(No Model.)

J. WINSLOW.

ROOFING AND SIDING.

No. 481,541. Patented Aug. 23, 1892.

FIG_1_

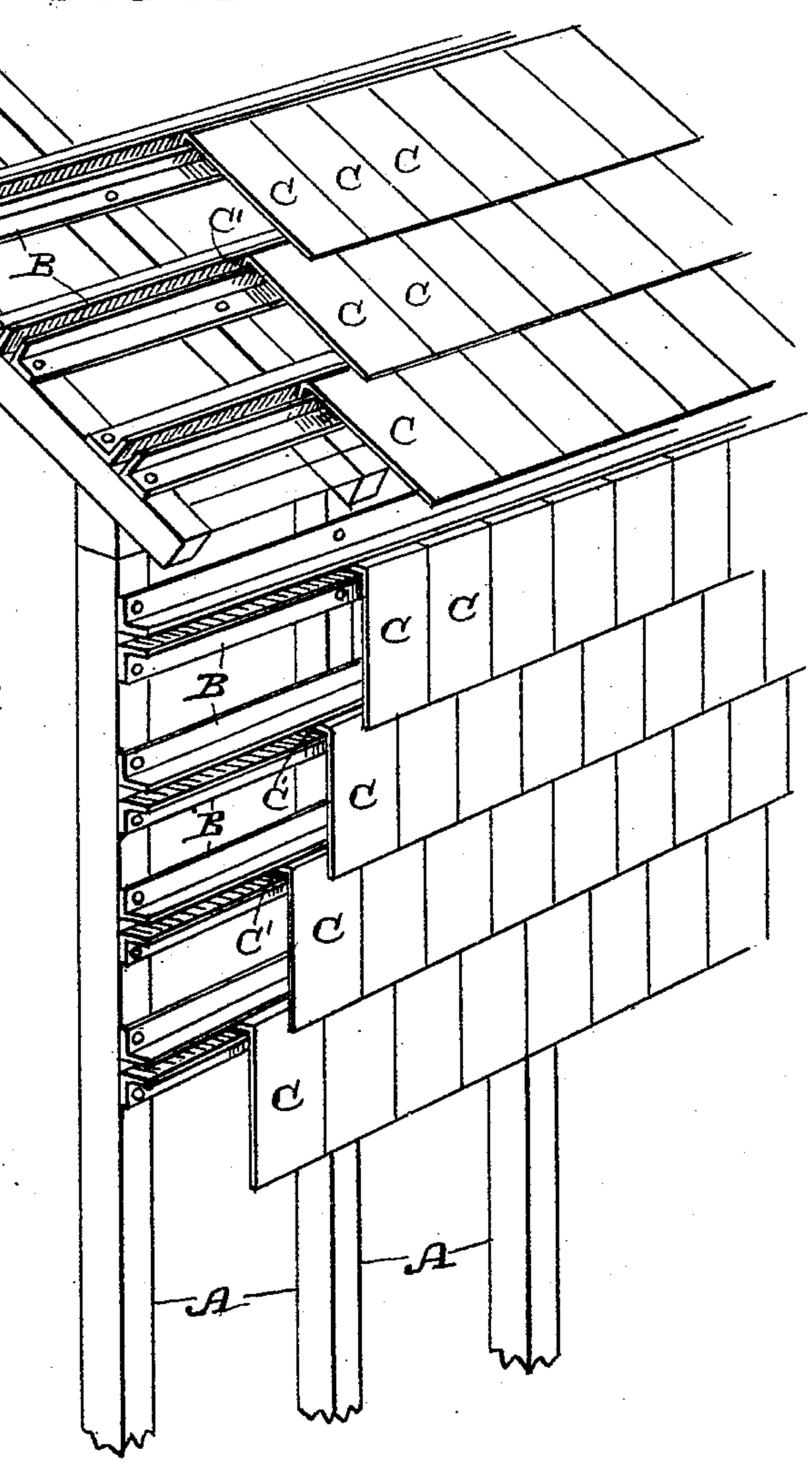


FIG__2

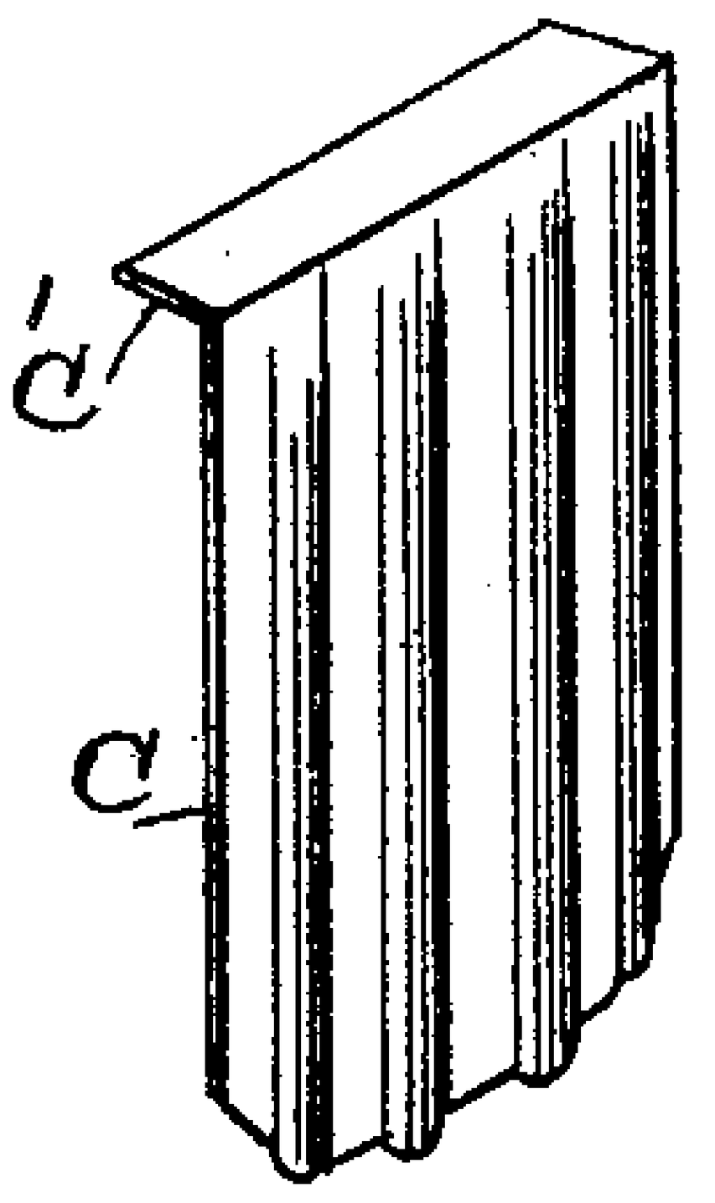


FIG_2ª

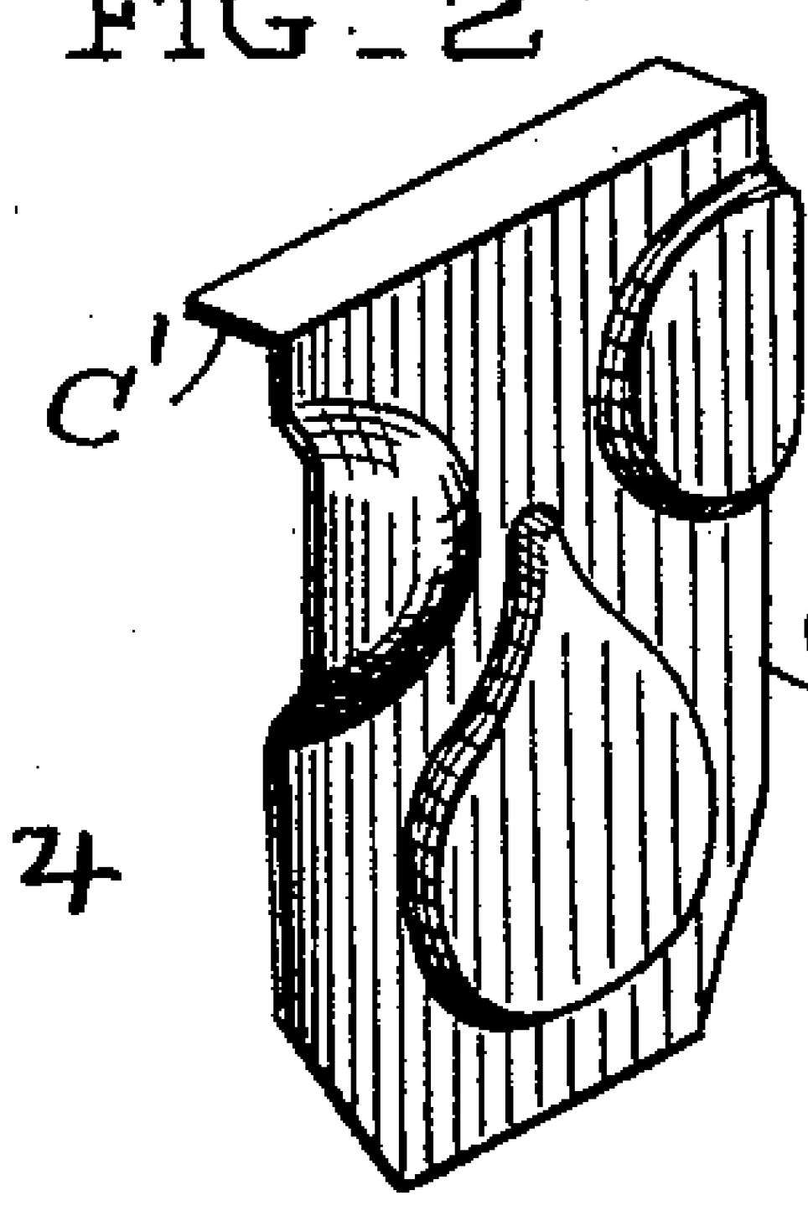


FIG_3

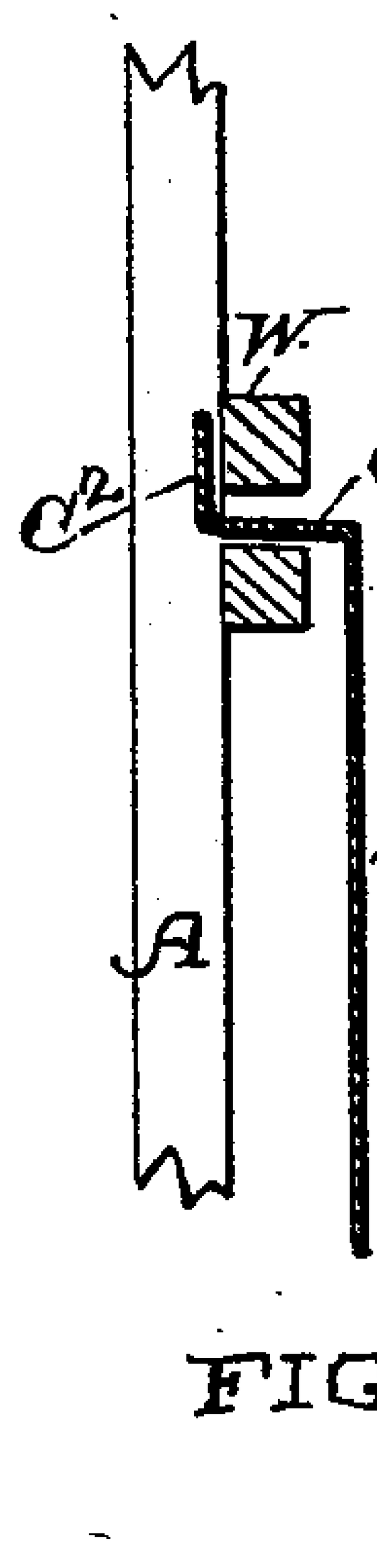


FIG_4

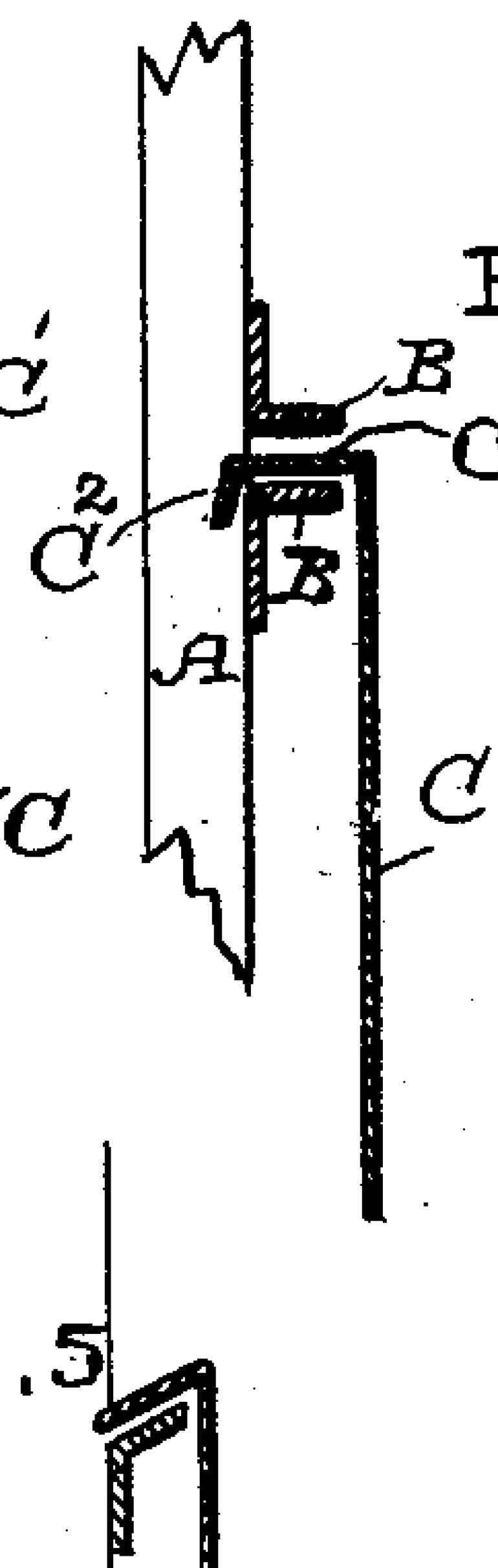


FIG.5

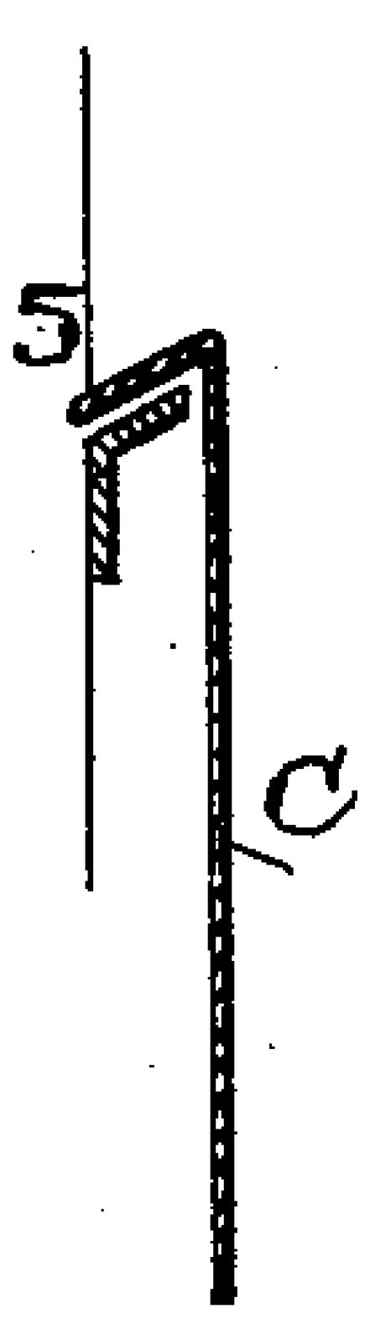


FIG_6

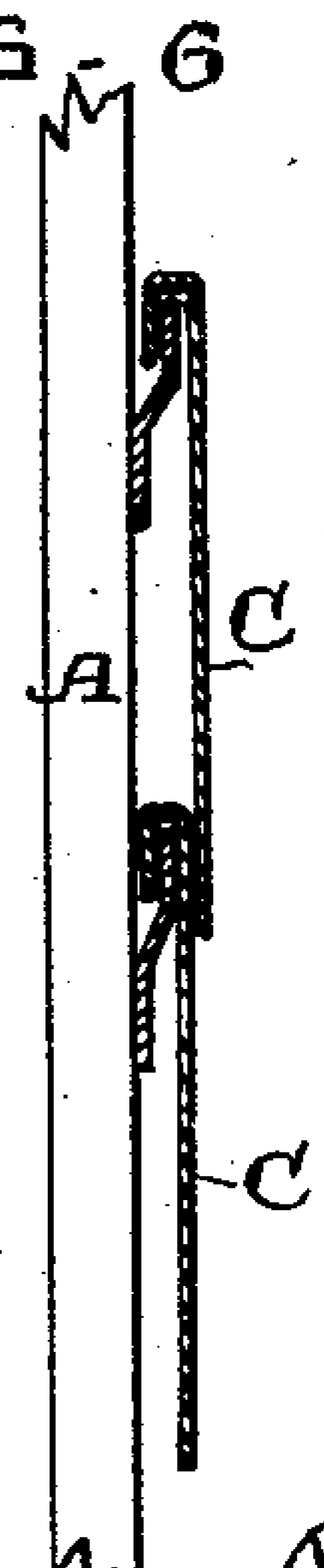
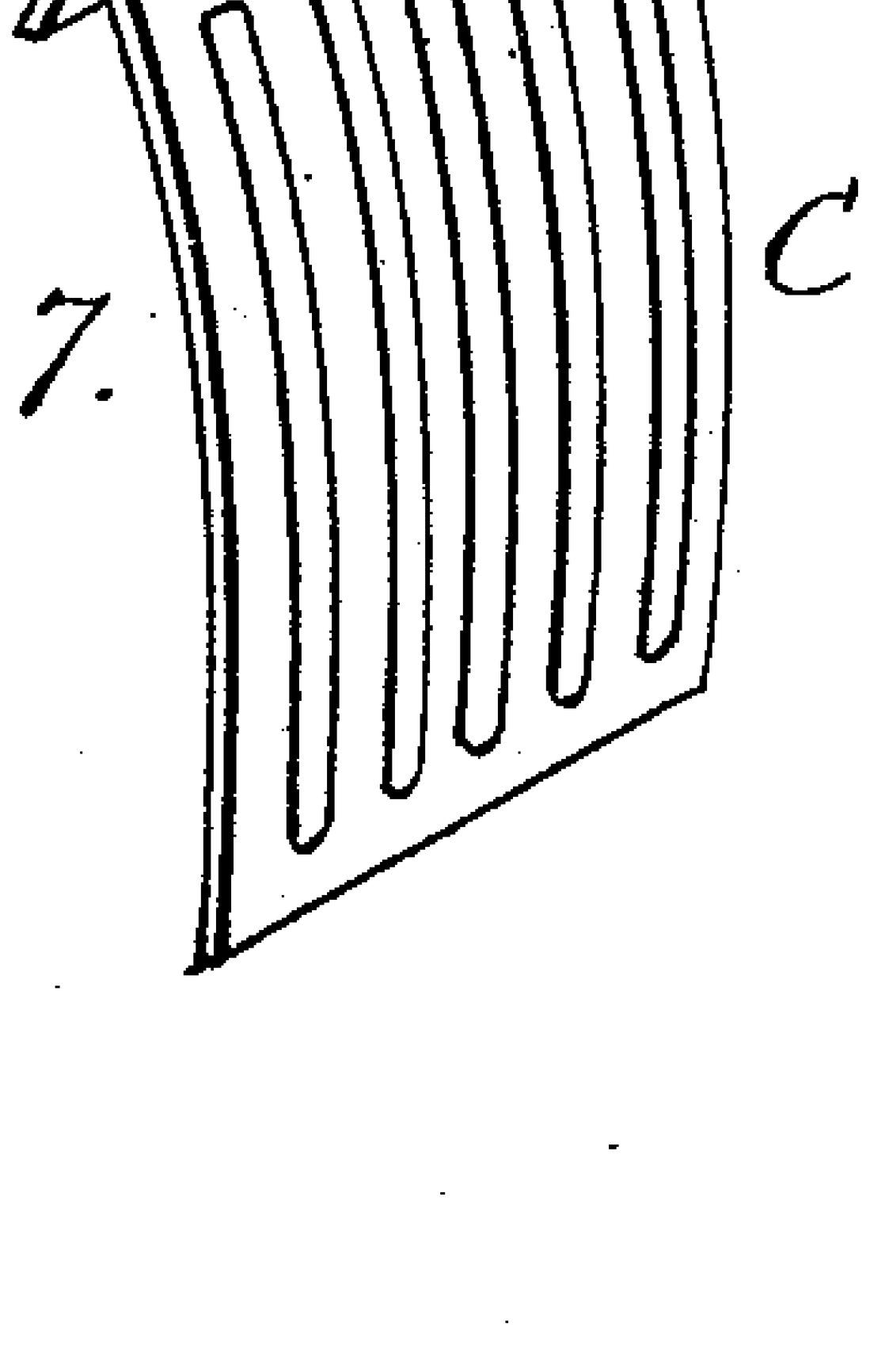


Fig.7.



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UNITED STATES PATENT OFFICE.

JAMES WINSLOW, OF SAN FRANCISCO, CALIFORNIA.

ROOFING AND SIDING.

SPECIFICATION forming part of Letters Patent No. 481,541, dated August 23, 1892.

Application filed June 12, 1891. Serial No. 396,053. (No model.)

To all whom it may concern:

Be it known that I, JAMES WINSLOW, a citizen of the United States, residing in the city and county of San Francisco, State of California, have invented an Improvement in Roofings and Sidings; and I hereby declare the following to be a full, clear, and exact description of the same.

My invention relates to an improvement in covering the roofs and walls of buildings; and it consists of a series of overlapping metallic, glass, composition, or other plates or shingles having raised ribs or configurations, by which the rigidity of the shingle is increased, and a novel means for attaching and securing these plates.

It also consists in certain details of construction, which will be more fully explained by reference to the accompanying drawings, in which—

Figure 1 is a view showing a portion of the side and roof of the building. Figs. 2 and 2^a are views of a single covering-plate, showing its configuration and raised ribs. Fig. 3 is a view showing another form of the same. Figs. 4, 5, and 6 are transverse sections showing different modes of securing the plates in place. Fig. 7 is a perspective view of one of the plates, showing it curved from top to bottom to form the concave inner face.

A A represent the studding and rafters of a building, and B B are angle-iron plates, which are secured to this studding at a sufficient distance apart to receive and support the plates which form the outer coating. These angle-iron plates B are secured to the studding or rafters with the two projecting sides adjacent to each other and leaving a space between them sufficient to receive the bent edge of the plate or shingle which is to be secured to them. These plates or shingles are made of any suitable or convenient shape and material. In the present case I have shown them approximating in form to ordinary wooden shingles, and they are made of galvanized iron or other suitable sheet metal, glass, or of any composition possessing the necessary qualities of rigidity and permanence. In order to give these plates sufficient strength and rigidity to prevent their warping or turning up by heat, either from the weather or in case of an adjacent fire, I have formed them with longitudinal corrugations or ribs, or in some cases with symmetrically-raised figures stamped upon them, these ribs or figures serving to stiffen the plates, and those which are adjacent to the edges being symmetrical in shape will overlap and fit those of the next adjacent plates, thus allowing the plates to lie closely upon each other, while at the same time they are greatly stiffened and strengthened. In stamping and corrugating these plates I also give them a slight curvature from top to bottom, so that they will present a concave face toward the wall of the building. The upper edges of these plates are bent, as shown at C′, so that these bent edges will enter the grooves or channels formed between the adjacent strips B. These portions C′ are bent to a little more than a right angle, so that if the grooves or channels in which they are inserted are at right angles the tendency when the plates are in place will be to draw the lower ends closely down against the side of the building from the next adjacent plates below, thus counteracting still further any tendency of the plates to warp or turn outward.

In some cases it may be advisable to make a second bend C^2 in the upper end of the plate, so that when the body of the plate C lies outside the supporting-strip the portion C′ passes between that strip and the next one above, and the portion C^2 is turned upward beneath the strip above, thus forming a strong and perfect lock to hold the plate in place, as shown in Fig. 3. Another method will be to turn the portion C^2 downwardly, as in Fig. 4, instead of upwardly, so that it will hang upon the supporting-strip like a hook, and the next strip above being fastened down firmly upon the top of this one will hold it in place. Still another form is shown at Fig. 5, where the upper outer edge of the supporting-strip is beveled to an acute angle, and the plate is correspondingly bent to an acute angle to fit over this strip. The next strip above may have its lower outer angle made obtuse and corresponding with the upper outer angle of the one below, to which it fits, thus locking the plate in place in this manner.

Fig. 6 shows the upper edge of the covering plate or shingle bent more sharply upon itself,

so as to hook over the edge of the support, which in this case may be a thin plate nailed to the studding, and having its upper edge bent outward sufficiently to receive the hooked edge of the plate. These plates may be secured either to the angle-iron supports B, first described, or they may be simply fastened to transverse wooden strips W. When secured to the angle-iron strips, the edges of these strips projecting outwardly from the studding or rafters to which they are secured, will support the covering-plates at a certain distance away from the studding or rafters, and if these latter be made of wood it will prevent their being easily ignited in case of an exterior adjacent fire. It also provides an air space for ventilating and other purposes. By these various constructions I am enabled to produce a light, economical, tight, fireproof, and ornamental covering for buildings and roofs.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. The improvement in covering for walls and roofs, consisting of plates having flanges formed with double bends at their upper ends to form a lock for the plates, substantially as herein described.

2. The improvement in covering for walls and roofs, consisting of plates having flanges at their upper ends bent to form the double bends, which form a lock for the plates, said plates having raised portions on the faces, whereby they are stiffened and their overlapping edges fitted upon each other, substantially as herein described.

3. The improvement in covering for walls or roofs, consisting of plates or shingles of concavo-convex form having double bent flanges at their upper ends adapted to form a lock for the plates, said plates having raised portions at their overlapping edges, horizontal strips having edges formed for engagement with the double bent portions and secured to the studding to lock the plates in position, substantially as herein described.

In witness whereof I have hereunto set my hand.

JAMES WINSLOW.

Witnesses:
S. H. NOURSE,
WM. H. CHAPMAN.