

M. WINANDY.
BENCH FOR GREENHOUSES.
APPLICATION FILED JULY 24, 1911.

Patented Apr. 9, 1912.
2 SHEETS—SHEET 1.

1,022,616.

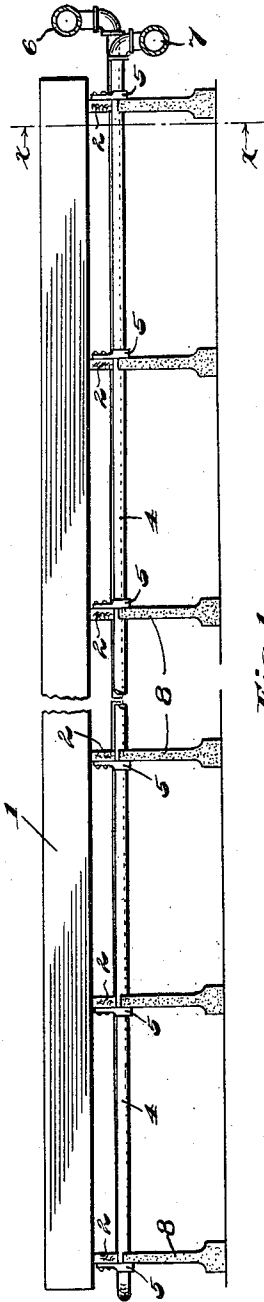


Fig. 1.

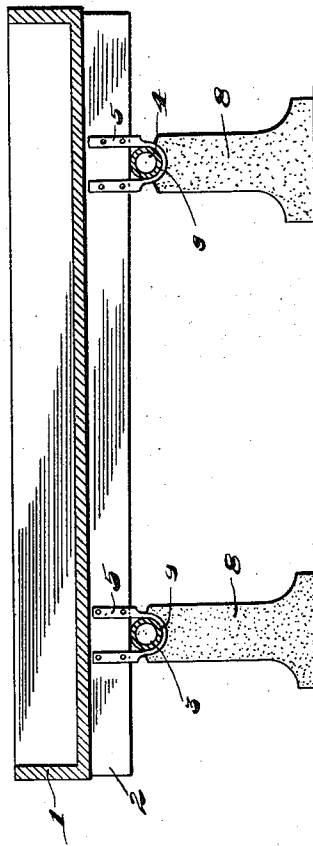


Fig. 2.

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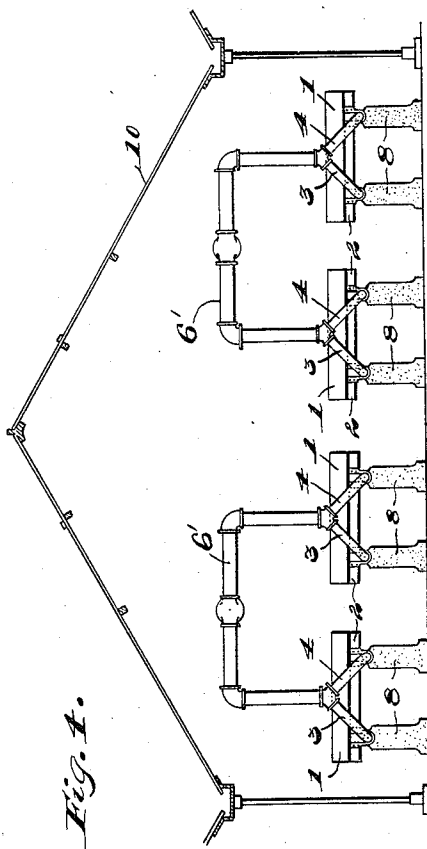
Michael Winandy,

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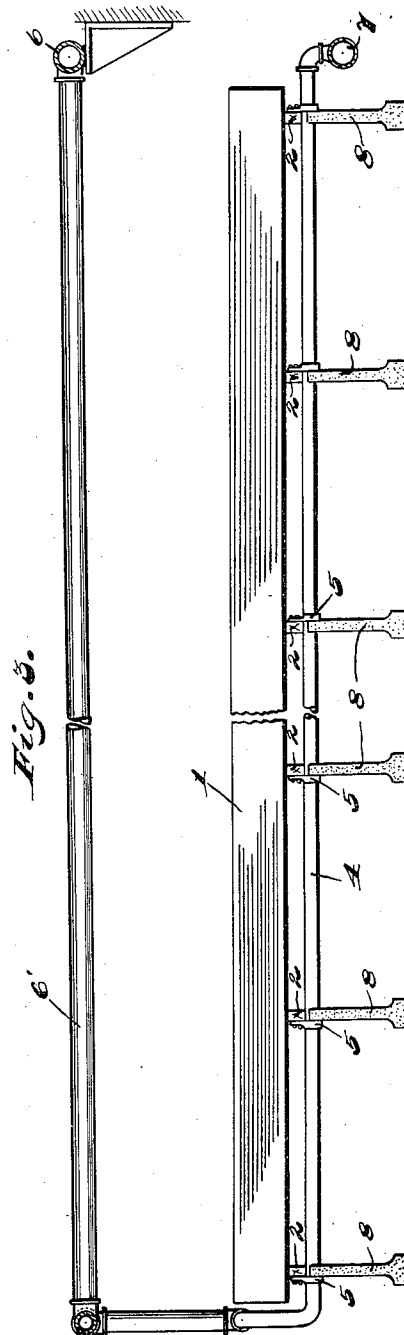
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UNITED STATES PATENT OFFICE.

MICHAEL WINANDY, OF CHICAGO, ILLINOIS.

BENCH FOR GREENHOUSES.

1,022,616.

Specification of Letters Patent.

Patented Apr. 9, 1912.

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To all whom it may concern:

Be it known that I, MICHAEL WINANDY, a citizen of the United States, and a resident of the city of Chicago, county of Cook, and State of Illinois, have invented certain new and useful Improvements in Benches for Greenhouses, of which the following is a specification.

My invention relates to improvements in benches for hot houses or florists' benches and has for its object the production of a construction which shall be economical by reason of the peculiar and novel means of supporting the heating pipes, and which shall be of high efficiency in operation.

Other objects will appear hereinafter.

With these objects in view my invention consists in the combinations and arrangements of parts hereinafter described and claimed.

My invention will be best understood by reference to the accompanying drawings forming a part of this specification, and in which,

Figure 1 is a side elevation of a florist's bench embodying my invention, Fig. 2 is a transverse section taken on line $x-x$ of Fig. 1, Fig. 3 is a view similar to Fig. 1 showing a slightly modified arrangement of the heating pipes, and Fig. 4 is a transverse section of a green house equipped with benches embodying the invention and showing the heating pipes arranged in the manner illustrated in Fig. 3.

The preferred form of my construction as illustrated in Figs. 1 and 2 of the drawings comprises the dirt bed support 1 which is of the usual form and construction, no claim being made to the specific construction of the support. The dirt bed support 1 is mounted upon cross pieces 2 which are secured at intervals upon the under side or bottom thereof, said cross pieces being supported upon the heating pipes 3 and 4 which extend under the member 1 longitudinally thereof. The cross pieces 2 and hence the member 1 are rigidly secured to the pipes 3 and 4 by means of straps 5, the extremities of which are secured to said cross pieces, the central portions thereof extending under said pipes as clearly shown in Fig. 2. One end of the pipe is connected as shown with the inlet or hot water supply pipe 6 which in turn extends to the boiler, or any other source of hot water supply, the correspond-

ing end of the pipe 4 being connected with the return pipe 7 which is arranged adjacent the pipe 6 but slightly below the same; the opposite ends of the pipes 3 and 4 being connected with each other. The pipe 3 as will be observed is inclined slightly downwardly from the pipe 6 and the pipe 4 is inclined downwardly toward the pipe 7 thereby facilitating the flow of water through said pipes; the course of circulation evidently being from the pipe 6 downwardly through the pipe 3, thence to the pipe 4 which discharges into the return pipe 7. The heating pipes 3 and 4 are supported at intervals upon concrete legs or posts 8, the upper ends of said posts being recessed as at 9 for the reception of said pipes as will be readily understood.

In Figs. 3 and 4 the general construction, that is the construction of the bench same as shown in Figs. 1 and 2 just described, corresponding reference characters being therefore applied thereto. In Figs. 3 and 4, however, the pipes 3 and 4 both serve in the same capacity as the pipe 4, in the first described form, both pipes being connected at corresponding ends with the inlet or supply pipe 6 through the medium of the branch 6', the opposite ends of said pipes 3 and 4 both discharging into the return or outlet pipe 7 toward which the same are inclined. The green house in Fig. 4 is shown at 10.

With the construction set forth it will be observed that the heating pipes are supported directly upon the upper ends of the bench legs or posts, the dirt bed support or bench top being mounted upon said pipes. Thus with this construction additional means which are universally employed in florists' benches now in use for the supporting of the heating pipes are dispensed with, thereby conducing to simplicity and economy in the bench produced. And notwithstanding the omission of additional supporting means for the heating pipes the resulting construction possesses great rigidity and strength and is neat and finished in appearance. Moreover, the construction may be readily assembled and is of high efficiency in use. Also the method of heating, that is, the arrangement of the heating pipes relative to the supply and outlet pipes and to the dirt bed support is of high efficiency and is adapted to effect the perfect and uniform heating

thereby conducing to best results in the growth of the plants arranged in the dirt bed.

While I have illustrated and described the preferred form of construction for carrying my invention into effect, this is capable of variation and modification without departing from the spirit of the invention. I, therefore, do not wish to be limited to the precise details of construction as set forth, but desire to avail myself of such variations and modifications as come within the scope of the appended claims.

Having described my invention what I claim as new and desire to secure by Letters Patent is:

1. In a bench for florists and others, the combination of a dirt bed support; heating pipes supporting said dirt bed support; and legs supporting said pipes, substantially as described.

2. In a bench for florists and others, the combination of a dirt bed support; heating pipes supporting said dirt bed support and extending longitudinally thereof; and legs supporting said pipes, substantially as described.

3. In a bench for florists and others, the combination of a dirt bed support; and heating pipes supporting said dirt bed support, substantially as described.

4. In a bench for florists and others, the combination of a dirt bed support; heating pipes supporting said dirt bed support and extending longitudinally thereof; and legs supporting said pipes, said legs being recessed to receive said pipes, substantially as described.

5. In a bench for florists and others, the combination of a dirt bed support; cross pieces on the bottom of said dirt bed support; longitudinally extending heating pipes arranged under and supporting said dirt bed support, said pipes contacting with said cross pieces; and legs supporting said pipes, substantially as described.

6. In a bench for florists and others, the combination of a dirt bed support; cross pieces on the bottom of said dirt bed support; longitudinally extending heating pipes arranged under and supporting said dirt bed support, said pipes contacting with

said cross pieces; and legs supporting said pipes, said legs being recessed at their upper ends for the reception of said pipes, substantially as described.

7. In a bench for florists and others, the combination of a dirt bed support; heating pipes supporting said dirt bed support and extending longitudinally thereof; and legs supporting said pipes, said legs being formed of concrete and provided with recesses in their upper ends forming sides for said pipes, substantially as described.

8. In a bench for florists and others, the combination of a dirt bed support; cross pieces on the bottom of said dirt bed support; longitudinally extending heating pipes arranged under and supporting said dirt bed support, said pipes contacting with said cross pieces; means rigidly connecting said cross pieces and said pipes; and legs supporting said pipes, substantially as described.

9. In a bench for florists and others, the combination of a dirt bed support; cross pieces on the bottom of said dirt bed support; longitudinally extending heating pipes arranged under and supporting said dirt bed support, said pipes contacting with said cross pieces; straps extending under said pipes and connected with said cross pieces; and legs supporting said pipes at their upper ends, substantially as described.

10. In a bench for florists and others, the combination of a dirt bed support; two heating pipes supporting said dirt bed support and extending longitudinally thereof, one end of one of said pipes being connected with the hot water inlet pipe, the corresponding end of the other of said pipes being connected with the outlet pipe, the opposite ends of said pipes being in communication with each other; and legs supporting said heating pipes, substantially as described.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

MICHAEL WINANDY.

Witnesses:

JOSHUA R. H. PORTS,
W. C. SMITH.