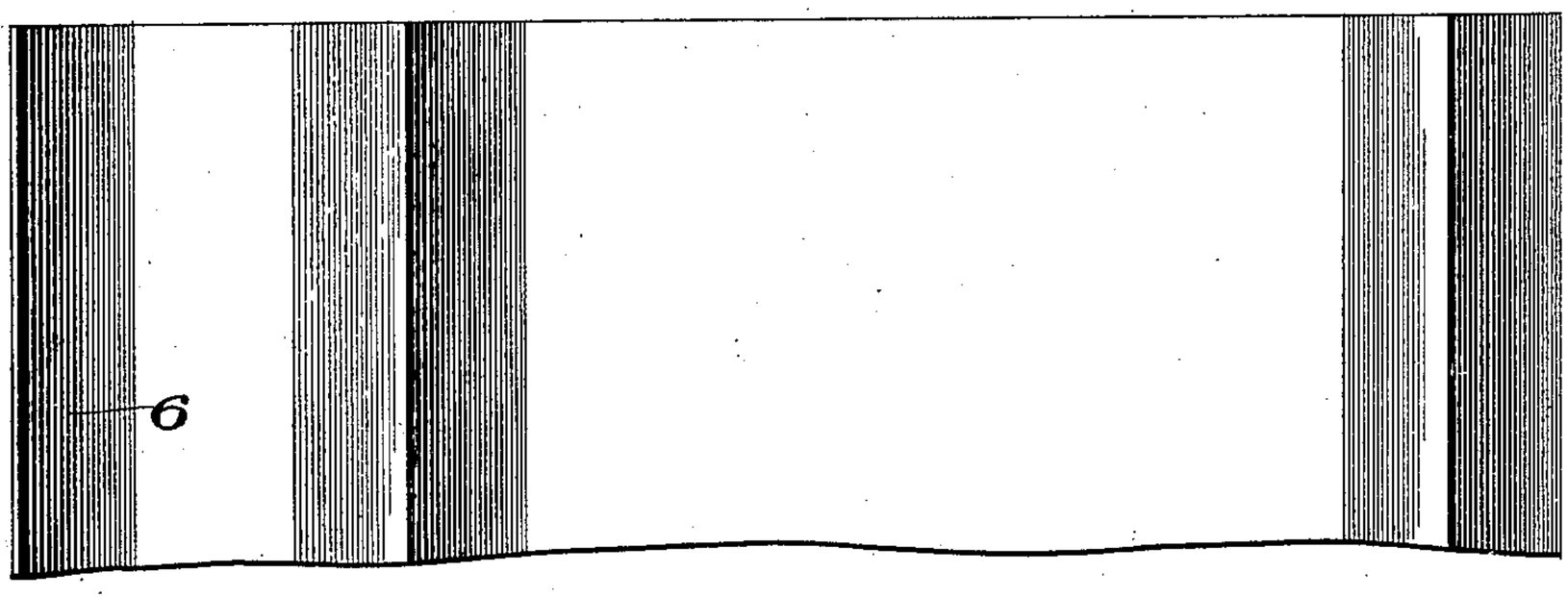
No. 844,983. PATENTED FEB. 19, 1907.

D. J. WINN.

SHEET METAL ROOFING.

APPLICATION FILED OCT. 25, 1906.

Fig. 1



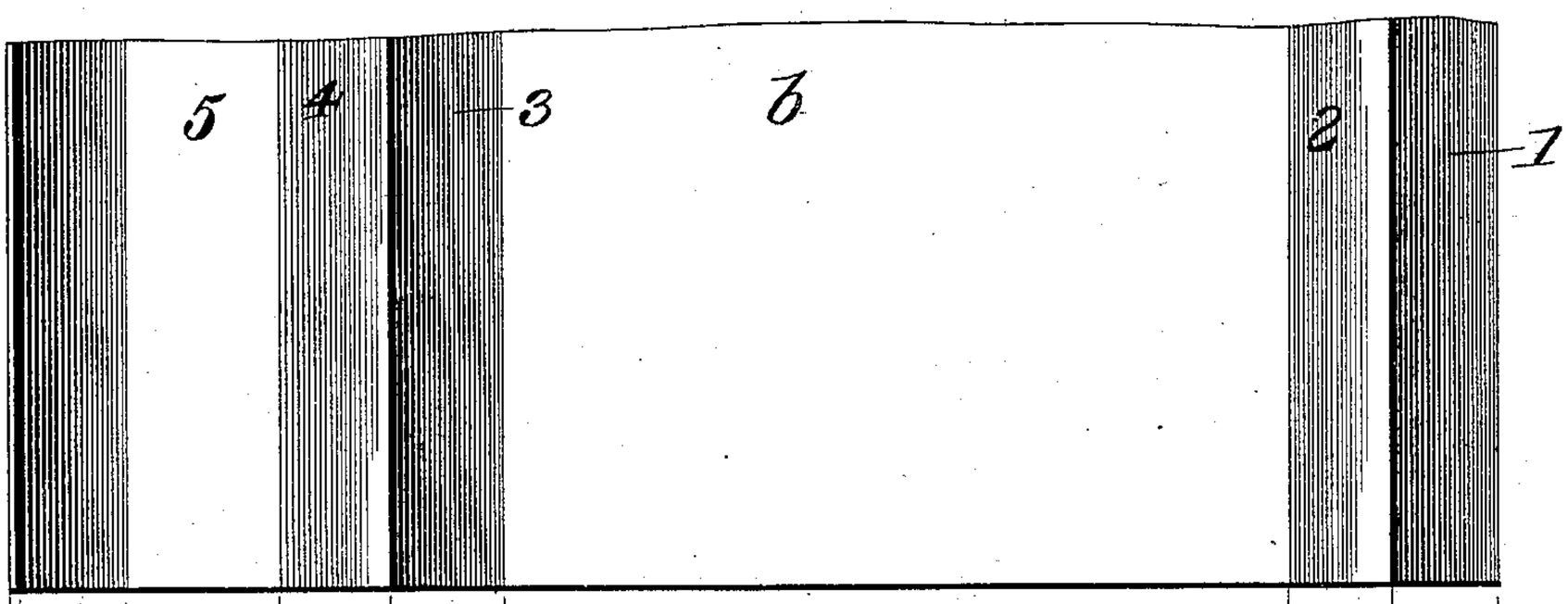


Fig. 2

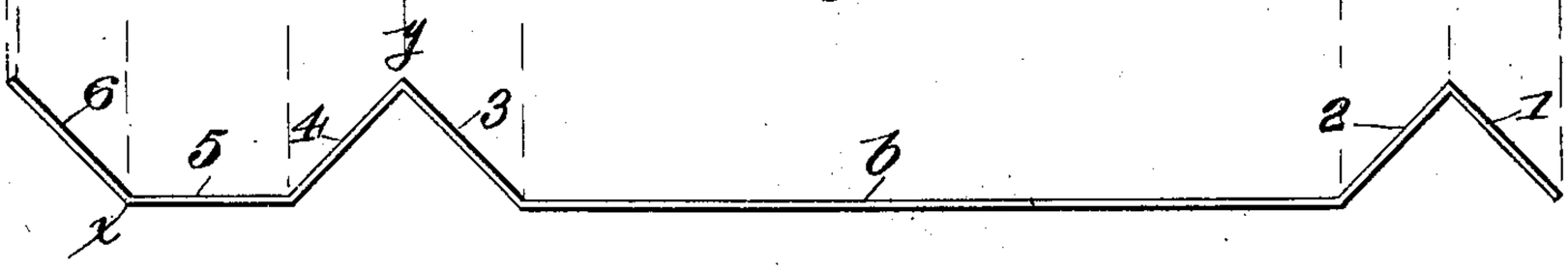
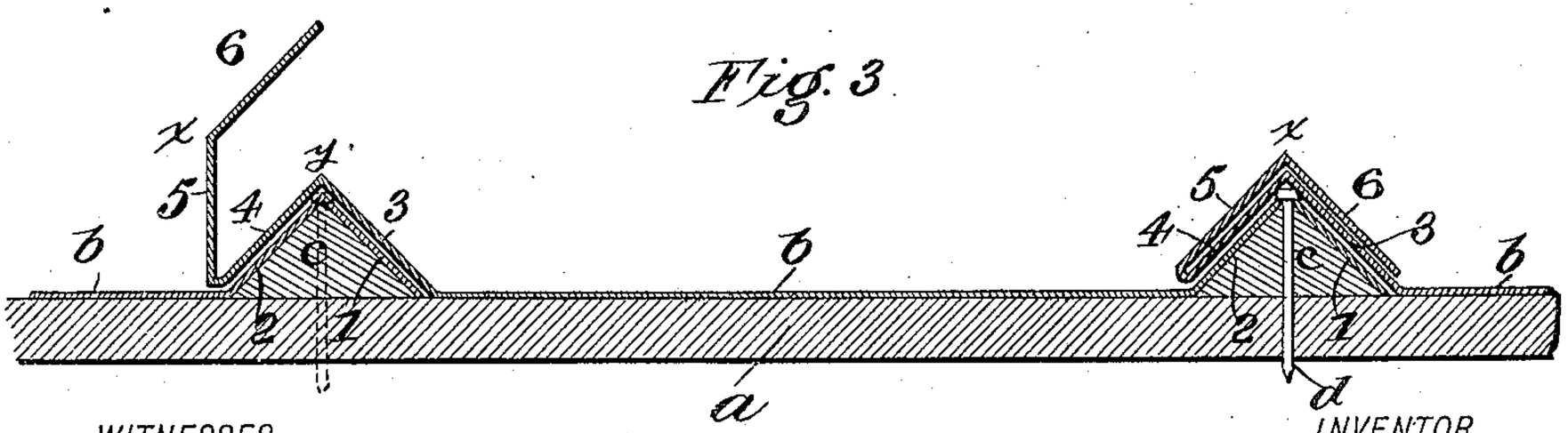


Fig. 3



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SHEET-METAL ROOFING.

No. 844,983. Specification of Letters Patent. Patented Feb. 19, 1907.

Application filed October 25, 1906. Serial No. 340,568.

To all whom it may concern:

Be it known that I, DAVID JAMES WINN, a citizen of the United States, residing at Sumter, in the county of Sumter and State of South Carolina, have invented a new and useful Improvement in Sheet-Metal Roofing, of which the following is a specification.

My invention relates to sheet-metal roofing of that type in which the metal sheets are formed at their lateral edges with an upward and downward bend along said edges, forming along each edge an elevated housing, the housing of one sheet overlapping and fitting closely down upon the housing of the adjacent sheet and both being secured to the subjacent sheathing-boards of the roof by nails driven into the elevated ridges and through wooden ribs or filling-strips contained therein into the subjacent sheathing-boards. With this form of roofing the nail-heads are exposed, and consequently there is liable to be leakage through the nail-holes.

My invention consists in forming one of the side edges of the sheets with two additional folds arranged to form a return-bend over the ridges, so as to cover and protect the nails and giving a triple thickness of sheet metal over the ridges, as hereinafter fully described with reference to the drawings, in which—

Figure 1 is a face view, and Fig. 2 an edge view, of one of my improved roofing-sheets; and Fig. 3 is a transverse section taken through a roof laid with my sheets, the section being at right angles to the ridges.

In the drawings Figs. 1 and 2, *b* represents one of my roofing-sheets. As heretofore constructed these have been made simply as rectangular sheets with an upward and downward bend 1 2 along one lateral edge and another upward and downward bend 3 4 along the other lateral edge, the bends 1 2 of one sheet fitting over the bends 3 4 of the adjacent sheet and being secured by nails driven along the apex and into a housed wooden strip below the bends to form a solid nailing and the nails being long enough to pass through these filling-strips and into the wooden sheathing *a* below. In accordance with my invention one of the lateral edges 3 4 is formed with two additional folds or bends 5 6, made in one piece with and of substantially the same width as 3 4 or a little wider; but these bends have their angles reversed to those of the bends 1 2 and 3 4. In laying a roof with these plates after the bends 1 2 of a sheet have been laid on top of the filling-strip *c* (see left-hand part of Fig. 3) the bends 3 4 of the next adjacent plate are placed directly over 1 2 of the previously-laid plate, and nails (shown in dotted lines on the left of Fig. 3) are then driven through the lapped folds 1 2 3 4 and also through the housed filling-strips *c* into the sheathing of wood, and then the additional folds 5 and 6 are bent back and over the nails, the fold 5 lying flat down upon the fold 4 and the fold 6 lying flat down upon the fold 3, as shown on the right-hand side of Fig. 3, in which it will be seen the nails have become completely covered and the nail-holes protected from access of rain. In this operation the angular bend *x*, Fig. 2, coincides with and fits over the angular bend *y*, making a straight, true, and undented ridge, which adds to the symmetry and beauty of the roof, and the ridges are of three-ply thickness, which stiffens them against pressure from tramping on the same and also strengthens the roof as against the lifting strains of wind-pressure under the sheets.

Although I have shown the body of the plates *b* as flat and plain, it is obvious that they may be made corrugated and stiffened, if desired.

The roofing-plates are cheaply rolled or folded in one piece and are compactly nested together for mutual protection and economic transportation.

I claim—

1. A sheet-metal roofing-plate having along one edge an angular upward and downward bend and having along the other edge four angular bends, the inner two being angular upward and downward bends and the outer two being bent outward and upwardly and all of the metal surfaces between the bends being flat and substantially equal sections adapted to register with each other as described.

2. A sheet-metal roofing, comprising a wooden base, sheet-metal plates having along each lateral edge an upward and downward bend and having formed in one piece with one lateral edge two reversely-bent folds and nails or screws passing through the two thicknesses of the two lapped folds, the reverse bends being folded over to house and cover the nails and subjacent lapped folds.

DAVID JAMES WINN.

Witnesses:
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