

(No Model.)

3 Sheets—Sheet 1.

C. D. PRUDEN.
SHEET METAL BUILDING FRONT.

No. 483,163.

Patented Sept. 27, 1892.

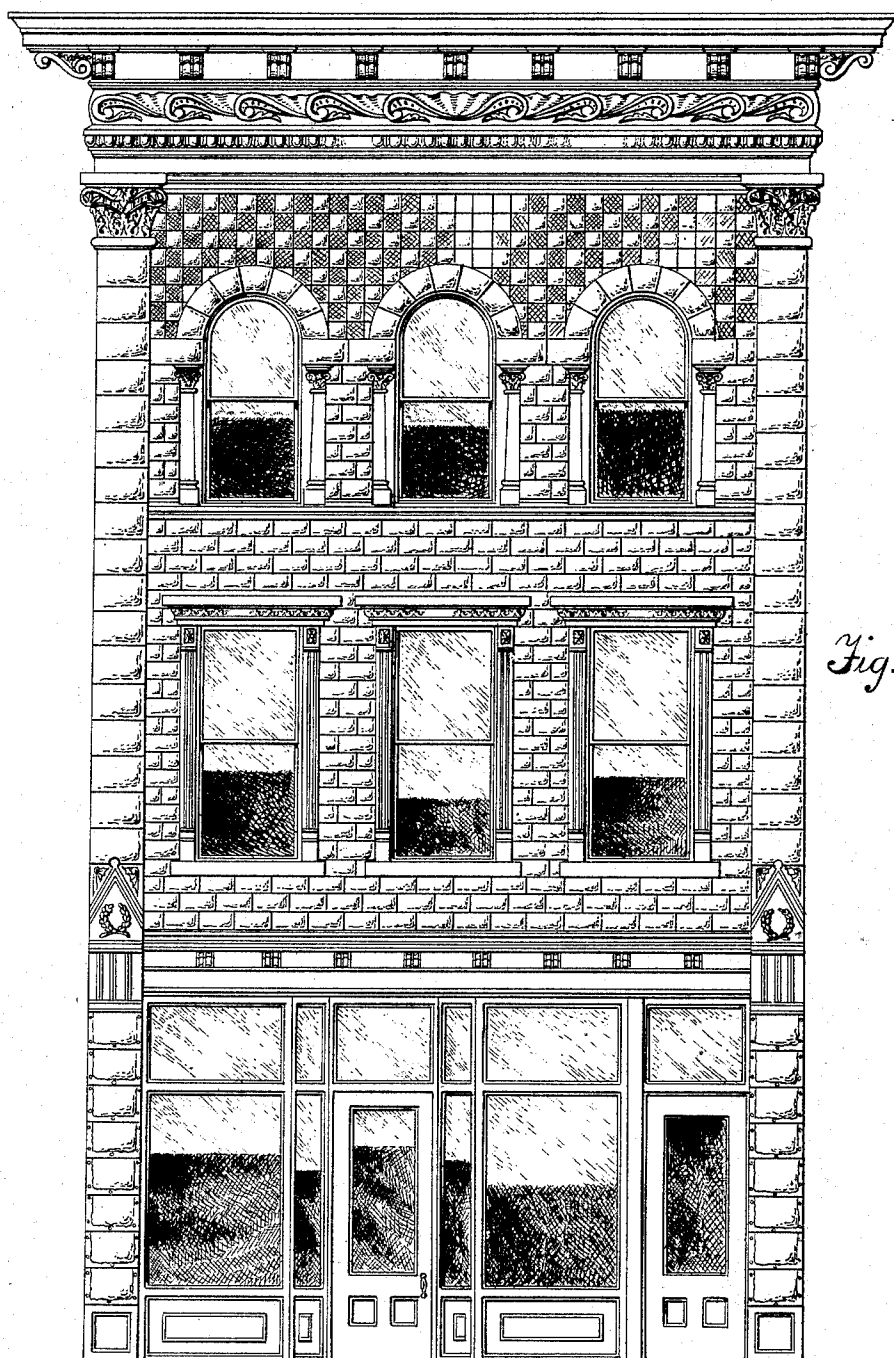


Fig. 1.

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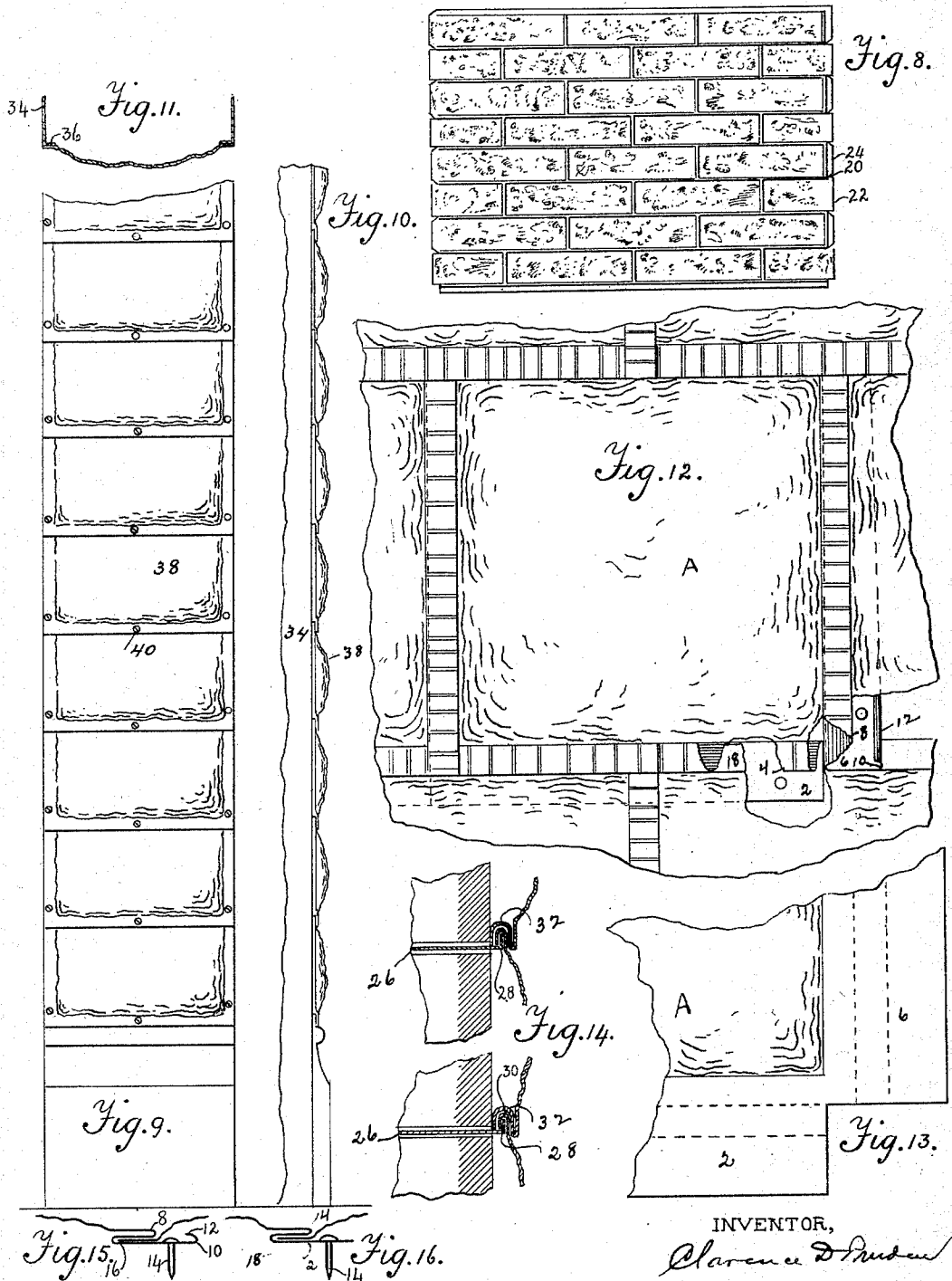
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3 Sheets—Sheet 3.

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UNITED STATES PATENT OFFICE.

CLARENCE D. PRUDEN, OF ST. PAUL, MINNESOTA.

SHEET-METAL BUILDING-FRONT.

SPECIFICATION forming part of Letters Patent No. 483,163, dated September 27, 1892.

Application filed January 5, 1892. Serial No. 417,077. (No model.)

To all whom it may concern:

Be it known that I, CLARENCE D. PRUDEN, of St. Paul, Ramsey county, Minnesota, have invented an Improved Sheet-Metal Building-Front, of which the following is a specification.

The object of my invention is to provide a sectional sheet-metal cover or front for the wall of a brick or wooden building, the sections of which can be readily secured upon the face of the wall and interlocked each with the other, so as to form a weather and fire proof covering therefor without the use of solder or rivets.

To this end my invention consists in providing sections or sheets of the metal stamped or otherwise formed to represent blocks of stone, brick, &c. The edges of the sheets are then folded over, so as to form overlapping locks, which secure the sheets firmly together. The horizontal joints between the sheets are lap-joints, and the vertical joints have conductors underneath formed by the folds of the sheet to carry any water which may be driven into the joint downward and outside of the sheet beneath.

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

In the accompanying drawings, forming part of this specification, Figure 1 represents a complete sheet-metal front, the several panels or sections of which are imitations of independent blocks of stone. Fig. 2 is a partial front elevation of a similar but modified construction of front. Fig. 3 represents an enlarged vertical section of the same, taken on line E F of Fig. 2, showing the manner of securing the sheets or sections to the building. Fig. 4 is a horizontal cross-section of Fig. 2, taken on line A B, showing the vertical lock-joints of the sheets or sections. Fig. 5 is a similar horizontal cross-section of Fig. 2, taken on line C D. Fig. 6 is a detail plan view of a single section or panel in imitation of a block of picked stone. Fig. 7 is a longitudinal section of the same shown secured to the building and interlocked with the adjacent sections or panels. Fig. 8 represents a sheet or panel formed in imitation of a plu-

ality of rock-faced bricks. Fig. 9 represents a front elevation of a column faced with the metallic sheets; Fig. 10, a side elevation of the same, and Fig. 11 a horizontal cross-section of one of the sheets. Fig. 12 is a detail elevation of a portion of a front, parts of the sheets being broken away to show the manner of interlocking the same. Fig. 13 represents a detail of a portion of a blank sheet before its edges are folded, the lines of the folds being indicated by dotted lines. Fig. 14 is a sectional detail illustrating the manner of securing the sheets to a brick front without the use of nails. Fig. 15 shows conventionally one of the vertical joints or locks, and Fig. 16 similarly shows the form of a horizontal joint or lock.

The sheets or sections A of which the front is constructed are generally of rectangular form, the lower right-hand corner having a right-angled notch, as shown in Figs. 6 and 13. The lower edge 2 is then formed with a double fold 4, (see Fig. 16,) the edge of the sheet extending below the fold, and the right-hand edge or end 6 is formed with a similar double fold 8, the projecting edge 10 being folded back upon itself to form the hem 12, as shown in Fig. 15. The edges of this notch at the lower right-hand corner are parallel, respectively, with the edges of the section and at such distance therefrom that the inner bend of the double fold along the vertical edge of the section aligns with the vertical edge of the notch, while the inner bend of the double fold at the bottom of the section extends approximately its width above the horizontal edge of the notch.

The main body of the sheet is given any desired ornamentation to represent, for example, rock-faced brick or rough or picked stone, as illustrated in the various figures of the drawings. Where the sections are formed with the locks, as above described, they are applied one at a time to the building, commencing at the upper left-hand corner and working toward the right, the edges being secured to the front by means of nails 14, and the straight edge 16 of each successive sheet being slipped into the fold 8 of the preceding sheet. Another row of sections is then arranged beneath the first, so as to break the

joints, the upper edge 18 of each section being slipped up under the fold 4 of the upper sections and the lower and right-hand edges secured by means of nails. It will thus be
 5 seen that the upper sheets overlap the lower, so as to carry off upon them any moisture, and the fold or the hem 12 serves as a conductor underneath the vertical joint to carry any moisture which enters through it downward
 10 onto the sheet below into the outer bend of the double fold at the bottom of the adjacent section overlapping the conductor, whence it drains out at the end of the fold, thus making the joint practically water-tight. Another
 15 advantage of this construction is that the overlapping edge of that portion of the upper section forming the conduit is held firmly in the fold of the adjacent section. This protects it and prevents it from rattling in the
 20 wind, as is the case when the projecting edge is exposed and unsecured.

In making up the front the other ornamental parts—such as cornices, moldings, and pilasters—are slipped into place, interlocking
 25 with the sections or other ornamental parts, as shown best in Fig. 2, where the horizontal lap-joints are clearly shown, and also as shown in Fig. 4, where the column 19 and pilaster 21 are first secured in place, and the
 30 intermediate panel or section 23 afterward slipped vertically in place, entering the locks of the column and pilaster. In this method of construction all of the members or parts of the front can be secured upon the face of the
 35 wall and interlocked, the locks of the sections first secured to the wall firmly holding the other sections afterward slipped in place, and into engagement with them, so as to dispense with the necessity of riveting to hold
 40 them securely, and the overlapping of the joints dispenses with the necessity of soldering them.

Where the sheet or section is formed, as shown in Fig. 8, to represent a plurality of
 45 rock-faced bricks, the ends are provided with notches or slits 20 at the joints between the tiers of brick, the ends 22 of the half-bricks on one sheet overlapping those on the adjoining section and the ends 24 of the whole
 50 bricks interlock with those of the other section.

Where the sheets or sections are to be secured to a brick surface or front, I prefer to secure them thereto by means of anchors 26,
 55 laid between the brick in the ordinary manner and their projecting ends being provided with upturned hooks 28. The upper edges of the sheets are then formed with underturned hems or folds 30, which will hook over and
 60 secure the sheet to the anchors. The fold 32 of the under edge of the sheet above, being larger than the fold 30, will inclose it, as shown in Fig. 14, the body of the sheet overlapping that of the one beneath. With this
 65 method of interlocking the sheets are applied

to the building, beginning at the bottom and proceeding upward.

In facing a column, as shown in Figs 9, 10, and 11, the plain sheets 34 are arranged upon the sides of the column, with their front edges
 70 formed with a right-angled turn 36 to overlap the corner of the column. The sheets 38 are then secured upon the face of the column, as by means of nails or screws 40, the upper sheets overlapping the lower in the way of
 75 wooden sidings or shingles.

I claim—

1. A rectangular sheet-metal wall-section having a right-angled notch in one of the lower corners, the edges of the notch being
 80 parallel with the edges of the section, the portion of the section above the notch being formed with a double fold near the edge to receive the edge of the adjacent section, the inner bend of the fold being approximately in
 85 line with the vertical edge of the notch, the edge of the section being outturned to form a water-conduit with the inner bend of the fold, and the inner bend of the fold at the bottom of the section extending above the upper edge
 90 of said notch.

2. The sectional sheet-metal wall-covering having horizontal and vertical joints, the lower edge of each section being secured to the wall, a double fold or return-bend being
 95 formed in the section just above the edge to receive the upper edge of the section beneath, and the vertical joints being formed of a double fold on one section, the edge of said fold being outturned to form with the inner
 100 bend of the fold a conduit for conducting the water entering the joint downward over the section below.

3. The sectional sheet-metal wall-covering having vertical and longitudinal joints both
 105 formed with double folds, the fold on one section receiving the edge of the adjacent section, the vertical joint having a water-conduit extending below the fold of the horizontal joint and overlapping the section below, sub-
 110 stantially as described.

4. The combination, with a vertical brick wall, of upturned hooks anchored in the horizontal joints of the brick, similar sheet-metal sections provided with inturned upper edges
 115 or hems adapted to engage said hooks, and with reverse or double folds at the bottom adapted to engage with and overlap the upper edges of the adjacent lower sheets, substantially as described.

5. In a sectional sheet-metal wall-covering, the combination of rectangular sections connected together by vertical and horizontal joints, consisting each of a double fold on one section, securing the edge of the adjacent section, and a water-conduit underneath the vertical joint, entering the outer fold of the horizontal joint, substantially as described.

6. In a sectional sheet-metal wall-covering, the vertical and horizontal joints connecting
 120

the sections, each consisting of a double fold on one section engaged by the edge of the adjacent section, the inner bend of the vertical fold with the outturned edge of the section forming a water-conduit entering the outer bend of the horizontal fold in the adjacent section, substantially as described.

In testimony whereof I have hereunto set my hand this 30th day of December, 1891.

CLARENCE D. PRUDEN.

In presence of—

T. D. MERWIN,
A. M. WELCH.