(No Model.)

F. G. CALDWELL.

SHEET METAL PANELING FOR CEILINGS, &c.

No. 524,932. Patented Aug. 21, 1894.

Fig. 1.

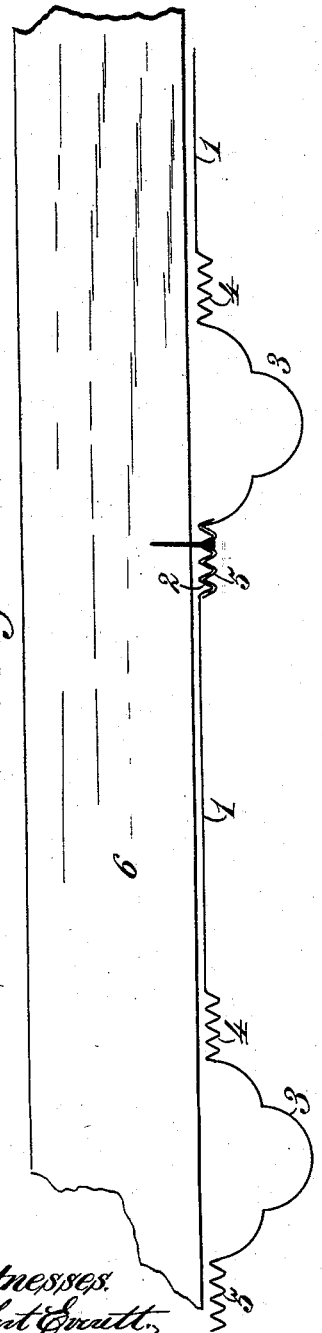
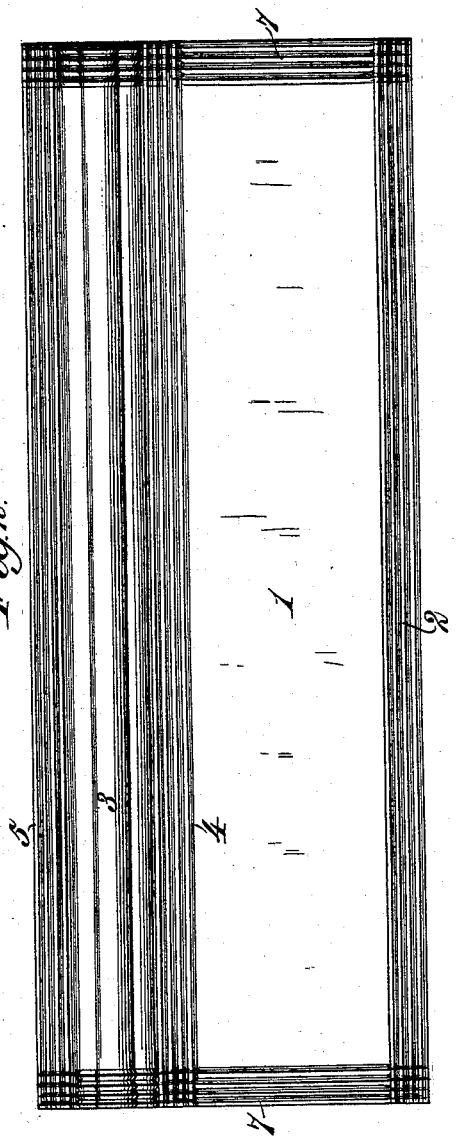


Fig. 2.



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UNITED STATES PATENT OFFICE.

FRANK G. CALDWELL, OF WHEELING, WEST VIRGINIA.

SHEET-METAL PANELING FOR CEILINGS, &c.

SPECIFICATION forming part of Letters Patent No. 524,932, dated August 21, 1894.

Application filed March 31, 1894. Serial No. 505,874. (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 Sheet-Metal Paneling for Ceilings, &c., of which the following is a specification.

This invention relates to sheet metal ceilings, walls, and the like, wherein a series of sheet metal panels and moldings are so assembled and applied as to provide a continuous metallic surface which can be painted, or otherwise decorated or ornamented in any pattern or manner desired for the purpose of presenting a handsome appearance.

In constructing a ceiling or wall of the type alluded to it is very desirable and advantageous to adjust the panels relatively to one another to secure accurate and nice joints and perfect work at comparatively small expense; and it is also desirable in assembling the panels to have them, in a measure interlocked, so that when adjusted to the correct position they will not shift or become disarranged or displaced prior to rigidly nailing or otherwise fastening them to the joist, studding, or wooden, or other foundation. To accomplish this by novel, simple, efficient and economical means is the chief object of my present invention; and to that end it consists essentially in a sheet metal panel having at one edge portion a plurality of parallel corrugations or flutes, and the opposite edge portion formed integral with an arched molding with a flange extension longitudinally corrugated or fluted, and adapted to adjustably fit the corrugated edge portion of another panel.

The invention is illustrated by the accompanying drawings, in which—

Figure 1 is a sectional view taken through two panels which are constructed and assembled in accordance with my invention; and Fig. 2 is a detail plan view of one of the panels.

In order to enable those skilled in the art to make and use my invention, I will now describe the same in detail, referring to the drawings, wherein—

The numeral 1 indicates the body portion of a sheet metal panel of the type designed for ceilings, walls, and the like, in order to produce a continuous metallic surface which is susceptible of being painted or otherwise decorated or ornamented to present the desired handsome appearance.

The body portion of the panel may be struck up, or constructed otherwise to suit the conditions required, and this panel is provided at one edge portion with a plurality of lambdoidal or V-shaped corrugations or flutes 2, of comparatively small dimensions. The opposite edge portion of the panel is formed integral with an ornamental arched molding 3 of any desired or suitable shape in cross-section. The molding is provided along one side with a plurality of lambdoidal or V-shaped corrugations or flutes 4, and along the opposite sides with a flange-like portion which is also corrugated or fluted, as at 5, the same as or similar to the flutes or corrugations 2 and 4.

The corrugations formed and arranged in the manner above described not only impart rigidity to the sheet metal panel and render it stronger and more durable, but they fulfill the conditions required to adjustably assemble the plates and practicably interlock them prior to rigidly nailing or fastening the same to the joist, studding, or wooden or other foundation 6.

In constructing a ceiling according to my invention, the corrugated or fluted flange-like portion 5 of the molding 3 is designed to engage and interlock with the corrugated or fluted edge portion of another panel, as will be understood by reference to Fig. 1. It will be obvious that the corrugated or fluted portions 2 and 5 can be adjusted one upon the other in order to vary the distance between two ornamental arched moldings 3; and that when the desired adjustment has been effected, the interlocking of the corrugations or flutes renders it impossible for the panels to shift or become disarranged or displaced prior to rigidly fastening the panels to the joist, studding, or other foundation. In attaching the panels I preferably drive nails through the overlapping corrugated or fluted portions 2 and 5, as illustrated in Fig. 1.

The sheet metal panel is also provided along the edge or ends which lie at right angles to the corrugated and fluted edge portion 2, with a plurality of lambdoidal or V-

shaped corrugations or flutes 7, which run continuously from the corrugations or flutes 2 to the corrugations or flutes 4, thereby stiffening and strengthening the panel, and enabling other panels to be adjustably fitted thereto in the same manner as the corrugated or fluted portions 2 and 5 are adjustably fitted together.

By the means described, it is possible to accurately fit the panels together and adjust them relatively to one another to secure accurate and nice joints and the correct position of the parts; and, furthermore, the interlocking of the fluted or corrugated portions renders it impossible for the panels to shift or become disarranged or displaced prior to rigidly securing them by nails or other fastening devices. I am thus enabled to materially economize in the construction of a ceiling or wall, while obtaining perfect work; whereas to secure a desirable finish very extensive designs have heretofore been essential.

My invention enables a ceiling of sheet metal to be constructed that combines cheapness with perfect work, while separate or independent moldings are avoided, the cost of manufacture is lessened, the required finish is obtained at a small expense, a perfect and nicely fitting lap joint is obtained, and the panels are adjustable as regards width and length. The corrugated fluted or crimped portion 7 is advantageous in producing perfect laps without buckling, and secures the adjustment as to length. The corrugations, crimps or flutes also form a line of panel work susceptible of being decorated in any manner desired.

The formation of the arched molding integral with the sheet metal panel secures the desired finish and imparts to the sheets that rigidity necessary in work of this kind. The style or pattern of the arched molding is susceptible of any change to meet the requirements of the trade.

The sheet metal panels are constructed of considerable length as compared to their width; but, obviously, they may be of any required or necessary size.

Having thus described my invention, what I claim is—

1. A sheet metal panel having one edge portion provided with a plurality of corrugations or flutes, and the opposite edge portion formed integral with an arched molding having a corrugated or fluted flange extension adapted to adjustably fit the corrugated edge portion of another panel, substantially as described.

2. A sheet metal panel having one edge portion formed integral with an ornamental arched molding, the opposite edge portion having corrugations running parallel with the median line of the molding, and another edge portion having corrugations running at right angles to the molding, substantially as described.

3. A sheet metal panel having one edge portion formed integral with a molding from which extends a flange having corrugations or flutes running parellel with the median line of the molding, and another edge portion formed with sets of corrugations or flutes running at right angles to the corrugations or flutes in the flange of the molding, substantially as described.

4. A sheet metal ceiling composed of a series of contiguous sheet metal panels having one edge portion longitudinally corrugated, and the opposite edge portions formed integral with arched moldings from which extend flange portions having lambdoidal or V-shaped corrugations or flutes running parallel with the moldings, substantially as described.

In testimony whereof I have hereunto set my hand and affixed my seal in presence of two subscribing witnesses.

FRANK G. CALDWELL. [L. S.]

Witnesses:
CHARLES H. COPP,
ROBT. WHITE.