E. B. WESTON.

DISPLAY RACK.

APPLICATION FILED SEPT. 12, 1918.

1,381,607. **Patented June 14, 1921.**

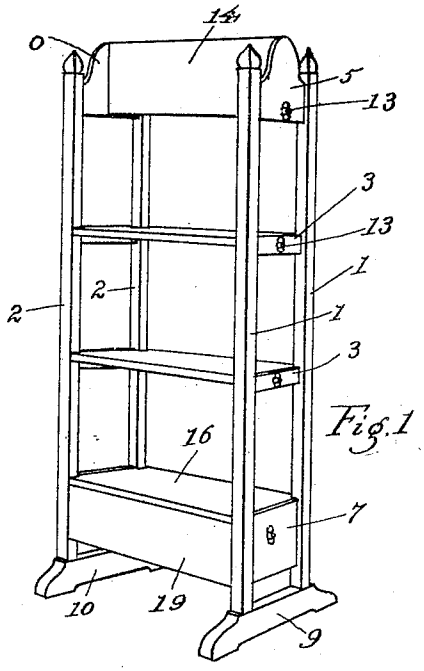


Fig. 1

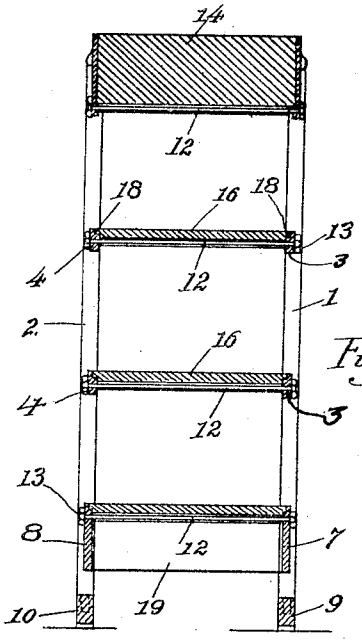


Fig. 2

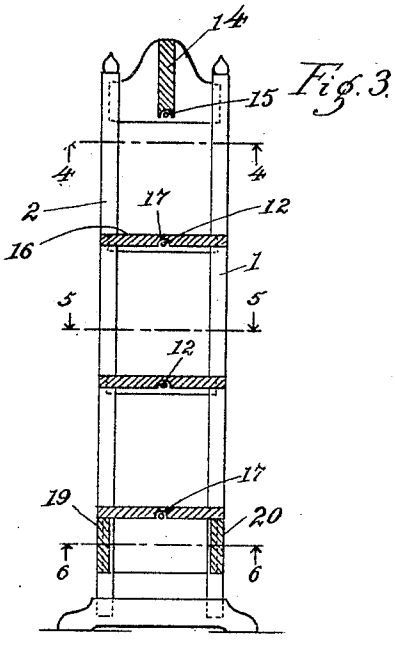


Fig. 3

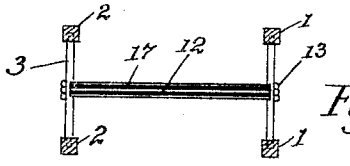


Fig. 4

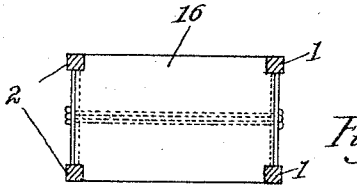


Fig. 5

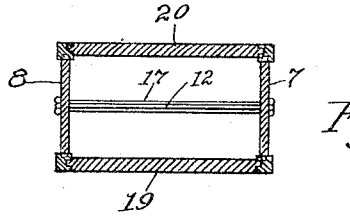


Fig. 6

Inventor:
Edward B. Weston
By Allen & Allen
Attorneys.

UNITED STATES PATENT OFFICE.

EDWARD B. WESTON, OF DAYTON, OHIO, ASSIGNOR TO THE WESTON PAPER & MANUFACTURING COMPANY, OF DAYTON, OHIO, A CORPORATION OF OHIO.

DISPLAY-RACK.

1,381,607. Specification of Letters Patent. Patented June 14, 1921.

Application filed September 12, 1918. Serial No. 253,673.

To all whom it may concern:

Be it known that I, EDWARD B. WESTON, a citizen of the United States, and a resident of Dayton, in the county of Montgomery and State of Ohio, have invented certain new and useful Improvements in Display-Racks, of which the following is a full, clear, and exact description, reference being made to the accompanying drawing, forming part of this specification.

My invention relates to display racks for merchandise of various kinds, but more particularly for racks for bakers' and grocers' use for the holding of boxes and cartons of crackers, biscuit and the like.

The object of the invention is to provide a rack for such purposes, which may be packed and shipped to the user in knockdown condition in the smallest possible package, which shall contain a minimum number of parts and which shall be adapted to be set up and assembled by the most ignorant user. My object is to dispense with the use of nails, glue, screws or bolts to hold the parts together, and at the same time to furnish a rack which can be subjected to a great deal of strain, pressure and rough usage without losing its desired rigidity.

The above objects I attain by that certain novel construction and arrangement of parts to be hereinafter particularly pointed out and claimed.

In the drawing which forms part of this specification and illustrates one embodiment of my invention, Figure 1 is a perspective view of my improved rack set up, ready for use.

Fig. 2 is a central longitudinal section of the same.

Fig. 3 is a central vertical section.

Figs. 4, 5 and 6 are respectively horizontal sections taken on the lines 4, 4, 5, 5, and 6, 6, of Fig. 3.

The rack is constructed of side standards comprising the vertical bars 1, 1, and 2, 2, with cross pieces 3, 3, and 4, 4, top cross pieces 5, 6, and bottom cross pieces 7, 8, while each side standard is provided with the foot portions 9, 10. These side standards made up as above described have the pieces to form each standard permanently secured together. To secure the two side standards in upright position, I provide the rods 12, which run horizontally between the cross pieces and are screwthreaded on their outer ends to receive the thumb nuts 13, so that the rods can be properly tightened. For the top of the rack I provide a vertical panel 14, which is tenoned to fit within the vertical mortises in the top cross pieces 5, 6, and this panel 14 is formed with a groove 15 to fit over the uppermost rod 12, which thus forms a fixed stop for the panel 14. The shelves 16, which are interchangeable, are each formed with a central longitudinal groove 17 on the lower surface to fit over and around its respective rod 12, and the ends of the shelves with the cross pieces are formed with a tenon and groove 18 on each end so that the shelves will rest on the cross pieces and also abut up against the cross pieces. This is of considerable importance, because otherwise upon tightening the rods with the thumb nuts so great strain could be brought to bear on the cross pieces 3, 3, and 4, 4, as to cause them to split. With the above construction, no matter how carelessly the brace rods 12 may be tightened, the shelves take the strain and prevent splitting or breaking of the cross pieces. At the lower end of the rack two longitudinal panels 19 and 20 are employed for the front and back of the rack, and these panels and the end standards are mortised and tenoned so that the panels can be readily slipped into place.

In assembling the rack, the two side standards are set up in vertical position and held in position by the rods 12. The central top panel 14 and the front and rear panels 19 and 20 are slipped into place, the shelves located to rest on the cross pieces and then the wing nuts on the ends of the tie rods are tightened. Inasmuch as the rods are seated in the grooves for the shelves, they are out of sight and form no obstruction for the reception of the display goods placed on the shelves. As the rods fit in the grooves, they prevent the standards from twisting under any sort of strain to which they may be subjected, inasmuch as the rods being thus incased cannot be bent under any twisting strains, making the rack perfectly rigid and very strong.

With this construction I have only a minimum number of parts, which can be set up in a very short time, and by the method of incasing the brace rods in the shelves and panels and the capacity for tightening the thumb nuts without rendering the cross pieces liable to be broken, I am able to fur-

nish a very rigid substantial structure. The cross pieces forming the side standards, it will be understood, are inset between the vertical bars, so that when set up the thumb nuts will not project beyond the face of the standards, and it will be possible to set up any number of racks abutting each other, so that each rack may be employed as a sectional unit, with any number of racks desired. In racks of this kind, the upper central panel 14 and the lower panels 19 are usually employed for advertising purposes. At the same time it will be understood these vertical panels taken in connection with the horizontal shelves, furnish a very effective brace against twisting strains.

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

1. A display rack comprising side standards of upright bars and cross pieces, with removable shelves supported by said cross pieces, and tie rods connecting the cross pieces, with clamping nuts for the tie rods bearing on the cross pieces to brace the side standards, a vertical cross board at the upper part of the rack between the side standards, the ends of the shelves and the cross pieces being gained to receive the shelves between the cross pieces to resist the strain of the clamping nuts, and the vertical cross board and the shelves each provided with a longitudinal groove to receive its respective tie rod to resist bending strains.

2. A display rack comprising side standards of upright bars and cross pieces, with removable shelves supported by said cross pieces, and tie rods connecting the cross-pieces, with clamping nuts for the tie rods bearing on the cross pieces to brace the side standards, a vertical cross board at the upper part of the rack and front and rear upright cross boards for the lower portion of the rack between the side standards, the shelves and the upper vertical cross board each provided with a longitudinal groove to receive its respective tie rod to resist bending strains.

EDWARD B. WESTON.