

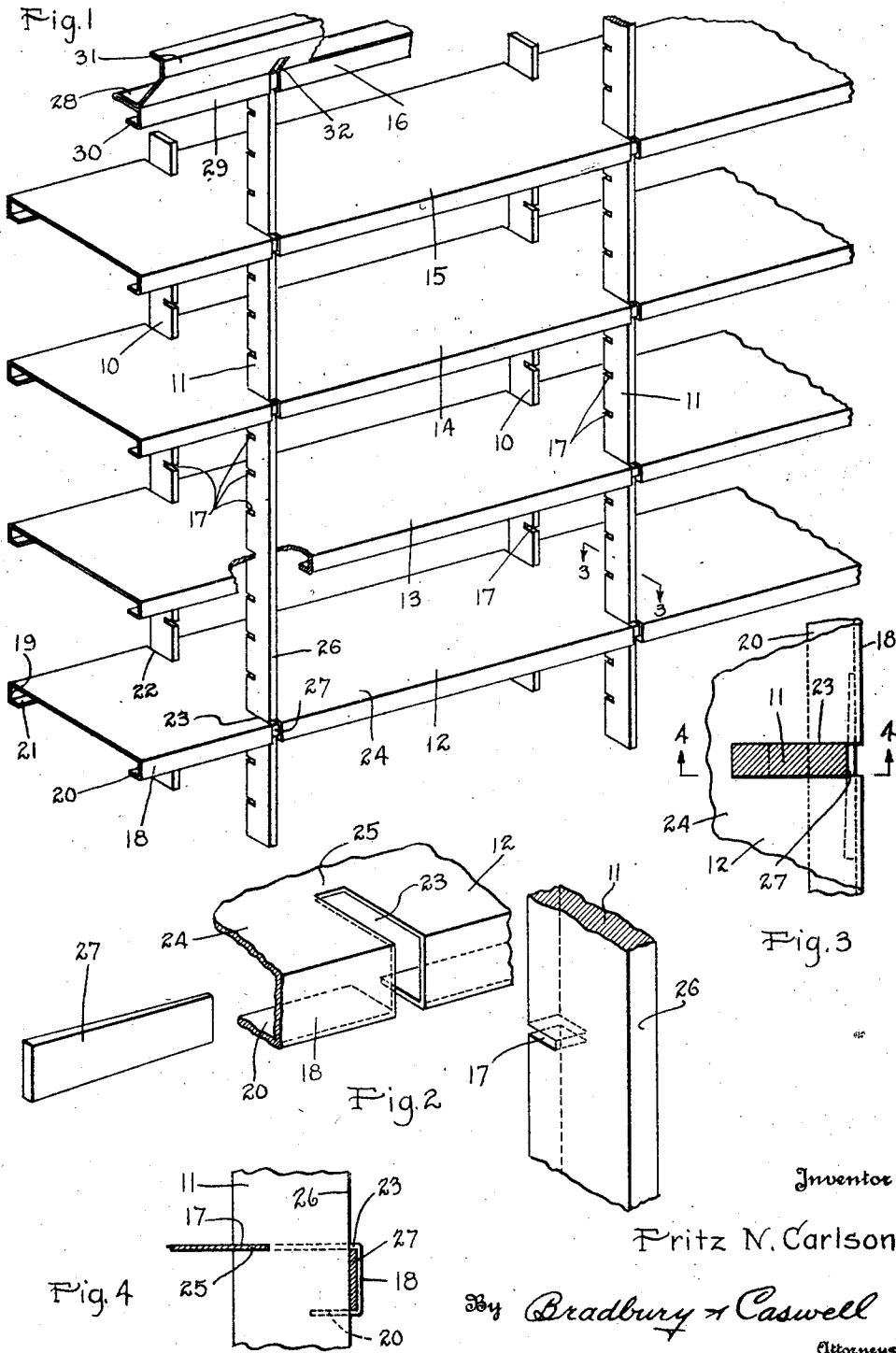
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SHELF FIXTURE

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SHELF FIXTURE.

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My invention relates to shelf fixtures and has as an object thereof to provide structural parts capable of being easily assembled to provide shelves at various selected elevations which are supported in a rigid and substantial manner.

A further object of the invention resides in providing notched standards adapted to receive the shelves and support the same.

Another object resides in forming the shelves of sheet metal bent to provide a depending flange having an inwardly turned lip, and to form said shelves with slots extending through said flange and lip for the reception of said standards, portions of said shelves being adapted to enter the notches of said standards to hold the shelves supported thereon.

A still further object resides in providing a key adapted to be positioned between a shelf proper and its inturned lip and to lie against the depending flange on one side and against a standard on the other to hold the shelf attached to the standard.

With the foregoing and other objects in view, which will appear in the following description, the invention resides in the novel combination and arrangement of parts and in the details of construction hereinafter described and claimed.

In the drawings, Fig. 1 is a perspective view of a shelf fixture embodying my invention.

Fig. 2 is a detail perspective view of a key and of a portion of a shelf and a standard showing the relative positioning of said parts in the assembling thereof.

Fig. 3 is a fragmentary sectional view taken on line 3—3 of Fig. 1 and drawn to an enlarged scale.

Fig. 4 is a sectional view taken on line 4—4 of Fig. 3.

My improved shelf fixture is particularly adapted to be used in stores and similar places where a rigid and substantial fixture is required permitting of adjustment of the shelves and which may be readily and quickly assembled or taken apart. Although my shelf fixture may be constructed according to various plans to meet the requirements of the particular building in which the same is being installed, I have simply illustrated a small section of a shelf fixture which is best shown in Fig. 1. This construction consists primarily of pairs of spaced standards 10 and 11 which are arranged at sufficiently

close intervals throughout the length of the shelving. Upon these standards are mounted a series of shelves 12, 13, 14 and 15 which may be adjustably attached to said standards. Upon the upper ends of the standards is secured a molding 16 which lies adjacent the ceiling of the room in which the shelf fixture is installed, and which serves to trim the shelf fixture and give the same an attractive and ornamental appearance.

The standards 10 and 11 are identical in construction and are formed of bar metal, preferably rectangular in cross section. Along one edge of each bar is cut a series of transverse notches or kerfs 17 which are equally spaced from one another. The width of these kerfs is just sufficient to permit the entry therein of the shelf proper in a manner which will be presently described. As before stated, all of the standards 10 and 11 are of the same size and the kerfs 17 correspondingly formed therein so that the shelves, mounted in corresponding kerfs, lie horizontal.

Each of the shelves 12, 13, 14 and 15 is identical in construction and therefore only one of said shelves need be described in detail. A portion of shelf 12 has been illustrated in detail in Figs. 2, 3, and 4. Shelf 12 may be made of any length and is formed of a sheet or strip of sheet metal forming a body portion 24, which has the edges along both sides thereof bent over to form two depending flanges 18 and 19. Both of these flanges have the lower edges thereof turned inwardly to provide two lips 20 and 21 which face each other. The flanges 18 and 19 in addition to giving the shelf a finished appearance serve to stiffen the same and to form a rigid and substantial construction. At regular intervals along the two edges of shelf 12 are cut pairs of oppositely facing slots 22 and 23 which extend through the flanges 18 and 19 and the lips 20 and 21 of said shelf and into the body thereof for a short distance. These slots are of a width snugly to receive the standards 10 and 11, which may be inserted therein by the moving of said standards laterally toward one another. The portion 25 of the body 24 of the shelf immediately back of the slots 22 and 23 is adapted to enter into any of the kerfs 17 along the standards 10 and 11. Slots 22 and 23 which are identical in formation extend inwardly into the body 24 a distance such that the outer edges 26 of the

standards 10 and 11 fall within the flanges 18 and 19 a short distance, as clearly shown in Figs. 3 and 4. By this construction the shelf is held supported upon the standards, and the standards are braced both by the body 24 of the shelf and by the lips 20 and 21.

For holding the shelves rigidly and securely attached to the standards 10 and 11 I employ keys 27, best shown in Fig. 2, said keys being of a width slightly less than the distance between the body 24 of the shelf and either of the lips 20 or 21 thereof. After the standards and shelves are assembled, keys for each shelf are slid along the inner faces of the flanges 18 and 19 to become lodged between said flanges and the edges 26 of standards 10 and 11. When so lodged said keys are supported at their lower edges by the lips 20 and 21 and at the same time bridge the gap across said flanges 18 and 19 formed by the slots 22 and 23, and thereby prevent the standards 10 and 11 from sliding out of said slots. In this manner the shelving and standards may be held securely locked together to provide a rigid and substantial construction. Preferably, the keys 27 are made thicker at one end than the other to serve as wedges between each of the standards 10 and 11 and their respective flanges 18 and 19 of the shelving. And they may be made of the same material as the shelving proper and bowed slightly before being put in place to prevent the accidental dislodgment thereof from the shelf structure.

For the purpose of giving an ornamental appearance to the top of the shelf fixture the molding 16 previously referred to, may be employed. This molding may be formed of sheet metal bent in any desirable manner to give the same the desired appearance. The lower portion of the molding is constructed with a body portion 28 from which is bent a downwardly depending flange 29. The lower edge of this flange is bent inwardly to provide a lip 30, which construction is identical with the flanges 18 and 19 and the lips 20 and 21 of the shelf proper. The remainder of the molding indicated at 31, as before stated, may be bent or formed to give the desired ornamental and attractive appearance. At the proper intervals along the flange 29 are provided slots 32 which are identical with and correspond to the slots 22 and 23 in the shelf proper. By means of these slots and keys similar to the keys 27, molding 16 may be attached to the top of the standards 10 and 11 in exactly the same manner as the shelves 12, 13, 14 and 15.

When the notches 17 in the standards 10 and 11 are sufficiently close together, adjustment of the space between the shelves may be readily made to meet with ordinary conditions. If, however, spacing other than that provided is desired, the same may be easily obtained by cutting additional notches in the standards

10 and 11 by means of an ordinary hack saw. This may be more apt to become necessary in respect to the molding 16 where it is desired to attach the same so that said molding lies against the ceiling of the room in which the shelf fixture is installed.

Although I have illustrated but a single type of shelf fixture it will become apparent that drawers, cupboards and other types of compartments may be installed and built into the structure embodying my invention. In addition my improved shelf fixture may be built into cases, vaults or other special structures. The standards being of rectangular formation occupy but a comparatively small amount of space so that substantially the entire shelf area is available for use. Due to the flanges 18 and 19 along the edges of the shelves, the same are materially stiffened so that the standards supporting the shelves may be spaced apart considerably. Any tendency of the fixture to weave longitudinally is effectively prevented by the bracing contact of the shelf bodies 24 and lips 19 and 20 with the sides of the standards 10 and 11 and any tendency of said fixture to weave laterally is effectively prevented by the relatively wide keys 27 wedged between the shelf flanges 18 and 19 and the edges of the standards 10 and 11. The shelf fixture may be easily and quickly erected or taken down, thereby providing a highly meritorious and useful construction.

Changes in the specific form of my invention, as herein disclosed, may be made within the scope of what is claimed without departing from the spirit of my invention.

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

1. In combination, a standard of rectangular cross section, formed with kerfs along one edge thereof, a shelf having a flange depending therefrom and a lip extending inwardly from the lower edge of said flange, said shelf having a slot extending through said flange and lip for the edgewise reception of said standard, the portion of said shelf at the end of said slot being adapted to enter one of the kerfs in said standard, said slot being of a depth sufficient to bring the outer edge of said standard within said flange, and a flat key of a width equal to the distance between said shelf and lip, held edgewise therebetween, and lodged on one side against the inner surface of said flange and on its other side against the outer edge of said standard for holding said shelf in place upon said standard.

2. In combination, standards of rectangular cross section, a shelf having a flange depending therefrom and a lip extending inwardly from the lower edge of said flange, said shelf having slots extending through said flange and lip, each slot for the snug edgewise reception of a standard, means on

said standards for supporting said shelf, said slots in the shelf being of a depth sufficient to bring the outer edges of the standards within said flange, and keys positioned between said shelf and lip and lodged at one side against said flange and at the other side against said standards for holding said shelf in place upon the standards, the shelf with its lip co-operating with the standards to brace the structure one way and the keys co-operating with said standards to brace the structure another way.

3. In combination, a shelf supporting standard formed with kerfs along an edge thereof, a shelf having a flange depending therefrom and a lip extending inwardly from the lower edge of said flange to provide a space therebetween, said shelf having a slot extending through said flange and lip for the reception of said standard, a portion of said shelf being adapted to enter one of the kerfs in said standard, and a wedge-like key positioned edgewise in said space between said shelf and lip and wedged flatwise between said flange and the standard to bridge across said slot and to hold said shelf clamped to said standard.

4. In combination, a shelf supporting standard formed with kerfs along an edge thereof, a shelf including a flange depending therefrom and a lip extending inwardly from the lower edge of said flange to provide a space therebetween, said shelf having a slot extending through said flange and lip for the reception of said standard, a portion of said shelf being adapted to enter one of the kerfs in said standard, and a key positioned in said space between said shelf and lip and lodged between said flange and the standard to bridge across said slot and to hold said shelf attached to said standard.

5. In combination a standard, a shelf including a flange formed thereon, said shelf

having a slot extending through said flange for the reception of said standard, means for supporting said shelf upon said standard and a key lodged between said flange and standard for holding said shelf attached thereto.

6. In combination, a shelf supporting standard having kerfs along the same, a shelf having a portion thereof adapted to engage the kerfs of said standard for supporting said shelf thereon, and a wedge carried by said shelf and co-operating with the standard for holding the shelf attached thereto and for drawing said shelf into said kerfs.

7. In combination a standard of rectangular cross section formed with kerfs along one edge thereof, a shelf formed of sheet metal having a flange depending therefrom and a lip extending inwardly from the lower edge of said flange, said shelf having a slot extending through said flange and lip intermediate the ends of said shelf for the edgewise reception of said standard, a portion of said shelf at the end of said slot being adapted to enter one of the kerfs in said standard, said slot being of a depth sufficient to bring the outer edge of said standard within said flange and a key of a width equal to the distance between said flange and standard held edgewise between said shelf and lip and lodged on one side against the inner surface of said flange, and on its other side against the outer edge of said standard for bridging across said slot and holding said shelf in place upon said standard, the portions of said lips adjacent said slots directly engaging said standard for bracing the shelf relative to said standard.

In testimony whereof, I have signed my name to this specification.

FRITZ N. CARLSON.