E. A. VELDE.

GARDENING FRAME.

APPLICATION FILED FEB. 18, 1918.

1,268,649.

Patented June 4, 1918.

FIG. 1.

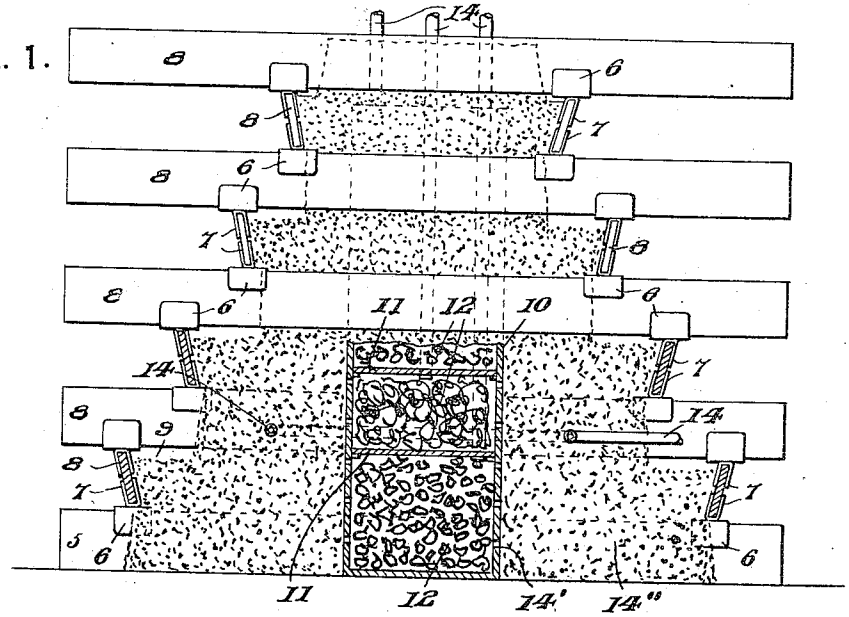


FIG. 2.

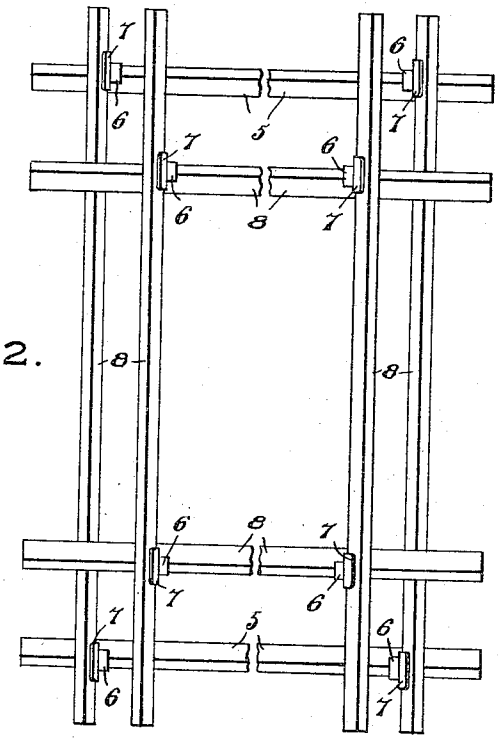


FIG. 3.

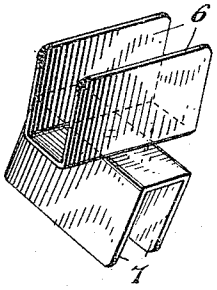
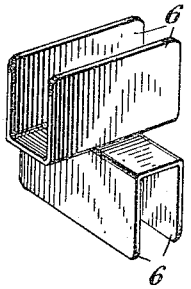


FIG. 4.



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GARDENING-FRAME.

1,268,649. Specification of Letters Patent. Patented June 4, 1918.

Application filed February 18, 1918. Serial No. 217,806.

To all whom it may concern:

Be it known that I, ERNEST A. VELDE, a citizen of the United States, residing at Cedar Rapids, in the county of Linn and State of Iowa, have invented certain new and useful Improvements in Gardening-Frames, of which the following is a specification.

My invention has for its primary object the provision of improved means for holding earth, especially adapted for use where space is limited, and provides means, under such conditions, for greatly increasing the amount of planting surface.

It is another object to provide means for facilitating the free circulation of air in and around plants grown in the frame.

It is a still further object of the invention to provide an earth holding frame so constructed as to enable easy and dependable means to be adapted thereto for the fertilization, irrigation and heating of the earth within the frame, when desired.

It is a further object of the invention to provide an earth holding frame that may be readily set up so as to provide varying sized spaces on the different sides of the frame, in order that different plants, requiring more or less sun, may be conveniently accommodated in the frame.

Other objects of the invention will hereinafter more fully appear as the invention is described in detail, and in such description reference will be had to the accompanying drawings wherein the practical embodiment of the invention is shown, it being understood that other arrangements may be readily made in the practice of the invention without departing from the spirit and scope thereof as claimed.

In the accompanying drawings:

Figure 1 is a view partially in side elevation and partially in section of a built-up earth holding frame in accordance with my invention;

Fig. 2 is a top plan view of a frame in accordance with this invention, the earth supporting means at two sides of the frame being broken away, the view showing only two supports at each side;

Fig. 3 is a perspective view of one form of the side board holding means; and

Fig. 4 is a similar view of another form.

Assuming that it is desired to set up a frame in rectangular or square form, I proceed to make the same as follows: Two boards as 5, of any desired length and width, are set up on the ground or other support, in parallel spaced relation, and near each end of each side board thus provided there is placed a corner piece or holder of the form shown in Fig. 3 or Fig. 4, or other form of corner piece which will accomplish the purpose thereof. As here shown, this corner piece or holder is in the form of two metal clamps as 6 secured together back to back at right-angles to each other. These corner pieces or holders may have one of the clamps inclined with respect to the other as shown for clamp 7 in Fig. 3, or both clamps may be at direct right-angles to each other as shown for the two clamps 6 in Fig. 4. In Fig. 1 the form of clamp shown in Fig. 3 is employed, and assuming the employment of this form of clamp, the member 6 is placed over the top edge of the boards 5, and the member 7 receives the edge of superposed boards 8, the member 7 of the succeeding clamp matching with member 7 of the preceding one, and member 6 of such succeeding clamp receiving the succeeding board extending at right-angles to board 8. In this manner a series of tiers are built up as shown in Fig. 1, providing planting spaces 9 for the plants that are to be placed entirely around the frame on the four sides thereof. The inclination of one or both of the clamps of the corner piece or holder is for the purpose of providing for the inclining of the boards 8, as such arrangement greatly increases the planting space 9, and also prevents the volume of earth above from settling and packing the earth too hard in the lower boxes. Although as here shown the corner pieces or holders are made from sheet metal, it will be obvious that any spider construction which might be cast or otherwise formed, but having two clamps disposed with their open faces in opposite directions and the clamps extending at right-angles to each other would be the full equivalent of the sheet metal corner piece shown.

By the provision of the superposed planting boxes or spaces as in Fig. 1, these being in a rectangular, square, or similar form, means for fertilization, irrigation, and even for heating of the superposed boxes may readily be had.

With the structure as here shown, there may be arranged in the center of the frame, or at any point desired, a box as at 10, ex-

tending any desired height, and if desired, provided with partitions 11 to form a compartment for each box or bed, and in these compartments may be placed any desired nature of fertilizing material 12, and to each compartment a pipe 14 may be led for conducting water thereto which will escape from the compartment through apertures 14′ into the mound 14″. By providing a separate pipe 14 for each compartment, any bed or box of the superposed series may be irrigated irrespective of the others.

By providing a series of superposed beds or independent planting boxes, it is possible also to extend into the mound, at any desired point, a heating pipe 14 through which steam or if desired warm water may be conducted to the mound for the purpose of inducing germination or the like.

In practice, the corner pieces or holders have each clamp made of sufficient length so as to securely hold the side boards against tipping, and as the corner pieces or holders in successive boxes come closer to the center of the side boards, the complete arrangement of boxes is frusto-conical, that is, the boxes decrease in size from the bottom to the top of the frame.

It will be obvious that by the superposed relation, material increase is had in the planting area, since the combined planting area of the boxes 9, where a series of the same are built up as shown in Fig. 1, is materially greater than the planting area covered by the frame.

The form of clamp shown in Fig. 4 acts in the same manner as that shown in Fig. 3, and illustrated in working position in Figs. 1 and 2, but does not provide for the inclining of the side boards as does the clamp which has one member thereof at an inclination as clearly illustrated in Fig. 1.

It will be observed that while the plants are placed around the sides of the mound formed by superposing the series of beds, yet with the interior of the frame filled with earth, there is provided much room for root growth, and the growth of the plant may be greatly facilitated by fertilizing in the manner shown and described.

What I claim is:—

1. A gardening frame including crossed pairs of side and end boards arranged in rectangular form and alternately superimposed one above the other in edgewise relation, and corner pieces in the form of clips, each having means engaging and holding a side and an end board outwardly inclined and substantially at right angles to each other.

2. A gardening frame including crossed pairs of side and end boards arranged in rectangular form and alternately superimposed one above the other in stepped relation, and corner pieces in the form of clips, each having means engaging and holding a side and an end board substantially at right angles to each other.

3. A corner piece for operatively supporting the side and end boards of a gardening frame of the form described including two rigidly connected clamps disposed at right angles to each other and having oppositely extending inclined jaws to receive and retain a side and an end board of the frame in outwardly inclined edgewise relation and at right angles to each other.

4. A gardening frame including alternately superimposed pairs of side and end boards arranged in crossed edgewise relation substantially at right angles to each other and in stepped rectangular form, and means to retain said side and end boards in operative position.

5. A knock-down gardening frame including alternately superimposed pairs of side and end boards arranged in crossed edgewise relation substantially at right angles to each other and in stepped rectangular form, and a plurality of clips at each corner of the frame, each engaging one end and one side board, to adjustably and detachably retain said side and end boards in operative position.

6. A corner clip for gardening frames of the form described including two channel members connected at their bases and disposed substantially at right angles to each other, the spaced sides of each of said channel members being substantially flat and parallel to each other throughout their length and height.

7. The combination with a gardening frame of the class described, of a combined fertilizing and irrigating device therefor including a box having perforated sides and divided into superimposed fertilizer containing compartments by horizontal partitions, and means to supply water to said compartments.

In testimony whereof I affix my signature.

ERNEST A. VELDE.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."