

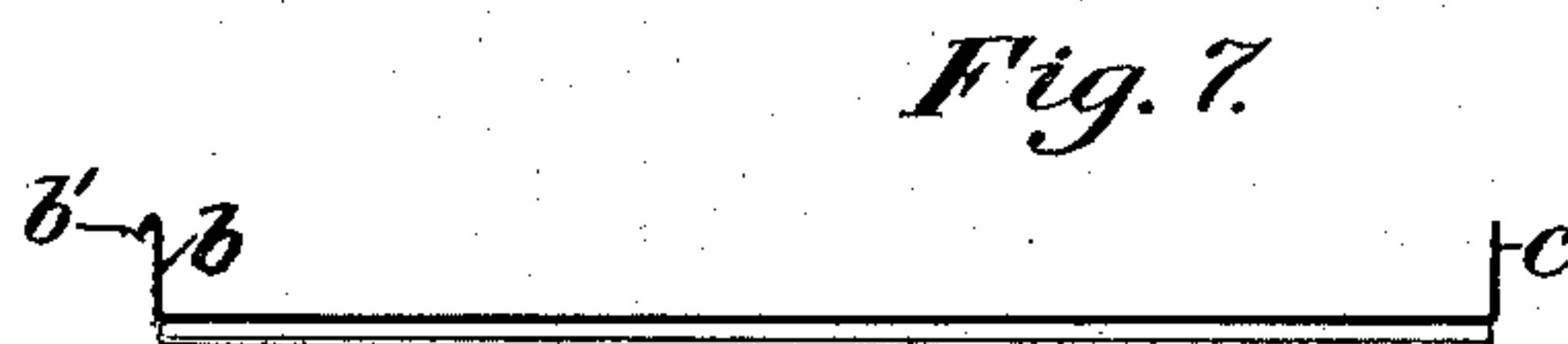
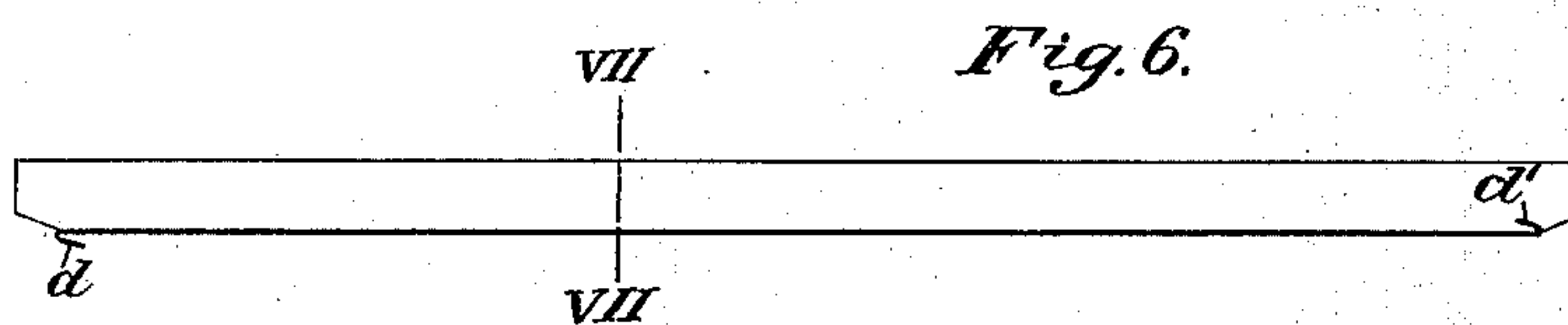
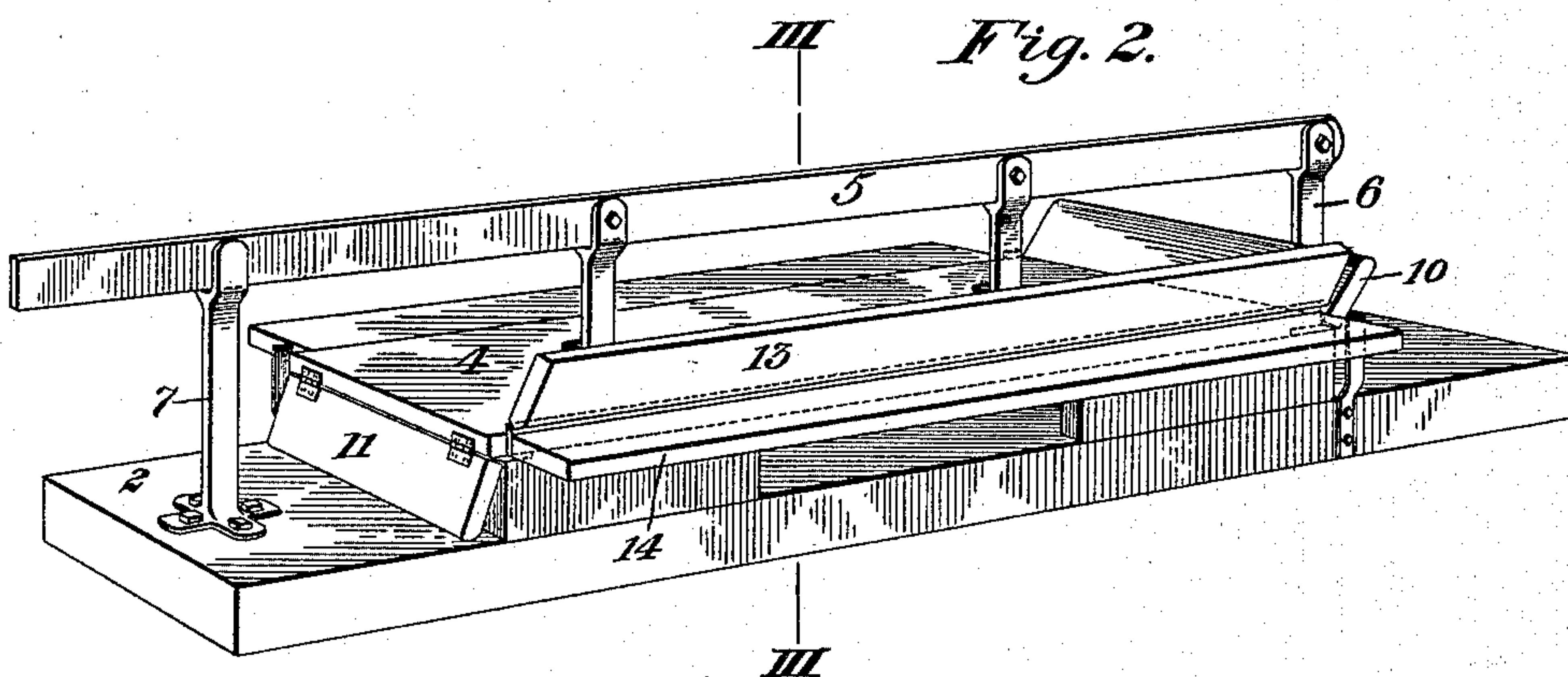
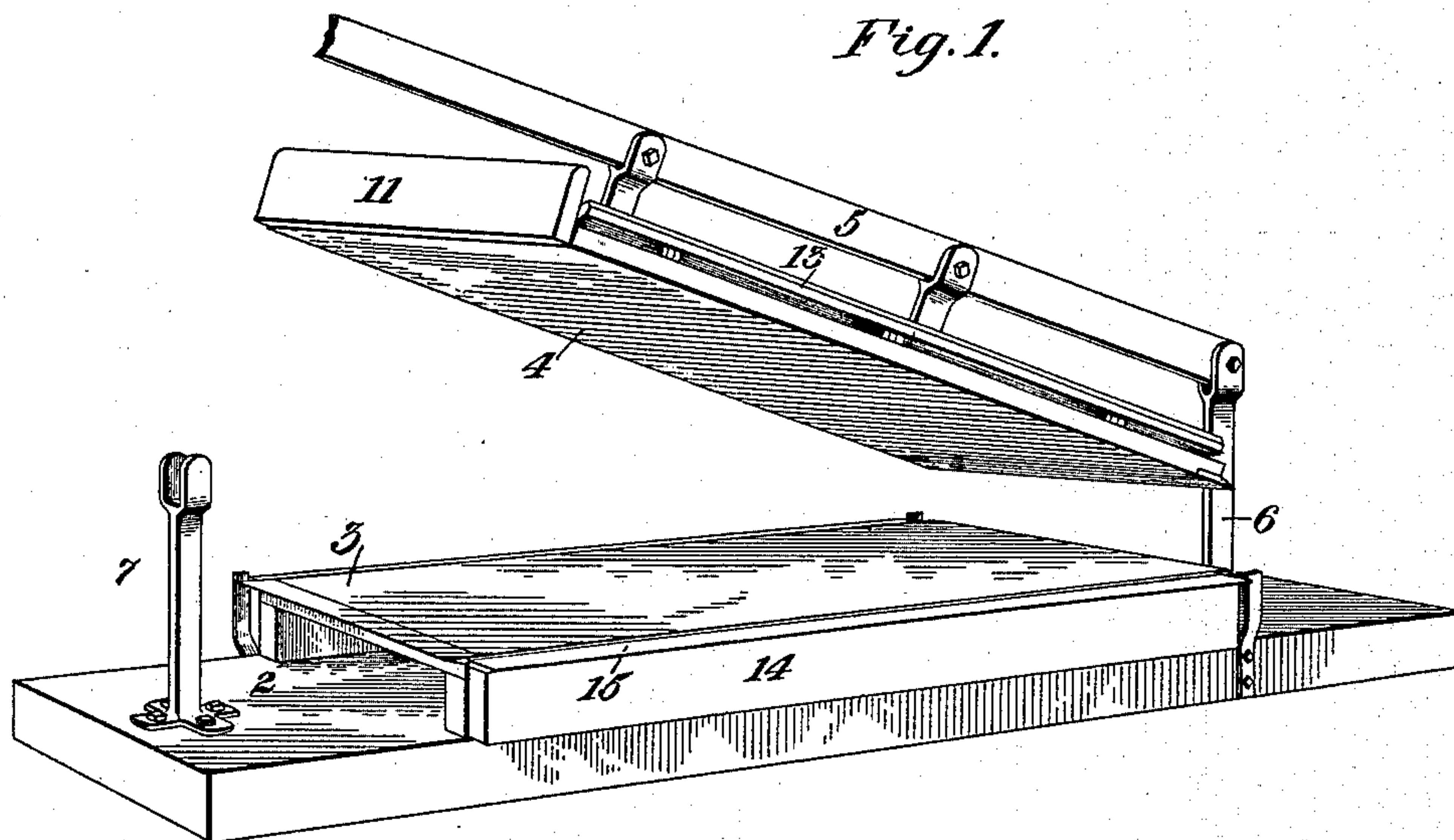
(No Model.)

2 Sheets—Sheet 1.

L. H. BOHN.
MACHINE FOR EDGING ROOFING SHEETS.

No. 410,066.

Patented Aug. 27, 1889.



Witnesses
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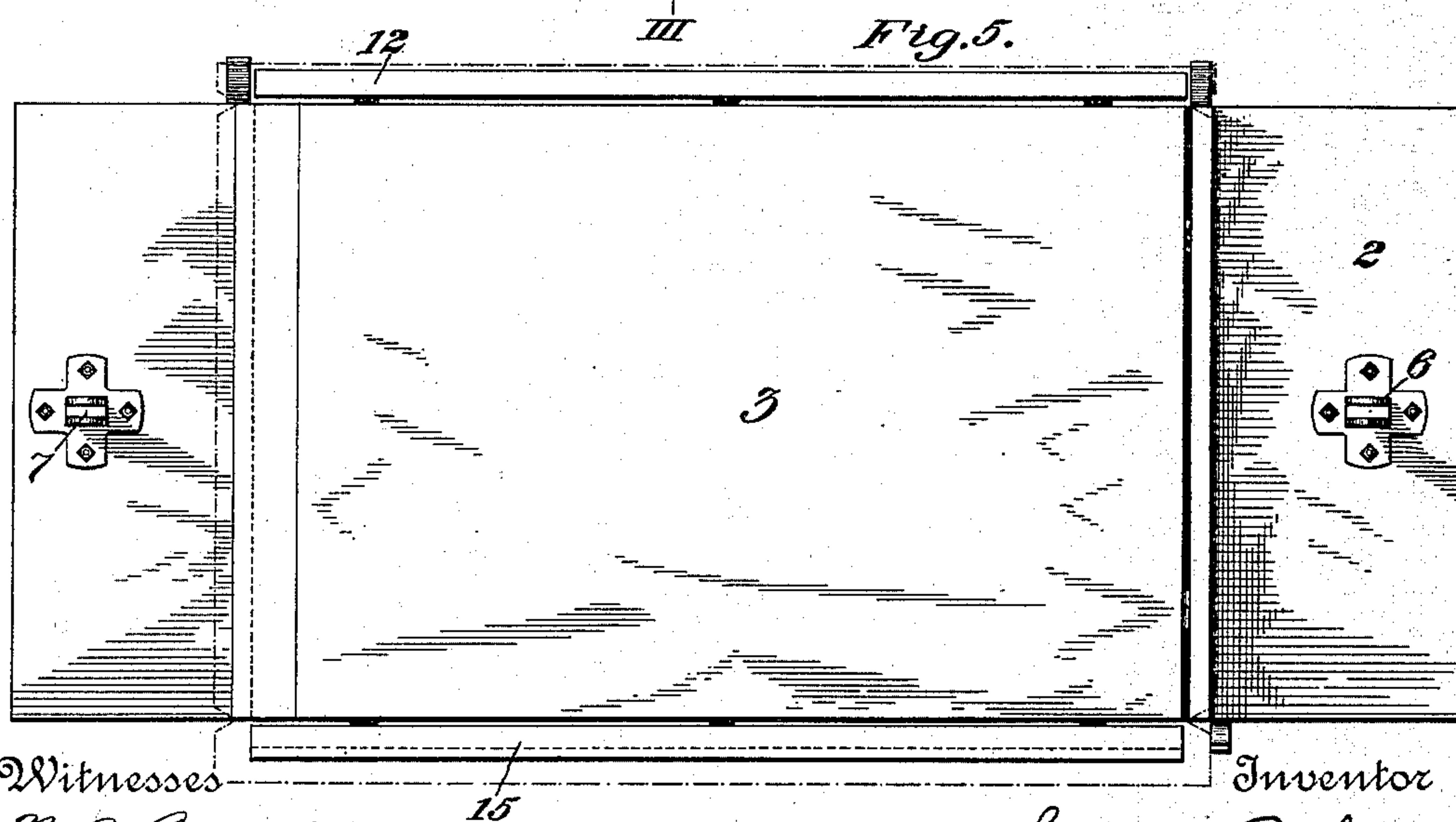
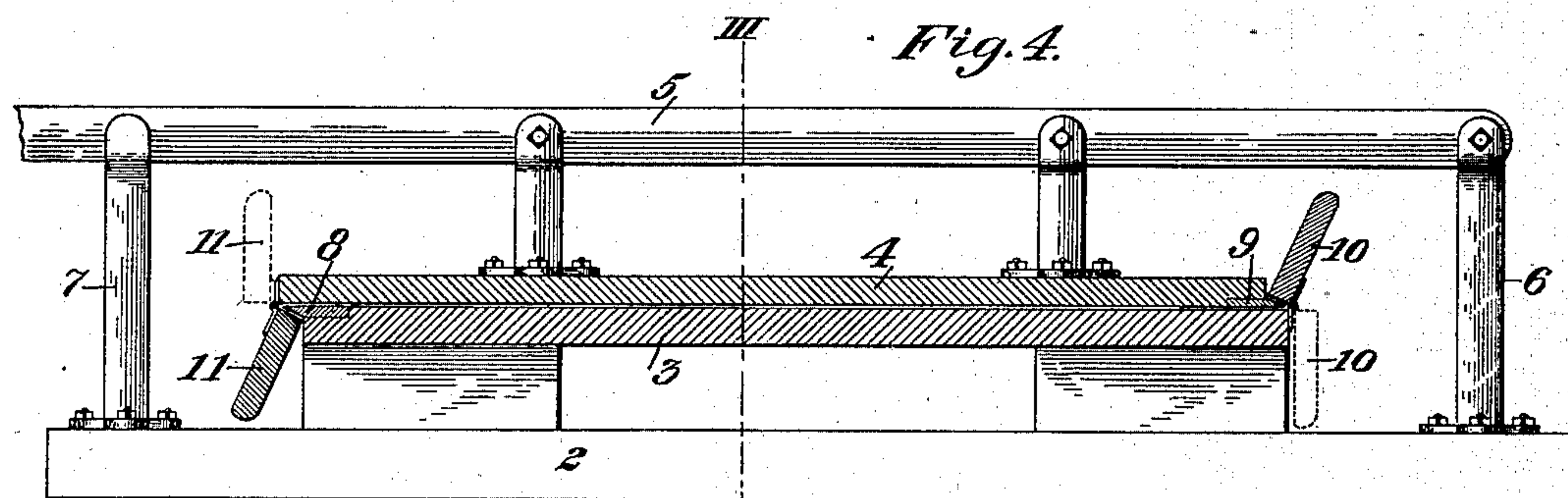
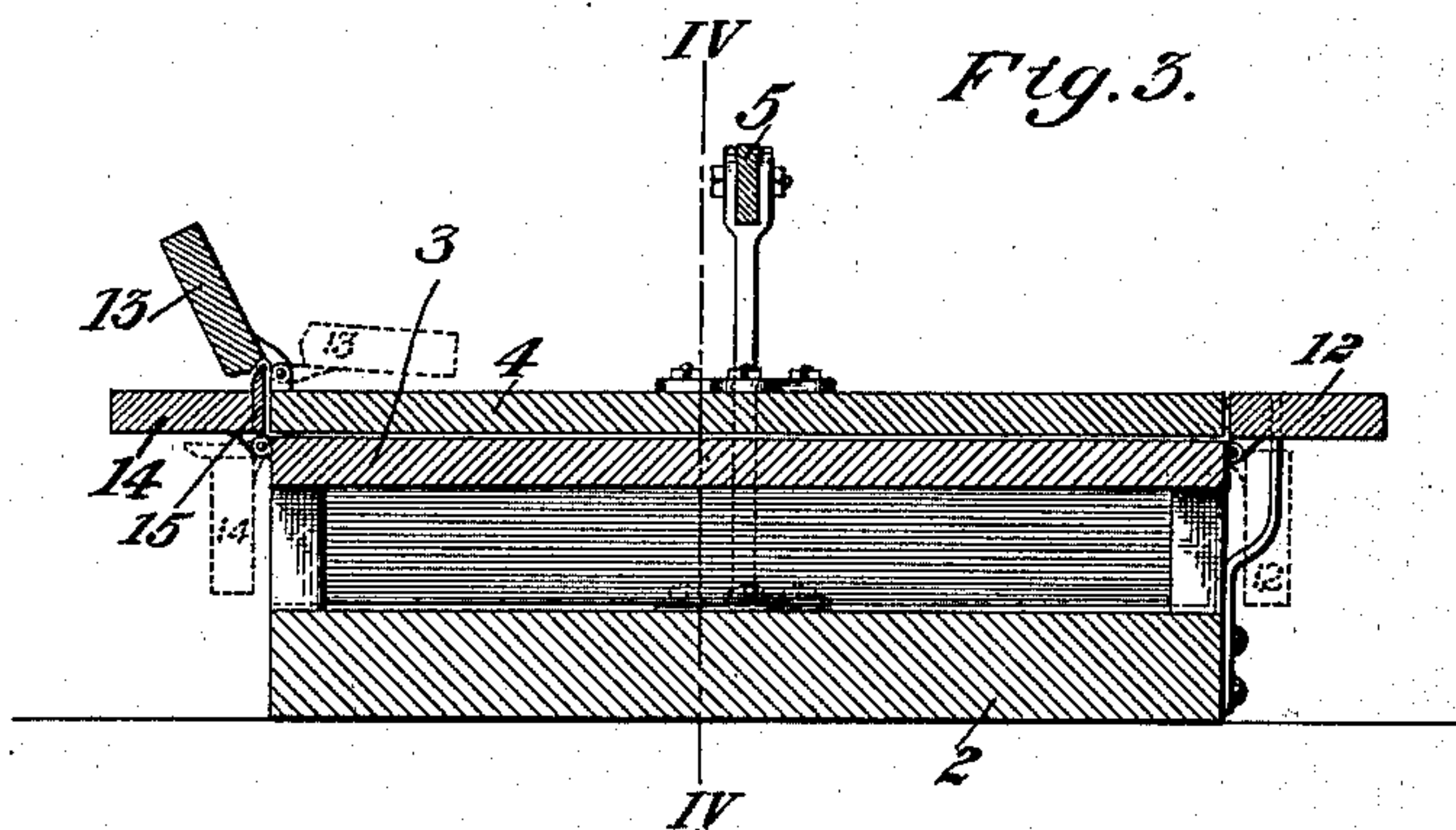
(No Model.)

2 Sheets—Sheet 2.

L. H. BOHN.
MACHINE FOR EDGING ROOFING SHEETS.

No. 410,066.

Patented Aug. 27, 1889.



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UNITED STATES PATENT OFFICE.

LOUIS H. BOHN, OF ALLEGHENY, PENNSYLVANIA.

MACHINE FOR EDGING ROOFING-SHEETS.

SPECIFICATION forming part of Letters Patent No. 410,066, dated August 27, 1889.

Application filed March 5, 1889. Serial No. 302,008. (No model.)

To all whom it may concern:

Be it known that I, LOUIS H. BOHN, of Allegheny, in the county of Allegheny and State of Pennsylvania, have invented a new and useful Improvement in Machines for Bending Roofing-Sheets, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 is a perspective view of my improved machine, showing it when open in position to receive the tin sheet. Fig. 2 is a similar view showing the parts of the machine closed. Fig. 3 is a vertical cross-section of the machine, the section being on the line III III of Figs. 2 and 4. Fig. 4 is a vertical longitudinal section on the line IV IV of Fig. 3. Fig. 5 is a plan view of the machine without the top plate. Fig. 6 is a vertical longitudinal section of a sheet of roofing which has been formed by use of the machine. Fig. 7 is a vertical cross-section on the line VII VII of Fig. 6. A metal sheet cut preparatory to bending in the machine is shown in plan view by dotted lines in Fig. 5.

Like symbols of reference indicate like parts in each.

My invention relates to an improvement in machines for bending plates of sheet metal to bring them into proper form to constitute interlocking roofing-sheets, so that the sheets may be properly shaped before taking them to the roof on which they are to be laid, thus saving time and labor to the roofers.

In the drawings, 2 represents the bed or supporting-frame of the machine.

3 is a bed-plate on which the sheets of tin to be bent are placed.

4 is a clamping-plate, adapted to fit upon the plate 3 and to hold the interposed roofing-sheet.

5 is a lever to which the plate 4 is attached, and which is fulcrumed on the standard 6 of the bed 2, and 7 is a rest for the lever at the front end of the bed. The plate 3 is provided at one end with a projecting edge 8, formed with a beveled under side, and the plate 4 is provided at the other end with a projecting edge 9, suitably beveled on its upper side. (See Fig. 4.)

At the upper edge of the plate 3 is pivoted

a brake 10, and at the lower edge of the plate 4 is pivoted a brake 11. The brakes 10 and 11 have suitably-formed bending-edges, as shown in Fig. 4, said bending-edges being adapted to work in conjunction with the edges 9 and 8, respectively.

At one side of the plate 3 is pivoted a brake 12, as shown in Fig. 3. At the other side, pivoted at the upper edge of the plate 4, is a brake 13, and pivoted to the upper edge of the side of the plate 3, adjacent to the brake 13, is a bending-brake 14, having a projecting edge 15, beveled correspondingly to the beveled edge on the brake 13.

The operation of the machine is as follows: A sheet of metal of proper size is notched at four places, as shown in Fig. 5, and is placed upon the bed-plate 3. The plate 4 is then brought down upon the surface of the metal sheet, so as to hold the same firmly, and the edges of the sheet will then project beyond the plates in the manner shown in Fig. 5. In order now to bend the edges of the sheet into the desired form, I fold the brakes 12 and 14 up into the positions in which they are represented by full lines in Fig. 3, and thereby, by means of the inner edge of the brake 12 and the face of the edge 15, the edges of the roofing-sheet are turned up to form the portions *b* and *c*. (Shown in Fig. 7.) Then to form the lip *b'* on the roofing-sheet the brake 13 is turned down from the position shown in dotted lines in Fig. 3 into the position in which it is shown in full lines, thereby causing the heel of the brake 13, in conjunction with the beveled edge 15, to bend back the lip *b'*, as is clearly shown in Fig. 7. Then to bend the ends of the sheet the brakes 10 and 11 are turned from the positions in which they are shown by dotted lines in Fig. 4 into the positions in which they are shown by full lines, thereby, in conjunction with the edges 9 and 8, bending the lips *d* and *d'* into the positions shown in Fig. 6. The roofing-sheet may now be taken from the machine by replacing the several bending-brakes in their original positions and raising the plate 4 therefrom, and is in condition to be applied to the roof, the lip *d* at the end of one sheet being adapted to interlock with the lip *d'* at the end of the next adjacent sheet, and the

bent portions *b* and *b'* on one sheet being adapted to fit over the upturned edge *c* of the next adjacent sheet. When thus placed together, the roofing-sheets may be secured to the roof by suitable cleats, and connected together by pressing the seams by any suitable tools adapted to this purpose.

The machine which I have shown may be modified in form and proportions of its parts without involving a departure from the principles of my invention, as stated in the following claims. For example, instead of operating the several brakes by hand-power, they may be worked by foot-power, by steam-power, or otherwise, and other changes will suggest themselves to the skilled mechanic. The advantages of my invention will be appreciated by those skilled in the art.

The machine is simple in construction, easy in its operation, not apt to get out of order, and is very efficient in producing roofing-sheets, which, by reason of their being bent previous to their application to the roof, can be laid with little cost and labor, requiring the work of but one person; whereas when the sheets are not previously bent the services of two men are required in work peculiarly difficult and dangerous. The sheets also, on account of their peculiar form, make a good and serviceable roofing with perfectly tight seams or joints.

I claim as my invention—

1. In a machine for bending roofing-sheets, the combination of the bed 2, the plate 3, ar-

ranged upon the bed and having the edge 8 at one end and projecting from its upper surface, and the brake 10, hinged at the other end of the plate, the plate 4, superposed upon the plate 3 and having the edge 9 projecting from the lower surface of one end, and the brake 11, hinged at the other end of said plate, all constructed and arranged substantially as described, the lever 5, pivotally connected to the bed 2, the plate 4 being fixed to and carried by said lever, and a rest for said lever, substantially as set forth.

2. In a machine for bending roofing-sheets, the bed 2, the plate 3, arranged above and upon the bed, the brake 12, hinged to one side of said plate, the brake 14, hinged to the other side of said plate 3 and provided upon its upper edge with the edge 15, the plate 4, the brake 13, hinged to one side of said plate 4, to co-operate with the edge 15 to make a standing seam, one member of which is straight and the other having an overturned edge, all constructed and arranged substantially as described, combined with the lever 5, affixed to and carrying the plate 4 and pivotally connected to the bed, and a rest for said lever, substantially as set forth.

In testimony whereof I have hereunto set my hand this 15th day of February, A. D. 1889.

LOUIS H. BOHN.

Witnesses:

THOMAS W. BAKEWELL,
JNO. K. SMITH.