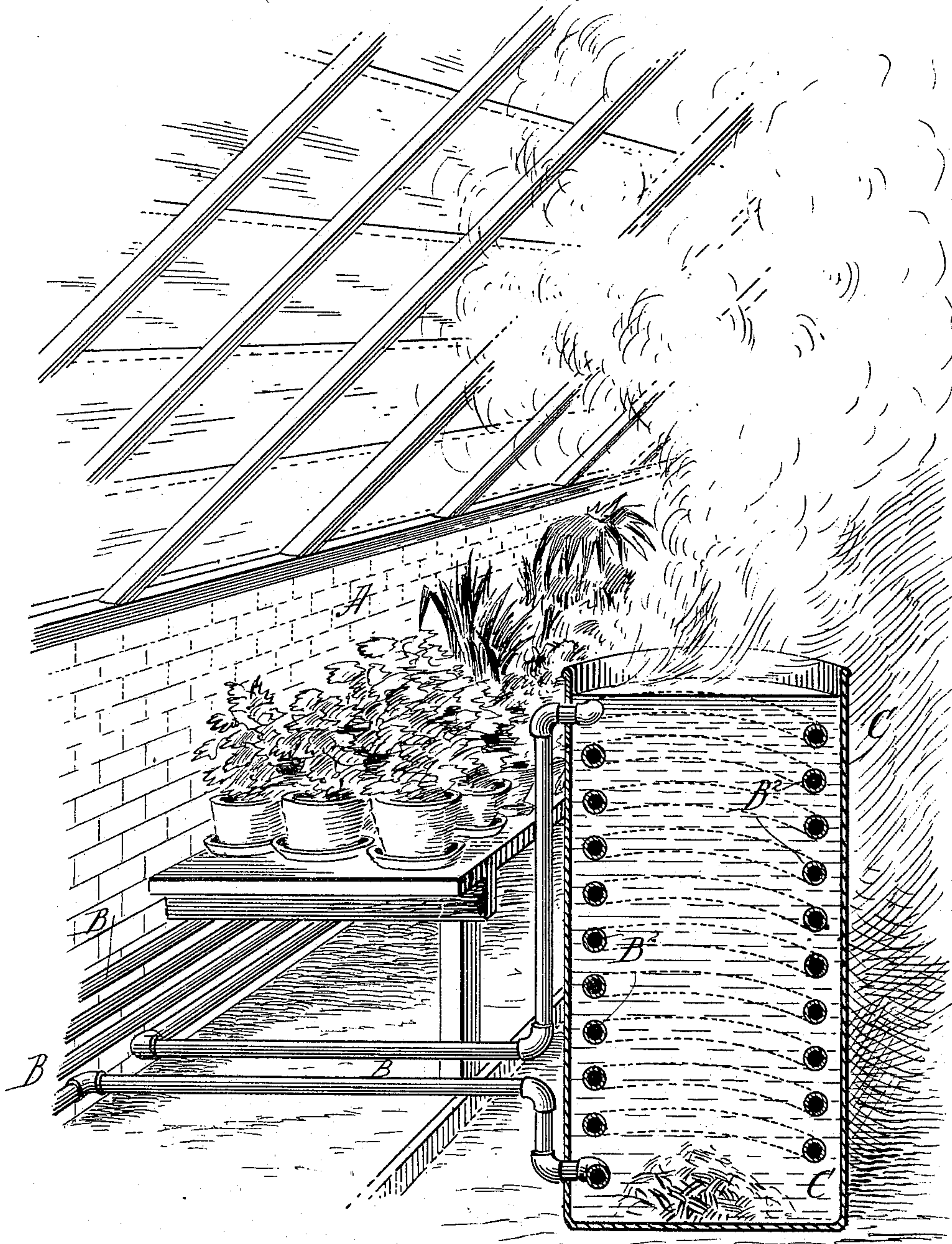


(No Model.)

N. S. CHAPMAN.
GREENHOUSE.

No. 566,443.

Patented Aug. 25, 1896.



Witnesses:

J. W. Garfield
H. D. Clemons

Inventor

Norman S. Chapman

by Chapman &
Attorneys

UNITED STATES PATENT OFFICE.

NORMAN S. CHAPMAN, OF SPRINGFIELD, MASSACHUSETTS.

GREENHOUSE.

SPECIFICATION forming part of Letters Patent No. 566,443, dated August 25, 1896.

Application filed February 2, 1895. Serial No. 537,083. (No model.)

To all whom it may concern:

Be it known that I, NORMAN S. CHAPMAN, a citizen of the United States of America, residing at Springfield, in the county of Hampden and State of Massachusetts, have invented new and useful Improvements in Greenhouses, of which the following is a specification.

The object of this invention is to improve greenhouses with respect to the provision therein of appliances, combined with the steam-heating equipments thereof, which will operate to create and disseminate vapors for the extermination of lice and other parasites on the plants.

The invention consists in employing in a greenhouse steam-heating circulation-pipes having comprised therein, as a continuous intermediate part thereof, a series of coils and a receptacle which is upwardly open and which incloses the coils and within which are placed water and tobacco-stems or other matter poisonous to the plant-vermin to be exterminated.

The improved greenhouse equipment is fully and clearly illustrated in the figure in the accompanying drawing.

In the drawing, A represents the general interior of a greenhouse, of which the steam-circulation pipes B are shown in part.

The coils B², comprised in a vertical bank and

as a part of the circulation-pipes, are suitably located and are surrounded by the tank or can C, which has a closed bottom and sides, except so far as to permit the connection of the ends of the uppermost and lowermost coils with the steam-pipes leading thereto and therefrom.

Water and tobacco-stems are placed in the tank, and the circulation of the steam through the pipes and coils induces a gentle simmering and steaming of the contents of the tank, the resultant vapors being disseminated throughout the greenhouse for the positive and effective extermination of the parasites on the plants.

Having thus described my invention, what I claim, and desire to secure by Letters Patent, is—

The combination with the steam-pipes B, of a greenhouse, of a subsidiary pipe-coil B², an evaporating-tank C, containing a liquid decoction, the vapor of which is poisonous to insects, and inlet and outlet pipe connections between said steam-pipes and coil, whereby heat is applied to said tank, and said poisonous vapor set free, substantially as described.

NORMAN S. CHAPMAN.

Witnesses:

WM. S. BELLOWS,
J. W. GARFIELD.