A. J. THORNLEY.

SHEET METAL PANEL.

APPLICATION FILED FEB. 15, 1909.

944,059.

Patented Dec. 21, 1909.

Fig. 1.

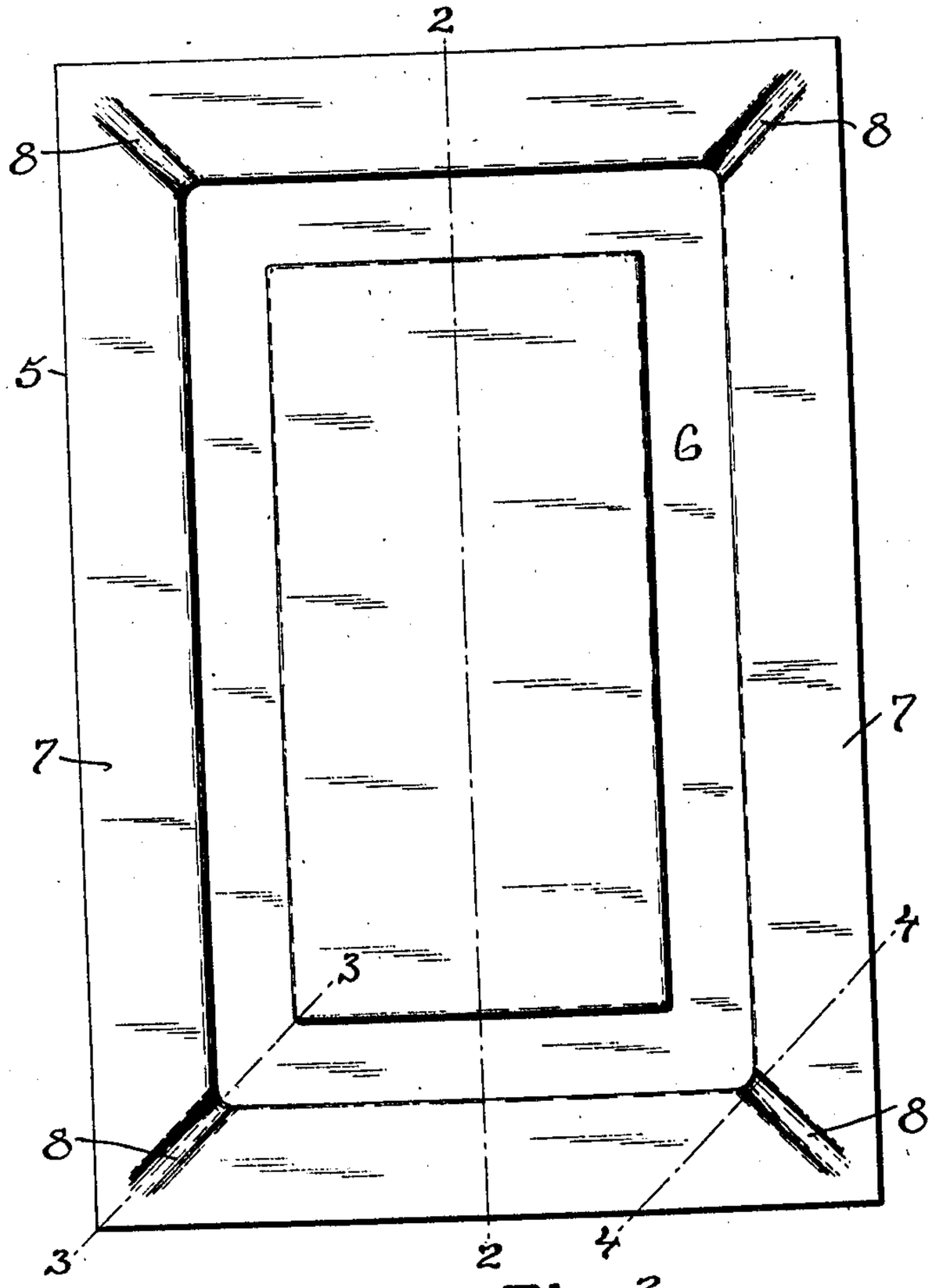


Fig. 2.

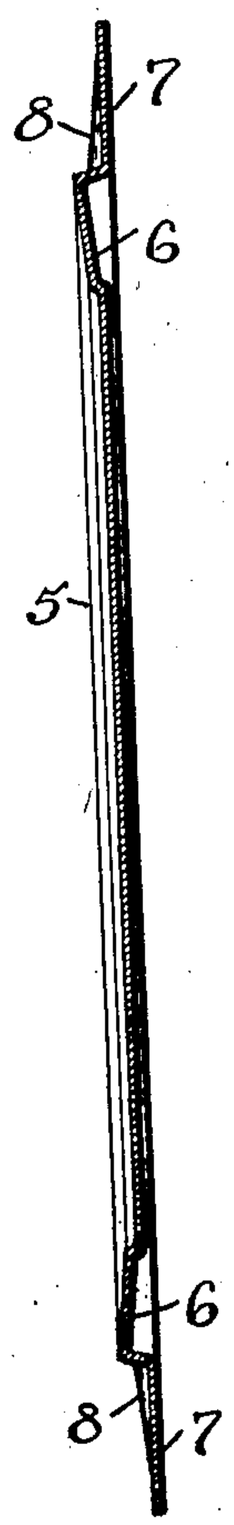
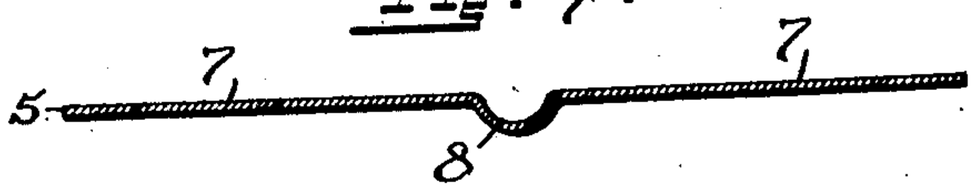


Fig. 3.

Fig. 4.



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SHEET-METAL PANEL.

944,059. Specification of Letters Patent. Patented Dec. 21, 1909.

Application filed February 15, 1909. Serial No. 478,119.

To all whom it may concern:

Be it known that I, ALBERT J. THORNLEY, a citizen of the United States, residing at Pawtucket, in the county of Providence and State of Rhode Island, have invented a new and useful Improvement in Sheet-Metal Panels, of which the following is a specification.

This invention has reference to an improvement in sheet metal construction and more particularly to an improvement in sheet metal panels for lockers, cabinets, furniture, doors or other sheet metal structural work. In the use of sheet metal panels it is extremely essential that the panel should come from the press in a true or flat condition and that the panel should be so constructed that it cannot be readily twisted out of shape. In the construction of the usual form of countersunk sheet metal panels, it has been found in practice that even when the panel is held adjacent the edges in a hydraulic press under a pressure that will almost liquefy the metal of the panel, the metal at the corners of the panel (in forming the countersunk portion of the panel) will draw together or concentrate, causing a high tension of the metal at the corners of the panel. This concentration or high tension of the metal at the corners only of the panel causes the panel, when removed from the press, to twist out of shape or allows the panel to be easily twisted out of shape when handled or when used to form the panels of doors, lockers or similar articles.

The object of my invention is to improve the construction of a sheet metal panel, whereby the panel will come from the press in a perfectly true or flat condition and cannot be easily twisted out of shape.

A further object of my invention is to strengthen the construction of sheet metal panels.

My invention consists in the peculiar and novel construction of a sheet metal countersunk panel, said construction consisting essentially of hollow radial ribs at the corners of the panel and formed integral with the panel, whereby the panel is constructed true in form, is prevented from being twisted out of shape under ordinary conditions and the panel strengthened in construction.

Figure 1 is a face view of my improved sheet metal panel, showing the radial ribs at the corners of the panel. Fig. 2 is a longitudinal sectional view through the panel, taken on line 2 2 of Fig. 1. Fig. 3 is an enlarged detail sectional view taken radially through the corner of the panel on line 3 3 of Fig. 1, and Fig. 4 is an enlarged detail sectional view taken transversely through the corner of the panel on lines 4 4 of Fig. 1.

In the drawings, 5 indicates a sheet metal panel preferably rectangular in shape and constructed to have the countersunk central portion 6 forming the flat border 7 in which, at the corners of the panel, are formed integral the semi-circular hollow radial ribs 8 8, each rib 8 extending radially from the edge of the countersunk portion 6, where it has its greatest depth on the back of the panel toward the corner of the panel to a point approximately one-quarter the distance from the outer corner of the panel, where it merges into the flat border of the panel, as shown in Fig. 3. By this construction the metal which would draw together or concentrate at the corners in forming the countersunk portion of the panel is dispersed and formed into the radial ribs 8 8 (which are formed on a line on which the metal would heretofore concentrate in the usual construction of sheet metal panels), thereby preventing the panel from twisting out of shape, and increasing the strength of the panel.

It is evident that the panel could be elongated or square in form and that the ribs 8 8 could be V or U shape in cross section, without materially affecting the spirit of my invention.

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

1. In a sheet metal panel having a countersunk central portion, means for eliminating the twisting of the panel caused by the metal tending to concentrate at the corners of the panel in forming the countersunk portion of the panel, consisting of forming integral hollow radial ribs at the corners of the panel on a line on which the metal tends to concentrate, said ribs having their greatest depth at the point where the metal tends to have the greatest concentration and gradually diminishing in depth to a point where the metal tends to have the least concentration.

2. A sheet metal panel constructed integral to have the countersunk central por-

tion 6 forming the flat border 7 and the semi-circular radial ribs 8 8 formed on the back of the panel at each corner of the panel, each rib 8 having its greatest depth adjacent the countersunk portion 6 or at the point where the metal has the greatest concentration in forming the countersunk portion 6 and gradually diminishing in depth to a point where the metal has the least concentration in forming the countersunk portion of the panel.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

A. J. THORNLEY.

Witnesses:
ADA E. HAGERTY,
J. A. MILLER.