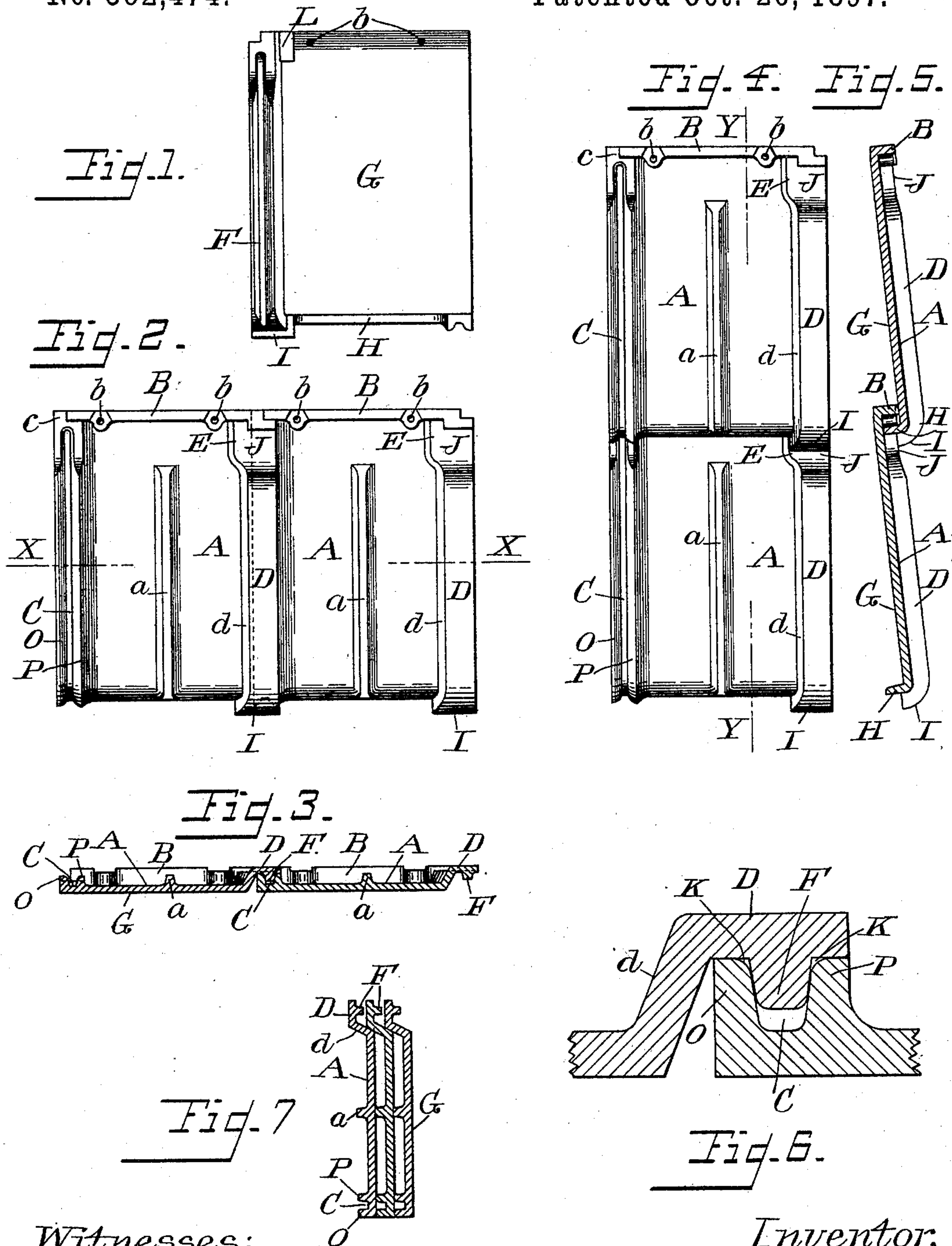


(No Model.)

J. J. MERRILL.
TILE.

No. 592,474.

Patented Oct. 26, 1897.



Witnesses:
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UNITED STATES PATENT OFFICE.

JOHN J. MERRILL, OF ALFRED, NEW YORK.

TILE.

SPECIFICATION forming part of Letters Patent No. 592,474, dated October 26, 1897.

Application filed July 13, 1897. Serial No. 644,381. (No model.)

To all whom it may concern:

Be it known that I, JOHN J. MERRILL, a citizen of the United States, residing at Alfred, in the county of Allegany, State of New York, have invented a new and useful Improvement in Tiles, of which the following is a specification.

My invention relates to the construction of tiles for roofing; and the objects of my invention are, first, to produce roofing-tile with watersheds, conducts, and air-spaces, and so constructed that the lock-joints will be covered, and, second, to produce roofing-tile so constructed that they may be arranged in series for burning or transportation, so as to occupy the least possible space and present the greatest possible resistance to prevent breakage and to sustain the weight of additional series of tile upon them. I attain these objects by means of the construction illustrated in the accompanying drawings, in which—

Figure 1 represents a back view of one of my tiles. Fig. 2 represents a top plan view of a pair of tiles jointly connected at their sides and indicates the method of laying the first course. Fig. 3 is a section of Fig. 2 at X X. Fig. 4 represents a top plan view of the tiles as connected at their ends and indicates the method of laying the upper course. Fig. 5 is a section of Fig. 4 at Y Y. Fig. 6 is an enlarged detailed view showing the form of the joint by which the tiles are connected at their sides, and Fig. 7 is a sectional view of the tiles as set for burning or transportation.

Similar letters refer to similar parts throughout the several views.

My present invention is an improvement on the tiles shown and described in Letters Patent No. 557,137, issued to me March 31, 1896.

A represents the plain top face of my tile.

B represents the raised upper end, which is provided with the holes *b* for the purpose of securing the tiles to the roof, as by nails or screws.

C represents a groove or water-course at the side of the tile, and *c* represents the upper end of said water-course, which is closed to prevent the water from backing up, as was possible in the tile in the above-mentioned patent.

D represents one side of the tile raised so as to overlap and cover the water-course C of the adjoining tile, as shown in Figs. 2 and 3. This raised portion or cover D has the side *d* adjacent to the body of the tile formed at an obtuse angle with the face surface A, so that when arranged in tiers for burning or transportation the tile will set closely to each other, as shown in Fig. 7, and so take up the least possible space and at the same time present the greatest strength for placing other series of tile over them and in burning reduce to a minimum the warping and consequent loss of a large percentage of those set in the ordinary way. The upper end of the raised portion D is slightly compressed at J and broadened, so as to have a projecting shoulder E. This upper portion is somewhat thinner than the balance of the tile for the purpose of allowing the lower end of the next tile above when locked upon it to not be raised sufficiently to retard water running freely to the tile below.

L is a depression on the back of the tile to receive the projection or shoulder E when the tile are stood up together for burning or transportation.

a is a rib or raised portion in the center of the tile for strengthening the tile and for convenience in handling.

G is the plain flat surface of the bottom of the tile.

F is a rib which is on the under side of the raised portion D and fits into the water-course C of the adjoining tile when laid together in series.

H is a projection downward reaching nearly the width of the tile and locks over the top B of the next lower tile, as shown in Figs. 4 and 5.

O and P are ribs forming the groove or water-course C, and except the upper ends, which are depressed as and for the purposes above stated, are each equal to *a* in height, which is equal to the vertical distance between the upper surface of A and the under surface of D, thus forming when set in series a complete support for burning without the use of cones or other artificial settings.

When my tile are laid side by side in the lower series upon the roof, the raised portion D laps over and locks upon the adjoining side

of the adjacent tile, so that the rib F fits into the water-course C, and in laying the course next above, the lower edge of each tile laps over and locks upon the tile next below, so that the lower projecting ends H of the body of the tile and lower end I of the raised portion D and the lower curved ends of the ribs O and P lap over the raised end B of the adjacent tile below, forming a perfect joint, and the broadened or extended portion E of the raised portion D makes a complete lock to prevent the water from backing up or ice forming under and raising any exposed lower portion of the raised side D, and the raised portions of the upper end of the tile where the lower tile fits over being somewhat thinner where the next tile above fits on leaves an unobstructed and free conduct for the water to pass off.

The rib F is not of sufficient height to extend to the bottom of the water-course C, and so leaves a free space for water to pass through the water-course C. The angles of the ridges O and P at the upper inside corners are rounded, while the angles forming the ridge F are sharp angles, so as to leave air-spaces K K, as shown in Fig. 6, for the purpose of preventing water from passing over the edge of the tile by capillary attraction upon the roof-boards.

When constructed in this way, my tile is an improvement over the tile shown in my Patent No. 557,137 in that the water cannot back up through the water-course along over the sides of the tile, and also the angle d of the raised side D is such that the tiles can be placed together in series or tiers for drying, burning, or transportation, so as to occupy much less space and present much greater strength; also, tile constructed as herein described can be stood up in series, as shown in Fig. 7, for burning or transportation, and each tile furnishes a support and helps strengthen the other tile in the series, and the raised portion D of each tile coming di-

rectly over the body of the next adjoining tile presents sufficient strength to enable additional series to be placed upon the top of the first series without artificial settings, resulting in great economy both in burning and transportation.

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

1. The herein-described article of manufacture consisting of a tile provided along one edge with raised ribs O and P forming a groove or way C, and along the other edge a groove-cover D having depending from its under surface a rib F of less height than the groove C, said rib F being constructed so as to be contained within said groove when tiles are laid side by side, the sides of the rib F forming sharp angles, while the inside upper corners of the ribs O and P are rounded, producing the air-spaces K K, the ribs O and P being depressed at their upper ends and curved downward at their lower ends, forming a free vent when the depressed portion of one tile receives the downward-bent portion of the adjacent tile, substantially as described and for the purpose set forth.

2. The herein-described article of manufacture, consisting of a tile having ribs O and P which form a groove of equal height with a central rib a , and also equal to the vertical distance between the under surface of the raised groove-cover D and the upper surface of the tile A, the groove-cover D being joined to the body A at an obtuse angle, so that when the tiles are set in series upon their sides, the cover D will be supported by the body A, whereby inherent settings are furnished and the tiles cannot warp or be moved from their setting—except in order and from the top, substantially as described and for the purpose set forth.

JOHN J. MERRILL.

Witnesses:

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