

[54] **ARTICLE SUPPORT BRACKET**

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[58] Field of Search 248/DIG. 3, 223, 224, 225,
248/220.5, 73; 211/87, 106

[56]

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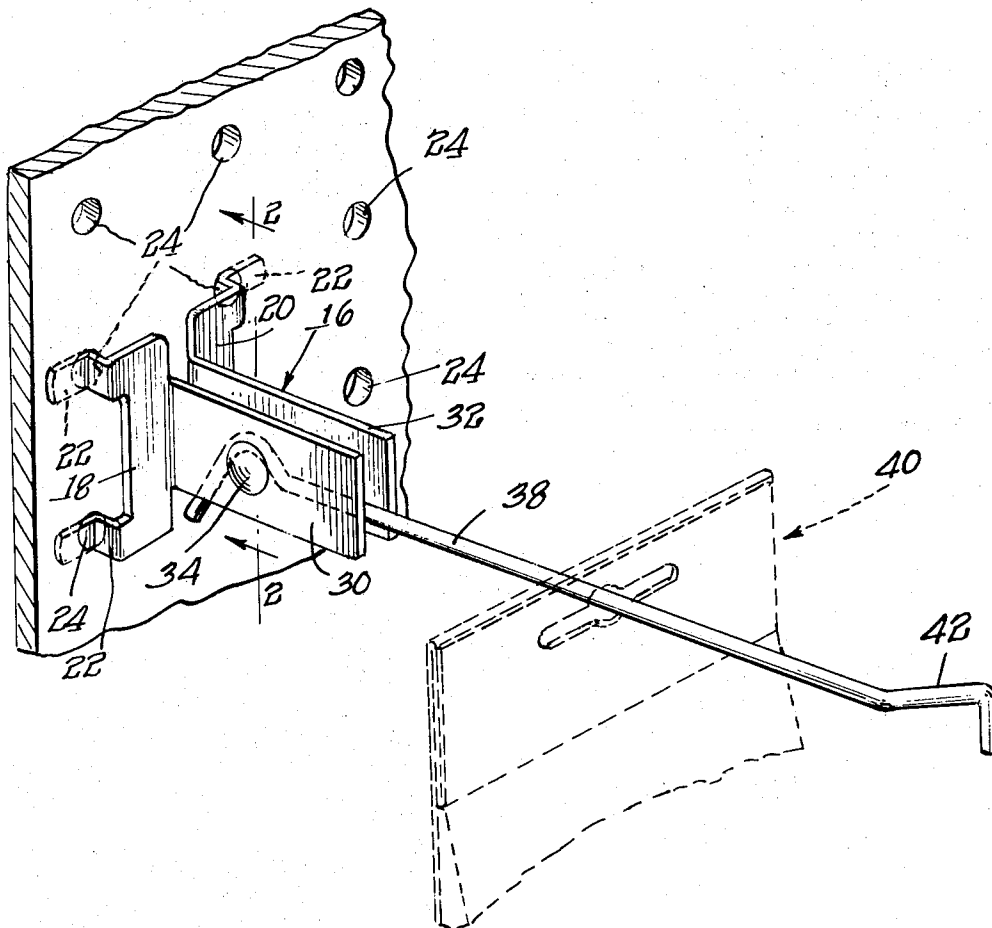
Attorney, Agent, or Firm—Olson, Trexler, Wolters,
Bushnell & Fosse, Ltd.

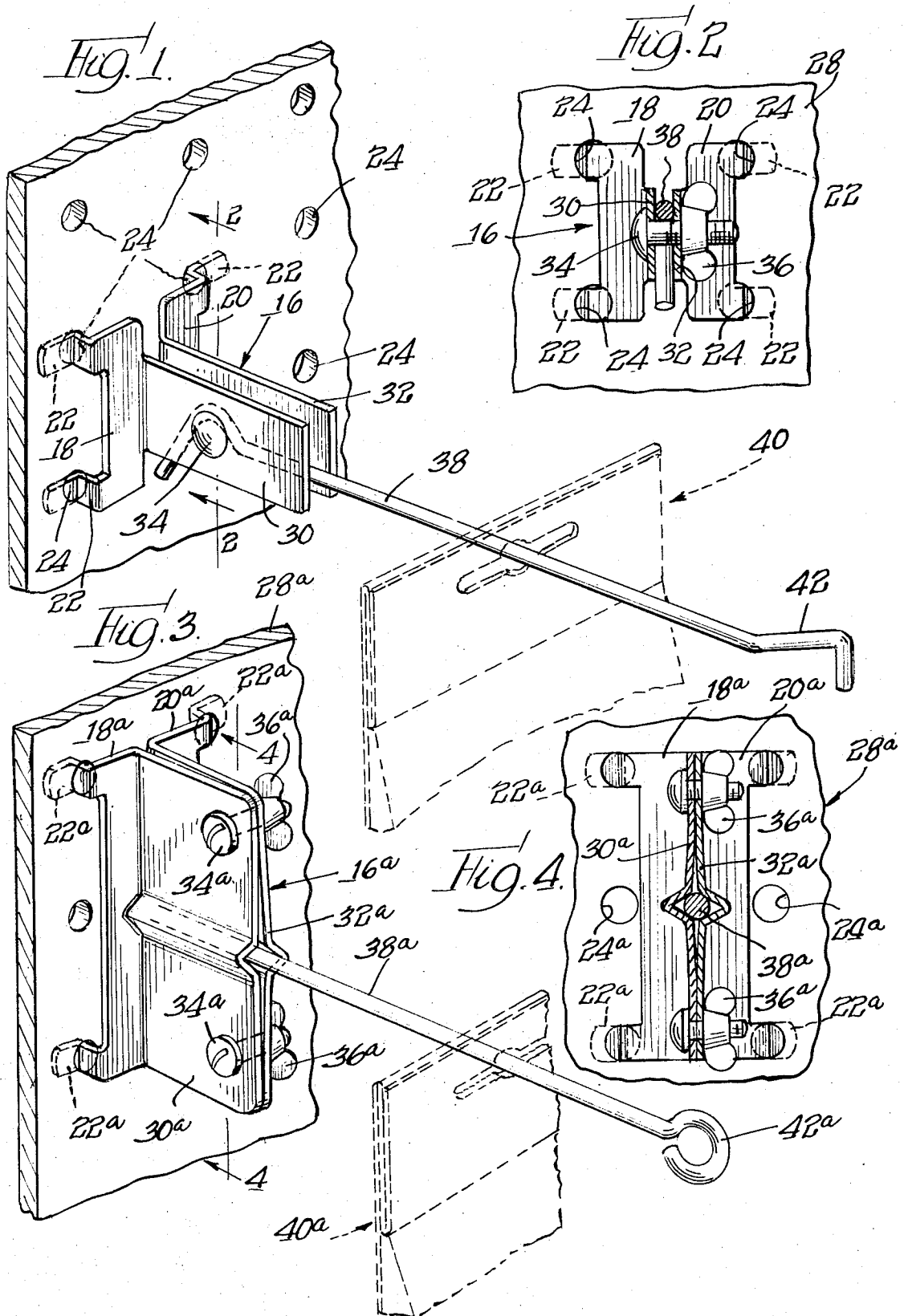
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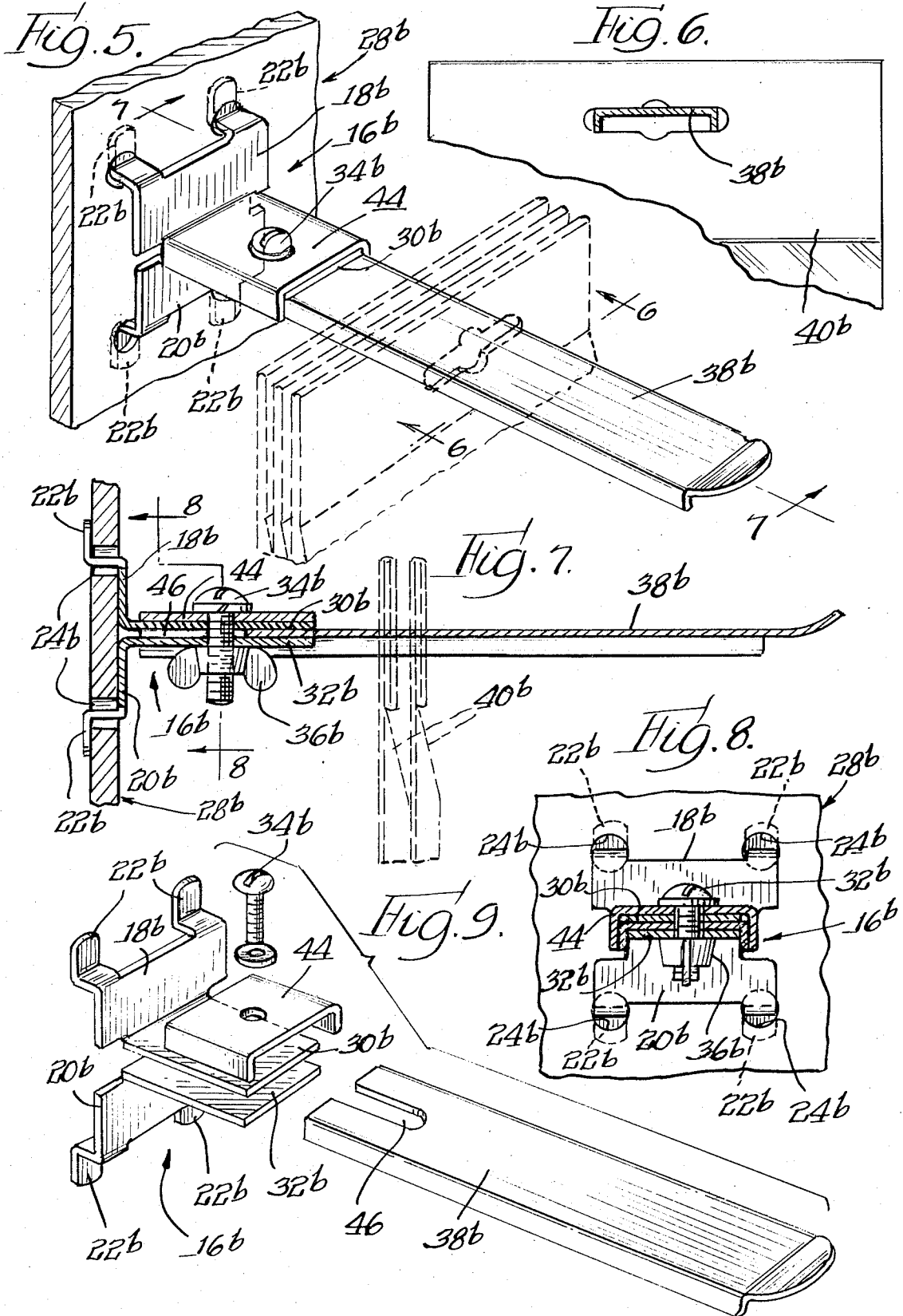
ABSTRACT

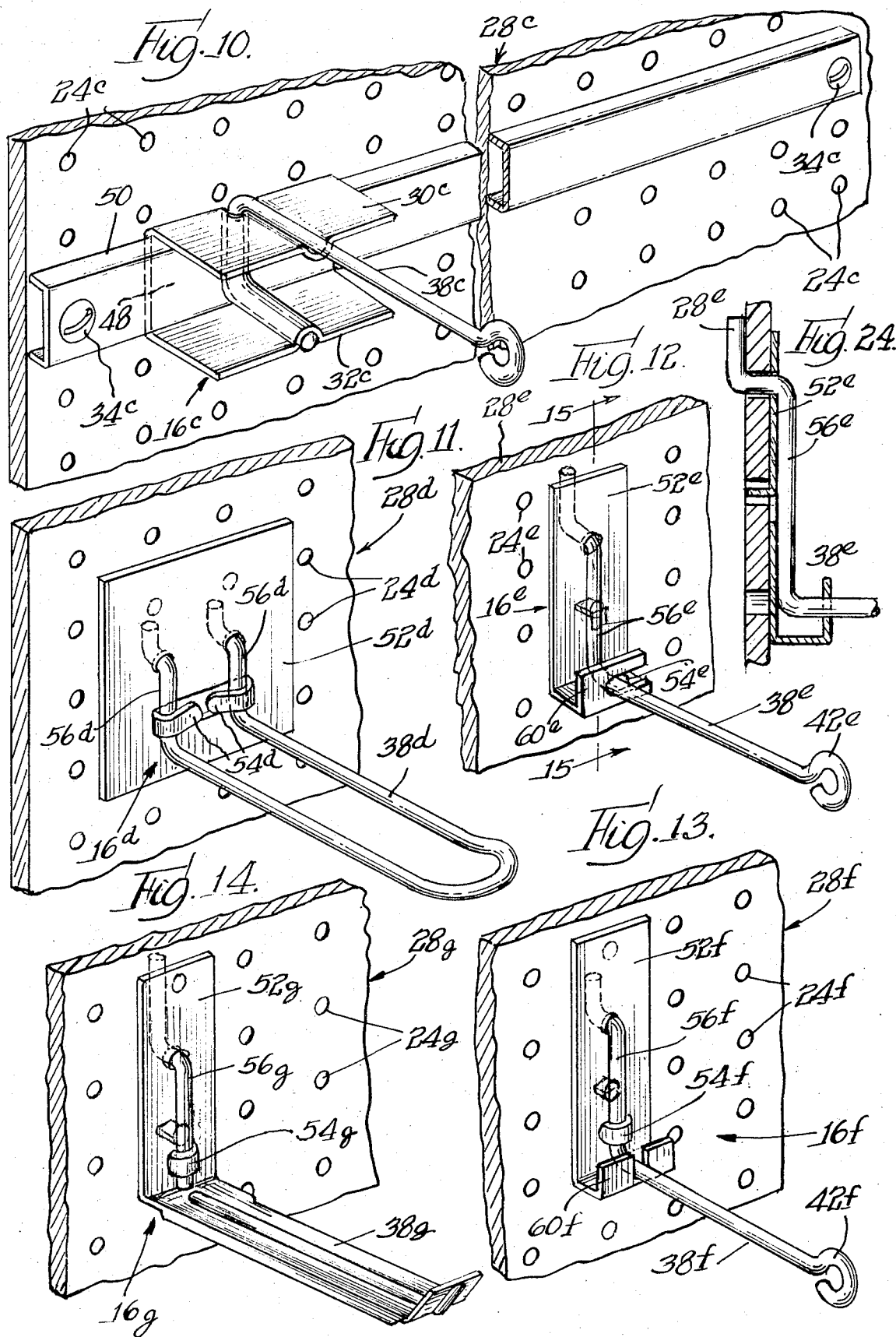
The present invention relates generally to improvement in article display devices and more particularly to article display devices adapted for use with perforated panels commonly known as pegboards. The embodiments disclosed herein includes a plate member adapted for engagement with the pegboard, and means for securing said plate member in flush engagement with said pegboard. An elongated article support projects outwardly from the plate member when said plate member is secured to said pegboard, and means is provided on the plate member for clampingly engaging the elongated article support for securing the same in article accommodating position.

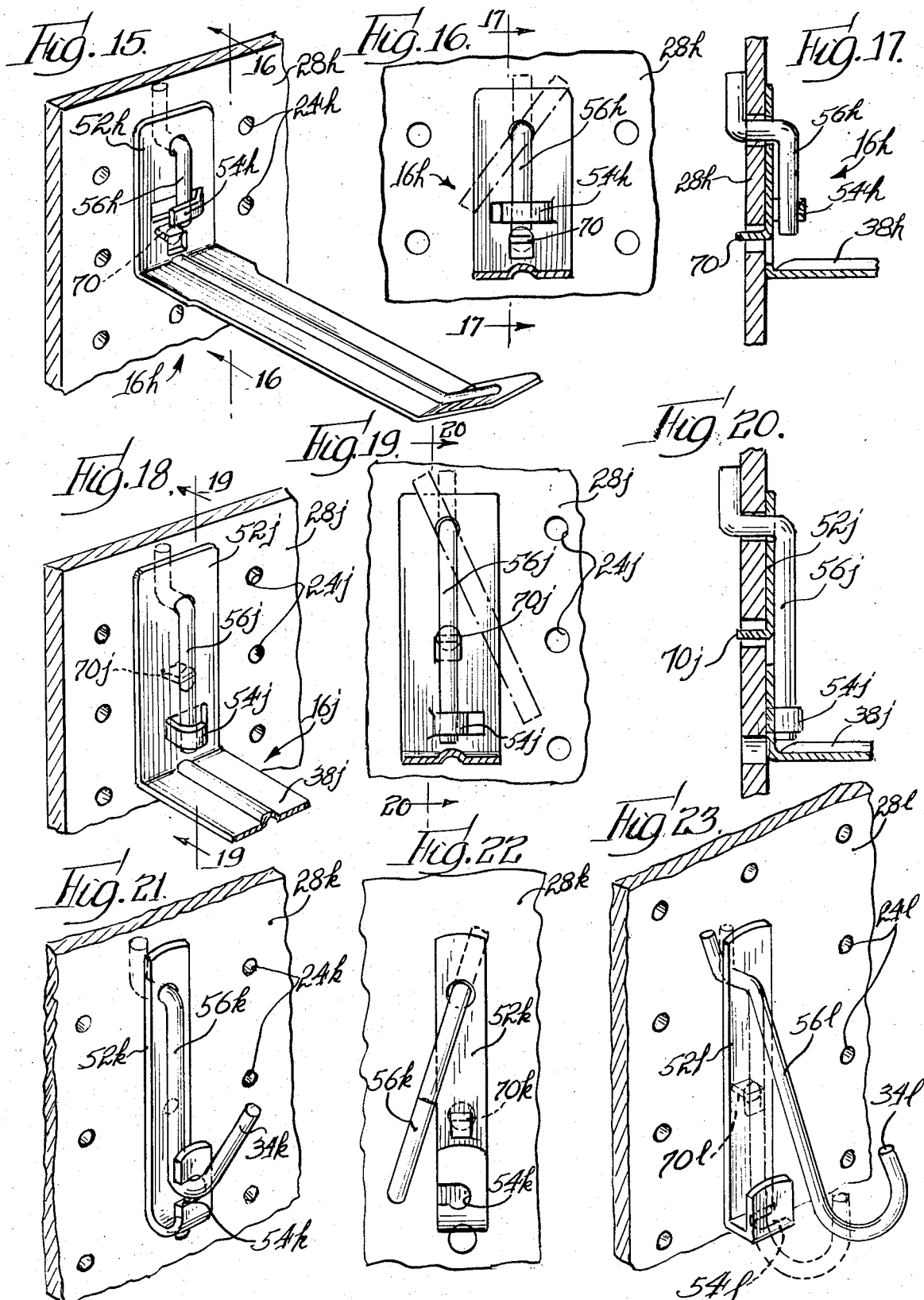
8 Claims, 24 Drawing Figures











ARTICLE SUPPORT BRACKET

SUMMARY OF THE INVENTION

It has heretofore been common practice to employ pegboards for accommodating the free extremities of elongate article support members. This has been accomplished by configuring such extremities so as to enable the support member to be initially tilted upwardly for insertion within a pegboard aperture and then swung downwardly to an article accommodating position. When such article accommodating devices are employed to sustain relatively heavy loads it has been found that the fiber material of the pegboard may not lend sufficient holding strength in the area of attachment of the article support to the apertured panel. It is therefore an important object of the present invention to provide novel, inexpensive, and relatively simple means whereby the area in the vicinity of the attachment of the article support to an apertured panel is materially strengthened.

More specifically, the present invention contemplates the use, in association with an apertured panel such as a pegboard, of auxiliary means which may be mounted upon the panel and function so as directly to receive the mountable extremity of an elongate article support.

The fibrous sheet material commonly used in the production of apertured sheet stock such as pegboard has certain strength limitations which obviously restrict loads to which it may be safely subjected. Hence, the present invention contemplates the provision of novel means whereby pegboards and the like may be reinforced to serve the purpose set forth above.

BRIEF DESCRIPTION OF THE DRAWINGS

The foregoing and other objects and advantages will be more apparent from the following detailed description of the drawings wherein:

FIG. 1 is a perspective view disclosing a fragmentary portion of the vertical apertured panel equipped with article support means which is representative of one embodiment of the present invention;

FIG. 2 is a vertical sectional view taken substantially along the line 2—2 of FIG. 1 more particularly to illustrate the manner in which the elongate article support may be clamped in position between a pair of plate members;

FIG. 3 is a perspective view similar to FIG. 1 disclosing a modified form of article or display supporting device contemplated by the present invention in which the elongate article support is longitudinally adjustable;

FIG. 4 is a vertical sectional view taken substantially along the line 4—4 of FIG. 3;

FIG. 5 is a perspective view disclosing a further modified form of article support wherein a longitudinal panel member is employed as distinguished from the rod members illustrated in FIGS. 1 to 4, inclusive;

FIG. 6 is a fragmentary vertical longitudinal sectional view taken substantially along the line 6—6 of FIG. 5 more clearly to illustrate the manner in which display articles may be supported by the elongate channel member;

FIG. 7 is a vertical sectional view taken substantially along the line 7—7 of FIG. 5;

FIG. 8 is a transverse vertical sectional view taken substantially along the line 8—8 of FIG. 7;

FIG. 9 is an exploded view of the constituent elements of the support device illustrated in FIGS. 5 to 8, inclusive;

FIG. 10 is a perspective view disclosing a modified form of the invention wherein a longitudinal channel shaped strip and an additional U-shaped plate member cooperate to secure an elongate article support rod upon an apertured panel;

FIG. 11 is a perspective view illustrating a further modified form of the invention wherein a U-shaped elongate article support is carried by a plate which in turn is maintained in flush engagement with the outer side of an apertured panel;

FIG. 12 is a perspective view similar to FIG. 11 illustrating a modified form of the invention wherein a single rod or article support as distinguished from the U-shaped support of FIG. 11 may be secured firmly in position upon an apertured panel;

FIG. 13 is a perspective view of a still further modified form of the invention illustrating the use of strip stock and a rod element for securing an article support upon an apertured panel;

FIG. 14 is a modified form of the invention which is somewhat similar to the device illustrated in FIG. 12;

FIG. 15 illustrates an alternate form of the bracket and mounting pin structure constructed in accordance with the principles of this invention;

FIG. 16 is a vertical sectional view taken along line 16—16 of FIG. 15;

FIG. 17 is an edge sectional view taken along line 17—17 of FIG. 16;

FIG. 18 illustrates still another alternate modification of this invention;

FIG. 19 is a sectional view taken along line 19—19 of FIG. 18;

FIG. 20 is an edge sectional view taken along line 20—20 of FIG. 19;

FIG. 21 is still another alternate embodiment of this invention;

FIG. 22 is a front view of the embodiment of FIG. 21; and

FIG. 23 illustrates an alterante configuration of the structure of FIGS. 21 and 22.

DESCRIPTION OF THE PREFERRED EMBODIMENTS

Referring now to the drawings more in detail, wherein like numerals have been employed to designate similar parts throughout the various views, it will be seen in FIGS. 1 and 2 that an article support device representative of one embodiment of the present invention is designated generally by the numeral 16. The device 16 includes duplicate plate sections 18 and 20, having marginal tongues 22 adapted to be accommodated by complementary apertures 24 of a conventional pegboard 28.

Extending forwardly or outwardly from the margins of the plates 18 and 20 are integral spaced plate sections 30 and 32, respectively. The threaded shank of a bolt 34 traverses the parallel plates 30 and 32, a wing nut 36, FIG. 2, when tightened upon the bolt will cause the plates 30 and 32 to grip the inner hook extremity of an elongate article or shelf support member or rod 38.

The type of display bag or article which may be supported by the elongate member or rod 38 is indicated

in dotted lines and designated generally by the numeral 40. In this construction, the plate sections 18 and 20 are secured in a firm fixed position upon the pegboard 28 by means of the crimped prongs 22.

Referring now to FIGS. 3 and 4, it will be seen that a modified form of article support device is illustrated and is designated generally by the numeral 16a. The device 16a, like the previously described device 16, includes plate sections 18a and 20a firmly gripped and held in position upon a pegboard 28a by means of bent-over prongs 22a. Extending forwardly and formed integral with the plates 18a and 20a are plate portions or members 30a and 32a, respectively, which when clamped together through the agency of bolts 34a and wing nuts 36a adjustably fasten the inner extremity of an article support or rod 38a in firm position upon the pegboard. The outer extremity of the elongate support or rod 38a is formed with an integral ring portion 42a which corresponds in function with a similar bent portion 42 at the free extremity of the rod 38 to restrain dislodgment of the articles or display bags. The elongate support member 38a, like the previously mentioned support member 38, is adapted to carry display articles 40a, indicated by dotted lines in FIG. 3.

In FIGS. 5 to 9, inclusive, a still further modified form of the invention is disclosed. In these figures an article support device is shown which is designated generally by the numeral 16b. The device 16b includes duplicate plate sections 18b and 20b provided with tongues or prongs 22b, accommodated by complementary apertures 24b of a conventional pegboard 20b. The tongues 22b when crimped against the inner surface of the pegboard 22b serve rigidly to secure the plates 18b and 20b upon the pegboard 22b. Extending forwardly from and formed integral with the plates 18b and 20b, respectively, are plate portions 30b and 32b. A bolt 34b and a wing nut 36b cooperate with an apertured U-shaped plate member 44 in clampingly securing the inner extremity of an elongate channel-shaped article or shelf support 38b in position, as shown in FIGS. 5 and 7. The inner extremity of the elongate article support 38b is provided with a longitudinal recess 46, designed to accommodate the shank of the bolt 34b and thus permit longitudinal adjustment of the elongate support member 38b between the plate sections 30b and 32b. As previously mentioned, articles designated generally by the numeral 40b are adapted to be maintained in positions of display by the support member 38b. Obviously, the support device 16b is designed to maintain heavier loads, and secure more positively the elongate support members 38b against lateral displacement with respect to a supporting pegboard 28b.

FIG. 10 discloses a further modified form of support device indicated generally by the numeral 16c. An elongate article support member 38b at its inner extremity is U-shaped so as to be accommodated by three sides of a U-shaped plate member which includes spaced plate sections 30c and 32c which correspond functionally with the previously described plate sections 30 and 32, respectively. These plate sections 30c and 32c extend forwardly from a vertical rear plate 48, which together with an elongate channel strip 50 secure the support member 38c upon a pegboard through the agency of clamping bolts 34c. It will be noted that the spaced parallel plate sections 30c and 32c, as well as the rear plate section 48, are indented or recessed to accommodate the U-shaped, fixed extremity of the

elongate support member 38c. In this manner, the support member is secured against lateral as well as vertical displacement. Obviously, a plurality of support devices 16c may be distributed along the bar 50, position upon the panel 28e.

FIG. 13 discloses a structure very similar to that illustrated in FIG. 12, the only significant difference being the use of a tab 54f struck from the body of the plate member 52f, as distinguished from FIG. 12 wherein a tab 54e is struck from the flange portion 60e.

Referring now to FIG. 14 an alternate embodiment of the invention is illustrated. Here an article support member 38g includes as an integral part thereof the plate member 52g which is positioned immediately adjacent the flat surface of the apertured support board 28g. An aperture in the plate member 52g is placed in alignment with one of the apertures 24g and receives a bent pin support member 56g which has upstanding and depending portions spaced on opposite sides of the pegboard and plate member, respectively to lock these units together. In this embodiment a struck portion 54g is bent so as to lock the pin support 56 in position.

Referring now to FIGS. 15, 16, and 17 there is seen still another alternate embodiment of this invention designated generally by reference numeral 16h. Here the article support member 38h includes a plate member 52h which is to be positioned in abutting relation with the surface of the apertured support member 28h. An aperture in the plate member 52h is placed in alignment with one of the apertures 24h and receives a bent support pin 56h to have upstanding and depending portions thereof positioned on each side of the board. The depending portion of the pin 26h is rotated into locking engagement with the tab member 24h and may be held in position by bending the tab member over as shown in FIG. 14. To add support to the article support member a struck back pin 70 is formed in the plate member 52h and is dimensioned from the aperture in the plate an equal distance between apertures in the board. This then allows the article support member to be aligned more readily and adds support thereto. In this instance the struck-back support portion 70 is located beneath the locking tab 54h.

Referring now to FIGS. 18, 19, and 20 a modification of the configuration shown in FIGS. 15, 16, and 17 is shown. Here the article support member is designated generally by reference numeral 16j and includes an article support portion 38j formed contiguous with a plate member 52j to be positioned adjacent the flat surface of the aperture support board. In this instance a struck-back pin portion 70j is formed above the tab portion 54j to allow lengthening of the plate member 52j for additional rigidity and support. Also in this instance the tab portion 54j is shown as being open to the right, as compared to being open to the left with regard to FIG. 15.

Referring now to FIGS. 21 and 22 still another modification of the invention is here illustrated. The article support member in this instance is formed by an extended portion 34k of the bent pin 56k which passes through the locking aperture 54k. As seen in FIG. 22 the bent pin is inserted through aligned apertures in the plate member 52k and 24k and then rotated about the horizontal portion thereof to engage and lock with the struckout or machined-out portion 54k.

In FIG. 23 a modification to this configuration is shown, here it being illustrated that the struck-out por-

tion 54L is formed at the bight portion of the plate member 52L. Also the bent pin 56L is moved into locking position by rotating from right to left rather than left to right as seen in FIGS. 21 and 22.

It will be apparent from the foregoing description that applicant contemplates the provision of a very simple yet sturdy structure for supporting articles, shelves, and the like, upon apertured panels such as pegboards. The provision of various plate structures secured in a fixed position upon the pegboard enables the device to support relatively heavy loads with the utmost safety. Also, the various elongated support members illustrated herein are secured against lateral displacement and, in some instances, capable of longitudinal adjustment. Support devices constructed in accordance with the teachings of the present invention are readily adaptable for supporting various types and shapes of articles for display purposes and the like. The structural simplicity of support devices of the

FIG. 11 shows a still further modified form of the invention, the support device being designated generally by the numeral 16d. The device 16d includes an elongate U-shaped forked device 38d mounted upon a plate 52d. A pair of struckout prongs 54d crimp a vertical portion 56d of the U-shaped article support 38d. The upper extremities of the portions 56d are bent so as to permit initial telescopic association thereof with complementary apertures in the plate member 52d, and the pegboard 28d. This is accomplished by tilting the support member 38d upwardly and then lowering it to the position shown in FIG. 11. By crimping the tabs or prongs 54d against the portions 56d, the entire unit is held in a firm fixed position upon the pegboard.

FIG. 12 discloses a support device 16e which includes a single elongate support member or rod 38e having at its inner extremity a bent-up portion 56e corresponding functionally with the previously described portion 56d of the support device 16d. A plate member 52e is bent upwardly at its lower extremity to provide a flange 60e. An elongate support member 38e projects through the flange 60e and thence upwardly so as to bear against the outer surface of the plate 52e. The upper extremity of the portion 56e is bent so as to permit initial telescopic association of the upper free extremity of the rod portion 56e by initially tilting the rod upwardly and then lowering it to the position where it will interlock with the flange 60e. As shown in FIG. 12, a struck-out tab 64e functions similarly to the previously mentioned tab 54b in securing the parts in a fixed type contemplated by the present invention lends itself

for economical production, and hence assures relatively low cost to the consumer.

The invention is claimed as follows:

1. An article support device for use with apertured panels such as pegboards and the like including a plate bracket member for engagement with the outer surface of a vertically disposed apertured panel, means associated with said plate member for interlocking with an aperture of said panel for securing said plate in flush engagement therewith, elongate article support means adapted to engage said plate bracket outwardly of said outer surface and to project outwardly from said plate member when said plate member is secured to said apertured panel, and means formed on said plate bracket for clampingly engaging said elongate article support means to secure said support means in a predetermined article accommodating position.

2. An article support device for use with apertured panels as set forth in claim 1 wherein the plate bracket means comprises a plurality of sections.

3. An article support device for use with apertured panels as set forth in claim 1 wherein the panel interlocking means comprises tabs adapted for telescopic association with an apertured panel and for impinging the rear surface of said panel.

4. An article support device for use with apertured panels as set forth in claim 1 wherein the elongate article support means includes a rod member.

5. An article support device for use with apertured panels as set forth in claim 1 wherein said elongate article support means includes a U-shaped rod member with the free extremities thereof attachable to said plate bracket means.

6. An article support device for use with apertured panels as set forth in claim 1 wherein said elongate article supporting means includes a section of strip stock having outer and inner extremities, the inner extremity thereof being adapted for attachment to said plate bracket means.

7. An article support device for use with apertured panels as set forth in claim 1 wherein said elongate article support means is longitudinally adjustable.

8. An article support device for use with apertured panels as set forth in claim 1 wherein the inner extremity of the elongate article support includes a section adapted to extend substantially horizontally and an upright rod section adapted for attachment to said plate bracket means.

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UNITED STATES PATENT OFFICE
CERTIFICATE OF CORRECTION

Patent No. 3,853,293 Dated DECEMBER 10, 1974

Inventor(s) CHARLES O. LARSON

It is certified that error appears in the above-identified patent and that said Letters Patent are hereby corrected as shown below:

Abstract, lines 1 and 2, change "improvement" to
--improvements--

Abstract, line 5, change "includes" to --include--

Column 2, line 45, insert as a separate paragraph
--Fig. 24 is a vertical sectional view
taken along line 15-15 of Fig. 12.--

Column 4, line 4, after "bar 50." and before "position"
insert the material presently appearing
in Column 5, lines 20 through 49, the said
material to begin a new paragraph.

Signed and sealed this 8th day of April 1975.

(SEAL)

Attest:

RUTH C. MASON
Attesting Officer

C. MARSHALL DANN
Commissioner of Patents
and Trademarks