

Aug. 8, 1933.

A. C. GILBERT

1,921,027

TOY FOR HORTICULTURAL PURPOSES

Filed May 17, 1932

2 Sheets-Sheet 1

Fig. 1.

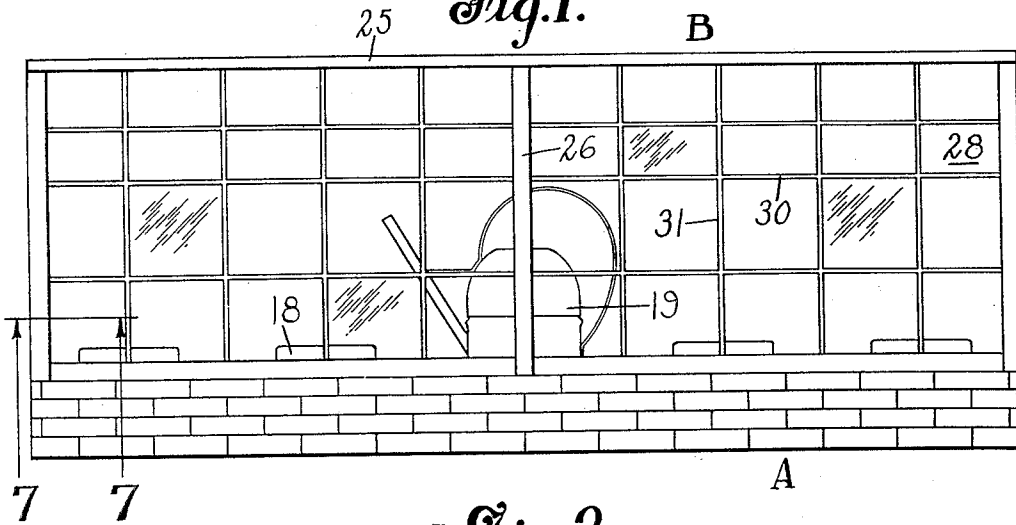


Fig. 2.

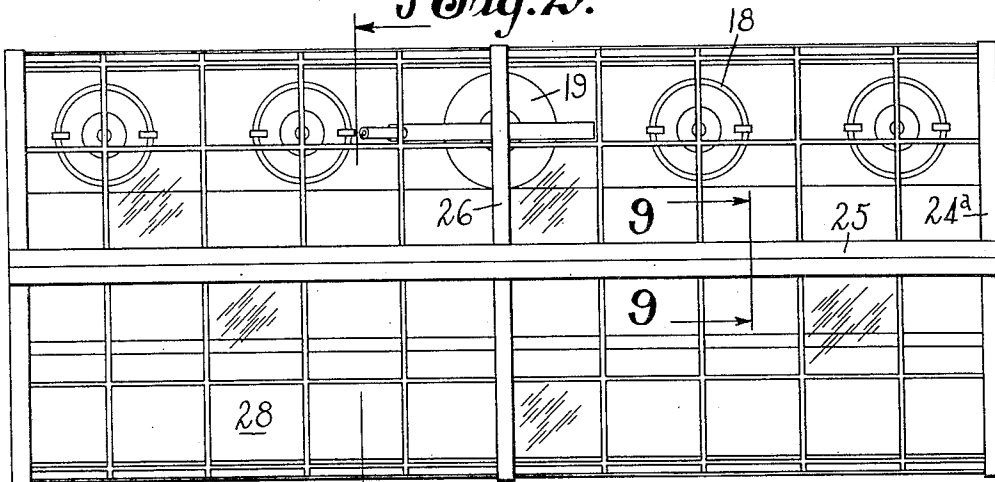


Fig. 3.

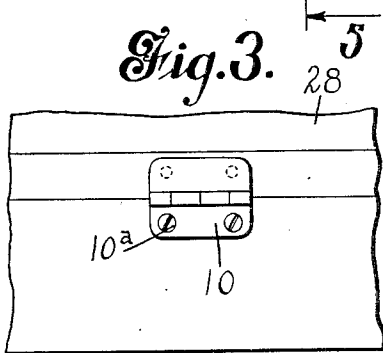
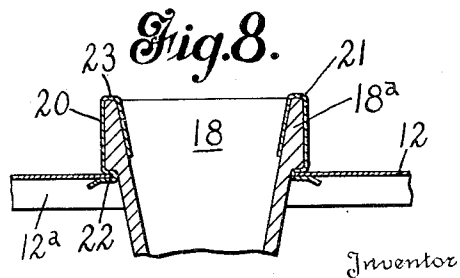


Fig. 8.



Inventor

Alfred C. Gilbert

Rollins & Bartholomew

By

Attorney

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A. C. GILBERT

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2 Sheets-Sheet 2

Fig. 4.

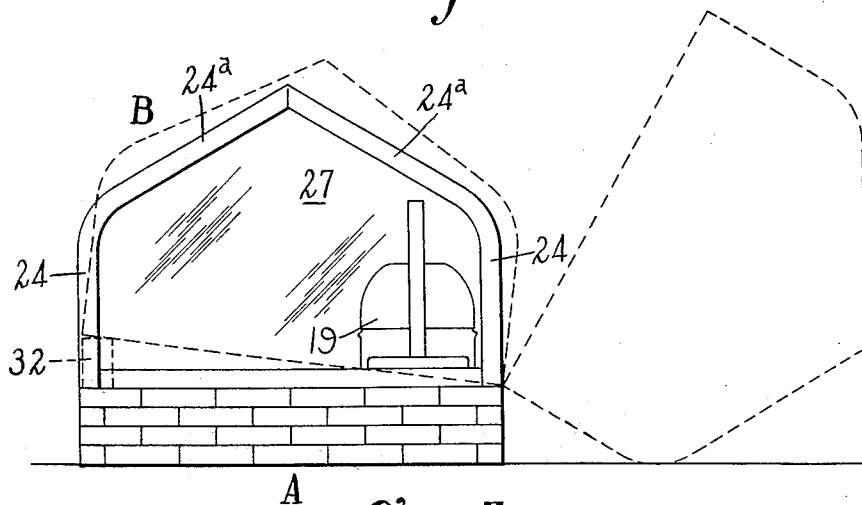


Fig. 5.

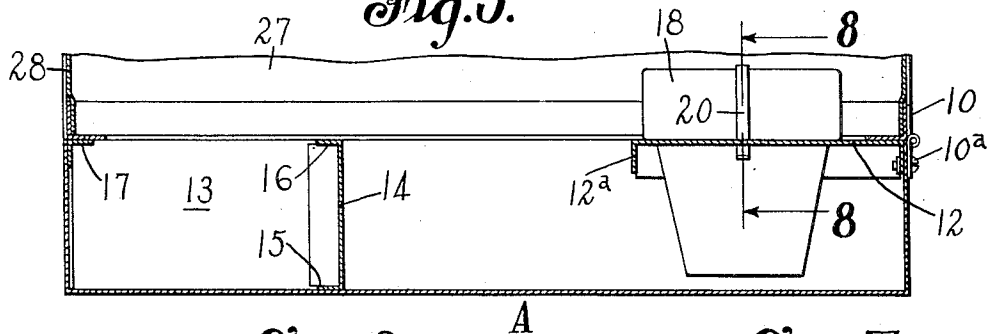


Fig. 6.

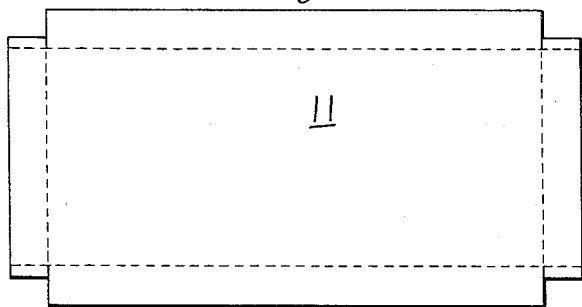


Fig. 7.

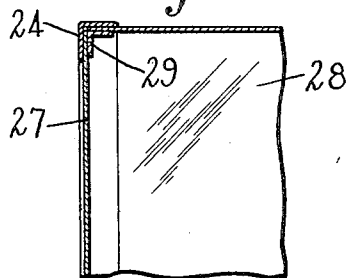
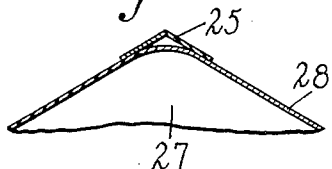


Fig. 9.



Inventor
Alfred C. Gilbert,

By *Rowell & Bartholomew*

Attorney

UNITED STATES PATENT OFFICE

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TOY FOR HORTICULTURAL PURPOSES

Alfred C. Gilbert, North Haven, Conn., assignor
to The A. C. Gilbert Company, New Haven,
Conn., a Corporation of Maryland

Application May 17, 1932. Serial No. 611,767

18 Claims. (Cl. 47—17)

This invention relates to toys and more especially to a toy for horticultural purposes intended to give pleasure and instruction to children.

The toy of my invention is in the nature of a small partially transparent enclosure adapted to hold a quantity of soil so that seeds can be planted therein, and flowers and plants grown. Its character is such that it is made use of and enjoyed particularly by children.

In an article of this character it is desirable to have ready portability and to provide for ready access to the soil-holding receptacle or tray so that the seeds can be conveniently planted and the various steps of sprinkling, cultivation and the like carried out conveniently without the presence of interfering obstructions of any kind; but, on the other hand, it is desirable to provide protection from the wind as well as temperature modification by the provision of an enclosing section which is transparent so that the sun's rays pass through it. It is also desirable to provide an article of simple construction having an appearance which will be pleasing.

One of the objects of my invention, therefore, is to provide a device which will fulfill the above-mentioned requirements.

Another object is to provide a device of this character in which the transparent section is of a non-shattering character, and this makes the device much safer for use by children.

Other objects of the invention are to furnish satisfactory provisions for ventilating the plant-enclosing structure, for supporting the transparent upper section when it is in the open position, and for preventing leakage of moisture from the tray in which the plants are grown.

To these and other ends the invention consists in the novel features and combinations of parts to be hereinafter described and claimed.

In the accompanying drawings:

Fig. 1 is a front elevation of a toy constructed in accordance with my invention;

Fig. 2 is a top plan view of the same;

Fig. 3 is a fragmentary rear view showing one of the hinges connecting the upper transparent section with the tray;

Fig. 4 is an end view of the structure;

Fig. 5 is a section on line 5—5 of Fig. 2 on an enlarged scale;

Fig. 6 shows the blank from which the soil-holding tray is made;

Fig. 7 is a detail section on line 7—7 of Fig. 1;

Fig. 8 is a section on line 8—8 of Fig. 5; and

Fig. 9 is a detail section on line 9—9 of Fig. 2.

In its general nature the article selected for

illustration and description comprises a metal tray preferably of a leak-proof character adapted to hold or contain a body of soil in a suitable trough and also adapted to hold or contain a number of miniature flower pots; and to this tray is movably connected as by hinging a transparent upper enclosure adapted in one position fully to enclose the tray and form a superstructure therefor, and in another position to clear the tray so as to permit full and convenient access to the latter for planting, cultivation and the like.

In the drawings the tray is indicated generally at A and it is preferably of rectangular shape having relatively low upstanding walls at all of its margins, these walls preferably being vertical, as shown. Along one side of the tray the transparent upper enclosure B is hinged as by means of two or more hinges 10, of which one is shown in detail in Fig. 3. The enclosure B consists of a frame generally rectangular in plan to correspond with the shape of the tray, and said frame, which is preferably constructed of light sheet metal, serves as a mounting for the transparent material of which the greater part of the upper enclosure is composed. This transparent material is preferably constituted by one or more sheets of cellulose esters material or other material which is transparent, flexible and not likely to break, and which if broken will not shatter.

Referring now to the details of the structure, it may be noted that the tray A is constructed of a sheet metal blank 11 shown in Fig. 6, suitably cut and bent to provide the imperforate bottom and the relatively shallow upright marginal walls. At the corners the adjacent side walls overlap and are secured to each other in a water-tight manner, for example by welding the face portion of one wall portion to the face of the adjacent wall portion. Preferably there will be within the tray thus provided provisions for holding a body of earth for the planting of seeds, and preferably there will be in addition a shelf or table-like support adapted to mount a plurality of miniature flower pots. The arrangement of these parts is susceptible to variation, but in the example illustrated I have shown a sheet metal table or shelf running along one side of the tray and a soil-holding trough running along the opposite side of the tray with an intervening space running lengthwise of the tray between the shelf and the trough. The shelf may be conveniently constituted by a sheet metal plate 12 having at all four of its sides bent-up

flanges. The top of the shelf is substantially flush with the upper rim of the tray, as shown in Fig. 5, and the flanges on the shelf depend therefrom, and the flanges adjacent the end walls of the tray and the flange adjacent the side wall of the tray are secured in face-to-face contact with the tray walls in an appropriate manner, as for example by spot welding. The flange on the remaining or fourth side of the shelf, which is located along the aisle, as it may be termed, forms a suitable finishing means for the margin of the shelf as well as a reinforcing means therefor. In Fig. 5 of the drawings this particular flange is indicated at 12^a.

In the particular case shown the trough for holding earth is located at the opposite side of the tray and is indicated at 13 in Fig. 5. This trough or earth receptacle is provided by inserting a suitable partition member 14 into the tray, which partition member is located at the opposite side of the aisle from the shelf 12 and is of approximately the same height as the side walls of the tray and forms in association with said side walls an elongated earth receptacle of rectangular cross-section, as shown in Fig. 5. The partition or wall member 14 may also be conveniently made of sheet metal and I prefer to provide it with flanges along the sides and across the ends, the flange across the lowermost side lying in contact with the tray bottom and being appropriately secured thereto as by spot welding, and the upper flange being turned inwardly with respect to the trough, as shown. The lowermost side flange welded to the tray is indicated in Fig. 5 at 15, and the upper flange is indicated at 16. This upper flange 16 has a counterpart at the opposite side of the trough in a flange 17 which extends inwardly from the side margin of the tray and is a part of a thin angle bracket secured as by welding to the side wall of the tray at its upper portion.

For the purpose of holding a series of miniature flower pots shelf 12 is provided with a number of round apertures, one of which is shown in Fig. 8. These apertures serve to receive the bodies of miniature flower pots 18, of which four are illustrated herein. The collars or rims 18^a of these pots are intended to lie above the shelf 12 and the bodies of the pots project down through the round apertures and are only slightly smaller than said apertures, as shown in Fig. 8, the lower ends of the pots being thus held at only a slight distance above the bottom of the tray, as shown in Fig. 5. In this manner a very convenient support for the flower pots is provided, the upper ends of the pots projecting upwardly somewhat from the shelf so that they are readily accessible. In the particular form shown, there is, in addition to the flower pots, a small watering pot 19, and I provide a convenient support for this watering pot in the center of the series of flower pots by cutting an aperture in the shelf for the flanged lower end of this watering pot to rest in. This particular aperture is not illustrated in the drawings, but it may be noted that it is of the same size and shape as the flower pot apertures, the watering pot being of corresponding size, and therefore it is possible to utilize this aperture for holding an additional flower pot instead of the watering pot. The flower pots may, if desired, be held in place in their shelf apertures by the convenient detachable holding means shown particularly in Fig. 18, wherein 20, 21 designate readily bendable sheet metal clips oppositely located, and

each having a generally U-shaped bend 22 therein embracing the edge of the shelf aperture, and a further generally U-shaped bend 23 therein embracing the upper edge portion of the flower pot. In this manner the flower pot is firmly held in its shelf aperture. When it is desired to remove it, it is only necessary to bend up the inner legs of the upper U-shaped portions 23 to a position to clear the upper edge of the pot, after which the pot can be lifted out of its aperture or socket. Thereafter the clip 20 can be easily removed from the shelf by disengaging its lower bent portion from the edge of the aperture.

The frame of the upper enclosing structure B is preferably made of light sheet metal angles. Four angle members are connected together to form a rectangle at the base of the structure adapted to rest on top of the tray, as shown in Fig. 5, and conforming to the shape thereof. At each end of the structure upwardly disposed angle members 24 are located at the corners and attached to the lower rectangular part of the upper structure. Each member 24 is gradually curved midway of its ends to provide an upwardly and inwardly inclined portion 24^a and the upper ends of the two opposing portions 24^a are interconnected by welding or soldering. The end frames thus provided are then interconnected at the top by means of an angular sheet metal ridge member 25, which extends from one end of the structure to the other and is of the cross-section shown in detail in Fig. 9. Intermediate the ends of the structure the ridge angle member 25 may be connected with the lower frame member or sill by means such as a flat sheet metal reinforcing strip 26. This strip may, and preferably does, run continuously from the outside of the lower angle member to, under and across the ridge member 25 and down to and across the outer face of the angle member at the opposite side of the frame.

The upper frame as thus constructed is hinged to the tray by means of the hinges 10 previously mentioned, there preferably being two or more of these hinges, and said hinges having leaves welded to the outer face of the lower angle member of the frame, and having other leaves secured to the side wall of the tray by screws 10^a.

The frame of the upper enclosing structure is filled in with transparent sheet material of the kind previously mentioned appropriately secured to the frame members as by cementing it thereto. In the form shown, there are separate sheets of transparent material at the respective ends of the enclosure, and a single sheet of this material extends the entire length of the frame and runs completely from one side of the frame to the other. This sheet of material is, therefore, curved at the sides of the enclosure so as to conform to the gradual curve of the end frame members 24, shown in Fig. 4. Thus this sheet of material provides two substantially vertical side walls and two inclined top walls merging thereinto. One of the edges of the sheet is located in the angle of the front lower frame member, that is to say, inside the upright flange of said member, and the sheet thence extends upwardly and then upwardly and inwardly across and beneath the ridge member 25, thence downwardly and outwardly, and then downwardly to the other angle frame member at the rear side of the frame. No joint is employed between the upright transparent portion of the enclosing wall and the inclined transparent top wall of the enclosure, as these two portions join each other on a gradual curve and are in one piece.

In Fig. 7 I have shown one of the members 24 in section, and in this view 27 is the transparent flexible sheet at the end of the structure, and 28 is the continuous flexible sheet forming the transparent side walls and transparent upper walls as previously described. The sheets 27 and 28 rest in the angle of member 24, to which they are applied in an appropriate manner, as by cementing, and an angular member 29 of the transparent material may be used at the joint for a reinforcement.

In the particular form shown the transparent sheet 28 is decorated to simulate a multiplicity of panes of glass, this being done by applying intersecting lines of white paint to the sheet, as indicated at 30 and 31. The striping 30, 31 is preferably applied to the inner surface of the sheet 28. The tray portion may be painted exteriorly to represent brick work.

From the foregoing it will be understood that the device is readily portable and that the tray affords a body section defining a planting space in which soil is held in a body or in flower pots or otherwise, such planting space being rendered accessible by the swinging of the upper transparent enclosure to its open position. When the upper structure is swung on its hinges to the position shown at the right of Fig. 4, the tray is fully accessible for planting seeds therein and for watering flowers and cultivating the soil in the tray. For carrying on these operations it is highly desirable that the tray be entirely unobstructed from above, and by my invention this result is satisfactorily accomplished, inasmuch as the upper structure can be moved to a position in which it lies to one side of the tray and does not overhang the same. Furthermore, I have provided a structure in which the transparent upper section when swung to the open position can be very firmly and satisfactorily supported. This will be evident from Fig. 4, from which it appears that in the open position of the upper section it rests on the table or the like on which the tray is supported, at one side of the tray, the engagement being between the curved portions of the members 24 and the table. The hinging of the upper section relatively to the tray also provides for ventilation of the plant-enclosing structure as a certain amount of air comes in between the upper edge of the tray and the lower edge of the transparent section, and if desired, small blocks 32 may be set in between the front edge of the transparent section and the front edge of the tray to provide for ventilation, as indicated by dotted lines in Fig. 4. Notwithstanding the fact that the tray is fully accessible for planting and like operations, there is provision for enclosing the plants so as to protect them from wind and so as to obtain the desired modification of the temperature.

Various changes can be made in the details of the structure without departing from the scope of the invention as defined in the claims. I have not attempted to describe all of the different embodiments, and for illustrative purposes have described only one embodiment in which the principles of the invention are employed.

What I claim is:

1. A toy such as described comprising a portable soil-holding body section having upstanding marginal walls defining a planting space, in combination with a covering section having translucent side and end walls and a translucent top wall, said covering section being movably connected to the body section so that the former

can be shifted to a position giving full access to the body section from above.

2. A toy such as described comprising a portable soil-holding body section having upstanding marginal walls defining a planting space, in combination with a covering section adapted to overlie and enclose said body section and having translucent side, top and end walls of a flexible non-shattering material, and means for mounting said covering section on the body section so that it is movable to a position giving full access to the body section from above.

3. A toy such as described comprising a portable body section having upstanding marginal walls, in combination with a transparent enclosing section provided with side, end and top walls, said last-named section being hinged to the body section and movable with relation to the body section to an open position to give full access to the body section from above, said enclosing section comprising a frame and transparent flexible sheet material mounted in said frame.

4. A toy such as described comprising a portable substantially leak-proof soil-holding tray, and a covering section hinged to said tray and having side, end and top walls and movable to an open position to give access to the tray and to provide ventilation, said covering section comprising transparent flexible sheet material constituting the greater part of the side, end and top walls thereof.

5. In a device such as described, a tray, a covering section therefor having side, end and top walls and including a frame having end members curved intermediate of their extremities so as to present side wall portions and top wall portions, and a sheet of transparent flexible material in said frame providing a side wall and a top wall and conforming to the curvature of said end members.

6. In a device such as described, a tray, a covering section therefor having side, end and top walls and including a frame having end members curved intermediate of their extremities so as to present side wall portions and top wall portions, and a sheet of transparent flexible material in said frame providing side walls and top walls and conforming to the curvature of said end members, said sheet extending from the lower edge of the section at one side thereof to the lower edge of the section at the opposite side.

7. In a device such as described, a covering section having side, end and top walls and including a frame having end members curved intermediate of their extremities on a gradual curve or fillet so as to provide an upright side wall portion and an inclined top wall portion running from the curved portion to a ridge, and a transparent flexible sheet mounted in the frame and presenting an upright side wall, a slanting top and a gradually curved portion in the zone where the side wall and top join each other.

8. A toy such as described comprising a tray having a flower pot holding shelf therein, and a hinged transparent covering section for the tray, said tray having a soil-holding trough spaced from said shelf.

9. In a toy such as described, the combination of a tray, a shelf in the tray having apertures therein, miniature flower pots in said apertures, and clips for holding the flower pots removably in position in the apertures.

10. In a device such as described, the combination of a soil-holding tray and a transparent

- covering section hinged to the tray and having side, end and top walls, said covering section having a closed position in which it overlies and rests on the upper margin of the tray and having an open position in which it rests on a table or other tray support rearwardly of the tray, said covering section having a curved zone extending lengthwise thereof at the juncture of the side wall and the top wall constituting a table-contacting portion.
11. In a device such as described, a sheet metal tray having upstanding marginal walls, a shelf set in and secured to said tray and having its upper surface substantially flush with the upper margin of the tray, said shelf being provided with a plurality of apertures, and a plurality of flower pots having collared upper ends projecting upwardly from the shelf and bodies disposed in and projecting downwardly through the respective apertures.
12. A toy comprising a light portable enclosure in which seeds are planted and plants grown, said enclosure adapted to be readily lifted and carried from place to place and to be used either outdoors or indoors and comprising in its construction a rectangular tray having upstanding marginal walls defining a space to contain soil in which seeds are sown, and a covering section having side, top and end walls, the greater part of the area of said covering section being formed of a flexible translucent non-shattering material, said covering section being unitarily related to the tray but movable with respect to the latter to give access to the tray from above.
13. A light portable enclosure in the nature of a toy in which seeds are planted and plants grown, said enclosure comprising in its construction a rectangular tray having upstanding marginal walls, a soil-holding trough in the space defined by said marginal walls, and a translucent covering section movable with relation to the tray to an open position to give full access to the latter from above and movable to a closed protecting position over the tray but unitarily related to the tray so that the tray and covering section are portable together.
14. A light portable enclosure in the nature of a toy in which seeds are planted and plants grown, said enclosure comprising in its construction a rectangular sheet metal tray having upstanding marginal walls defining a planting space, a pot-holding shelf within said planting space, a soil-holding trough within said planting space in substantially parallel relation to said shelf, and a covering section movable with relation to the tray to an open position to give full access to the latter from above and movable to a closed protecting position over the tray for closing the same against the entrance of air, said covering section having walls of flexible translucent sheet material.
15. A toy such as described comprising a light sheet metal body section having upstanding marginal walls defining a planting space, in combination with a covering section adapted to overlie and enclose said body section to close the same against the entrance of outside air but movable with relation to the tray to an open position to give full access to the tray from above, said covering section having side, top and end walls, said side, top and end walls being flexible and of a non-shattering character and translucent.
16. In a toy such as described, the combination of a tray, a shelf in the tray having apertures therein, miniature flower pots having collars engaging the shelf at the upper surface thereof and body portions extending downward into the apertures, and metallic clips in the apertures having bendable portions engaging the rims of the flower pots for holding the pots removably in position in the apertures.
17. In a device such as described, a tray having upstanding marginal walls, a shelf set in and secured to said tray and having a plurality of apertures therein, a plurality of flower pots having collared upper ends projecting upwardly from the shelf and bodies disposed in and projecting downwardly through the respective apertures, and a covering section comprising transparent flexible sheet material adapted to close the tray against the entrance of outside air.
18. In a device such as described, a tray having upstanding marginal walls, a shelf set in and secured to said tray, a soil-holding trough in the tray in substantially parallel relation to said shelf, said shelf being provided with a plurality of apertures, a plurality of shouldered flower pots engaging said apertures, and a hinged covering section for said tray comprising translucent material.
- ALFRED C. GILBERT.

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