

(No Model.)

F. G. CALDWELL.
METAL CEILING.

No. 414,017.

Patented Oct. 29, 1889.

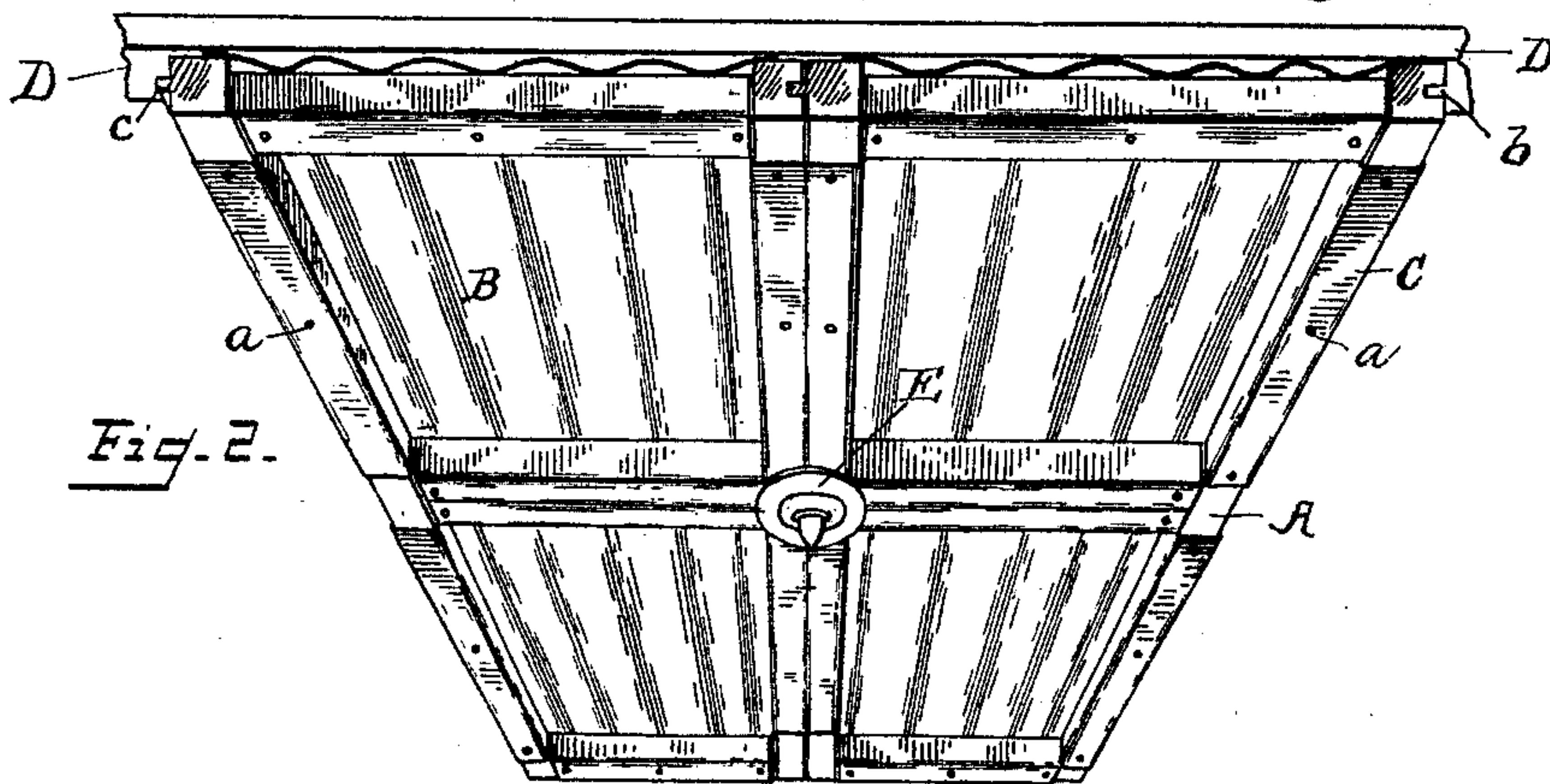
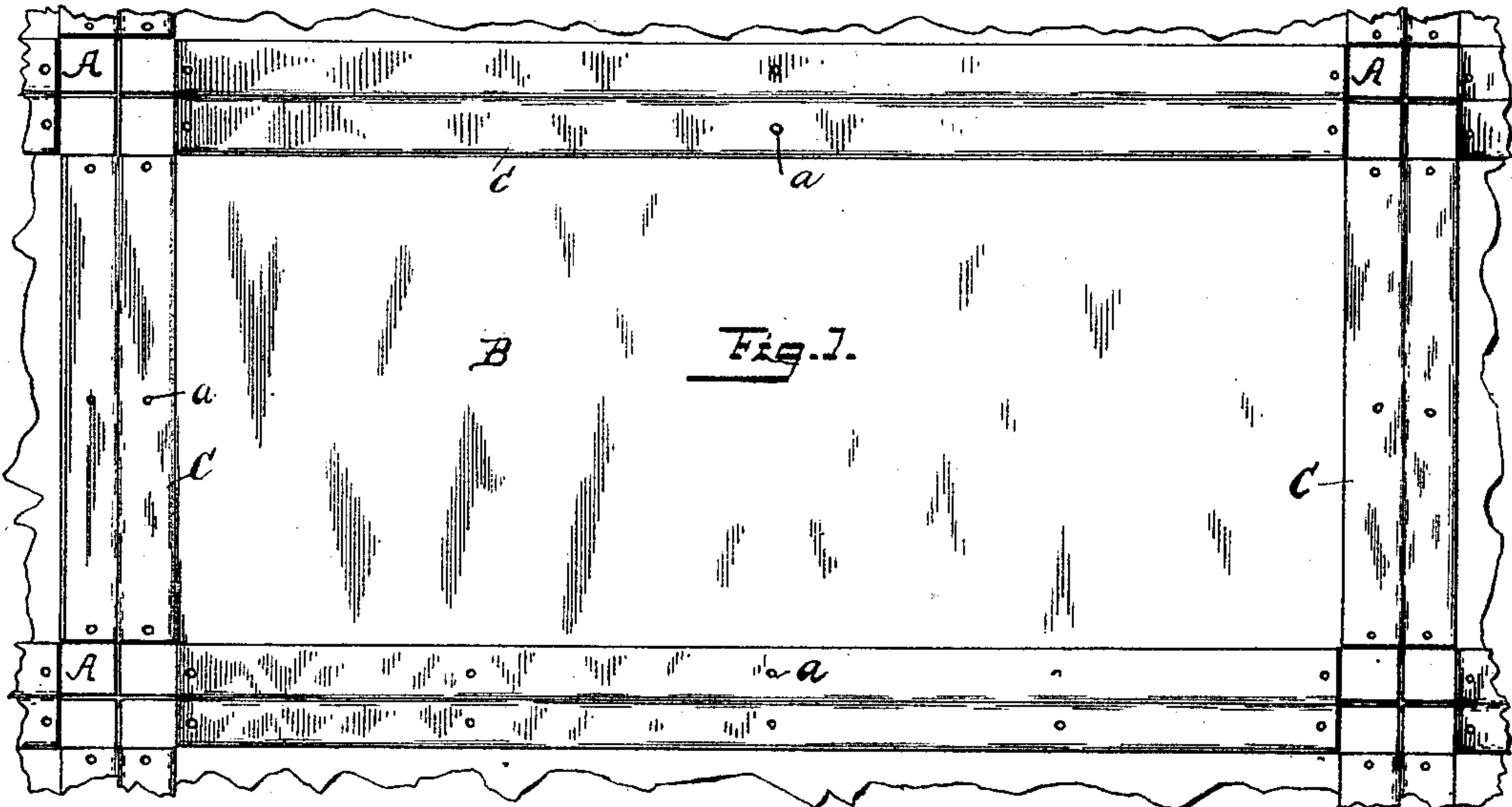


Fig. 3.

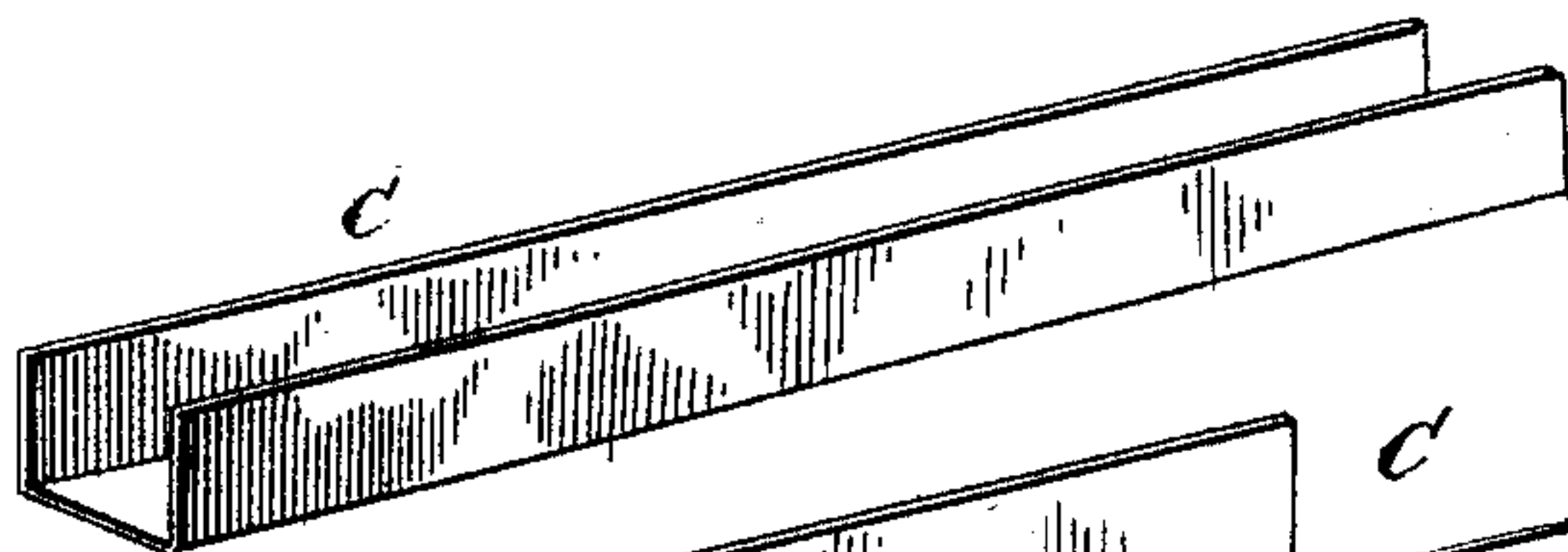


Fig. 4.

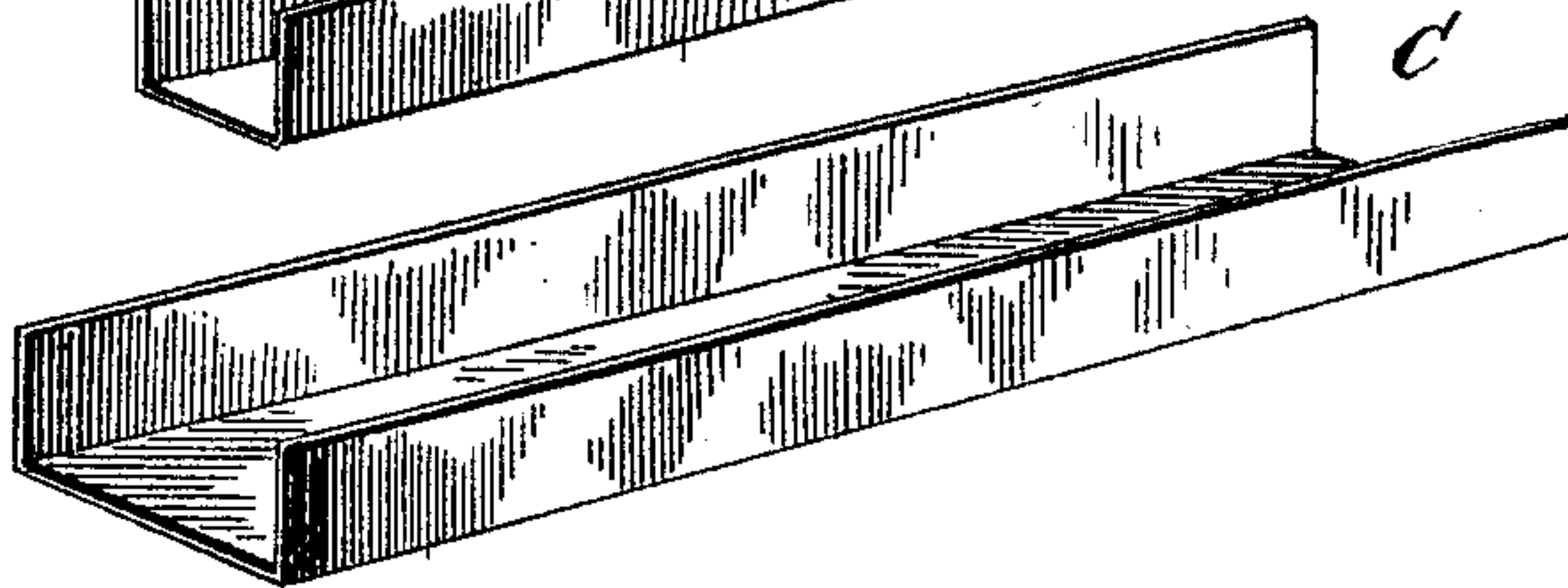
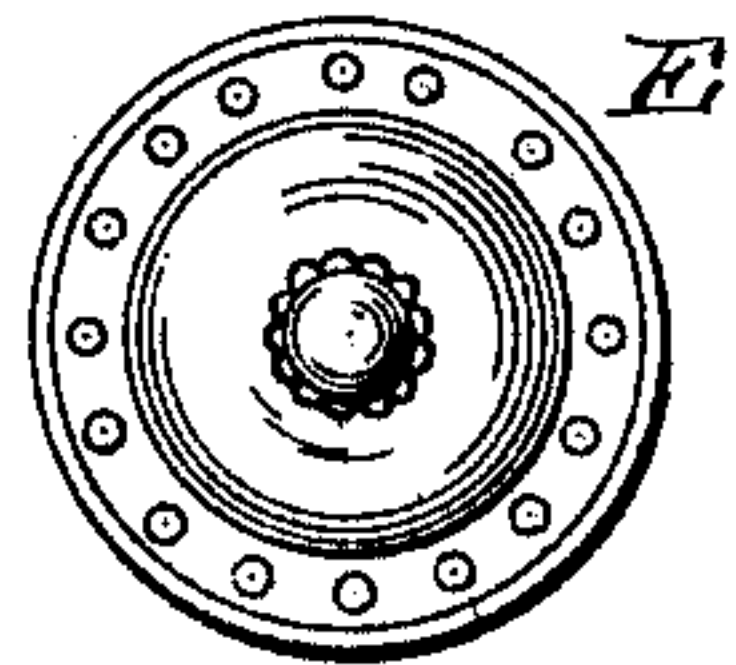


Fig. 5.



Witnesses

J. A. Rutherford.
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UNITED STATES PATENT OFFICE.

FRANK G. CALDWELL, OF WHEELING, WEST VIRGINIA.

METAL CEILING.

SPECIFICATION forming part of Letters Patent No. 414,017, dated October 29, 1889.

Application filed August 22, 1889. Serial No. 321,563. (No model.)

To all whom it may concern:

Be it known that I, FRANK G. CALDWELL, a citizen of the United States, residing at Wheeling, in the county of Ohio and State of West Virginia, have invented new and useful Improvements in Metal Ceilings, of which the following is a specification.

This invention relates to a ceiling-panel composed of a frame of wood or other suitable material and a metallic sheet or plate secured to one side of the frame in such a manner as to produce a light, inexpensive, and durable fire-proof panel for use in the construction of ceilings and partitions, as described in an application filed by me June 8, 1889, Serial No. 313,595. The ceiling described in said application is composed of a number of separate panels, each consisting of an open wooden frame having a metal sheet secured to one side, said panel being preferably secured to the rafters in such a manner that the wooden frames are exposed and cause the ceiling to present the appearance of a series of recesses.

It is the object of my present invention to provide a metallic covering for these exposed wooden frames, thereby adding to the durability and fire-resisting quality of the ceiling, besides affording an opportunity for varying and contrasting the metal employed in the structure, so as to enhance its ornamental appearance.

Metal ceilings have heretofore been constructed by nailing metal sheets to the rafters or to strips of wood previously secured to the rafters, and wooden slabs separately clad with metal sheets have been employed in the construction of ceilings and partitions. These, of course, I do not claim.

My improvement in metal ceilings comprises a panel composed of an open frame, a metal sheet or plate secured to one side of the frame, and a metal cap that covers the exposed side of the frame, as hereinafter more fully described.

In the annexed drawings, illustrating the invention, Figure 1 is a view of one of my improved ceiling-panels provided with caps that cover the exposed portions of the frame.

Fig. 2 is a perspective view of a portion of a metal ceiling composed of my improved reversed panel and attached cap. Fig. 3 is a separate view of a metal cap for covering

one side of the wooden frame to which the metal sheet or plate is secured. Fig. 4 is a view of a cap adapted to cover the contiguous portions of the adjoining frames. Fig. 5 represents an ornament for concealing the meeting corners of the panels and caps.

Referring to the drawings, it will be seen that each ceiling-panel consists of an open frame A, a metal sheet or plate B, secured to the upper side of said frame, and the caps C, that cover the exposed under sides of the frame. These panels are completed at the factory and supplied to the trade in readiness to be put in place without requiring the services of a skilled mechanic.

The ceiling-panels are separately secured to the rafters D by nails or other fastening *a*, passed through the frames and caps. If desired, the edges of the frames may be provided with grooves *b* and tongues *c*, by which the panels can be interlocked. Any suitable ornaments E can be used to cover the joints at the corners of the frames A and caps C, where the panels intersect.

The frames A are preferably made of wood, and may be of rectangular or other shape, as desired, or they may be varied in form to correspond with the shape of the room in which the ceiling is to be constructed. The metal sheets or plates B can be plain or corrugated, as preferred, or they may be ornamented in any appropriate manner.

The caps C are made of metal, and are oblong to correspond to the portions of the frame to which they are to be attached. These caps may be integral with the metal sheet or plate B, as shown in Fig. 1, or they may be separate therefrom, as shown in Figs. 2, 3, and 4. When the metal sheets or plates B are plain, as shown in Fig. 1, it is convenient to form the caps C on the edge of said sheets; but when corrugated sheets or plates, Fig. 2, are employed in constructing the panels it may be more suitable and less expensive to form the caps separately, as shown in Figs. 3 and 4. The caps C may be made of plain or corrugated metal, as preferred, or they may be embossed or ornamented in any suitable manner. By making the sheets or plates B and the caps C of different kinds of metal, pleasing effects may be produced by the contrast of color or luster.

The caps C may each have a breadth, as shown in Fig. 3, sufficient to cover only one bar of the frame, or they may be made sufficiently wide, as shown in Fig. 4, to cover the
5 adjacent bars of the frames placed side by side.

A ceiling constructed from these panels presents the appearance of a series of sunken recesses, which may vary in color, form, and
10 ornamentation, as desired, to produce various pleasing effects. The ceiling is substantially fire-proof, and the panels, being light and easily handled, can be readily applied to their intended use without requiring any but ordi-
15 nary skill.

What I claim as my invention is—

1. As a new article of manufacture, a ceil-

ing-panel composed of an open frame, a metal sheet or plate secured to one side of said frame, and a metal cap covering the ex- 20 posed portion or side of said frame, substantially as described.

2. As a new article of manufacture, a recessed ceiling-panel composed of an open frame and a metal sheet or plate secured to 25 one side of said frame and provided with a cap that covers the exposed side of the frame, substantially as described.

In testimony whereof I have affixed my signature in presence of two witnesses.

FRANK G. CALDWELL.

Witnesses:

W. VARDY,

W. F. PETERSON.