(No Model.) 2 Sheets—Sheet 1.

F. O. REISENER.

SHELVING.

No. 322,201. Patented July 14, 1885.

Fig. 1.

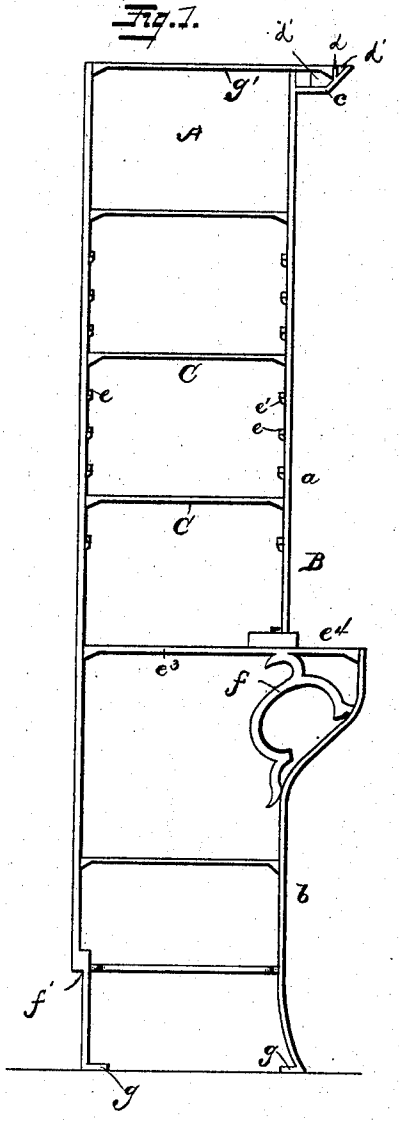


Fig. 3.

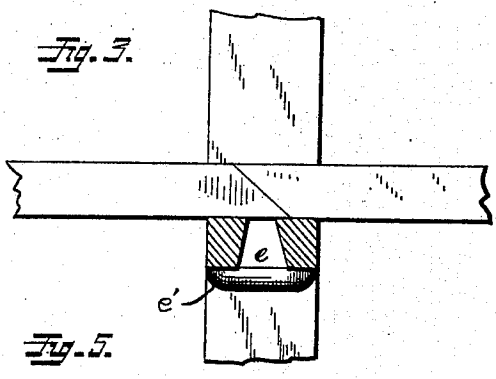


Fig. 5.

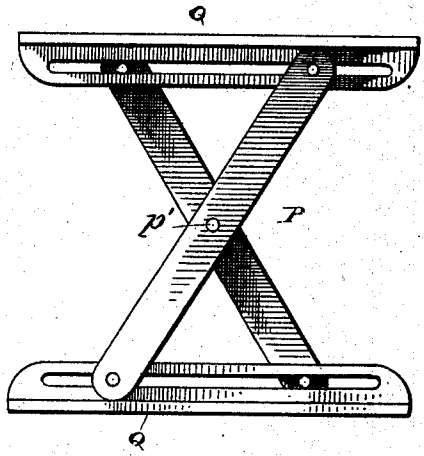
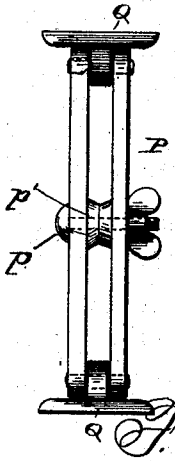


Fig. 6.



WITNESSES

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(No Model.) 2 Sheets—Sheet 2.

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SHELVING.

No. 322,201. Patented July 14, 1885.

Fig. 2.

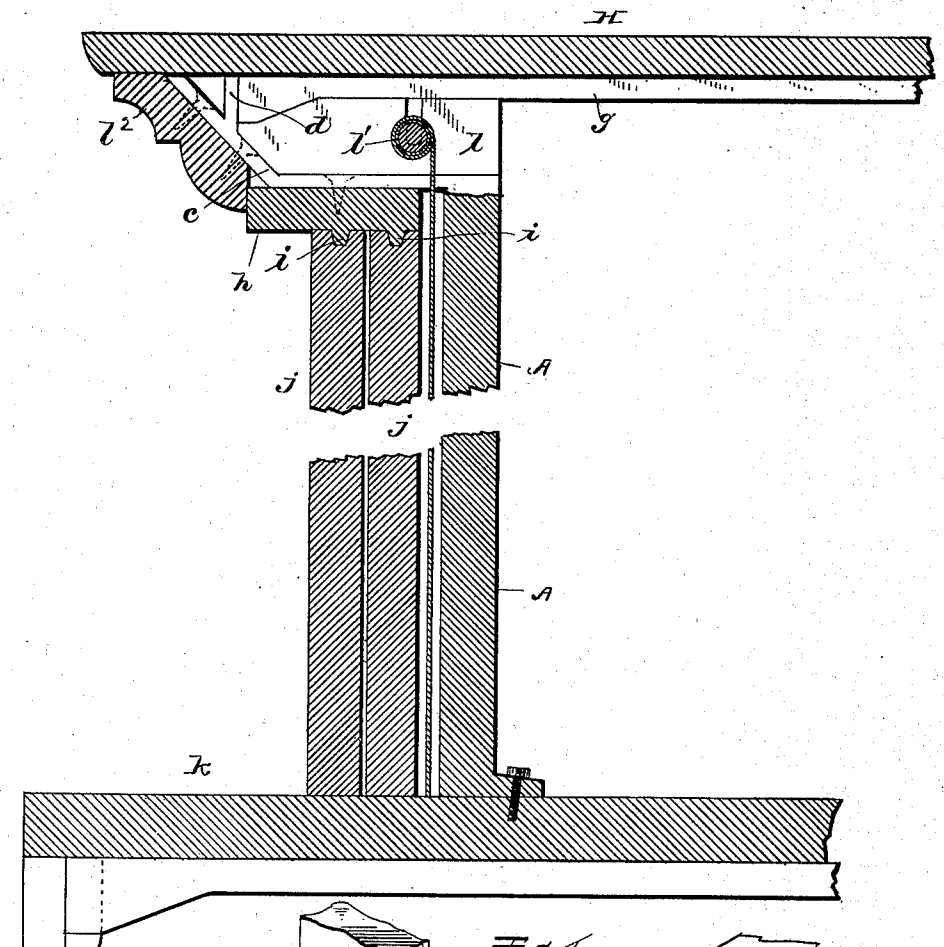
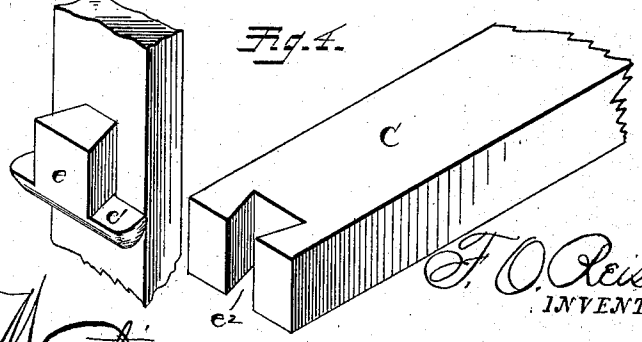


Fig. 4.



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UNITED STATES PATENT OFFICE.

FRIEDERICH OTTO REISENER, OF WEST POINT, IOWA.

SHELVING.

SPECIFICATION forming part of Letters Patent No. 322,201, dated July 14, 1885.

Application filed November 21, 1884. (No model.)

To all whom it may concern:

Be it known that I, FRIEDERICH O. REISENER, a citizen of the United States, residing at West Point, in the county of Lee and State of Iowa, have invented a new and useful Improvement in Shelving, of which the following is a specification, reference being had to the accompanying drawings.

My invention relates to shelving; and it has for its object to provide shelving which shall be simple in its construction, and which may be readily put together or taken apart when so desired.

A further object of the invention is to provide improved means for attaching the shelves whereby the same may be vertically adjusted.

A further object of the invention is to provide the shelving with an ornamental cornice or molding.

With the above and other objects in view, the invention consists in the improved construction and detailed arrangement of parts hereinafter fully described, and pointed out in the claims.

In the drawings, Figure 1 is an end view of one of the supporting-frames detached, showing the cross-bars adjusted in position for supporting the shelves. Fig. 2 is a vertical section of a completed shelf. Fig. 3 is a detail view showing the shelves overlapped. Fig. 4 is a detail view of the bars for supporting the shelves, and Fig. 5 is a detail view of a supplemental supporting-standard, and Fig. 6 is a vertical section of the same.

In the accompanying drawings, in which like letters of reference indicate corresponding parts in all the figures, A represents one of the supporting-frames, and of which there may be as many as is necessary. The supporting-frames A consist of the front standard, B, which is preferably cast in two pieces, *a b*. The upper piece, *a*, is formed at its upper end with an outwardly-extending arm, *c*, upon the inner side of which, near the outer end thereof, is provided an upwardly-extending bar or rod, *d*, thus forming seats *d'*. The front and rear supporting standards are formed upon their inner sides with inwardly-extending diametrically-opposite dovetailed flanges *e*, adjacent to the lower ends of which are formed ledges *e'*.

C represents a series of cross bars or rods, which are provided at their ends with dovetailed slots e^2. These bars fit the dovetailed flanges of the front and rear supporting-standards, their ends resting upon the ledges *e'*. The bar e^3, connecting the upper end of the lower piece, *b*, of the front standard, A, is somewhat longer than the other cross-bars, as shown, to form a shelf portion, e^4. The upper end of the piece *b* is curved outwardly, as shown, and is formed on its inner side with a dovetailed flange similar to those already mentioned. Said piece *b* is also formed on its inner side with an arm, *f*, which serves as a support for the bar e^3, said arm being on a vertical line with the upper piece, *a*, of the front standard. It will thus be seen that by curving the upper end of the piece *b* outwardly, and having the long cross-bar e^3 that a shelf is formed. The lower end of the upper piece has a foot provided with holes or openings, and rests upon and is secured to the cross-bar e^3. The lower end of the rear supporting-standard, B, is formed with an angular seat, *f'*, in order that it may fit upon the wash-board. The supporting-standards are formed at their lower ends with feet *g*, provided with holes or openings for the passage of screws or equivalent fastening, whereby they may be firmly and securely attached to the floor. The upper or top-supporting cross-bar, *g'*, extends beyond the body of the upper piece, *a*, and fits a dovetailed flange upon the inner side of the upwardly-extending arm *c*. In placing the shelving in position, as many of the supporting-frames are employed as is necessary to afford a proper support for the shelves. Upon the under sides of the outwardly-extending arms *c* of the supporting-standards is secured a strip of wood, *h*, having upon its under side at suitable distances apart two parallel longitudinal ribs, *i*, which is arranged to leave a slight space between itself and the front standard, A, of the supporting-frame. Sliding doors *j* are provided, the upper ends of which have grooves or channels, to receive the downwardly-projecting ribs on the under side of the strip *h*, the lower ends of said doors resting upon a strip of wood, *k*, which fits upon and connects the shelves of the adjacent supporting-frames. Near the rear ends of the

arms *c* of each supporting-frame and upon the upper sides thereof are provided blocks *l*, having slots or openings, in which are mounted the ends of a roller, *l'*, having a curtain of any desired material.

H represents a top board, which is secured to and connects the supporting-frames. This top board extends outwardly a short distance beyond the arms *c*, as shown, and serves to prevent dust or dirt from settling upon the shelves, said board being held in place by screws or equivalent fastening, which pass through holes or openings in the top-connecting cross-bars. Upon the outer side of the arms *c*, and near the outer ends thereof, is secured a molding, *l²*, of any desired form or configuration, the lower end of which rests or bears against the end of the strip *h*, while the upper end bears against the under side of the top board near the outer end thereof.

As a means of supporting the shelves between the supporting-frames, I employ two arms, P, having on their inner sides, midway between their ends, inwardly-extending flanges *p*, having holes or openings *p'*. These arms are crossed and pivoted together by a bolt having a screw-threaded end, upon which is a thumb-screw, so that said bolt may be tightened, to clamp the arms in any desired position.

Q represents plates having each a central longitudinal rib upon its under side, which is provided with a longitudinal slot. The ends of the arms P are connected with said plates by pins or bolts passing through said slots. It will be seen that by closing the ends of the arms and tightening the set-screw that the height of the support will be increased, while by spreading the arms apart and tightening the same the height will be decreased; hence the support may be adjusted to the distance between the shelves.

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

1. A supporting-frame for shelving, consisting of two uprights or standards having dovetailed flanges upon their inner sides, and ledges *e'* at the lower ends of said flanges, and cross-bars having slots to receive the flanges, and resting on the ledges *e'*, shelves adapted to be supported on said cross-bars, and adjustable supports for the shelves, as set forth.

2. A supporting-frame for shelving, consisting of two uprights or standards, the front standard being of two pieces, the lower piece being curved outwardly beyond the upper piece, as shown, a bar connecting the outwardly-extending portion of the lower piece of the front upright with the rear upright, the upper piece, *a*, being secured to the bar *e³*, and the arm *f*, substantially as set forth.

3. A supporting-frame for shelving, consisting of two uprights or standards having dovetailed flanges on their inner sides, and ledges adjacent to the lower ends of said flanges, cross-bars connecting the flanges, a shelf, and an arm extending inwardly from piece *b* of the front standard, and bearing against the under side of bar *e³*, substantially as set forth.

4. The combination, in portable shelving with the pivoted arms, of plates having central longitudinal slotted ribs upon their under sides, and a set-screw for clamping said arms, said arms being pivotally connected to the plates, as set forth.

5. The combination, in portable shelving, of pivoted arms having inwardly-extending flanges, with plates having central longitudinal slotted ribs upon their under sides, and pins connecting the arms pivotally with the slots of the plates, as set forth.

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

FRIEDERICH OTTO REISENER.

Witnesses:
CHAS. MARTIN,
GEORGE SEIM.