

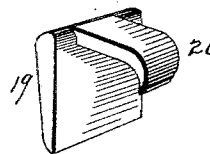
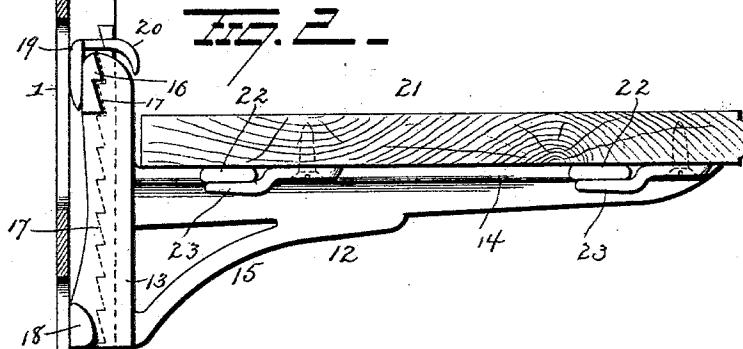
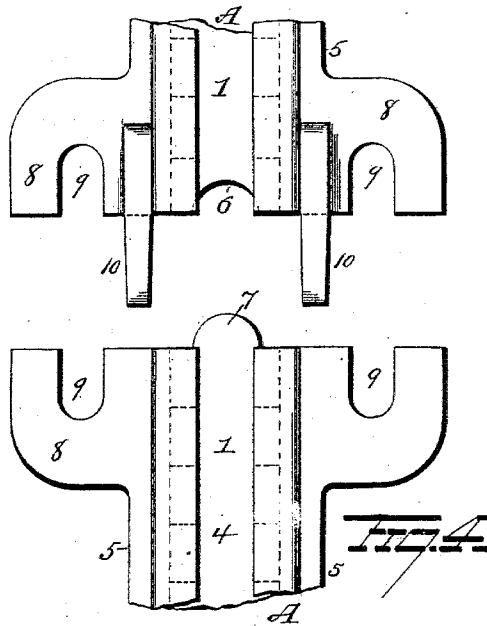
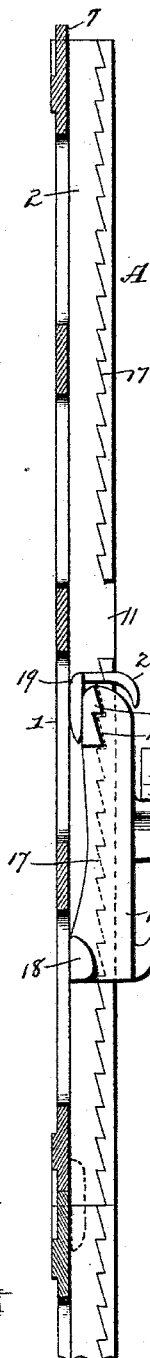
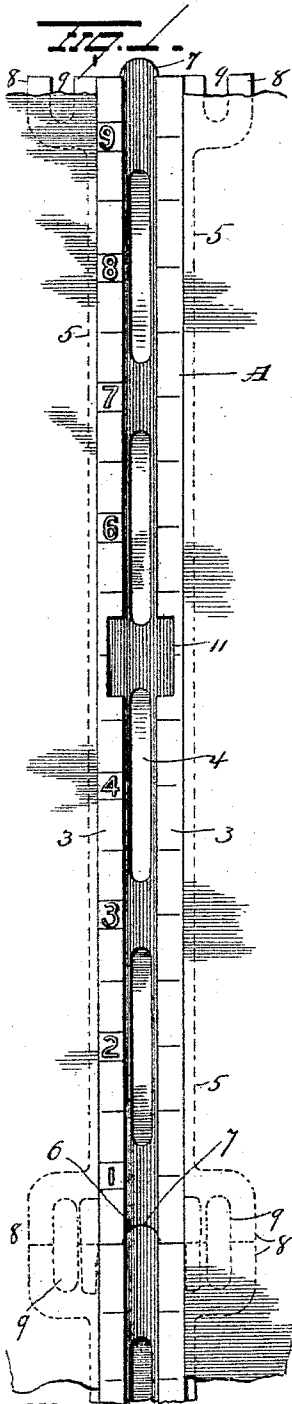
(No Model.)

2 Sheets—Sheet 1.

F. E. HARTZELL.
SHELVING.

No. 569,640.

Patented Oct. 20, 1896.



Witnesses
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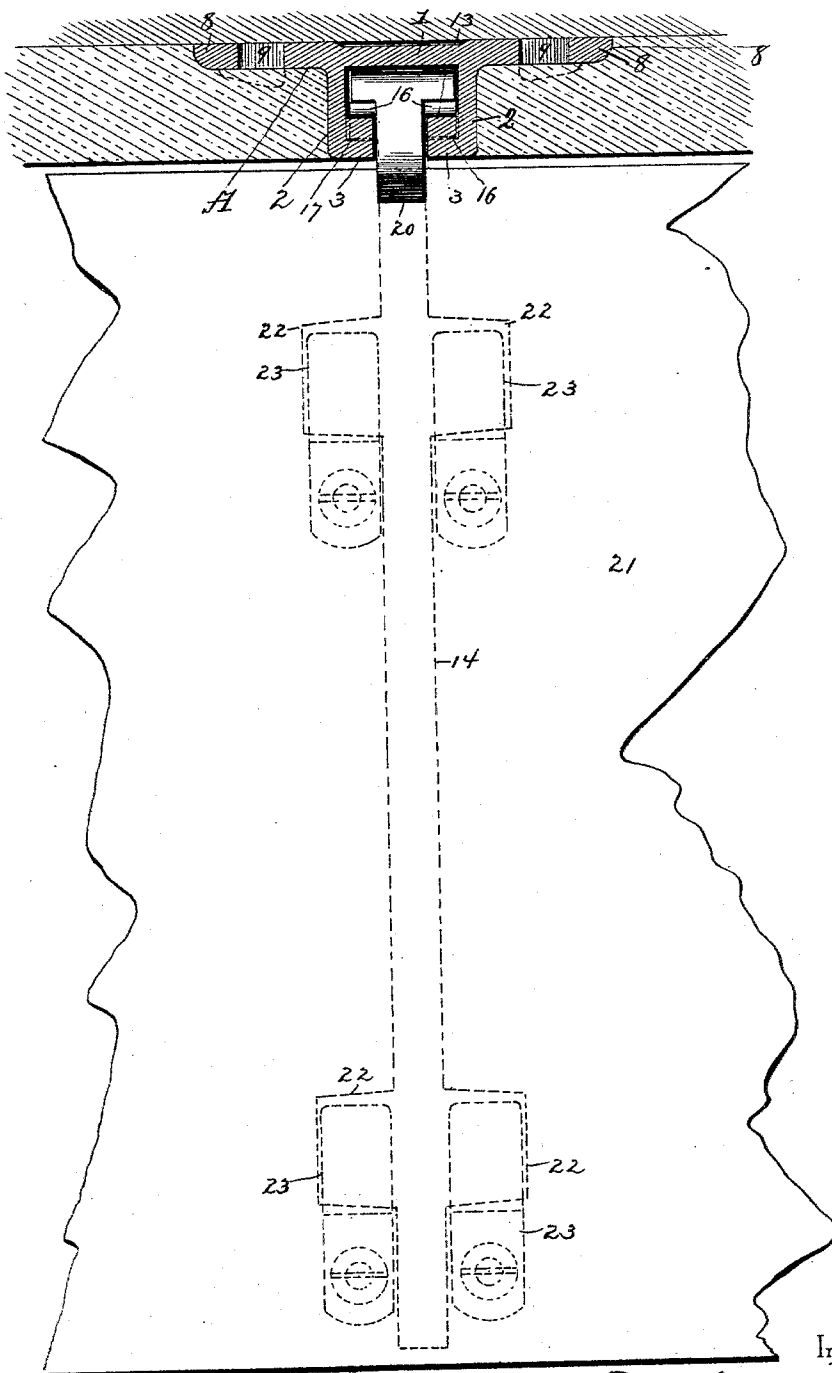
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2 Sheets—Sheet 2.

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UNITED STATES PATENT OFFICE

FRANK E. HARTZELL, OF ALLIANCE, OHIO.

SHELVING.

SPECIFICATION forming part of Letters Patent No. 569,640, dated October 20, 1896.

Application filed January 18, 1896. Serial No. 576,010. (No model.)

To all whom it may concern:

Be it known that I, FRANK E. HARTZELL, a resident of Alliance, in the county of Stark and State of Ohio, have invented certain new and useful Improvements in Shelving; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to an improvement in shelving, one object of the invention being to produce simple and efficient means whereby to attach shelving to the wall of a room.

A further object is to provide simple and efficient means for locking the shelves to the brackets.

A further object is to provide means whereby to prevent vertical displacement of the shelf-brackets.

With these objects in view the invention consists in certain novel features of construction and combinations and arrangements of parts, as hereinafter set forth, and pointed out in the claims.

In the accompanying drawings, Figure 1 is a view illustrating an embodiment of my invention. Fig. 2 is a vertical sectional view. Fig. 3 is a view partly in horizontal section and partly in plan, a portion only of the shelf showing. Fig. 4 is an enlarged view showing the ends of two of the wall-supports, and Fig. 5 is a detached view of the key.

A represents my improved wall-support, comprising a back 1, from which parallel flanges 2 project outwardly, and from the free edges of said flanges ribs 3 project toward each other, so as to form a slot 4 between them. At the junction of the flanges 2 with the back 1 laterally-projecting ribs or flanges 5 are made.

The support A is intended to be embedded in the wall of a room, so that the ribs 3 will be practically flush with the surface of the wall, thus giving the general appearance of a vertical slot in the wall. When the support is thus embedded in the wall, the lateral ribs or flanges 5 above alluded to will prevent any tendency of the support to bulge or move outwardly.

The supports A are preferably made in sections provided at their respective ends with tongues 7 and recesses 6, the tongue 7 of one

section being adapted to enter the recess 6 of the adjacent section, thus preventing any lateral displacement of the sections relatively to each other. Each section of the wall-support A is also provided at its respective ends with laterally-projecting lugs 8, having notches 9 for the accommodation of suitable fastening devices, by means of which the support can be secured in place to the foundation of the wall, whether that foundation be wood, brick, or stone. At one end of each section of wall-support downwardly-projecting fingers or catches 10 are made on the lugs 8, and these fingers or catches are adapted to overlap the lugs 8 of the adjacent section of the support. From this construction and arrangement of parts it will be seen that when weight is applied on brackets attached to a section of the wall-support such weight will serve to force the fingers or catches 10 at the lower end of the section to which the weight is applied firmly against the lugs 8 of the section immediately below, thus preventing any possibility of the latter moving outwardly when excessive weight is applied to one of the sections. When thus constructed, the rigidity of the support is insured, and would remain intact if fastening devices be only used at the upper and lower ends of the complete support.

The ribs 3 of at least one section of the wall-support are preferably cut away whereby to form an opening 11 to permit the insertion of the shelf-bracket 12. Each shelf-bracket is made with a vertical back 13, adapted to move in and neatly fill the slot 4, and with an outwardly-projecting arm 14, on which the shelf is to rest, said arm being braced by a brace 15. The vertical back 13 of each bracket is provided at its upper end with laterally and forwardly projecting teeth 16, adapted to engage teeth 17 on the inner faces of the ribs 3. The lower end of the back 13 of the bracket is provided with laterally-projecting lugs 18, adapted to bear against the inner face of the back of the wall-support A. In order to prevent the accidental disengagement of the teeth 16 on the bracket from the teeth 17 on the ribs 3 of the wall-support, a wedge or key 19 is inserted between the back 13 of the bracket and the back of the wall-support, and said wedge or key is provided with a lip 20, which pro-

jects through the slot 4 and rests on the upper end of the back 13 of the bracket, thus preventing said wedge or key from falling down behind the bracket.

5 The arm 14 of the bracket on which the shelf 21 rests is made with laterally-projecting lugs 22 whereby to broaden the bearing for the shelf. This is a matter of some importance when the abutting ends of two
10 shelves meet on one of the brackets. In order to avoid any possibility of displacement of the shelf from the bracket, I provide locks 23, which are secured in pairs to the under face of the shelf and adapted to project under
15 the laterally-projecting lugs 22.

In order to insure the adjusting of the brackets 12 in several parallel supports, so that they will all be in the same plane to support a shelf in a horizontal position, each support is graduated, as shown in Fig. 1, preferably from 1 at the bottom upward indefinitely.

It will be observed that the locks 23 on the underside of the shelf prevent any lateral or sidewise motion of the shelf after the latter
25 has been pushed back toward the wall, as the shelf will be thoroughly locked to the bracket at the front and rear edges. The bracket is also locked in the wall-support by the wedge 19, which also prevents lateral motion, so that
30 the combination of the locks 23 on the under side of the shelf and the wedge or lock 19 at the rear of the bracket prevent any lateral motion whatever of the shelf.

My improvements are simple in construction, comparatively cheap to manufacture, and effectual in all respects in the performance of their functions.

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

1. The combination with a wall-support adapted to receive a bracket, said support having ribs with teeth on their under faces, of a bracket having teeth to engage the teeth on said ribs, and a wedge or key adapted to be inserted between said bracket and the back of the support and immediately in rear of the teeth, whereby to prevent the accidental disengagement of said teeth, substantially as set forth.

2. The combination with a wall-support adapted to receive a bracket, said support having inwardly-projecting ribs with teeth on their under faces, of a bracket having teeth to engage the teeth on the ribs, a wedge or key adapted to be inserted between the bracket and the back of the support, and a hook or lip on said wedge or key adapted to engage the upper end of the bracket, substantially as set forth.

3. The combination with a support and a bracket adjustably attached thereto, of laterally-projecting lugs on the shelf-supporting arm of said bracket, a shelf on the bracket, and locks secured to the under face of the shelf and adapted to engage said laterally-projecting lugs, substantially as set forth.

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

FRANK E. HARTZELL.

Witnesses:

LUTHER LEE JOHNSON,
J. W. CRAINE.