

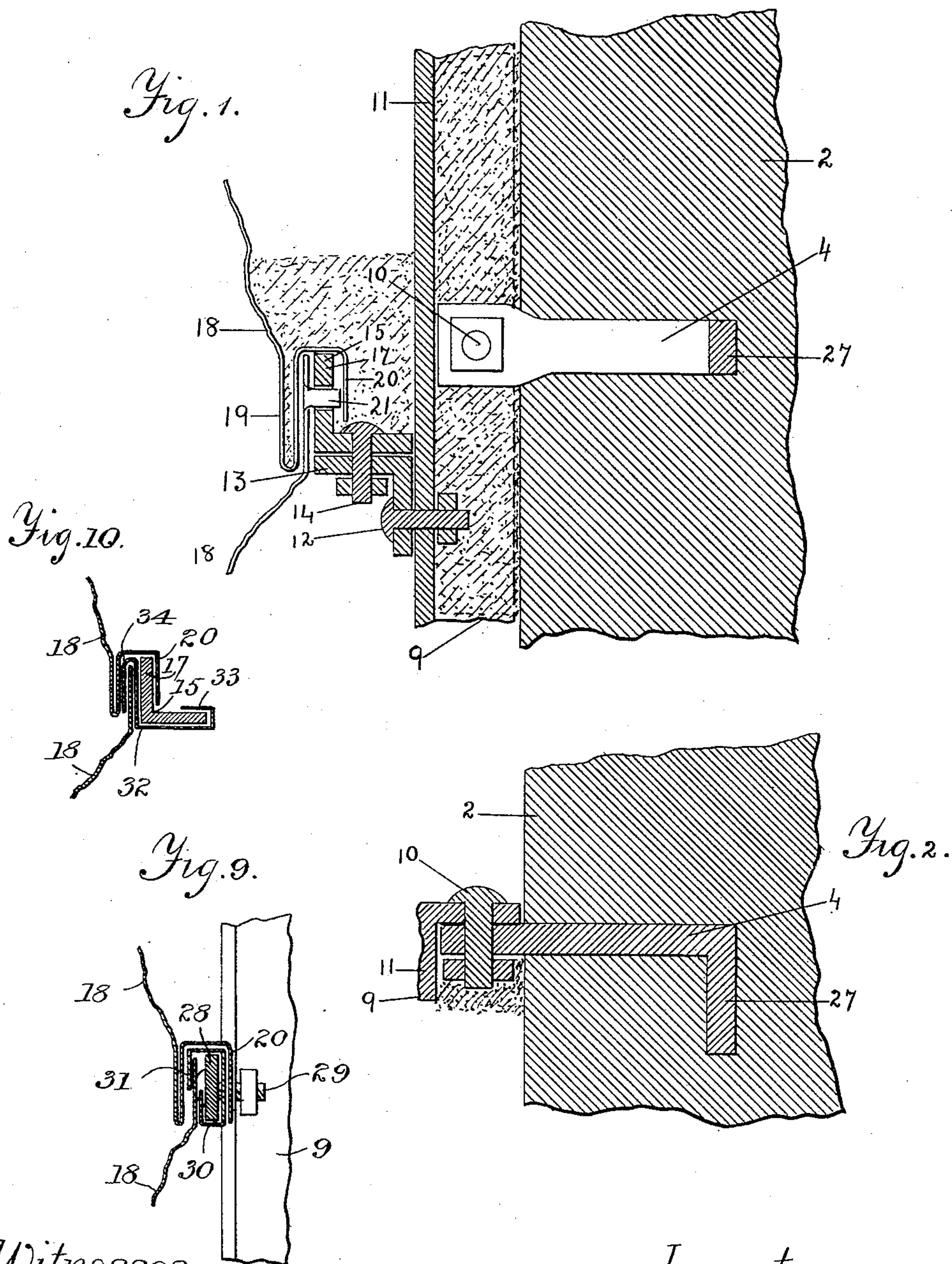
(No Model.)

2 Sheets—Sheet 1.

P. A. DESLAURIERS.
MEANS FOR SECURING SHEET METAL FRONTS TO THE
WALLS OF BUILDINGS.

No. 489,467.

Patented Jan. 10, 1893.



Witnesses

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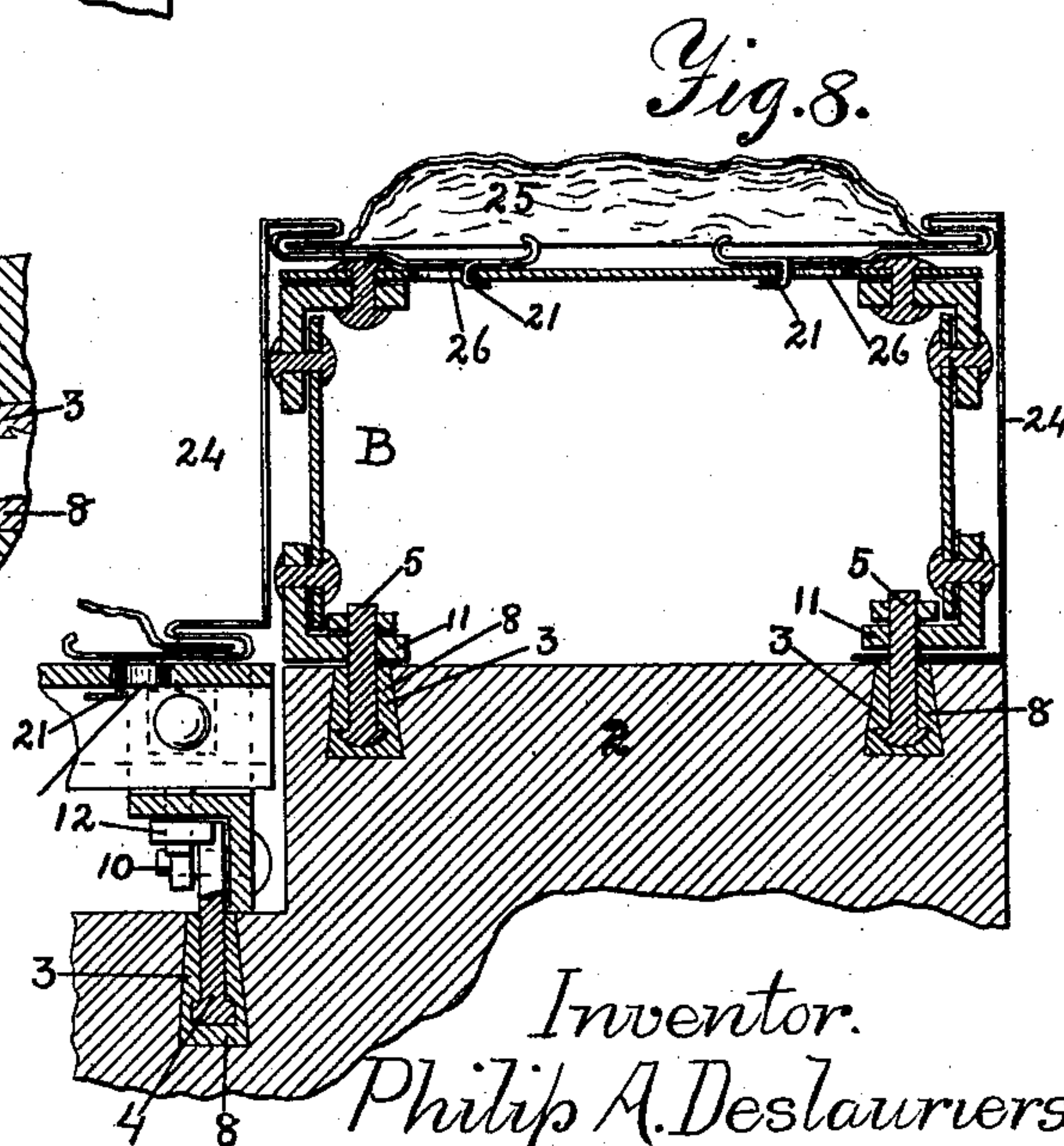
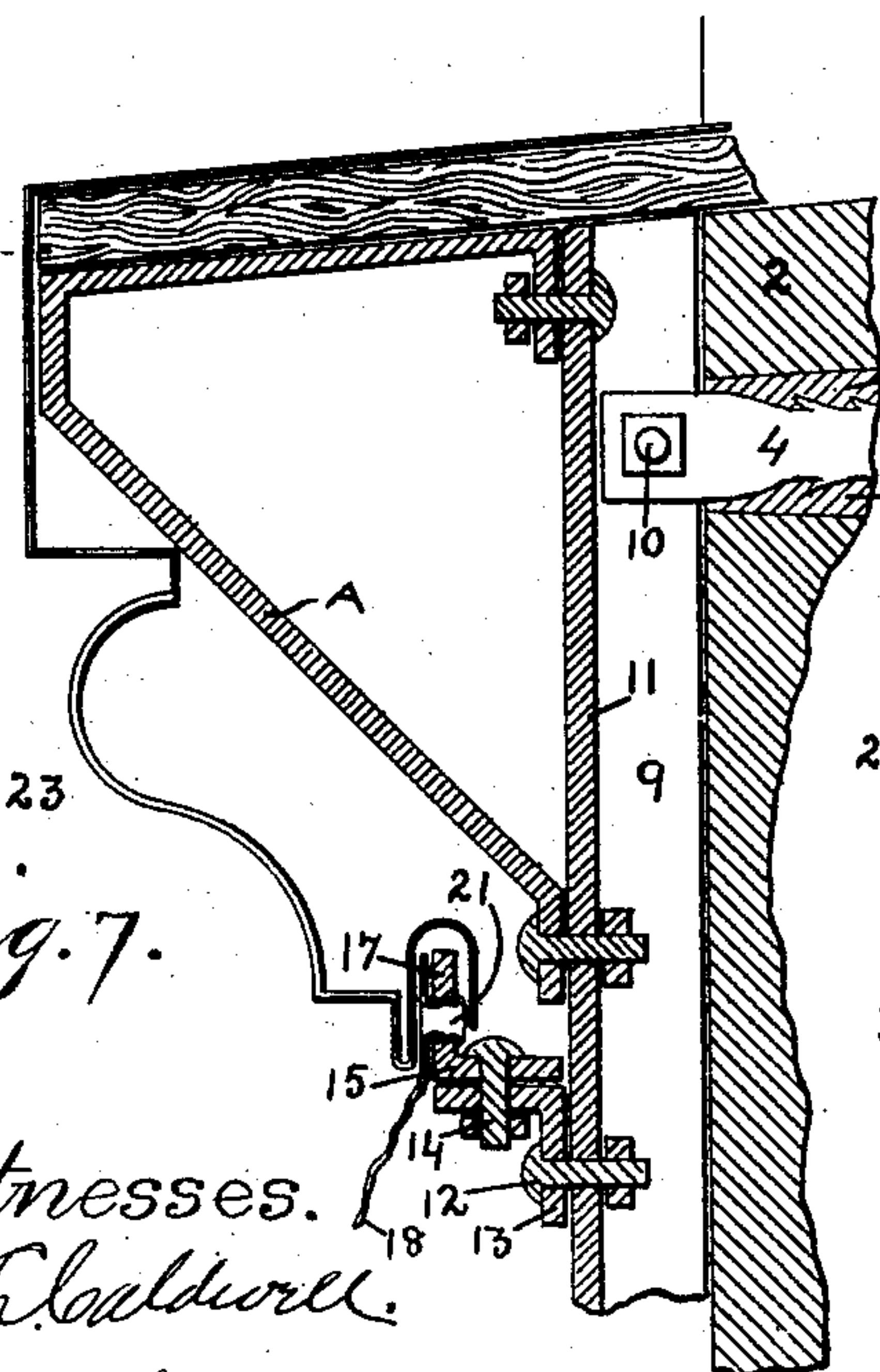
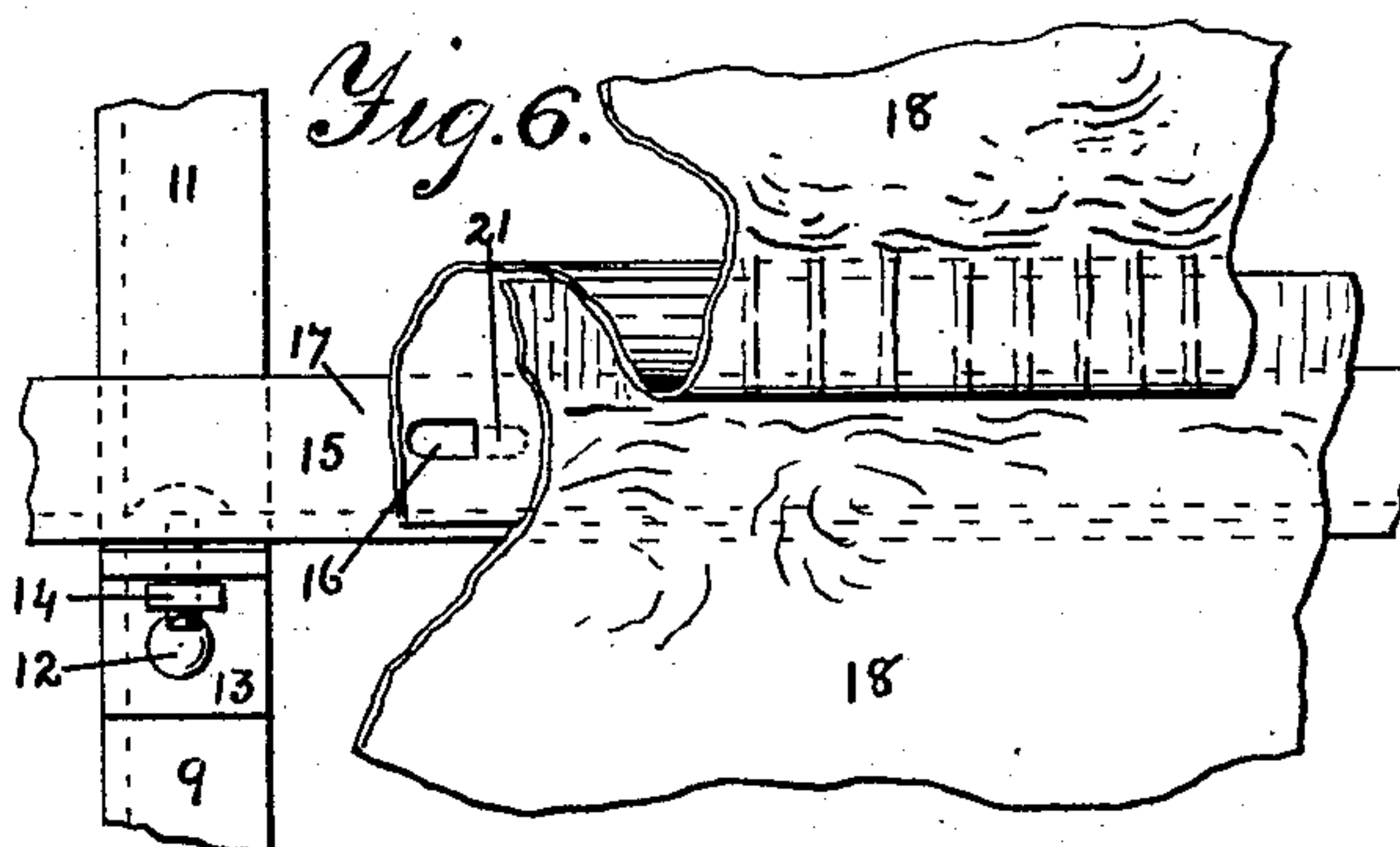
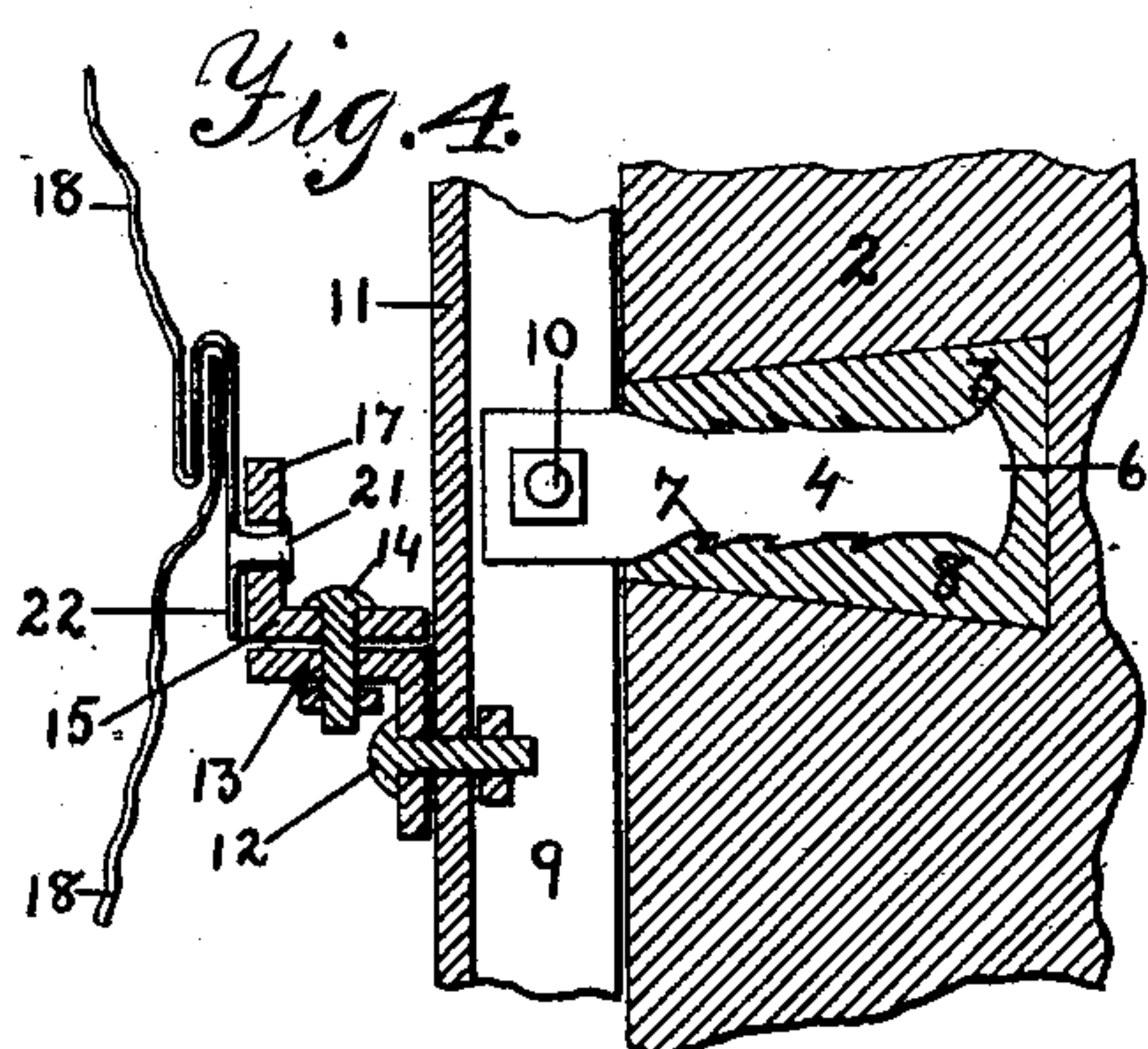
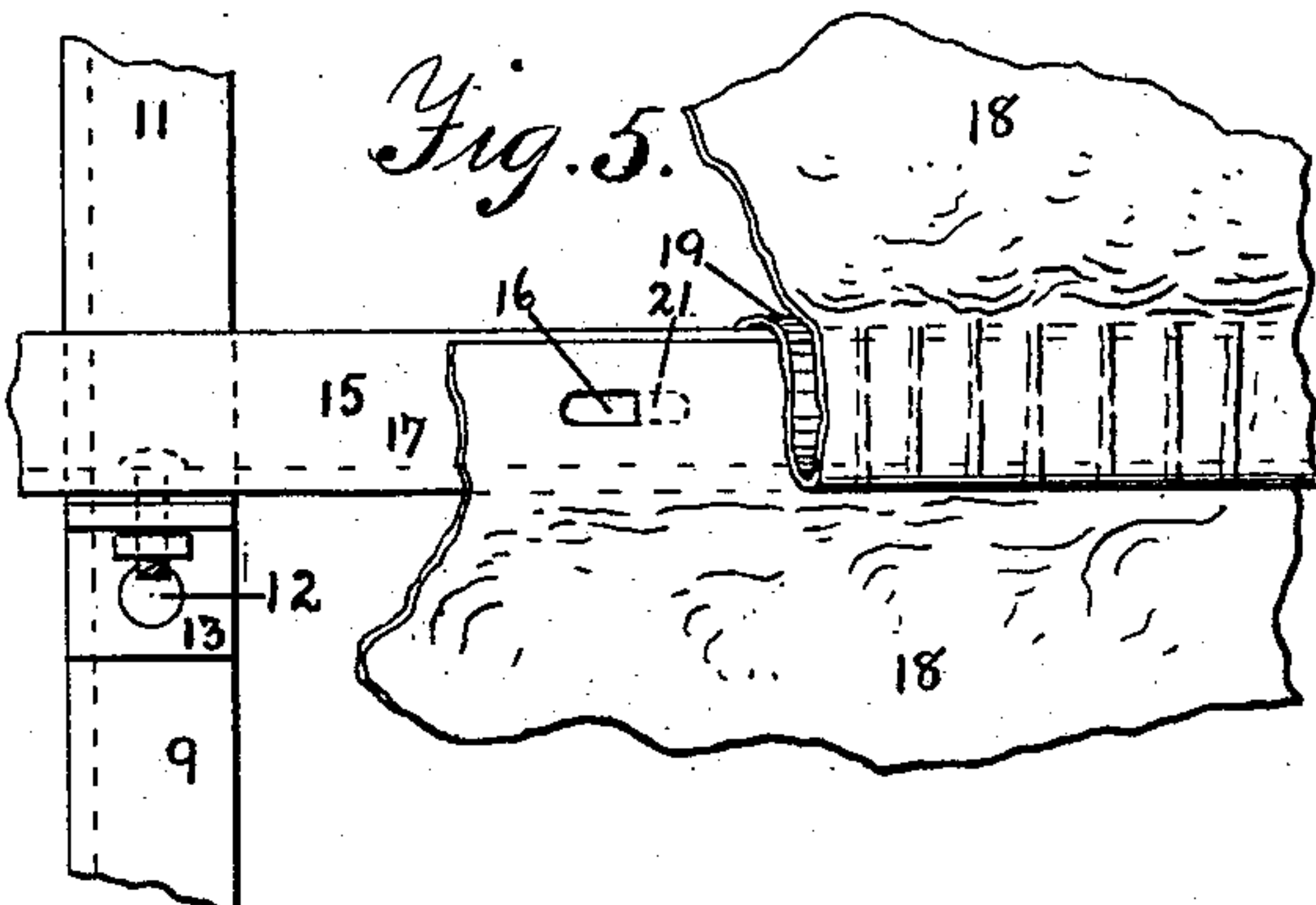
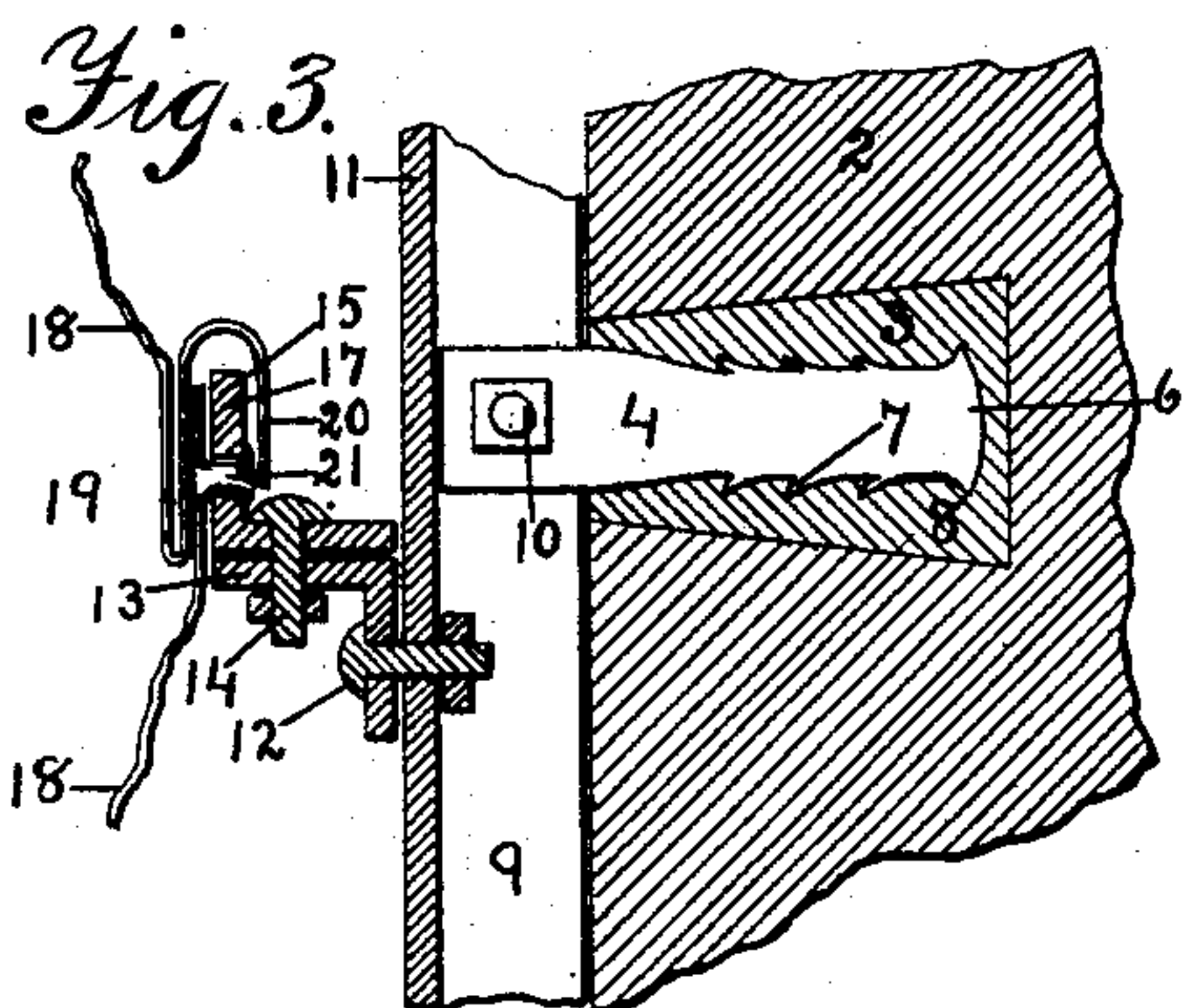
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2 Sheets—Sheet 2.

P. A. DESLAURIERS.
MEANS FOR SECURING SHEET METAL FRONTS TO THE
WALLS OF BUILDINGS.

No. 489,467.

Patented Jan. 10, 1893.



Witnesses.
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UNITED STATES PATENT OFFICE.

PHILIP A. DESLAURIERS, OF ST. PAUL, MINNESOTA.

MEANS FOR SECURING SHEET-METAL FRONTS TO THE WALLS OF BUILDINGS.

SPECIFICATION forming part of Letters Patent No. 489,467, dated January 10, 1893.

Application filed May 5, 1892. Serial No. 431,875. (No model.)

To all whom it may concern:

Be it known that I, PHILIP A. DESLAURIERS, of St. Paul, Ramsey county, Minnesota, have invented certain Improvements in the Means for Securing Sheet-Metal Fronts to the Walls of Buildings, of which the following is a specification.

My invention relates to improvements in the means for connecting sheet metal fronts to the walls of buildings; its object being to provide means for supporting the front, and for making a solid backing for the same.

To this end my invention consists in securing anchors in the face of the wall either by building them therein with the construction of the wall, or by drilling dove tail sockets into the face of the wall and inserting the anchors of dovetail or barb shape therein, filling the space around the anchor with lead or sulphur, or other suitable material to secure the same firmly in place. To these anchors I bolt a series of vertical angle bars, and to these bars transverse series of angle bars, thus forming an open work frame. The bars of the second series are provided with slotted openings to receive inturned lips on the sections of sheet metal forming the front, the sections also interlocking with each other. The space between the front and the wall may then be filled in with any suitable material, such as cement, making a solid backing and lateral support for the front.

My invention further consists in the specific construction and combination hereinafter described and particularly pointed out in the claims.

In the accompanying drawings forming part of this specification. Figures 1 and 2 represent portions of a wall, having anchors built therein, also the manner of securing the angle bars to the anchors and to each other, and the sheet metal sections to the second series of bars, also illustrating the filling material which may be placed between the front and the wall. Figs. 3 and 4 are similar views illustrating the method of securing the anchors in a wall after its erection; Figs. 5 and 6 are front elevations of the same; Fig. 7 is a vertical, sectional detail showing the manner of constructing and supporting a sill; Fig. 8 is a horizontal section of a column or pilaster; and Figs. 9 and 10 are details of modified

means for attaching the sheet metal sections to the frame.

In the drawings 2 represents the brick or stone wall of the building to which it is desired to apply the sheet metal front. Into this wall as shown in Figs. 3, 4, 7 and 8 are drilled dovetail holes or sockets 3 to receive the anchors 4 and 5. These anchors are formed preferably with an enlarged inner head 6, either with or without the barbs, or lateral projections 7. After the anchor is inserted, the socket is filled in around it with any suitable material 8, such as lead or sulphur. Where the front is to be applied to a building in course of construction, anchors with a right angled bend 27, are built in the wall, as shown in Figs. 1 and 2. To the anchors is secured the frame for supporting the sheet metal front, made preferably of two series of angle bars bolted together. First, the series of vertical angle bars 9 is connected to the anchors by bolts 10. To the outer web 11 of these bars, which stand in a plane parallel with the face of the wall, are secured by means of bolts 12, the angle iron clips or brackets 13, to which are secured by bolts 14 the horizontal angle bars 15, having at intervals longitudinal slots 16 in their vertical webs 17, which also stand in a plane parallel with the face of the wall. As shown in Figs. 3 and 5 the lower edge of the sheet metal sections 18 is formed with a double fold 19, the inner edge 20 of which hooks over the upwardly projecting web 17 of the horizontal angle bars 15. While the upper edges of the sections are formed with inturned lips 21 adapted to be passed through the slots 16 and bent around against the inner face of the bar, so as to clasp the same and hold the sheet in place.

In the construction shown in Figs. 4 and 6, the lips 21 are formed upon the lower projecting edge 22 of the sheet, while the upper edge of the sheet beneath is held in the fold of the sheet above.

In constructing the sill, as shown in Fig. 5, a supporting frame A may be bolted directly to the vertical angle bars, and upon this the sheet metal sill 23 secured, its lower edge being locked to the horizontal angle bars beneath. Similarly in forming a collar or pilaster as shown in Fig. 8, a frame B is bolted

to the vertical angle bars 11, the column being thus formed with side sheets 24 having interlocking edges, and the face sheets 25 locking upon the same and being secured to the frame B by means of the intumed lips 21 of the sheets, engaging the slots 26 in the frame.

In Figs. 9 and 10 I show modified constructions of means for connecting the front to the frame. As shown in Fig. 9, in place of the horizontal angle bar, I use a flat bar 28 secured by means of bolts 29 to the vertical angle bar 9. Upon this bar 28 at intervals between the vertical bars, I secure sheet metal clips 30, with over hanging lips 31 under which the upper edge of the sheet 18 is slipped and held, the hook 20 on the lower edge of the sheet above, passing back of the bar 28 and clips 30. As shown in Fig. 10 the horizontal angle bar 15 is fitted with sheet metal clips 32 having a fold 33 engaging the horizontal web of the bar, the clips being bent upward and lying against the face of the vertical web 17. A fold or lip 34 upon the upturned part of the clip serves to engage and secure the upper edge of the sheet 18, the fold 20 of the sheet above hooking over the clips, as in the construction shown in Fig. 9.

In order to more fully secure the sheet metal front to the building as the work progresses, in some cases I prefer to fill in the space between the front and the wall with concrete or other suitable material, thus making a solid backing for the sheet metal as shown in Fig. 1 of the drawings. Where the front is applied to the building in process of construction, the frame is placed in position and properly stayed, the sections of the front being then secured to it, and the building wall carried upward at the same time, and the anchors secured in place, and the space between the wall and front filled, as the work progresses.

I claim—

1. The combination with the wall, of the series of anchors secured therein, the series of angle bars having their faces in a plane parallel with the face of the wall and connected to said anchors, separate angle plates connected to said first angle bars, and the sheet metal front secured to said last named angle plates, substantially as described.

2. The combination with the wall, of the anchors secured thereto, the series of angle bars connected to said anchors having slotted openings therethrough, and the sheet metal sections severally connected to said bars by means of lips intumed from said sheets and hooked through said slots, substantially as described.

3. The combination with the wall, of the anchors secured therein, the series of vertical angle bars secured to said anchors, the series of horizontal angle bars secured to the said vertical angle bars, and provided with longitudinal slots in their vertical webs, and the sheet metal sections provided with lips hooked into said slots, substantially as described.

4. The combination with the wall, of the horizontal bars supported upon the face thereof, and provided with openings therethrough, and the sheet metal sections provided with lips hooked into said openings, substantially as described.

5. The combination with the wall, of the series of angle bars supported thereon, having openings through their vertical webs, the sheet metal sections having lips engaging said openings, and interlocking devices upon the edges of adjacent sheets, substantially as described.

6. The combination with the wall, of the series of angle bars secured upon its face, and the sheet metal sections severally secured to said angle bars, and interlocking with each other, substantially as described.

7. The combination with the wall, of the frame secured upon the face thereof, and the sheet metal sections severally secured to said frame and interlocking with each other, substantially as described.

8. The combination with the wall, of the open work frame formed of the two series of vertical and horizontal angle bars and intermediate angle bar clips or brackets, and secured to the face of the wall, the sheet metal front secured upon said frame, and a suitable filling between said front and said wall, substantially as described.

9. The method of constructing a building with a sheet metal front, consisting of first placing the front supporting frame in position, then building the wall behind and securing the frame anchors in said wall, and at the same time building up the front by securing the sections to said frame.

10. The method of constructing a building with a sheet metal front, consisting of first placing the front supporting frame in position, then building the wall behind and securing the frame anchors in said wall, and at the same time building up the front by securing the sections to said frame, and filling the open space between with suitable material.

In testimony whereof I have hereunto set my hand this 22d day of April, 1892.

PHILIP A. DESLAURIERS.

In presence of—

T. D. MERWIN,
H. S. JOHNSON.