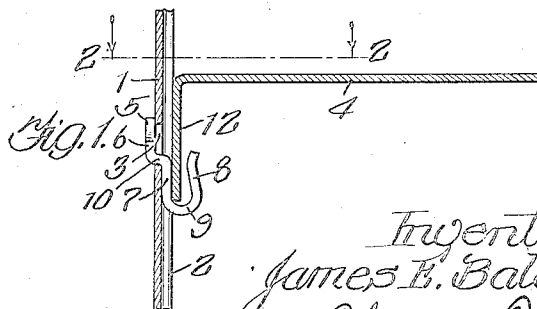
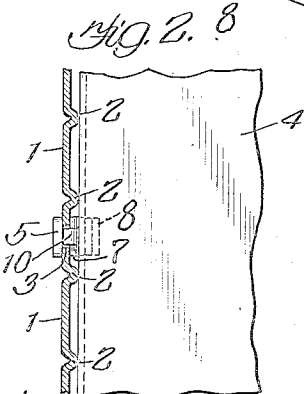
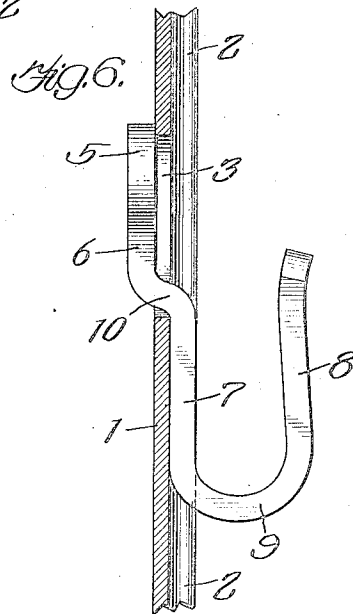
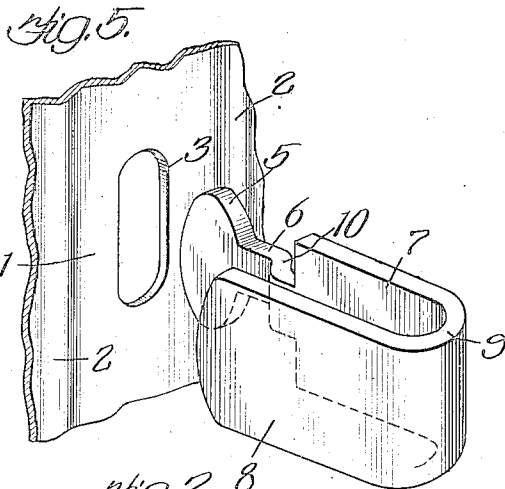
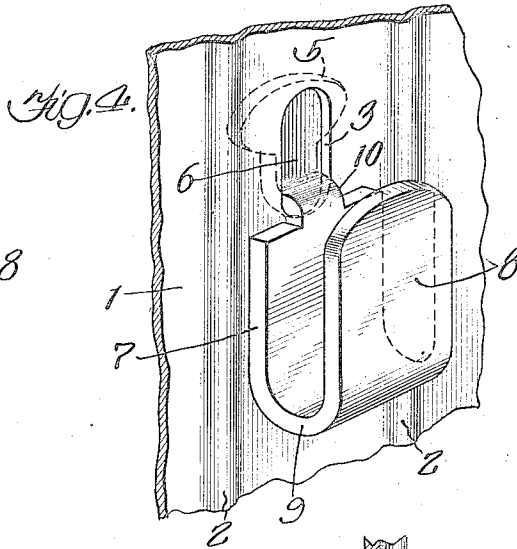
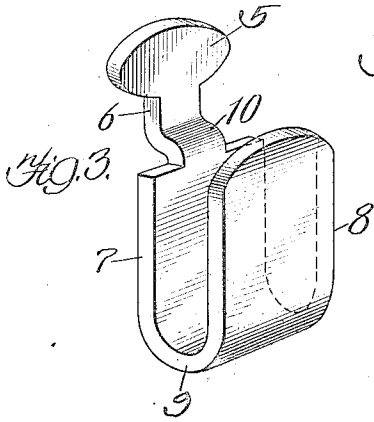


J. E. BALES.
SHELVING.
APPLICATION FILED APR. 17, 1914

1,140,940.

Patented May 25, 1915.



Witnesses:

John Nelson Jr.
Edward Bales

Inventor:
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Attys

UNITED STATES PATENT OFFICE.

JAMES E. BALES, OF MONTGOMERY, ILLINOIS, ASSIGNOR TO LYON METALLIC MANUFACTURING COMPANY, OF AURORA, ILLINOIS, A CORPORATION OF ILLINOIS.

SHELVING.

1,140,940.

Specification of Letters Patent. Patented May 25, 1915.

Application filed April 17, 1914. Serial No. 883,432.

To all whom it may concern:

Be it known that I, JAMES E. BALES, a citizen of the United States, residing at Montgomery, in the county of Kane and State of Illinois, have invented a certain new and useful Improvement in Shelving, of which the following is a specification.

My invention relates to shelving, and deals more particularly with the manner of supporting the shelf upon the uprights or partitions.

The general object of the invention is to provide means whereby the shelf may be rigidly and securely supported and yet be readily raised or lowered.

The manner in which I accomplish my object is shown in the accompanying drawings in which—

Figure 1 is a vertical sectional view of shelving embodying my invention. Fig. 2 is a horizontal section of the parts shown in Fig. 1, the plane of section being indicated by the line 2—2, Fig. 1. Fig. 3 is a perspective view of the suspensor hook in its best form. Fig. 4 is a perspective view of the hook shown in position in the partition. Fig. 5 is a perspective view showing the manner of inserting the head of the hook into the slot of the partition. Fig. 6 is a vertical sectional view showing the hook in acting position in the partition.

Similar numerals refer to similar parts throughout the several views.

In the form selected to illustrate the invention, the upright 1 consists of sheet metal having a number of vertical ribs or corrugations 2. These serve to stiffen the uprights or partitions and render it feasible to employ thinner gage metal than could otherwise be used. At suitable intervals slots 3 are formed in the partitions, said slots having a greater dimension vertically than horizontally. By preference they are located midway between adjacent ribs with a resulting advantage which will hereinafter become apparent.

The hooks by which the shelves 4 are supported are provided with a head 5 arranged transversely to the median line of the hook and having a width slightly less than the length (vertically) of the slots 3. The head 5 is connected by a neck 6 to the body of the hook, which may be said to consist of the back 7 and the riser 8 jointed thereto at the bottom by a connecting band 9. The

width of the neck is slightly less than the width of the slot with the result that when the hook is in place there will be little or no lateral play of the hook. A bend or offset 10 is formed in the neck and when the parts are assembled this seats at the lower end of the slot 3 and supports the hook in place.

In operation, let it be assumed that the partitions are provided with vertical ribs 2 as shown. When it is desired to mount a shelf, the operator first places the hook in the position shown in Fig. 5. He then inserts the head of the hook into a slot 3, subsequently giving the hook a quarter turn in a clockwise direction and simultaneously lowering the body of the hook until the parts finally assume the position shown in Figs. 1, 2, 4 and 6. After the requisite number of hooks have been adjusted into place, the shelf is ready to be set, and this is done by lowering the shelf flange 12 down onto the hook as best shown in Fig. 1.

By inspection of this, the preferred form of my invention, it will be seen that the construction is not only exceedingly simple but that it possesses certain novel and advantageous characteristics. In the first place, the slot 3 is at all points narrower than the width of the head 5 of the hook, and the hook cannot be released by merely raising it as would be the case if the slot were enlarged at the upper end to form what might be termed a "key slot". The hook may be raised and lowered without danger of its becoming detached so long as the hook maintains an approximately upright position. Consequently, an operator need have no fear that in raising the shelf he may accidentally raise the hooks and dislodge them from their position in the uprights. This is a matter of importance, as will be appreciated by those who have had occasions to manipulate shelving in which the shelves are supported upon hooks which may be vertically adjusted. In my form, if the flange 12 were of double thickness or for any other reason should stick in the hook, no harm would result from lifting the shelf, for in such case the hook would remain upright and the head 5 would be retained in the slot.

Another advantage in my shelving when the partitions are vertically ribbed, as shown, is that the shelf flanges abut the ribs and thus are provided with a greater contact area than if they abutted merely the

back of the hook itself. This makes for rigidity of the shelf structure. Furthermore, the countersunk portion between the ribs affords a space for the back of the hook and the hook is not apt to be disturbed when the shelves are being inserted or removed.

What I claim as new and desire to secure by Letters Patent, is:

1. In shelving, the combination of an upright partition having a slot arranged vertically therein, said slot being of uniform width, and a hook comprising a body portion, a head portion and a narrow connecting neck, the width of the neck being less than the width of the slot, the neck having a bend or offset seating at the lower end of the slot, and the head, when the hook is in acting position, extending beyond the edge of the slot to engage the partition on the side opposite to the body of the hook.

2. In shelving, the combination of an upright having a narrow slot arranged vertically therein, said slot being of uniform width and a hook comprising a body portion, a head portion and a narrow neck connecting them, the width of the neck being less than the width of the slot, the neck having a bend or offset seating at the lower end of the slot, the width of the head being less than the length of the slot and greater than the width of the slot.

3. In shelving, the combination of an upright having a narrow slot arranged vertically therein, and a hook comprising a body, a head and a narrow connecting neck all integral with each other, the width of the neck being narrower than the narrowest

part of the slot and the width of the head being greater than the widest part of the slot, and the width of the head being less than the length of the slot, said neck having a bend seating at the lower end of the slot.

4. In shelving, the combination of an upright having a slot therein, a hook having a body engaging one side of the upright, a head engaging the other side of the upright, and a connection between said body and said head, the upright having vertical ribs arranged on either side of the slot and standing out from the upright an amount approximately equal to the thickness of that portion of the hook which engages the inner side of the upright.

5. In shelving, the combination of a sheet metal upright having a slot therein, a hook having a body engaging one side of the upright, a head engaging the other side of the upright, and an element connecting the head with the body, said upright having vertical ribs the rise whereof is approximately equal to the thickness of that portion of the hook which engages the inner side of the upright, and a shelf having a depending flange at the end adapted to seat in said hook and adapted to bear against the ribs of the upright.

In witness whereof, I have hereunto subscribed my name in the presence of two witnesses.

JAMES E. BALES.

Witnesses:

JOHN WORLEY, Jr.,
B. L. WATERS.