(No Model.)

L. COBURN.

SHELF CONSTRUCTION.

No. 564,005. Patented July 14, 1896.

Fig. 2.

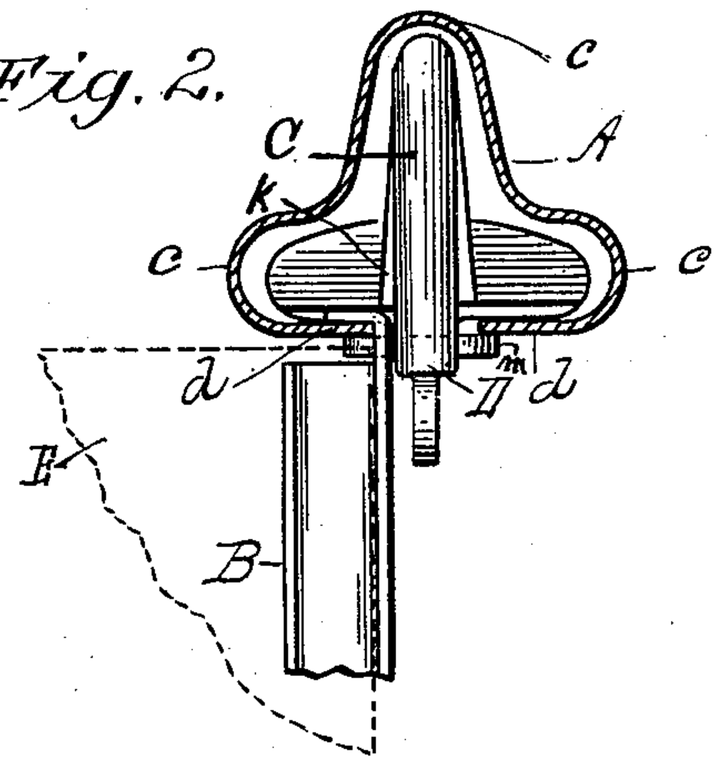


Fig. 1.

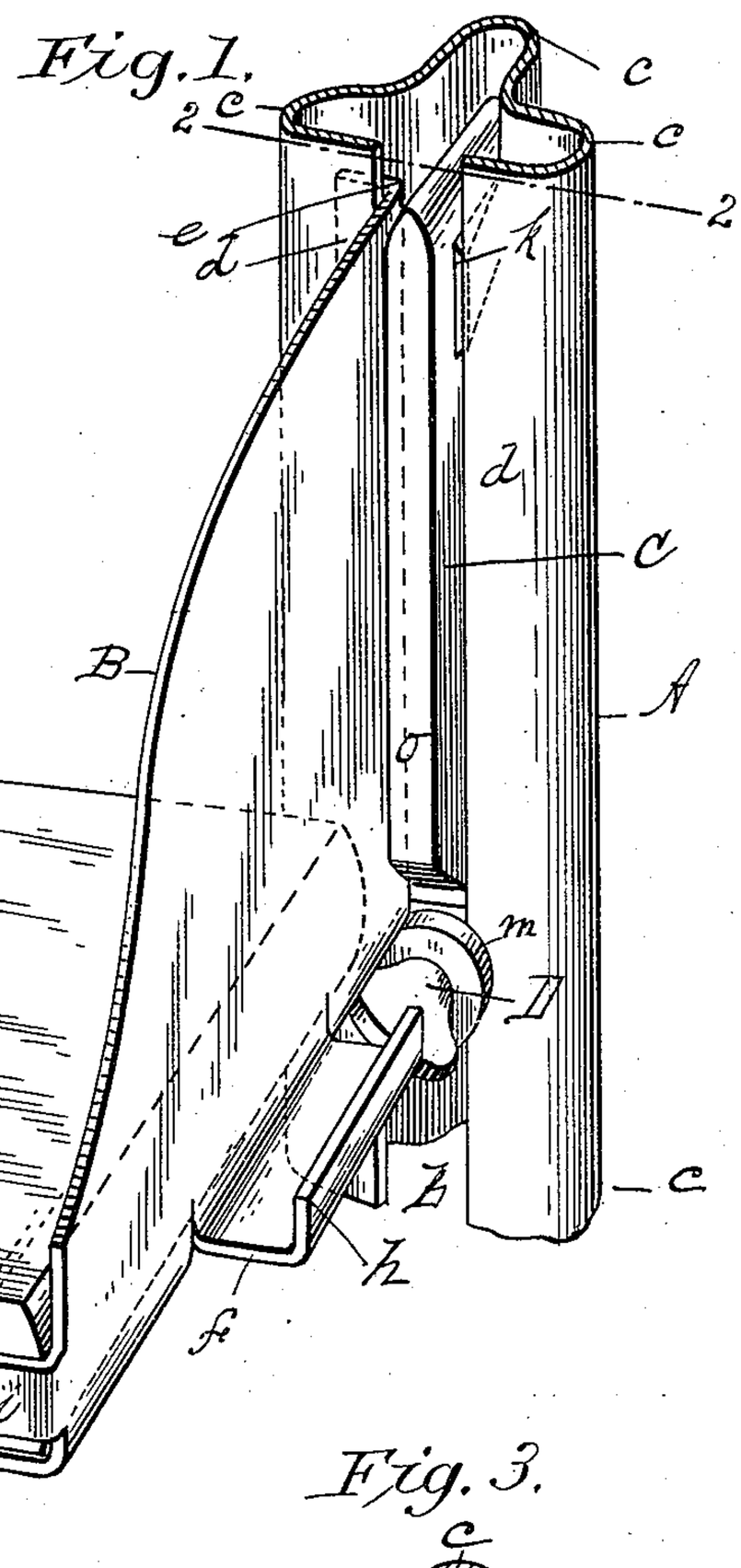


Fig. 4.

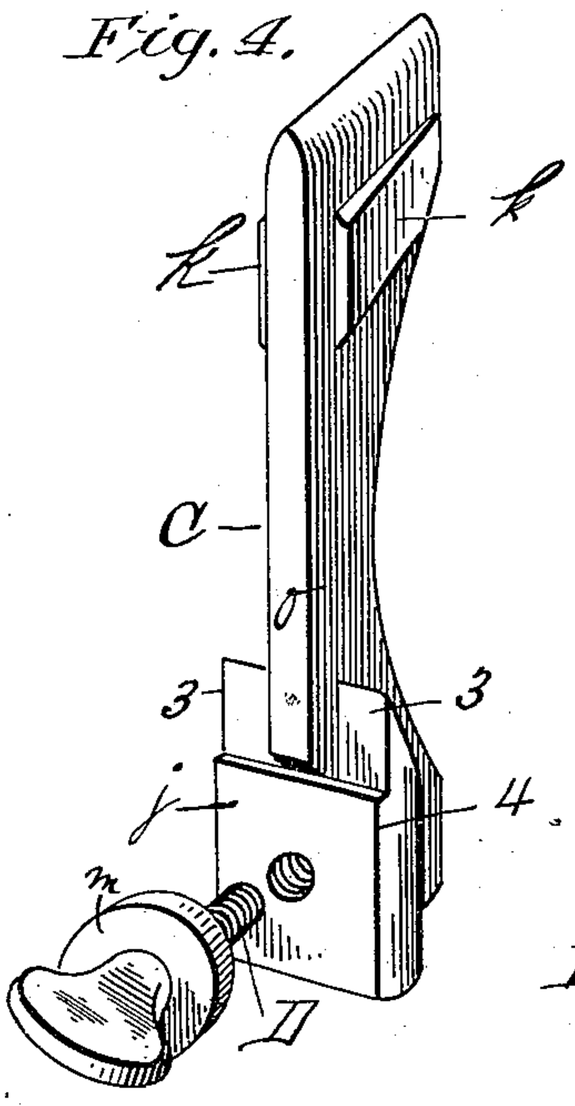


Fig. 5.

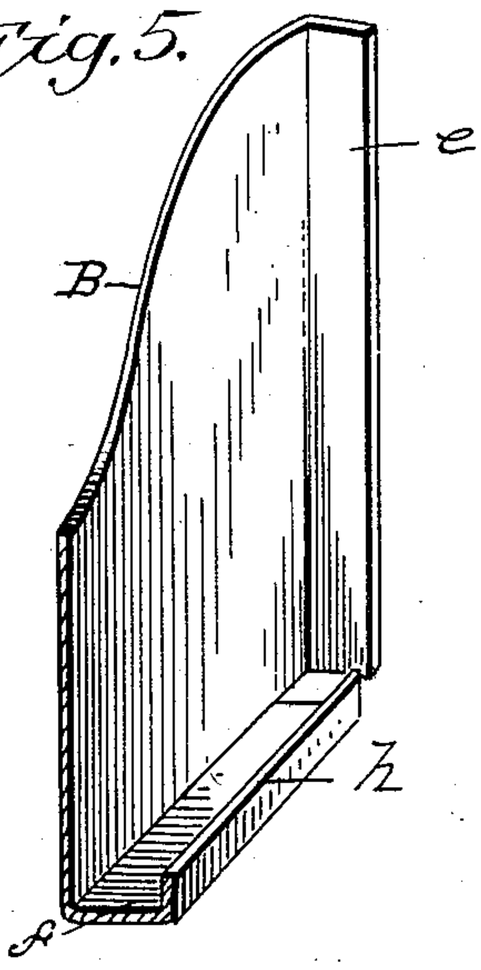


Fig. 3.

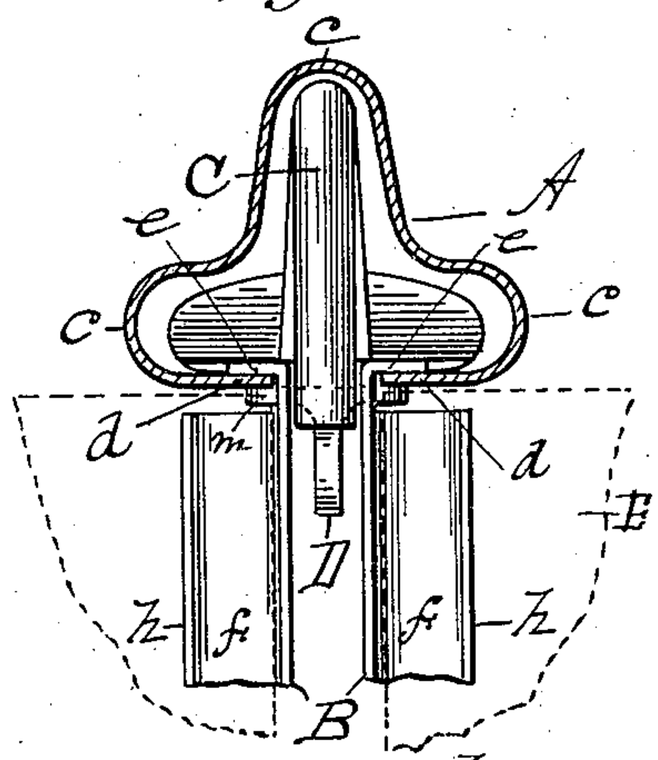
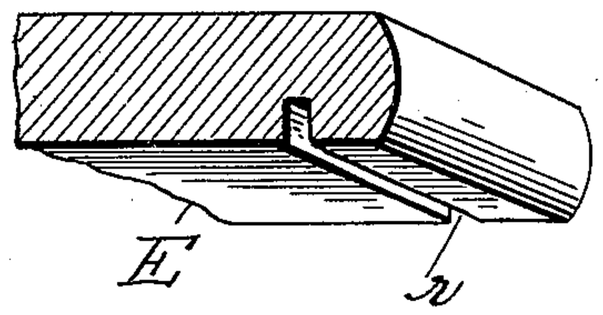


Fig. 6.



Witnesses:
J. D. Garfield
H. A. Clemons

Inventor:
Lemuel Coburn,
by Chapin & Co
Attorneys.

UNITED STATES PATENT OFFICE.

LEMUEL COBURN, OF HOLYOKE, MASSACHUSETTS.

SHELF CONSTRUCTION.

SPECIFICATION forming part of Letters Patent No. 564,005, dated July 14, 1896.

Application filed March 25, 1896. Serial No. 584,796. (No model.)

To all whom it may concern:

Be it known that I, LEMUEL COBURN, a citizen of the United States of America, residing at Holyoke, in the county of Hampden and State of Massachusetts, have invented new and useful Improvements in Shelf Constructions, of which the following is a specification.

This invention relates to shelf constructions, the object being to provide improved means for supporting shelving and shelves therefor, which are applicable to domestic and commercial purposes, and are, if desired, easily made portable by "knocking down" the parts thereof; and the invention consists in the peculiar construction and arrangement of the shelf-supporting devices, and of shelves therefor, all as hereinafter fully described and more particularly pointed out in the claims.

In the drawings forming part of this specification, Figure 1 is a perspective view of a piece of a shelf-supporting post, of a piece of a shelf, and of shelf-sustaining devices applied thereto embodying my improvements. Fig. 2 is a section on line 2 2, Fig. 1, the outline of the shelf shown in said last-named figure being indicated in dotted lines. Fig. 3 is a similar view to Fig. 2, but showing devices for supporting a second shelf, as below described. Fig. 4 is a perspective view of the shelf-bracket clamp and its screw-bolt. Fig. 5 is a perspective view of one of the shelf-brackets. Fig. 6 is a perspective view of a section of a shelf.

In the drawings, A is the shelf-supporting post consisting of a sheet-metal tube having a longitudinal slot *b*. Said post is preferably of trefoliated form in cross-section in order, by reason of the longitudinal ribs *c c c*, thereby formed thereon, to provide a light tubular post offering considerable resistance to lateral deflection when loaded as below described. In giving said peculiar form to said post A, one flat side, substantially, is produced thereon, in which said slot *b* is formed, said flat side or part of the post consisting of the two border portions *d d* of the sheet of metal from which the post is made.

The shelf-bracket B, above referred to, is made from sheet metal of suitable thickness, and has on its vertical edge a laterally-turned lip *e*, and on its lower edge a lip *f*, extending at right angles to the side or body of the bracket, and on the border of said lip *f* an upturned border *h*, thereby producing a trough-like formation on the lower end of said bracket B. In Fig. 1 the bracket B, there shown, is constructed with parts of said trough-like formation extending in opposite directions from both sides of the body of the bracket, for a purpose hereinafter described. Said bracket B is provided, preferably, with a lip *i*, turned toward the upturned border *h* thereon, said lip *i* extending before the adjoining border of a shelf whose end is engaged on said bracket.

A bracket-clamp C is provided to be placed within said post A, as shown in the several figures. A block *j* is formed on the lower front side of said clamp for engagement with the rear or inner sides of the said border portions *d d* of said post A, and two upstanding bracket-clamping arms 3 3 are provided above the border 4 of said block *j*, for engagement with the lower ends of the lip *e* on bracket B. A bolt D, of thumb-bolt formation or otherwise, is provided to be screwed into said clamp C, when the latter is in place within said post A, and draw the lower end of said block *j* and said clamp forcibly toward said inner sides of said border portions of said post. Said clamp is provided with the projections *k* on the opposite sides thereof, for end engagement with a part of one or more brackets B, as hereinafter set forth, when the latter are connected to said post A. The front edge *o* of said clamp C, while the latter is within the post A, as in Fig. 1, is, in practice, brought to the position in the slot *b* of said post shown in said last-named figure when engaged with one or more brackets B.

A section of a shelf E is illustrated in Figs. 1 and 6, which is adapted for use with the above-described devices. As shown in Fig. 1, a groove *r*, in the under side of said shelf, is provided for engagement with the said upturned border *h* of the lip *f* of said bracket, and when so engaged that part of the end of the shelf between said groove *r* and the extremity thereof rests upon said lip

f of the bracket, and thereby said shelf is locked to the bracket; and the shelf is prevented from sliding forward on the bracket when any object is drawn off from it by said lip *i*, which extends in front of the edge of said shelf, as shown in Fig. 1. The said border *h*, which is turned upwardly on the edge of said lip *f* of bracket B, as well as said lip *i*, may, if desired, be omitted. The object in making said bracket B, when desired, with portions of said shelf-supporting lip *f* extending at right angles or horizontally in opposite directions, as shown in Fig. 1, is to provide, if need be, for supporting the ends of two separate shelves on the same bracket. The foot of said post A may be secured to a floor by a suitable foot of cast-iron or other material, adapted to receive the end thereof in a suitable socket or on a stud, and to be attached to the floor by screws, and a similar fixture may be employed for securing the upper end of said post to a wall or other object, whereby it may be secured rigidly in an upright position.

In assembling the above-described parts constituting the herein-described shelving construction, one proceeds as follows: The posts A therefor have inserted therein as many of the bracket-clamps C as there are to be lines or rows of shelving. The bolt D of the clamp is then unscrewed sufficiently to permit of moving the same to the desired position in said post, and then the bracket B is applied to the post by inserting its lip *e* through the slot *b* thereof and into engagement with the inner side of one of said border portions *d* of said post, as shown. The said clamp C is then moved to the position in post A relative to said lip *e* of the bracket, as shown in Fig. 1, whereby the end of one of the projections *k* is brought opposite the upper inner corner of the bracket, and one of said arms 3, of the clamp is brought against the lower end of the said lip *e* of the bracket. The bolt D is then screwed into the clamp, its collar *m* engaging with the outer side of the post A, thereby drawing said clamp against the flanges or borders *d*, and rigidly clamping the said lip *e* against the inner side of one of said borders *d* of said post, and adapting it to sustain the shelving and matter that may be placed thereon. Said post and clamp are adapted to have two brackets B, supported by each clamp, each occupying substantially the position shown in Fig. 1, but side by side when it is desired to run lines of shelving in opposite directions from said post.

As above set forth, the use of a second bracket may be dispensed with by constructing the bracket with shelf-engaging trough-shaped lips *f* on opposite sides of its lower edge, as shown.

The above-described shelf construction provides convenient means for changing the positions of the several shelves of a group, for every shelf is detachable from its bracket-support and the latter are adjustable vertically on the supporting-posts A, and hence the shelves may be arranged at pleasure for such degree of separation as varying wants may require.

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

1. Shelf-supporting devices consisting of a tubular metallic post having a slot extending longitudinally in one side thereof, combined with a shelf-supporting bracket engaging said post on one of the borders of said slot, and devices on said post for clamping the engaging parts of said bracket and post, one to the other, substantially as set forth.

2. Shelf-supporting devices consisting of a tubular metallic post having a slot extending longitudinally in one side thereof, combined with a shelf-supporting bracket having a lip thereon engaging the inner side of said post adjoining one of the borders of said slot, and devices on said post for clamping the said bracket-lip and the adjoining part of said post, one to the other, substantially as set forth.

3. Shelf-supporting devices consisting of a tubular metallic post having a slot extending longitudinally in one side thereof, combined with a shelf-supporting bracket having a lip thereon engaging the inner side of said post adjoining one of the borders of said slot, and a shelf-supporting lip thereon extending from one or both sides thereof, and devices on said post for clamping the said post-engaging lip of said bracket and the adjoining part of said post one to the other, substantially as set forth.

4. Shelf-supporting devices consisting of a tubular metallic post having a slot extending longitudinally in one side thereof, combined with a shelf-supporting bracket having a lip thereon engaging the inner side of said post adjoining one of the borders of said slot and a shelf-supporting lip thereon extending from one or both sides thereof and a clamp within said post engaging the lip of said bracket, and a screw-bolt entering said clamp through said post-slot and engaging the outer side of said post, and drawing said clamp against said bracket-lip and the latter against the inner surface of said post, substantially as set forth.

5. Shelf-supporting devices comprising a bracket having a shelf-supporting lip *f*, extending from one, or from opposite sides thereof, and a post-engaging lip *e*, on one border thereof, combined with a shelf engaging by one end with said lip *f*, a tubular metallic post having a slot extending longitudinally in one side thereof, and engaging said bracket-lip *e*, by one border thereof, adjoining said slot, and devices for clamping the said bracket-lip *e*, and the adjoining part of

said post, one against the other, substantially as set forth.

6. In combination, the shelf E, having the groove *r*, the bracket B, having the lip *f*, on its lower edge extending at right angles to the side thereof, the upturned border *h*, on said lip for engagement in said groove, and the lip *i*, extending opposite the edge of said shelf, substantially as set forth.

LEMUEL COBURN.

Witnesses:
H. A. CHAPIN,
K. I. CLEMONS.