(No Model.)

W. LUDOWICI.

ROOFING TILE.

No. 283,126. Patented Aug. 14, 1883.

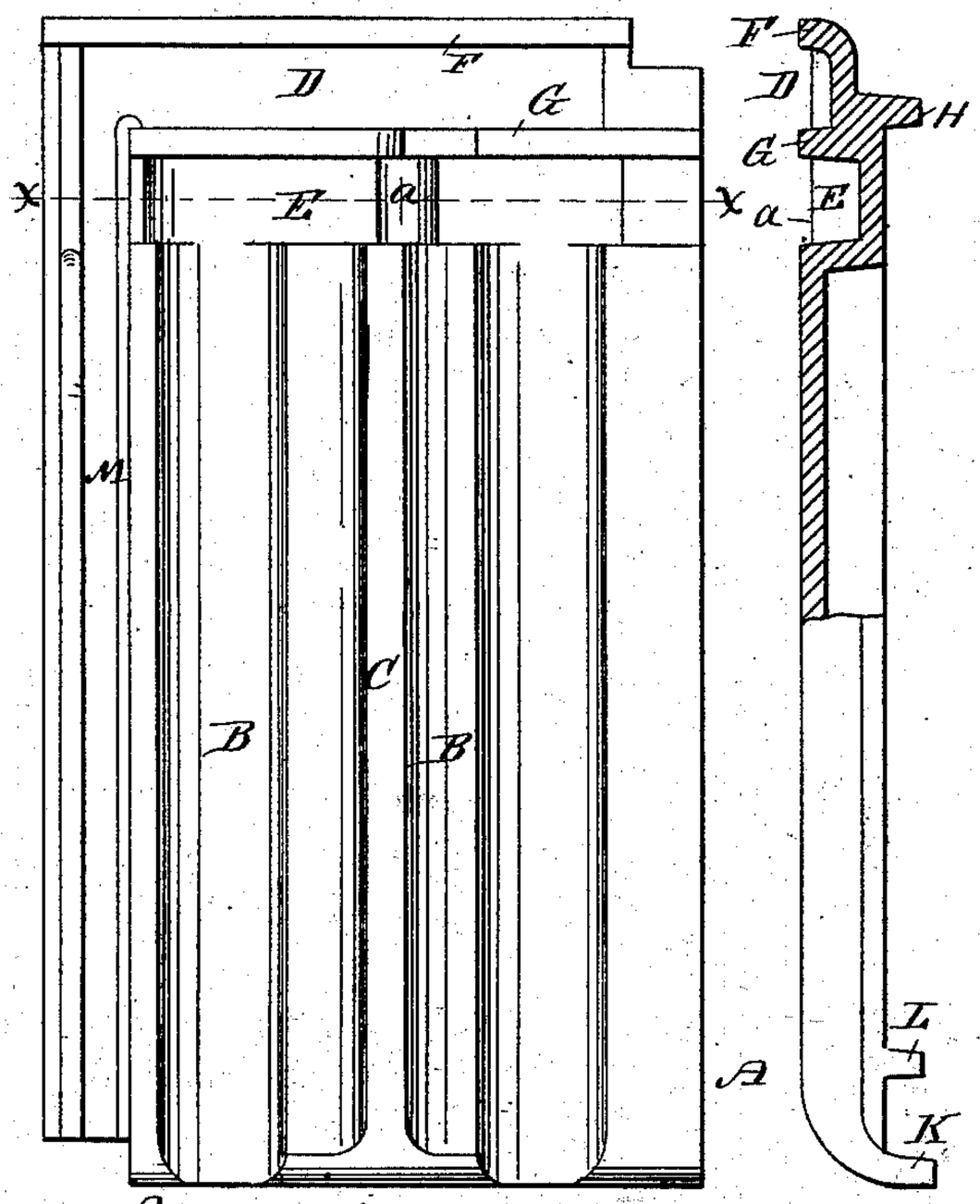

Fig. 1.

Fig. 2.

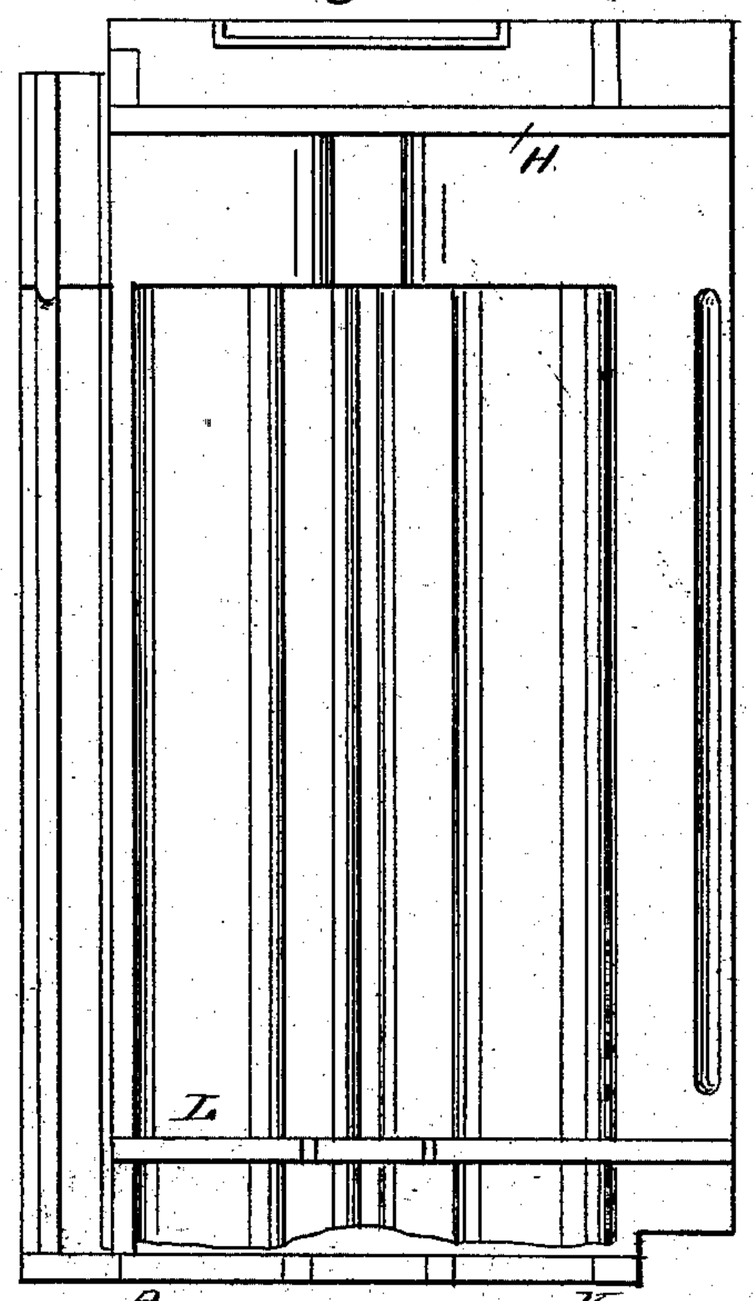

Fig. 3.

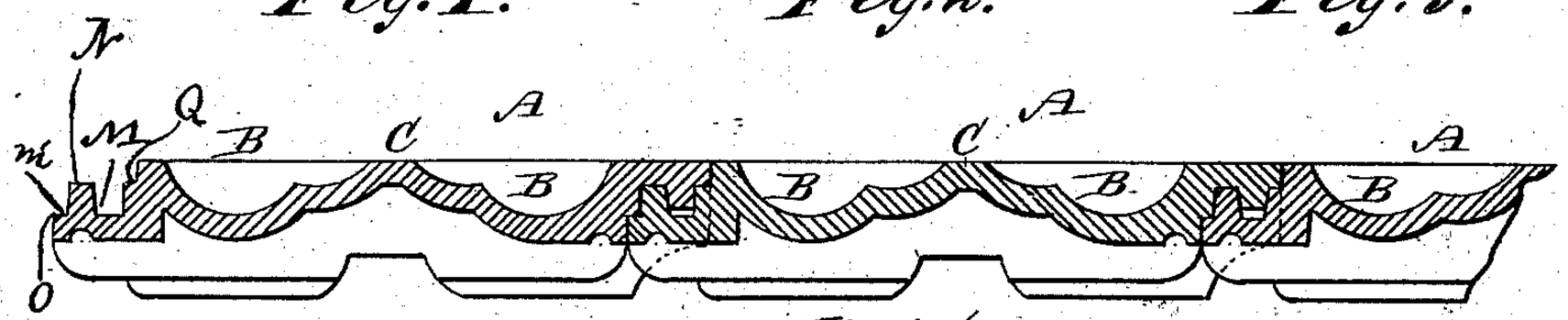

Fig. 4.

Fig. 7.

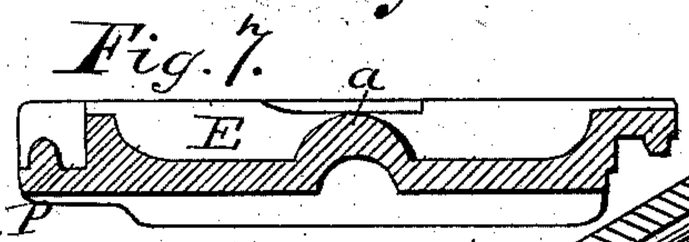

Fig. 6.

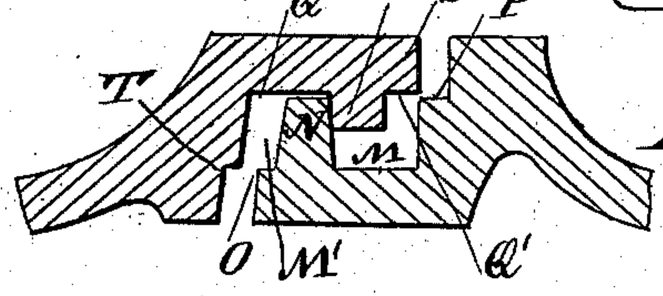

Fig. 5.

Fig. 8.

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WILHELM LUDOWICI, OF LUDWIGSHAFEN-ON-THE-RHINE, GERMANY.

ROOFING-TILE.

SPECIFICATION forming part of Letters Patent No. 283,126, dated August 14, 1883.

Application filed December 11, 1882. (No model.) Patented in Germany May 7, 1881, No. 16,757, and September 4, 1881, No. 17,940.

To all whom it may concern:

Be it known that I, WILHELM LUDOWICI, of Ludwigshafen-on-the-Rhine, Germany, have invented new and Improved Roofing-Tiles, of which the following is a full, clear, and exact description.

The object of my invention is to provide new and improved roofing-tiles, which form very close joints, conduct off all water, and cannot be raised by wind, prevent the wind from driving the rain through the joints, are very light and durable, and can be attached to the roof very easily.

The invention consists in details of construction, as will be fully described hereinafter.

Reference is to be had to the accompanying drawings, forming part of this specification, in which similar letters of reference indicate corresponding parts in all the figures.

Figure 1 is a face view of one of my improved roofing-tiles. Fig. 2 is a longitudinal elevation of the same, parts being shown in section. Fig. 3 is a plan view of the under side of the same. Fig. 4 is a cross-sectional elevation of a series of the same. Fig. 5 is a detail longitudinal sectional elevation of the same, showing the end joint. Fig. 6 is a detail cross-sectional elevation of the same, showing the side joint. Fig. 7 is a transverse section through line *x x* of Fig. 1. Fig. 8 is a view in elevation of the bottom end of tile.

The tile A is provided in its upper surface with two longitudinal grooves, B, which may be segmental in cross-section, or may be formed of two segments, as shown, which grooves are separated by a longitudinal central ridge, C, which does not project above the level of the upper surface of the tile. The two parallel grooves B are curved toward the middle rib, C, so as to cause the snow and water to slide off very rapidly, the snow finding no projecting corners against which it can rest.

At its upper end the tile is provided in its upper surface with a transverse groove, D, and adjoining the same with an additional groove, E, provided with a short central ridge, *a*, parallel with the longitudinal axis of the tile. The grooves D E form a transverse end ridge, F, and a transverse ridge, G, between the two grooves D E.

On the under side of the tile a transverse ridge, H, is formed a short distance from the upper end, which ridge rests against the upper longitudinal edge of the roof-slat J, for the purpose of holding the tile on the roof. The grooves B extend from the lower end of the tile to the lower edge of the groove E at the upper end of the tile. The ridges F and G do not project above the level of the upper surface of the tile.

At the lower end the tile is provided in its under surface with a transverse ridge, K, and with a ridge, L, parallel with and a short distance from the ridge K. The upper surface of the tile is rounded off toward the ridge K at the lower end of the tile. The right and left hand ends of the ridge K are rounded to fit against the ridge *a*, for the tiles are arranged with broken joints, the joints of one row of tiles parallel with the peak of the roof coming over the centers of the upper ends of the next lower row. The ridge K of one tile passes into the transverse groove E of the next lower tile and the ridge L passes into the groove D of the said next lower tile, as shown in Fig. 5.

In its upper surface the tile is provided along its edge with the groove M and rabbet M′, forming a ridge, N, a short distance from the said edge, and a lip, O, in the said edge. A rabbet, P, is formed in the inner edge or side of the groove M. In its under surface the tile is provided along the opposite longitudinal edge with a groove, Q, and a rabbet, Q′, forming a ridge, R, a short distance from the edge, and a lip, S, in the said edge. The inner edge or side of the groove Q is provided with a rabbet, T. At the longitudinal edges the tiles overlap each other, as shown in Fig. 6, the ridge R passing into the groove M and the ridge N into the groove Q, and the lip S overlapping the rabbet P and the lip O the rabbet T. The water that passes into the transverse or longitudinal joint-grooves can all flow off, and as all joints are double the wind cannot blow the water through the joints. The longitudinal grooves B B form a series of gutters from the ridge to the eaves of the roof. The side joint grooves are arranged to give the tiles the required play. As the surface of the tiles are curved, the tiles can be made very thin and light, and will yet be very durable.

Having thus fully described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. A roofing-tile having the channel E, with a half-round rib, *a*, and a correspondingly corner-recessed head, K, as shown, whereby the tile may rest with its entire width on the roof and be securely held against storms or wind.

2. A roofing-tile provided with the grooves M and Q, rabbet M′ and Q′, and the ridges N and R at the longitudinal edges, substantially as herein shown and described, and for the purpose set forth.

3. A roofing-tile provided with the grooves M and Q, the ridges N and R, the rabbets T, Q′, M′, and P at the longitudinal edges, substantially as herein shown and described, and for the purpose set forth.

WILHELM LUDOWICI.

Witnesses:
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