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(54) Piece of furniture for babies toilet

(57) A piece of furniture of plastic material for babies' toilet, comprising:

a supporting frame (3) made up by two sides (3), constituted by a same type of quadrangular element obtained by monobloc moulding, and by cross-pieces (4) obtained by monobloc moulding and fixed to each side (3) by a combination of fitting and fastening means (15);

at least a drawer (5) inserted and sliding in said frame (2), each drawer (5) being constituted of a contained (20) obtained by monobloc moulding and of a fitted in front-piece (21);

a small bath-tub (6) fixed to the upper end of the frame, and

an anatomic swathing-table (7) or bearing table hinged at one upper side of said frame (2).

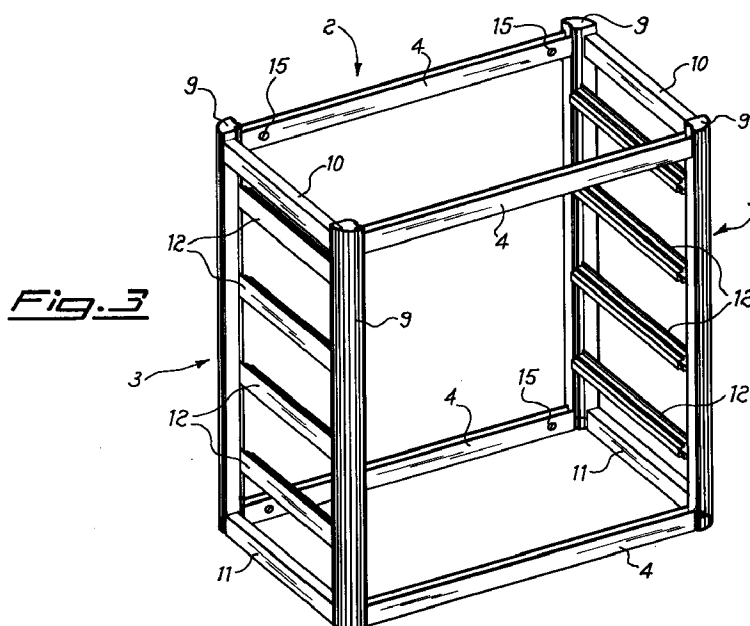


Fig. 3

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Description

This invention relates to a piece of furniture for babies' toilet.

More particularly, this invention relates to a piece of furniture having the function of chest of drawers, small bathtub and swathing table, particularly suitable to wash and clean babies.

Pieces of furniture for babies' toilet of the above type are already known and available on the market. As is known, they comprise a supporting frame wherein at least a drawer is inserted and slides, a small tub fixed at the upper end of the frame, and an anatomic swathing table or, in some cases, a bearing top hinged to an upper side of said frame. The tub may be used for the bath of the baby, having tilted the swathing table or the bearing top.

These pieces of furniture are produced by assembling various components from different materials such as plastic material, metal, wood, chip-wood, veneered wood, etc., fixed to one another by means of screws, tie-rod, fittings and like fastening means.

These pieces of furniture, while having had - to some extent - a commercial success, are not free from drawbacks as concerns both their production and use.

A first drawback is due to the fact that the components necessary for their production are numerous, so that the assembly operation is rather laborious and time-consuming. Besides, it is necessary to have a very wide classification and filing of the components, and to have on stock many pieces, which obviously affects the end price.

Another drawback lies in that some of the known pieces of furniture are not stable. In fact, during the use, they vibrate or oscillate giving the impression of an insufficient safety. Besides, if the various components of the supporting frame have been assembled to one another by fitting in, the various joints tend to unhook and open, making the piece unsafe.

Object of this invention is to obviate all the above drawbacks.

More particularly, object of this invention is to realise a piece of furniture for babies' toilet made up by a limited number of components fixed to one another stably and solidly.

In its more general aspect, the present invention allows to obtain these and still other objects which will be apparent from the following description, using only four components obtained by monobloc moulding of plastic material; two of these components are intended for the formation of the supporting frame and fixed to one another by means of a combination of fitting and fastening means, and two are intended for the production of the chest of drawers.

Therefore, object of this invention is a piece of furniture from plastic material for babies toilet comprising: a supporting frame, made up by two sides and cross-pieces fixed to said sides; at least a drawer inserted and

sliding in said frame; a small tub fixed at the upper end of the frame, and an anatomic swathing table or bearing top hinged on an upper side of the frame, wherein:

sides are constituted by a same type of quadrangular element obtained by monobloc moulding and provided with longitudinal rails for drawers;

cross-pieces have all the same structure and shape;

cross-pieces are fixed to each side by the combination of fitting and fastening means, and

each drawer is constituted by a container obtained by monobloc moulding and a fitted in front-piece.

Therefore, for the realisation of the piece of furniture of this invention only four different components are needed, i.e. one only type of quadrangular element provided with longitudinal rails, one only type of cross-piece, one only type of container for each drawer and one only type of front-piece. The length of cross-pieces may change depending on the size of the piece of furniture. These components are assembled and fastened to one another to produce any type of chest of drawers, swathing table and bath-tub wished, with a marked saving of manpower, components produced and products on stock. Besides, the fastening of cross-pieces to the two quadrangular side elements by means of the combination of fitting and fastening means ensures a high solidity and stability of the piece of furniture obtained.

Any thermoplastic material may be used for the production of the piece of furniture of the present invention. We mention, by way of example, polyethylene, polypropylene, ABS resins, polyvinylchloride (PVC), etc.

The construction and functional characteristics of the piece of furniture for babies' toilet of the present invention will be better understood thanks to the following detailed description, wherein reference is made to the attached drawings that represent a realisation shown by way of non limitative example of such piece of furniture, and wherein:

Figure 1 is a perspective front view of the piece of furniture for babies' toilet of the present invention; Figure 2 is a perspective front view of the piece of furniture of Figure 1 with the swathing table tilted; Figure 3 is a schematic perspective view of the supporting frame of the piece of furniture of Figures 1 and 2;

Figure 4 is an exploded perspective view of the frame of Figure 3;

Figures 5a, 5b and 5c are schematic side cross-views from the top of a fitting in of a cross-piece with a side;

Figure 7 is a perspective view from top downwards of the components of a drawer;

Figure 8 is a schematic view of a longitudinal section of the drawer of Figure 7 during assembly, and Figure 9 is a perspective view from the tip of the assembled drawer.

With special reference to the figures, the piece of furniture (1) for babies' toilet of this invention comprises a supporting frame (2) made up by two sides (3) and cross-pieces (4) fastened to said sides; at least a drawer (5) inserted and sliding in said frame (2); a small bath-tube (6) fixed to the upper end of the frame, and an anatomical swathing-table (7) or bearing top hinged to an upper side of said frame (2). The piece of furniture may also be provided with a soap and sponge holder (8) fixed to one of the sides (3).

The two sides (3) are perfectly equal to one another, having the same structure, shape and size, and are constituted by a same type of quadrangular element obtained by monobloc moulding.

Each side (3) comprises two parallel uprights (9) having preferably a cross-section shaped as a circle-quarter, united to one another by an upper section (10) and a lower section (11), and provided with a plurality of longitudinal rails (12) for the support and sliding of drawers (5). The Figures show a piece of furniture provided with 4 longitudinal rails, but their number may vary between 1 and 6.

Each upright (9) is provided on each end with a protruding flange (13) having a through-hole (14) for the insertion of a fastening means (15). Each flange (13) is provided with a U-shaped end element (16) having a smaller section with respect to the one of said flange (13).

Side (3) is obtained by monobloc moulding with the two uprights (9), the cross-pieces (10, 11), the rails (12) and the protruding flanges (13) with the relevant U-shaped end elements.

Each cross-piece (4) has an inverted U-shaped cross-section and is preferably provided with intermediate reinforcement ribs and, at each end, with a seat (17) ending into an opening (18), and with a through-hole (19) on one only of its surfaces. Preferably the external section of flange (13) is slightly smaller than the internal one of the cross-piece (4), and the external section of the end element (16) is slightly smaller than the internal one of opening (18). All cross-pieces are obtained by monobloc moulding, have the same structure and shape, while the length may change depending on the wished size of the piece of furniture (1).

The fastening of the equal side (3) to cross-pieces (4) is obtained by pressure-fitting flanges (13) and the relevant ends (16) of uprights (9) respectively in seats (17) and openings (18) of the cross-pieces (4), so that the through-hole (14) of each flange (13) coincides with hole (19) of the corresponding cross-piece (4) and, subsequently, by inserting into such holes a fastening element, such as for instance a self-threading screw (15), a pin or a piston pin.

Cross-pieces (4) are generally in number of four, of which two upper ones (front and back pieces) and two lower ones (front and back pieces).

A covering table from plastic material, wood, Formica or the like may be inserted and fixed to each side (3) and to the back of the supporting frame.

Each drawer (5) comprises a container (20) and a front-piece (21) obtained both by moulding of thermoplastic material and fixed to one another at a later stage.

Container (20) is a monobloc body made up by a bottom (22), sides (23), head wall (24) and back wall (25).

Sides (23) are provided with longitudinal rails (26) for the sliding of the drawers along the corresponding rails (12) of the supporting frame (2).

Stops (26), for instance flanges of sawteeth, are obtained in correspondence of the back end of rails (26) of drawer (5), that get in touch with matching elements in the rails (12) of frame (2) to prevent the involuntary and complete coming out of the drawer.

Besides, the head wall (24) of the drawer is provided with grip-recesses (28) arranged by side of said wall.

The front-piece (21) is provided with longitudinal hooking flanges (29) which allow its snap-application to the head wall (24) of container (20). This allows the front-piece (21) to be centred, hooked and tied at least on the upper and lower sides of the head wall (24) of the drawer, without using conventional fastening means. Besides, the front-piece (21) is provided with two side openings (30) which coincide with recesses (28) when said front-piece is fastened to the head wall (24). Recesses (28) and holes (30) form the handles for hand-pulling the drawer, without leaving unaesthetic gaps or discontinuities in the surfaces on sight of the piece of furniture.

Instead of recesses (28) grip-protrusions may be used, always integral and forming one only block with the head wall (24).

From the above description, the advantages achieved by the piece of furniture of this invention are obvious, because of the reduced number of necessary components, assembly facility, stability and solidity, ensuring the required safety.

While the present invention has been described with reference to a possible embodiment expounded by way of non limitative illustration, many changes and modifications may be introduced by those skilled in the art, in the light of the above description.

Therefore, the present invention is intended to encompass all the changes and modifications that fall within the spirit and the protection scope of the following claims.

Claims

1. A piece of furniture for babies' toilet comprising: a supporting frame (3) made up by two sides (3) and

cross-pieces (4) fixed to said sides (3); at least a drawers (5) inserted and sliding in said frame (2); a small bath-tub (6) fixed to the upper end of the frame, and an anatomic swathing table (7) or a bearing to, hinged at an upper side of said frame (2), characterised in that:

sides (3) are made up by a same type of quadrangular element obtained by monobloc moulding and provided with longitudinal rails (12) for the support and sliding of at least a drawer (5);

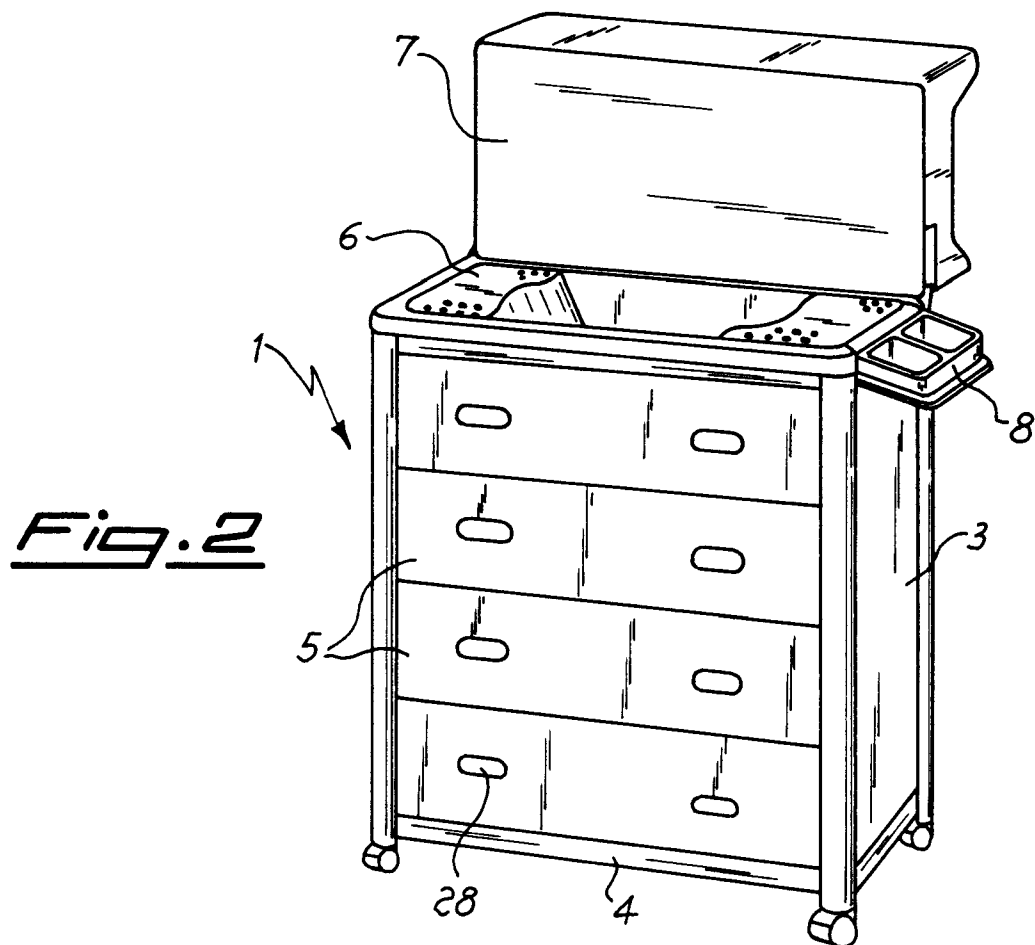
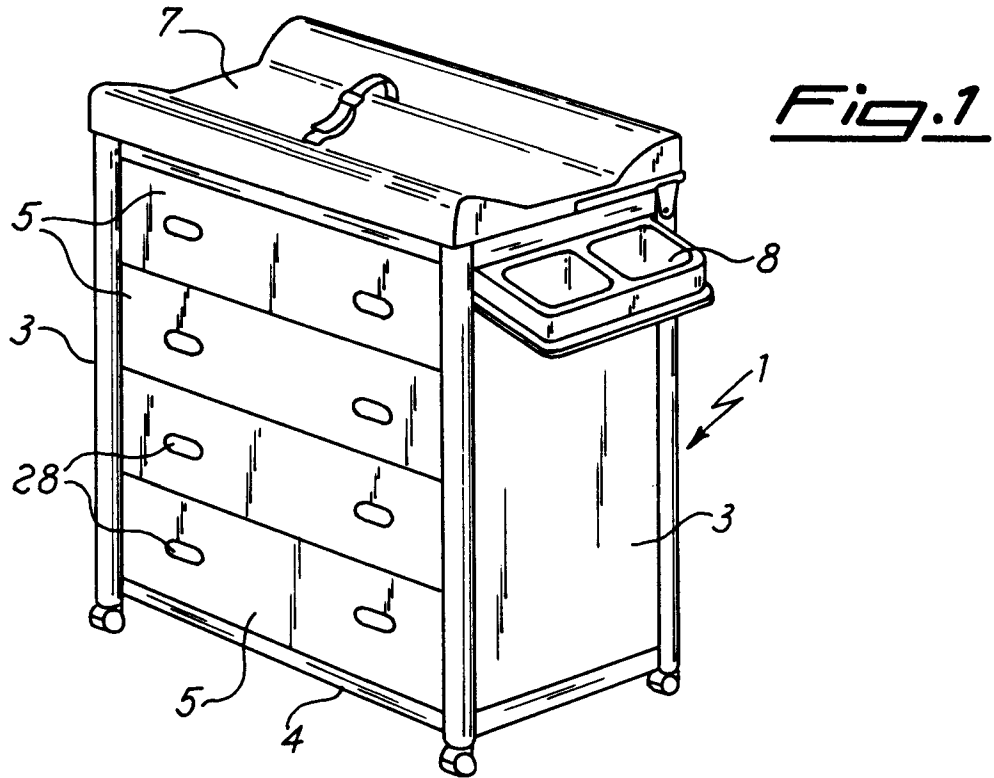
cross-pieces (4) are fixed to each side (3) by means of the combination of fitting and fastening means (15), and

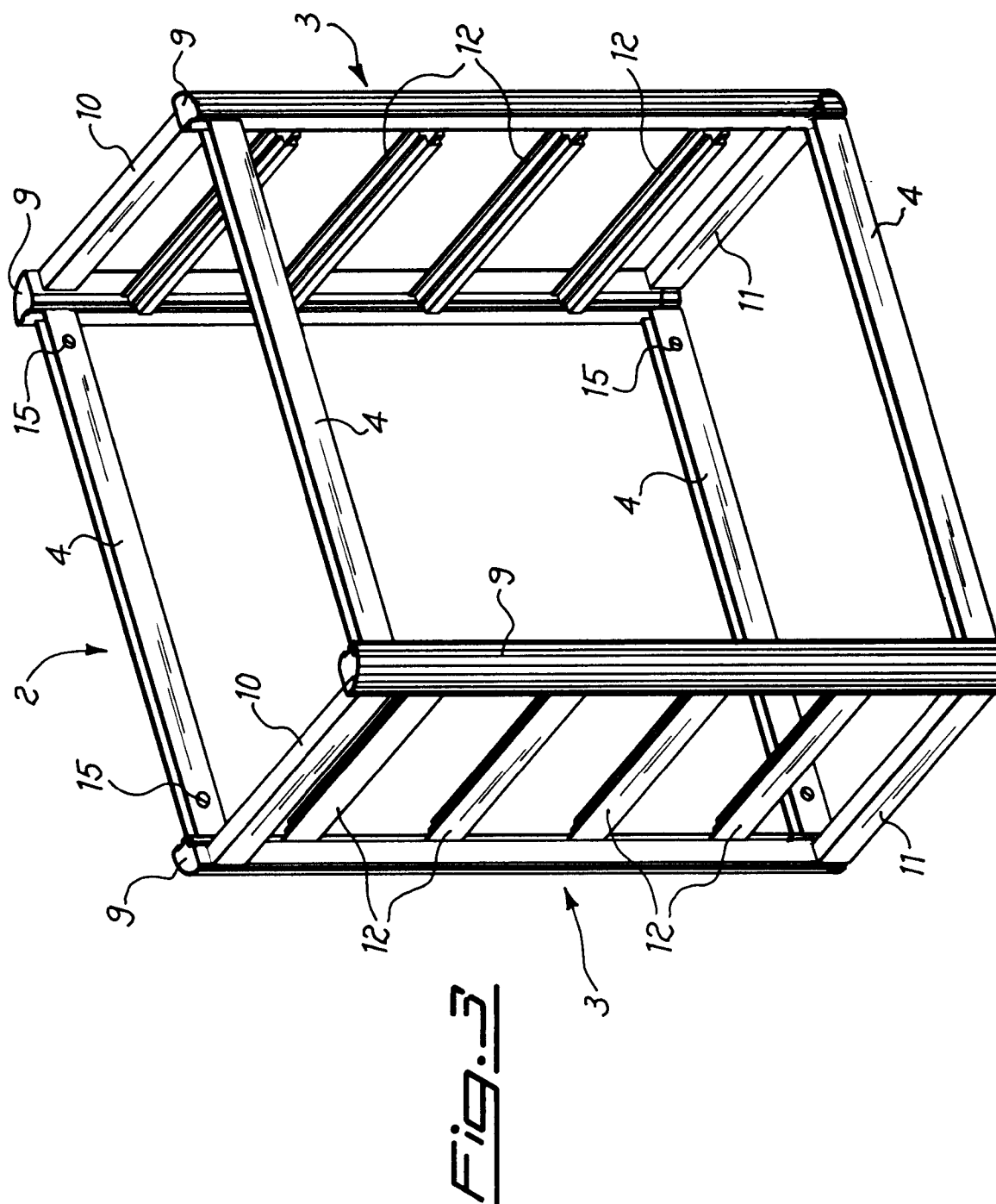
each drawer (5) is made up by a container (20) obtained by monobloc moulding and a fitted-in front-piece (21).

2. The piece of furniture according to claim 1, characterised in that each side (3) comprises two parallel uprights (9) united to one another by an upper section (10) and a lower section (11), and provided with a plurality of longitudinal rails (12) for the support and sliding of drawers (5).
3. The piece of furniture according to claim 2, characterised in that each upright (9) is provided on each end with a protruding flange (13) having a through-hole (14) for the insertion of a fastening means (15), each flange being provided with a U-shaped end element (16) having a section smaller than the section of said flange (13).
4. The piece of furniture according to claim 2 or 3, wherein uprights (9) have a circle-quarter-shaped cross-section
5. The piece of furniture according to any of the preceding claims, characterised in that each cross-piece (4) has a cross-section shaped as an upside-down U and is provided with intermediate reinforcement ribs and, at each end, with a seat (17) ending into an opening (18) and a through-hole (19) on one only surface.
6. The piece of furniture according to claim 5, wherein the external section of flange (13) is slightly smaller than the internal section of the cross-piece (4) and the external section of the end element (16) is slightly smaller than the internal section of opening (18).
7. The piece of furniture according to any of the preceding claims, characterised in that flanges (13) and the respective ends (16) of uprights (9) are respectively inserted in seats (17) and openings

(18) of the cross-pieces (4), so that the through-hole of each flange (13) coincides with hole (19) of the corresponding cross-piece (4) and, subsequently, a fastening element (15) is fixed in said holes (14, 19).

8. The piece of furniture according to any of the preceding claims, characterised in that each drawer (5) comprises a monobloc container (20), made up by a bottom (22), sides (23), a head wall (24) and a back wall (25), and a front-piece (21) provided with longitudinal hooking flanges (29) for the snap-application to the head wall (24) of container (20).
9. The piece of furniture according to claim 8, characterised in that the head wall (24) of the drawer is provided with grip recesses (28) arranged by side of said wall, and the front-piece (21) is provided with two side holes (30) which coincide with said recesses (28) so as to form the handles for hand-gripping, when said front-piece (21) is fixed to the head wall (24).
10. Use of the piece of furniture according to any of the preceding claims as chest of drawer, bath-tub and swathing-table for babies.





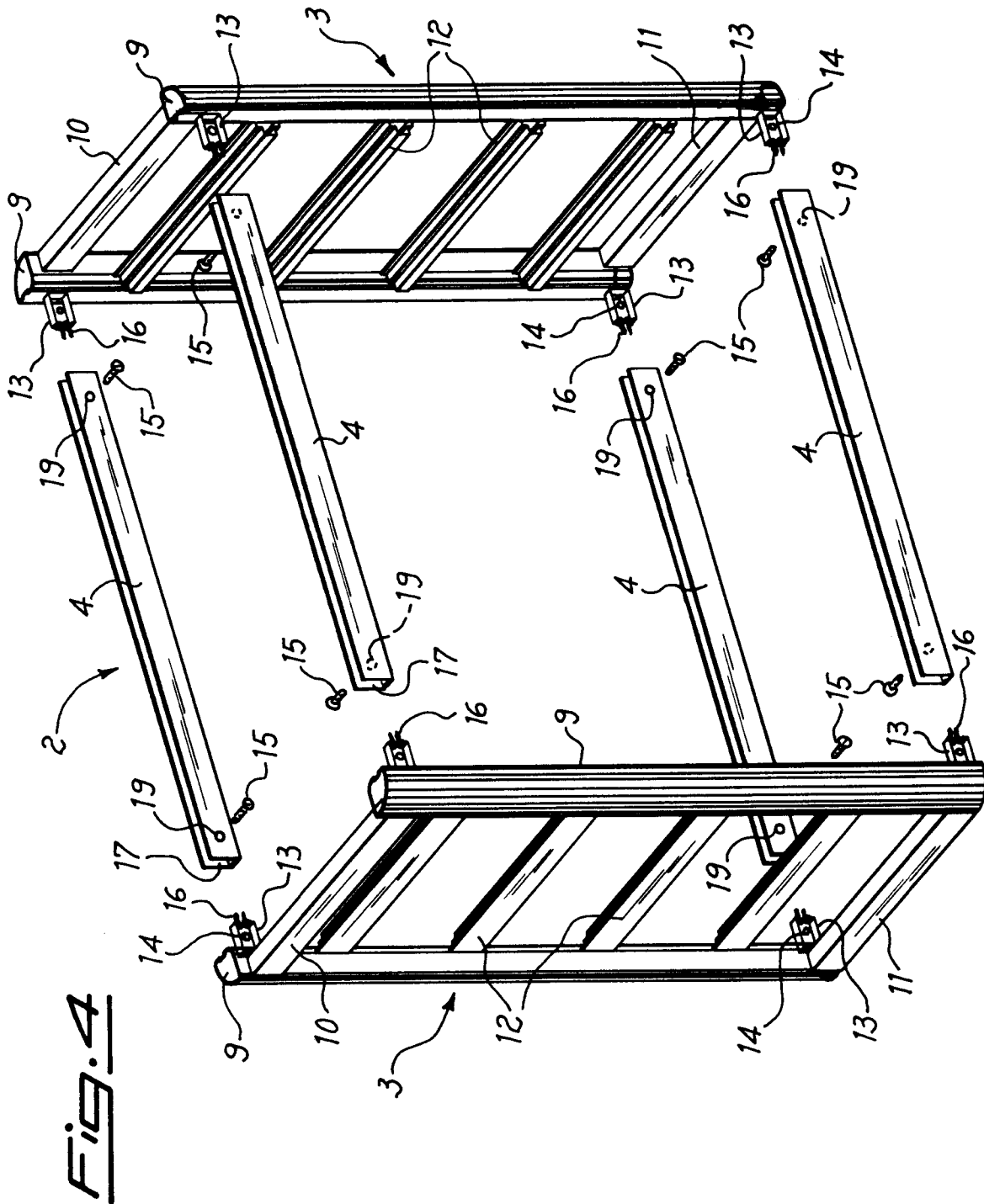


Fig. 5b

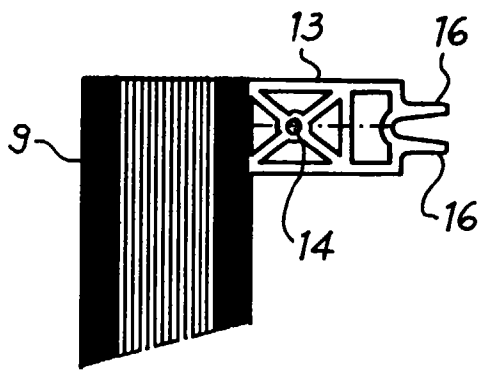


Fig. 5a

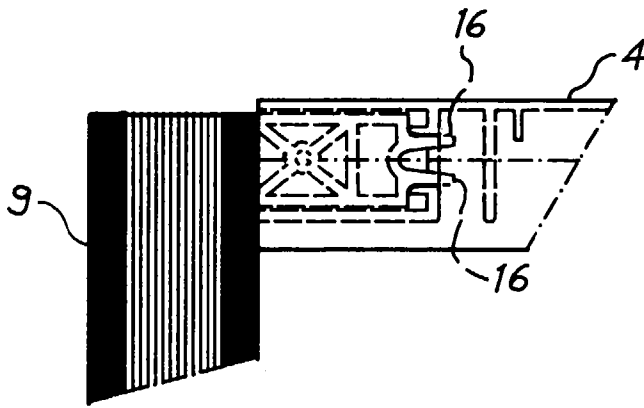
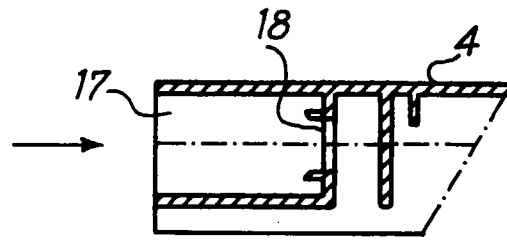


Fig. 5c

Fig. 6b

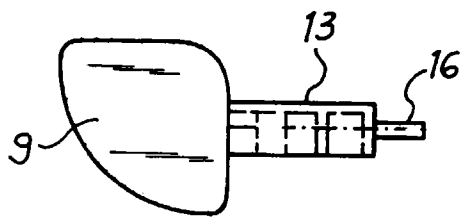


Fig. 6a

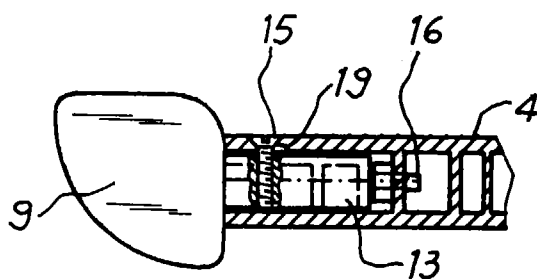
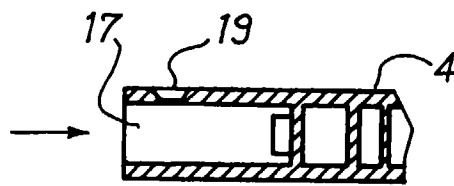


Fig. 6c

Fig. 7

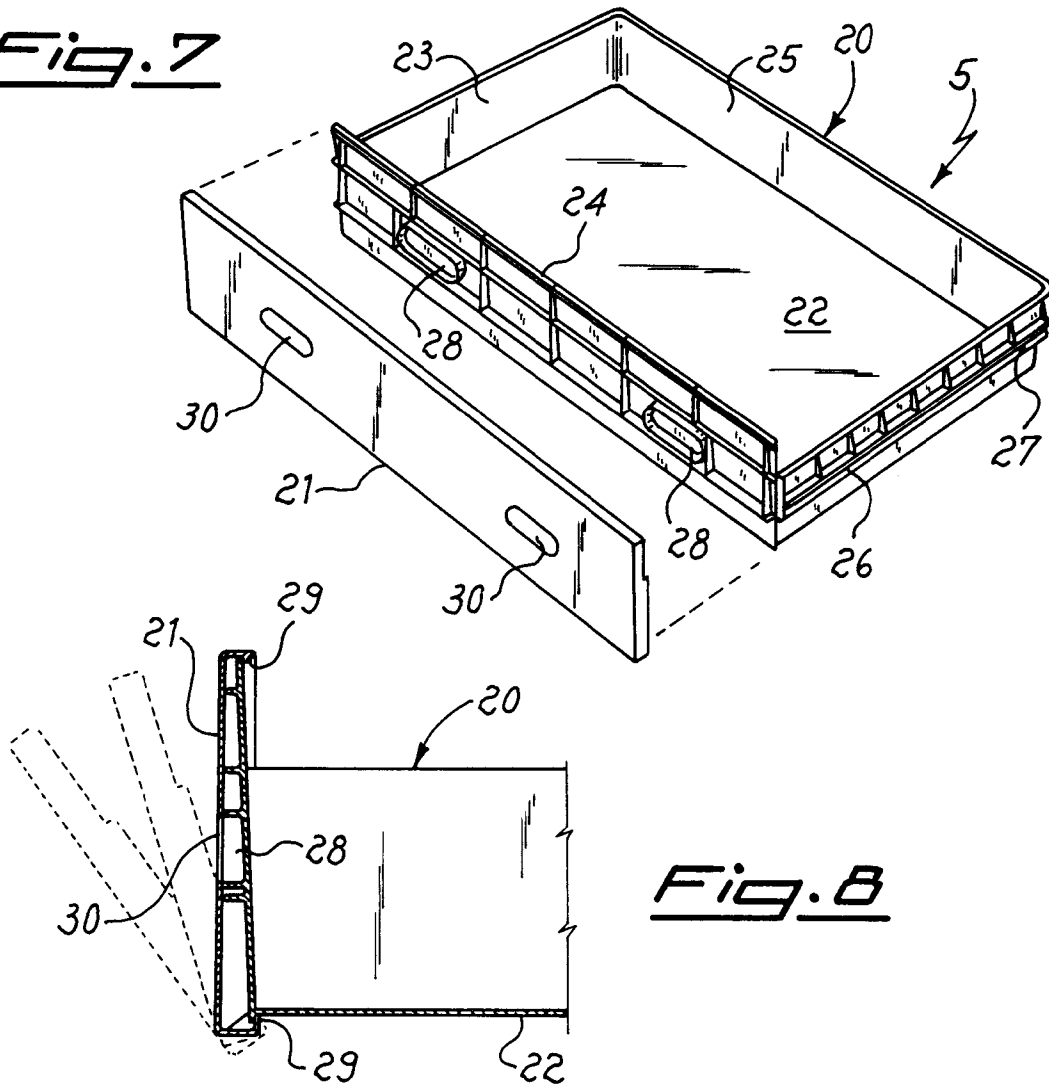


Fig. 8

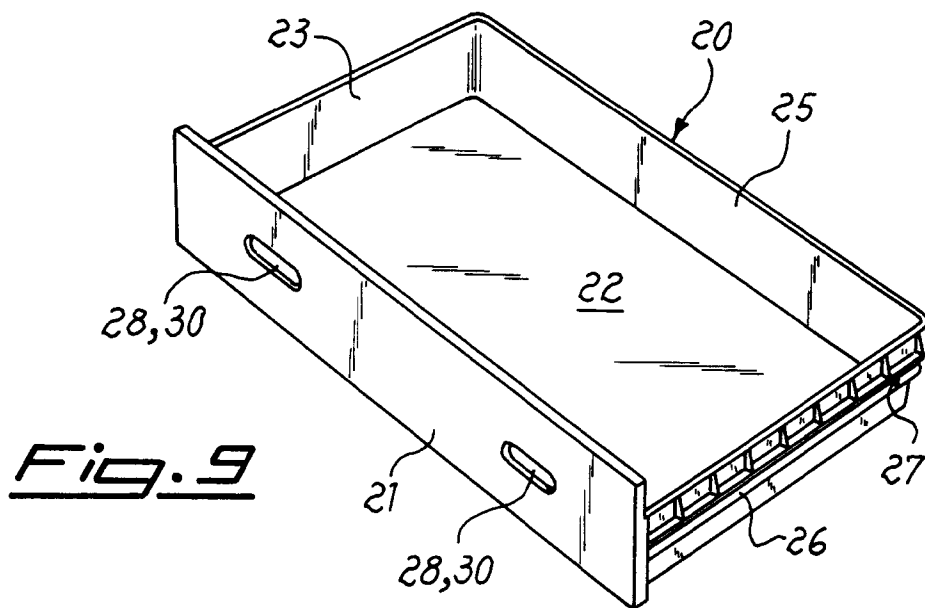


Fig. 9

