

W. T. CALLAGHAN.
BOOK STACK.
APPLICATION FILED DEC. 23, 1907.

989,566.

Patented Apr. 18, 1911.

3 SHEETS—SHEET 1.

Fig. 1.

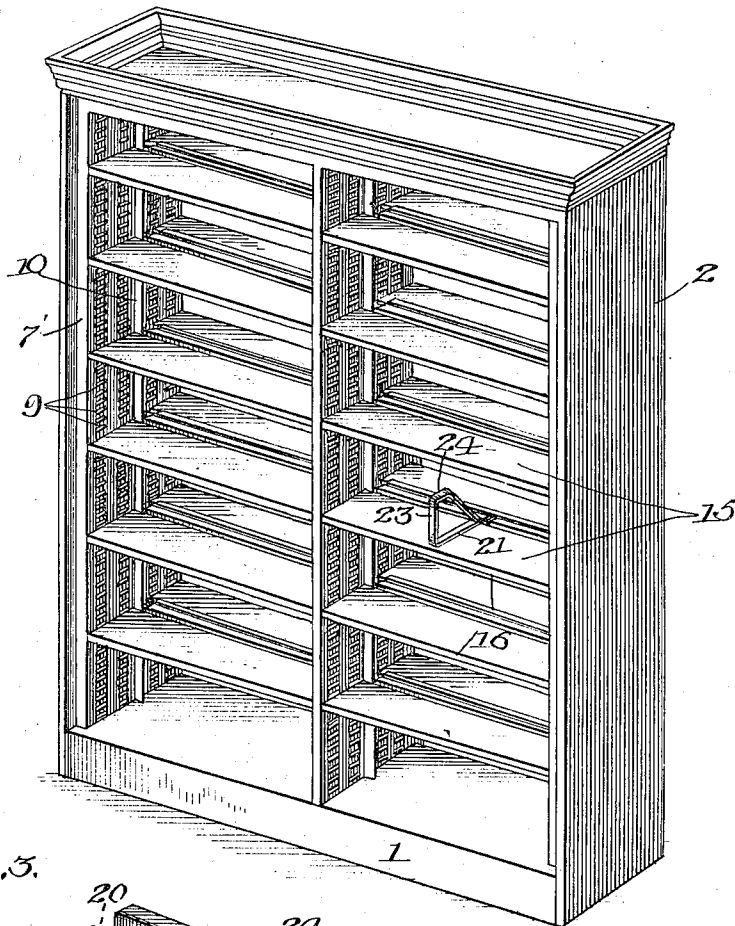
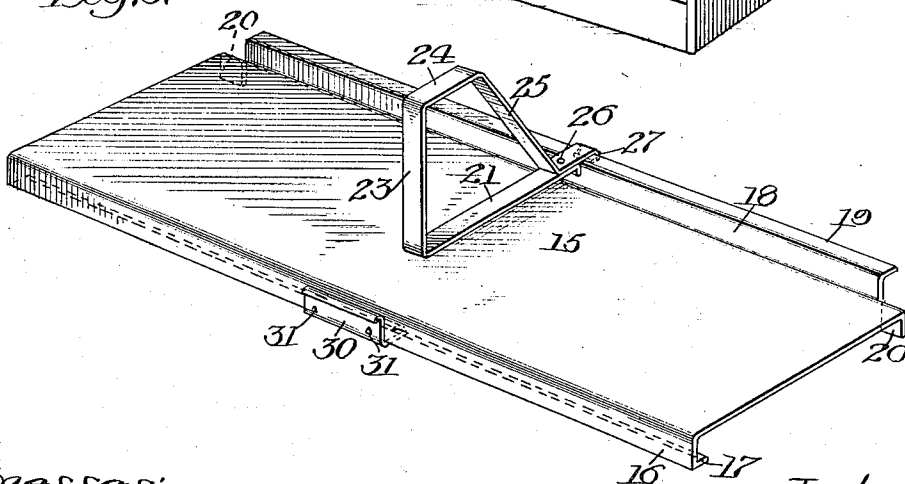


Fig. 3.



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3 SHEETS—SHEET 2.

Fig. 2.

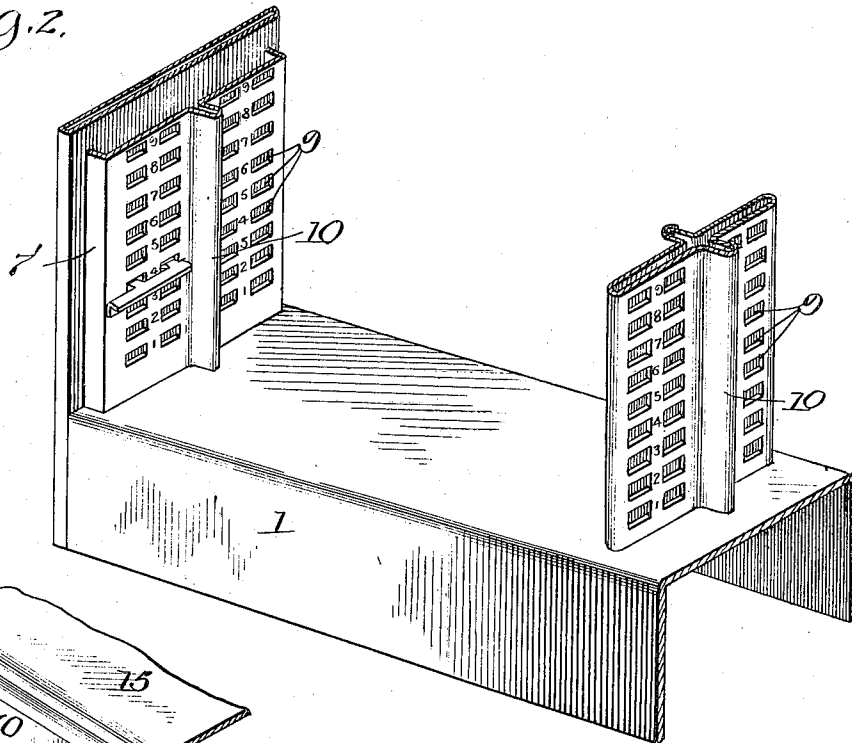


Fig. 4.

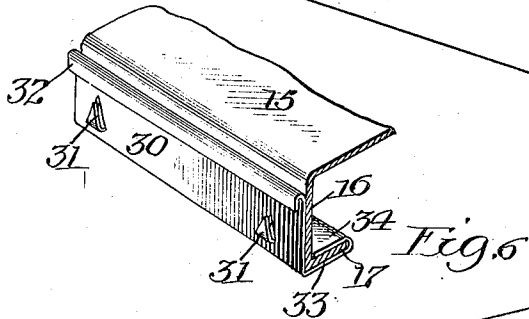


Fig. 6

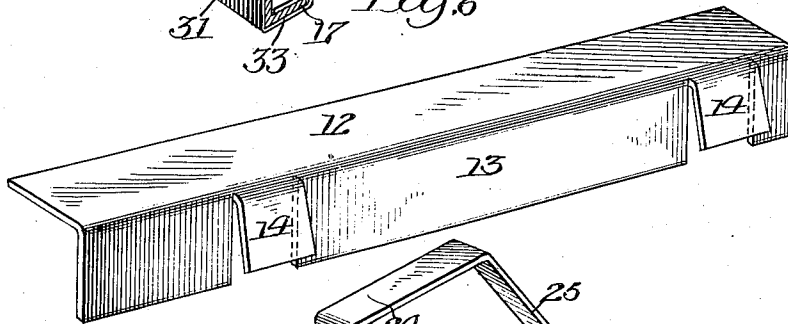
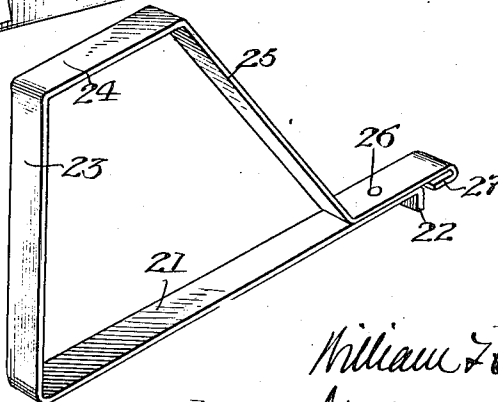


Fig. 5.



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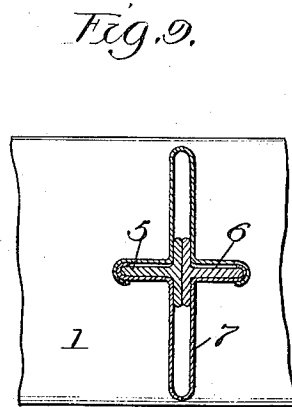
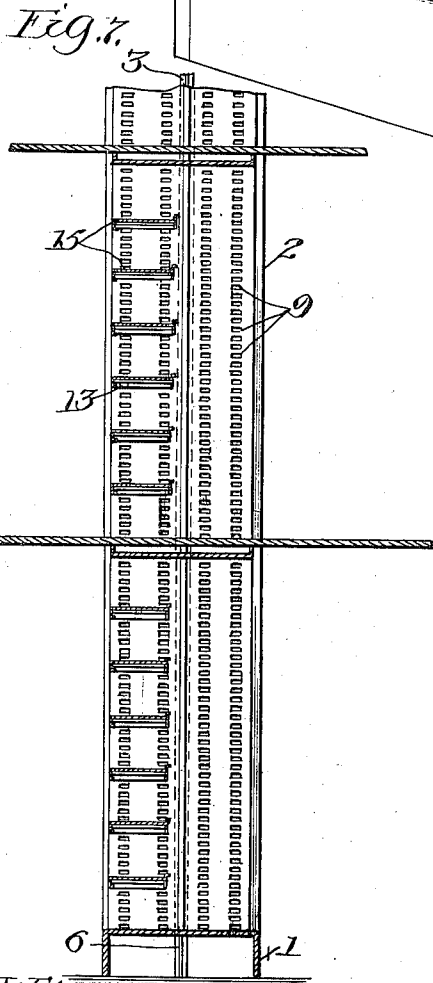
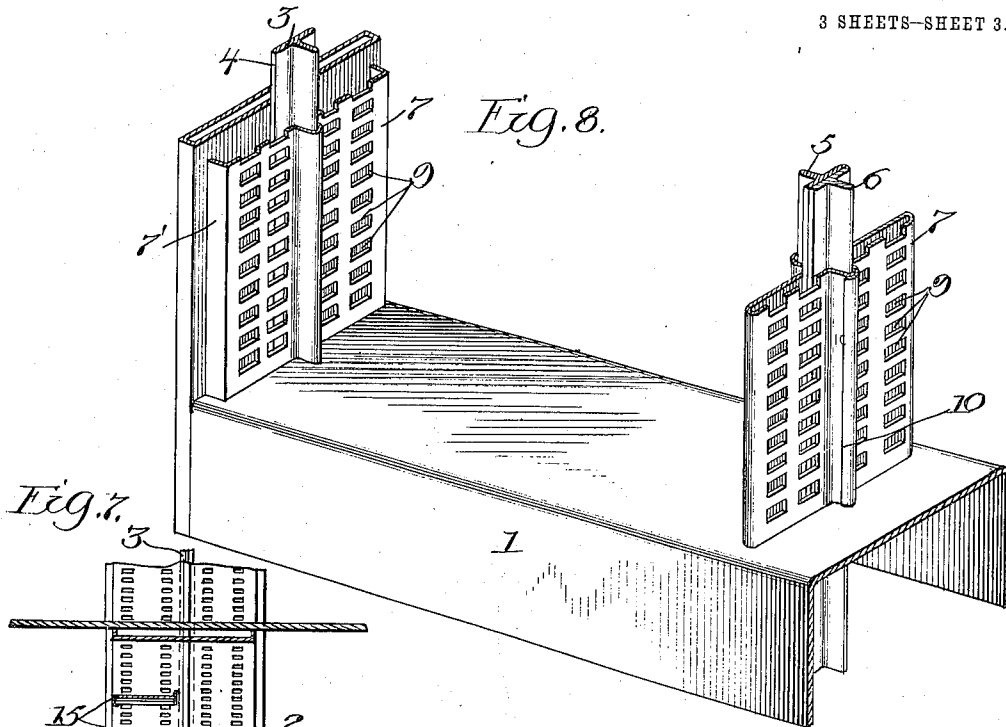
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3 SHEETS—SHEET 3.



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UNITED STATES PATENT OFFICE.

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BOOK-STACK.

989,566.

Specification of Letters Patent.

Patented Apr. 18, 1911.

Application filed December 23, 1907. Serial No. 407,848.

To all whom it may concern:

Be it known that I, WILLIAM T. CALLAGHAN, a citizen of the United States, residing at the city of Chicago, in the county of Cook and State of Illinois, have invented a new and useful Improvement in Book-Stacks, of which the following is a specification.

This invention relates to certain improvements in book stacks; and particularly to those such as are commonly employed in public and other libraries.

The object of the invention is to provide a solid and substantial structure which shall be simple and cheap in construction and which shall comprise the necessary means for adjusting the shelves, supporting the books in their proper relative positions, and for ready reference thereto.

The invention consists in certain novel features of the construction, combination and arrangement of the several parts of the stack, and its component parts, whereby important advantages are had in the construction, and the whole is better adapted and more convenient in use.

The principles of the invention are illustrated in the drawings, in which—

Figure 1 is a perspective of a double faced stack; Fig. 2 is an enlarged representation of a portion of the base and uprights; Fig. 3 is an enlarged perspective view of a shelf with label holder and book support in place; Fig. 4 is an enlarged portion of the front edge of such shelf; Fig. 5 shows a book support removed from the shelf; Fig. 6 is a shelf supporting cleat; Figs. 7, 8 and 9 illustrate the application of my invention to a library stack adapted to support floors or platforms at convenient heights.

Further describing my invention with reference to the drawings, in which like characters of reference denote like parts throughout; 1 is the base of a double book stack; 2—2 are the ends thereof.

3 is a T-bar resting on the floor on which the stack stands and having its base 4 in contact with and secured to the stack end 2.

5 and 6 are similar T-bars having their bases in contact with each other, and over which are folded the sheet metal facings 7. Such shelf facings are also provided at the inner ends of the stack and folded over the T-bar 3. The construction of the said facings or linings at the inner ends of the stack and intermediate thereof is practically the

same. They are formed of sheets of metal having the perforations 9 and having the vertical edges turned down at 7' so as to off-set the principal plane thereof from the inner end of the stack by the thickness of the base of the T-bars described. Said linings are provided with a central off-set 10, which passes around and makes a finish for the vertical leg of the T-bars and may provide a stop against which the rear edges of the shelves may impinge and thereby be placed in alinement. Such alinement may, however, be secured by the relative construction of the shelf and cleat hereafter described. Said linings consist of two parts of sheet metal, one of which 10' as shown in Figs. 2 and 9 is provided with overturned end portions, which are adapted to embrace the opposite outer ends of the bar web, while intermediate portions of said lining flatly contact the bar web and bases while the other part 11' thereof contacts the opposite base members but lies in spaced relation to the web portions and overlaps the other lining part and thereby also embraces the opposite ends of the bar web.

The shelf support or cleat shown in Fig. 6 comprises a horizontal flange 12 and a vertical flange 13, having the lugs 14 separated from such vertical flange and off-set enough that they may be inserted in the openings 9 of the stack facings. When so inserted the vertical flanges 13 will bear smoothly against the face of the linings and the lugs 14 will be inclosed or housed in the space back thereof. The shelf cleats when properly placed should not come quite to the off-set portion 10, but a slight interval should be provided for the purpose later to be set forth. The lugs 14 should correspond in width to the length of the openings 9.

A shelf especially adapted to be used in connection with the structures last described is shown in Fig. 3. It should be made of a single piece of sheet metal comprising the flat or table portion 15, the front vertical flange 16, and the bottom horizontal flange 17. It is also provided with the rear vertical flange 18, the top horizontal flange 19, and the downwardly turned lugs 20. It will be seen that the shelf thus shown can be made of a single piece of steel without cutting, except to remove a slight portion of metal if desired from a point corresponding to the extension of the horizontal flange 19, and to separate the inner edge of the lug

20 from the end of the vertical flange 18 so as to enable it to be turned in an opposite direction. The shelf thus described and the shelf cleat shown in Fig. 6 should be so constructed with reference to each other that the length of such cleat should be slightly less than the distance between the lug 20 and the edge of the front horizontal flange 17. When the shelf is slid backward on the cleats the rear edge will strike against the stops 10, whereupon the lugs 20 will drop into the rear of the ends of such cleat and hold it securely in position.

A book support designed to be used in connection with the described shelf is shown in Fig. 5. It should be made of a single piece of metal so bent as to form a body portion which may consist of a lower horizontal member 21 having at one end the downwardly projecting lug 22, the upright 23, and a portion which may comprise the parts 24 and 25 to connect the vertical to the horizontal portion. When so connected the projecting material should be secured to the horizontal arm by a rivet 26 and the end formed into a reverse bend or loop 27. The support thus formed being made of material of suitable width may be slipped onto the rear of the shelf when in place in the space between the ends of the rear vertical and horizontal flanges and the end of the case. When so put in position it is not removable at any intermediate position, but forms a substantial and readily slidable book support which will bind and give a substantial support for books on the shelf at whatever point it may be placed. The leverage of the projecting portions causes the lug 22 and the loop 27 to so engage the flanges on which it is mounted as to produce this result.

The stiffening flanges 16 and 17 on the front edge of the shelf 15 provide a means for attaching a label holder of the form shown in Fig. 4. The latter may be formed of a single piece of metal, comprising the vertical portion 30, having the off-set outstanding lugs 31, the downturned finish or bead 32 off-set from its face, the horizontal flange 33, and the reversely turned flange 34.

The latter should be spaced with reference to the flange 17 so as to correspond to the thickness of the material of which the shelf is made, and have a space between the inner edge and the vertical portion 30 also corresponding to such thickness. When so made the label holders can be readily slid upon the shelf from the end and moved to any portion or portions of the shelf desired, where they will be held in secure engagement. The off-set lugs 31 and the bead 32 form a simple and convenient means by which a label holder may be respectively supported and protected.

I claim and desire to secure by Letters Patent the following:

In combination with the base of a book stack, a vertical member comprising a plurality of T-bars, said bars being placed base to base and extending through said base, the bases of said bars being disposed transversely of the stack, a two-part covering for said T-bars adapted to embrace the same, one part of said covering flatly contacting the opposite exterior faces of the contacting bases and the contiguous alining faces of the oppositely extending webs of said bars and lapped around the outer edges of said webs, the other part of said covering contacting the bar bases but spaced from the webs thereof and overlapping the lapped portions of the first mentioned part of said covering, said covering having parallel faces, one of said parallel faces being provided with openings therethrough and the other acting as a stop for the end of the shelf passing through said openings, and a vertical fold in said covering adapted as a limiting means for the rear edges of the shelving of the stack.

In witness whereof, I have hereunto set my hand, this 19th day of December A. D. 1907, in the presence of two subscribing witnesses.

WILLIAM T. CALLAGHAN.

Witnesses:

C. K. CHAMBERLAIN,
A. S. PHILLIPS.