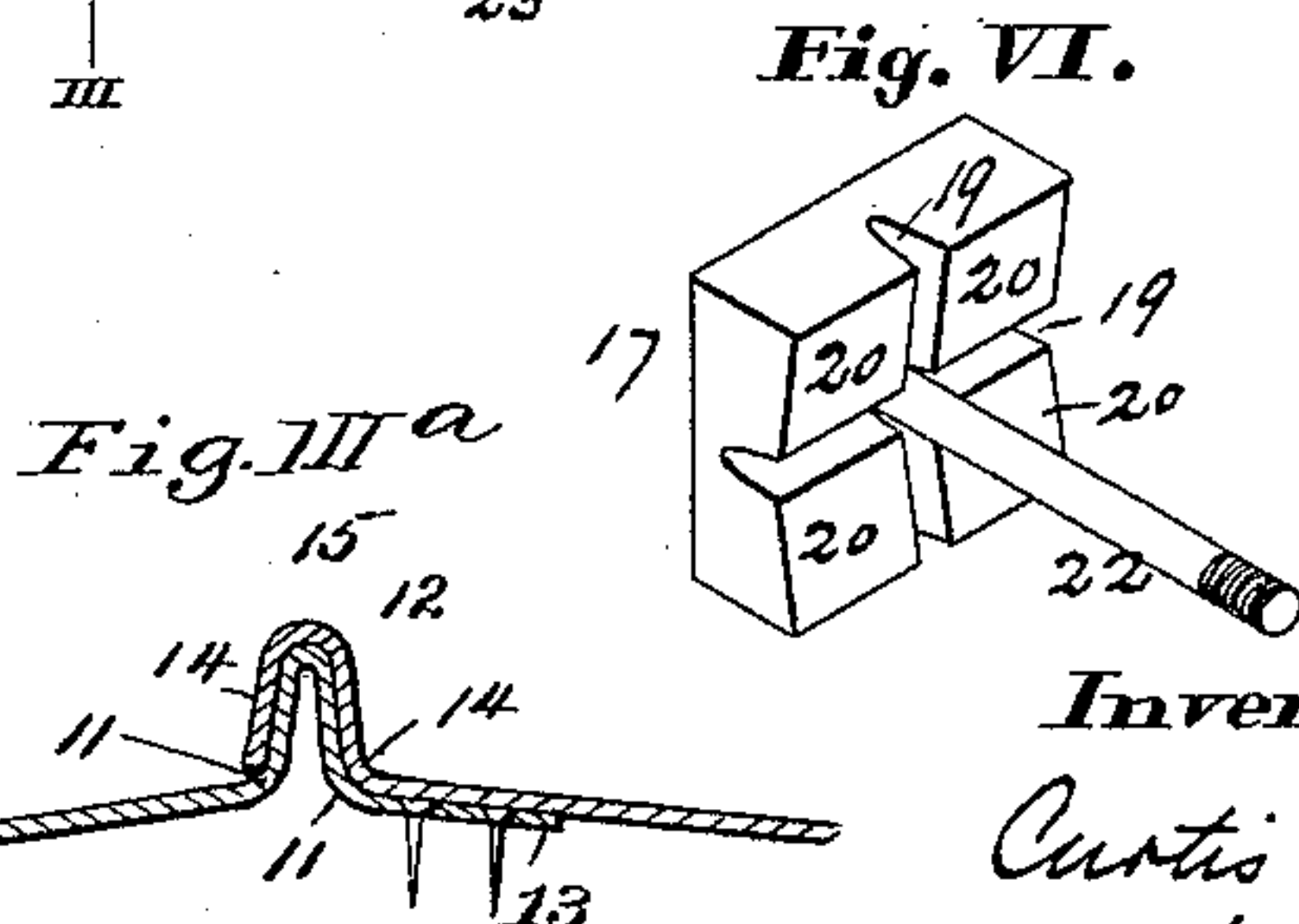
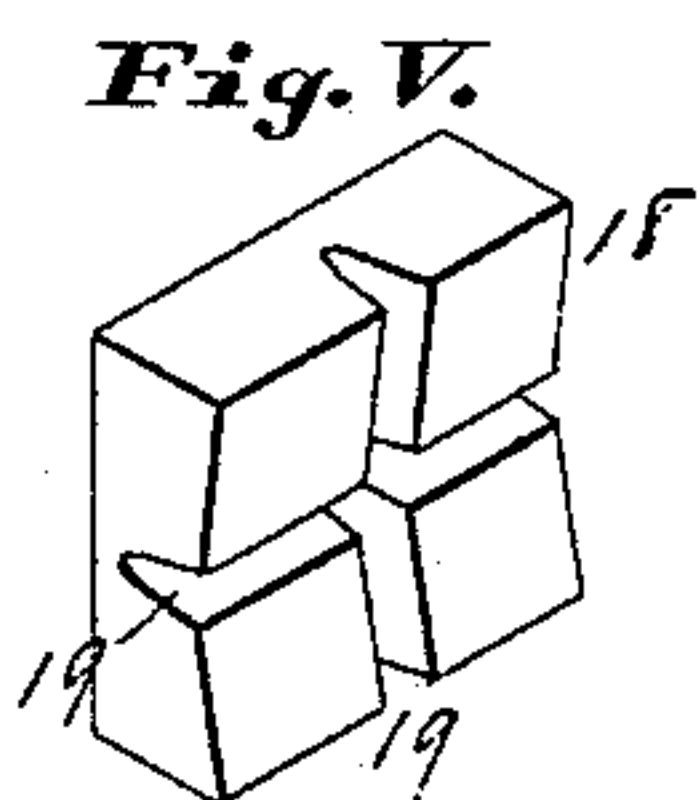
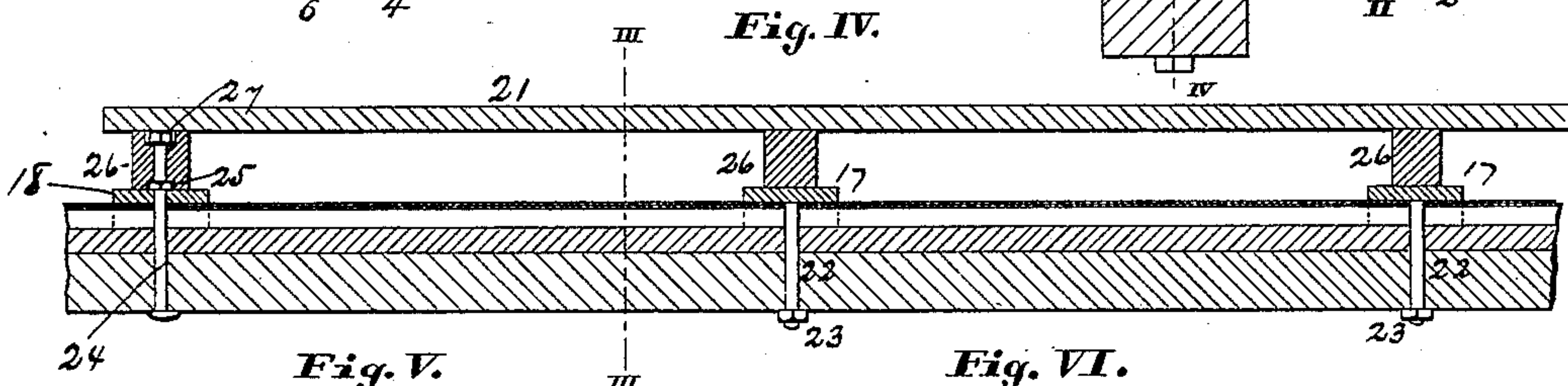
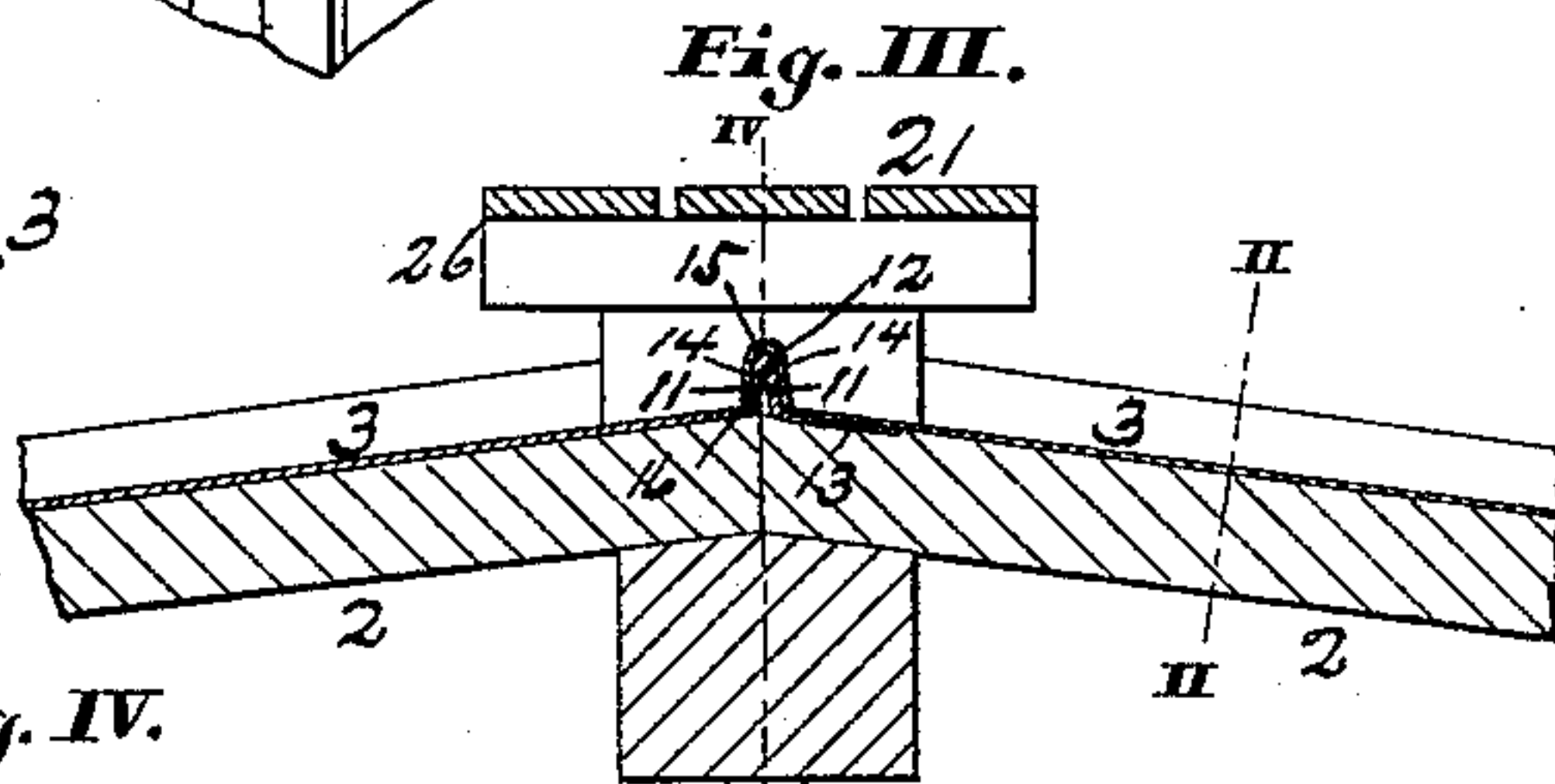
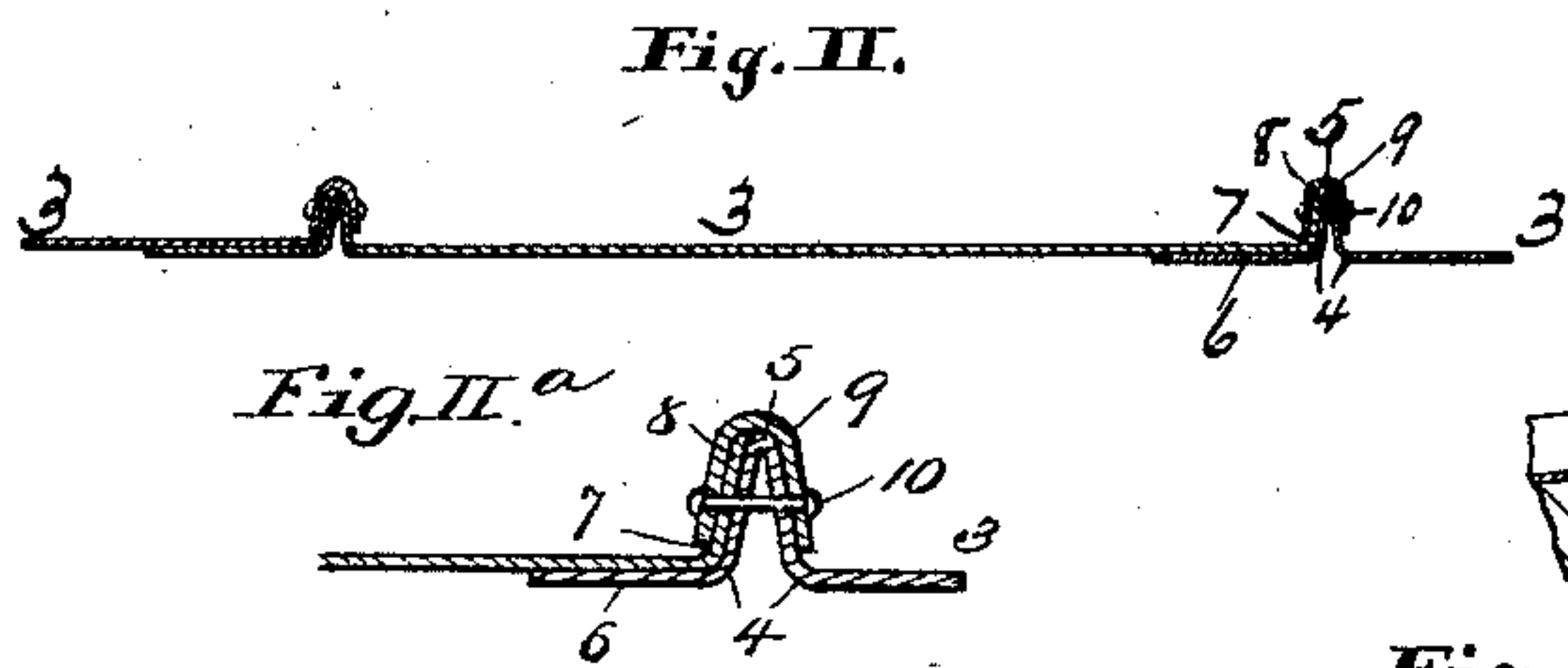
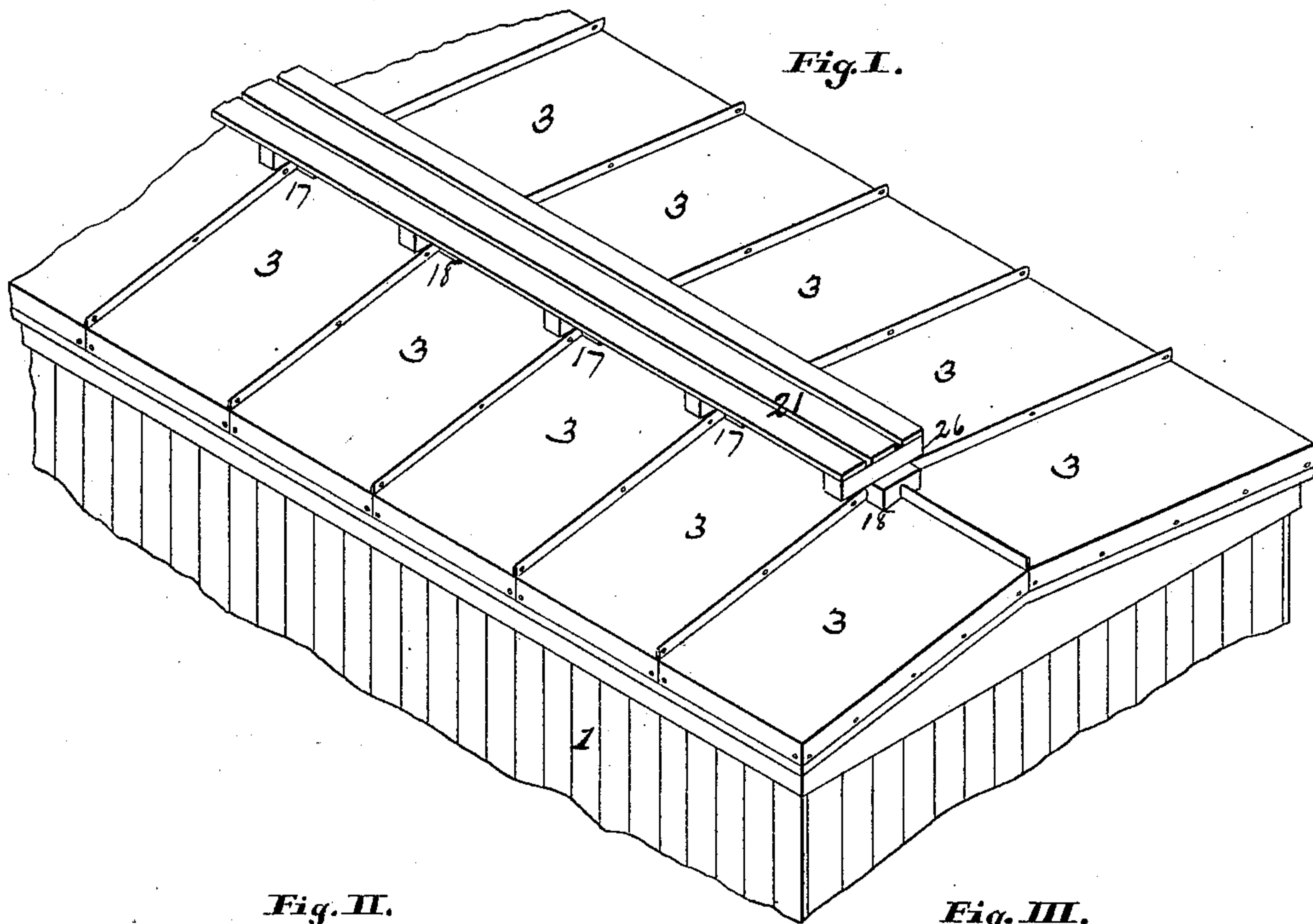


(No Model.)

C. M. JENNINGS.
CAR ROOF.

No. 446,780.

Patented Feb. 17, 1891.



Attest:
E. Arthur
W. E. Allen

Inventor:
Curtis M. Jennings
By Knight Bros
Atty

UNITED STATES PATENT OFFICE.

CURTIS M. JENNINGS, OF ST. LOUIS, MISSOURI.

CAR-ROOF.

SPECIFICATION forming part of Letters Patent No. 446,780, dated February 17, 1891.

Application filed August 30, 1890. Serial No. 363,490. (No model.)

To all whom it may concern:

Be it known that I, CURTIS M. JENNINGS, of the city of St. Louis, in the State of Missouri, have invented a certain new and useful Improvement in Car-Roofs, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming part of this specification.

My invention has for its object to produce a car-roof which will be simple in construction and easily applied, and which will be durable and perfectly water-tight.

My invention consists in features of novelty hereinafter fully described, and pointed out in the claims.

Figure I is a perspective view showing a portion of the body of a car provided with my improved roof. Fig. II is a vertical longitudinal section of the roof, taken on line II II, Fig. III, the supporting frame or timbers being omitted. Fig. II^a is an enlarged view of a portion of Fig. II. Fig. III is a transverse section taken on line III III, Fig. IV. Fig. III^a is an enlarged view of a portion of Fig. III. Fig. IV is a vertical longitudinal section taken on line IV IV, Fig. III, but made on a smaller scale. Fig. V is a perspective view of one of the corner-caps, and Fig. VI is a perspective view of the other form of corner-cap.

Referring to the drawings, 1 represents the body of a freight-car, having the usual framework 2 for supporting the roof to which my invention relates. The roof is composed of a number of sheets 3 of any desired size. The adjacent sides of the sheets are joined together as follows: One of the sheets is provided at its edge adjacent to the next sheet with a double bend 4, forming a vertical rib 5, from which protrudes a nailing-flange 6, by which the sheet is held to the frame of the roof. The adjacent edge of the next sheet covers the nailing-flange 6, and is provided with a single bend 7, forming a vertical flange 8, fitting up against the side of the rib 5. The rib 5 and flange 8 are then covered by a V-shaped strip 9, secured to the rib 5 and flange 8 by rivets 10, thus securely holding the strip in place and holding the flange 8 and rib 5 firmly together. The joint thus formed is thoroughly water-proof and durable, and has sufficient rigidity to prevent its being mashed or crushed if stepped upon. The adjacent

sides of all the sheets of the roof are thus formed. The section shown in Fig. II illustrates two of the joints.

The ends of the sheets at the ridge or peak of the roof are joined as follows: The sheet on one side of the car has its upper end formed with a double bend 11, forming a rib 12, from which extends a nailing-flange 13. (See Fig. III.) The adjacent end of the sheet on the other side of the roof is formed with a double bend 14, forming a rib 15, which fits over the rib 12 and terminates at the base of the bend 11, as shown at 16. This joint is thoroughly water-proof and is sufficiently strong, owing to the fact that it cannot be trod upon, for the reason that the running-board is placed over or covers it. The adjacent ends of all of the sheets are joined together in the manner I have described. The corners of the sheets are joined and covered by heavy flat-headed caps 17 and 18, formed with the grooves 19 to receive the ribs of the roof which I have described. The grooves form projections 20, which rest upon the surface of the sheets, and their flat heads form the support for the running-board 21. The caps 17 are interspersed between the caps 18, and have downwardly-extending shanks 22, which extend through the framing of the car-roof, as shown in Fig. IV, where they are provided with nuts 23, by which the caps are clamped firmly down upon the sheets and securely hold the sheets to the framing of the roof, the grooves 19 being of the proper size to fit snugly over the ribs of the sheets, and thus serve to clamp and hold the layers of the ribs together. The caps 18 are perforated to receive bolts 24, passing up through the framing of the car-roof, and having nuts 25 over the caps, and by which the caps are held down firmly upon the roof, the same as the caps 17. The bolts 24 extend up beyond the caps, forming a means for connecting the cross-strips 26 of the running-board to the car-roof, the bolts having nuts 27 above the cross-strips. It will thus be seen that the bolts 24 perform the function of holding the running-board in addition to holding the caps 18. A sufficient number of the caps 18 and bolts 24 are used to hold the running-board, and in between them are placed the caps 17, upon which the cross-strips of the running-board

may rest, but to which they are not secured, thus cheapening the construction, as it is unnecessary to have the running-board attached to the car-roof at all of the joints of the corners of the sheets.

A car-roof thus formed is cheap and durable, is easily made, and can be put together without the use of skilled labor.

I claim as my invention—

1. In a car-roof, the combination of the sheets united at their sides by means of joints consisting of double bends forming a rib and a nailing-flange on one of the sheets, a single bend forming a flange on the other sheet, and a cap covering said rib and flange and riveted thereto, substantially as shown and described.

2. A car-roof consisting of sheets united at their sides by joints consisting of double bends in one of the sheets, forming a rib and a nailing-flange, a single bend in the other sheet, forming a flange fitting against said rib, a cap covering said flange and rib and riveted thereto, and such sheets being further united at their ends by joints consisting of double bends in one of the sheets, forming a rib and a nailing-flange, and a double bend in the other sheet, forming a rib covering the rib

having a nailing-flange, substantially as set forth.

3. In a car-roof, the combination of the sheets united at their sides and ends by suitable joints, and caps covering the corners of the sheets and bolted to the framing of the car-roof, said caps having grooves to receive the joints of said sheets, and projections between the grooves, which rest upon said sheets and having flat upper surfaces to support the running-board, substantially as set forth.

4. In a car-roof, the combination of the sheets having joints at their sides and ends and caps for covering the corners of the sheets, part of said caps being perforated for the passage of bolts by which the running-board is secured to the car, and the remainder of said caps having downwardly-projecting stems by which they are clamped upon the sheets, and all of said caps having grooves to receive the joints of the sheets, substantially as and for the purpose set forth.

CURTIS M. JENNINGS.

In presence of—

THOS. KNIGHT,

BENJN. A. KNIGHT.