

(No Model.)

2 Sheets—Sheet 1.

J. E. DONALDSON.  
DIE FOR ROOFING TILES.

No. 472,189.

Patented Apr. 5, 1892.

FIG. 1.

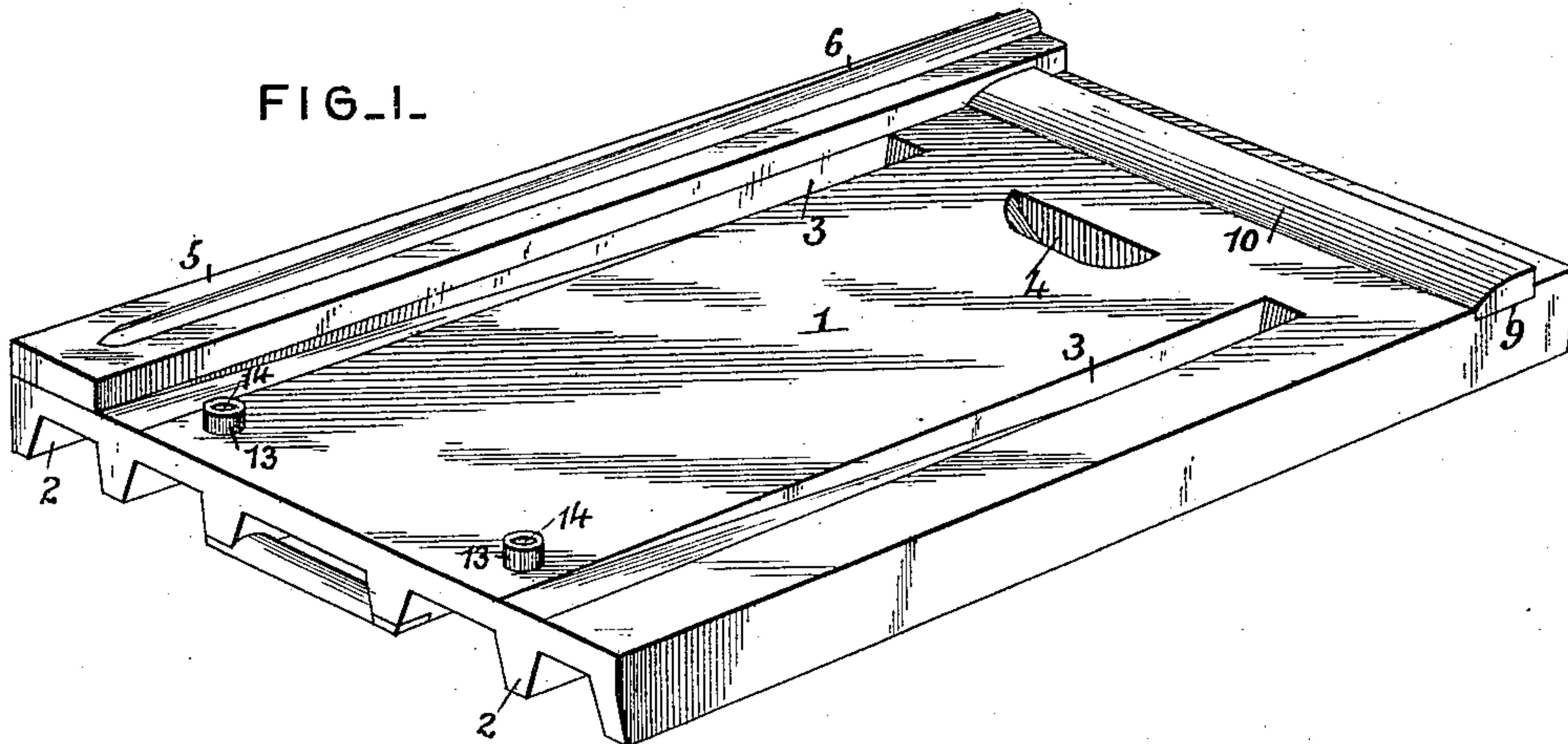


FIG. 2.

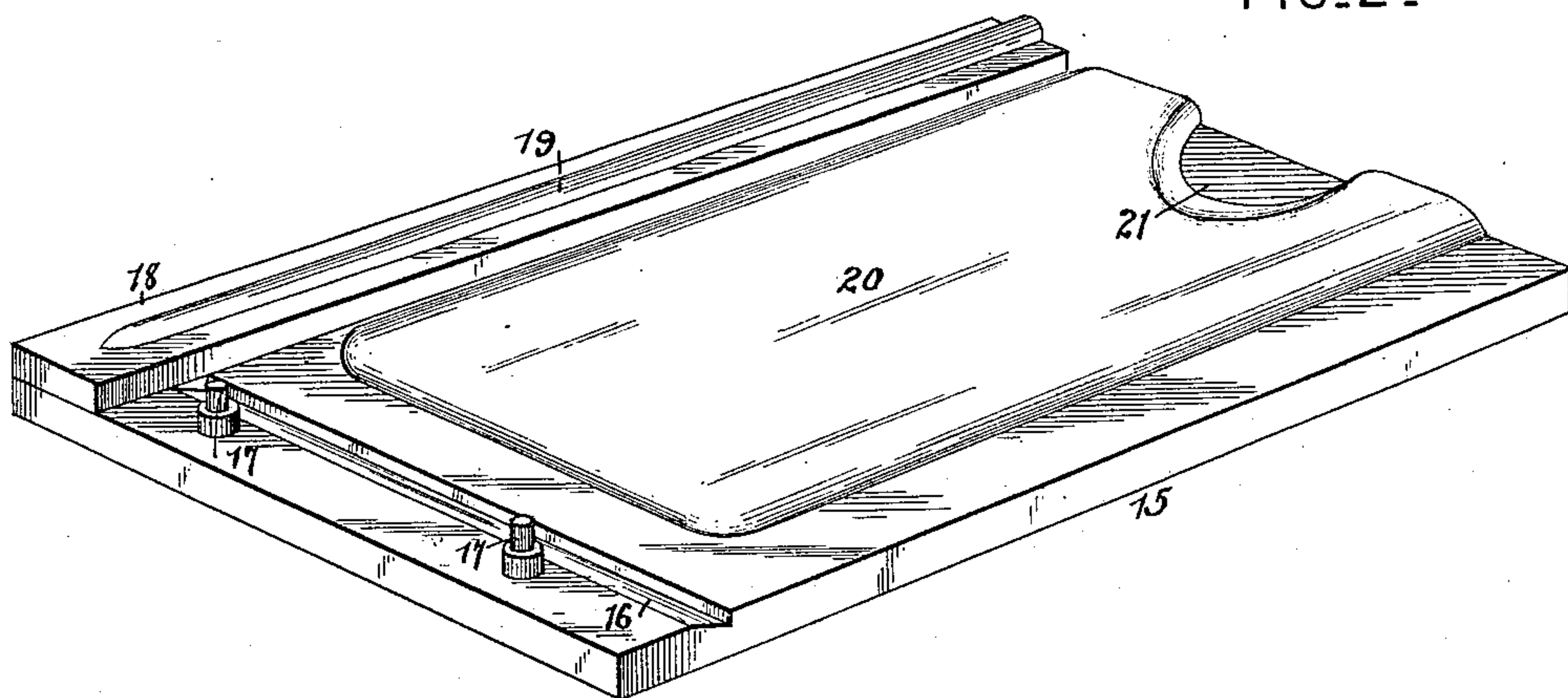
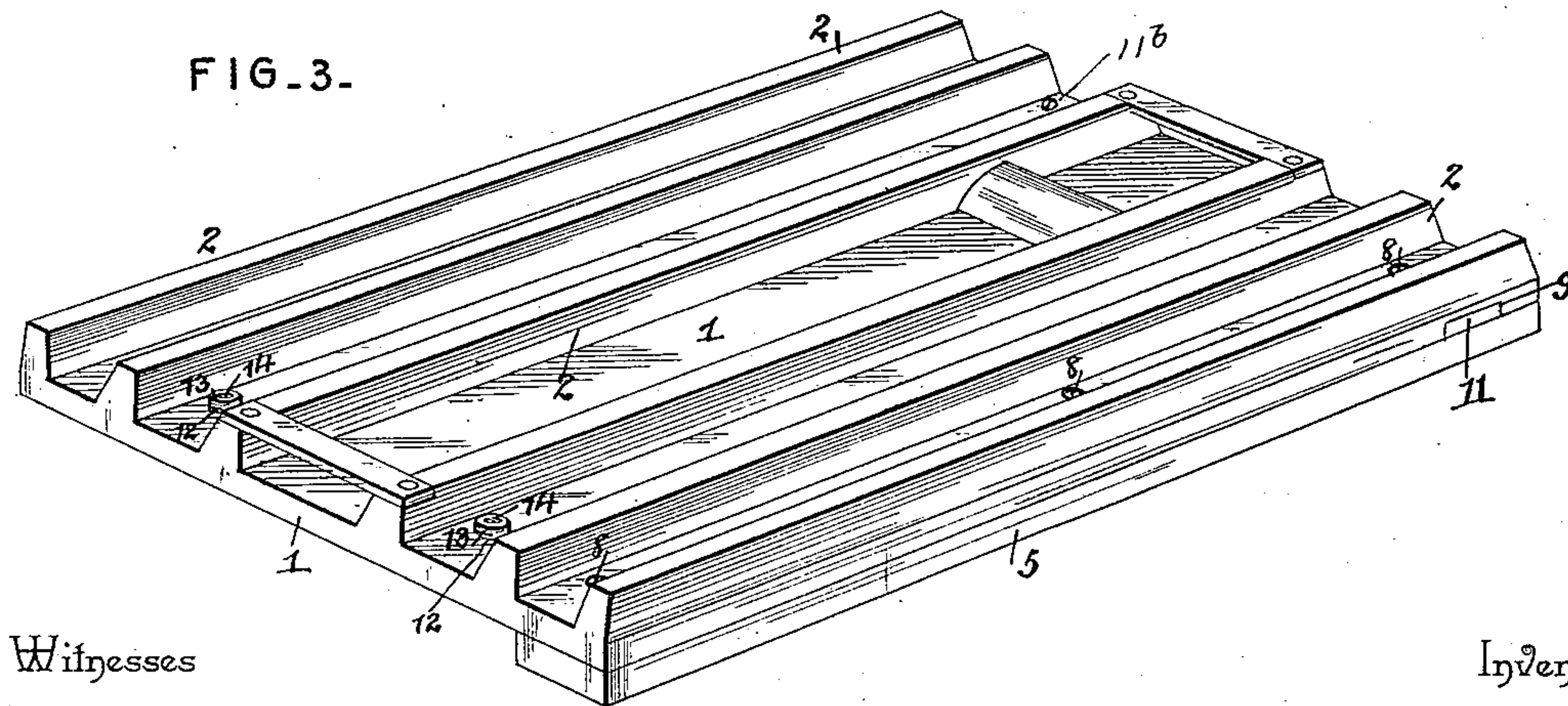


FIG. 3.



Witnesses

Jas. H. McLathran

Wm. P. Baggett

By his Attorneys,

Inventor  
John E. Donaldson

C. A. Snow & Co.



(No Model.)

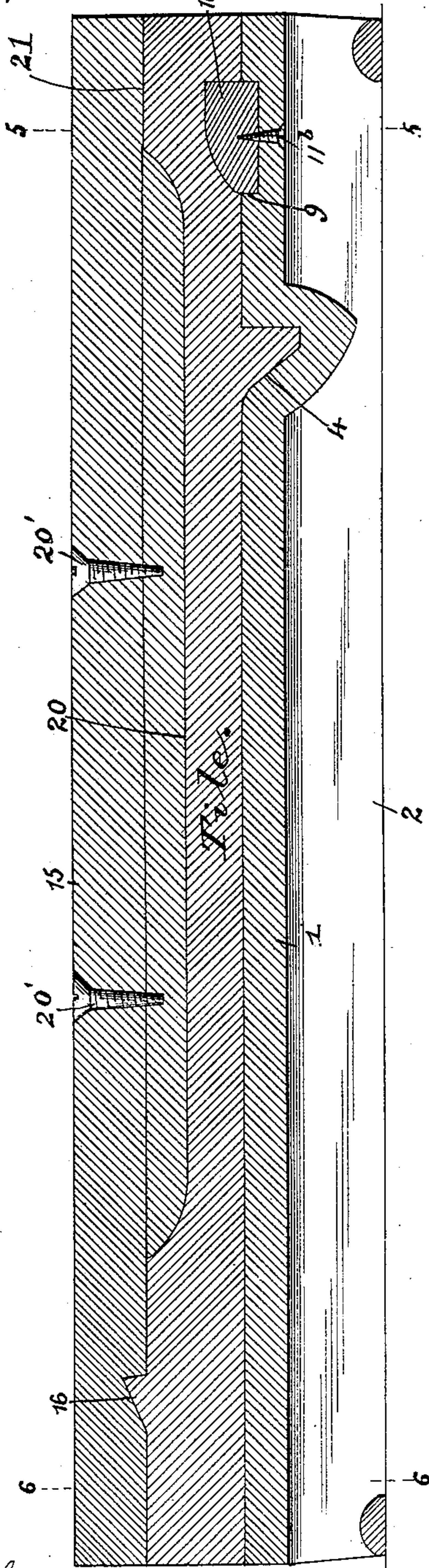
2 Sheets—Sheet 2.

J. E. DONALDSON.  
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FIG-4-



Witnesses

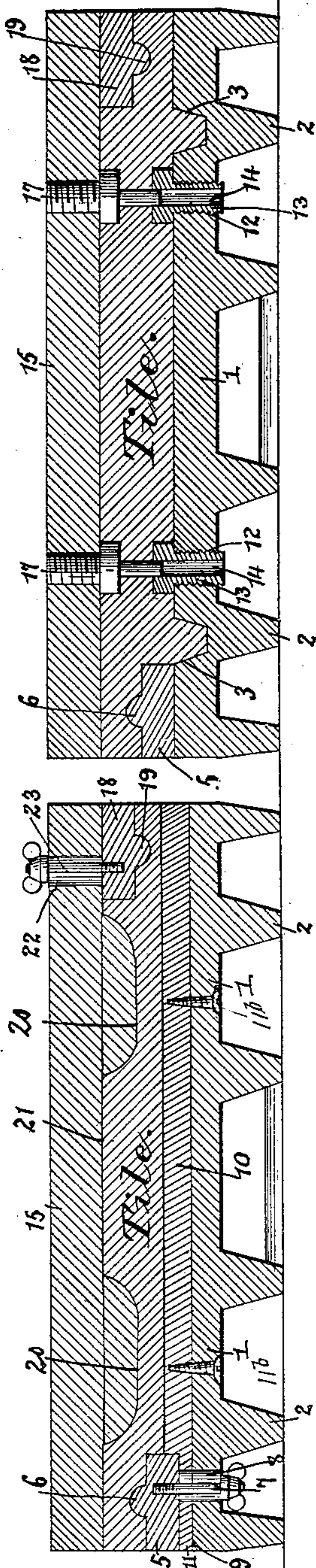
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Wm. Baggett

By his Attorneys,

Chas. Snow & Co.

FIG-5-



Inventor

John E. Donaldson



# UNITED STATES PATENT OFFICE.

JOHN E. DONALDSON, OF MONTEZUMA, INDIANA.

## DIE FOR ROOFING-TILES.

SPECIFICATION forming part of Letters Patent No. 472,189, dated April 5, 1892.

Application filed February 11, 1891. Serial No. 381,050. (No model.)

*To all whom it may concern:*

Be it known that I, JOHN E. DONALDSON, a citizen of the United States, residing at Montezuma, in the county of Parke and State of Indiana, have invented a new and useful Die for Roofing-Tiles, of which the following is a specification.

This invention relates to molds or dies for forming roofing-tiles of a construction approximately shown in Letters Patent of the United States No. 426,584, dated April 29, 1890, and No. 432,122, patented July 15, 1890.

My invention has for its object to construct a mold or die which shall be simple and inexpensive in its construction and in which the parts that are most exposed to wear may be readily detached for the substitution of new ones.

The invention consists in the improved construction, arrangement, and combination of parts, which will be hereinafter fully described, and particularly pointed out in the claims.

In the drawings hereto annexed, Figure 1 is a perspective view of the base or bottom part of the mold, showing the upper side of the same. Fig. 2 is a perspective view of the upper part of the mold, showing the same in an inverted position. Fig. 3 is a perspective view of the base or bottom part of the mold, showing the same in an inverted position. Fig. 4 is a longitudinal sectional view showing the base and the top part of the mold in operative position. Fig. 5 is a transverse sectional view taken on the line 5 5 in Fig. 4. Fig. 6 is a transverse sectional view taken on the line 6 6 in Fig. 4.

Like numerals of reference indicate like parts in all the figures.

The base of my improved mold or die, which is designated by 1, is provided on its under side with longitudinal ribs or supporting-flanges 2 2, which are formed integrally with the said plate 1 and which are principally for the purpose of supporting the latter. The upper side or face of the plate 1 is provided with longitudinal inclined grooves 3 3 and with a recess 4, adapted to form the corresponding projections upon the tile that is to be constructed. At one side of the base-plate 1 is a flange 5, having a longitudinal rib or bead 6. Said flange is constructed separable from the base-plate and is secured detachably

to the latter by means of screws or bolts 7, inserted from the under side of the base-plate, which latter is provided with transverse slots 8 for the passage of said bolts. By this construction the flange 5 may be adjusted laterally, so as to compensate for wear. The base-plate 1 is provided near its upper end with a transverse groove 9, in which is seated a flange 10, one end of which has a lug 11, extending under the flange 5. The flange 10 is secured by means of bolts or screws 11<sup>b</sup>, inserted from the under side of the plate 1. The said plate 1 is also provided near its lower edge with screw-threaded perforations 12, in which are seated the bushings 13, having vertical perforations 14, for the purpose to be hereinafter described.

The upper die-plate 15 is provided on its under side with a transverse beveled groove 16, below which are mounted, near its lower end, detachable punches 17, adapted to engage the perforated bushings 13 of the base-plate for the purpose of forming the perforations in the tile, through which nails or other fastenings may be inserted. At one edge of the die-plate 15 is mounted a detachable flange 18, having a rib or bead 19, and a flat plate or disk 20, having a recess 21 at its upper edge, is likewise mounted upon the under side of the die-plate 15 and preferably detachable by means of screws 20'. The flange 18 is made transversely adjustable by forming slots 22 in the die-plate 15 for the passage of the fastening screws or bolts 23.

Heretofore molds or dies of the class herein described have been manufactured in a single piece. The first cost of such molds or dies has necessarily been high, owing to the difficulty encountered in planing and smoothing them down to the desired shape, which is caused by the numerous angles and projections of irregular shape. By my improvement the die-plates are originally provided with flat faces, in which the grooves and recesses 3, 4, and 16, as well as the transverse groove 9 for the reception of the flange 10, may easily be made, while the perforations for the reception of the punches and bushings may also be easily and quickly formed. The several projecting flanges 5, 10, and 18, as well as the disk 20, may with comparative ease be made separate from the base-plates



and may be very easily attached to the latter in the desired manner and position. The flanges 5 and 18, which are the parts principally subjected to wear, are capable of being  
5 adjusted laterally, as described, to compensate for such wear, thus insuring uniformity in the size of the tiles. Said flanges, as well as the remaining projecting parts, may also  
10 be easily removed and new ones substituted, when necessary, and this function permits punches and bushings of different sizes to be substituted when it is desired to form larger or smaller holes in the tiles.

Having thus described my invention, I  
15 claim—

1. The combination of the base-plate 1, having transverse groove 9, with the flange 10, seated removably in said groove and having the lug 11, and the laterally adjustable and  
20 detachable flange 5, extending over the said

lug and standing on the face of the base-plate, substantially as set forth.

2. In a device of the class described, the combination of the upper and lower die-plates having threaded perforations, smooth perforated bushings detachably engaging the perforations of said lower die-plate, and punches having threaded shanks removably engaging the perforations of the upper die-plate and adapted to pass through the tile and into the  
25 smooth bore of said bushings, substantially as set forth. 30

In testimony that I claim the foregoing as my own I have hereto affixed my signature in presence of two witnesses.

JOHN E. DONALDSON.

Witnesses:

GEORGE KEMP,  
HORACE GRIFFITH.