(19) Europäisches Patentamt
European Patent Office
Office européen des brevets

(11) Publication number: **0 143 751**
A2

(12) EUROPEAN PATENT APPLICATION

(21) Application number: **84830039.8**

(22) Date of filing: **16.02.84**

(51) Int. Cl.⁴: **E 06 B 3/94**, A 47 K 3/22

(30) Priority: **24.11.83 IT 2365683 U**

(43) Date of publication of application: **05.06.85 Bulletin 85/23**

(84) Designated Contracting States: **AT BE CH DE FR GB LI NL SE**

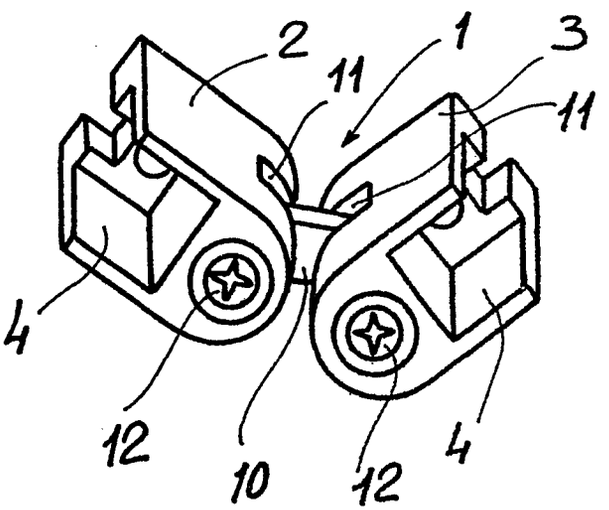
(71) Applicant: **Meardi, Giovanni, Viale Romolo, 2, I-20143 Milano (IT)**

(72) Inventor: **Meardi, Giovanni, Viale Romolo, 2, I-20143 Milano (IT)**

(74) Representative: **Cicogna, Franco, Ufficio Internazionale Brevetti Dott.Prof. Franco Cicogna Via Visconti di Modrone, 14/A, I-20122 Milano (IT)**

(54) Connector element for interconnecting plate-like members for mutual rotation through 360o, intended particularly for erecting shower bath booth walls.

(57) The connector element comprises a first body (2) associable with one edge of one of the plate like members (5) to be interconnected and a second body (3) associable with one edge of another of the plate like members (5) to be interconnected, a connective portion (10) being provided which is hinged with the ends thereof to the bodies (2,3) and adapted to be rotated about axes extending substantially parallel to the mating edges of the plate like members (5).



EP 0 143 751 A2

0143751

This invention relates to a connector element for interconnecting plate-like members which enables the latter to be mutually rotated through 360 degrees.

As is known, the need is felt in many fields for connector elements which can interconnect plate-like members, such as panels, glass panes, and the like such that any panel or glass pane may be rotated through 360° relatively to another.

Currently used connectors have the disadvantage of having a complex construction which makes assembling of the various panels a complicated and labour-consuming operation.

With particular reference to the field of shower bath booths, it is in many instances necessary to provide connector elements which can connect glass panes together such as to ensure adequate leak-proof features and the faculty of easily folding one pane against the other to reduce the space requirements of the shower bath booth when the latter is not being used.

Another disadvantage of prior approaches resides in that the connector elements actually made available are bulky and little versatile.

For such reasons, their application to glass panes may be quite a difficult task.

It is a primary object of this invention to obviate such prior deficiencies by providing a connector element for interconnecting plate-like members of various description, which can ensure a 360° rotation ability therefor without involving

a bulky arrangement along thusly interconnected edges of said plate-like members.

A further object of the invention is to provide a connector element for interconnecting plate-like members, which affords good leak-proof features, thereby an element can be provided which is specially suitable for supporting glass panes intended to form movable parts of a shower bath booth or bath tub screen or for application in the building construction field.

It is another object of this invention to provide a connector element which comprises a small number of component parts, and can give full assurance of being reliable and safe to use.

Still another object of the invention is to provide a connector element of relatively low cost, so that it can achieve widespread application among users.

These and other objects, such as will be apparent hereinafter, are achieved by a connector element for interconnecting plate-like members, and adapted to ensure 360° mutual rotation capabilities therefor, according to the invention, characterized in that it comprises a first body associable with one edge of one of the plate-like members to be interconnected and a second body associable with one edge of another of the plate-like members to be interconnected.

Also provided is a connective portion hingedly attached with its ends to said bodies for mutual rotation about axes extending substantially parallel to the adjoining edges of said plate-like members.

Further features and advantages of the invention will be more clearly understood by making reference to the following detailed description of a connector element for interconnecting plate-like members for 360° rotation capabilities, in conjunction with the accompanying illustrative drawing, where:

Figure 1 shows schematically and in perspective the connector element of this invention;

Figure 2 is a front view of a wall portion comprising two plate-like members connected together by a connector element;

Figure 3 is a bottom view of the same detail shown in Figure 2;

Figure 4 is a top view of a connector element between two plate-like members, with the latter in a part-folded condition one against the other;

Figure 5 is a front view of two panel doors interconnected by means of this connector element;

Figures 6 and 7 are perspective views of two walls formed by accordion-like folding panels, which incorporate this connector element and are shown in a partly extended condition and folded one of minimum bulk.

With reference to the numerals used in the cited drawing figures, this connector element for interconnecting plate-like members such that the latter can be mutually rotated through 360°, as generally designated with the reference numeral 1, comprises essentially a first body 2 and second body 3.

The bodies 2 and 3 have a substantially elongate

shape with rounded interconnection ends, as explained hereinafter.

The bodies 2 and 3 define, at their free ends, a recess or cavity 4 wherein are accommodated the plate-like members or panels to be interconnected, or alternatively, sectional members 5 which act as supports for the plates or panels 30.

Where sectional members 5 are used, a lip seal 6 may be provided to interconnect the sectional members 5, thereby providing a barrier which ensures a tight seal.

The bodies 2 and 3 are hingedly attached, at the mating ends thereof, to a connective portion 10 the ends of which are accommodated in cutouts 11 advantageously defined at the rounded ends of the bodies 2 and 3.

Also provided are screw or the like elements, indicated at 12, which function in practice as mutual rotation axles for the bodies 2 and 3 with respect to the connective portion 10.

The rotation axis thus defined is substantially parallel to the edge of the sectional member 5 or panel edge, which is connected to the elements.

The connective portion 10 has a distance, between the points of mutual hinged connection to the bodies 2 and 3, which larger than or equal to the width of the bodies 2 and 3, thus affording the faculty of rotating one body relative to the other.

With the connector element of this invention, for assembling shower bath booths or the like screens, one

is enabled, moreover, to install on the horizontal crosspieces 20, located at the top and bottom ends of the plate, a sealing gasket 21, which would provide a virtually leak-proof closure of the shower booth toward the outside.

It may be appreciated from the foregoing description that the invention achieves its objects.

In particular, it is pointed out that the provision of a connector element which comprises in practice but three parts articulated to one another, affords a considerable simplification of all the panel and/or plate-like members or the like assembling procedures, which members are interconnected for mutual rotation through 360°.

Furthermore, the connection between the connector element and plate, accomplished by means of an interlocking joint and possible locking at the cavity 4, allows great simplification of the inventive connector element assembling procedure.

In practicing the invention, the materials used, and the dimensions and contingent shapes, may be any selected ones to meet individual requirements.

CLAIMS

1. A connector element for interconnecting plate-like members adapted for mutual rotation through 360°, characterised in that it comprises a first body (2) associable with one edge of one of the plate-like members (5) to be interconnected and a second body (3) associable with one edge of another of the plate-like members (5) to be interconnected, and that a connective portion (10) is provided which is hinged with the ends thereof to said bodies (2,3) and adapted to be rotated about axes extending substantially parallel to the mating edges of said plate-like members (5).

2. A connector element for interconnecting plate-like members adapted for mutual rotation through 360°, according to Claim 1, characterised in that said first and second bodies (2,3) have a substantially elongate configuration with a rounding at the mutual connection ends.

3. A connector element for interconnecting plate-like members adapted for mutual rotation through 360°, according to the preceding claims, characterised in that said first and second bodies (2,3) define, at the free ends thereof, a cavity (4) for coupling, at said edge, with plate-like members (5) to be interconnected.

4. A connector element for interconnecting plate-like members adapted for mutual rotation through 360°, according to one or more of the preceding claims, characterised in that said cavity (4) may accommodate sectional members for supporting plate-like members

(5) in the form of glass panes or the like, a gasket (6) being also provided for sealing said sectional members together at the area of hinged connection between said plate-like members.

5. A connector element for interconnecting plate-like members adapted for mutual rotation through 360°, according to one or more of the preceding claims, characterised in that said connective portion (10) is hingedly attached at the ends thereof, as by means of screw fasteners or the like accommodated in said bodies (2,3), at the reounded ends, and that define substantially parallel axes to the edges of plate-like members (5) to be interconnected.

6. A connector element for interconnecting plate-like members adapted for mutual rotation through 360°, according to one or more of the preceding claims, characterised in that said connective portion (10) has, between the points of hinged connection to said bodies (2,3), a distance which is larger than or equal to the width of one of said bodies (2 or 3) to permit unrestricted rotation through 360° of one plate-like member relatively to the other.

7. A connector element, according to one or more of the preceding claims, characterised in that it is adapted to provide articulated connection of framed shower bath booth panels having frames with top and bottom crosspieces (20) which include sealing gaskets (21) adapted to ensure tightly sealed shower bath booths or bath tub screens as specified in the foregoing description.

0143751

Fig. 1

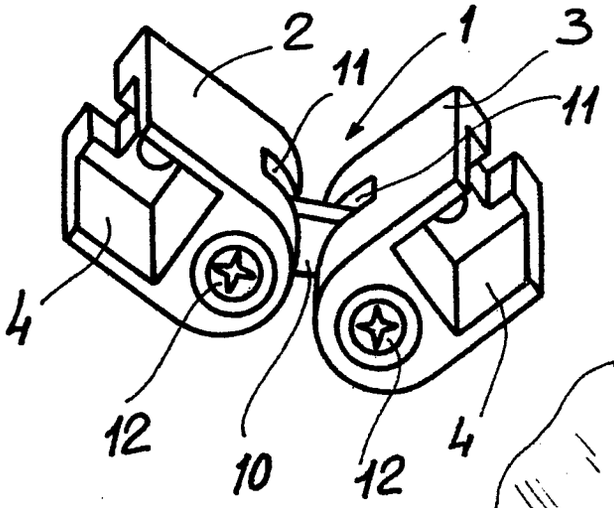


Fig. 2

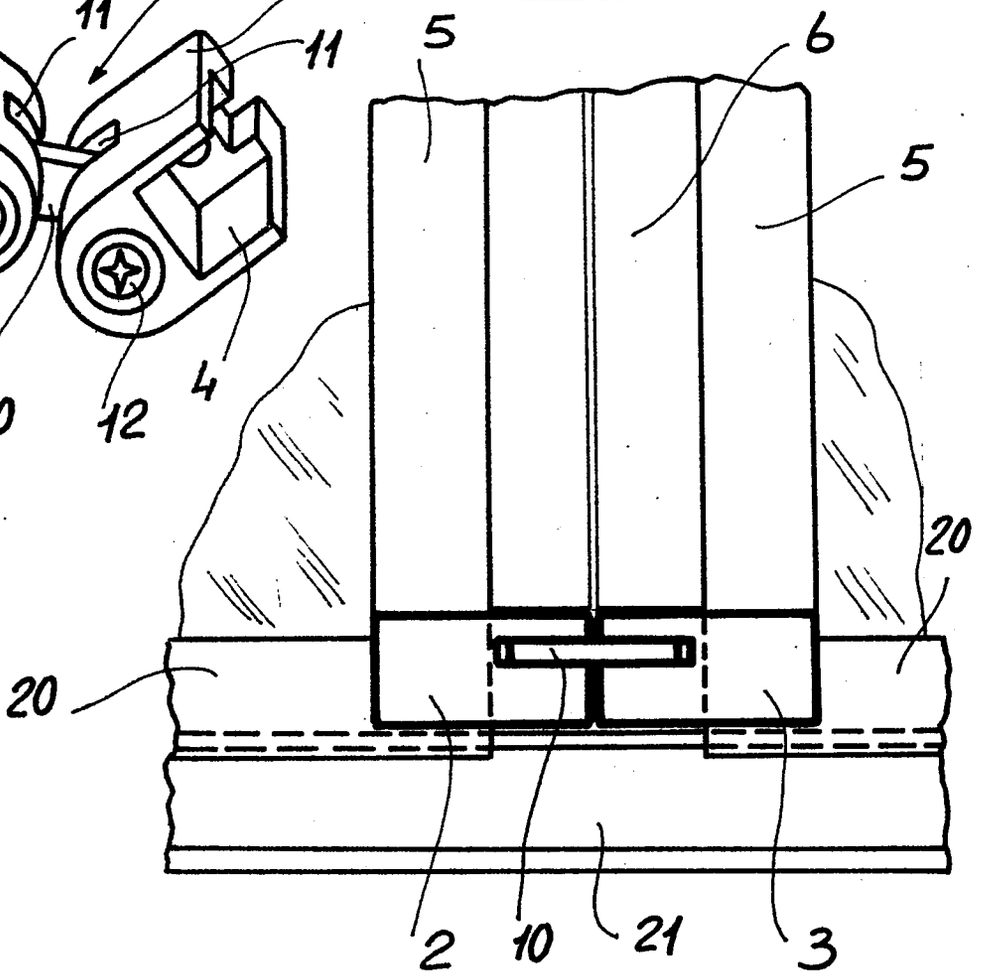


Fig. 3

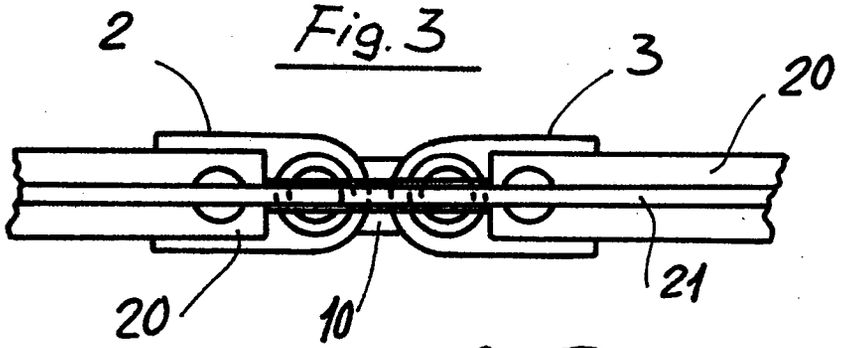
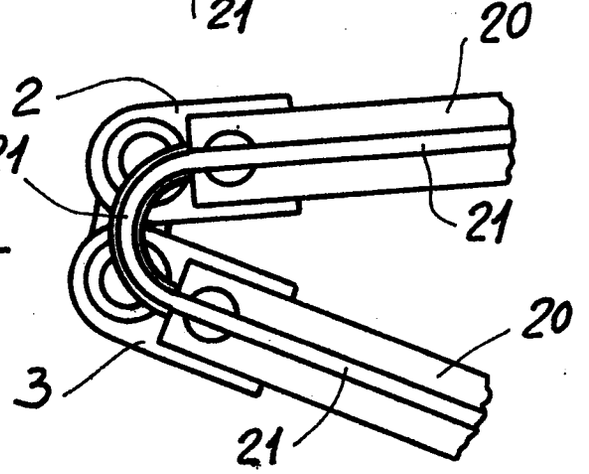
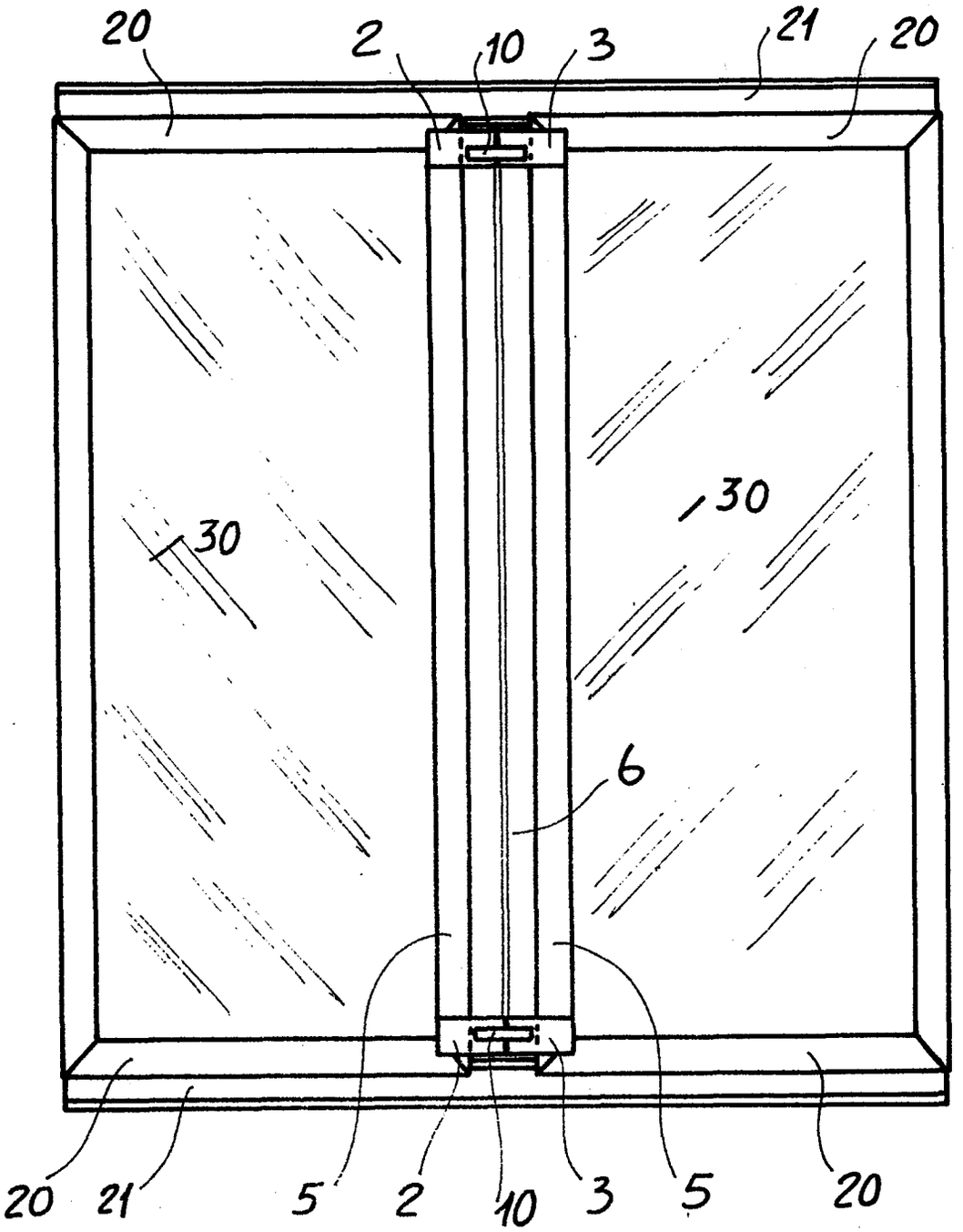


Fig. 4



0143751

Fig.5



0143751

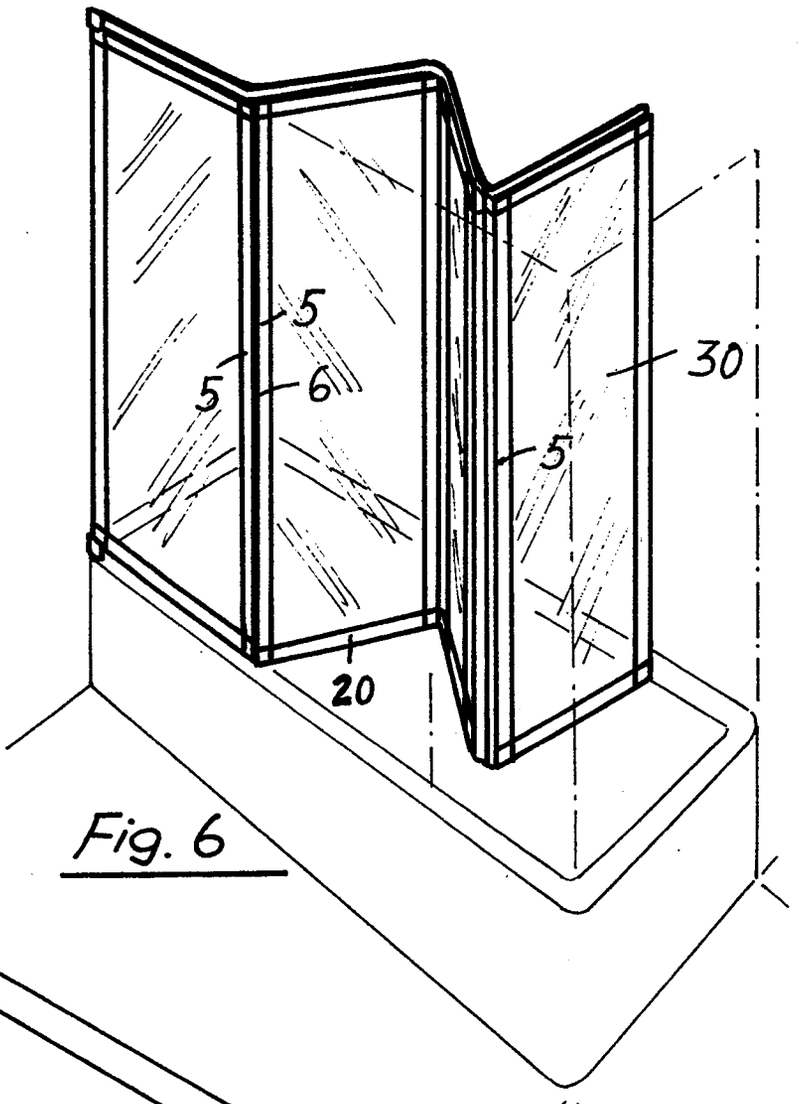


Fig. 6

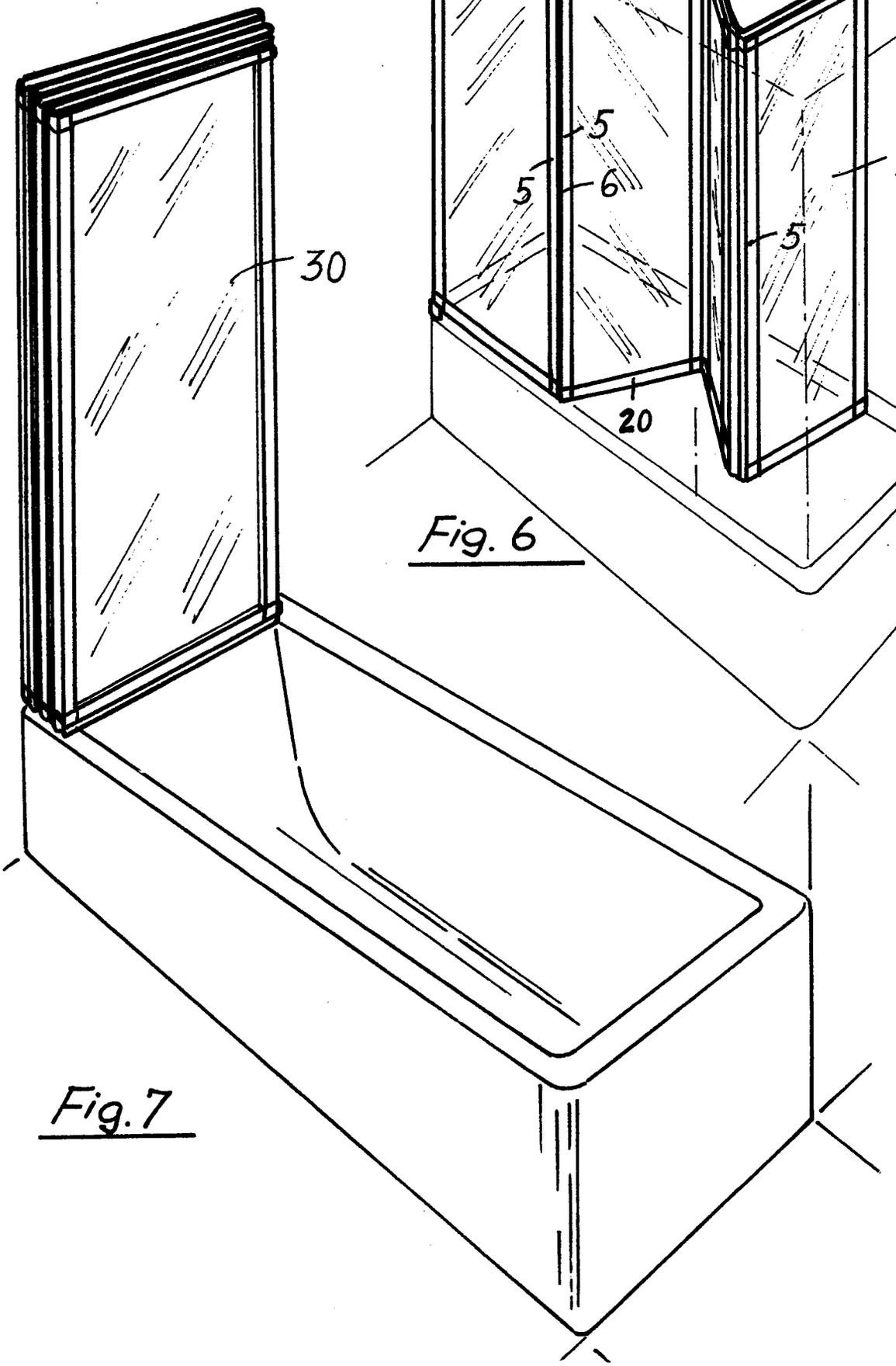


Fig. 7