Nov. 3, 1925.

1,560,436

E. C. STAPLES

SHEET METAL SHELF

Filed June 2, 1925

2 Sheets-Sheet 1

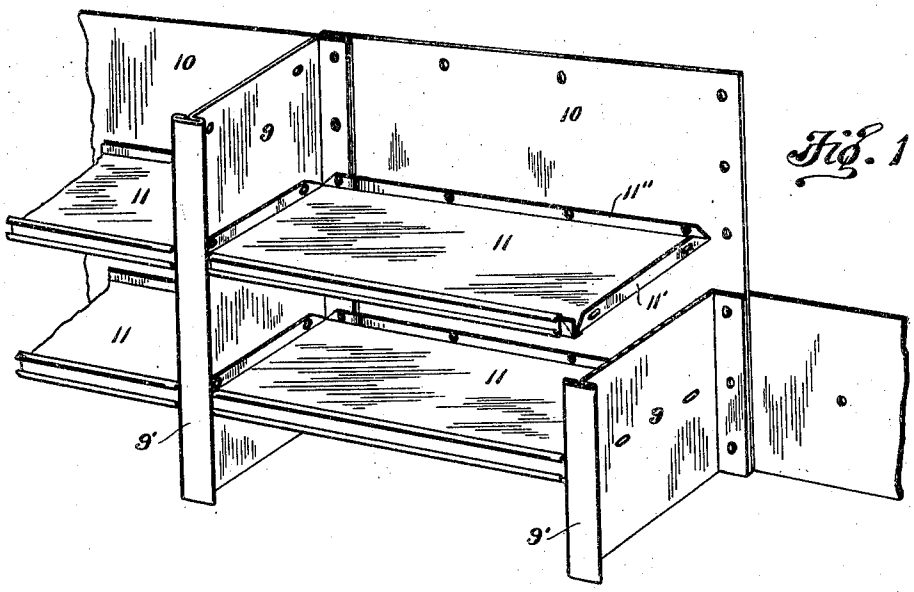
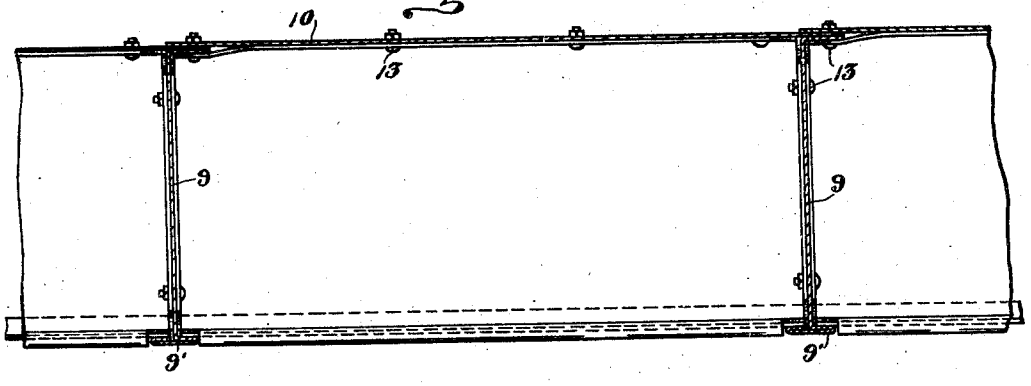


Fig. 1

Fig. 2



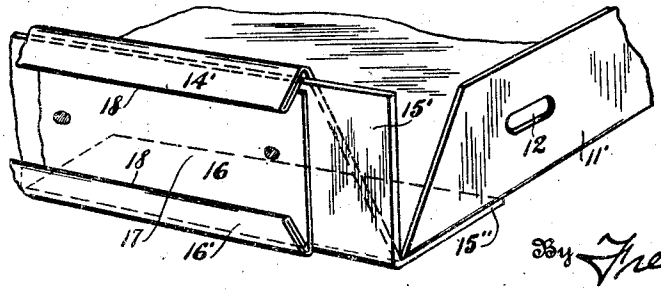


Fig. 3

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Nov. 3, 1925.

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E. C. STAPLES

SHEET METAL SHELF

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2 Sheets-Sheet 2

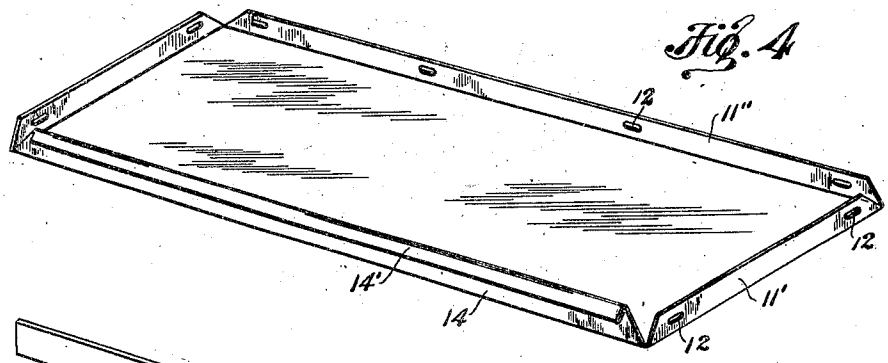


Fig. 4

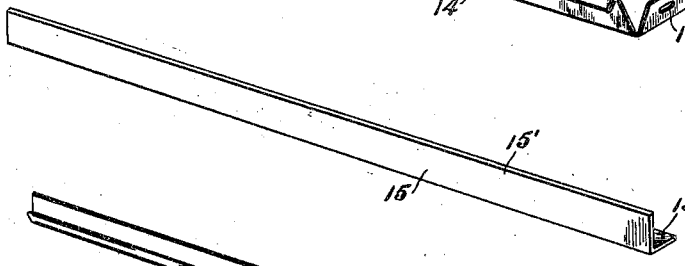


Fig. 5

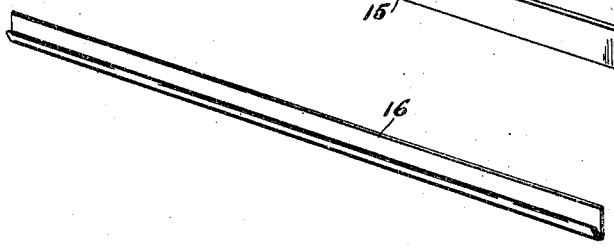


Fig. 6

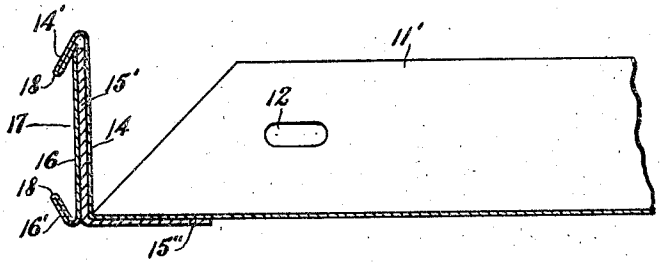


Fig. 7

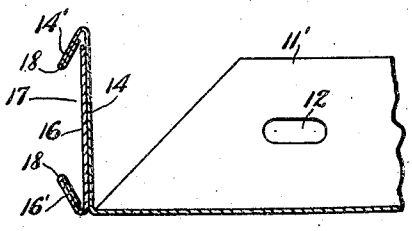


Fig. 8

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Patented Nov. 3, 1925. 1,560,436

UNITED STATES PATENT OFFICE.

EDWARD C. STAPLES, OF CANTON, OHIO, ASSIGNOR TO UNITED ALLOY STEEL CORPORATION, OF NEW YORK, N. Y., A CORPORATION OF NEW YORK.

SHEET-METAL SHELF.

Application filed June 2, 1925. Serial No. 34,356.

To all whom it may concern:

Be it known that I, EDWARD C. STAPLES, a citizen of the United States, residing at Canton, in the county of Stark and State of Ohio, have invented certain new and useful Improvements in Sheet-Metal Shelves, of which the following is a specification.

The invention relates to the construction of shelves made of sheet metal, and the object of the improvement is to reinforce the free edge of the shelf in such a manner as to form a label holder on the face thereof.

When a flange is formed along the free edge of a shelf made of sheet metal to increase the strength thereof, the sheared edge of the flange presents a cutting edge which is dangerous to a user; and when a flanged lip is formed on the edge of such a flange, or on the edge of a strip associated therewith to form a label holder, the sheared edges thereof form cutting edges which are likewise dangerous to a user of the shelf.

The purpose of the present improvement is accomplished by folding the edges of lip flanges which may be formed on the edge of a shelf flange and on the edge of a reinforcing strip which may be secured to the same, inward upon themselves so as to present smooth edges, which not only improves the finish of the shelf front, but eliminates sharp cutting edges therefrom, and also serves to increase the strength of the reinforcement along the free edge of the shelf.

The strength of the free edge of the shelf may be further increased by interposing an angle strip between the flange and the reinforcing strip; which angle strip may be made of a heavier gauge sheet than is required for the shelf, so as to increase the strength of its free edge to any desired degree.

The invention is illustrated in the accompanying drawings forming part hereof, in which—

Figure 1 is a fragmentary perspective view of a tier of shelves embodying the improvement, with parts broken away to show details of construction;

Fig. 2, a plan section of the tier of shelves shown in Fig. 1;

Fig. 3, a fragmentary perspective view showing the corner of the improved shelf with a reinforcing angle strip therein;

Fig. 4, a detached perspective view of the improved shelf;

Fig. 5, a detached perspective view of the reinforcing angle strip which may be used therewith;

Fig. 6, a detached perspective view of the reinforcing strip which may be used with the shelf flange to form a label holder thereon;

Fig. 7, a fragmentary section, showing the use of an angle strip between the shelf flange and lipped strip; and

Fig. 8, a fragmentary section showing the use of a reinforcing strip in direct abutment with the shelf flange.

Similar numerals refer to similar parts throughout the drawings.

A tier of shelves may be made of partition walls 9, back walls 10 and a series of shelves 11; and the forward edges of each partition wall may be strengthened and finished by forming a folded T-flange 9′ along the same, as shown in Figs. 1 and 2.

The shelves may be formed with flanges 11′ and 11″ on the end and rear edges, and these flanges may be provided with suitable apertures 12 through which bolts 13 may be passed for securing the shelves to the partition and back walls of the shelf frame formed thereby.

For the purpose of the present invention, the forward edge of each shelf is provided with a reinforcing flange 14, which may extend upward at a normal angle to the plane of the shelf, and upon its free edge a lip flange is bent downward and folded inward upon itself to form a downward and forwardly inclined flange 14′ for a label holder.

A reinforcing angle strip 15 may be applied to the flange angle of the shelf, and when used, the one flange 15′ of the angle strip extends upward on the face of the shelf flange into the angle of the lip flange thereon, and the other flange 15″ of the angle strip extends rearward in abutment with the bottom of the shelf, to which it may be secured, as by spot welding.

A reinforcing strip 16 may be applied directly to the forward face of the angle bar 15 when the same is used, as shown in Fig. 7, or directly to the forward face of the shelf flange 14, as shown in Fig. 8; and in either event the abutting parts may be secured to-

gether, as by spot welding. Upon the lower edge of the reinforcing strip 16 a lip flange is bent upward and folded inward upon itself to form an upward and forwardly inclined flange 16′ for a label holder.

The ends of the shelf flange may be cut away as shown in the drawings, so as to enter the rear of the T-flanges 9′ on the forward edges of the partition walls 9, and to bring the ends of the lip flanges 14′ in abutment with the edges of the T-flanges. When the reinforcing angle strip is used, the same may extend the full length of the shelf so as to extend in rear of the T-flanges, and the ends of the reinforcing strips 16 and the flanges 16′ thereon preferably abut the edges of the T-flanges, so as to form neat joints between the parts.

By this construction, the shelf flange may be reinforced to any desired extent, either with or without the use of a reinforcing angle strip; and a label holder 17 is formed upon the forward face of the shelf flange by means of the lip flanges, which are folded inward upon themselves to present rounded edges 18 which give the shelf a finished appearance without any sharp cutting edges.

I claim:

1. A sheet metal shelf formed with a normal flange on its free edge and a downward forwardly inclined lip flange on the upper edge of the normal flange, and a reinforcing strip secured to the shelf flange and formed with an upward forwardly inclined lip flange on the lower edge thereof.

2. A sheet metal shelf formed with a normal flange on its free edge and a downward forwardly inclined lip flange folded inward upon itself on the upper edge of the normal flange, and a reinforcing strip secured to the shelf flange and formed with an upward forwardly inclined lip flange folded inward upon itself on the lower edge thereof.

3. A sheet metal shelf formed with a normal flange on its free edge and a downward forwardly inclined lip flange on the upper edge of the normal flange, a reinforcing strip secured to the shelf flange and formed with an upward forwardly inclined lip flange on the lower edge thereof, and a reinforcing angle bar secured to the flange angle of the shelf with one of its flanges interposed between the shelf flange and the reinforcing strip secured thereto.

4. A sheet metal shelf formed with a normal flange on its free edge and a downward forwardly inclined lip flange folded inward upon itself on the upper edge of the normal flange, a reinforcing strip secured to the shelf flange and formed with an upwardly forwardly inclined lip flange folded inward upon itself on the lower edge thereof, and a reinforcing angle bar secured to the flange angle of the shelf with one of its flanges interposed between the shelf flanges and the reinforcing strip secured thereto.

In testimony that I claim the above, I have hereunto subscribed my name.

EDWARD C. STAPLES.