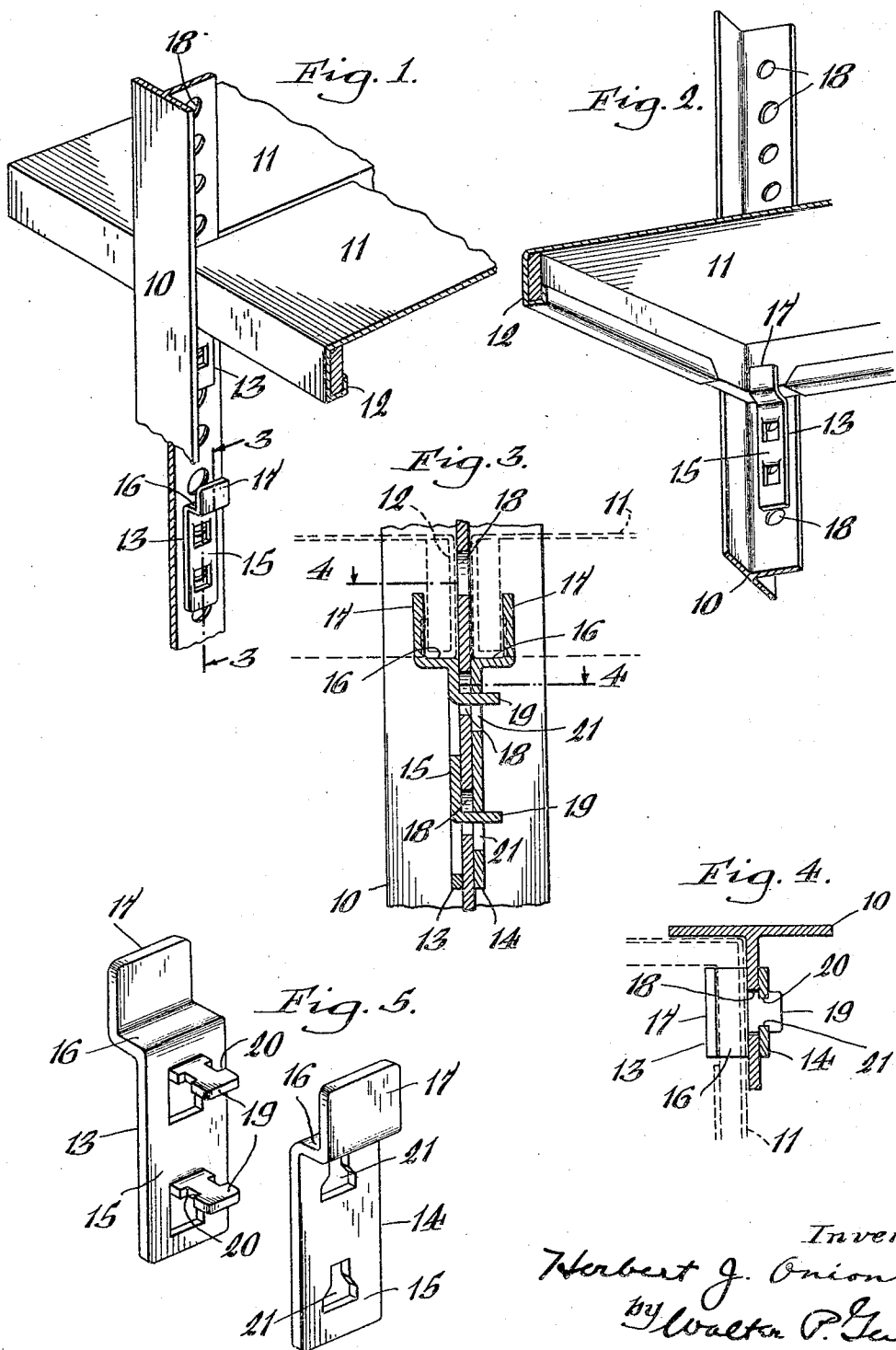


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H. J. ONIONS
ADJUSTABLE SHELVING
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Inventor
Herbert J. Onions,
by Walter P. Geyer
Attorney.

UNITED STATES PATENT OFFICE

HERBERT J. ONIONS, OF WARREN, PENNSYLVANIA, ASSIGNOR TO DE LUXE METAL FURNITURE COMPANY, OF WARREN, PENNSYLVANIA, A CORPORATION OF PENNSYLVANIA

ADJUSTABLE SHELVING

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This invention relates generally to shelving and particularly to adjustable shelving of the metallic type.

One of its chief objects is the provision of an open or skeleton type of shelving which is so designed that it affords economy of production and erection as well as strength and rigidity of construction.

Another object of the invention is to provide the shelving with simple and inexpensive means for adjustably supporting the shelves at their corners without the use of bolts or other separate fasteners.

A further object of the invention is the provision of readily detachable and adjustable corner brackets for the shelves which are disposed in pairs and reliably interlocked with the legs or standards of the shelving unit against displacement, and which are so designed that the brackets of a pair act jointly to anchor them to the shelf-standards, thereby dispensing with bolts or like fasteners and accordingly effecting a material saving in time and labor in the erection of the shelving.

In the accompanying drawing:—

Figures 1 and 2 are fragmentary perspective views of my improved shelving, looking from the top and bottom sides thereof, respectively. Figure 3 is an enlarged transverse vertical section taken on line 3—3, Figure 1. Figure 4 is a horizontal section taken on line 4—4, Figure 3. Figure 5 is a detached perspective view of a pair of shelf-brackets.

Similar characters of reference indicate corresponding parts throughout the several views.

My invention is particularly applicable to steel shelving of the open rack type employed for storage and other purposes, the same consisting of a skeleton-like frame composed of standards or upright bars 10 one being shown in the drawing and shelves 11 adjustably secured thereto. The bars are preferably of

angle or T-shape in cross section and the shelves are provided with a depending, marginal reinforcing flange 12. In the drawing, by way of example the shelves are disposed in horizontal alinement on opposite sides of the upright 10.

The shelves are adjustably supported on the T-bars by means of plates or brackets which are so designed as to be self-sustaining and do not require the use of separate fastenings or tools to apply and remove them to and from the bars. These brackets, which are disposed in pairs and constructed to jointly interlock with each other and with the bars 10, are indicated generally by the numerals 13 and 14, each consisting of an attaching portion or shank 15 and a shelf-support or rest 16 at its upper end formed by the provision of a laterally offset flange 17 between which and the adjoining faces of the bar the depending shelf-flange 12 is adapted to be fitted, as seen in Figures 2 and 3.

Formed in the web or inwardly-facing flange of the T-bar 10 are a series of openings 18 disposed in vertically-spaced relation for detachably receiving the brackets 13 and 14. The latter are arranged in opposing relation at opposite sides of the perforated T-bar and are provided with complementary male and female coupling elements, the bracket 13 having one or more laterally-projecting tongues 19 formed in its attaching portion 15, which pass through adjoining openings 18 in the bar, as shown in Figures 3 and 4. These tongues are preferably formed integral with the bracket and are stamped therefrom at approximately right angles to its attaching portion and are substantially in the shape of the letter T in plan to provide terminal locking heads or shoulders 20. The inner shank portions of these tongues are of a width to snugly fit the openings in the bar 10 to prevent shifting of the brackets relative to the bar. The companion bracket 14 has corresponding

slots or openings 21 in its attaching portion disposed in line with the openings 18 in the T-bar 10 and also adapted to receive the locking tongues 19 of the bracket 13. The bracket-openings 21 are T-shaped, the larger portion being of a width to freely receive the corresponding part of the companion locking tongue during the assembling and dismembering operations of the brackets, and the narrower portion of such bracket-opening being adapted to receive the corresponding or reduced shank of the companion locking tongue. In the clamped position of the brackets, the shoulders 20 of the locking tongues engage the opposing side face of the bracket 14 along the marginal edges of the reduced portions of its openings 21, as seen in Figure 4, whereby both brackets are jointly and positively clamped to the bar 10 to reliably support the shelving.

In applying the brackets to the bar or upright of the shelf-unit, the bracket 13 is positioned at the desired elevation on the bar with its tongues 19 projecting through the bar-openings 18, after which the companion bracket 14 is placed on the opposite side of the bar with the transverse portions of its slots 21 engaging the projected ends of the corresponding tongues 19. The bracket 14 is now shifted lengthwise of the bar 10 to bring the narrow or upright portions of its slots behind the headed portions of the tongues, which movement results in the brackets being firmly clamped to the bar 10 and reliably held against displacement in all directions. In removing the brackets to effect a change of adjustment, a reversal of the steps just described is all that is necessary.

While manifestly simple, compact and inexpensive in construction, this improved shelf-support can be readily and easily applied and removed for quick adjustment without the use of separate fasteners or tools, and its parts are effectually interlocked against displacement.

I claim as my invention:—

1. In a shelving unit, the combination of an upright for shelving having a series of openings therein, and brackets for the shelving applied to opposite sides of the upright in parallel relation thereto and having slidably-fitted interlocking male and female elements thereon for jointly clamping the brackets to each other and to the upright, the male interlocking element of one bracket engaging one or another of said upright-openings and interlocking with the female element of the companion bracket whereby said brackets are jointly drawn toward the upright in contiguous engagement with its opposite sides.

2. In a shelving unit, the combination of an upright for shelving having a series of openings therein, and supporting means for

the shelving comprising plates applied to opposite sides of said upright in opposing relation, one of said plates having an opening therein adapted to register with any one of said upright-openings, and the other plate having a locking tongue for jointly engaging the alining openings of said upright and said first-named plate, said tongue having a head interlocking with the opening of said first-named plate.

3. In a shelving unit, the combination of an upright having a series of openings therein, and supporting means for the shelving comprising companion plates applied to opposite sides of said upright in opposing relation, one of said plates having a substantially T-shaped opening therein adapted to register with any of said upright-openings and the other plate having a locking tongue terminating in a substantially T-head projecting laterally therefrom for jointly engaging the alining openings of said upright and said first-named plate.

4. In shelving, an upright having a vertical row of openings therein, a plate applied to one side of the upright and having a tongue engaging one of the openings thereof, and a shelf-engaging bracket applied to the opposite side of said upright and detachably interlocking with said plate-tongue.

5. As a new article of manufacture, a bracket for shelving composed of a pair of companion members, one member having a headed tongue projecting therefrom and the other member having an opening for receiving said tongue, the head of the latter extending through and interlocking behind the opening in the companion member.

6. As a new article of manufacture, a bracket for shelving composed of a pair of companion members having attaching portions and shelf-engaging portions, the attaching portion of one member having a laterally projecting tongue terminating at its end in an enlargement and the attaching portion of the other member having an opening for receiving said tongue, and behind which opening said tongue-enlargement is adapted to interlock.

7. As a new article of manufacture, a bracket for shelving composed of a pair of companion members terminating at their upper ends in laterally-offset, shelf-engaging flanges, the one member having an integral, laterally projecting tongue including a head and a neck portion and the other member having a complementary, correspondingly-shaped interlocking opening for receiving said tongue, the head of the latter being adapted to interlock behind the neck portion of the opening of said second-named member.

8. As a new article of manufacture, a bracket for shelving composed of a pair of companion members, one of said members having a tongue projecting therefrom and

terminating in a substantially T-shaped locking head, and the other member having a substantially T-shaped slot for receiving said tongue, the head of the latter bearing at its inner edge against the contiguous face of said second-named member at opposite sides of its slot.

9. In adjustable shelving, an upright having a vertical row of openings therein, and companion members applied to opposite sides of the upright and having complementary headed tongue and correspondingly-shaped slot connections for jointly coupling the members to each other and to said upright, the tongue being engageable with any one of said upright openings, and being disposed at substantially right angles to its carrying member, the slot in the companion member being disposed in the plane thereof.

10. As a new article of manufacture, a bracket for shelving composed of a pair of companion members, one of said members having headed-tongues projecting laterally therefrom and the other member having complementary openings of substantially the same shape as said tongues and adapted to receive and interlock with the same, said openings being disposed in the plane of their bracket member and at right angles to their complementary tongues.

HERBERT J. ONIONS.

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