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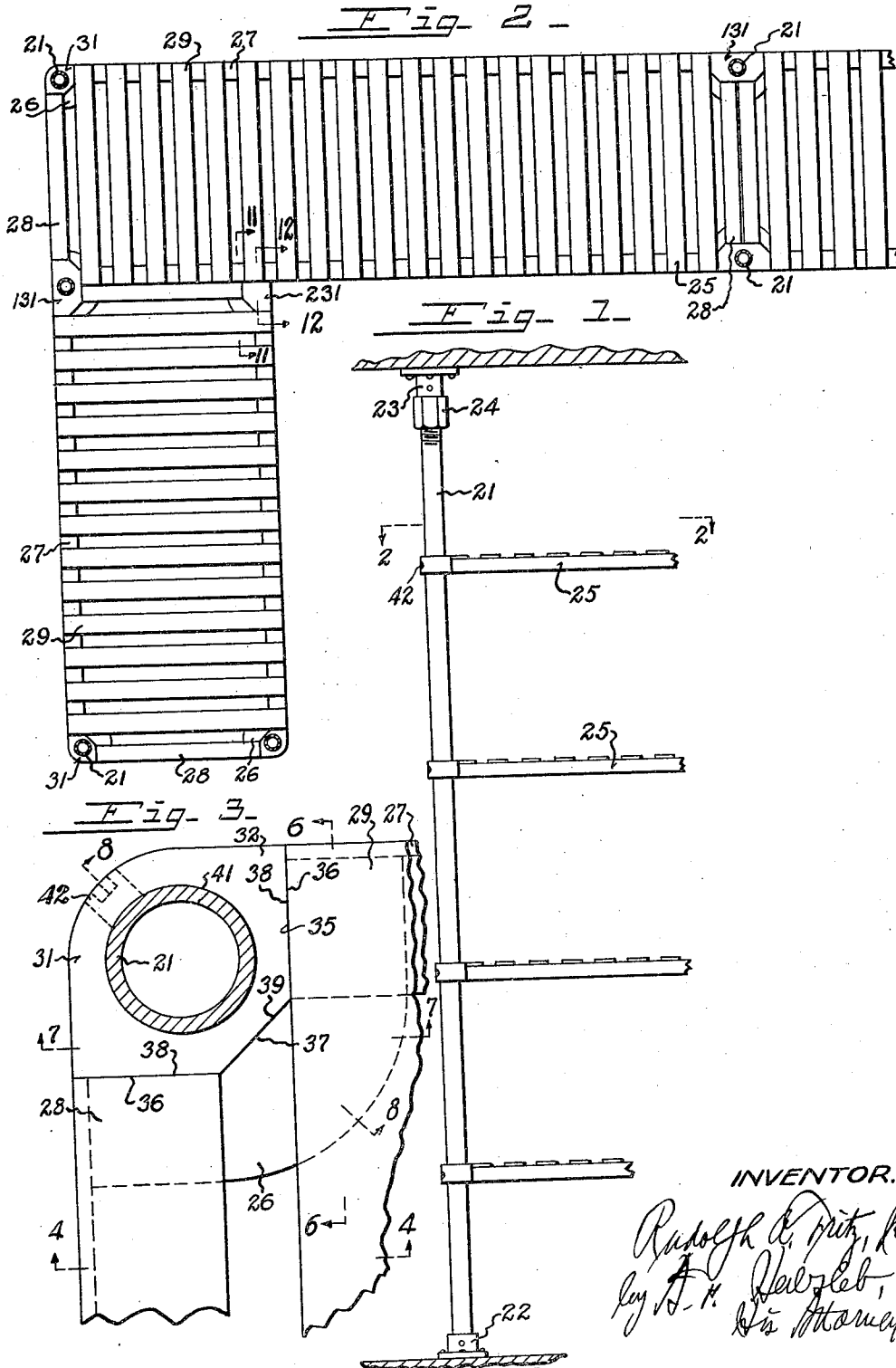
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R. A. FRITZ, JR

SHELVING

Filed Sept. 6, 1927

2 Sheets-Sheet 1



INVENTOR.

Rudolph A. Fritz, Jr.,
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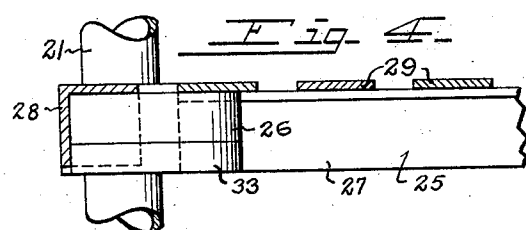
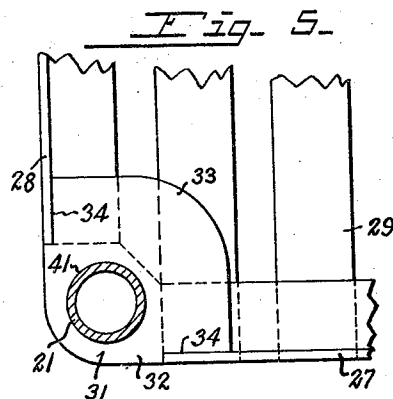
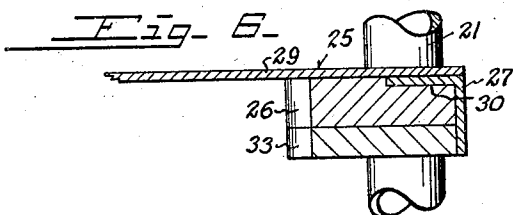
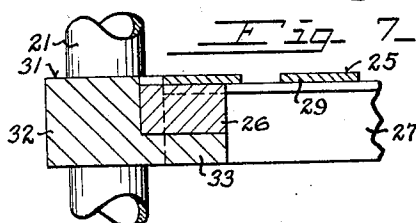
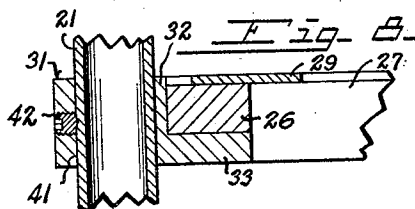
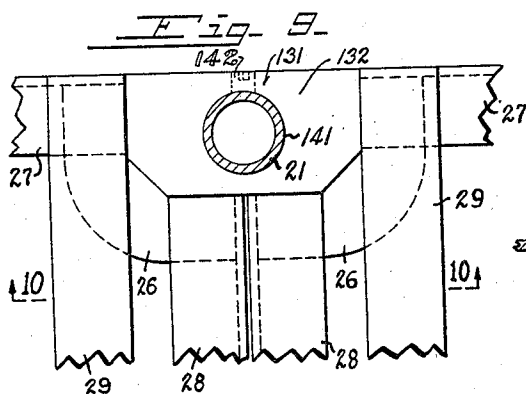
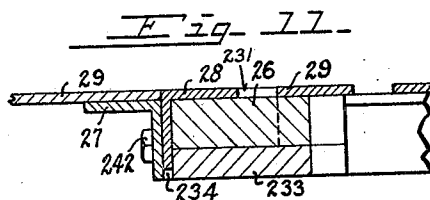
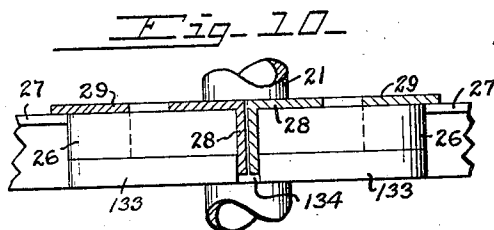
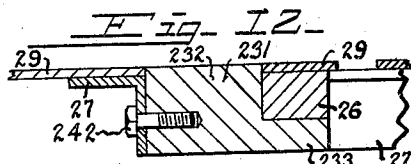
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R. A. FRITZ, JR

SHELVING

Filed Sept. 6, 1927

2 Sheets-Sheet 2



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UNITED STATES PATENT OFFICE.

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SHELVING.

Application filed September 6, 1927. Serial No. 217,761.

It is the object of my invention to provide new and improved shelving of knock-down nature so arranged that shelves may be readily removed for cleaning purposes and the structure readily reassembled in such manner as to make a rigid structure; further, to provide ready means for releasably connecting the shelving with its supports in manner to prevent relative rotation between the shelves and the supports; and, further, to provide novel means whereby the shelf is held against rotation to its support in a horizontal plane but is readily releasable in a vertical plane, and whereby further cavities in the supporting portions of the supports are avoided to prevent lodgment of substances likely to cause an unclean condition.

The invention will be further readily understood from the following description and claims, and from the drawings, in which latter:

Fig. 1 represents a front elevation of my improved device in assembled form, partly broken away.

Fig. 2 is a horizontal section of the same taken on the line 2—2 of Fig. 1, partly broken away.

Fig. 3 is a plan view of a corner of the shelving showing a single corner support, partly broken away.

Fig. 4 is a sectional inside end view of the same, taken on the line 4—4 of Fig. 3.

Fig. 5 is a bottom view of the same.

Fig. 6 is a vertical cross-section of the same, taken on the line 6—6 of Fig. 3.

Fig. 7 is a vertical cross-section of the same, taken on the line 7—7 of Fig. 3.

Fig. 8 is a vertical cross-section of the same, taken on the line 8—8 of Fig. 3.

Fig. 9 is a plan view showing a double corner structure, partly broken away.

Fig. 10 is a vertical cross-section of the same, taken on the line 10—10 of Fig. 9.

Fig. 11 is a cross-section taken on the line 11—11 of Fig. 2, showing a corner-piece attached to one of the shelves for supporting a corner of another shelf, partly broken away; and,

Fig. 12 is a cross-section of the same, taken on the line 12—12 of Fig. 2.

Posts 21 are suitably positioned or secured in place, and are provided with lower socket-pieces 22 secured to the floor and provided with sockets in which the lower ends of the posts are received, and upper socket-pieces 23

secured to the ceiling, the upper end of the post being threaded and having a nut 24 threaded thereabout for coaction with the upper socket-piece for securing the post in place.

The shelves 25 respectively comprise corner-pieces 26, marginal angle-bars 27, 28, and slats 29. The angle-bars have horizontal wings and vertical wings. The horizontal wings of the angle-bars 27, are received in rabbets 30 in the corner-pieces, for placing the upper surfaces of said horizontal wings and of said corner-pieces in the same horizontal plane. The horizontal wings of the angle bars 28 are secured to the top surfaces of the corner-pieces. The slats are of the same thickness as the horizontal wings, and are secured on top of the horizontal wings of the angle-bars 27, which places the upper surfaces of said slats and the upper surfaces of the horizontal wings of the angle-bars 28 in the same horizontal plane. The vertical wings of the angle-bars depend below the corner-pieces. The corner-pieces, angle-bars and slats are rigidly secured together, as by riveting or welding or in other manner.

Corner-supports 31 respectively comprise a head 32 and a flange 33 extending laterally in the angle of the corner at which said corner-support is placed. The corner-piece at the corner of the shelf is arranged to rest on this flange, and the depending wings of the angle-bars at said corner of the shelf, which form depending flanges of the shelf, are received at the respective ends of said flange 33 extending from the corner-support, the inner side faces of said depending wings abutting against the respective ends of said flange for preventing relative rotation between the shelf and the corner-support. Said depending wings are received in rabbets 34 between the respective ends of said flange of said corner-support and the sides of the head. The sides of the head are at right angles to each other and in line with the right angular edge-faces of the shelf.

The corner of the shelf is provided with a recess 35 in which the corner-support is received. The corner-support has end walls 36 which are at right angles to each other, and a diagonal wall 37 between said end walls, the corner-piece of the shelf having corresponding walls 38, 39, respectively. The ends of the respective angle-bars at said corner are in alinement with said walls 38 and the

side edge of the proximate slat is in line with one of said last-named side walls. The upper end of the head of the corner-support is preferably on a level with the upper supporting surface of the shelf. The complementary end walls 36, 38, and the complementary abutment faces between the depending wings and the ends of the supporting flange at the corner for preventing rotation of the shelf on the corner-support.

The corner-supports are provided with bores 41 in which the posts are received. The corner-supports are adjustably secured to the posts, as by means of set bolts 42 in threaded apertures in the wall of said bores for clamping the corner-support to the posts at desired elevation.

The shelves may be made of desirable lengths and widths, there being preferably a corner-support at each corner of the shelf. The top surfaces of the corner supports and the top surfaces of the slats and of the horizontal wings of the angle bars 28 are preferably in the same horizontal plane, so that the entire area between posts may be utilized for shelf purposes. The top supporting surfaces of the corner-supports and of the shelves are in the same horizontal plane throughout the area between posts.

If it is desired to arrange a series of shelves end to end, single corner-supports are provided for the ends of the shelving and double corner-supports 131 are provided between the ends of proximate shelves. (See Figs. 2, 9 and 10.) These double corner-supports are provided with elongated heads 132, from which supporting flanges 133 extend horizontally in the angles between proximate shelves, the depending wings at the proximate ends of the adjacent shelves being received in a slot 134 between the proximate ends of the horizontal flanges extending from said head 132. This slot serves the purpose of two of the rabbets 34. The head 132 is provided with a bore 141 in which the post is received. The double corner-supports are adjustably secured to the post in the same manner as are the single corner-supports. The parts of the double corner-support are designated by reference numerals similar to the reference numerals designating similar parts of the single corner-support, but raised to the series 100.

If it is desired to arrange shelves at right angles to each other, a corner-support 231 which has a solid head 232, and is secured to the depending wing of the proximate shelf, intermediate of the ends of said shelf, as by means of bolts 242 (see Figs. 2, 11 and 12). The top of this head is preferably on a level with the adjacent slats so as to provide a shelf having upper supporting surfaces which are level throughout. The marginal offset of the end of the flange 233 which is adjacent to the shelf, to which the corner-

support is secured, forms a slot 234 in which the depending end wing of the shelf supported by said corner-support is received. The parts of the shelf-supported corner-support are designated by reference numerals similar to the reference numerals designating similar parts of the single corner-support, but raised to the series 200.

The corner-supports and corner-pieces may be of cast metal and the angle-bars and straps may also be of metal. The shelves may be suitably galvanized, tinned, or otherwise coated after the same have been fabricated. My improved device is employed in various relations and is especially adapted for use as meat-racks and for supporting products in the meat industry.

The construction and arrangement of the corner-supports and of the shelf-parts complementary thereto are such that the shelving is rigid when assembled whether or not the posts are independently fixed at their tops.

The corner supports and the shelves are constructed to avoid cavities so as to permit ready cleaning of the same, and the parts are so constructed and arranged that the shelves may be readily removed and replaced. A structure is further provided which is firm and rigid and is especially strong for readily supporting the great weights to which shelving of this kind is subjected.

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

1. In knock-down shelving, a post, a corner-support having a head about said post and provided with an upper surface and a flange extending from said head in the angle of the corner throughout substantially a right angle about said post and lower than said upper surface and forming a rabbet in said corner-support about said post in said angle throughout substantially said right angle, said flange forming wings extending from said head at substantially right angles to each other and at diagonally opposite sides of said post, said wings having end faces at right angles to each other, and a shelf comprising a corner-piece located in said rabbet and a pair of angle-bars fixed in right angular relation to said corner-piece said angle-bars respectively comprising depending wings, said depending wings depending below said corner-piece, and the inside faces of said depending wings coacting with said right angular end faces of said first-named wings for resisting relative turning between said shelf and said corner-support.

2. In knock-down shelving, a corner-support having a head provided with an upper surface and a flange extending from said head in the angle of the corner throughout substantially a right angle and lower than said

upper surface and forming a rabbet in said corner-support in said angle throughout substantially said right angle, said flange forming wings extending from said head at substantially right angles to each other, and a shelf comprising a corner-piece located in said rabbet and a pair of angle-bars fixed in right angular relation to said corner-piece, said angle-bars respectively comprising depending wings, said flange and said corner-piece having complemental laterally extending wings at substantial right angles to each other, said laterally extending wings terminating inside right angular planes tangential to said head forming end-rabbets at the respective ends of said laterally extending wings, and said depending wings of said respective angle-bars located in said respective end-rabbets with the inside faces of said depending wings contacting said last-named ends of said laterally extending wings of said corner-support for resisting relative turning between said shelf and said corner-support.

3. In knock-down shelving, the combination with shelving having a post, of a corner-support having a head provided with an upper surface, means attaching said head to said post, said corner-support comprising a flange extending from said head in the angle of the corner throughout substantially a right angle and lower than said upper surface and forming a rabbet in said corner-support and in said angle throughout substantially said right angle, said flange forming wings extending from said head at substantially right angles to each other, and a shelf comprising a corner-piece located in said rabbet and a pair of angle-bars fixed in right angular relation to said corner-piece, said angle-bars respectively comprising depending wings and horizontal wings, said flange and said corner-piece having complemental wings at substantial right angles to each other, said complemental wings terminating inside right angular planes tangential to said head forming end-rabbets at the respective ends of said complemental wings, one of said rabbets being a slot between said post and said flange and corner-piece, and said respective wings of said respective angle-bars located in said slot and in the other of said end-rabbets.

4. In knock-down shelving, a corner-support having a head provided with an upper surface and a flange extending from said head in the angle of the corner throughout substantially a right angle and lower than said upper surface and forming a rabbet in

said corner support in said angle throughout substantially said right angle, said flange forming wings extending from said head at substantially right angles to each other, and a shelf comprising a corner-piece located in said rabbet and a pair of angle-bars fixed in right angular relation to said corner-piece, said angle-bars respectively comprising depending wings and horizontal wings, said flange and said corner-piece having complemental laterally extending wings at substantial right angles to each other, said laterally extending wings terminating inside right angular planes tangential to said head forming end-rabbets at the respective ends of said laterally extending wings, and said depending wings of said respective angle-bars located in said respective end-rabbets, with the inside faces of said depending wings contacting said ends of said laterally extending wings of said corner-support resisting relative turning between said shelf and said corner-support, the outer side faces of said depending wings and said head being substantially flush with each other, one of said wings of said corner-piece provided with a top rabbet in which the horizontal wing of one of said angle-bars is located with its top surface flush with the top surface of said corner-piece and the horizontal wing of the other of said angle-bars located on top of the other wing of said corner-piece, and a slat fixed on top of said first-named angle-bar and said corner-piece, with the top surface of said slat level with the top surface of said horizontal wing of said other of said angle-bars, and said last-named top surfaces, when said shelf is located on said corner-support, being level with said upper surface of said head.

5. In knock-down shelving, a support having a head provided with an upper surface and a flange extending substantially continuously and in the same plane halfway about said head and lower than said upper surface and provided with an upright slot in its middle portion and forming a rabbet about said head, and companion shelves respectively comprising corner-pieces located in said rabbet and angle-bars at substantial right angles to each other fixed to said respective corner-pieces and comprising depending wings, said corner-pieces having a space between them complementary to said upright slot, and said depending wings of said angle-bars located in juxtaposition in said space and in said slot.

In testimony whereof, I have hereunto signed my name.

RUDOLPH A. FRITZ, JR.