



(22) Date de dépôt/Filing Date: 2008/02/20

(41) Mise à la disp. pub./Open to Public Insp.: 2009/08/12

(45) Date de délivrance/Issue Date: 2014/08/05

(30) Priorité/Priority: 2008/02/12 (US61/028,084)

(51) Cl.Int./Int.Cl. *A47B 61/00* (2006.01),
A47B 77/02 (2006.01), *E06B 7/00* (2006.01)

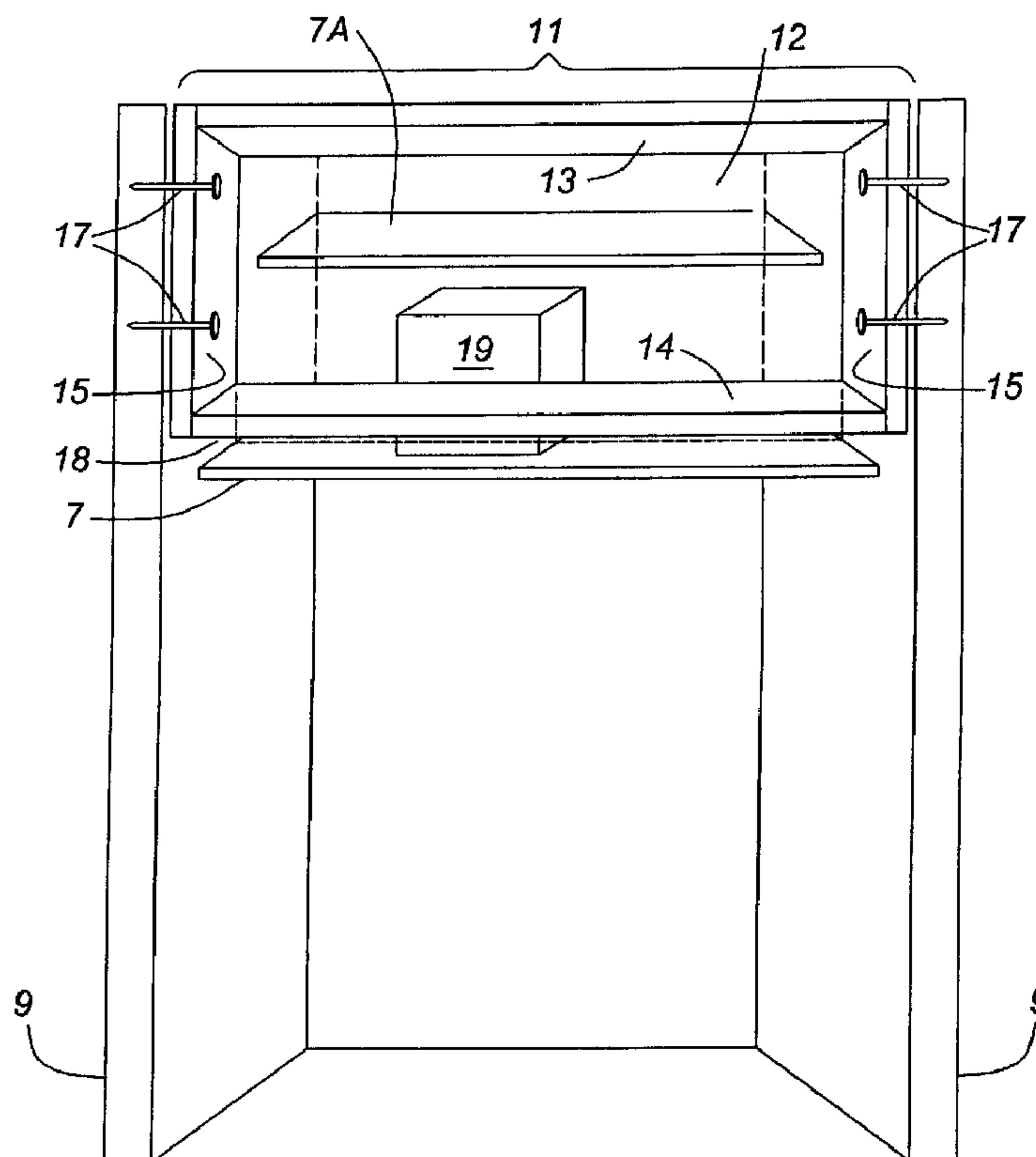
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(54) Titre : BOITE A ACCES PAR LE HAUT D'UN PLACARD

(54) Title: CLOSET TOP ACCESS BOX



(57) Abrégé/Abstract:

In a closet with an upper shelf and a door opening defined laterally by two vertical door frame posts which extend to the ceiling, a box frame having a box frame opening and a box frame door system is installed between these posts and above the location of the

(57) **Abrégé(suite)/Abstract(continued):**

door opening. The box frame is fastened either to the door frame posts or to the ceiling to provide an opening by which articles may be more readily placed on the upper shelf. The upper shelf within the closet may extend only for a portion of the depth of the closet leaving a gap between such shelf and the box frame thereby providing access to objects present on the shelf through such gap.

ABSTRACT

In a closet with an upper shelf and a door opening defined laterally by two vertical door frame posts which extend to the ceiling, a box frame having a box frame opening and a box frame door system is installed between these posts and above the location of the door opening. The box frame is fastened either to the door frame posts or to the ceiling to provide an opening by which articles may be more readily placed on the upper shelf. The upper shelf within the closet may extend only for a portion of the depth of the closet leaving a gap between such shelf and the box frame thereby providing access to objects present on the shelf through such gap.

TITLE: CLOSET TOP ACCESS BOX**FIELD OF THE INVENTION**

This invention relates to a device to allow access to the upper part of closets
5 for the purpose of easing storage therein. More particularly, it addresses a mode of
manufacturing a closet to provide improved access to the upper region of the closet.

BACKGROUND TO THE INVENTION

Household closets have an important role to play in everyday living. Storage
10 is a major issue for everyone. Closet space is at a premium not only for apartment
owners, but also for persons living in houses.

Various proposals have been made to enhance the efficiency by which things
can be stored in closets. This includes closet organizers, specialty hooks and
15 hangers, types of closet rods, etc.

Notwithstanding the above initiatives, the prospects of using, more efficiently,
the upper shelving provided in a closet have not been fully addressed. A deterrent in
this respect is that space permitting for upper shelving in a closet is partially
20 obstructed by the existence of the framing located above the door opening of a
standard closet.

Most closets have a door opening with a top portion or lintel spanning the door
opening. Above this lintel the space is typically closed-in, as by plasterboard. The
25 consequence is that the amount of space available for access to upper shelves is
limited by the presence of such a lintel. While it may be possible to envisage a closet
opening that extends fully to the ceiling, such an arrangement would be generally not
be considered attractive, practical or acceptable.

The present invention addresses the problem of providing improved access to the upper regions of a closet which has a door opening wherein such upper regions would otherwise be obstructed by a door opening lintel. Further, the invention
5 allows the addition of one or more further accessible closet shelves if one so desires, beyond the normal shelf.

The invention in its general form will first be described, and then its implementation in terms of specific embodiments will be detailed with reference to
10 the drawings following hereafter. These embodiments are intended to demonstrate the principle of the invention, and the manner of its implementation. The invention in its broadest and more specific forms will then be further described, and defined, in each of the individual claims which conclude this Specification.

15 SUMMARY OF THE INVENTION

According to the present invention in one aspect, a closet with an upper shelf and a door opening is defined laterally by two vertical door frame posts which extend to the ceiling, includes, between these posts and above the location of the door opening, a box frame having a box frame opening and a box frame door system.
20 Preferably, the box frame is fastened to the door frame posts, although it may also be attached to the ceiling.

According to a preferred variant of the invention, the box frame is of limited depth, extending backwardly from the box frame opening into the closet for only a
25 minor percentage of the depth of the closet; e.g., 10-15%. Where, as in North America, framing is typically carried-out with standard 2X4 lumber, the depth of the door frame that extends inwardly into the closet is preferably on the order of 4 inches

but optionally 5 or 6 inches. Generally, this results in a box frame which has a depth that is 1/10 of its width or less.

The box frame system of the invention provides an opening by which articles
5 may be more readily placed on the upper shelf. Preferably, the box frame opening extends upwardly and, optionally, virtually all the way to the ceiling, the access provided by the frame can be larger than the dimensions of the access pathway normally available for placing objects on an upper closet shelf when a standard door lintel is present.

10 When a frame of this design is used in conjunction with a closet containing an upper shelf that extends outwardly from the rear wall of the closet by only a portion of the depth of the closet, a gap exists which can prove advantageous. While it is permissible for the upper shelf to extend entirely for the depth of the closet,
15 extending to the box frame and making the shelf accessible only through the box frame opening, it is preferable for the upper shelf to be of a dimension that leaves a gap between the front edge of the upper shelf and the rear edge of the box frame. This gap can provide access for small objects to be placed on the upper shelf without the use of the box frame opening. It can permit ambient light from outside the closet
20 to enter and illuminate the lower portion of the closet, and this gap can provide access for lifting objects stored on the upper shelf in order to move them outwardly through the box frame. Because such a gap is present between the shelf and the box frame, overhanging objects stored on the upper shelf can be supported manually while being moved outwardly through the box frame opening.

25 While it is preferable that the upper shelf be aligned substantially with the level of the lower transverse portion of the box frame, it is permissible for the upper shelf to be located either above or below this height. The presence of a gap as

described above is particularly convenient when the shelf is below the level of the bottom portion of the box frame. An object stored on the shelf can then be accessed through the gap in order to be lifted-up for removal through the box frame. A similar advantage arises when the shelf is above the level of the bottom portion of the box frame whereby an object can be advanced outwardly through the frame by being contacted manually through the gap.

The box frame may be fitted with doors to seal the closet and provide an aesthetic appearance. A single door can be provided, preferably hinged about a horizontal axis by means of a hinge system connected along the upper edge of the box frame. A pair of doors can be provided, each hinged about a respective vertical axis located along the two vertical sides of the box frame. Standard door hardware may be included for such a doors including a handle and a latch.

By relying on the presence of vertical posts defining the door opening, a generally typical component of any closet design, and the box frame of the invention may be securely positioned above the door opening. As such, the bottom horizontal piece of the box frame is available to serve as a lintel for the door opening.

The bottom horizontal piece of the box frame can be fitted with a track by which sliding doors may be suspended or by which the roller in bifold doors is guided. Or, the bottom horizontal piece of the box frame can simply serve to carry doorstop elements against which the top portion of one or more vertically hinged doors may close. In the event that the bottom piece of the box frame is used to carry the weight of one or more doors, this piece may be strengthened by an added piece that gives such bottom piece a "T"-shaped cross-section.

The closet access box frame system of the invention is best suited for installation at the time a house is being constructed. However, it can also be installed on a retrofit basis in established housing at which point the existing lintel would preferably be removed or otherwise remain and the closet access box frame installed
5 above the said lintel.

The closet access box frame system of the invention can also be integrated into a closet door frame kit in which case the assembled kit can be inserted in an opening provide specifically for the assembled kit.
10

More particularly such a kit may be installed in a finished wall recess having a closet opening extending upwardly from a floor towards a ceiling, the closet opening being defined by a pair of vertical studs and serving to frame the entrance to a closet. The closet may include a closet shelf located in the upper portion of the wall recess.
15 In such case the closet opening kit comprises:

1) two opposed vertical, framing side members dimensioned to run from the floor towards the ceiling within the opening of the wall recess, the side members being spaced apart by a width to allow the side members to be each respectively
20 affixed to a respective vertical stud in the closet opening,

2) a transverse upper member that is coupled transversely between upper ends of the side members,

3) a lintel member that extends transversely between the side members beneath the transverse upper member at a height to receive a closet door, the lintel
25 member together with the upper member and upper portions of the side members defining an upper closet access opening, and

4) an upper door or pair of doors carried by the open box for covering the upper closet access opening,

whereby, with the closet opening kit installed in the closet opening of the wall recess and with the upper door means open, articles may be more readily placed on the closet shelf for storage within the closet.

5

The closet opening kit may include a closet door assembly carried by one or more of the side members, or by the lintel, for covering the closet opening. When the closet contains an upper shelf which extends outwardly from a rear wall of the closet by only a portion of the depth of the closet, it should preferably extend no further
10 than the rear edge of the lintel member. Preferably, such upper shelf should extend outwardly from the rear wall of the closet to a point short of the rear edge of the lintel member to provide a gap between the front edge of the shelf and the rear edge of the lintel member sufficiently large to provides access to the shelf from beneath the lintel member. This will allow objects to be placed on the upper shelf without the use of
15 the box frame opening.

The foregoing summarizes the principal features of the invention and some of its optional aspects. The invention may be further understood by the description of the preferred embodiments, in conjunction with the drawings, which now follow.

20

BRIEF DESCRIPTION OF THE DRAWINGS

Figure 1 is a front elevation view of a prior art closet having two closet doors bounded by side posts.

25

Figure 2a is a front view of a box frame adapted for installation above the closed doors of Figure 1.

Figure 2b is a bottom view of the box frame of Figure 2 wherein the bottom portion of the frame is provided with a stiffener to form a "T" cross-section.

Figure 3 is a front perspective view of the box frame as in Figure 1 mounted
5 above a shelf-containing closet opening with the closet doors removed.

Figure 4 is a front perspective view of the frame of Figure 1 showing hardware.

10 Figure 5 is a front plan view of a typical installation of the frame of Figure 2a installed in a typical closet wherein the frame is fitted with a single frame door.

Figure 6 is a front plan view of a typical installation of the frame of Figure 2a installed in a typical closet wherein the frame is fitted with two frame doors.

15

Figure 7 is a front plan view of a variant of the invention which incorporates the closet access box into a closet door kit.

DESCRIPTION OF THE PREFERRED EMBODIMENT

20 As shown in Figure 1, a prior art closet is provided with folding closet doors, each having respective panels 2A, 2B fitted into a door opening 3. In this case, two hinged closet door panels 2A, 2B each hung at their top inside edges from a track 4 along the lintel 6 of the door opening 3 and are individually hinged to fold in two parts so that as depicted, one door may be closed while the other door may be
25 opened. The closet door panels 2A, 2B are coupled to each other by hinges 2C and are guided by the roller guide track 4 at the top of the door opening 3.

Within the closet of Figure 1 a typical shelf 7 is fitted against the back wall of the closet, extending for the full width of the closet interior but only part way out from the depths. The shelf 7 is in the upper region of the closet, positioned over the clothes hanging bar 8 also spanning the full width of the closet interior. The door opening 3 is defined laterally by two vertical doorframe posts 9 which extend to the height of the ceiling 10. The region 10A above the lintel 6 is normally closed-in with gypsum panel board.

In accordance with the invention and as shown in Figure 2a, a box frame 11 having a box frame front opening 12, is defined by a top member 13, a bottom member 14, and two vertical side members 15. Not shown in Figure 2, but shown in Figure 6, a pair of doors 16A may be fitted to cover the opening 12. The box frame 11 is intended to be fastened to the doorframe posts 9 or ceiling. The box frame 11 may be fastened to the door frame posts 9 by spikes 17 or other similar fastening means 17, as shown in Figure 3.

The box frame 11 is of limited depth, extending backwardly from the box frame front opening 12 into the closet for only a minor percentage of the depth of the closet, e.g. 10 -15%. Where the framing used for the door frame posts 9 is effected with lumber of a specific width, the depth of the bottom member 14 of the box frame 11 may be of a similar width or slightly larger. Generally, this results in a box frame which has a depth which is 1/10 of its width or less.

In the top view, Figure 2b, the bottom portion 14 of the frame 11 is provided with a stiffener 22 which, in combination with the bottom portion 14 provides a "T" cross-section.

As shown in Figure 3, the box frame system of the invention provides an opening 12 by which articles may be more readily placed on one or more shelf(s) 7, 7A within the closet. As the shelf 7 extends forwardly from the rear wall of the closet by only a portion of the depth of the closet, a gap 18 shown in Figure 3 is present
5 between the front edge of the upper shelf 7 and the rear edge of the bottom member 14 of the box frame 11. This gap 18 can provide access for small objects to be placed on the upper shelf without the use of the box frame opening 12. This gap 18 can also permit ambient light from outside the closet to enter and illuminate the lower portion of the closet. And this gap 18 can provide access for lifting objects 19
10 stored on the upper shelf 7, and particularly when such objects 19 are overhanging the shelf 7, in order to move them outwardly through the box frame opening 12.

While it is preferable that the upper shelf 7 be aligned substantially with the level of the bottom member 14 of the box frame 11, it is permissible for the upper
15 shelf 7 to be located either above or below this height. Although one lower shelf 7 and one upper shelf 7A are shown, several may be provided, including shelves at various heights.

The box frame may be fitted with one or more doors to seal the closet and
20 provide an aesthetic appearance. A single door 16, as shown in Figure 5, can be provided, hinged about a horizontal axis by means of hinges 20 connected along the top member 13 of the box frame 11, as shown in Figures 4 and 5. A pair of doors 16A can be provided as shown in Figure 6, each hinged by hinges 20 about a respective vertical axis located along the two vertical sides members 15 of the box
25 frame 11. Standard door hardware may be included for such a doors including hinges, a handle and a latch (not shown).

By relying on the presence of vertical posts 9 defining the door opening 3, a typical component of any closet design, the box frame 11 of the invention may be securely positioned above the door opening 3 as shown in Figure 5. As such, the bottom horizontal member 14 of the box frame 11 is available to serve as a lintel for
5 the door opening 3.

The bottom horizontal piece 14 of the box frame 11 can be fitted with a track 4 by which closet door panels 2A, 2B may be suspended. In the event that the bottom member 14 of the box frame 11 is used to carry the weight of one or more doors to,
10 this piece may be strengthened by an added piece 22 that gives such bottom piece 14 a "T"-shaped cross-section, as shown in Figure 2b.

The frame doors 16 and 16A, as shown in Figures 5 and 6 respectively, can also optionally extend downwardly in order to screen the track 4 from optical view,
15 while the clothes hanging bar 8 and shelf 7 remain visible. Where a single upwardly opening door 16 is installed on the box frame 11, anti-shutting hardware 23 as known in the prior art such as a hinged brace, shown in Figure 4, may be installed.

The box frame 11 parts may be pre-cut to standard closet sizes or otherwise cut
20 from custom measurements and once assembled with included hardware, will be fitted in the closet opening 3, which may have the gypsum wallboard covering the sideposts 9.

A box frame 11 may be incorporated into a closet opening kit 11A as shown in
25 Figure 7. Such kit 11A is intended to be installed in a finished wall recess having a closet opening extending upwardly from a floor towards a ceiling. The closet opening is normally defined by a pair of vertical studs 9 serving to frame the entrance to the closet. The closet typically includes a closet shelf 7 located in the upper

portion of the wall recess as shown in Figures 1, 3 and 6. In such case the closet opening kit 11A comprises:

- 1) two opposed vertical, framing side members 15 dimensioned to run from
 5 the floor towards the ceiling within the opening of the wall recess, the side members 15 being spaced apart by a width to allow the side members to be each respectively affixed to a respective vertical stud 9 in the closet opening,
- 2) a transverse upper member 13 that is coupled transversely between upper
 ends of the side members 15,
- 10 3) a lintel member 14 that extends transversely between the side members 15 beneath the transverse upper member 13 at a height to receive a closet door, the lintel member 14 together with the upper member 13 and upper portions of the side members 15 defining an upper closet access opening, and
- 4) an upper door or pair of doors (or more) 23 as shown in Figure 6 may be
 15 fitted to cover the integrated box frame 11.

With the closet opening kit 11A installed in the closet opening of the wall recess and with the upper door , articles may be more readily placed on the closet shelf 14 for storage within the closet.

20

The closet opening kit 11A may include a closet door assembly, e.g. such as doors 2B as shown in Figure 1, carried by one or more of the side members 15, or by the lintel 14, for covering the closet opening.

25 CONCLUSION

The foregoing has constituted a description of specific embodiments showing how the invention may be applied and put into use. These embodiments are only

exemplary. The invention in its broadest, and more specific aspects, is further described and defined in the claims which now follow.

These claims, and the language used therein, are to be understood in terms of
5 the variants of the invention which have been described. They are not to be restricted to such variants, but are to be read as covering the full scope of the invention as is implicit within the invention and the disclosure that has been provided herein.

10

THE EMBODIMENTS OF THE INVENTION FOR WHICH AN EXCLUSIVE PROPERTY OR PRIVILEGE IS CLAIMED ARE DEFINED AS FOLLOWS:

1. A box frame installed beneath a ceiling in a closet having an upper shelf and a first closet opening defined laterally by two vertical door frame posts which extend to the ceiling, the box frame comprising:

two side members, a top member, a bottom member and a box frame door system, the box frame having a rear perimeter edge, the box frame being fastened either to at least one of the two vertical door frame posts and the ceiling to provide a second closet opening,

wherein the upper shelf of the closet extends outwardly from a rear wall of the closet by only a portion of the depth of the closet to provide a gap between a front edge of the upper shelf and the rear perimeter edge of the box frame, the gap providing access to the upper shelf from the first closet opening, wherein the box frame is mounted between a front edge of the door frame posts and the front edge of the upper shelf and between the two vertical door frame posts and above the first closet door opening.

2. The box frame as in claim 1 wherein the box frame is of limited depth, the box frame having a depth which is $1/10$ of its width or less whereby the box frame will be able to extend from the front edge of the box frame inwardly toward the rear wall of the closet for only a minor percentage of the depth of the closet.

3. The box frame as in claim 1 in combination with the closet having a depth wherein the box frame extends from the front edge of the box frame inwardly toward the rear wall of the closet by an amount which represents between 10 to 15 percent of the depth of the closet.

4. The box frame as in claim 1 wherein the upper shelf of the closet is positioned at a level below the bottom member of the box frame.

5. The box frame as in claim 1 wherein the upper shelf of the closet is positioned above the level of the bottom member of the box frame.

6. The box frame as in claim 1 wherein the upper shelf of the closet is positioned at the level of the bottom member of the box frame.
7. The box frame as in claim 1 comprising a single door hinged about a horizontal axis by means of a hinge system connected along the upper edge of the box frame.
8. The box frame as in claim 1 comprising a pair of doors, each being respectively hinged about a respective vertical axis located along the two vertical side members of the box frame.
9. The box frame as in claim 1 in combination with the closet having the door opening wherein the bottom member of the box frame serves as a lintel for the door opening.
10. The box frame as in claim 9 wherein the bottom member of the box frame is strengthened by an added piece that gives such bottom member a "T"-shaped cross-section.
11. The box frame as in claim 1 wherein the bottom member of the box frame is fitted with a track in combination with sliding closet doors suspended from such track.
12. A closet opening kit installed in a wall recess having an opening extending upwardly from a floor towards a ceiling, the opening being defined by a pair of vertical studs and serving to frame the entrance to a closet wherein the closet includes a closet shelf located in the upper portion of the wall recess, the closet opening kit comprising:
 - two opposed vertical, framing side members dimensioned to run from the floor towards the ceiling within the opening of the wall recess, the side members being spaced apart by a width to allow the side members to be each respectively affixed to a respective vertical stud in the opening;
 - a transverse upper member that transverses between upper ends of the side members;

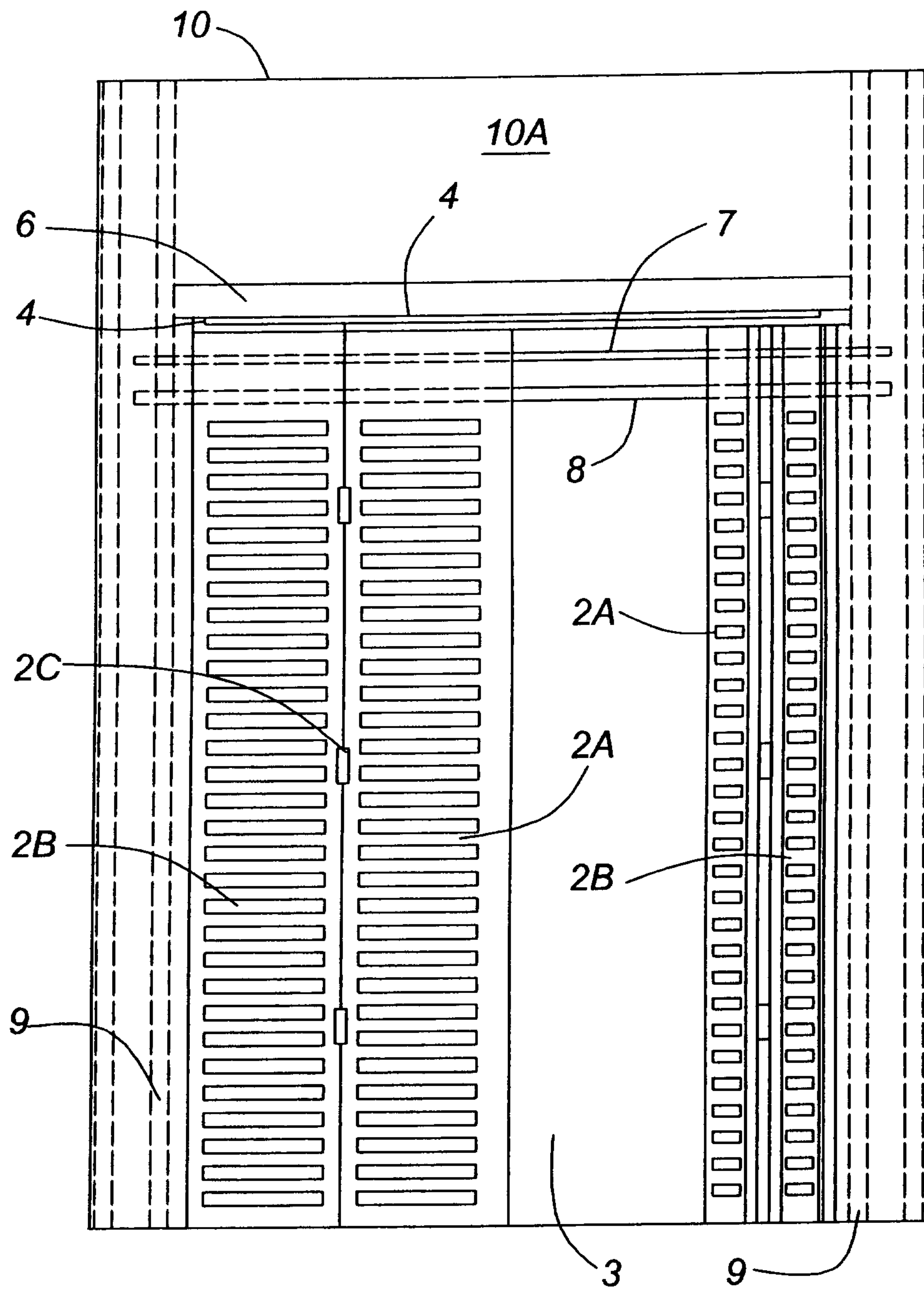
a lintel member that extends transversely between the side members, beneath the transverse upper member at a height to receive a closet door, the lintel member and the two opposed vertical, framing side members together forming a first closet opening, the lintel member together with the transverse upper member and upper portions of the side members forming a frame and providing a second closet opening; and

an upper door or pair of doors carried by the frame for covering the second closet opening;

wherein when the closet opening kit is installed in the opening of the wall recess and with the upper door open, the closet shelf may be accessed for storage within the second closet opening, and

wherein, the closet shelf extends outwardly from a rear wall of the closet by only a portion of the depth of the closet to provide a gap between a front edge of the closet shelf and a rear edge of the lintel member, the gap providing access to the closet shelf from the first closet opening.

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PRIOR ART
FIG. 1

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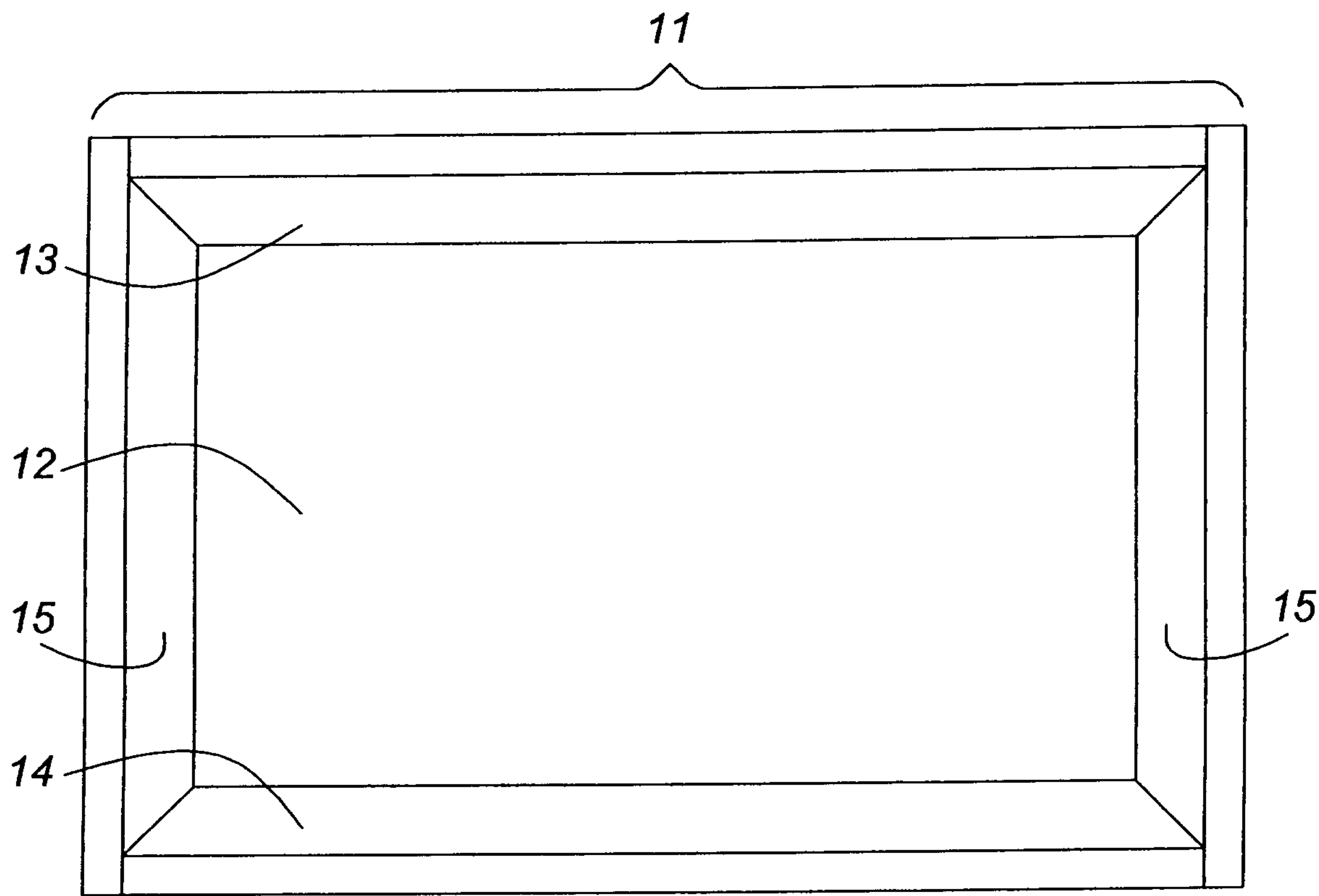


FIG. 2A

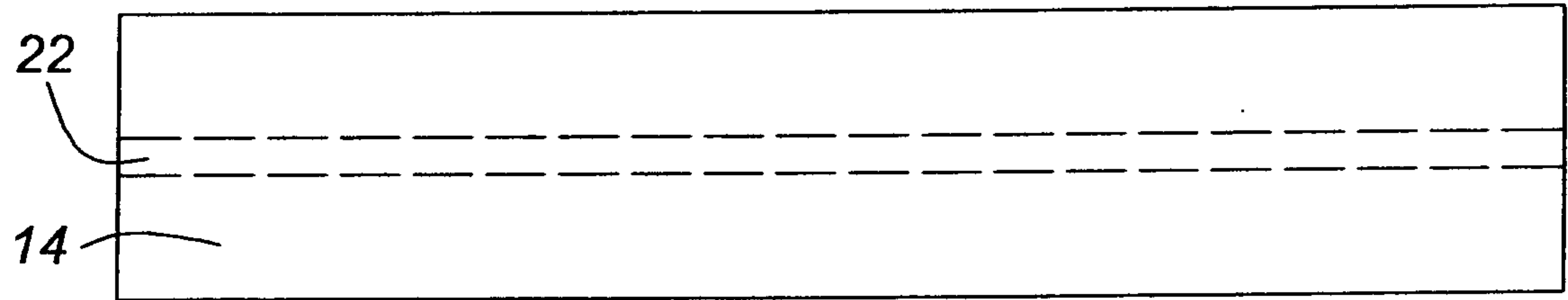
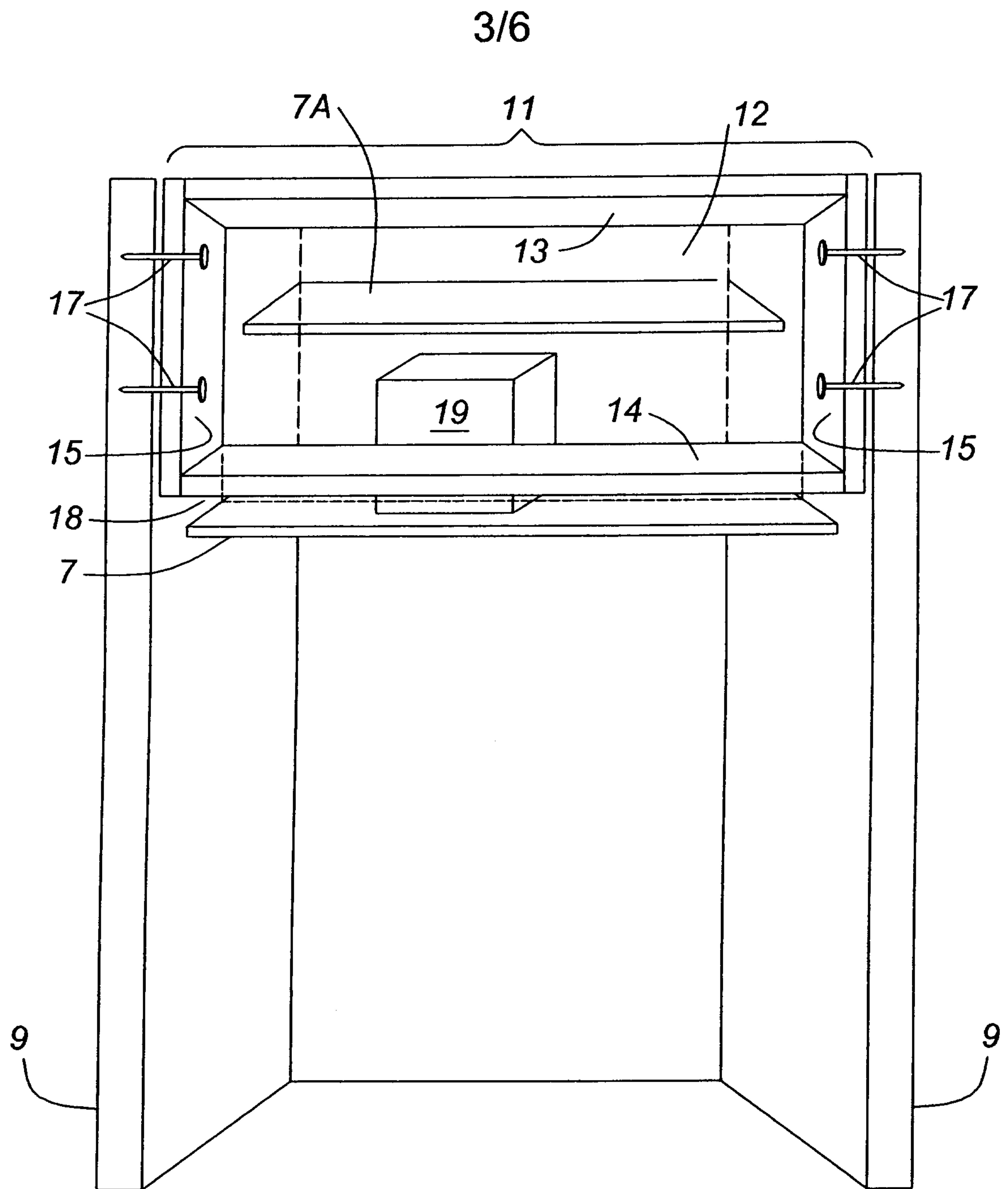


FIG. 2B

**FIG. 3**

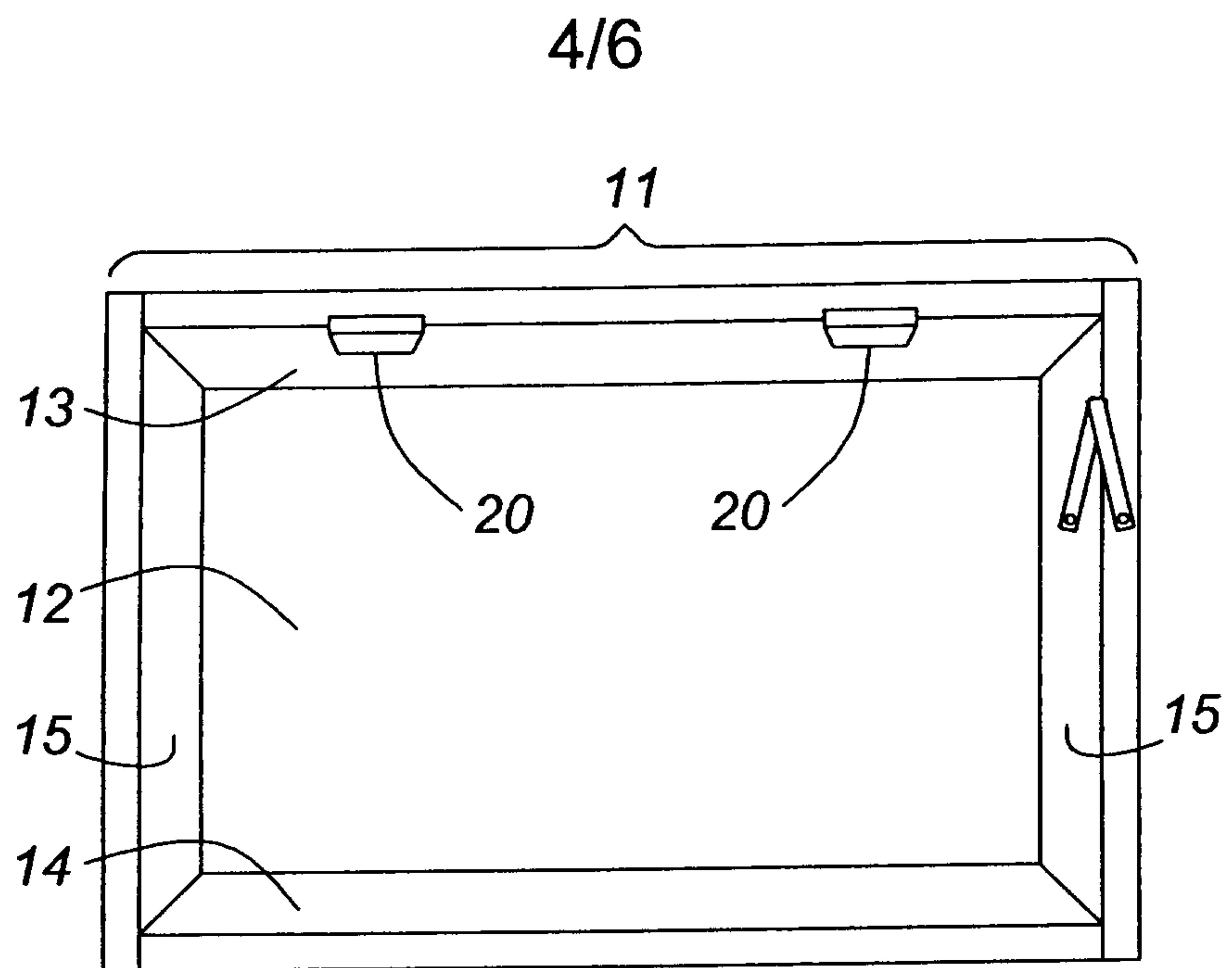


FIG. 4

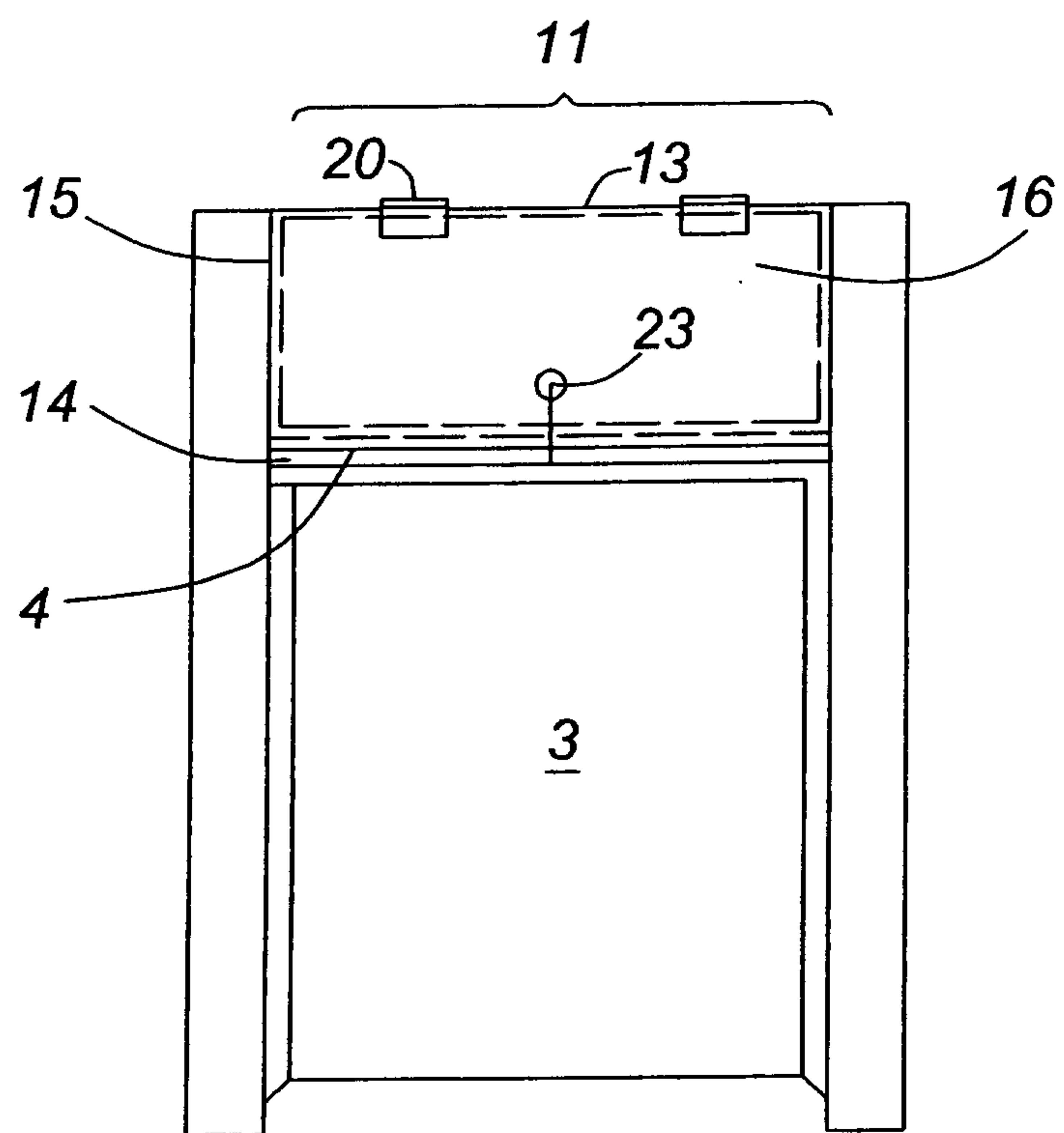


FIG. 5

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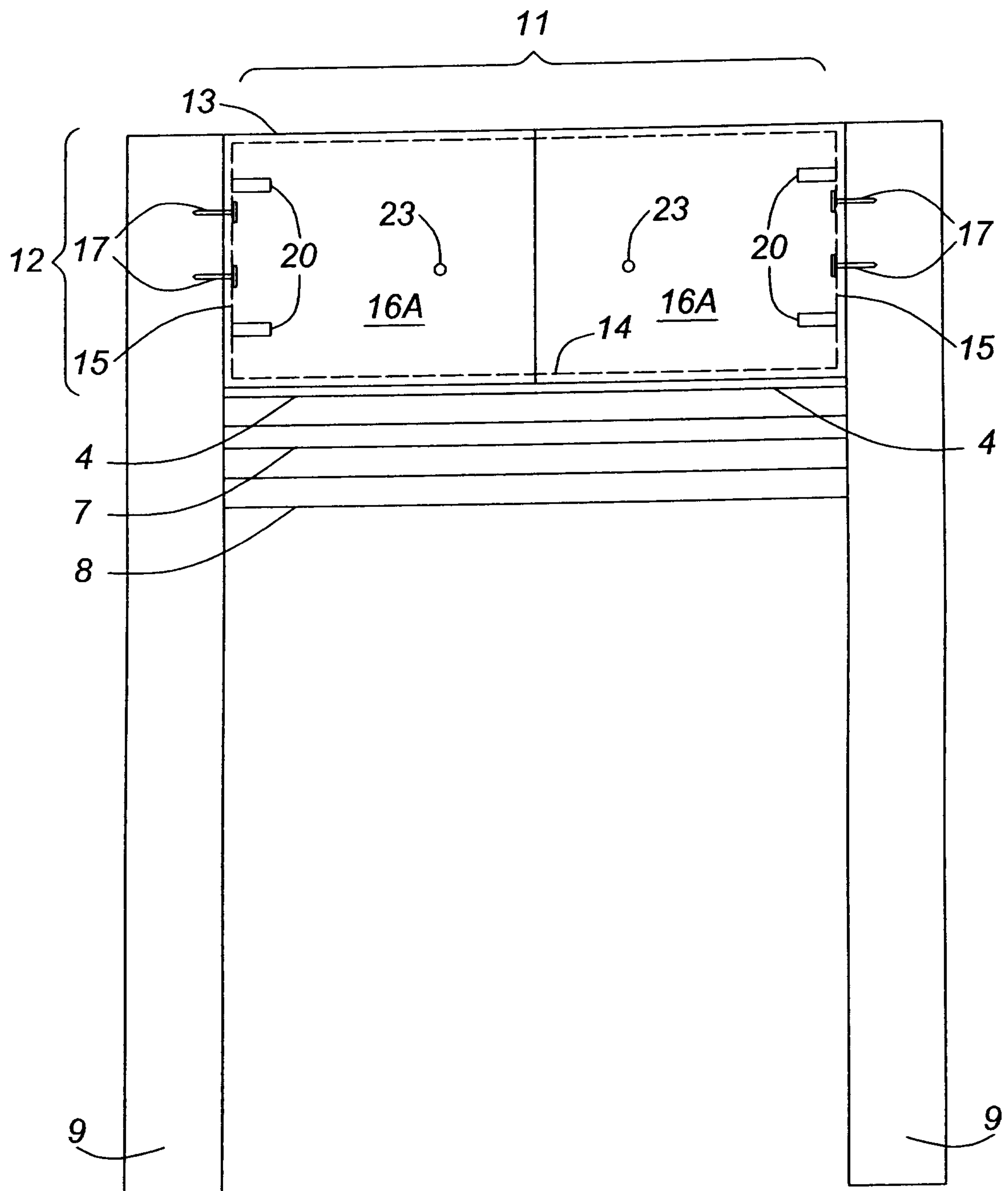
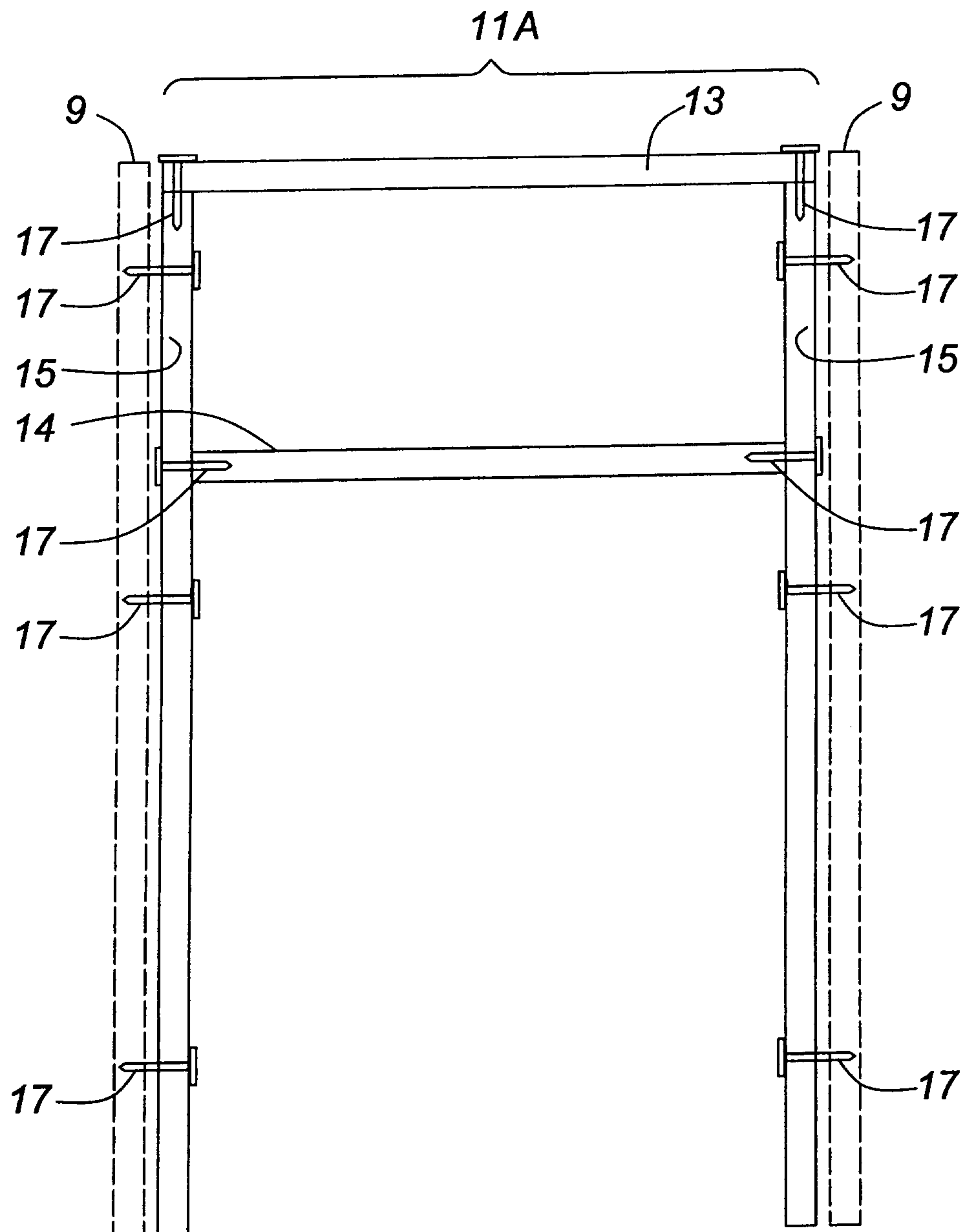


FIG. 6

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**FIG. 7**

