

# PATENT SPECIFICATION

613,767



Application Date: July 2, 1946. No. 19705/46.

" " June 4, 1947. No. 14742/47.

One Complete Specification left (under Section 16 of the Patents and Designs Acts, 1907 to 1946): June 21, 1947.

Specification Accepted: Dec. 2, 1948.

Index at acceptance:—Class 132(iii), S6.

## PROVISIONAL SPECIFICATION

No. 19705 A.D. 1946.

### Improvements in Constructional Building Toys

I, CHARLES BIRD PLIMPTON, of 39, Hamilton Road, Wallasey, Cheshire, British Nationality, do hereby declare the nature of this invention to be as follows:—

This invention relates to a constructional building toy of the kind in which models of buildings or the like may be erected upon a base having equi-distantly pitched holes arranged in transverse rows to receive the lower ends or vertical rods, a series of such rods serving as a framework to support building panels, slabs or the like having grooves or recesses along opposite vertical edges for engaging round the vertical rods, various other elements such as window frames, doors and a roofing member being also supported on the rods.

According to this invention instead of the roofing member in a constructional building toy being formed as a single unitary structure as previously it is built up of separate parts such as two end gable pieces of, say, tri-angular section, perforated and/or grooved to engage on the vertical rods of the model building system where they project above the walls, and two preferably rectangular flat roofing parts which are adapted to be engaged with the two end gable parts to form a complete roof. Such a construction while suitable for completing the roof of a model building assembled in the way described by means of vertical rods and a series of loose panels threaded thereon, would also be available for forming an open-sided shelter, an overhanging porch or other constructions. The invention further concerns the construction a roof in such a building toy from a series of separate panels having means for supporting them upon horizontal rods forming purlins, and either overlapping or abutting at their junctions.

In one embodiment of the invention the end parts for forming the gable ends

of the roof have in their rear faces a series of vertical channels pitched equi-distantly apart to correspond to the pitching of the rows of perforations in the perforated base of the toy building set and consequently of the rods engaged therein, so that on the ends of such rods where they protrude above the side walls the end gable pieces may be threaded and be held rigidly in place by the rods lying within the grooves. A bracing ridge may be formed integrally on the gable end parts bridging across the vertical channels and being perforated to receive the ends of the rods, and secure the gable end parts. The apex of each gable part is notched, say with a V-shaped notch, and the rectangular sides of the roof which are positioned on the sloping edges of the gable ends to form the slant sides of the roof are formed longitudinal ribs for engaging into the V-notches in the gable ends and so support the slant sides, such sides being reinforced beneath with ribs, in the manner of rafters, extending from a longitudinal rib at one lower or eave edge of the roof side to another longitudinal rib at the other or ridge edge of the side. The edges of the roof pieces are mitred so that when two are positioned in engagement into the notches of the gable ends the mitred edges of the two roof pieces abut together to form a joint. The outer faces of the roof sides may be ribbed or otherwise formed to simulate tiling.

Such separate sections may also be utilized to build the roof of an open-sided shelter by means of, say, two end posts having protruding pins at each end, for insertion in the perforations of the base plate and into the grooves and perforations in the gable ends, both gable ends being thus supported and the slanting roof members positioned and connected thereto as previously described, or two such posts may be closely assembled on

[Price 2/-]

the perforated base, and two gable end parts engaged on the posts, on to which the slant roof members are then positioned, thus forming a porch having a

5 considerable overhanging at each end.

The constructions previously described provide for a roof being built up from four separate pieces instead of a single unit but the roof may be assembled by

10 using more pieces. For instance after the gable ends have been positioned, rods may then be threaded horizontally across into apertures suitably positioned therein near the slant edges of the gable ends,

15 and separate tiling panels, shaped on their upper surface to imitate tiles and having beneath longitudinally disposed ribs, may then be hung on the horizontal

wires or purlins, the tile panels having ribs either only at one edge by which the

20 tiles are hung from an upper rod, or ribs at both ends. If provided with a rib at only one, the upper edge, the tile panels may then be arranged to overlap to form a rain-shed. By means of a separate roof

25 panelling arrangement as described, roofs of various length may be constructed built up of a number of tiled units, instead to the size of the model building being limited by that of the roof mem-

30 bers of some standard size.

Dated this 1st day of July, 1946.

A. J. DAVIES.

Agent for the Applicant,  
24, Moorfields, Liverpool 2.

## PROVISIONAL SPECIFICATION

No. 14742 A.D. 1947.

### Improvements in Construal Building Toys

I, CHARLES BIRD PLIMPTON, of 39, Hamilton Road, Wallasey, Cheshire, British Nationality, do hereby declare the nature of this invention to be as

35 follow:—

This invention relates to a constructional building toy of the kind in which models of buildings or the like may be

40 erected upon a base having equi-distantly pitched holes arranged in transverse rows to receive the lower ends of vertical rods, a series of such rods serving as a framework to support building panels, slabs or

45 the like having grooves or recesses along opposite vertical edges for engaging round the vertical rods, various other elements such as window frames, doors and a roofing member being also sup-

50 ported on the rods.

According to this invention the end gable pieces of the roof in such a toy instead of being each a single piece, may be made up of several component pieces,

55 such as say two triangular pieces abutting together or two triangular pieces with several intervening parallel-sided panels, all abutting together to form an end gable, such gable pieces having grooves

60 or recesses for receiving vertical rods which are equi-distantly spaced by being set in equi-distantly pitched holes in a base. Each sloping side of the roof may be made up of several rectangular flat

65 roofing parts lying in one plane or several relatively inclined planes, the rectangular roof pieces being mitred to abut together so that with suitable profiled gable ends a Mansard type of roof may be

70 built up. Similarly by using a half

gable end piece of triangular section and one flat roofing piece, a stoop or portico may be built projecting from the side of the building. The roof pieces in every

75 instance have longitudinal ribs adapted to engage V-notches in the gable ends. A roof projection, imitative of a dormer window, may be made as a unit from a gable end to which is fixed two sloping

80 side pieces, the whole being preferably cemented, or otherwise secured together, or even cast integrally as a composite unit, the part opposite to the gable end being bevelled to fit the slope of a roof to

85 which it is fitted and being held in position in the usual way by the vertical rods engaging grooves or recesses in the gable end.

The depth of slope of the roof in such toy building may be increased by building the roof from several horizontal

90 stretches laid one above the other and supported on horizontal wires or purlins extending across from one end gable to the other, such wires being either

95 threaded through holes in the end gables or laid into open slots formed in the edges thereof, the separate roof members having horizontal under ribs at their upper

100 or lower, or both, edges to engage on the purlin wires. Instead of unit stretches of roofing, several such roofing tiers may be built up from separate tilting panels also having horizontal under ribs for engaging the purlin wires, and where

105 such unit roof elements, or the separate tiling panels, meet horizontally, they are arranged to overlap, the lower roof member being, say, recessed to receive the

lower edge of the adjoining upper roof member. The upper edges of the topmost roof members, channel-recessed in the way described, are then enclosed and locked at the top by a ridge tiling piece of angle-section corresponding, say, to the relative slope of the roof sides, the ridge tiling having depending lugs, holes in which are adapted to be engaged by a rod threaded

through holes at the apex of each end gable, so that all the ridge tiling is secured by such top apex wire, the ridge tiling engaging and locking the roofing members.

Dated this 3rd day of June, 1947.

A. J. DAVIES.

Agent for the Applicant,  
24, Moorfields, Liverpool 2.

## COMPLETE SPECIFICATION

### Improvements in Constructional Building Toys

I, CHARLES BIRD PLIMPTON, of 39, Hamilton Road, Wallasey, Cheshire, British Nationality do hereby declare the nature of this invention and in what manner the same is to be performed to be particularly described and ascertained in and by the following statement:—

This invention relates to constructional building toy of the kind in which models of buildings or the like may be erected upon a base having equi-distantly pitched holes arranged in transverse rows to receive the lower ends of vertical rods, a series of such rods serving as a framework to support building panels, slabs or the like having grooves or recesses along opposite vertical edges for engaging round the vertical rods, various other elements such as window frames, doors and a roofing member being also similarly supported on the rods.

According to this invention a constructional building toy of the kind referred to comprises a roof constructed of separate gable end and sloping roof parts, the gable parts being engaged with an secured in position on the vertical rods of the model building system and the sloping roof parts being engaged with and supported on the gable ends. Further features of the invention are set out in the following specification and claims.

In the accompanying explanatory drawings:—

Fig. 1 is an end view showing the kind of constructional toy to which the invention relates and the improved roof construction according to this invention,

Fig. 2 being a plan with the roof partly broken away.

Fig. 3 is a view of a unit gable part with one flat roofing part, in section, engaged therewith.

Fig. 4 is a rear view of the unit gable part showing its ribbed and grooved formation.

Fig. 5 being a plan in section on the line, 5—5 Fig. 4.

Fig. 6 is an end view in section on the line 6—6, Fig. 4.

Fig. 7 is an underneath view showing the ribbing of a flat roofing part.

Fig. 8 being an end view, and

Fig. 9 a section on the line 9—9, Fig. 7.

Figs. 10 and 11 are an elevation and side view respectively of a dormer-window roof member,

Fig. 12 being a perspective view showing a roof built up from a number of gable parts and flat roofing part, and

Fig. 13 is a detail of the centre section of such a composite gable part.

Fig. 14 is a diagrammatic perspective view showing the fixing of a dormer-window roof member and an overhanging porch or portico to a model building.

Fig. 15 is a fragmentary perspective view showing the construction of a roof from a series of separate tiling panels supported on purlin wires,

Fig. 16 being a perspective view of a ridge tile suitable for locking the upper portions of the tiers of panels shown in Fig. 15.

Figs. 17 and 18 are an elevation and plan respectively, of a wall building panel.

The toy buildings are constructed by providing a base 1 having a number of transverse rows of equi-distantly pitched holes 2 adapted to receive straight vertical rods 3 of various lengths which are inserted into selected holes in the base according to the style of building to be erected, the walls being then built up from panels 4 having grooves or recesses 5 in their vertical edges which are engaged between the rods 3. The roof of such a model building is then made up of separate parts, such as two end gable parts 5 of triangular section, and two similar rectangular flat roofing parts 6, which are adapted to be engaged upon the two gable parts 5 to form a complete roof. Each gable part 5 is formed on its rear face

with a series of vertical grooves 7 pitched equi-distantly apart to correspond to the pitch of the perforations 2 in the base 1 of the toy building set and consequently to conform in distance a part to that of the rods engaged therein, so that when the walls have been built up to the desired height by the panels 4, the gable parts 5 may be positioned on the ends 3a of the rods which then protrude above the side walls, the ends 3a entering the grooves 7 and the gable parts being thus held rigidly in place on top of the walls. A bracing ridge 8 may be formed integrally on the gable parts bridging across the groove 7 and the ribs 9 forming such grooves, the ridge 8 being perforated at 8a, Fig. 6, to pass the rod ends. The apex of each gable part 5 is notched at 10, the notch being preferably of V-shape.

The sloping sides of the roof are formed by rectangular flat parts 6, which are shaped with longitudinal ribs 11 along opposite edges and transverse ribs 12 extending in the manner of rafters across from one longitudinal rib to the other. The longitudinal edges 13 of the roof parts 6 are mitred at 6a. When therefore the gable parts 5 have been set on the rod ends 3a, the roof may be completed by the rectangular roof parts 6, the longitudinal ribs 11 at their ridge edges being engaged in the notches 10, the lower ribs 11 at the eaves engaging the lower ends of the gable parts and the mitred edges of the roof parts 6 abutting closely together at the ridge to form a joint. The exterior surfaces of the roof parts 6 may be formed as indicated at 14 to imitate tiling.

Instead of the roof being built up merely from four separate parts, as just described, namely two end gable parts and two flat roof parts, each gable part and each sloping roof side may be assembled from several component parts. Such an arrangement is shown in Fig. 12 here each end gable is composed of two triangular parts 5a with three intervening parallel-sided panels 15, the rear faces of all of which component parts are grooved, in a manner similarly to that indicated and described with reference to Fig. 4, to receive the vertical rods 3, all the part abutting to form a complete end gable, and their upper edges being, if desired, relatively inclined. The centre panel 15 is, as illustrated in Fig. 13, notched at 10, and the upper corners of the end parts 5a are also notched at 10a. The sloping sides of the roof may then be formed by several rectangular flat roofing parts 16 lying in relatively inclined planes, the roof parts 16 being suitably mitred at their longitudinal edges 17 to

abut together and so form a Mansard type of roof, the parts 16 engaging by longitudinal ribs such as 11 into the notches 10, 10a of the gable parts.

Similarly, as shown in Fig. 14, by using half gable end parts 5b of triangular section and one flat roofing part 6, an overhanging porch or portico may be built up projecting from the side of a building, the gable parts 5b being again supported on vertical rods 3 which may be enclosed with panels 4 or left open, the upper longitudinal rib 11 of the roofing part 6 engaging the notches 10b of the gable parts 5b.

A roof part Figs. 10 and 11, in imitation of a dormer window may be made as a unit member from a gable part 5 to which is fixed sloping roof sides 18, the whole being cemented or otherwise secured together or cast integrally as a composite piece, the rear edges being bevelled at 19 to fit the slope of a roof against which it is positioned as shown in dotted lines, Fig. 14. The roof part 18 is held in position in the way described by vertical rods engaging grooves or recesses in the rear face of the gable part 5b.

Instead of unit stretches of roof parts 6, several roofing tiers in the same, or relatively inclined plane, may, as shown in Fig. 15, be built up from separate tiling panels 20 having under ribs 21 for engaging purlin wires 22 extending across from one gable end 5 to the other, such wires being either threaded through holes 23 in the gable parts or let into open slots 24 formed in the edges thereof. The tiling panels 20 are arranged to overlap where they meet horizontally, the upper edges of the panels being recessed at 25 to receive the lower edges of the adjoining higher panels. The recessed upper edges of the topmost panels are overlapped and locked by ridge tiling pieces 26 of angle-section corresponding, say, to the relative slope of the roof sides, the ridge tiles having depending lugs 27, holes 28 in which are adapted to be engaged by a topmost rod 22a threaded through apex holes 23a in the gable parts so that all the ridge tiles are secured by such top wire 22a, such tiling in turn engaging and locking the roofing panels. One or more of the ridge tiles may be formed in the manner of a chimney or turret 29.

By building up a roof for a model building in separate tiling panels as described, the roof may be made of any length and any sloping depth as desired. The upper surface of the panels may be ribbed or otherwise formed to imitate roof tiling.

The gable and roof parts as also the wall panels and perforated base are preferably moulded from plastic material and in various colours.

- 5 Having now particularly described and ascertained the nature of my said invention and in what manner the same is to be performed I declare that what I claim is:—
- 10 1. A constructional building toy of the kind referred to in which the roof is constructed of separate gable end and sloping roof parts, the gable parts being engaged with an secured in position on the vertical rods of the model building system and the sloping roof parts being engaged with and supported on the gable ends.
- 20 2. A constructional building toy as claimed in Claim 1 in which the gable end parts are notched and the sloping roof parts formed with ribs or the like for engaging the notches.
- 25 3. A constructional building toy as claimed in Claim 1 in which the gable end parts are grooved or recessed to receive and engage the vertical rods of the model building system.
- 30 4. A constructional building toy as claimed in Claim 1 in which the gable ends and sloping sides of the roof are each adapted to be built up of several

component members, the component of each sloping roof side lying in relatively inclined planes to form a Mansard type of roof. 35

5. A constructional building toy as claimed in Claim 1, in which each sloping side of the roof is adapted to be built up in several tiers assembled from separate tiling panels and supported on horizontal wires or like purlin elements carried from gable end parts. 40

6. A constructional building toy as claimed in Claims 1 and 5 in which the gable end parts are apertured or slotted to receive the purlin wires. 45

7. A constructional building toy as claimed in Claims 1, 5 and 6 in which the tiling panels are formed with ribs for engaging the purlin wires. 50

8. A constructional building toy as claimed in Claims 1, 5, 6 and 7 in which the topmost tier of tiling panels are overlapped and retained by ridging tiles engaged by a purlin wire. 55

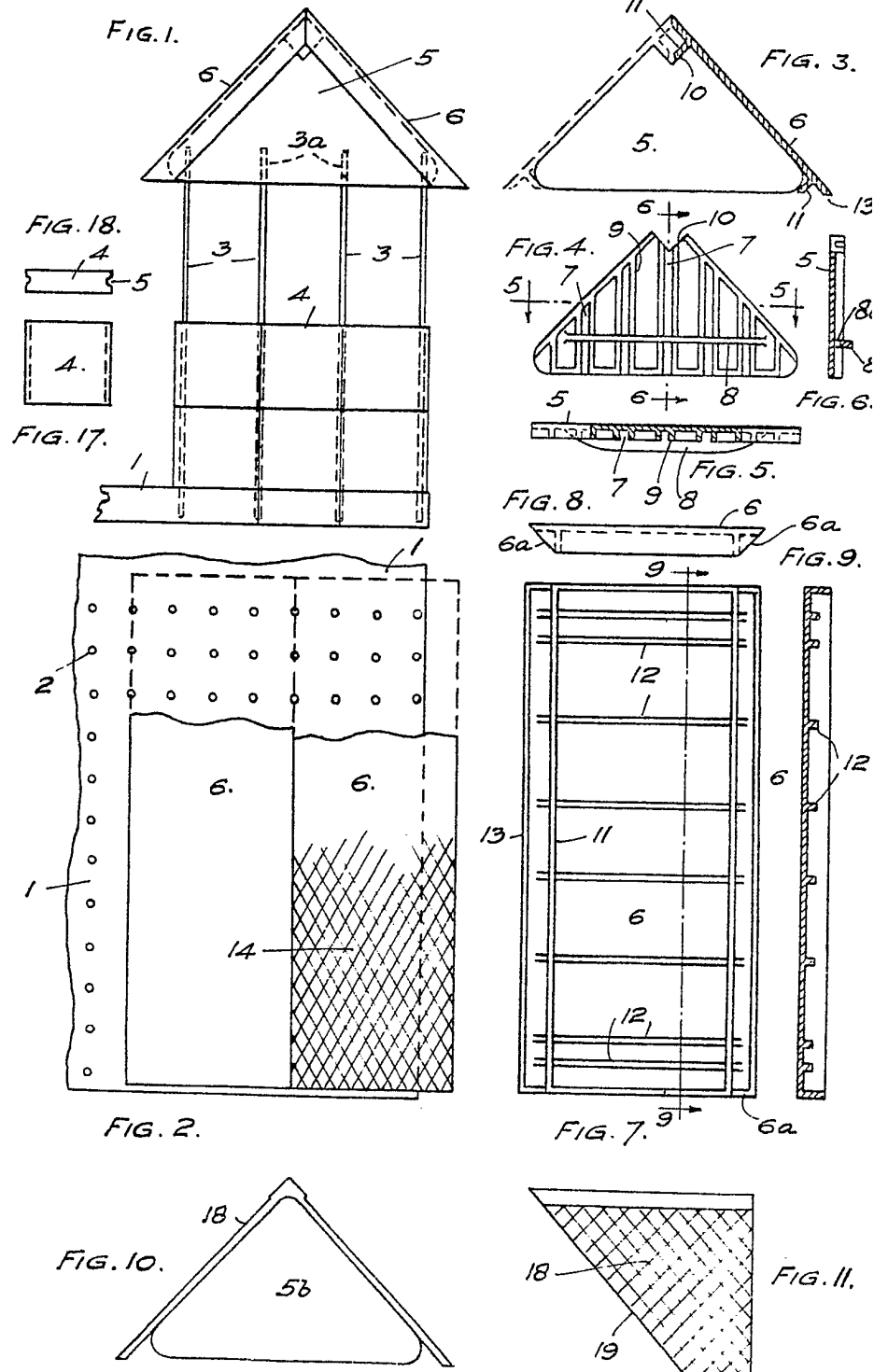
9. A constructional building toy substantially as described with reference to the accompanying drawings.

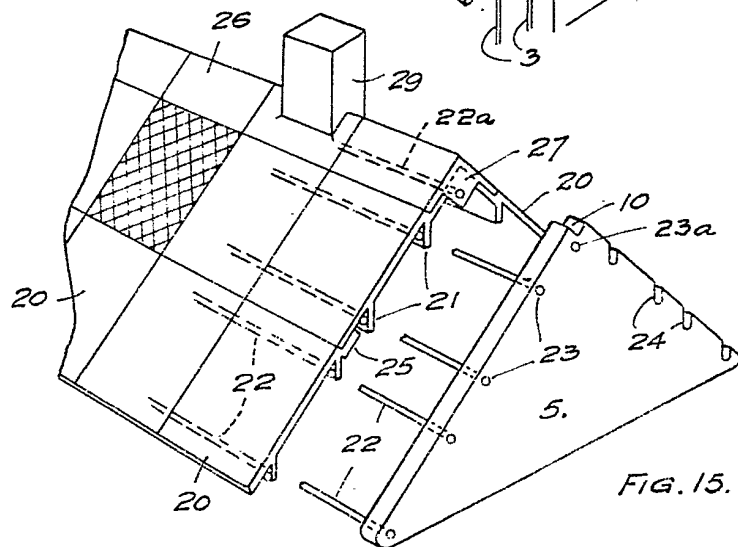
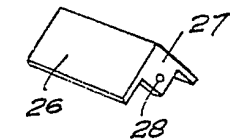
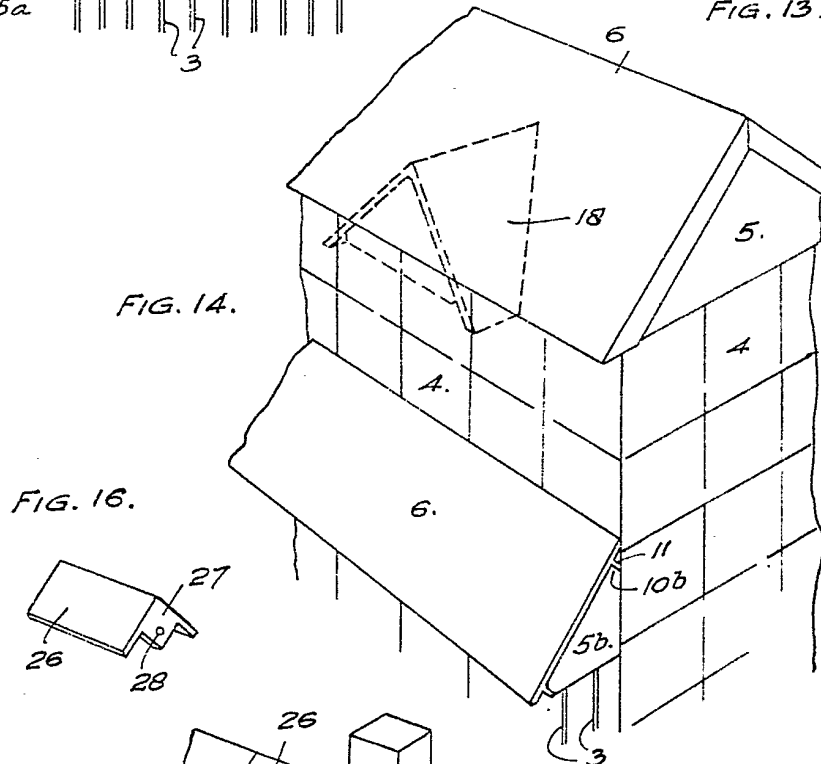
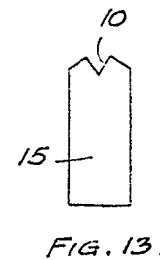
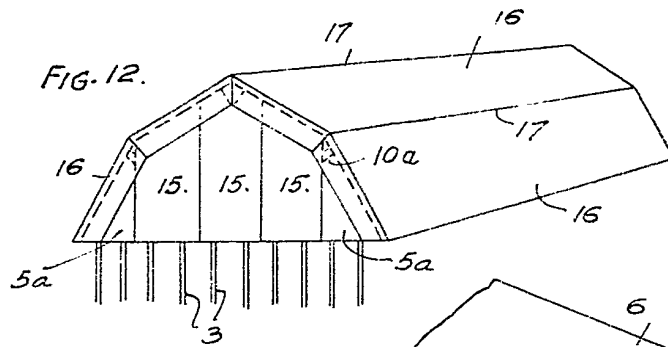
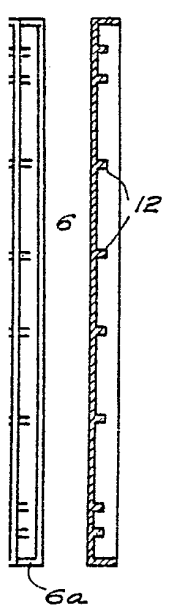
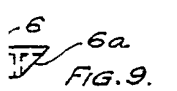
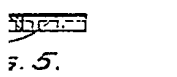
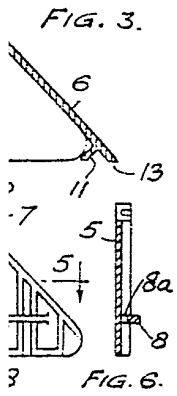
Dated this 16th day of June, 1947.

A. J. DAVIES.

Agent for the Applicant,  
24, Moorfields, Liverpool 2.

[This Drawing is a reproduction of the Original on a reduced scale.]





[This Drawing is a reproduction of the Original on a reduced scale.]

