

Jan. 14, 1947.

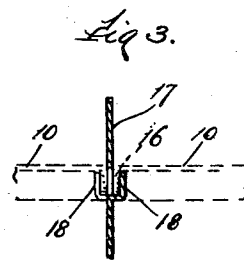
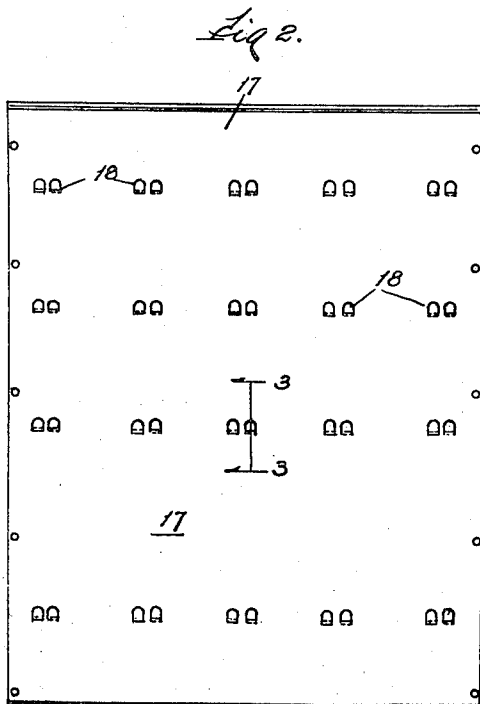
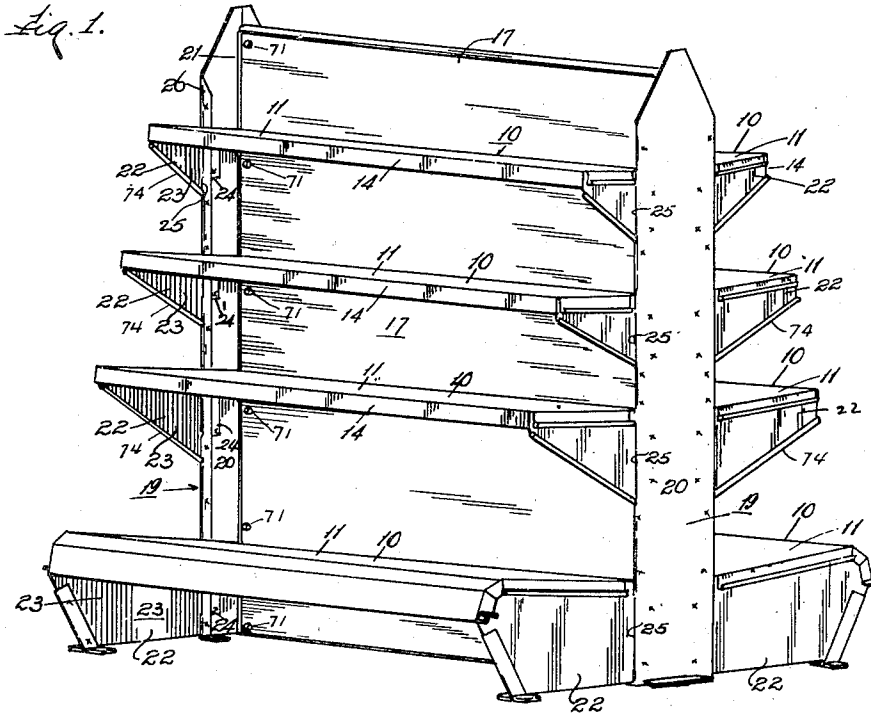
E. F. SCHILD

2,414,334

SHELVING

Filed Oct. 23, 1945

2 Sheets-Sheet 1



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2 Sheets-Sheet 2

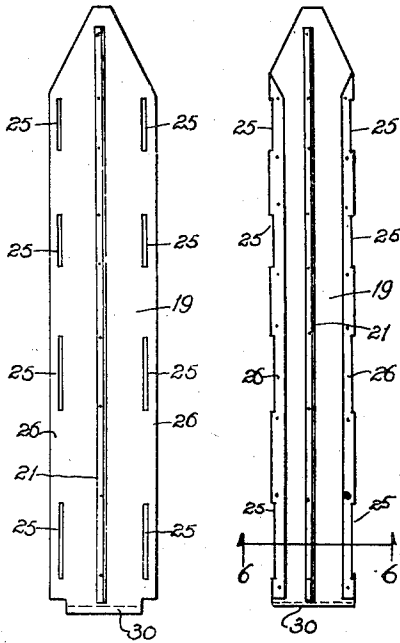


Fig. 4.

Fig. 5.

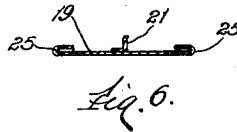


Fig. 6.



Fig. 8.

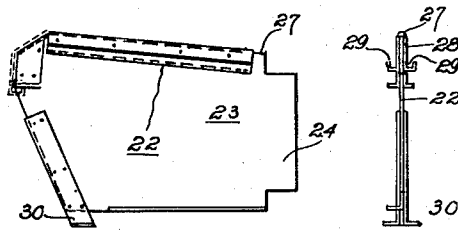


Fig. 7.

Fig. 9.

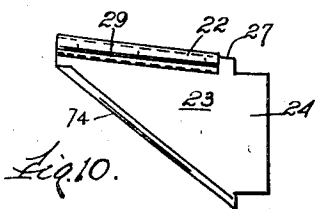


Fig. 10.

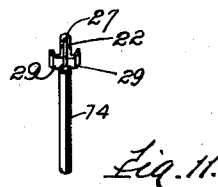


Fig. 11.

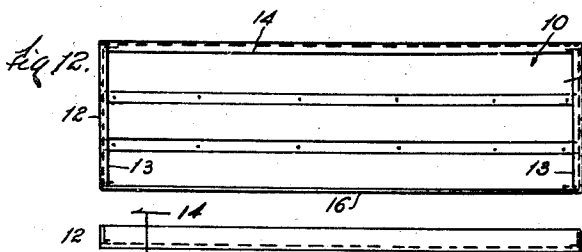


Fig. 12.

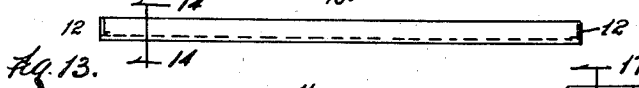


Fig. 13.

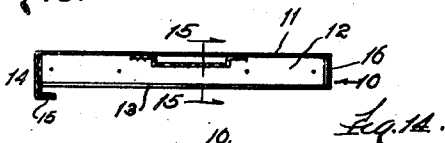


Fig. 14.

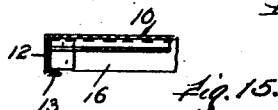


Fig. 15.

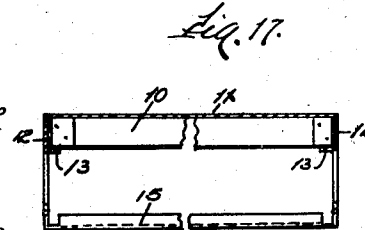


Fig. 17.

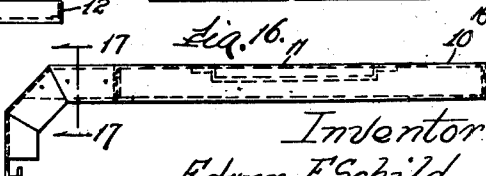


Fig. 16.

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UNITED STATES PATENT OFFICE

2,414,334

SHELVING

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Application October 23, 1945, Serial No. 623,986

2 Claims. (Cl. 211-137)

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My invention relates to shelving for use in self-service food stores, offices, storage, or any other place in which open shelves are desired.

Among the objects of my invention is to provide shelving in which the shelves are held in position without the use of bolts or the like, and which can be simply and quickly assembled and disassembled without any particular skill, thereby resulting in the saving of labor costs; to supply shelving in which the shelves will not tip in front or fall down in the back; to create shelving having a rigid construction which will not sway or rattle.

My invention also contemplates such other objects, advantages and capabilities as will later more fully appear and which are inherently possessed by my invention.

While I have disclosed herein a preferred embodiment of my invention, yet I wish it understood that the same is susceptible of modification and change without departing from the spirit of my invention.

Referring to the drawings;

Fig. 1 is a perspective view of assembled shelves embodying my invention on shelving; Fig. 2 is an elevational view of my rear wall; Fig. 3 is an enlarged, detailed, sectional view on line 3-3 of Fig. 2; Fig. 4 is an elevational view of my upright showing perforated slots, Fig. 5 is an elevational view of my formed upright; Fig. 6 is a detailed, sectional view on line 6-6 of Fig. 5; Fig. 7 is a side elevational view of my bottom gusset; Fig. 8 is a top edge view of my bottom gusset; Fig. 9 is a front edge view of my bottom gusset; Fig. 10 is a side elevational view of one of my upper gussets; Fig. 11 is a front edge view of one of my upper gussets; Fig. 12 is a bottom plan view of my shelf; Fig. 13 is a front elevational view of my shelf; Fig. 14 is an enlarged, detailed, sectional view of my shelf as seen on line 14-14 of Fig. 13; Fig. 15 is a detailed, sectional view on line 15-15 of Fig. 14; Fig. 16 is a side elevational view of my lower shelf and; Fig. 17 is a detailed sectional view on line 17-17 of Fig. 16.

The embodiment selected to illustrate my invention comprises a shelf 10, having a flat body portion 11, downwardly extending side flanges 12 with inwardly extending horizontal angle portions 13, front flange 14 extending downwardly with an inwardly extending horizontal angle portion 15, and a downwardly extending rear flange 16.

My front flange 14 extends below the side flanges 12 so that angle portion 15 is at a lower level than side flanges 12.

The structure to which my shelves 10 are re-

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movably attached comprises rear wall 17, having a plurality of spaced cut lugs 18, forming seats to receive and support the lower end of rear flange 16 of shelf 10. A plurality of spaced uprights 19 is provided. Each upright has a body portion 20 with a vertical member 21 contacting the rear wall 17 and attached thereto by suitable means such as nuts and bolts 71.

A plurality of vertically spaced gussets 22 are attached to uprights 19. Each gusset 22 has a body portion 23 and an extension 24. Each of said extensions 24 extends through an opening 25 in folded over portion 26 of uprights 19 and is spot welded or otherwise suitably attached thereto. The lower end 74 of the body portion 23 of each gusset 22 is curled over, except those gussets at the bottom of the structure. To the top portion 27 of each gusset 22 is attached by spot welding, or other suitable means, a bracket 28. Where there are shelves on either side of the upright, bracket 28 has a pair of channels 29. When there is a shelf only on one side of the upright, bracket 28 has only one channel 29. Side flanges 12 of the shelf 10 fit within channels 29 and angles 13 are of sufficient width to substantially fill said channels to prevent rattling and side-sway and provide a rigid construction.

The inner horizontal angle 15, of shelf 10, being at a lower level than side flanges 12, and the bottom of channel 29, is adapted to slide under channel 29 and prevent undesired lift of the shelf at its front portion.

In use, let us assume that the uprights 19 are attached to the rear wall 17 and it is now desired to add the shelves 10. The user takes one of the shelves 10 in his hands, with the rear portion inclined upwardly and the front portion inclined downwardly. He fits the side flanges 12 and horizontal angle portions 13 into channels 29. With the shelf still inclined, he then slides the shelf backwardly in channels 29 until the inner horizontal angle 15 is positioned under channel 29. This backward movement also causes the rear flange 16 of the shelf 10 to approach rear wall 17. He then presses downwardly on the top surface of the rear portion of the shelf until the back flange 16 is seated and supported within lugs 18, and side flanges 12 and horizontal angles 13 are completely fitted within channels 29.

In this position, the shelf 10 is firmly anchored in position and cannot be inadvertently displaced. Accidental upward contact on the front of the shelf 10, which might occur in commercial use, will not lift the shelf out of position. Downward pressure will not move the shelf out of position.

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In order to remove the shelf 10, it is necessary for the user to first apply upward pressure underneath the shelf, at its rear portion, to raise the rear flange 16 out of contact with the lugs 18. This brings the shelf 10 into an inclined angle and in this position the user then slides shelf 10 forwardly with side flanges 12 and angles 13 moving in channels 29 until inner horizontal angle 15 is forward of and free from contact with the bottom of channel 29. By lifting shelf 10, the user then raises side flanges 12 and angle portions 13 out of channel 29 to complete the removal of the shelf.

A platform 30 is provided for the bottom of the rear wall 17 by a right angle portion. A similar construction is provided for the lowest gusset 22. This provides sufficient support on the ground or floor for holding the construction in upright position.

Having thus described my invention, I claim:

1. Shelving comprising a plurality of shelves, each of said shelves having a flat body portion, downwardly extending side flanges with inwardly extending angle portions, a downwardly extending front flange with an inwardly extending angle portion, and a downwardly extending rear flange, a rear wall, and a plurality of spaced uprights attached to said rear wall and having brackets with channels, the side flanges with inwardly

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extending angle portions of said shelves removably positioned within the channels of said brackets, and the inwardly extending angle portions of the downwardly extending front flanges of said shelves removably positioned below the bottoms of the channels of said brackets, said rear wall having a plurality of cut-out lugs forming seats, the downwardly extending rear flanges of said shelves removably supported on said seats.

2. In shelving, a pair of uprights, a bracket attached to each side of said uprights, said brackets each having a channel portion, a shelf having a flat body portion, downwardly extending side flanges with inwardly extending angle portions slightly less in width than the width of said channel portions, so that when the shelf is removably positioned on said brackets, said angle portions substantially fill said channels to prevent side-sway and rattling and provide a rigid construction, said shelf having a downwardly extending front flange with an inwardly extending angle portion, said downwardly extending front flange of greater depth than the depth of said channels so that its inwardly extending angle portion may be removably positioned below the bottom of said channels to prevent undesired lift of said shelf from said channels.

EDWIN F. SCHILD.