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(54) **Arrangement for safety hinge on frames for doors**

(57) The invention refers to an arrangement comprising a mechanised jamb, and some studs as cover plates, which can be adapted without the need for any type of operation, to a frame prepared to hold a door equipped with safety hinges, the kind comprising a lengthwise strip that covers the height of the door and prevents any type of accident, especially in public places occupied by children, who may unexpectedly place their fingers between the door frame and the door itself.

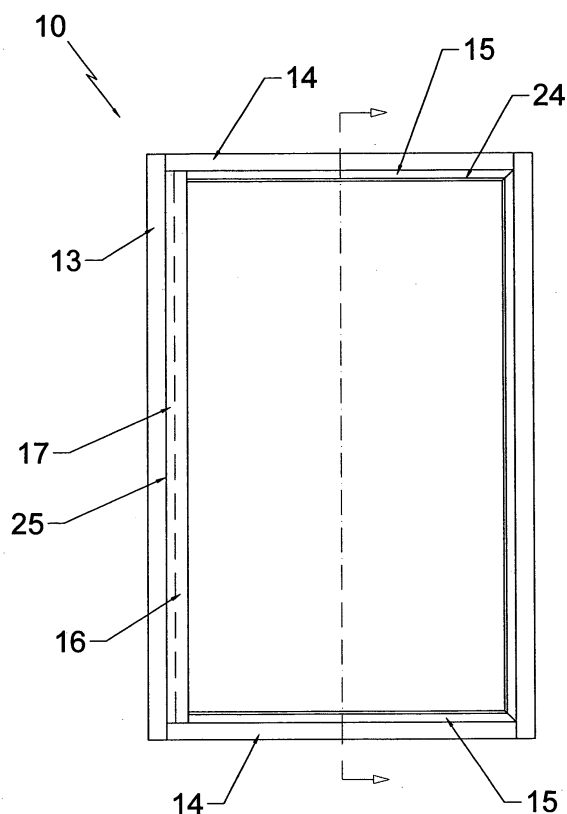


Fig. 1

Description

Purpose of the Invention.

[0001] More specifically, the invention refers to an arrangement comprising a mechanised jamb, and some studs as cover plates, which can be adapted without the need for any type of operation, to a frame prepared to hold a door equipped with safety hinges, the kind comprising a lengthwise strip that covers the height of the door and prevents any type of accident, especially in public places occupied by children, who may unexpectedly place their fingers between the door frame and the door itself.

State of the Art.

[0002] There are on the market, and which therefore can be considered as state of the art, frames that are placed in the openings of walls and similar for the later mounting of the door, which are made up of a fixed frame that covers the frame and the door itself, the door being attached to the frame by the corresponding hinges, and closed in the frame with the aid of the corresponding handle and lock.

[0003] To prevent accidents by fingers being caught between the frame and the door, hinges called safety hinges were designed, in their day, to replace conventional hinges. A conventional hinge is a set made up of two jointed metal pieces that allow the connection of doors and windows, whereas safety hinges are a single piece that is located between the struts of the door and the frame, and which does not allow anything to be put into it, which obviously includes fingers.

[0004] This piece is a strip of any material, preferably flexible, and which does not allow for any crack or space between the door frame and the door itself.

[0005] Safety hinges are widely used in public places, especially in nursery and primary schools; nevertheless, as they are special pieces, their mounting requires non-standard operations and therefore a mechanisation of door and frame that is not foreseen by architects and builders, and which implies an additional cost.

Scope of the Invention.

[0006] To solve the drawbacks of the mounting of safety hinges in frames and door frames that are not prepared for these hinges, at the same time creating a standard, which, based on the conventional frame, allows the fitting of the hinges into the frame and door without any type of on-site mechanisation, but rather the frame and the door are prepared for the mounting of the hinge pressed into the frame and later attached to both using simple screws.

Purpose of the Invention.

[0007] To create an arrangement comprising a length-

wise slot in one of the side bases of the door, and the mounting of a mechanised strut to the frame, into which the safety hinge itself fits.

[0008] The mechanised strut is a single strip that has the same height as the door and frame, and which may be mounted to the right or left of the frame, and which has a lengthwise slot in the central part that covers this height.

[0009] The safety hinge that forms part of the arrangement is made up of a lengthwise strip with a noticeably rectangular perimeter, of a flexible material, the side bases of which enter into slots in the two pieces comprising the hinge.

[0010] The two parts that are exactly the same are simple strips that are the height of the door and that have a noticeably triangular cross-section, from the base of which emerges a lengthwise tab longitudinal that fits into the lengthwise slot made in one of the side bases of the door and frame.

[0011] The operation of mounting the recommended arrangement starts with the placement of the mechanised strut in the strut of the frame or in the strut of the door frame itself, both struts being joined by simple screws, then placing the lengthwise tab of the hinges in the lengthwise slit, and attaching said tab to the strut using simple screws.

[0012] The door comes with the safety hinge mounted from the workshop, so that its mounting only requires the operations described above, which are totally manual and only require simple pressing to enter the lengthwise tab of the hinge into the lengthwise slit, without any type of tool.

[0013] The possibility of mounting the mechanised strut on one side or the other of the frame allows one to choose whether the door opens to the right or to the left, all of the above being complemented, if so desired, with simple strips or mouldings like a false frame on top of the frame.

[0014] Other details and characteristics shall be shown throughout the description below referring to drawings attached to this report which are intended to be illustrative but not limiting and show the preferred details of the invention.

Description of the drawings.

[0015]

Figure 1 is a front elevation view of the door frame (10), in a form in which the mechanised strut (17) has been mounted on top of the strut (13) of the frame.

Figure 2 is a cross section cut 2-2', according to Figure 1.

Figure 3 is a front elevation view of a door (11) equipped with a safety hinge (13).

Figure 4 is a top plan view of the same door of the previous figure with the safety hinge (12).

Description of a preferred embodiment of the invention.

[0016] The recommended arrangement comprises:

- A door (11) in one of whose larger side bases (25), there is a lengthwise slot (16). 5
- A safety hinge (12) made up of strips (18) joined by another strip (19).
- A strut (17), the larger side base of which includes a slot (16). 10
- Some strips (15).

[0017] The frame (10) as shown in figure 1, comprises some studs (14), and some struts (13), on one of which (13) a second strut is placed (17), which we will call mechanised, because in the workshop a lengthwise slit has been made (16) that covers the entire height of (17), see this slit also (16) in figure 2. 15

[0018] The mechanised strut (17) may be mounted to the right or left of the frame (10), on the struts (13), using simple screws, the holes of which will come from the workshop, so that all that will be necessary to attach the said struts (17) will be placing some simple screws. 20

[0019] The door (11) as shown in figure 3 comes equipped with a hinge (12), made up of two strips (18) with a triangular cross-section, from the base of which a tab (20) emerges. The strips (18) are joined lengthwise through a strip (19), that has an entrance in the aforementioned strips, as they have been built in two equal parts, see figure 4. 25 30

[0020] The tabs (20) of the safety hinges enter into the slit (26) foreseen in the door (11), and in the slit (16), foreseen in the mechanised strut (17).

[0021] Optionally, the strips (15) can be placed in front of the door (11), as can be seen in figure 1. 35

[0022] Having sufficiently described this invention using the Figures attached, it is easy to understand that any changes judged to be suitable may be made, whenever these changes do not alter of the essence of the invention summarised in the following claims. 40

Claims

1. "ARRANGEMENT FOR SAFETY HINGE ON FRAMES FOR DOORS" of the kind made up of a frame attached to the frame, onto which a so-called safety hinge has been placed using the appropriate means and operation, and a door fixed to this hinge, **characterised in that** the arrangement comprises: 45 50

- A door (11) in one of whose larger side bases (25), there is a lengthwise slot (16), which covers at least the height of the door (11).
- A safety hinge (12) made up of strips (18) joined by another strip (19). 55
- A mechanised strut (17), the larger side base of which includes a slot (16).

- Some strips (15).

2. "ARRPGEMENT FOR SAFETY HINGE ON FRAMES FOR DOORS" according to claim 1 **characterised in that** the safety hinge is made up of two lengthwise strips (18), made in two equal parts, between which the strip (19) is placed.

3. "ARRANGEMENT FOR SAFETY HINGE ON FRAMES FOR DOORS" according to claims 1 and 2 **characterised in that** the strips (18) have a triangular cross-section, from the base of which a tab (20) emerges.

4. "ARRANGEMENT FOR SAFETY HINGE ON FRAMES FOR DOORS" according to claim 1 **characterised in that** the tabs (20) of the safety hinges enter into the slit (26) foreseen in the door (11), and in the slit (16), foreseen in the mechanised strut (17).

5. "ARRANGEMENT FOR SAFETY HINGE ON FRAMES FOR DOORS" according to claim 1 **characterised in that** the mechanised strut (17) may be mounted on the right or left side strut of the frame (10).

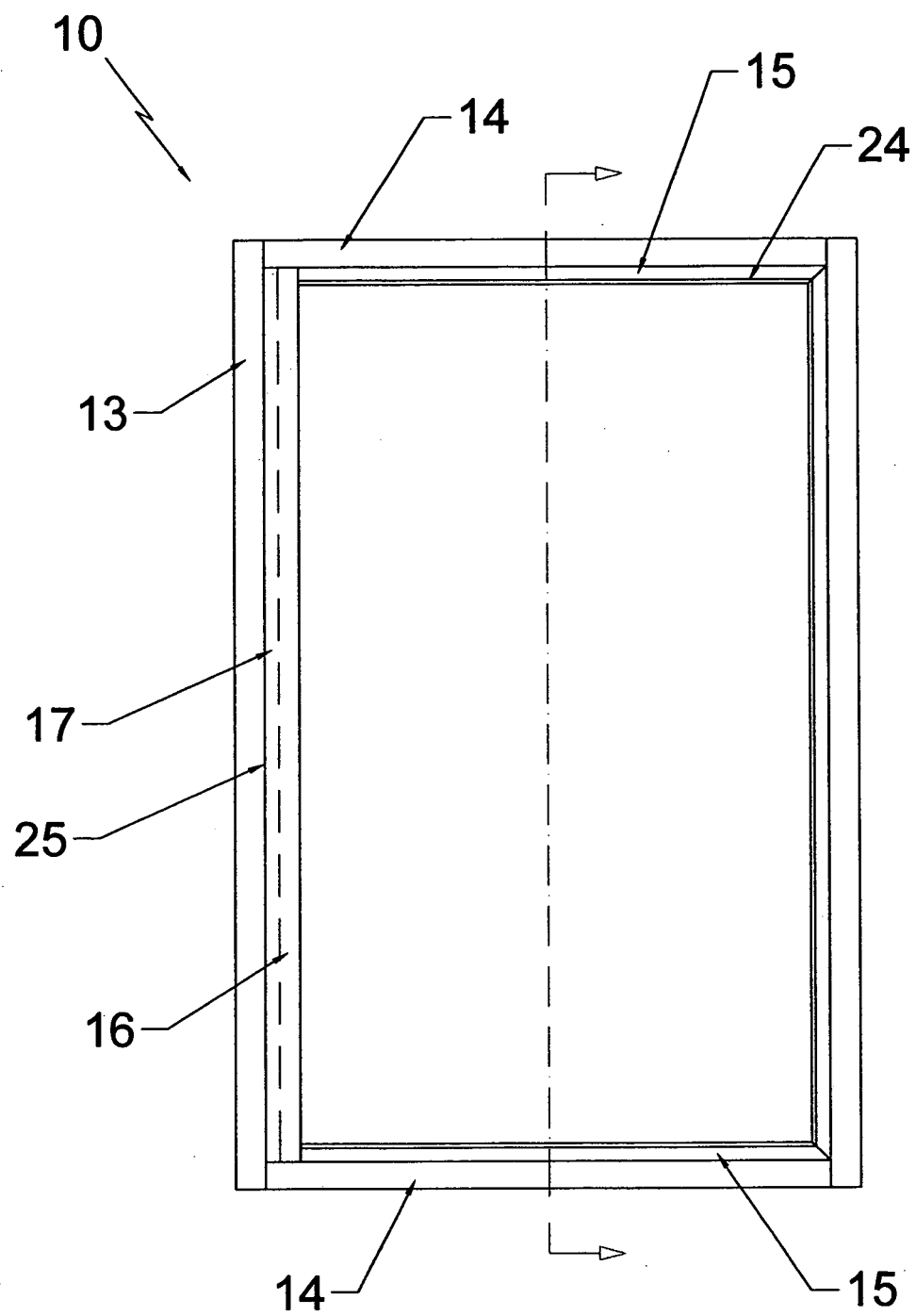


Fig. 1

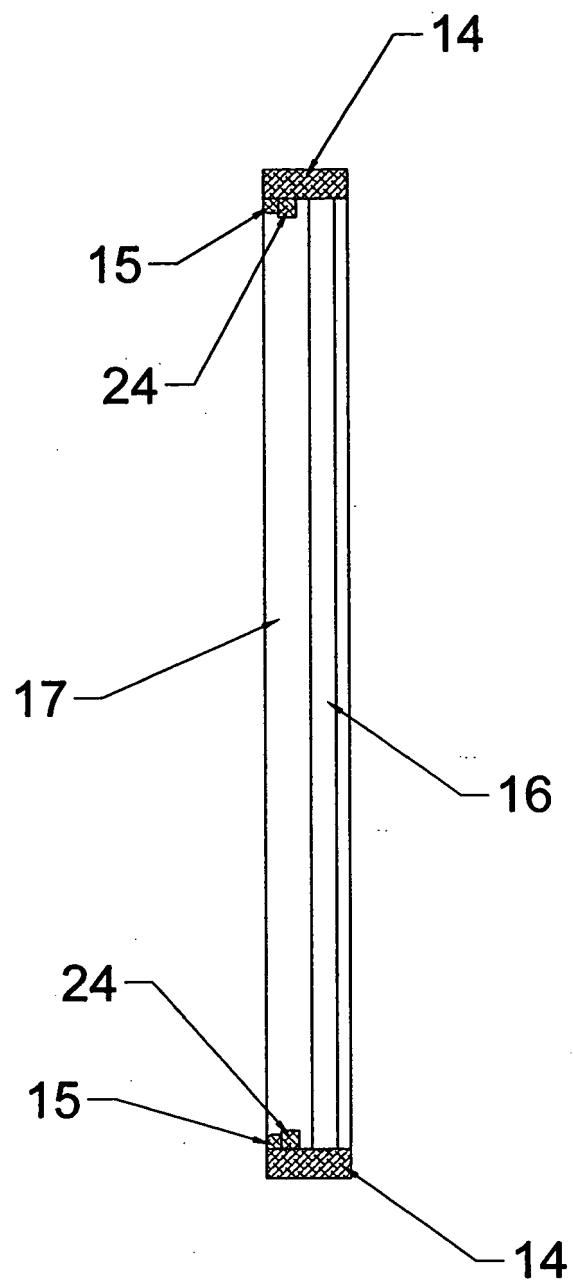


Fig. 2

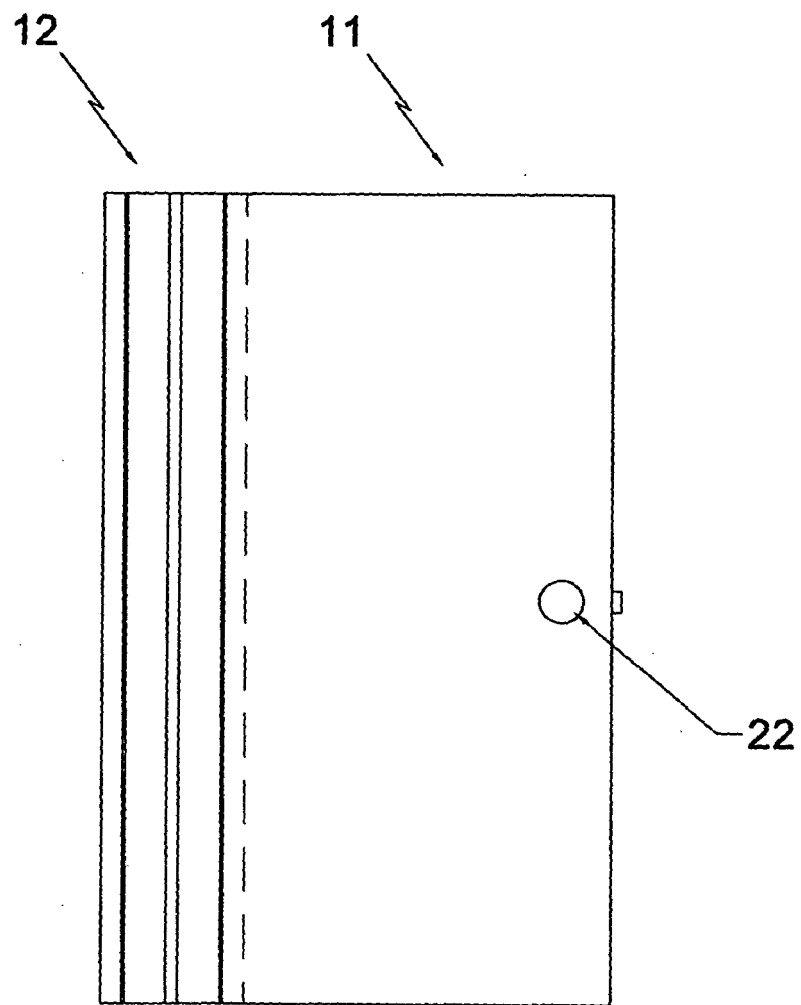


Fig. 3

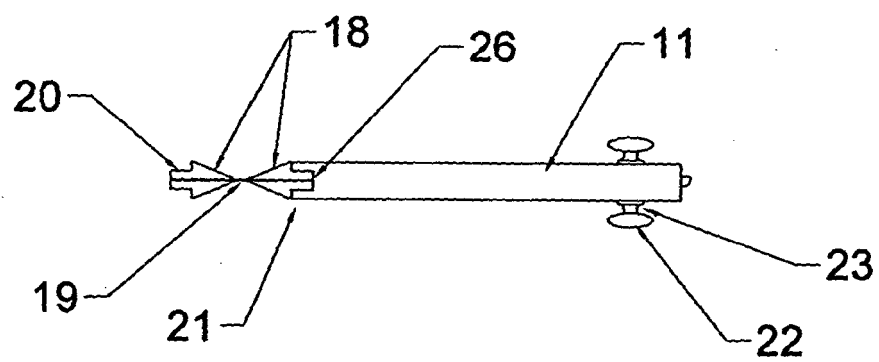


Fig. 4