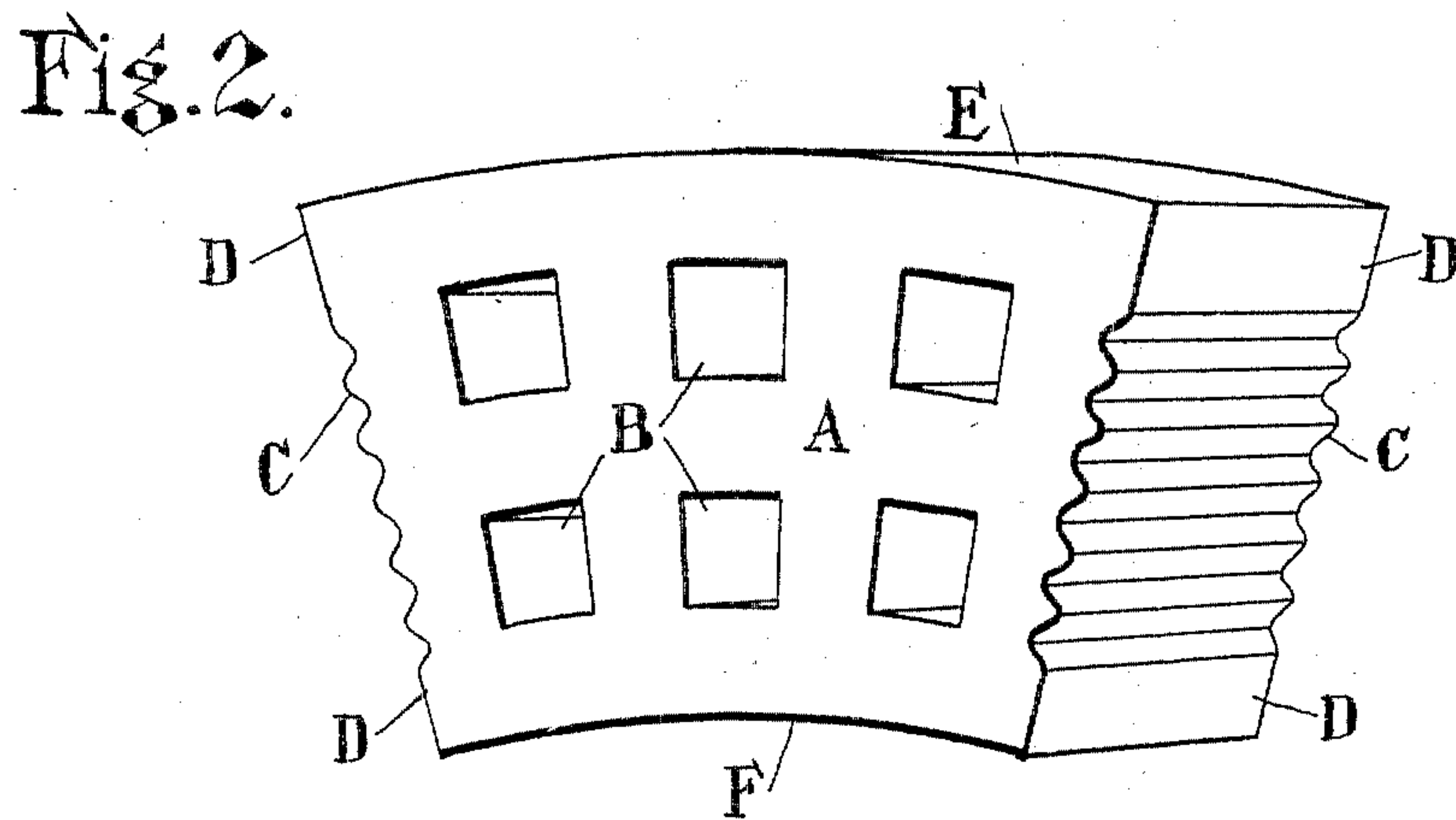
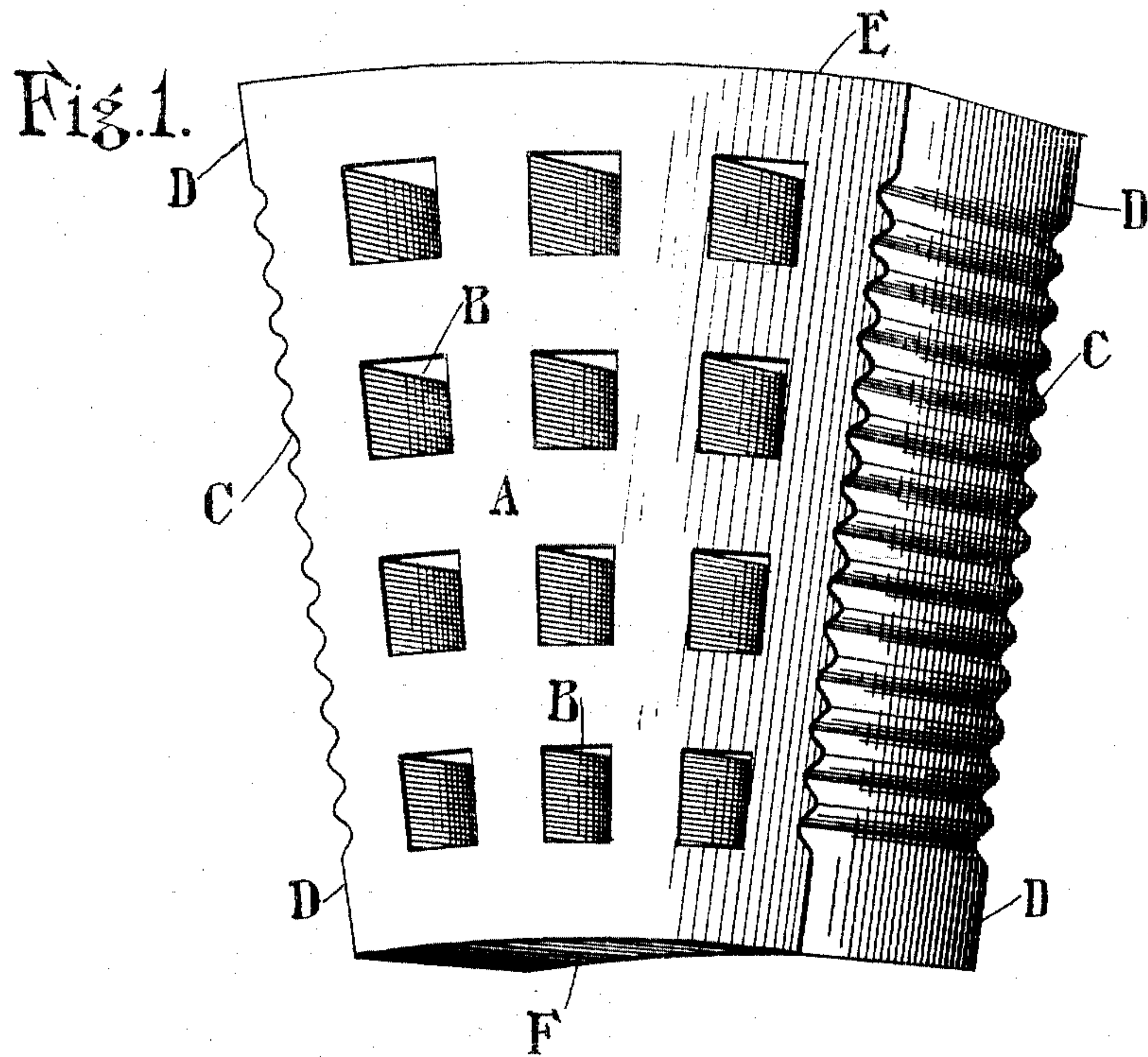
No. 776,127.

PATENTED NOV. 29, 1904.

D. D. ELDER, JR.
PERFORATED RADIAL BRICK.

APPLICATION FILED FEB. 26 1904.

NO MODEL.



WITNESSES:
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UNITED STATES PATENT OFFICE.

DAVID D. ELDER, JR., OF NEW YORK, N. Y., ASSIGNOR OF ONE-HALF TO MORRIS W. KELLOGG, OF ELIZABETH, NEW JERSEY, AND W. B. OSGOOD FIELD, OF NEW YORK, N. Y., COMPOSING THE FIRM OF M. W. KELLOGG & COMPANY, OF NEW YORK, N. Y.

PERFORATED RADIAL BRICK.

SPECIFICATION forming part of Letters Patent No. 776,127, dated November 29, 1904.

Application filed February 26, 1904. Serial No. 195,379. (No model.)

To all whom it may concern:

Be it known that I, DAVID D. ELDER, JR., a citizen of the United States, and a resident of the borough of Manhattan, city, county, and State of New York, have invented a new and useful Improvement in Perforated Radial Brick, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, in which—

Figure 1 illustrates a perspective view of a radial perforated brick used by me in the construction of factory-stacks and which embodies my invention. Fig. 2 illustrates the same view of another similar but smaller brick embodying the invention.

In the drawings hereof I illustrate and shall describe my invention as embodied in perforated segmental brick such as are used in the building of circular factory-stacks, because the advantages of the invention are peculiarly availed of in such structures.

Referring to the drawings, A represents the radial or tapered body of the brick or tile; B, the perforations therein, which, as shown, extend vertically through the brick as laid.

C C represent vertically-arranged corrugations which extend across the vertical sides of the brick.

D D are spaces left at the ends of the brick in the plane of the normal side thereof, so that when laid the brick present the same appearance as ordinary ones.

E and F are the curved sides of the brick, made of that shape because, as stated, the form of brick illustrated is the radial, tapered, or segmental form.

The operation of the invention is as follows: When the brick are laid, the cement or mortar is placed between the oppositely - presented vertical surfaces of adjoining brick in the usual manner. It is mixed in the usual proportions and consistency, and when dried it forms a peculiarly strong and reliable bond between the brick, not only because of the fact that the cement enters into the opposed irregularities in the surface of the brick, but also because there is much greater area of surface

presented for contact with the cement when the irregularities are present than in brick with plain flat surfaces. It will also be observed that by placing the irregularities or corrugations on the vertical sides of the brick they may be continuous, extending entirely across the brick from edge to edge, whereas if they were on the horizontal surfaces—that is to say, the top and bottom—then the perforations would break into and destroy the continuity of the corrugations, thus reducing the area of their surface to the extent of the size of the perforations. Moreover, placing the corrugations on the vertical sides of the brick is very easily effected during the manufacture thereof by simply producing small irregularities in the proper sides of the mold of the brick-making machine, whereas it would be practically impossible without great expense to corrugate the top and bottom sides.

The employment of my invention in conjunction with perforated brick or tile is especially advantageous because of the marked reduction in contraction and expansion of such brick as compared with non-perforated ones.

Although I have shown corrugations of the form illustrated at C, I wish it to be understood that I do not limit myself to corrugations. I prefer them because they can be very easily and inexpensively made in the manner stated; but any other form of small irregularity whereby the area of the surface with which the cement comes in contact is increased is within my invention.

I particularly call attention to the fact that my invention does not contemplate large interlocking or dovetailing parts on adjoining bricks whereby a tongue-and-groove effect is produced or in which keys of terra-cotta or brick or cement are used to bind the structure together. Such blocks or brick are expensive in the first instance, are necessarily usable in predetermined sizes only unless one or more of the brick be broken or chipped at the end of each course, and also have ordinarily to be laid up dry in the first instance,

the cement being applied in semifluid form and sometimes means resorted to to force it into the crevices and cracks of the structure. Such blocks or brick require special skill in
5 laying them up, and it is difficult to secure successful bonding between the brick and the cement. Under my invention the bricks are, in effect, so far as their laying up is concerned, no different from ordinary brick. There is
10 no interlocking, keying, or tongue-and-groove action, and they are adapted to use in structures of all sizes, as though my improvements were not present. The cement is applied to them in the usual and ordinary way, and their
15 cost is or need not be increased beyond that of brick or blocks which do not embody my invention.

The essential feature of my construction is the roughening of the vertical edges of the
20 brick with small irregularities in which the cement enters by itself during the usual proc-

ess of laying up the wall or structure, and the advantages secured are those resulting from the greater surface contact of the cement with the brick and the added strength due to the
25 roughened surface as compared with a smooth one. The appearance also of the structure made with my brick is the same as though ordinary brick were employed.

I claim—

A perforated brick having a plurality of
30 vertically - arranged small non - interlocking and keyless irregularities on its vertical sides except at the corners.

In testimony whereof I have signed my name, 35
to this specification in the presence of two subscribing witnesses.

DAVID D. ELDER, JR.

Witnesses:

SAMUEL INGBER,
F. M. DOUSBACH.