

Sept. 22, 1964

L. E. MAGERS

3,149,727

MULTIPLE PURPOSE BOOK, CHART AND POSTER DISPLAY STAND

Filed May 28, 1962

2 Sheets-Sheet 1

FIG. 1

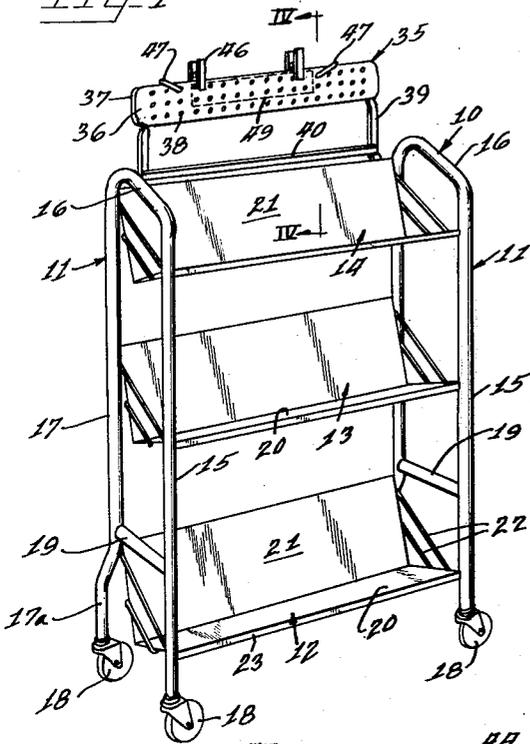


FIG. 2

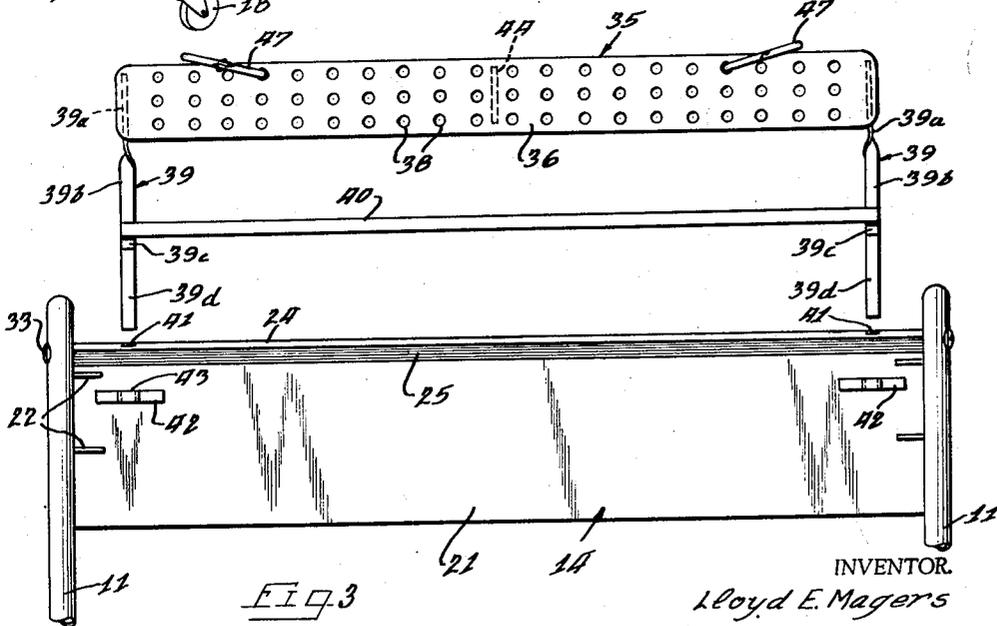
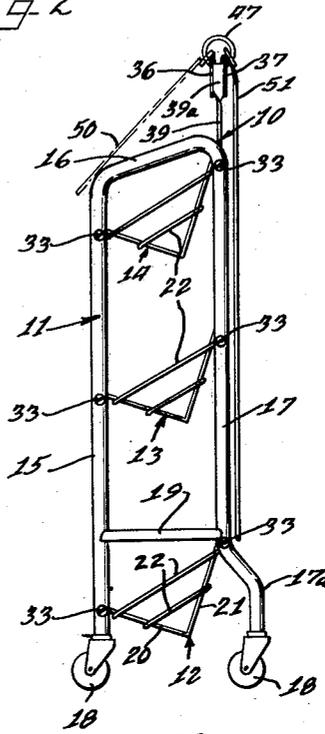


FIG. 3

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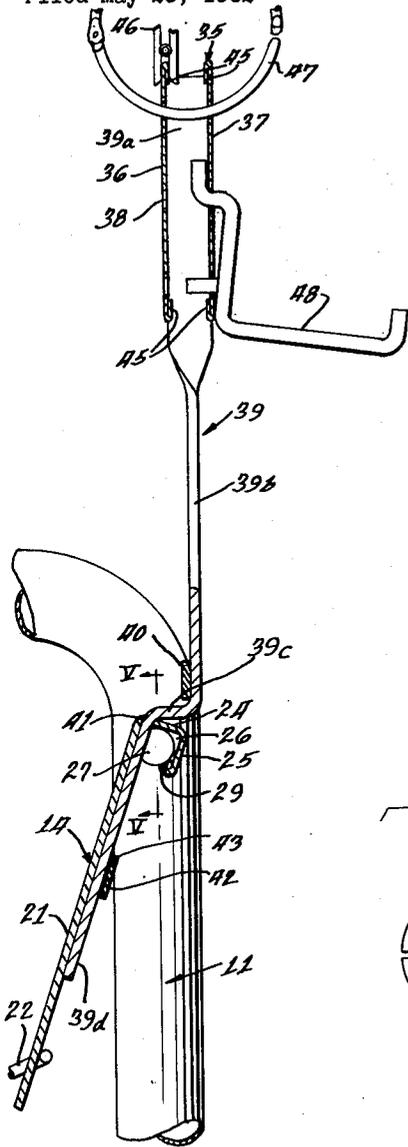


Fig. 4

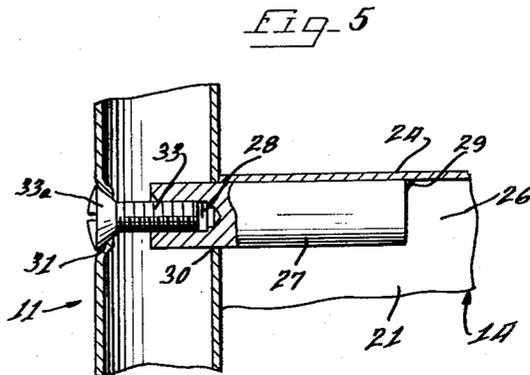


Fig. 5

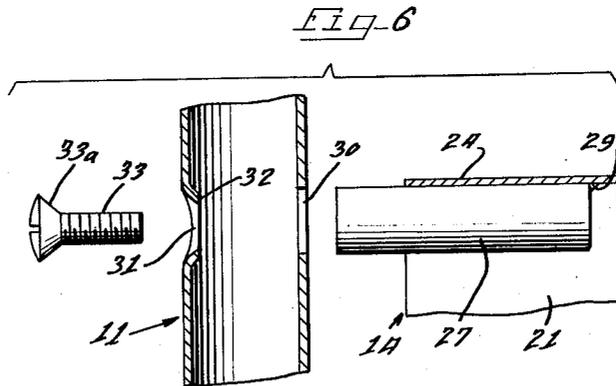


Fig. 6

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3,149,727

## MULTIPLE PURPOSE BOOK, CHART AND POSTER DISPLAY STAND

Lloyd E. Magers, Evanston, Ill.; State Bank and Trust Company, Evanston, Ill., a corporation of Illinois, trustee and executor of said Lloyd E. Magers, deceased, assignor, by mesne assignments, to Gaylord Bros., Inc., Syracuse, N.Y., a corporation of New York  
 Filed May 28, 1962, Ser. No. 198,235  
 4 Claims. (Cl. 211-148)

This invention relates to a multiple purpose mobile book stand and display device especially suited for classrooms. Specifically this invention relates to a wheeled book stand equipped to detachably support a Peg Board attachment on which posters, maps, charts, and the like sheet material can be suspended for display and storage without interfering with the book stand function while at the same time using the book stand construction to form a back-up wall for the suspended sheet material.

According to the preferred embodiment of the invention, the book stand has inverted U-shaped tubular end frames supported on casters or rollers and carrying therebetween superimposed inclined shelves which support books in easily accessible full view positions. The back legs of the end frames are offset rearwardly to hold the main body of the stand outwardly from a wall and provide a space between the stand and wall for receiving charts. The Peg Board attachment for carrying the charts is preferably composed of spaced front and rear perforated metal strips from which depend legs that are insertable into receptacles provided on the top shelf of the stand. The perforations of the strips can receive various types of fasteners such as hooks, binder rings, and the like, on which the charts, posters, and the like, can be displayed. The legs carry the perforated strips in spaced relation above the top shelf of the book stand at the back thereof for supporting announcements, posters, and the like, at convenient eye level above the tops of the books carried by the top shelf. Long charts hang downwardly from the Peg Board over the back of the book stand and are supported against swaying by the backs of the book shelves. Thus from the front the Peg Boards can support announcements, posters, and the like, at levels above the books carried by the book stands while from the back the longer charts can be suspended and displayed by merely rolling the stand so that its back portion will face the classroom. In storage of the stand adjacent the wall, the offset rear legs of the end frames of the stand of course protect these charts that are suspended from the Peg Board because there is ample space between the wall and the main body of the book stand to receive the suspended charts.

It is then an object of this invention to provide a combined book stand and display assembly for classrooms and the like.

It is another object of this invention to provide a multiple purpose book and display stand adapted to simultaneously perform book and chart storage and display functions.

Another object of this invention is to provide an attachment for a book stand which adapts the stand for displaying charts and the like.

A specific object of the invention is to provide a wheeled book stand with a socketed top shelf and a leg equipped Peg Board detachably mountable in the shelf sockets.

A further object of this invention is to provide a Peg Board attachment for mobile book trucks adapting the truck to chart display and storage usage.

A further and specific object of this invention is to provide a display rack for adapting other articles of furniture to usage for displaying charts, posters, and the like.

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Other and further objects of this invention will be apparent to those skilled in this art from the following detailed description of the annexed sheets of drawings which, by way of a preferred example only, illustrate one embodiment of the invention.

FIGURE 1 is a front isometric view of the combined book stand and display rack according to this invention.

FIGURE 2 is a side elevational view of the assembly of FIG. 1 and showing the manner in which charts and posters are suspended from the display rack.

FIGURE 3 is an enlarged fragmentary exploded rear elevational view of the top shelf of the book stand of FIGS. 1 and 2 and illustrating the manner in which the Peg Board display rack is mounted on the shelf.

FIGURE 4 is an enlarged fragmentary cross sectional view taken generally along the line IV-IV of FIG. 1 and illustrating various mounting means cooperating with the Peg Board rack.

FIGURE 5 is a fragmentary cross sectional view, with parts in elevation, taken along the line V-V of FIG. 4 and illustrating the manner in which the end frames are connected to the shelves.

FIGURE 6 is an exploded view of the assembly of FIG. 5 illustrating the manner in which the end frames and shelves are detachably connected.

As shown on the drawings:

The multiple purpose book and display stand 10 of this invention, as shown in FIGS. 1 and 2, is composed of inverted U-shaped tubular end frames 11, 11 and superimposed book shelves 12, 13 and 14 supported by the end frames and spanning the space therebetween.

Each end frame 11 has a vertical front leg 15, an upwardly and rearwardly inclined top bight portion 16 and a rear leg 17 with a rearwardly offset bottom end portion 17a. The bottoms of the legs 15 and 17 have casters 18 mounted thereon to provide a wheeled support for the assembly. A reinforcing tube 19 is provided between the front and rear legs 15 and 17 of each end frame adjacent the top of the offset portion 17a for the purpose of rigidifying the end frames and to prevent spreading between the front and rear legs thereof.

Each shelf 12, 13 and 14 has a bottom wall 20 and a back wall 21 in right angle relation to the bottom wall. Rods 22 are welded or brazed to the end edges of the bottom and back walls and extend diagonally in spaced parallel relation across the ends of the shelves to provide book ends or stops to maintain books on the shelves.

The front edge of the bottom wall portion 20 of each shelf has a downturned flange 23 while the top edge of the back wall 21 of each shelf has a rearwardly projecting flange 24. Both flanges 23 and 24 are of C shape with a depending portion 25 in right angle relation therewith as shown in FIG. 4. There is thus provided a groove-like recess 26 behind the front edge of the bottom wall 20 and the top edge of the back wall 21 of each shelf. The ends of these recesses 26 receive pins or dowels 27 which are brazed therein as shown in FIGS. 5 and 6. The ends of the pins 27 project laterally beyond the ends of the shelves and have threaded holes 28 therein. The front and rear legs 15 and 17 of the end frames have pin receiving holes 30 on their confronting inner sides, in spaced relation for receiving the pins to support the shelves. The outside faces of these legs have smaller diameter holes 31 aligned with the holes 30 and preferably equipped with inturned flanges 32 to provide a countersunk mouth for the holes 31.

As is evident from FIGS. 5 and 6 the end frames and shelves are united by inserting the projecting ends of the pins 27 into the holes 30 to bottom the end edges of the shelves against the inner faces of the end frame legs. The projecting ends of the pins 27 are not long enough to reach the flanges 32 of the smaller outside holes 31 when the shelves are bottomed on the inner faces of the end frames.

Therefore as shown in FIG. 5 the ends of the pins terminate inside of the tubular legs of the end frames in spaced opposed relation from the smaller holes 31. Fastening bolts 33 are then inserted in the small holes 31 and are threaded into the tapped holes 28 of the pins. These fasteners have tapered heads 33a to fit within the conical mouth of the holes 31 provided by the inturned flanges 32 and when the bolts are tightened in the pins the tapered heads 33a will be sunk substantially flush with the outer face of the end frames and the assembly will be drawn tightly together.

As shown in FIG. 2 the fasteners 33 in the front leg 15 of the end frame are spaced so that the bottom fastener is slightly above the caster 18, the middle fastener is about midway between the ends of the leg and the top fastener is spaced below the bight portion 16. The fasteners 33 in the rear leg however are at higher levels with the bottom fastener being adjacent the top of the offset portion 17a and the top fastener being closely adjacent the curved part of the leg which merges into the bight 16. With this spacing of the fasteners the bottoms 20 of each shelf will slope downwardly from the front legs while the back walls of each shelf will slope upwardly and rearwardly. This provides bin-like shelves which hold the books in upwardly angled relation where their titles are readily visible.

The dowel pin assembly construction of this invention makes it possible to ship the stands in a knockdown condition from which they are easily assembled by merely inserting the projecting ends of the dowel pins into the large holes on the inside faces of the end frames and by then tightening the fasteners in the small holes on the outside faces of the end frames. A very rigid assembly is provided and even though a fastener should become loose or even inadvertently removed, the snug fit of the projecting end of the pin 27 in the hole 30 will maintain the assembly and prevent the shelf from collapsing.

The offset leg portion 17a of each end frame gives a greater span between the front and rear casters 18 to insure against tipping of the stand. In addition however this offset leg 17a when backed against a wall will hold the main portion of the stand away from the wall and will provide a space between the rear leg 17 and the wall. As is more fully hereinafter pointed out this space is available for the storage of charts, maps, and the like.

A display rack and support 35 is, according to this invention, detachably carried by the top shelf 14. This attachment for the book stand is composed of front and rear perforated strips 36 and 37 having a plurality of aligned holes 38 therethrough. The strips 36 and 37 are shorter than the shelves so as to fit between the end frames 11 and while they may be of any desired width or height, they are preferably only wide enough to afford space for several superimposed rows of holes 38.

Legs 39 depend from the ends of the strips 36 and 37 and each leg has a top portion 39a extending between the strips 36 and 37 and bonded thereto as by welding or brazing. The legs 39 are composed of ribbon-like strips of a width to hold the front and rear strips 36 and 37 in spaced apart relation. The ribbon legs are twisted immediately below the strips 36 and 37 to provide elongated portions 39b in a plane at right angles to the top portion 39a. These elongated portions 39b extend vertically below the strips 36 and 37 for a sufficient distance to carry the strips above the top edge of the top shelf at a convenient visual level above any books that might be mounted on the top shelf. The lower ends of the leg portions 39b are forwardly offset at 39c to provide support shoulders for a purpose to be hereinafter more fully explained. The legs then have forwardly and downwardly sloping portions 39d extending from the forward ends of the offset portions 39c. A ribbon-like brace 40 spans the space between the legs 39 and is secured at its ends to the leg portions 39b adjacent the offset portions 39c to rigidify the legs against spreading or collapse.

As shown in FIGS. 3 and 4, the flange 24 of the top

shelf 14 has a pair of slots 41 positioned to receive the leg portions 39d and the back wall 21 of the top shelf also has a pair of straps 42 arched or welded thereon immediately below the slots 41 to provide pockets 43 for receiving the legs.

To assemble the display device 35 on the top shelf of the book stand it is therefore only necessary to drop the leg portions 39d through the slots 41 and into the pockets 43 a sufficient distance to cause the offset portions 39c to rest on the flange 24. The assembly of FIGS. 1 and 2 will thereby be produced with the device 35 rigidly mounted to provide the Peg Board strips at a desired level above the top shelf.

As shown in FIG. 3 a spacer strip 44 is mounted between the front and rear strips 36 and 37 to rigidify the same at about the center area but of course any number of such strips could be used as desired.

As shown in FIG. 4 the strips 36 and 37 have inturned crimped top and bottom edges 45 to rigidify the strips and to eliminate sharp edges.

As also shown in FIG. 4 the Peg Board strips 35 and 36 are adapted to receive various kinds of removable fasteners. Thus the crimped top edges of each strip could receive a spring pin or clip 46 to hold an announcement or notice over the front strip 36 while split binding rings 47 could be extended through aligned holes 38 to support maps or the like while Peg Board pins 48 could be mounted in aligned superimposed holes of the rear strip 37 to provide hangers for rigid charts and the like. The spacing of the strips 36 and 37 thus makes possible a clip board type of mounting and of course the aligned holes in the strips provide a myriad of available receptacles for hooks, rings, and the like.

As shown in FIG. 1, spring clips 46 can carry a notice or an announcement 49 on the front face of the device 35.

As shown in FIG. 2 the binder rings 47 can support simultaneously posters such as 50 and maps or charts such as 51 either in draped position over the top of the book stand or in depending position behind the book stand in the space made available by the offset leg portion 17a even when the book stand is backed tightly against the wall. The binder rings of course will accommodate swinging of the charts over the top of the device 35 in the same manner as the pages of a looseleaf notebook.

The entire assembly of this invention can be made of metal with the end frames 11 formed of tubular metal stock that can be chromium plated or painted and with the shelves formed of bent sheet metal having wire rod ends 22 and metal dowel pins 27. The device 35 has the ribbon-like metal legs 39 and the rigidifying cross bar 40 with metal strips 36 and 37 forming the Peg Board support for the charts and the like. Obviously the strips 36 and 37 could be made of composite board, plywood, plastic, or the like.

From the above description it should be understood that this invention provides an easily assembled combined book stand and display device especially useful in classrooms both as a mobile book shelf and a display and storage stand for charts and the like. The display device is removably carried by the book stand and is easily assembled and removed relative to the stand. The device cooperates with the stand without interfering with the book supporting and storage function of the stand.

It will be understood that modifications and variations may be effected without departing from the scope of the novel concepts of the present invention.

I claim as my invention:

1. A multiple purpose book, chart, and poster display stand which comprises,  
a pair of inverted U-shaped tubular end frames having

vertical front legs,

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upwardly and rearwardly inclined top bight portions,  
vertical rear legs and  
rearwardly offset bottom end portions on said rear legs,  
casters on the bottom ends of the front and rear legs of each end frame,  
spaced superimposed shelves between the end frames and spanning the space therebetween,  
each shelf having  
a bottom wall with a downturned flange at the front edge thereof and,  
a back wall with a rearwardly extended flange at the top edge thereof,  
said flanges providing C-shaped recesses,  
dowel pins anchored in said recesses and extending therefrom beyond the ends of the shelves,  
said front and rear legs of the end frames having  
holes in the confronting inner faces thereof sized for snugly receiving the projected ends of the dowel pins,  
said legs of the end frames having  
smaller diameter holes in the outer faces thereof aligned with the dowel pin receiving holes,  
fasteners in said smaller diameter holes of the end frames threaded into said dowel pins drawings the end edges of the shelves tightly against the inner face of the end frames and providing a rigid assembly of shelves and end frames,  
rods secured to the bottom and back walls of the shelves overlying the end edges thereof to provide book ends for the shelves,  
the rearwardly extending flange on the back wall of the top shelf having  
a pair of slots therethrough near the ends of the shelf,  
strap members secured to the back wall of the top shelf providing pockets aligned with said slots,  
a display device having front and rear perforated strips and depending legs detachably mounted in said slots and pockets,  
said legs having shoulder portions for overlying the flange of the top shelf to hold the perforated strips above the top shelf,  
said perforated strips adapted to receive fastener members for supporting posters, charts, and the like, and said offset leg portions on the rear legs of the end frames adapted to be abutted against a wall to hold the rear legs in spaced relation from the wall and provide a space for receiving posters, charts, and the like depending from said perforated strips.

2. A multiple purpose book stand and display rack which comprises,  
laterally spaced inverted U-shaped tubular metal end frames,  
casters on the bottoms of the end frames,  
shelves spanning the space between the end frames and anchored thereto in superimposed relation,  
each of said shelves having downwardly inclined bottom walls and upwardly and rearwardly inclined back walls to support books in upright tilted back position for easy insertion and removal and full visual access to their titles,  
the back wall of the top shelf having upward opening leg receiving pockets,  
a display device having depending legs receivable in said pockets,  
said display device including a perforated Peg Board carried by said legs at a level spaced above the top of the top shelf between the end frames,  
and said Peg Board adapted to detachably receive fastening means for carrying sheet material in readily visible positions relative to said book shelves,  
the back walls of said book shelves holding said sheet material against unauthorized swinging.

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3. A knockdown book stand and display device which comprises:  
a pair of inverted U-shaped end frames in laterally spaced relation and having confronting faces and outer faces,  
a plurality of superimposed book shelves between the end frames each having  
a bottom wall with a depending C-shaped front end flange and,  
a back wall with a C-shaped rearwardly extending top end flange,  
laterally spaced slots in said top end flange of the top shelf,  
pins secured in the C-shaped flanges of each shelf and projecting beyond the ends of the shelf,  
holes in the confronting faces of the end frames receiving said pins and spaced to support the shelves with the bottom walls thereof sloping downwardly and rearwardly and the back walls sloping upwardly and rearwardly to support books in upright tilted back position for easy removal and insertion and for full visual inspection of their titles,  
holes in the outer faces of the end frames smaller than the holes in the confronting faces of the end frames and aligned therewith,  
bolts bottomed in the smaller holes and threaded into said pins,  
a detachable display material carrying support having depending vertical legs extending into said laterally spaced slots in the top end flange of the top shelf in removable relationship therewith,  
each leg having an offset shoulder portion adapted to rest upon the top end flange of the back wall of the top shelf for limiting the extent of insertion of the legs in said slots,  
a cross brace connecting said vertical legs and overlying the top end flange of the top shelf when the legs are inserted into said slots for rigidifying the legs, and  
fasteners on said support for removably carrying display material including material adapted to depend from the support over the back walls of said shelf to be held against swaying by the shelves.

4. A combination book stand and display rack which comprises:  
laterally spaced inverted U-shaped tubular metal end frames,  
book shelves spanning the space between the end frames and anchored thereto in superimposed relation,  
each of said shelves having downwardly inclined bottom walls and upwardly and rearwardly inclined back walls to support books in upright slanted position for easy insertion and removal and for full inspection of their titles, the back wall of the top shelf having a rearwardly extending flange at the top edge thereof with laterally spaced elongated slots therein,  
a display device having a pair of depending legs at the ends thereof adapted to be inserted in said slots for holding the display device in upright position above said legs having affixed thereto a cross brace extending the top shelf,  
ing therebetween,  
said legs having offset shoulder portions intermediate their ends adapted to rest on the slotted flange and limit the degree of insertion of said legs,  
said legs having upper end portions twisted at right angle relation to the legs,  
a pair of perforated strips overlying the twisted upper end portions of the legs in fixed relation thereto and spanning the space therebetween, and  
fasteners detachably carried by said strips adapted to secure material to be displayed thereto including

charts and the like adapted to be draped over the  
back of the shelves.

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