

G. H. CHRISTENSEN.
GROOVED SHELVING AND ADJUSTABLE BRACKET.

1,234,628.

APPLICATION FILED FEB. 20, 1917.

Patented July 24, 1917.

2 SHEETS—SHEET 1.

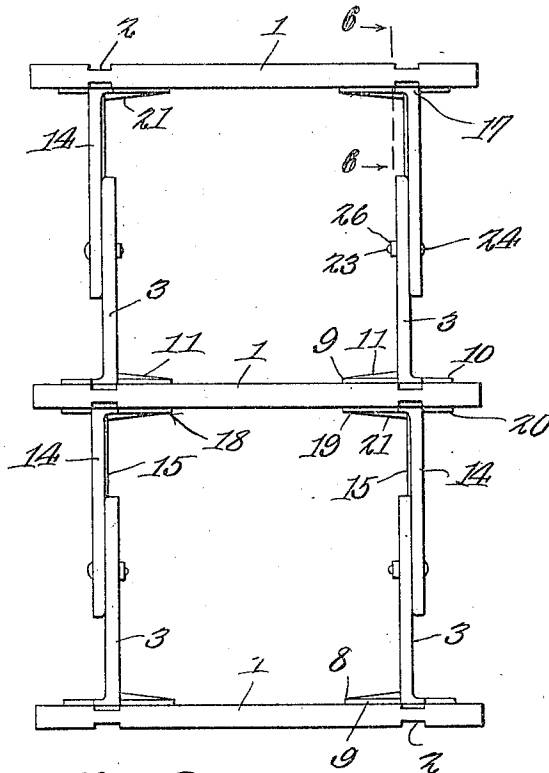
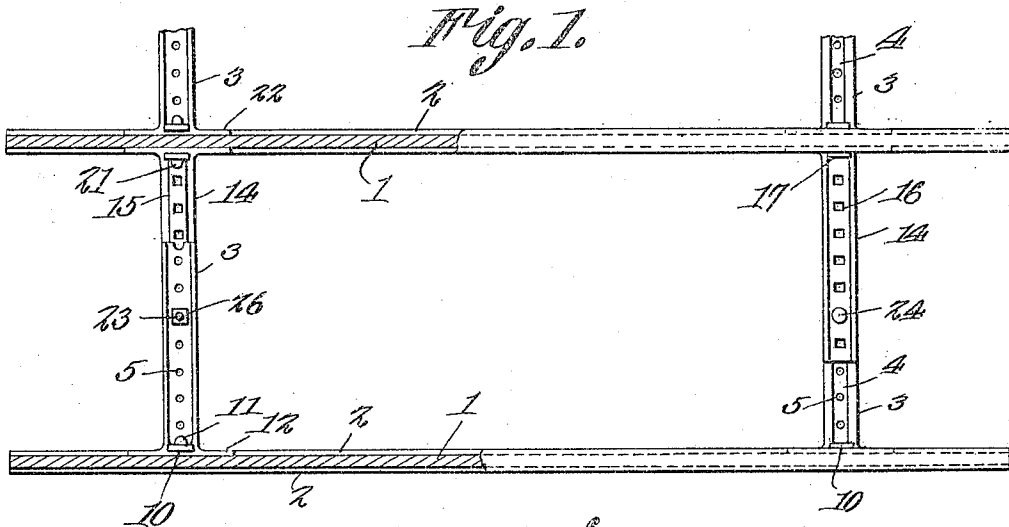


Fig. 2.

Witnesses

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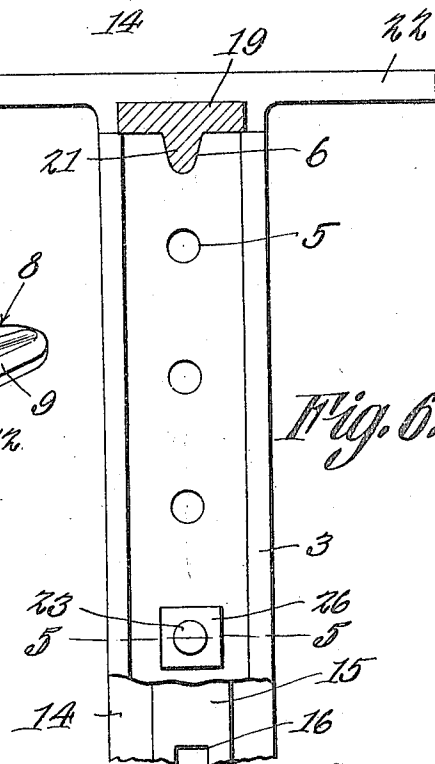
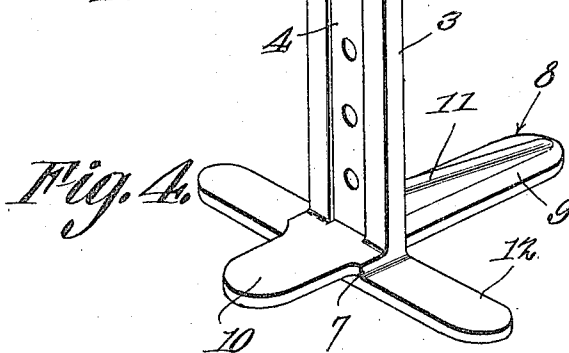
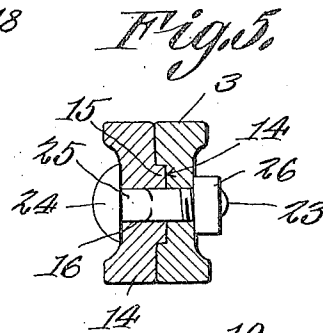
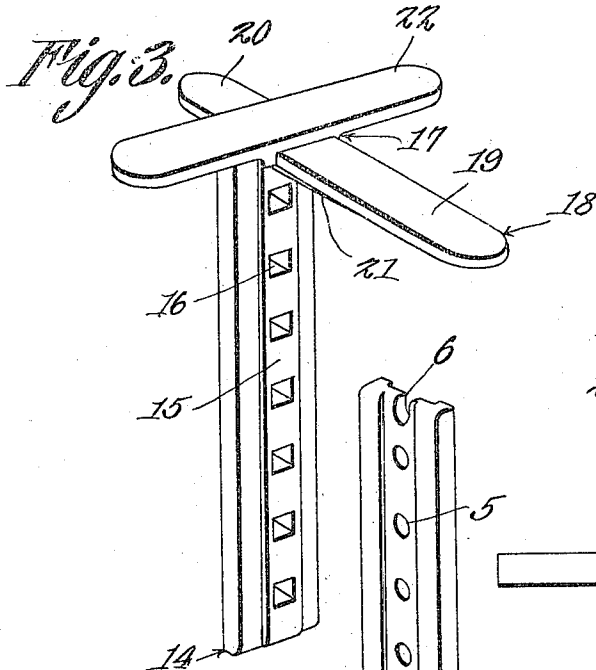
Attorneys.

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2 SHEETS—SHEET 2.



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UNITED STATES PATENT OFFICE.

GUNDER H. CHRISTENSEN, OF DEWITT, IOWA.

GROOVED SHELVING AND ADJUSTABLE BRACKET.

1,234,628.

Specification of Letters Patent.

Patented July 24, 1917.

Application filed February 20, 1917. Serial No. 149,867.

To all whom it may concern:

Be it known that I, GUNDER H. CHRISTENSEN, a citizen of the United States, residing at Dewitt, in the county of Clinton and State of Iowa, have invented a new and useful Grooved Shelving and Adjustable Bracket, of which the following is a specification.

The device forming the subject matter of this application is a shelf structure, and one object of the invention is to provide longitudinally extensible supports of novel form which are interposed between the shelves.

Another object of the invention is so to construct the shelves that they will engage properly with the ends of the supports.

It is within the province of the disclosure to improve generally and to enhance the utility of devices of that type to which the present invention appertains.

With the above and other objects in view which will appear as the description proceeds, the invention resides in the combination and arrangement of parts and in the details of construction hereinafter described and claimed, it being understood that changes in the precise embodiment of the invention herein disclosed can be made within the scope of what is claimed, without departing from the spirit of the invention.

In the accompanying drawings:—

Figure 1 shows in elevation, a shelf structure embodying the present invention, parts being broken away;

Fig. 2 is an end elevation of the structure shown in Fig. 1;

Fig. 3 is a perspective view showing the upper standard of the longitudinally extensible support;

Fig. 4 is a perspective view showing the lower standard of the longitudinally extensible support;

Fig. 5 is a cross section taken on the line 5—5 of Fig. 6; and

Fig. 6 is a section taken on the line 6—6 of Fig. 2, parts being broken away, and the shelf being omitted, and the upper standard lowered to rest on the lower standard.

In carrying out the invention there are provided any desired number of superposed shelves 1 supplied upon their upper and lower surfaces and near to their outer edges with longitudinal grooves 2.

The invention comprises a longitudinally extensible support of novel form, the same preferably being made of metal. This sup-

port includes a lower standard 3 provided upon its inner face with a groove 4. Openings 5 are formed in the standard 3, the same preferably being located at the base of the groove 4, and the openings ordinarily being of circular contour. In the upper end of the lower standard 3, a notch 6 is formed. Formed integrally with the lower end of the standard 3 is a foot denoted generally by the numeral 7, the same including a cross bar 8 embodying a long arm 9 and a short arm 10. The long arm 9 has a reinforcing rib 11 which merges into the standard 3. Formed integrally with the cross bar 8 and disposed at right angles thereto is a cross bar 12 which projects downwardly below the lower surface of the cross bar 8.

The invention comprises an upper standard 14 provided on its inner face with a longitudinal rib 15 slidably received in the groove 4 of the lower standard 3. The upper standard 14 is supplied with openings 16 which may be of rectangular outline. Assembled with the upper end of the standard 14 is a head 17 including a cross bar 18 comprising a long arm 19 and a short arm 20, the long arm 19 being reinforced by a rib 21 like the rib 11. Formed integrally with the cross bar 18 and disposed at right angles thereto is a cross bar 22 which upstands above the upper surface of the cross bar 18. Any one of the openings carried in the lower standard 3 may be brought into coaxial relation to any of the openings 16 in the upper standard 14, and through these openings may be inserted a bolt 23 including a head 24 bearing against the outer face of the upper standard 14. The squared portion 25 of the bolt 23 is received against rotation in the opening 16 of the standard 14. A nut 26 is threaded onto the bolt and bears against the outer face of the lower standard 3. The construction, obviously, is such that the support comprising the standards 3 and 14 may be adjusted in length. When the support is telescoped to the greatest possible extent, then the rib 21 on the arm 19 is received in the notch 6 of the lower standard 3.

The cross bar 12 of the lower standard 3 is received in the groove 2 in the upper surface of one shelf 1, and the under faces of the arms 9 and 10 of the cross bar 8 bear on the upper surface of the said shelf on opposite sides of the groove. In a similar way, the cross bar 22 of the upper standard 14 is re-

ceived in the groove 2 on the under side of the superposed shelf, the upper surfaces of the arms 19 and 20 of the cross bar 18 bearing on the under surface of the said shelf, on opposite sides of the groove. In this way, the shelves are supported with respect to each other in such a way that they cannot move transversely and become detached from the ends of the supports.

10 Having thus described the invention, what is claimed is:—

1. In a device of the class described, an upper shelf having a groove in its lower face; a lower shelf having a groove in its upper face; and a longitudinally extensible support comprising a cruciform head and a cruciform foot, the foot including rectangularly disposed bars, one of which extends downwardly below the other, the downwardly extended bar being received in the groove of the lower shelf, the other of said bars bearing on the shelf on opposite sides of the groove, the head including rectangularly disposed bars, one of which extends upwardly above the other, the upwardly extended bar being received in the groove of

the lower shelf, the other of said bars bearing on the upper shelf on opposite sides of the groove.

2. In a device of the class described, a support comprising standards, one of which is provided on its inner face with a longitudinal groove, the other of which is provided on its inner face with a longitudinal rib received in the groove, the standards being provided, respectively, with a cruciform head and a cruciform foot each including rectangularly disposed bars, one bar of the foot extending downwardly below the other bar of the foot, and one bar of the head extending upwardly above the other bar of the head; and means for connecting the standards for relative longitudinal adjustment.

In testimony that I claim the foregoing as my own, I have hereto affixed my signature in the presence of two witnesses.

GUNDER H. CHRISTENSEN.

Witnesses:

J. V. BLOOM,

B. F. ANDERSON.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."