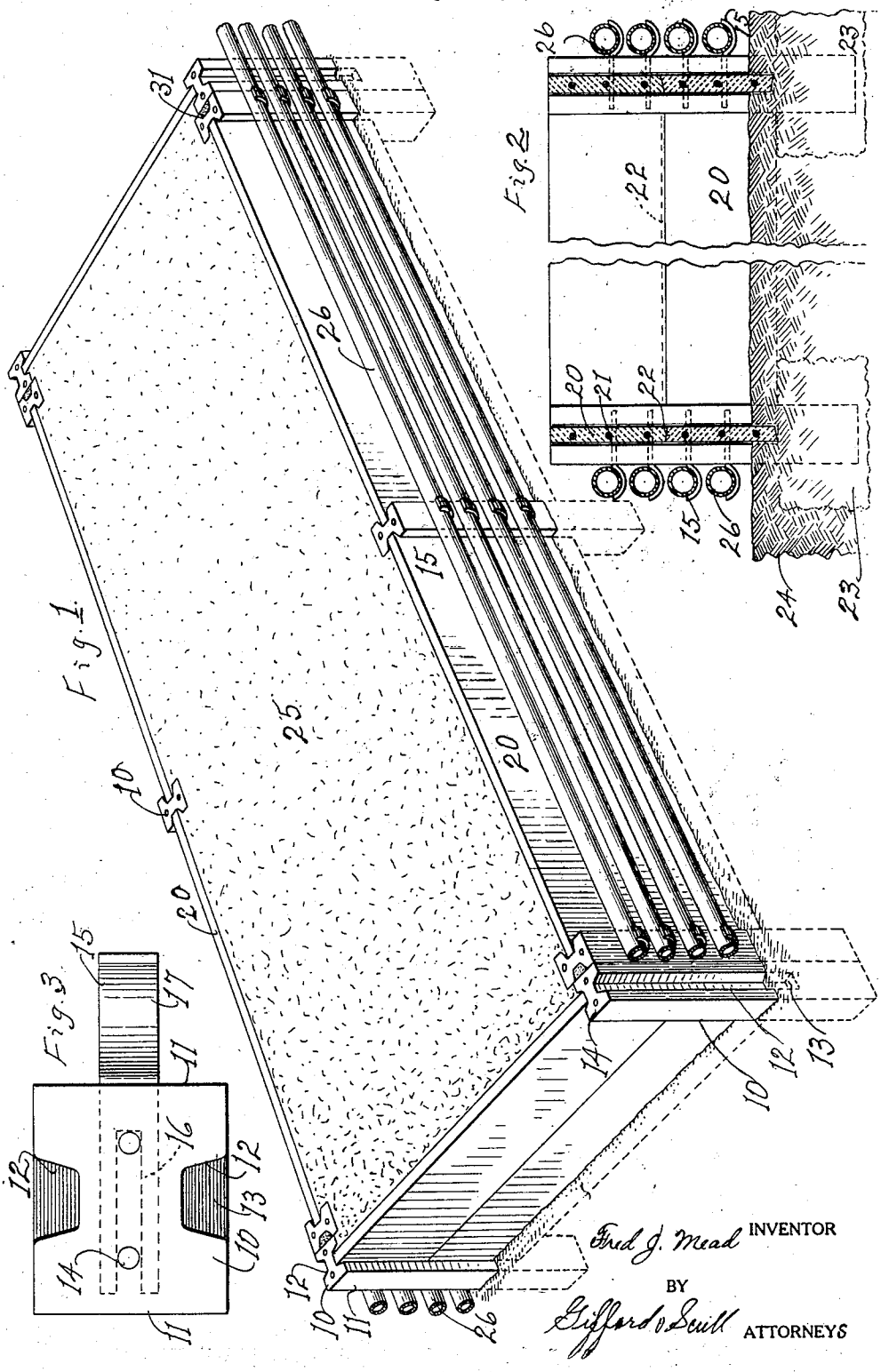
June 3, 1930. F. J. MEAD 1,761,796

GREENHOUSE BED

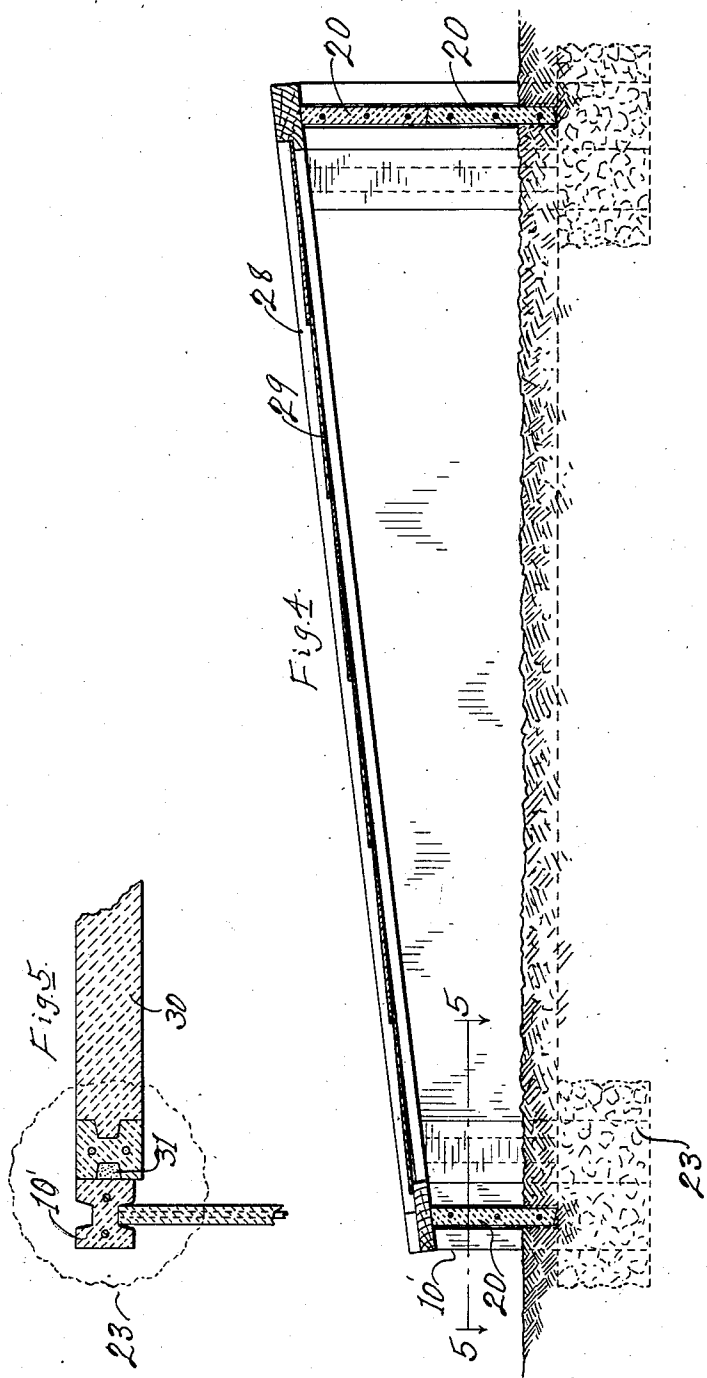
Filed Sept. 21, 1925 2 Sheets-Sheet 1



June 3, 1930. F. J. MEAD 1,761,796

GREENHOUSE BED

Filed Sept. 21, 1925 2 Sheets-Sheet 2



Fred J. Mead INVENTOR

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UNITED STATES PATENT OFFICE

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GREENHOUSE BED

Application filed September 21, 1925. Serial No. 57,496.

This invention relates to a greenhouse bed, especially adapted for hothouse purposes, which can be very readily and conveniently installed and can also be disassembled without difficulty. It relates especially to a device of this character that is made up of parts which can be manufactured in quantity without requiring an inordinate amount of equipment, as the parts which make up the bed partake of only a small variety of shapes that can be manufactured wherever convenient and shipped in a disassembled conditon.

In carrying out this invention, the parts that make up the greenhouse bed can be rapidly assembled in such a manner that they will be securely held together and danger of spreading or getting out of position will be avoided. At the same time the bed in which plants or the like may be started, is rendered rodent and vermin proof, the bed is economical of space, air may be excluded from entering the sides thereof, the bed can be heated in such a manner that the proper condition of warmth and moisture can be maintained, and the bed may be changed into a greenhouse bench with very little trouble.

My invention will be understood from the description in connection with the accompanying drawings, in which Fig. 1 is a perspective view of an illustrated embodiment of the invention; Fig. 2 is a sectional end view of the same; Fig. 3 is a plan view of one of the parts; Fig. 4 is a longitudinal section of a modification; and Fig. 5 is a horizontal section along the line 5—5 of Fig. 4.

In the drawings, reference character 10 indicates a post which may be made of reinforced concrete. This post is rectangular in cross section and is provided with longitudinal grooves 12 that are preferably flaring outwardly on opposite sides of the posts and the other sides are made with flat faces, as indicated at 11. The grooves 12 extend from one end and terminate at 13 short of the other end at such a distance as to indicate the proper depth to which the posts are to be imbedded in the ground. The posts are reinforced by means of metal rods 14 and may be used both as side posts and as corner posts, two of the same preferably being used in proper assembled relation, that is, with the grooved side of one contacting with the smooth or ungrooved side of the other, to form the corners of the bed. The posts which are placed along the sides of the bed are provided with metal supports 15 for heating pipes 26. These supports may be imbedded in the concrete as the posts are being formed so that the bifurcated portions 16 extend on either side of the reinforcing rods 14, as shown in Fig. 3.

Boards 20 which may be made of any appropriate material, preferably reinforced concrete, form the sides and ends of the bed, as shown in Fig. 1, extending from a groove 12 in one post 10 to a groove 12 in an adjacent post. These boards 20 when made of concrete are reinforced by reinforcing rods 21 and the boards are preferably provided with bevelled edges, as shown at 22, although the topmost boards of the bed may be made with their upper edges square.

In installing the posts it would be preferable to install the same in blocks of concrete 23, which are imbedded in the earth 24 at sufficient depth to permit the lower ends of grooves 12 and the lower edges of the boards 20 to extend sufficiently below the surface of the earth to prevent rodents or vermin from entering. The beds may be made as long as desired by installing posts 10 and the boards 20 in line with each other, and the width of the bed may likewise be varied. Although the bed illustrated is shown as being rectangular, it is obvious that the beds may be made in other polygonal shapes in a similar manner, as flaring grooves 12 permit the boards 20 to be assembled in relation to the posts 10 at angles other than a right angle. By installing the pipes 26, as indicated in the drawings and passing heating fluid therethrough, the beds can be kept warm, and as the pipes do not contact with the side walls, danger of over-heating is obviated. By having the edges of the boards 20 below the surface of the earth and having their beveled edges fitting together as indicated in the drawings, air can be prevented from entering and drying out the moisture too rapidly.

In the modification shown in Figs. 4 and 5, the bed is made so that a sloping roof can

be laid on the top thereof and a glass top can be used for admitting heat from the sunshine and retaining the same in the bed. In this modification the posts 10′ are preferably made with their tops sloping slightly, the posts for one end of the bed being made longer than those for the other end. A frame 28 for the glass 29 is installed along the top side of the bed, as shown, the side walls having been made by first providing forms extending between posts on the side and pouring concrete in these forms, this concrete being shown at 30. Earth or equivalent material 31 may be introduced into the space left by one of the grooves where two posts come together at a corner.

The bed can be converted into a greenhouse bench elevated above the ground simply by placing beams across the tops of the posts and laying on bottom slabs and side slabs as shown in my prior Patent No. 1,296,684. This is sometimes desirable when the user desires to change from plants that are grown in beds to plants that are grown on benches somewhat elevated above the ground. In making this change the side pieces of the bed can be used as bottom pieces of the elevated bench.

Instead of placing beams across the top of the pieces as just described to make green house benches, beams may rest upon shoulders provided along one side of the posts at the proper height from the ground, or the beams may simply rest upon blocks to raise them above the ground. The side walls of the benches can be made by retaining the side boards in the grooves in the posts with a small block of proper length resting in the lower portions of the groove to retain the side pieces at the proper height. In this way, good drainage and circulation under the full length of the bench can be obtained.

In case it is desirable to conduct heat to the lower side of the bench this may be done by removing a side board near the bottom of the bench thus making an opening into which the heat can pass. By removing boards on both sides of the bench opposite each other a draft of hot air can be caused to pass through the soil in the bench. The upper boards can be held in position by blocks in the lower portion of the groove as above described.

It will be evident from the description that a green house bed made according to this invention can be used at a great saving in time, material and space. The side and end walls being made of reinforced concrete can be made thin, thereby saving material, and they can be slipped in and out of place very readily. By having the walls thin more space is left for plants. By previously making the pieces and having the same ready to be assembled the bed can be constructed very much more readily than if it were necessary to pour the concrete and wait for the same to harden. Solid beds of concrete that are poured in situ have to be destroyed when taken up, while the pieces from the torn up bed made in accordance with the present invention can be used again.

The posts may be made longer than necessary so as to extend above the sides of the bed of usual depth, so that whenever it is desired to increase the depth, the user can insert more boards in place in the grooves of the posts and then fill the bed with soil to the proper depth.

Changes may be made in the details of construction and in the arrangement of the parts above described without departing from the spirit of my invention.

I claim:—

In a polygonal framework, a set of similar posts having longitudinal grooves along opposite sides thereof, a set of duplicate boards, some of said posts being installed with the grooved side of one in contact with an ungrooved side of another one and with others spaced apart with the grooves of successive posts facing each other, said boards extending from the groove of one post to that of another.

FRED J. MEAD.