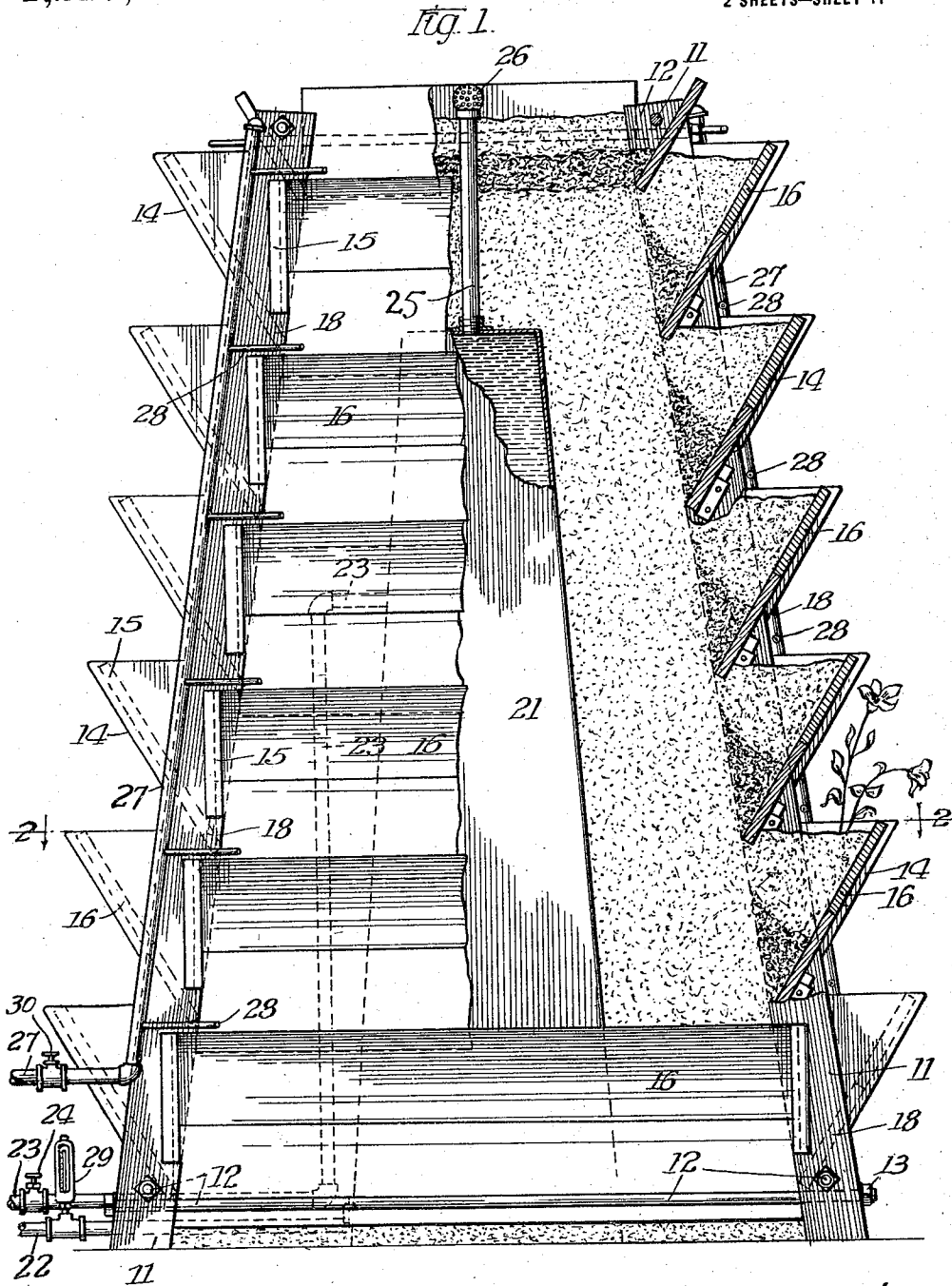


J. SWARTZ.
VEGETATIVE DEVICE.
APPLICATION FILED JAN. 5, 1916.

1,217,239.

Patented Feb. 27, 1917.
2 SHEETS—SHEET 1.



witnesses:
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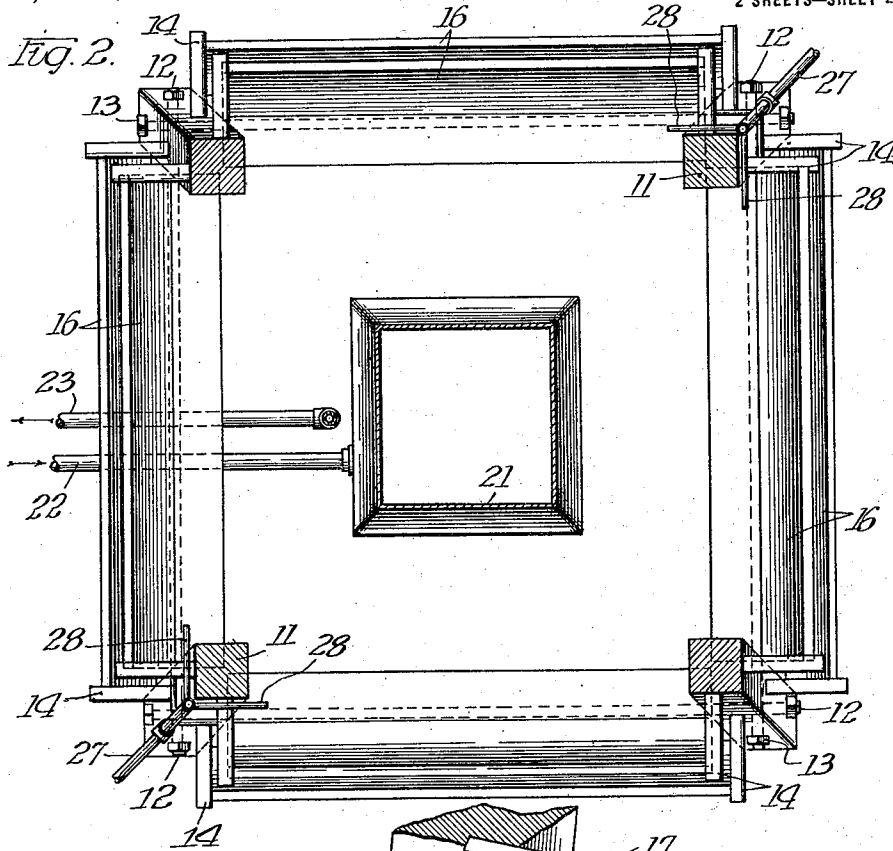
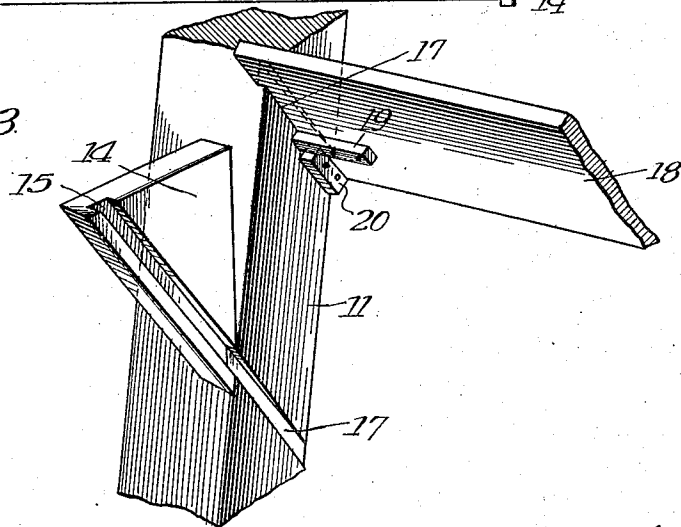


Fig. 3.



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UNITED STATES PATENT OFFICE.

JAMES SWARTZ, OF THOMPSON FALLS, MONTANA.

VEGETATIVE DEVICE.

1,217,239.

Specification of Letters Patent.

Patented Feb. 27, 1917.

Application filed January 5, 1916. Serial No. 70,372.

To all whom it may concern:

Be it known that I, JAMES SWARTZ, a citizen of the United States, residing at Thompson Falls, in the county of Sanders and State of Montana, have invented certain new and useful Improvements in Vegetative Devices, of which the following is a specification.

This invention relates to improvements in vegetative devices and has for its objects to provide a construction that will cause plant life to grow rapidly in a temperate climate; to provide a device that can be readily taken down to permit the change of soil and to refertilize the same; to provide a device that is watered from both the top and sides; and in general, to provide an improved device of the character referred to.

The invention will be more clearly understood from the following description, reference being had to the accompanying drawings, in which—

Figure 1, is an elevation, partly in section; Fig. 2, is a section on line 2—2 of Fig. 1; and

Fig. 3, is a portion of one of the corner posts showing the method of attaching the vanes.

In the preferred form of my invention as shown in the drawings, 11 designates four corner posts. These corner posts are set at an incline so that they are nearer together at the top than at the bottom. Tie rods 12 pass through the posts near the top and bottom for holding the posts in position and are provided with nuts 13.

Secured to two sides of each post 11 are a plurality of angular shaped pieces 14. These pieces are secured to the sides that face outwardly and are provided with slots 15, as shown in Fig. 3. Located in these slots 15 are rectangular flat shaped outer vanes 16.

After the posts are set up and secured together by the rods 12 the vanes 16 are slipped in place. The posts have slots 17 cut in their inwardly facing sides. Secured in these slots are inner vanes 18. These vanes are prevented from inner and downward movement by means of a pair of blocks 19 and 20, one pair for each inner vane. Blocks 19 being secured to the side of the vanes 18 and blocks 20 being secured to the posts 11 as shown in Fig. 3. This is a

convenient means of holding the vanes 18 in place. When these inner vanes have been placed in the slots and are resting against the blocks 20 the outer vanes 16 are slipped into their proper slots 15 and rest on the inner vanes 18. By this arrangement the outer vanes may be removed without disturbing the inner vanes.

Located within the interior of the devices is a water tank 21. This tank has an inlet pipe 22, and an outlet pipe 23 provided with a valve 24. The tank also has an outlet pipe 25 to the upper end of which is secured a sprinkler head 26. Secured to posts on opposite corners of the devices are pipes 27 which extend nearly the entire height of the device. Located in these pipes are small branch pipes 28. These small pipes 28 enter pipe 27 at right angles to each other.

The interior of the device is filled with soil. Fertilizer is then placed in the vanes filling the bottom portion thereof. Soil is then placed on top of this fertilizer.

Heated water is forced through pipe 22 into tank 21 until the tank is filled. A thermometer 29 is provided to determine the temperature of the water entering the tank.

When it is desired to water the soil, water is let into pipes 27 on either corner, the pressure being sufficient to force the water out through the branches 28 far enough to water all the soil in that particular vane. This pipe is provided with a valve 30 for regulating the flow therethrough. Auxiliary watering device 26 also waters the device. This sprinkler is connected directly to the heated water so that the temperature of the soil sprinkled thereby may be raised. This watering also causes the fertilizer to seep downwardly through the soil.

It will be observed from the above description that the outside vanes 16 can be readily removed. Also that the inside vanes may be removed when necessary. The purpose of these removable vanes is that when the soil needs refertilization the outer vanes, and inner vanes when necessary, may be taken out and the soil permitted to drop down and then mixed with fertilizing material. The vanes are then inserted and the refertilized soil again placed in the vanes.

It will be obvious that the details of construction may be varied more or less without departing from the scope of the invention

as set forth in the broader of the claims. I do not wish to be limited to the details of construction.

What I claim is:

5 1. In a device for promoting the rapid growth of plant life, the combination of a frame, comprising a plurality of uprights, means for securing said uprights together, inner and outer vanes removably secured be-
10 tween said uprights, and a heating and irrigating system for said device.

2. In a device for causing the rapid germination of plant life comprising a plurality of uprights having slots therein, remov-
15 able vanes secured in said slots between two adjacent uprights forming a frame whereby the soil may be changed and conditioned, means for securing the uprights together and a heating and irrigating system located
20 in said frame.

3. A vegetative device, comprising a plurality of corner posts, inner vanes removably secured between each pair of said posts, tie rods for securing said posts together,
25 outer vanes secured on the exterior faces of said posts and resting on said inner vanes, means for securing said inner vanes against displacement and a heating element located in the space inclosed by said vanes and posts.

4. A vegetative device, a plurality of posts, vanes secured to said posts, means for secur-
30 ing said posts together to form a space adapted to receive soil, a tank located in said space, an inlet and a plurality of outlets for said tank, one of said outlets being located
35 near the top of the device and a watering device located at opposite corners of the device.

5. A vegetative device, a plurality of posts, vanes secured to said posts, means for
40 securing said posts together to form a space adapted to receive soil, a tank located in said space, an inlet and a plurality of outlets for said tank, one of said outlets being located near the top of the device, a watering device

located at opposite corners of the device and
45 means for causing water to circulate through and around said soil.

6. In an apparatus for forcing the develop-
ment of plants, comprising a plurality of uprights, vanes secured to said uprights, 50 means for securing said uprights together to form an inclosure capable of holding soil, a water tank, an inlet and a plurality of outlets therefor, one of said outlets being lo-
cated above the water tank, the other of said 55 outlets being provided with a shut off whereby heated water contained in said tank may be forced out through said first mentioned outlet and thereby deposited on the soil within the inclosure to raise the temperature 60 thereof, and a secondary watering device associated with the uprights and vanes for moistening the soil.

7. In a device for promoting the rapid germination and growth of plant life, com- 65 prising a plurality of uprights, inner vanes removably secured between two adjacent uprights, means for securing said uprights together, outer vanes secured to the exterior of
said uprights and resting on said inner 70 vanes, means for securing said inner vanes against displacement, and a heating and irrigating system located in the space formed by said uprights and vanes.

8. In a device for causing the rapid ger- 75 mination and growth of plant life, a frame comprising a plurality of uprights, vanes located between adjacent uprights, means associated with said uprights and said vanes for holding said vanes so that they may be 80 readily removed whereby the soil may be changed and conditioned, means for securing said uprights together, and a heating and irrigating system associated with said frame.

JAMES SWARTZ.

Witnesses:

CHAS. T. WEST,
BEN F. MASON.

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