

W. TIETZ, DEC'D.
 R. G. DASHIELL, CURATOR.
 SHELF STRUCTURE.
 APPLICATION FILED APR. 19, 1911.

Patented July 1, 1913.
 3 SHEETS-SHEET 1.

1,066,165

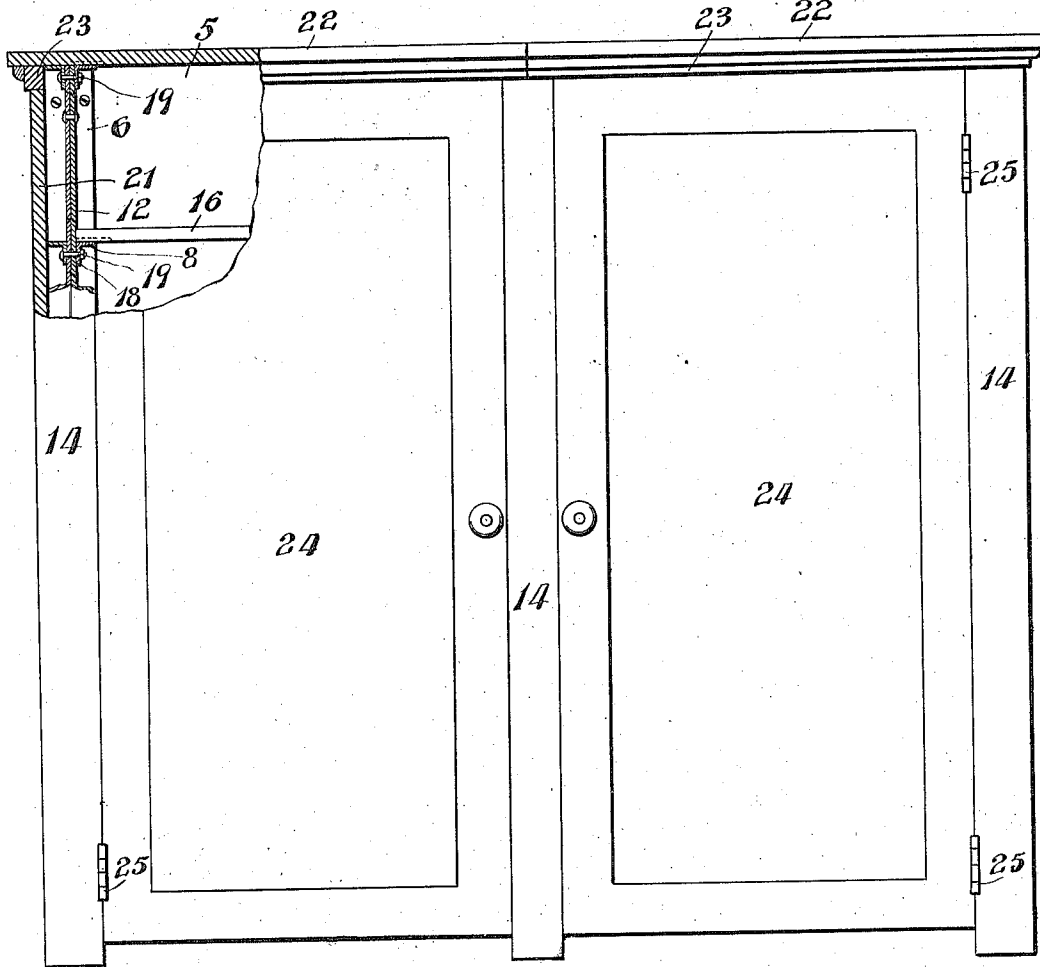


Fig. 1

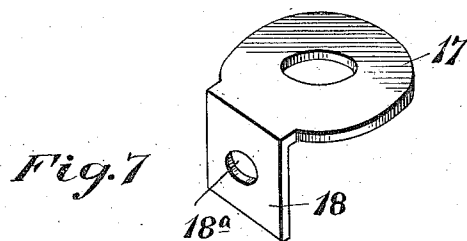


Fig. 7

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3 SHEETS—SHEET 2.

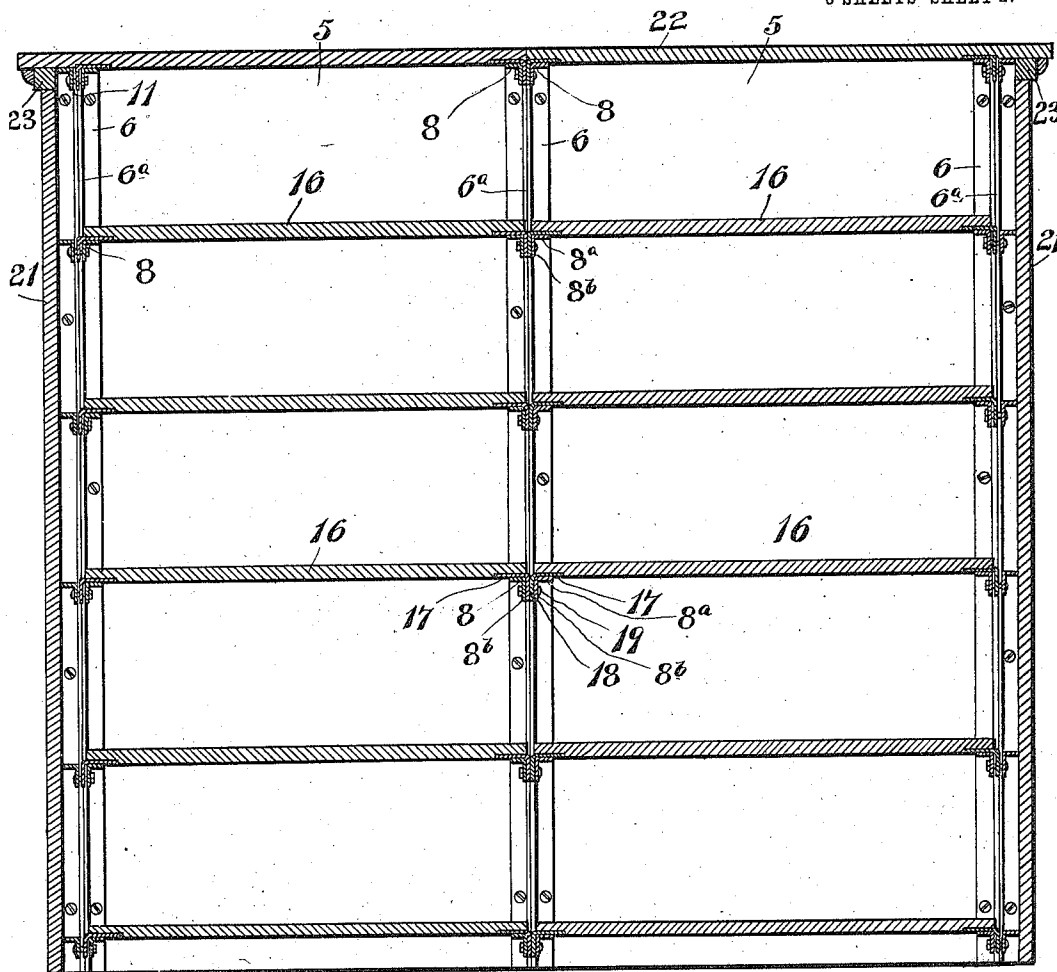


Fig. 2.

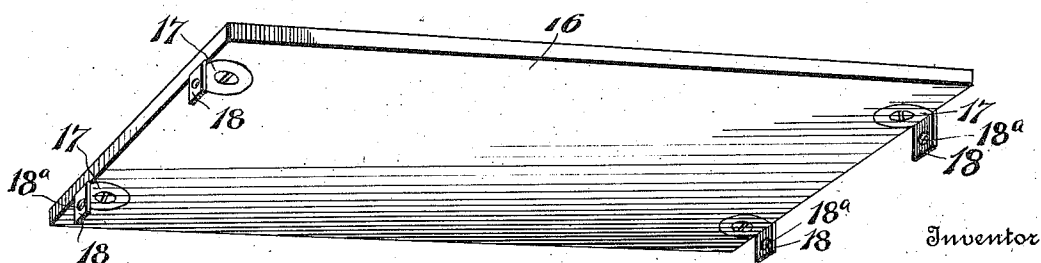


Fig. 8.

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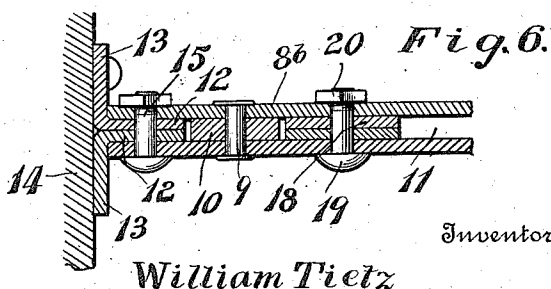
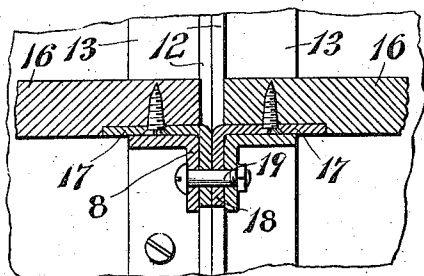
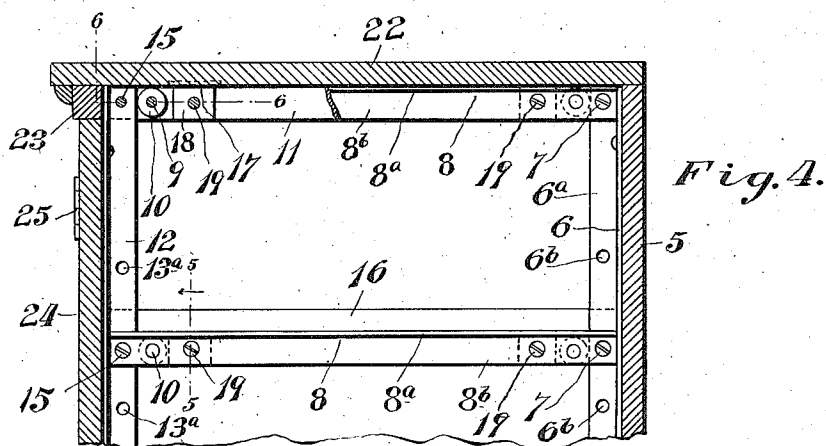
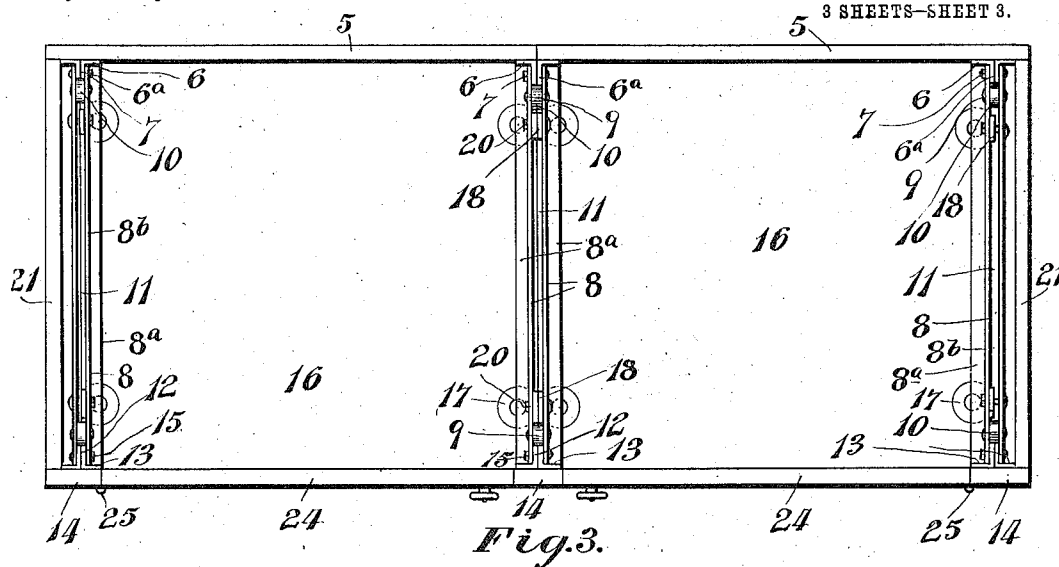
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3 SHEETS—SHEET 3.



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UNITED STATES PATENT OFFICE.

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SHELF STRUCTURE.

1,066,165.

Specification of Letters Patent.

Patented July 1, 1913.

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To all whom it may concern:

Be it known that I, WILLIAM TIETZ, a citizen of the United States, residing at Richmond, in the county of Henrico and State of Virginia, have invented new and useful Improvements in Shelf Structures, of which the following is a specification.

This invention relates to improvements in sectional shelving and the leading object of the invention is to provide a series of shelf supports adapted to be secured directly against a wall or partition and a series of shelves provided with means adapted to interlock with members carried by the supports and to hold said supports rigidly spaced from each other.

Another object of the invention is to provide a series of vertical supports and a series of horizontal supports adjustable thereon and so arranged that any number of sections may be connected together against a wall or partition.

A further object of the invention is to provide a sectional shelving construction including vertical and horizontal supports and shelves provided with end members adapted to interlock with the horizontal supports and adapted to be adjusted so as to assume tilting positions on the vertical supports.

With the above and other objects in view the invention relates to certain constructions, combinations and arrangements of parts, clearly described in the following specification and clearly illustrated in the accompanying drawings, in which,

Figure 1 is a front elevation of the improved shelving with portions thereof shown in section. Fig. 2 is a sectional view taken through the shelving and showing the interlocking engagement of the shelves with the horizontal supports. Fig. 3 is a bottom plan view. Fig. 4 is a vertical transverse sectional view showing the mounting of one of the horizontal members upon two of the vertical members. Fig. 5 is a detail sectional view taken on line 5—5 of Fig. 4 looking in the direction of the arrow. Fig. 6 is a detail sectional view taken on line 6—6 of Fig. 4. Fig. 7 is a detail perspective view of one of the interlocking arms or members carried by the shelves. Fig. 8 is a perspective view of one of the shelf members of one of the shelving sections looking at the bottom thereof.

Referring to the accompanying drawings,

which are prepared for illustrative purposes and accordingly are not drawn to scale, 5 denotes a wall, partition or other member, which in some cases may consist of a vertically disposed board. In the latter case the board is formed of a predetermined height and width so that a series of boards may be arranged in unit-form against a wall or partition, or if necessary away from the wall or partition.

Against the wall or member 5 vertically disposed L bars or angle supports 6 are secured, two of said supports being arranged in contacting engagement at spaced points against said wall or member 5 with a part of their flanges secured by means of fastening devices to said wall or support and their other flanges extending laterally of said wall or support. The laterally or outwardly extending flanges 6^a of the L bars or angle supports 6 are provided with vertically spaced openings 6^b which are adapted to receive the screws or supporting pegs 7 carried by the horizontal shelf supports 3. The horizontal shelf supports 8 consist of two angle iron or L bars which are arranged with two of their flanges in horizontal positions and two of their flanges in vertical positions, the vertical flanges being spaced apart from each other by washers or spacing members 9 and connected by rivets 10 extending through said washers or spacing members, so as to provide open spaces 11. The washers or spacing members 9 are located inwardly of the terminals of the horizontal shelf supports 8. The outer ends of the horizontal shelf supports 8 are engaged by the flanges 12 of the L-shaped bars or angle supports 13, which are suitably fastened to the vertical boards or frame members 14, as clearly shown in Figs. 3 and 4.

The vertical supports 6 and 13 and the horizontal supports 8 constitute the main features of the improved sectional shelving and owing to their peculiar construction can be multiplied indefinitely according to the requirements of the building or office or other place in which the shelving is to be erected. Two of the vertical supports arranged in contacting engagement against the wall or other supporting member 5, are arranged in vertical alinement with two other vertical supports so that the horizontal shelf supports 8 can be interlocked with the inwardly directed flanges of the vertical

supports. The flanges 12 of the outer vertical supports 13 are provided with vertically spaced openings 13^a which are adapted to receive the screws or supporting pegs 15 carried by the horizontal shelf supports 8. Each horizontal shelf support 8 may be adjusted at either end by changing the position of the supporting screw or peg extended through either end of the support, so that the support may be raised to a higher or lower horizontal plane or may be tilted with its rear end uppermost or with its rear end lowermost, as may be desired.

A series of shelves 16 is provided which are formed of predetermined widths and lengths and are adapted to engage the horizontal flanges 8^a of the shelf supports. Each of shelves is provided with end members 17 having depending flanges 18 adapted to enter the open spaces 11 between the vertical flanges 8^b of the horizontal shelf supports 8. The upper portions of the members 17 are disposed in countersunk openings formed in the ends of the shelves so that the shelf ends will lie snugly on the horizontal flanges 8^a. The open spaces 11 are wide enough to receive two contacting locking flanges 18 arranged in opposition to each other. The depending locking flanges 18 are provided with openings 18^a through which screw bolts 19 are passed, said screw bolts being also passed through openings formed in the horizontal shelf supports 8 and secured by nuts 20 to said horizontal shelf supports. In this way the shelves are locked to the horizontal shelf supports and the vertical L bars or angle supports are securely locked to each other against relative movement. After a number of sections have been assembled so as to provide separate tiers of shelves as shown in Fig. 2, end panels or boards 21 may be arranged to close the ends of the shelves and protect the goods contained on the shelves

against dust. A top 22 may also be provided so as to cover the edges of the member 5 and the front boards or supports 14 as well as the upper edges of the panels 21, and this top is preferably provided with a depending ledge 23 engaging the upper edges of the boards or supports 14 and the panels 21. The top 22 is also provided with two of the members 17 on each end so that it can be interlocked with the uppermost horizontal supports 8, as shown in Figs. 1 and 4. Doors 24 may be secured by hinges 25 to a part of the front supports 14 so as to protect the goods arranged on the shelves 16, and by the use of said doors the entire construction assumes the appearance of a rigid case. The top 22 may also be arranged in sections so as to permit of an easily varied unit construction. By securing the inner flanges of the vertical supports to each other front boards 14 may be dispensed with and the doors 24 omitted so that a series of open shelves is provided.

I claim,

In combination, a plurality of vertically disposed L-shaped bars having a pair of flanges arranged in contacting engagement, a pair of horizontally spaced supporting L-shaped bars adjustably mounted on said flanges, a series of shelves supported by said horizontal members, and a plurality of members having a horizontal flange portion secured to the underside of the adjacent ends of the shelves, and a depending flange, the adjacent depending flanges of each member being disposed in contacting engagement with each other and interlocked between said horizontal supports as described.

In testimony whereof I affix my signature in presence of two witnesses.

WILLIAM TIETZ.

Witnesses:

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