

C. E. GERBERICH.
SHELVING.

APPLICATION FILED MAY 3, 1909.

Patented Mar. 8, 1910.

3 SHEETS—SHEET 1.

951,475.

Fig. 3.

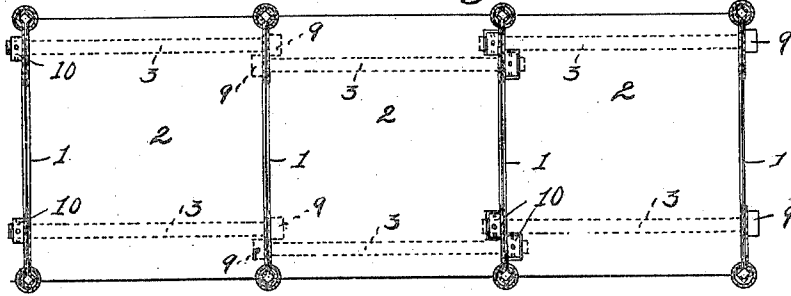


Fig. 1.

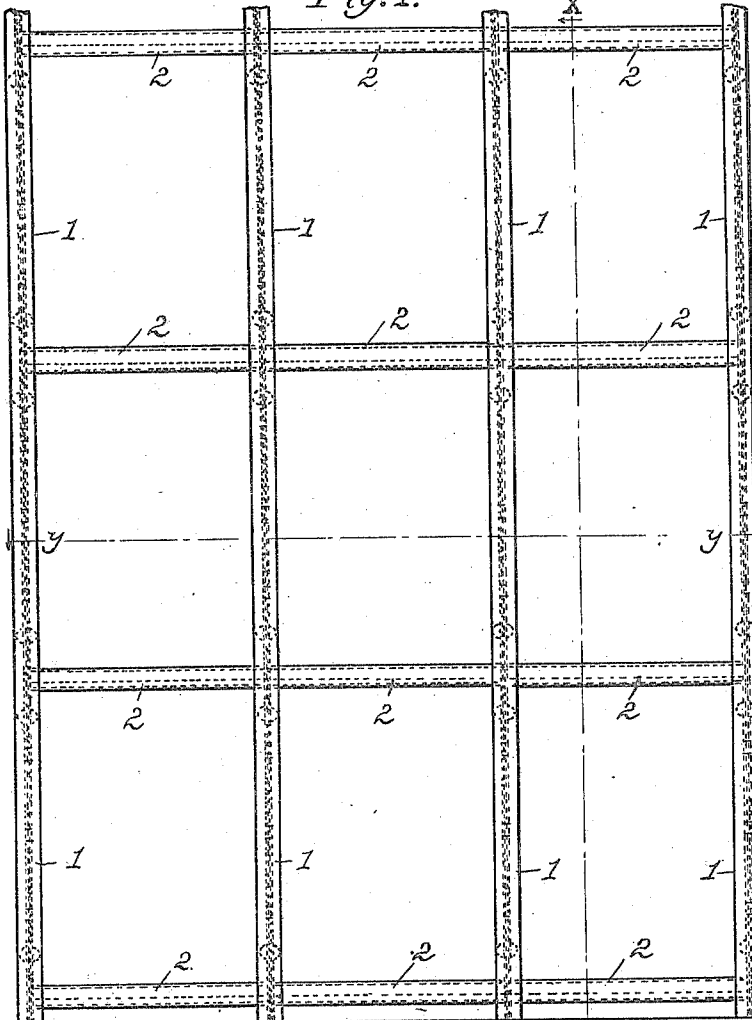
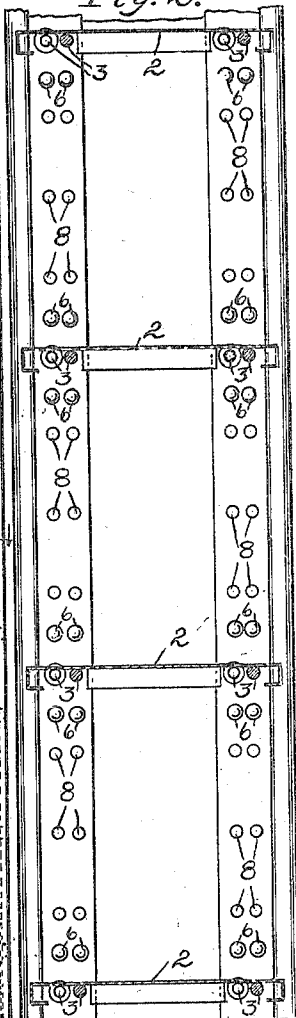


Fig. 2.



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3 SHEETS—SHEET 2.

Fig. 4.

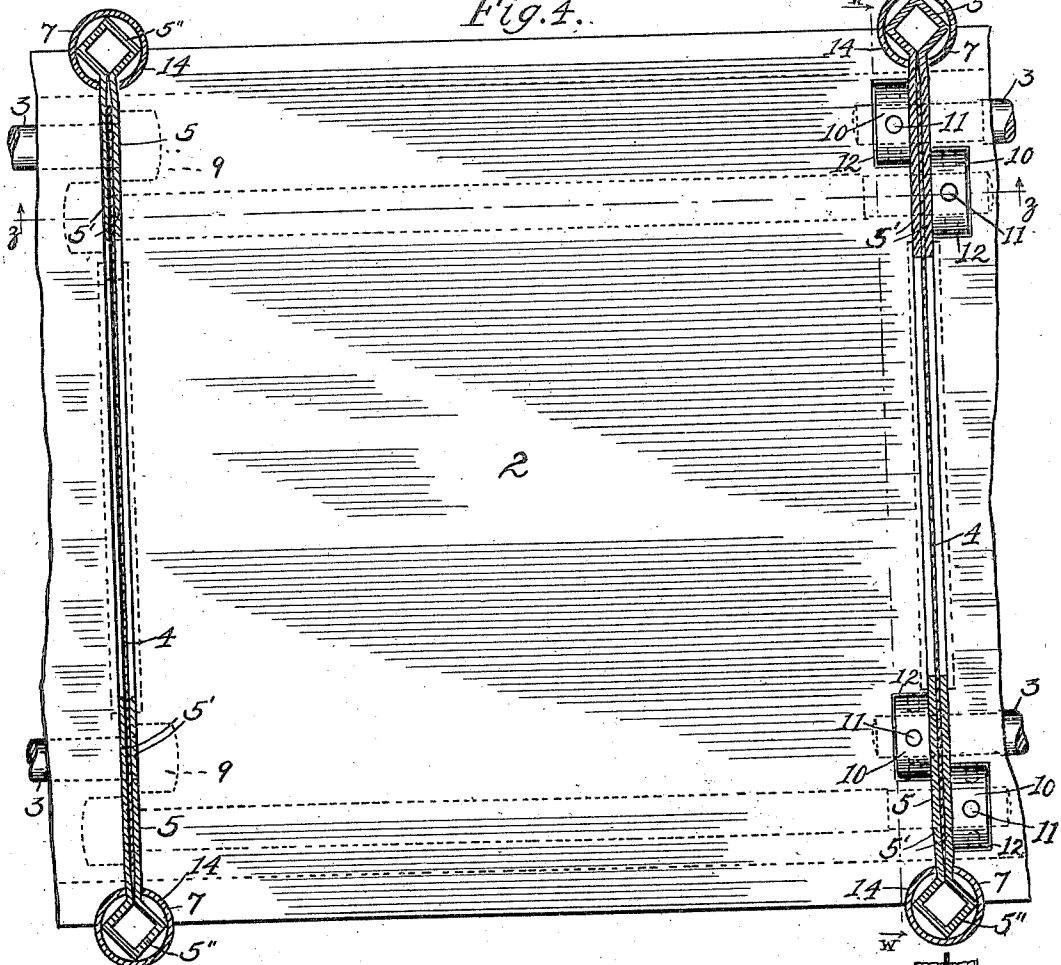
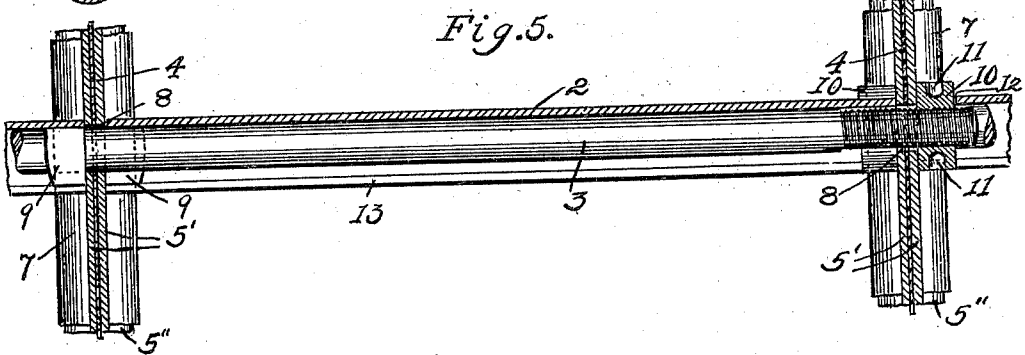


Fig. 5.



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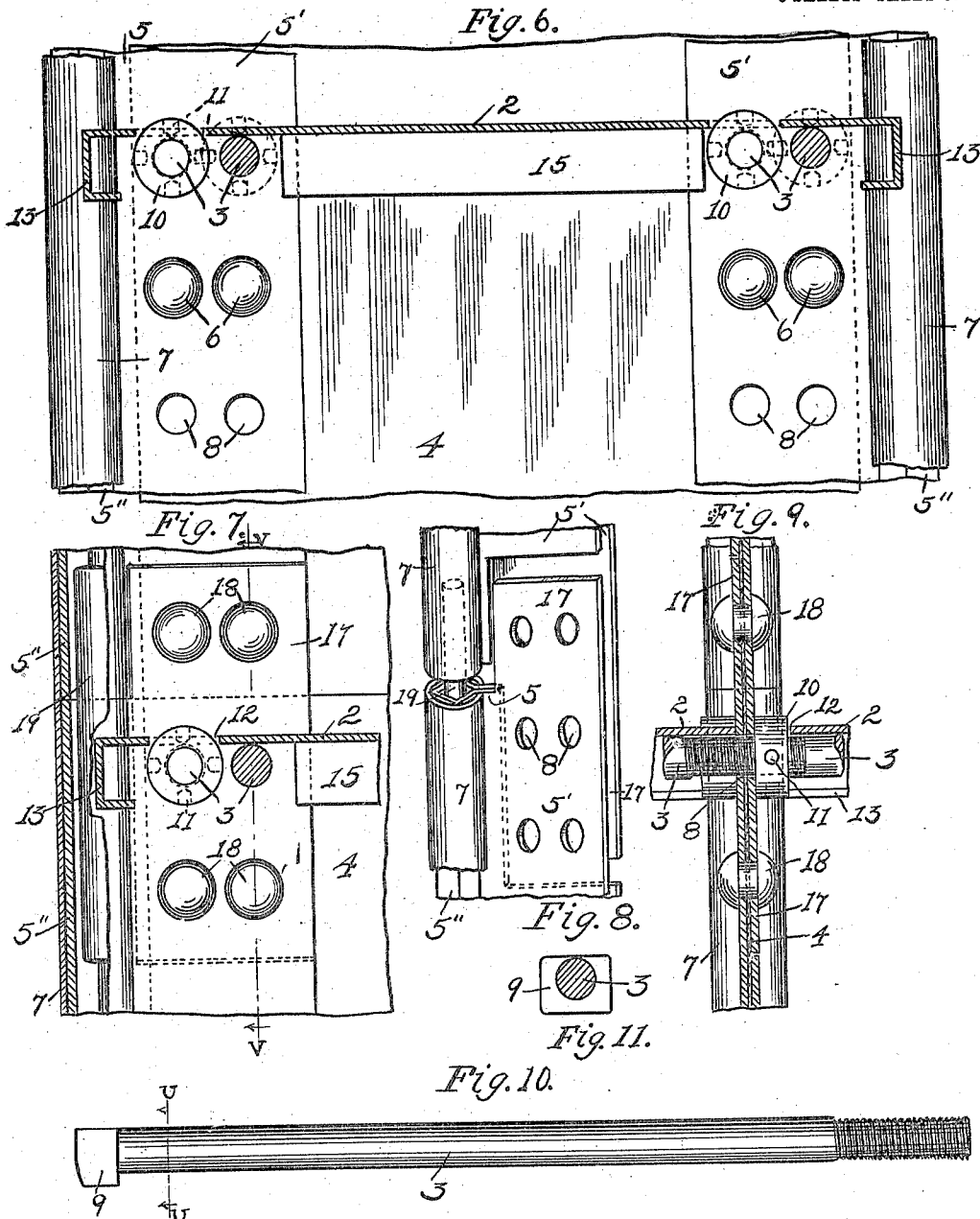
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UNITED STATES PATENT OFFICE.

CLARENCE E. GERBERICH, OF AURORA, ILLINOIS, ASSIGNOR OF ONE-HALF TO AXEL NELSON, OF MONTGOMERY, ILLINOIS.

SHELVING.

951,475.

Specification of Letters Patent.

Patented Mar. 8, 1910.

Application filed May 3, 1909. Serial No. 493,686.

To all whom it may concern:

Be it known that I, CLARENCE E. GERBERICH, a citizen of the United States, residing at Aurora, county of Kane, and State of Illinois, have invented certain new and useful Improvements in Shelving, of which the following is a specification.

My invention relates to shelving and more specifically to such as is formed of metal.

The object of my invention is to provide a shelving or rack of the character mentioned which will be of a sectional character the same being of such improved construction as to be capable of addition thereto either upwardly or laterally to an indefinite extent, and in which individual shelves included between adjacent uprights may be readily adjusted to any vertical position or entirely removed if desired, hence adapting the rack to accommodate articles of various dimensions.

A further object is to provide a shelving of such nature in which the uprights employed therein will be of greatly improved construction, the same being of the highest possible efficiency as regards their strength and durability and further which will be comparatively simple of construction, hence of low cost to manufacture.

Other objects will appear hereinafter.

With these objects in view my invention consists in a metallic shelving or rack characterized as above mentioned and in certain details of construction and arrangement of parts all as will be hereinafter fully described and particularly pointed out in the claims.

My invention will be more readily understood by reference to the accompanying drawings forming a part of this specification, and in which,

Figure 1 is a front elevation of a section of shelving constructed in accordance with my invention, Fig. 2 is a vertical transverse section taken on the line *xx* of Fig. 1, Fig. 3 is a horizontal section taken on the line *yy* of Fig. 1, Fig. 4 is an enlarged fragmentary horizontal section of a portion of the rack, Fig. 5 is a vertical longitudinal section taken on the line *zz* of Fig. 4, Fig. 6 is a vertical transverse section taken on substantially the line *vv* of Fig. 4, Fig. 7 is an enlarged fragmentary detail side elevation, partially in section, illustrating the method employed in my construc-

tion for effecting a joint or connection in an upright embodied therein, Fig. 8 is a reduced detail perspective thereof, Fig. 9 is a vertical transverse section taken on substantially the line *vv* of Fig. 7, Fig. 10 is a side elevation of one of the rods employed in my invention, and Fig. 11 is a transverse section taken on the line *uu* of Fig. 10.

Referring now to the drawings 1 indicates the uprights of my shelving and 2 the shelves thereof the latter being supported adjacent their front and rear edges upon tie rods 3 the extremities of which are detachably secured in said uprights. Comprised in each of said uprights, in the latter being embodied the essential and principal features of my invention, is a central portion or strip 4 of comparatively light material preferably sheet metal. Embracing each of the vertical or longitudinal edges of the portion 4 is an edging 5 preferably of sheet metal of a greater thickness and consequently of greater strength than the portion 4, the outward portion 5' of the edging 5 being angularly formed, preferably square in cross section. Rivets 6 extending through the parallelly extending portions 5' of the edging 5 and the portion 4 prevent displacement of the former from engagement with the latter. Inclosing the portion 5' of said edging is a reinforcing split tubular member 7 preferably circular in cross section the same being held in position thereon by frictional contact therewith.

For the reception of the extremities of the tie rods 3 each of the uprights is provided with a series of perforations 8 arranged in pairs therein at short intervals preferably at equal distances apart, the same extending through the upright portions 5 and 4. By such provision it is evident that the rods 3 and hence the shelves 2 may be readily arranged at any desired vertical position relative to the uprights. The tie rods 3 employed are of ordinary construction except that the heads 9 thereof are formed with one face in longitudinal alinement with the outer surface of the rod shank, as clearly shown in Fig. 9, such provision being made in order to accommodate the shelves 2, it being evident that with such construction, the latter upon being arranged upon said rods will rest directly upon the shanks thereof, as shown in Fig. 5. Threaded upon the opposite end portion of each of said rods is a

locking nut 10 preferably of a cylindrical form, the same being provided in the peripheral surface thereof with a plurality of radially extending recesses 11 adapted to receive the point of a key or other tool by means of which the nut may be rotated. For the reception of the nuts 10 one of the lateral edges of each of the shelf sections 2 is provided with slots 12.

The shelves 2 not forming an important part of my construction may be of any ordinary or desired form. However, shelves of a preferred construction are shown in the accompanying drawings. The forward and rearward edge portions of each of the shelf sections shown is formed with a depending and inwardly extending flange 13, the extremities 14 thereof being formed to conform with the circular contour of the tubular portion 7 of the uprights, the latter because of such construction being adapted to lock said shelves against forward or rearward movement in the uprights. Depending from the lateral edges of each of said shelf sections are reinforcing flanges 15, which, when the former is arranged for use, rest in engagement with the inner surface of the uprights.

In the construction described, upon desiring to make a vertical addition to the rack, or in the event of a connection in the uprights becoming necessary for any other reasons, the same may be readily effected in the manner clearly illustrated in Figs. 7, 8 and 9. As shown in said figures, in effecting such connection, the contiguous extremities of the edging 5 of the upright sections to be connected are so formed that the parallelly extending portions 5' thereof overlap as at 17, such overlapping portions being secured together by rivets 18. To further reinforce such connection, more particularly to maintain the tubular portions 7 of the adjoined parts in alining position, a pin 19 having its respective end portions resting in the adjoining end portions of the edging portions 5'' may also be provided.

While I have shown what I deem to be the preferable form of my invention, I do not wish to be limited thereto, as there might be many changes made in the details of construction and arrangement of parts without departing from the spirit of my invention comprehended within the scope of the appended claims.

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

1. In shelving, the combination of uprights, horizontally extending tie rods extending between adjacent ones of said uprights and passing through perforations provided therein adjacent the front and rear edges thereof, and shelves supported upon

said rods, each of said uprights comprising a central portion, an edging embracing each of the front and rear edges of said central portion, the outer portion of said edging being enlarged, and a tubular member embracing said enlarged portion of said edging substantially as described.

2. In shelving, the combination of uprights, horizontally extending removable tie rods supported in and extending between adjacent ones of said uprights, and shelves supported upon said rods, each of said uprights comprising a central portion of comparatively light material, an edging of heavier material embracing each of the front and rear edges of said central portion, the outward portion of said edging being enlarged, said enlarged portion being angular in cross section, and a split tubular member embracing said enlarged portion, substantially as described.

3. In shelving, the combination of uprights, horizontally extending tie rods extending between adjacent ones of said uprights, and passing through perforations provided therein at the front and rear edges thereof, each of said tie rods comprising a shank and a head one edge surface of which is disposed in longitudinal alinement with the outer surface of said shank, a nut threaded upon one extremity of the shank, each of said nuts having recesses in the peripheral surface thereof, and shelves arranged upon said rods, the edges of said shelves being slotted for the reception of said nuts, substantially as described.

4. In shelving, the combination of uprights, horizontally extending tie rods extending between adjacent ones of said uprights and passing through perforations provided therein adjacent the front and rear edges thereof, each of said uprights comprising a central portion of comparatively light material, an edging of heavier material embracing each of the front and rear edges of said central portion, the outer portion of said edging being enlarged, said enlarged portion being formed square in cross section, a split sleeve embracing said enlarged portion, and shelves supported upon said tie rods the lateral edges thereof resting in engagement with the inner surface of said uprights, the corner portions of said shelves resting in abutment with the split sleeves arranged upon the front and rear edges of said uprights, substantially as described.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

CLARENCE E. GERBERICH.

Witnesses:

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W. C. SMITH.