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

(11) Publication number: **0 095 810**
**A2**

# (12) EUROPEAN PATENT APPLICATION

(21) Application number: **83200744.7**

(22) Date of filing: **25.05.83**

(51) Int. Cl.³: **A 47 B 57/58**

(30) Priority: **25.05.82 NL 8202127**

(43) Date of publication of application: **07.12.83 Bulletin 83/49**

(84) Designated Contracting States: **BE DE FR GB NL**

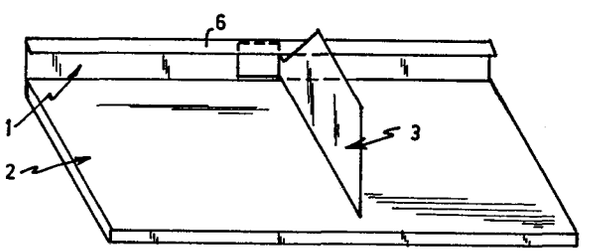
(71) Applicant: **SAMSOM EFFICIENCY B.V., Prins Bernhardlaan 10 P.O. Box 10, NL-2400 AH Alphen a/d Rijn (NL)**

(72) Inventor: **Schimmel, Huibertus, Stevinstraat 4, Alphen a/d Rijn (NL)**

(74) Representative: **Menting, Lamert Johannes et al, OCTROOIBUREAU VRIESENDORP & GAADE P.O. Box 266, NL-2501 AW The Hague (NL)**

## (54) Shelving system.

(57) A system to keep articles as for instance books or files upright on a shelf, said system comprising a back member along the rear edge of the shelf and at least one support consisting of a support portion and a coupling portion at right angles to the support portion, wherein the coupling portion can be coupled with the back member in an uncoupable manner and can be moved along the back member. The coupling member fits with slight tolerance between the bottom of a channel-shaped profile along the upper edge of said back member and the shelf or the foot portion of the back member. Along its lower edge said back member may be an integral part of the shelf, but it may also be a separate component that can be secured to the rear wall of a cupboard. The back member can also be secured by auxiliary members each consisting of a telescopic portion which is insertable between the channel and the foot of the back member and of a securing portion extending at right angles from the telescopic portion, said securing portion being adapted to be secured to a side wall of a cupboard. The system also comprises an anchorage system consisting of a strip having a vertical slot, the inserting portion of an auxiliary member being insertable in the slot and being pivotable to a position flat against the strip, after which the strip is secured on a side wall of a cupboard.




EP 0 095 810 A2

SHELVING SYSTEM.

The present invention relates to a system to keep articles as for instance books or files upright on a shelf, said system comprising a back member extending along the rear edge of the shelf and at least one support consisting of a support portion and a coupling portion at right angles to the support portion, wherein the coupling portion can be coupled with the back member in an uncoupable manner by pivoting the support with its support portion along a vertical plane at right angles to the back member and wherein in its coupled condition the coupling portion can be moved along the back member and prevents the support from tilting in directions parallel to the back member or the shelf.

The object of the invention is an as simple as possible system based on the above system so that the novel system can be assembled by an unskilled person and may be moreover economically manufactured.

This object is achieved in accordance with the invention by a channel-shaped profile along the upper edge of said back member, said coupling portion fitting with slight tolerance between the bottom of the downwardly open channel and the shelf or the foot portion of the back member, said support portion being provided with a recess for accepting the channel wall which is spaced from the body of the back member.

In a preferred modification said back member, along its lower edge, is an integral part of the shelf, wherein the back

member is an upwardly folded unit of a metal sheet of which the shelf is also made.

It is also possible to apply the invention to an individual shelf because in another modification said back member can be secured to the rear wall of a cupboard.

In order to make a back member with a standard length usable with a shelf with a somewhat larger length, the present invention may also provide auxiliary members for securing the back member, each auxiliary member consisting of a telescopic portion which is telescopically insertable between the channel and the foot of the back member from one end thereof, and of a securing portion extending at right angles from the telescopic portion, said securing portion being adapted to be secured to a side wall of a cupboard.

In order to be able to secure said back member at distance from the rear wall of the shelf, the present invention may also provide ananchorage system consisting of at least one strip having at least one vertical slot therein, the securing portion of an auxiliary member being insertable in said slot and being subsequently pivotable to a position flat against the strip, after which said anchorage system together with the auxiliary member is slidable relative to the back member in order to be secured on a side wall of a cupboard.

In order to dispose the files near the auxiliary members and near the back member at the same distance from the plane comprising the back member, in a modification of the invented system each telescopic portionof each auxiliary member is provided with a foot.

The invention will now be further elucidated in the following description of embodiments as indicated in the accompanying drawings.

Fig. 1 is a perspective view of an embodiment wherein the back member and the shelf are formed integrally of a single metal sheet.

Fig. 2 is a perspective view of a cupboard with a rear wall and a shelf, wherein the invented back member is secured to the rear wall of the cupboard.

Fig. 3 is a view as in fig. 2, in which however the shelf is longer than the back member having a standard length and being secured by auxiliary members.

Fig. 4 is a view as in fig. 2, in which however the back member is secured to the cupboard at distance from the rear edge of an excessively wide shelf via the auxiliary members and anchorage systems.

Fig. 5 is a cross-section of the back member and a support seen during coupling or uncoupling the support by pivoting relative to the back member.

Fig. 6 is an enlarged view of a part of fig. 4.

The invention relates in general to a back member 1 that can be arranged parallely to the rear edge of a shelf 2 of a cupboard, and to one or more supports 3 which are releasablly coupled with the back member as shown in figures 1, 5 and 6. The back member 1 is provided with a channel-shaped profile 6 at its upper edge and, if desired, is provided with a foot 7 as shown in fig. 5 and 5. Each support 3 consists of a support portion 4 and a coupling portion 5 which is at right angles to the support portion,said support being preferably cut out as one single unit from a metal sheet and is subsequently bent to form the support portion and the coupling portion. As shown in fig. 6 the coupling portion 5 of the support 3 fits with slight tolerance between the bottom of the channel 6 and the foot 7 of the back member 1, the support portion 4 of the support being provided with a recess 8 into which protrudes the edge of the channel 6, said edge being spaced from the body of the back member 1 as shown in fig. 5.

The support 3 can be coupled with the back member 1 by inserting the upper edge of the coupling portion 5 into the channel 6 of the back member 1 as shown in fig. 5 and by subse-

quently pivoting the support portion 4 in the plane of fig. 5 downwardly so that the coupling portion 5 will rest with its lower edge on the foot 7 of the back member 1. For uncoupling, the support 3 is pivoted in opposite direction, so upwardly in the plane of fig. 5. In coupled condition, the coupling portion 5 of the support can be moved along the back member 1 so that the distance between a side wall of the cupboard and the support 3 or between two supports 3 can be chosen freely. Because of the coupling of the coupling portion 5 with the back member 1, the support 3 is prevented from tilting in directions parallel to the back member and the support portion 4 is kept substantially at right angles to the back member 1 as shown in fig. 6. In this way books or files can rest against the support 3 and thereby they can be kept upright on the shelf 2.The channel 6 of the back member 1 serves to couple the support 3 with the back member, but moreover it provides the advantage that a lubricant can be applied to the back member to facilitate adjustment by sliding of the support portion 5 of the support 3 along the back member 1 without danger that books or files comeinto contact with said lubircant. For, books or files cannot be moved further back towards the back member than against the free edge of the channel 6 and, if present, the free edge of the foot 7 shown in fig. 5. The free edges of the channel 6 and the foot 7 preferably extend less than 1 cm away from the body of the back member 1.

With reference to the above indicated general principle of the invented system some embodiments will be described hereinafter. In a first embodiment as shown in fig. 1 a strip portion along the rear edge of a piece of metal sheet is bent upwardly to form the back member 1 with the channel 6, whereas the remainder of the sheet is worked on as to form the shelf 2. A foot portion of the back member like the foot 7 in fig. 5 is not present in this embodiment as the back member 1 forms a unit with the shelf 2.

A second embodiment is shown in fig. 2, wherein the back member is a separate member with respect to the shelf 2, said

member being adapted to be secured against the rear wall 9 of a cupboard, for instance by means of double-sided adhesive tape. In this embodiment the back member 1 is not only provided with the channel 6 but also with the foot 7 as shown in fig. 5.

A third embodiment is shown in fig. 3, wherein a back member1 with a standard length is used with a somewhat longer shelf 2. Each end of the back member 1 can be extended by an auxiliary member 10 in order to extend up to a side wall 11 of the cupboard. Each auxiliary member 10 comprises a telescopic portion 12 which can be inserted and slid at each end of the back member 1 between the bottom of the channel 6 and the foot 7 of the back member. Furthermore the auxiliary member 10 comprises a securing portion 13, extending at right angles from the telescopic portion 12 and being adapted to be secured against a side wall 11 of a cupboard shown in fig. 3 by means of for instance double-sided adhesive tape. Preferably a foot 14 extends from the telescopic portion 12, the leading edge of said foot being aligned with the leading edge of the foot 7 of the back member 1 so that files situated against the auxiliary member are at the same distance from the plane comprising the body of the back member 1 as the files located against the back member itself. This results in that the files can be moved without shocks along the feet 7 and 14 notwithstanding that during movement they first rest against the foot 7 of the back member1 and subsequently against the foot 14 of an auxiliary member 10 or reverse. Moreover, this results in that equally sized files extend up to the same distance from the leading edge of the shelf 2, which makes the contents of the cupboard better surveyable. The back member 1 can be adhered directly to the rear wall 9 of the cupboard by means of double-sided adhesive tape and/or can be adhered to the cupboard side walls 11 via the auxiliary members 10 which are then secured to the side walls 11 of the cupboard via the securing portions 13 and double-sided adhesive tape. The auxilairy member 10 is preferably punched and bent from metal sheet to

form an integral unit comprising the telescopic portion 12, the foot portion 14 and the securing portion 13.

If the shelf is too wide, then the back member 1 should be located at a distance from the rear edge of the shelf as shown in fig. 4 and 6. Then an auxiliary member 10 as described above with respect to fig. 3 is inserted into an anchorage system 15 which is adapted to be secured to a side wall 11 of the cupboard by means of double-sided adhesive tape. The anchorage system 15 consists of a strip 16 of metal sheet with a folded foot 17, said strip 16 having at least one, for instance three as shown in fig. 4 and 6, vertical slots 18, the securing portion 13 of the auxiliary member 10 being insertable through said slot 18 and being subsequently pivotable to a position flat against the strip 16. After that, as discussed with reference to fig. 3, the telescopic portion 12 of the auxiliary member 10 can be moved with respect to the back member 1 so as to secure the anchorage system 15 against the side wall 11 of the cupboard. Because of this the back member 1 can be located at the required distance from the leading edge of the shelf 2 and the length of the back member 1 plus the two auxiliary members 10 can be adapted to the length of the shelf 2.

C L A I M S

1. A system to keep articles as for instance books or files upright on a shelf, said system comprising a back member extending along the rear edge of the shelf and at least one support consisting of a support portion and a coupling portion at right angles to the support portion, wherein the coupling portion can be coupled with the back member in an uncoupable manner by pivoting the support with its support portion along a vertical plane at right angles to the back member and wherein in its coupled condition the coupling portion can be moved along the back member and prevents the support from tilting in directions parallel to the back member or the shelf, characterized by a channel-shaped profile along the upper edge of said back member, said coupling portion fitting with slight tolerance between the bottom of the downwardly open channel and the shelf or the foot portion of the back member, said support portion being provided with a recess for accepting the channel wall which is spaced from the body of the back member.

2. A system as claimed in claim 1, characterized in that along its lower edge said back member is an integral part of the shelf.

3. A system as claimed in claim 1, characterized in that said back member can be secured to the rear wall of the cupboard.

4. A system as claimed in claim 1, characterized by auxiliary members for securing said back member, each auxiliary member consisting of a telescopic portion which is telescopically

insertable between the channel and the foot of the back member from one end thereof, and of a securing portion extending at right angles from the telescopic portion, said securing portion being adapted to be secured to a side wall of a cupboard.

5. A system as claimed in claim 4, characterized by an anchorage system consisting of at least one strip having at least one vertical slot therein, the securing portion of an auxiliary member being insertable in said slot and being subsequently pivotable to aposition flat against the strip, and after which said anchorage system together with the auxiliary member is slidable relative to the back member in order to be secured on a side wall of a cupboard.

6. A system as claimed in claim 4 or 5, characterized in that the telescopic portion of each auxiliary member is provided with a foot.

0095810

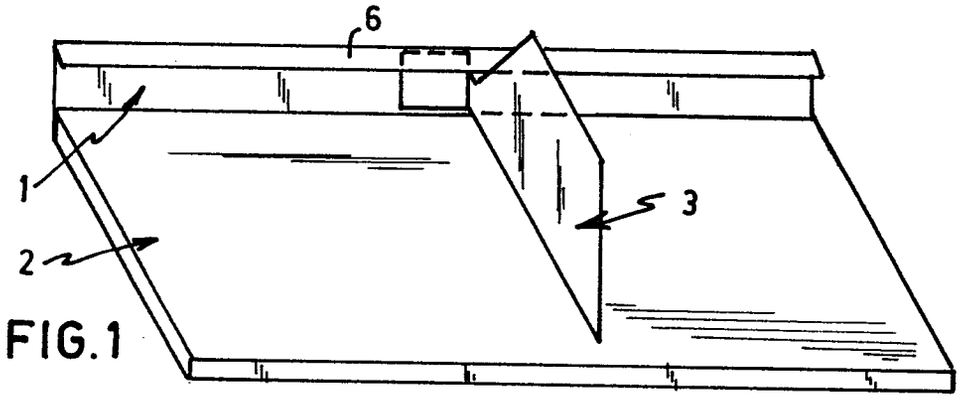



FIG.1

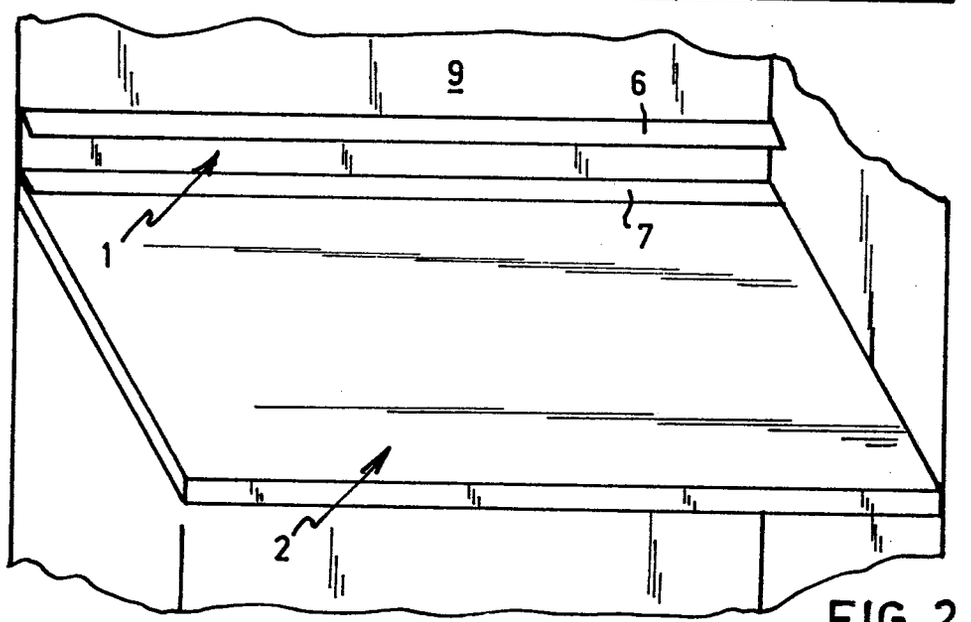



FIG. 2

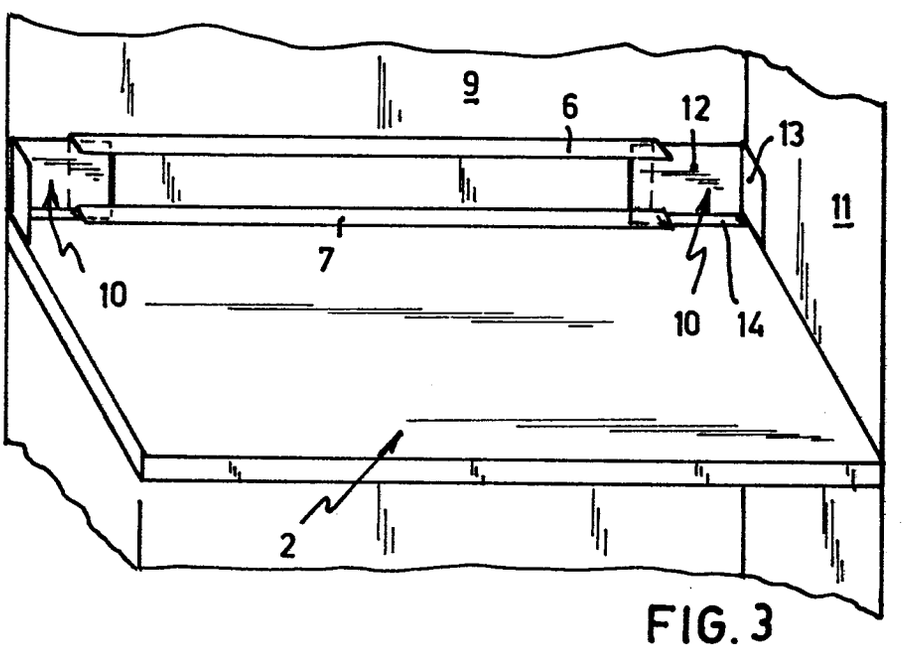



FIG. 3

0095810

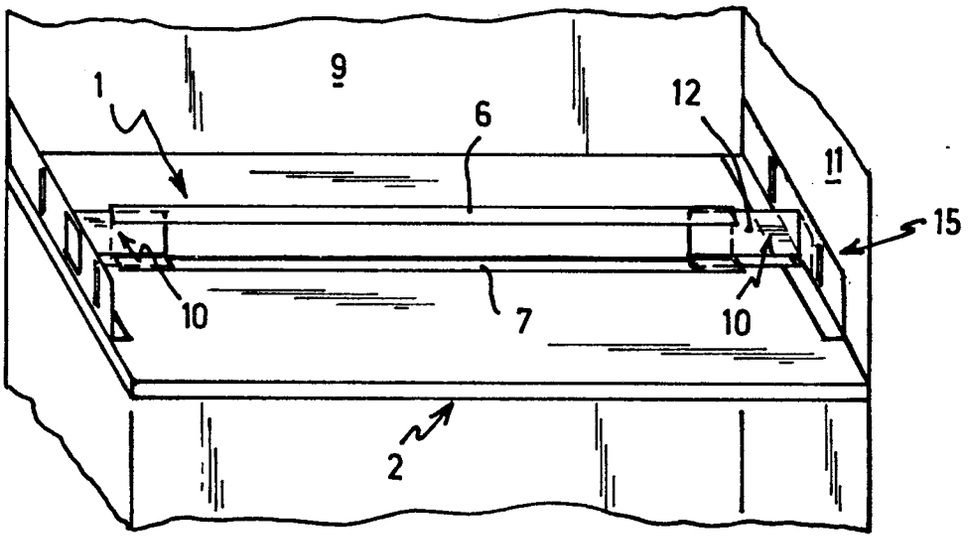



FIG. 4

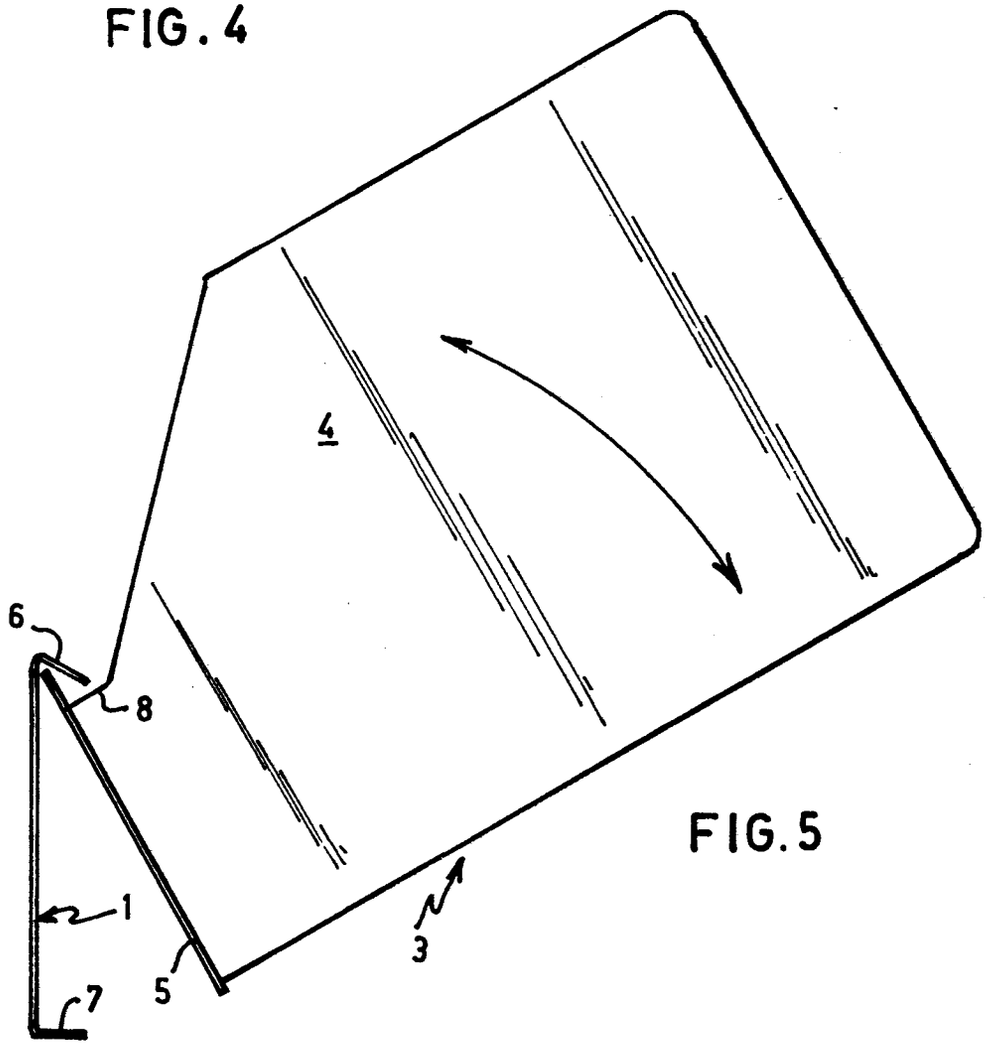



FIG. 5

0095810

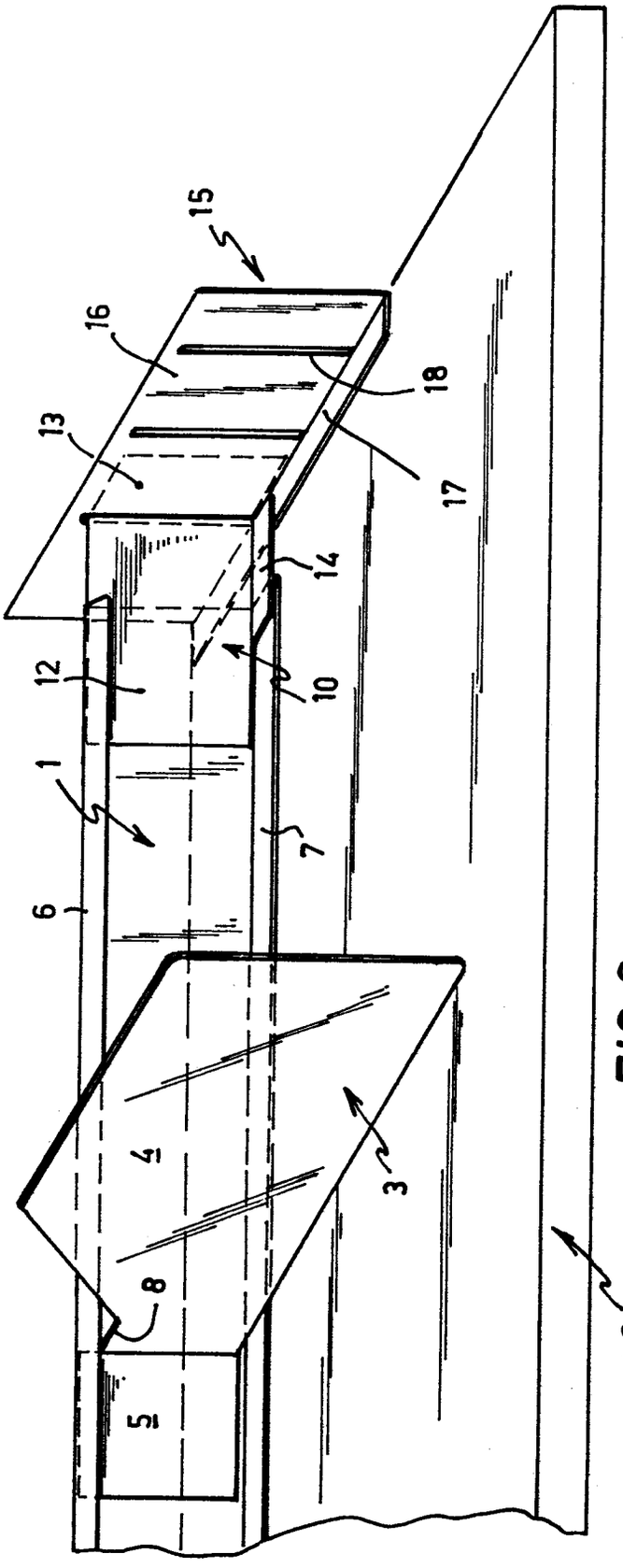



FIG.6