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(54) Prolongable table.

(57) Extensible table with rectangular extensible plane (8) sliding on a rectangular box under the table plane (6,6') into which a table extension plane (9) is inserted; equipped with guide means in order to be extracted from the box under the table plane, after the shifting of the table plane (8), and shifted to the same plane of the table and rotated of 90° horizontally to form the table extension plane; designed in a such a way that when the table plane is shifted in longitudinal direction towards the opposite end, leaving the extraction mechanism visible, so that it is possible: - to shift the above-mentioned extension panel (9), in longitudinal direction, - once the extension panel is extracted from the box: to rotate it of 90° in order to have it positioned on the table box, so as to hook the extension panel to the table plane (8); in which the guide means meet the following requirements: - a tilting longitudinal guide bar (4) fixed at one end to an intermediate transversal bar support in the box under the table plane (7), being the guide bar inclinable downwards and upwards by means of an extremity two position support means (3) being the last one fixed inside the box (6) under the table plane opposite to said transversal bar support (7); - a pivoting flask (2) sliding longitudinally in said guide bar (4); - a hinging plate support (1) with hinging pin means (5) fixed under the table extension panel (9), to hinge said pivoting flask (2), so as to enable the shifting of said extension panel by means of: - longitudinal shifting of the panel (9) along the tilting guide bar (4), being this guide bar furtherly inclinable by means of the said two posion support means (3).

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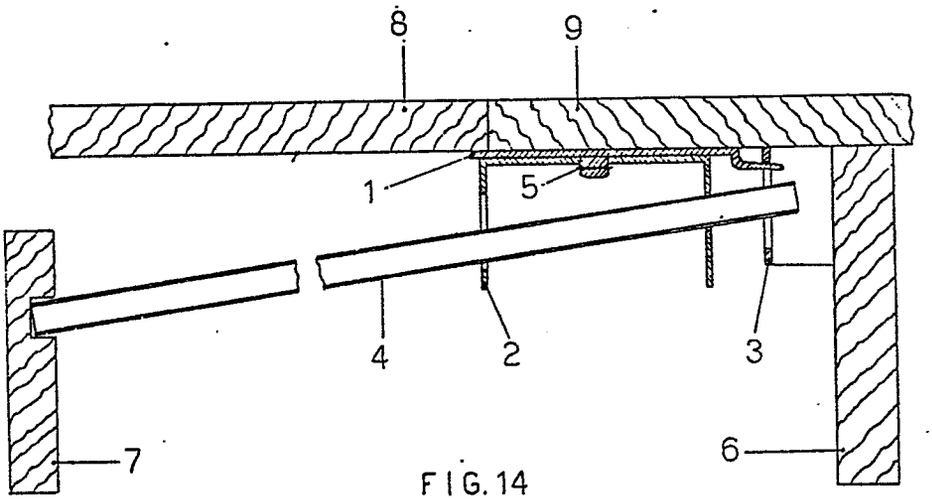

FIG. 14

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Prolongable Table

The present invention relates to a one piece extensible table plane equipped with a system for the extraction, positioning and fixing of a whole extension panel at either longitudinal end of the table sliding plane.

This invention is particularly suitable to be utilized to realize an extensible table fitted with a system enabling the extraction, positioning, and fixing of an extension panel at either longitudinal end of the table sliding plane, the table plane being longitudinally mobile on guides placed on a box under said table plane.

At the present state of the prior art, table extension systems of the type above mentioned are already known; namely systems equipped with a whole table plane sliding longitudinally on a box enabling an extension panel, articulated in order to be extracted and rotated from a housing position inside the box, to the extended plane position so as to realize the extension. To see for example the Italian Patent Application no.82505A/84 dated February 18th 1984 in the name of Montagner. This solution implies the use of a "U" shaped articulated arm placed upside-down inside the box, supporting a centrally hinged extension panel which can be rotated of 90° off the extension position. After shifting the above table plane the supporting "U" shaped articulated arm is turned over by lifting the extension plane over the box, and so placing it at the same level of the table plane. It is then rotated of 90° so as to be placed in the extension position. The table plane previously shifted is finally inserted by sliding and pushing it against the extension panel. As a result a table plane is extended on one end of it with no need to split it into two separate parts. This

solution is successfully applied to rectangular table planes in order to extend them longitudinally with an additional extension plane on one end.

However, the current used solutions are complex and can be hardly realized. Infact they have not been actually realized up to now, especially because of the little funcionality of the articulated system as described above.

The aim of this invention is to find an articulated system for the extension plane which enables it to be easily extracted from the box and to be rotated so as to be positioned at the same level of the table plane in order to make the relative extension possible.

The invention as claimed is intended to provide a remedy to the above-mentioned disadvantages. It solves the problem providing an articulated system realized on a tilting longitudinal guide bar which relizes a guide for hinging means supporting the extension plane, being the guide bar freely inclinable towards the end of the box in order to shift the extension plane outside the box by sliding it longitudinally, and finally enabling its relative rotation.

The advantages offered by this invention are mainly that:

- it does not require the use of the "U" shaped turnover articulated arm which bound all the extraction sytems suggested by the previuos solution (Montagner), simplifying it and making the extraction of the extension panel and its repositioning inside the box under the table plane, easier to handle.

One way of carrying out this invention is described in detail below with reference to drawings which illustrate some preferred embodiments, in which:-

Figures 1,2 and 3,4 show the table in a perspective view during its four phases necessary to perform the extension of the plane;

Figures 5,6,7 show the hinging plate which is fixed under the extension plane of the table, both in a plan and side view and in a transversal and longitudinal direction;

Figures 8,9,10 show the guide bar "U" shaped snap flask, hinged to the support hinging plate, respectively in a front, side and plan view;

Figures 11,12,13 show the two position support guide bar flask, in a front view from the interior of the box, in a side and plan view respectively, said flask being fixed to the head of the box in order to support and make mobile the head of the guide bar, so as to place it horizontally or inclined upwards to enable the extraction of the extension plane or its repositioning into the box;

Figure 14 shows a partial view of the table which is extended at the side of the extension in longitudinal axial section on the vertical plane.

According to the above figures and with particular reference to Fig. 14 it follows that:

Ref. 1 in Table 6/6 shows the hinging plate equipped with a safety tooth (see detail in table 3/6). The hinging plate consists of a shaped plate bearing in the centre of it a hinging pin and a safety tooth on one side. The above-mentioned hinging plate is then fixed to the whole extension by means of four lag screws.

Ref. 2 in Table 6/6 shows the "U" shaped hinged snap flask of the extension (see detail in Table 4/6). Said hinged snap flask is drilled across the respective sides and centrally in its base to be hinged on said hinging pin of the respective hinging plate.

Ref. 3 in Table 6/6 shows the two position support guide bar flask for extension-extraction-safety (see detail in Table 5/6).

Said flask which is shaped and drilled, is fixed on the right transversal side of the box (in Fig.14) if the extension is intended from the left side. The function of this flask is to keep in guide the tubolar guide bar shown at ref. 4 in Table 6/6 and to hook up the safety tooth of the hinging plate. This last function enables to fix perfectly the extension once it is extracted.

Ref. 4 in Table 6/6 shows the guide bar of the mechanism. The guide bar consists of a steel galvanized bar also in tubolar shape of 8/10 mm. diameter, and of 500/520 mm. length, which is inserted between the two drilled sides of the "U" shaped hinged snap flask, into which the hinging pin of the hinging plate is inserted. The bar has the function of keeping perfectly in guide the extension of the table both when it is extracted and blocked and when it is reinserted.

Ref. 5 in Table 6/6 shows the Seger cone. The Seger cone is positioned in the seat obtained in the central hinging pin of the hinging plate and its function is to prevent the hinged snap flask from slipping off the hinging plate. It is possible to fix steadily the connection between the extension and the hinging plate.

Ref. 6 in Table 6/6 shows either the right or the left transversal side of the table box.

Ref. 7 in Table 6/6 shows the transversal bar support of the guide bar 4. It is hooked to the two longitudinal sides of the table box.

Ref. 8 in Table 6/6 shows the table plane. The plane slides on two guides and enables the extraction of the extension.

Ref. 9 in Table 6/6 shows the extension panel sliding through the mechanism illustrated in section in Table 6/6. When the table is not extended, it looks like a surface with no slits, namely a common fixed table. On the contrary the extended table has a transversal slit only (see Table 2/6 Fig. 4). The cost of this

mechanism has been cut down to such an extent that can be now preassembled on all tables. As a result the production process is the same both for fixed and extensible tables. The whole side extension can be supplied only upon request. Whenever the plane is shifted on the guide, (see Table 1/6 Fig. 2), the mechanism enables an extremely practical extraction of the whole extension panel which, after positioning, forms a single and steady body with the table plane.

The main features of this new mechanism are: the guide bar 4 in Table 6/6 and its sliding and hooking system. The dynamic combination of these two basic features enables the whole mechanism to perform the extraction and repositioning of the extension in an extremely practical way. This simple mechanism preservs the utmost functionality and allows a considerable reduction of the manufacturing cost of the extension.

Claims:

1. Extensible table with rectangular extensible plane (8) sliding on a rectangular box under the table plane (6,6') into which a table extension plane (9) is inserted; equipped with guide means in order to be extracted from the box under the table plane, after the shifting of the table plane (8), and shifted to the same plane of the table and rotated of 90° horizontally to form the table extension plane; designed in a such a way that when the table plane is shifted in longitudinal direction towards the opposite end, leaving the extraction mechanism visible, so that it is possible:

- to shift the above-mentioned extension panel (9), in longitudinal direction,
- once the extension panel is extracted from the box: to rotate it of 90° in order to have it positioned on the table box, so as to hook the extension panel to the table plane (8);

characterized in that:

the guide means meet the following requirements:

- a tilting longitudinal guide bar (4) fixed at one end to an intermediate transversal bar support in the box under the table plane (7), being the guide bar inclinable downwards and upwards by means of an extremity two position support means (3) being the last one fixed inside the box (6) under the table plane opposite to said transversal bar support(7);
- a pivoting flask (2) sliding longitudinally in said guide bar (4);
- a hinging plate support (1) with hinging pin means (5) fixed under the table extension panel (9), to hinge said pivoting flask (2), so as to enable the shifting of said extension panel by means of:
- longitudinal shifting of the panel (9) along the tilting guide

bar (4), being this guide bar furtherly inclinable by means of the said two position support means (3).

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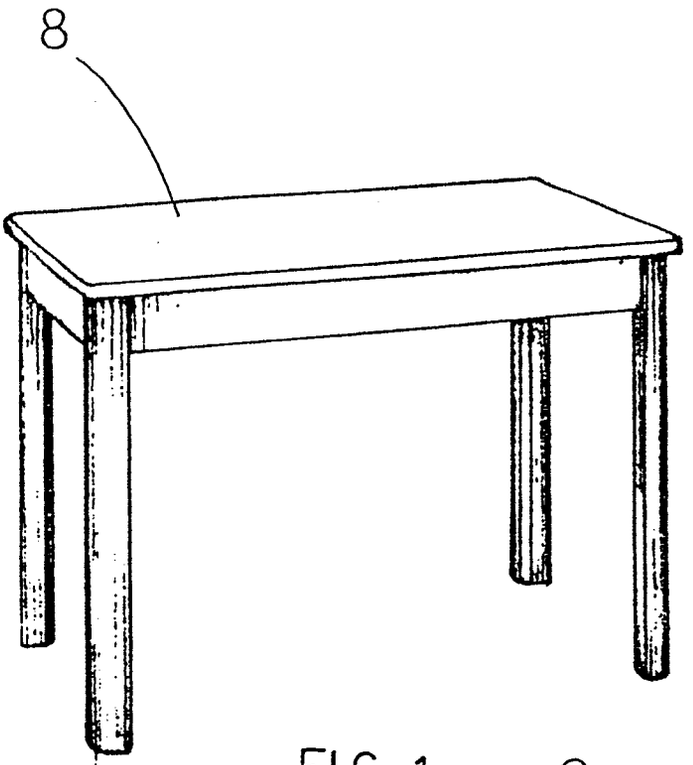

FIG. 1

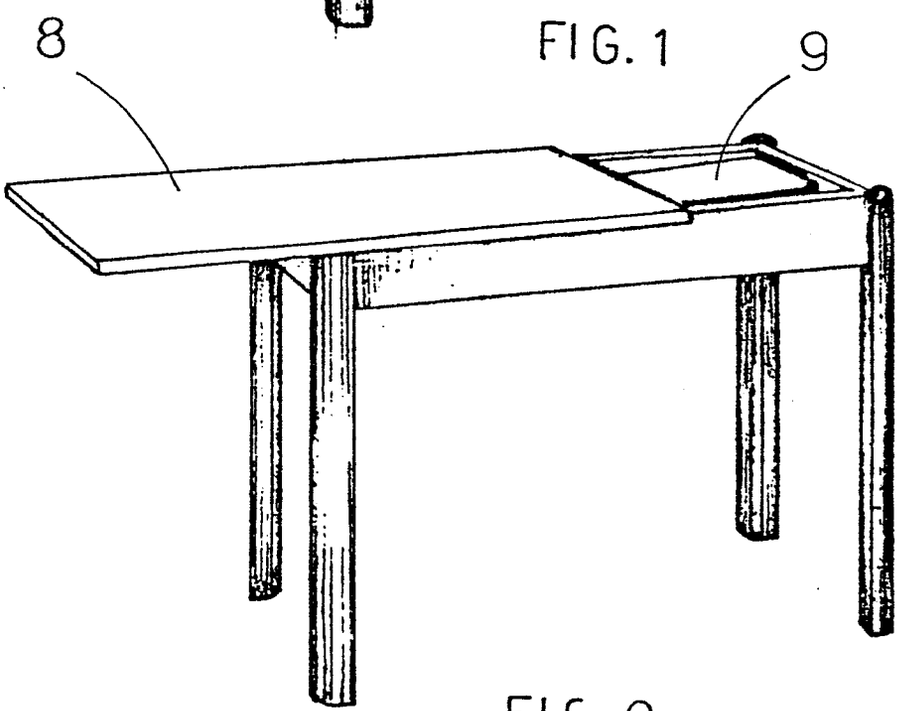

FIG. 2

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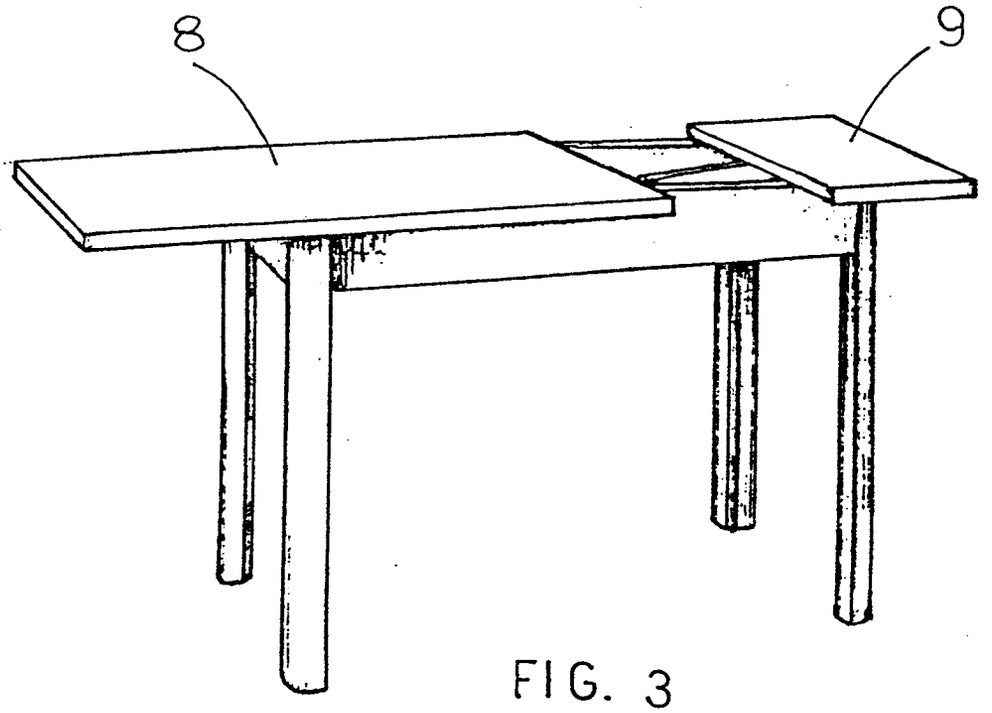

FIG. 3

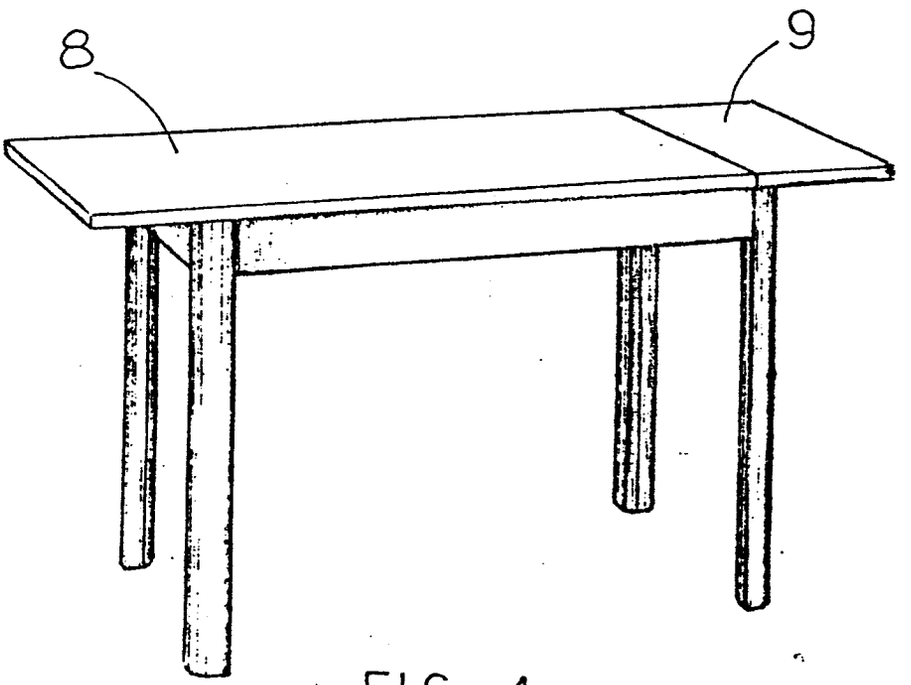

FIG. 4

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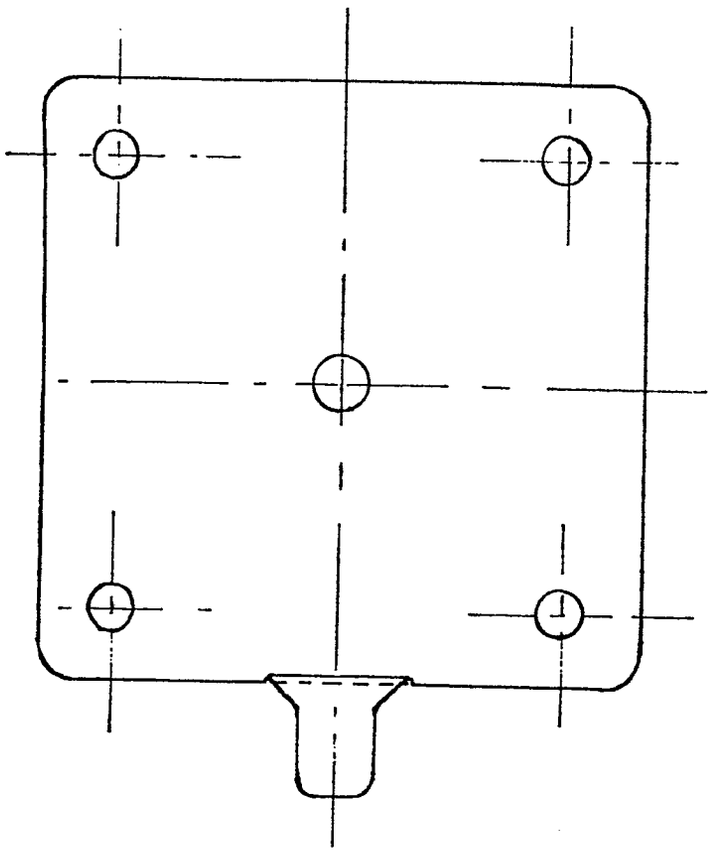

FIG. 5

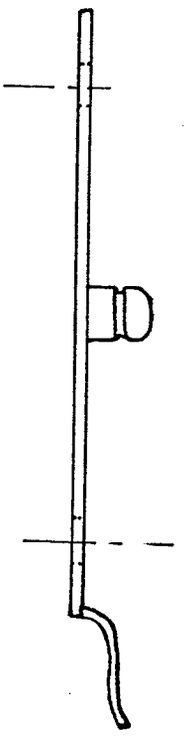

FIG. 6

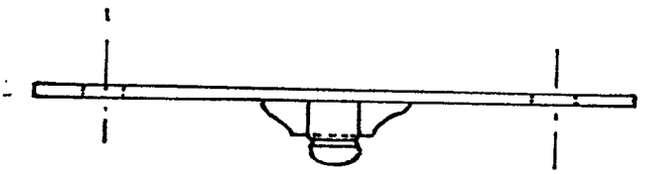

FIG. 7

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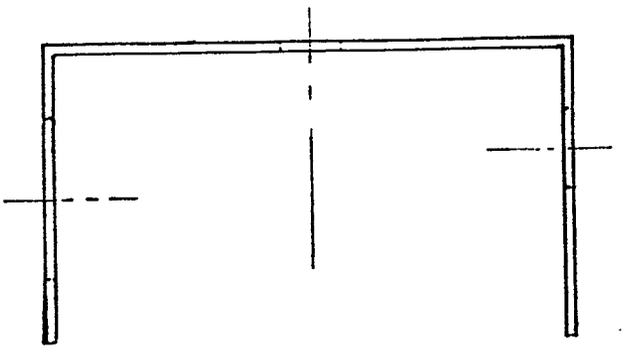

FIG. 8

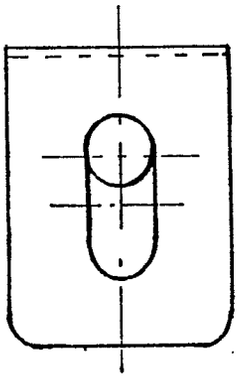

FIG. 9

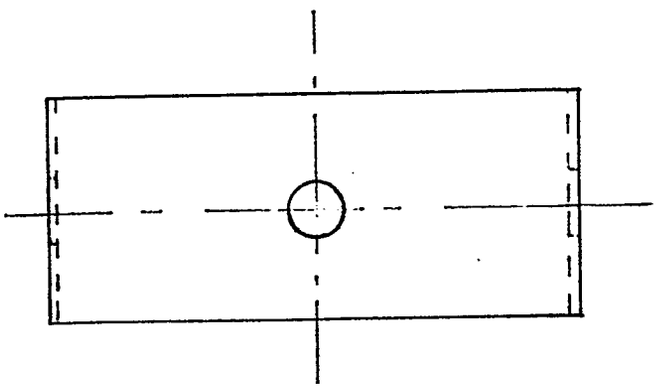

FIG. 10

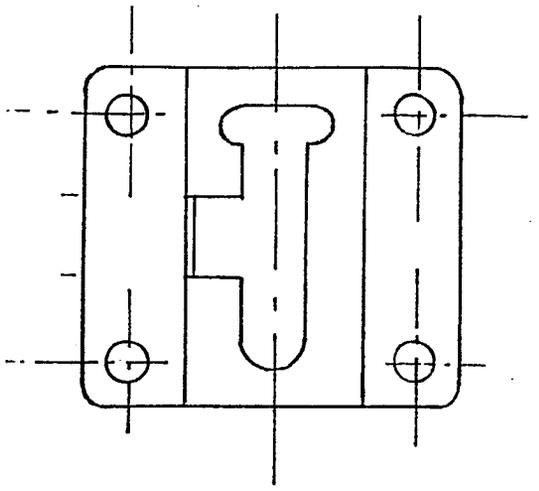

FIG. 11

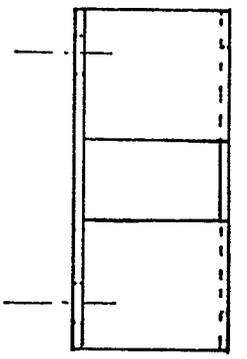

FIG. 12

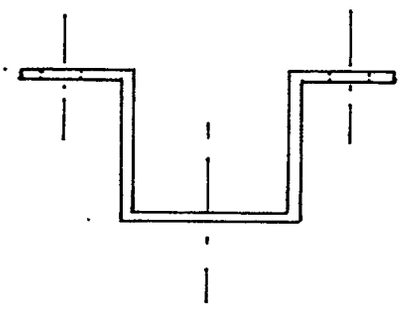

FIG. 13

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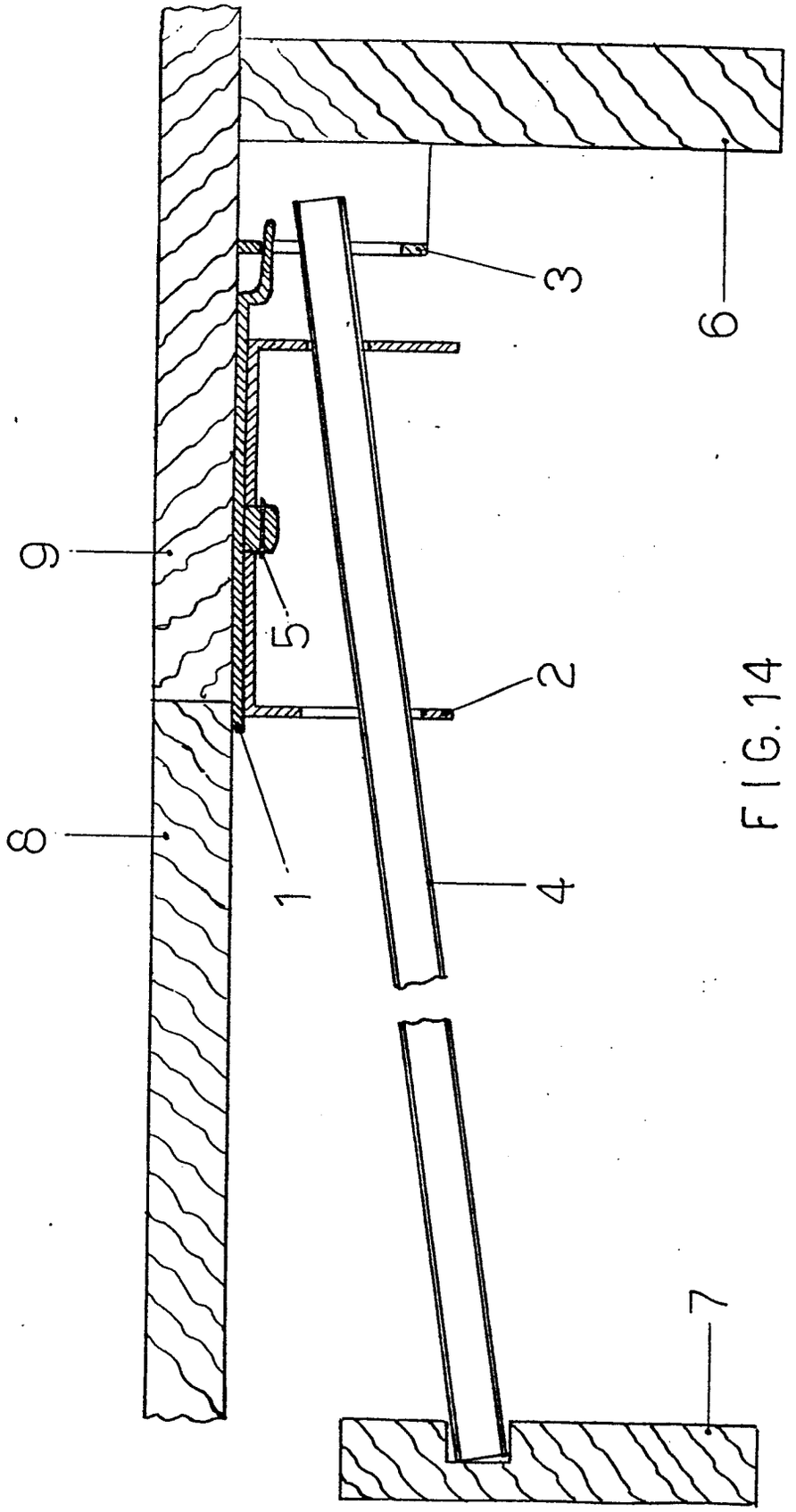

FIG.14