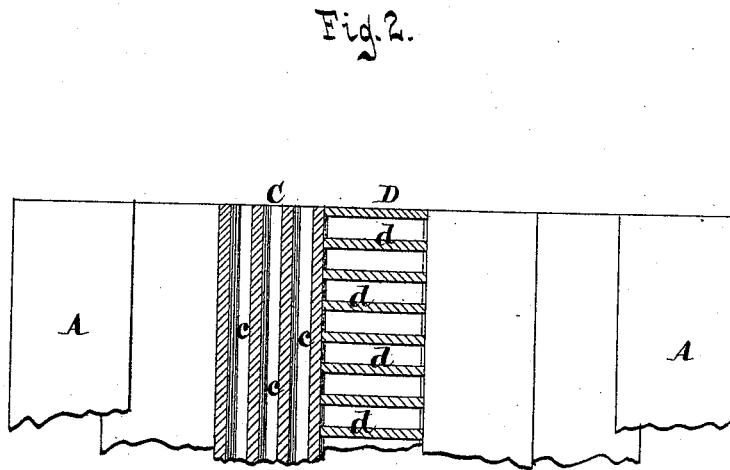
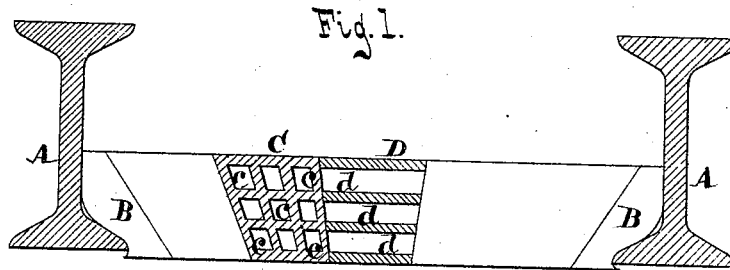


F. J. KENNEDY.  
HOLLOW TILE ARCHES.

No. 180.240.

Patented July 25, 1876.



Witnesses  
Otto Hufeland  
Chas. Wahlen.

Inventor.  
Francis J. Kennedy  
per  
Van Santwood & Hauff  
Attorneys

# UNITED STATES PATENT OFFICE.

FRANCIS J. KENNEDY, OF BROOKLYN, NEW YORK.

## IMPROVEMENT IN HOLLOW-TILE ARCHES.

Specification forming part of Letters Patent No. **180,240**, dated July 25, 1876; application filed January 11, 1876.

*To all whom it may concern:*

Be it known that I, FRANCIS J. KENNEDY, of Brooklyn, in the county of Kings and State of New York, have invented a new and useful Improvement in Hollow-Tile Arches, which improvement is fully set forth in the following specification, reference being had to the accompanying drawing, in which—

Figure 1 represents a transverse section. Fig. 2 is a sectional plan.

Similar letters indicate corresponding parts.

This invention relates to an arch composed of hollow tiles, the openings in a portion of which run transversely, and in another portion parallel, to the beams, so that in the joints between adjoining blocks one of the blocks presents a full face for the mortar to be spread upon, and thereby waste of mortar is avoided, and an arch is obtained which is not encumbered with unnecessary weight.

In the drawings, the letters A A designate the beams which form the abutments for my hollow-tile arch. These beams may be made of metal, or of any other suitable material. Next to said beams are placed the skew-backs B, and between these skew-backs are set the hollow tiles C D. These tiles are so constructed that the hollow spaces *c* in the tiles C run parallel to the beams A, while the hollow spaces *d* in the beams D run transversely to said beams. By this arrangement one of the adjoining faces in each joint presents an unbroken surface, on which the mortar can be spread; and when the two faces are brought together a joint is produced, while all waste of mortar is prevented.

If the tiles are so constructed that their hollow spaces all run in one and the same direction, the open ends of one row of tiles face the open ends of the adjoining row, and in making the joints the mortar has to be spread upon

the broken surfaces of the tiles. In doing this, a large quantity of mortar drops into the hollow spaces of the tiles; and such mortar is not only wasted, but it also unnecessarily increases the weight of the arch, when the same is finished.

These disadvantages are avoided in my arch. No mortar is wasted, and the arch is not encumbered by unnecessary weight.

In carrying out my invention, I prefer to arrange the hollow tiles so that their open spaces alternately run parallel with, and transversely to, the beams, and by these means one of the surfaces in each joint will present an unbroken surface for the mortar.

The tiles may, however, be so placed that only in a portion of the joints the above object is attained. Of course, an arch of this last-named description will only have the partial benefit of my invention.

By referring to Fig. 1 of the drawing it will be seen that the skew-backs B drop below the lower faces of the beams, and overlap the same, so that when two skew-backs are placed one on each side of the beam a dovetail is formed, into which the plaster or mortar sets, and thereby such plaster or mortar is firmly retained upon the face of the beam.

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

An arch composed of hollow tiles, the openings in a portion of which run transversely, and in another portion parallel, to the beams, substantially as shown and described.

In testimony that I claim the foregoing I have hereunto set my hand and seal this 4th day of January, 1876.

F. J. KENNEDY. [L. S.]

Witnesses:

W. HAUFF,  
CHAS. WAHLERS.