C. D. HITCHCOCK.

RECEPTACLE FOR CULTIVATING AND PRESERVING FLOWERS.

APPLICATION FILED SEPT. 22, 1912.

1,221,449.

Patented Apr. 3, 1917.

2 SHEETS—SHEET 1.

Fig. 1.

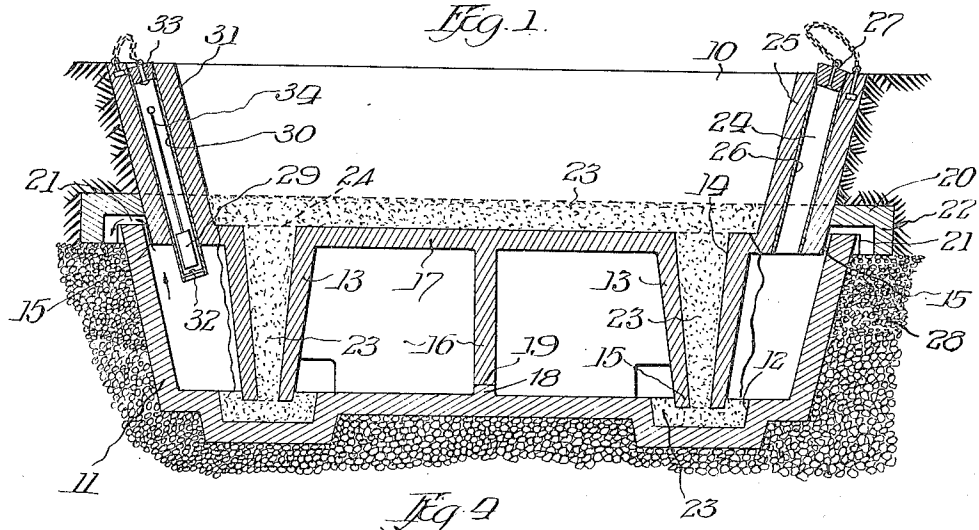


Fig. 4

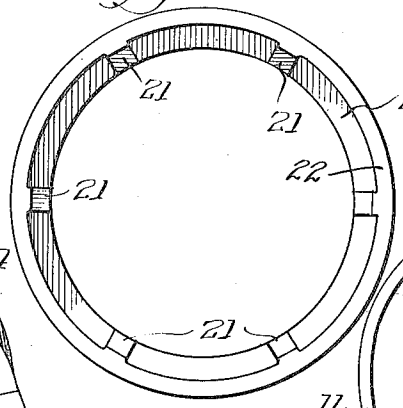


Fig. 2.

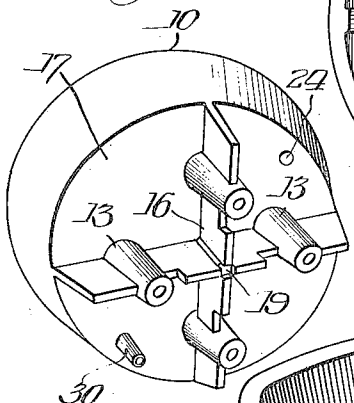


Fig. 3

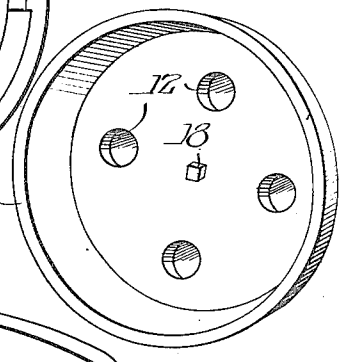
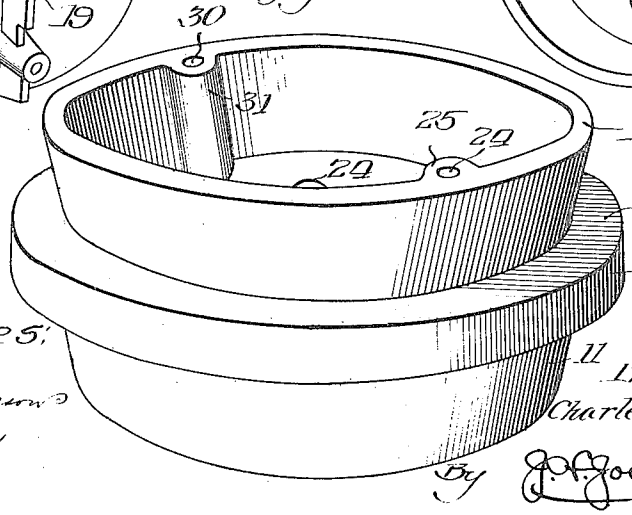


Fig. 5.



Witnesses:
Geo. C. Maxon
W. P. Kilroy

Inventor:
Charles D. Hitchcock
By J. F. Jochum & Co.
Attys.

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2 SHEETS—SHEET 2.

Fig. 6.

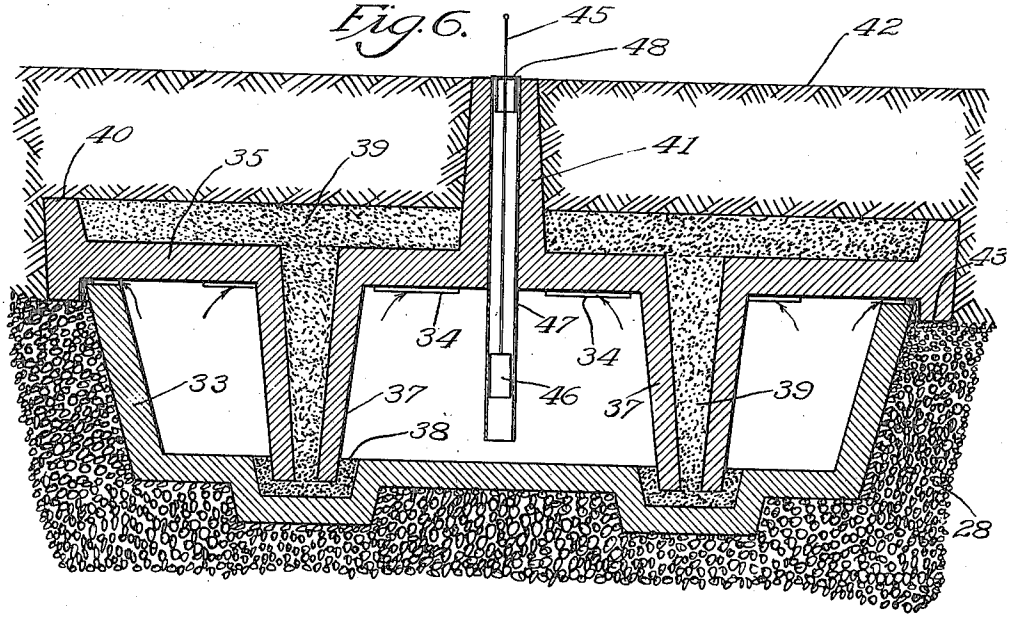


Fig. 7.

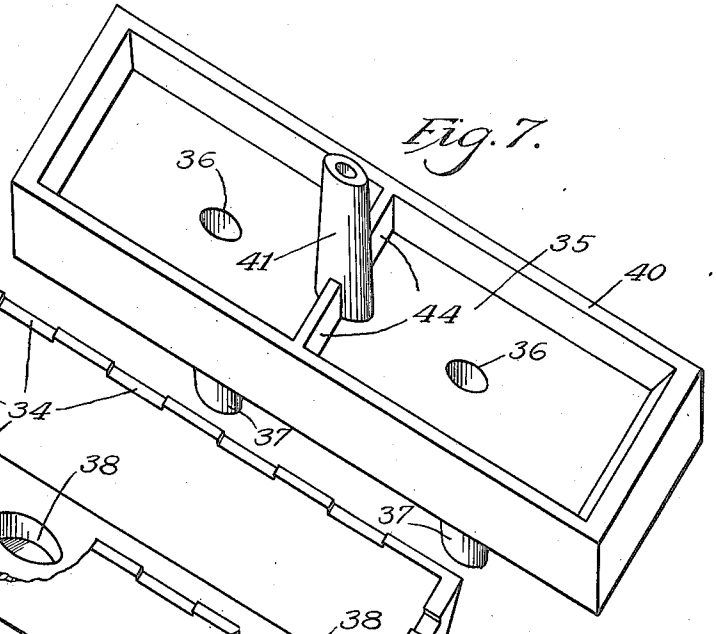


Fig. 8.

WITNESSES:

Channing L. Deutz.

Frederick W. Job

INVENTOR.

Charles D. Hitchcock

BY J. F. Jochum, Jr.

ATTORNEYS.

UNITED STATES PATENT OFFICE.

CHARLES D. HITCHCOCK, OF CHICAGO, ILLINOIS.

RECEPTACLE FOR CULTIVATING AND PRESERVING FLOWERS.

1,221,449. Specification of Letters Patent. Patented Apr. 3, 1917.

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To all whom it may concern:

Be it known that I, CHARLES D. HITCHCOCK, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Receptacles for Cultivating and Preserving Flowers, of which the following is a specification.

This invention relates to improvements in receptacles for cultivating and preserving flowers, and one of the objects of the same is to provide an improved, simple, durable and efficient device of this character adapted to contain a supply of liquid and having provisions whereby the liquid will be gradually supplied to the flower bed to keep the same moist as necessity requires.

A further object is to provide an improved device of this class having means whereby liquid may be supplied to the liquid receptacle or reservoir and also having means for indicating the quantity of liquid within the liquid receptacle or reservoir.

To the attainment of these ends and the accomplishment of other new and useful objects as will appear, the invention consists in the features of novelty in substantially the construction, combination and arrangement of the several parts hereinafter more fully described and claimed, and shown in the accompanying drawing exemplifying the invention and in which—

Figure 1 is an irregular vertical sectional view of an improved device of this class constructed in accordance with the principles of this invention.

Fig. 2 is a detail perspective view of one of the elements of the construction, and as taken from the bottom thereof.

Fig. 3 is a detail perspective view of another of the elements of the construction as taken from the top thereof.

Fig. 4 is a bottom plan view of still another of the elements of the construction.

Fig. 5 is a perspective view showing the parts assembled.

Fig. 6 is a view similar to Fig. 1, of a modified construction.

Fig. 7 is an isometric view of one of the elements of the modified construction.

Fig. 8 is an isometric view of the other element of the modified construction.

Referring more particularly to the drawing, one of the forms of the construction consists primarily in an upper receptacle 10, adapted to contain the earth for growing the plants, and a lower receptacle 11 constituting a reservoir or liquid receptacle.

These receptacles are adapted to be superposed with the lower receptacle 11 beneath the upper receptacle 10, and these two receptacles may be of any suitable material. They are both preferably constructed with inclined sides as shown in Fig. 1 so that when they are both embedded within the earth, they will resist the strain exerted thereon by the water therein whenever the latter freezes.

The lower receptacle 11 is provided with a series of open recesses 12 therein, any number of which may be provided and into these recesses project the extremities of the tubular depending extensions 13, which latter have communication with the upper receptacle 10 through suitable openings 14, in the bottom thereof, and the extensions are of such a length that when the extremities 15 thereof project into the respective recesses 12, they will terminate short of the bottom thereof.

The upper receptacle is preferably of a size slightly less than the diameter of the lower receptacle so that a portion of the bottom of the receptacle will project slightly into the top of the bottom receptacle 11 to form a closure therefor, and to also form a space 15 between the adjacent portions of the receptacle walls to constitute the overflow passage for the water or liquid from the lower receptacle 11.

The upper receptacle is supported with respect to the lower receptacle in any desired or suitable manner and in such a position that the lower extremities of the tubular extensions will be spaced above the bottoms of the respective recesses 12. In the present exemplification of this invention however, reinforcing ribs 16 are provided which depend from the bottom 17 of the upper receptacle and these ribs also extend between the tubular extensions 15 as shown more clearly in Fig. 2. The ribs are of such a height and are so shaped, that portions thereof will rest upon the bottom of the lower receptacle 11 for this purpose.

In order to guide the upper receptacle into a proper position when assembling, so that the extremities of the tubular extensions will project into the recesses 12, there is preferably provided a lug or extension 18, ar-

ranged on the bottom of the lower receptacle 11 which is adapted to project into a recess or cavity 19 arranged at the junction of the ribs 16.

An annular member 20 encompasses the lower portion of the upper receptacle 10, and rests upon the upper edge of the lower receptacle 11, to form a shield or closure for the overflow space 15 between the receptacles, and in order to provide means for holding the annular member 20 above the edge of the lower receptacle, at intervals, so as not to interrupt the passage of the liquid through the passage 15, the annular member 20 is provided with a series of spaced lugs 21 on its lower face which rest upon the upper edge of the lower receptacle and which lugs are arranged within a depending circumferential flange 22.

Arranged within the bottom of the upper receptacle 10 is a suitable absorbent material 23, which also extends into the opening in the tubular extensions 13 as well as into the recesses 12 in the lower receptacle 11. It has been found in practice that sand or fine granular material is very efficient as it will cause the liquid in the lower receptacle to pass by capillary attraction from the lower receptacle, through the tubular extensions 13, and also through the openings 14 in the bottom 17 of the upper receptacle to moisten the earth in which the plants are rooted and which earth is arranged within the upper receptacle above the granular material 23.

In order to prevent the granular material from packing and to hold it in a proper position within the extensions 13, the openings therein are preferably conical or tapering in a direction from the bottom of the upper receptacle to the extremity of the extension.

When the granular material is employed it will be manifest that a layer of any thickness may be provided in the receptacle 10 and as the material is filled into the extensions 13, the recesses 12 will be filled so that the free extremities of the tubular extensions will always be covered by the granular material and by the use of this material, all danger of the formation of spaces within the material which would check the capillary attraction will be obviated.

A filling opening or passage 24 is provided by means of which the lower receptacle may be filled, and in the present exemplification of this invention this passage 24 is formed in an enlarged portion 25 adjacent the wall of the upper receptacle, and may, if desired, be lined with a metal tube 26, and a stopper or closure 27 may be provided for closing the opening. When it is desired, or necessary, to fill the lower receptacle, the stopper 27 is removed and the liquid poured through the opening into the lower receptacle. Should the lower receptacle become filled, the liquid will flow through the passage 15 and into the gravel 28 which is preferably arranged around the lower receptacle, the latter, if constructed of plastic material may be lined with suitable water proofing material to prevent the water from percolating through the side of the receptacle.

In order to render it possible to ascertain the amount of liquid within the lower receptacle, an indicator or gage may be provided which preferably comprises a float 29 that is arranged within the tubular member 30, the latter extending through another portion 31 of the upper receptacle similar to the portion 25, and stops 32 preferably in the form of cross bars extend through the lower end of the tubular member 30 to prevent the float from passing out of the tubular member. This tubular member extends into the lower receptacle for any desired distance so that when the receptacle is full of water the float will be raised by the water. A closure 33 may be provided for the tubular member and an indicator or extension 34 may be connected with the float so that when the closure 33 is removed, and the float is raised by the liquid, the indicator 34 will move into view.

In the present exemplification of this invention the annular member 20 is shown as being separate from the receptacles, but it is obvious that it might be formed integral with the upper receptacle and in this event the supporting ribs 16 would not be necessary as the upper receptacle would then be supported upon the lower receptacle by means of the annular member 20.

With this improved construction it will be manifest that when there is any water in the lower receptacle, the absorbent material 23 will feed the same gradually by capillary attraction to the earth in the receptacle 10 and thereby maintain the earth moist, and it will also be manifest that when the liquid in the receptacle 11 overflows it will pass out into the earth around the receptacle without flooding the upper receptacle, and furthermore, it will also be manifest that the lower receptacle may also receive a supply of liquid through the tubular extensions 13, during rainy weather. During such a period the surplus water entering the upper receptacle will filter through the soil, the bed of granular material and then through the granular material into the extensions 13 and from these extensions into the lower receptacle.

While in the present exemplification of this invention the preferred forms of construction have been shown and described, it is to be understood that numerous changes may be made within the scope of the claims, without departing from the spirit of this

invention, and while the receptacle is shown embedded in the earth it is obvious that it need not be so embedded.

With the form of the invention shown in Figs. 6 to 8, both of the receptacles are angular in cross-sections, and with this form, it is possible to assemble several complete structures in any desired manner.

The lower receptacle 33 is similar in construction to the lower receptacle 11, with the exception that the upper edges of the walls are provided with a series of notches or recesses 34, opening through the upper edge thereof, so that when the upper receptacle 35 is placed upon the lower receptacle, the bottom thereof will form a closure for the lower receptacle, while the recesses 34 form outlets or overflow passages from the lower receptacle.

The upper receptacle 35, is provided with openings 36 in the bottom thereof, and depending below the bottom of this receptacle are tubular extensions 37, similar to the extensions 13. The extremities of these extensions 37 project into recesses 38, to terminate short of the bottom thereof, so that when the granular material 39 is placed in position, it will fill the receptacles 38 and will also cover the free extremities of the extensions.

The surrounding wall 40, of the upper receptacle, in this form of the invention, projects only a short distance above the bottom 35 to form a shallow receptacle for the granular material 39, and projecting upwardly from the bottom of the receptacle 35 is a tubular extension 41, through which liquid is supplied to the lower receptacle 33. Both of these receptacles are embedded in the earth, the receptacle 33 being surrounded by the gravel 28, while the receptacle 35 is preferably located some distance below the surface of the ground 42, and the tubular extension 41 is preferably of such a length that the entrance opening thereto will be disposed substantially flush with the surface of the ground 42. This arrangement of the upper receptacle permits the free passage or circulation of the elements in the earth or soil, and which circulation is necessary to maintain the earth in suitable condition for the propagation of the plants.

The upper receptacle extends beyond the wall of the lower receptacle as shown in Fig. 6, and depending from this projecting portion is a flange 43, which coöperates with the wall of the receptacle 33 and also with the passages 34 to form an outlet for the liquid as it overflows the receptacle, and to conduct it into the gravel bed, at the same time this flange forms a protection for the passages. A reinforcing rib 44 may be provided for the upper receptacle 40, if desired.

With this construction it will be manifest that when the receptacle 33 is filled with liquid, the liquid will pass by capillary attraction through the granular material in the bottom of the receptacle 35 and from there it will pass into the earth or soil, which latter contacts, or rests upon the granular material, thereby maintaining the adjacent soil or earth in a moistened condition.

In order to readily ascertain the amount of liquid in the receptacle 33, a visual indicator 45 is provided and which is connected with a float 46, that moves within a tubular member 47, arranged within the tubular member 41. A cap or closure 48 is provided for the tubular member 47 and through which cap the indicator 45 freely passes. Thus it will manifest that the position of the float 46 will be controlled by the amount of liquid in the receptacle 33 and as the float rises or falls, by the change in the level of the liquid, the visual indicator 45 will be correspondingly moved.

To fill the lower receptacle, the closure 48 is first removed, which may be accomplished by simply removing the closure, or by raising the indicator 45 until the float 46 contacts with the closure, after which a further movement of the float by means of the indicator 45, in an upward direction will remove the closure.

The lower receptacle 33 will also receive liquid through the tubular extensions 37, that is to say, the rainwater which percolates through the earth will pass through the granular material 39 to be discharged into the receptacle 33.

What is claimed as new is:—

1. A device of the character described, embodying an open liquid reservoir, a receptacle, means for supporting the receptacle in a manner to constitute a closure for the reservoir, there being an overflow space from the reservoir between the walls of the receptacle and the reservoir, means forming a closure for the space and being shaped to form an outlet passage communicating with the said space, and provisions for conducting the liquid by capillary attraction from the reservoir and into the receptacle through the bottom of the latter.

2. A device of the character described, embodying separable sections and comprising an open liquid reservoir, a receptacle, means for supporting the receptacle in a manner to constitute a closure for the reservoir, there being an overflow space from the reservoir between the walls of the receptacle and the reservoir, means forming a closure for the space and being shaped to form an outlet passage communicating with the said space, and provisions for conducting the liquid by capillary attraction from the reservoir and into the receptacle through the bottom of the latter.

3. A device of the character described, embodying superposed receptacles, the lower one constituting a liquid reservoir, there being an overflow space between the receptacles, a shield for the overflow space, means for conducting the liquid from one of the receptacles to the other by capillary attraction, and one or more holders for the said means, connected with one of the receptacles and projecting into the other receptacle.

4. A device of the character described, embodying two receptacles one of which is supported above the other, the lower receptacle constituting a liquid reservoir, a tubular extension projecting from the bottom of the upper and extending into the lower receptacle and having communication with both, the lower receptacle having an open recess into which one end of the extension projects, said end terminating short of the bottom of the recess, and absorbent material arranged in the bottom of the upper receptacle, around the opening in the extension, within the extension and also in the said recess to surround the end of the extension in the recess.

5. A device of the character described, embodying two receptacles one of which is supported above the other, the lower receptacle constituting a liquid reservoir, a tubular extension projecting from the bottom of the upper and extending into the lower receptacle and having communication with both, the lower receptacle having an open recess into which one end of the extension projects, said end terminating short of the bottom of the recess, and granular material arranged in the bottom of the upper receptacle, around the opening in the extension, within the extension, and also in the said recess to surround the end of the extension in the recess, there being an overflow leading from the lower receptacle and between the receptacles.

6. A device of the character described, embodying two receptacles one of which is supported above the other, the lower receptacle constituting a liquid reservoir, a tubular extension projecting from the bottom of the upper and extending into the lower receptacle and having communication with both, the lower receptacle having an open recess into which one end of the extension projects, said end terminating short of the bottom of the recess, there being an overflow passage from the lower receptacle, and means whereby liquid may be supplied to the lower receptacle.

7. A device of the character described, embodying two receptacles one of which is supported above the other, the lower receptacle constituting a liquid reservoir, a tubular extension projecting from the bottom of the upper and extending into the lower receptacle and having communication with both, the lower receptacle having an open recess into which one end of the extension projects, said end terminating short of the bottom of the recess, an absorbent material arranged in the bottom of the upper receptacle, said material filling the extension and the said recess, and guiding means for directing the assembling of the parts.

8. A device of the character described, embodying two receptacles one of which is supported above the other, the lower receptacle constituting a liquid reservoir, a tubular extension projecting from the bottom of the upper and extending into the lower receptacle and having communication with both, the lower receptacle having an open recess into which one end of the extension projects, said end terminating short of the bottom of the recess, granular material within the bottom of the upper receptacle, said material filling the said extension and also the recess in the other receptacle, means whereby the lower receptacle may be filled with liquid through the upper receptacle, and an overflow passage leading from the lower receptacle.

9. A device of the character described, embodying two open receptacles, arranged one above the other, the bottom of the upper one constituting a closure for the lower one, there being an outlet passage from the bottom receptacle and between the receptacles, an annular member surrounding the upper receptacle and constituting a cover for the passage, said member being shaped to form a continuation of the passage, a tubular extension leading through the bottom of the upper receptacle and projecting into the lower receptacle, and having communication with both, the lower receptacle having an open recess into which the end of the extension projects to terminate short of the bottom thereof, absorbent material arranged in the bottom of the upper receptacle to extend into and substantially fill the extension and the said recess, and a filling opening for the lower receptacle leading through the bottom of the upper receptacle.

10. A device of the character described, embodying two open receptacles, arranged one above the other, the bottom of the upper one constituting a closure for the lower one, there being an outlet passage from the bottom receptacle and between the receptacles, an annular member surrounding the upper receptacle and constituting a cover for the passage, said member being shaped to form a continuation of the passage, a tubular extension leading through the bottom of the upper receptacle and having communication with both, the lower receptacle having an open recess into which the end of the extension projects to terminate short of the bottom thereof, absorbent material arranged in the bottom of the upper receptacle to extend

into and substantially fill the extension and the said recess, there being a filling opening for the lower receptacle leading through the bottom of the upper receptacle, and an indicator for indicating the quantity of liquid in the lower receptacle, said indicator embodying a float and a guide therefor.

11. A device of the character described embodying two open receptacles, arranged one above the other, the bottom of the upper one constituting a closure for the lower one, there being an outlet passage from the bottom receptacle and between the receptacles, an annular member surrounding the upper receptacle and constituting a cover for the passage, said member being shaped to form a continuation of the passage, a tubular extension leading through the bottom of the upper receptacle, and having communication with both, the lower receptacle having an open recess into which the end of the extension projects to terminate short of the bottom thereof, absorbent material arranged in the bottom of the upper receptacle to extend into and substantially fill the extension and the said recess, there being a filling opening for the lower receptacle leading through the bottom of the upper receptacle, and reinforcing means for the upper receptacle, said reinforcing means also serving to support the upper receptacle and to hold the receptacles spaced.

In testimony whereof I have signed my name to this specification, in the presence of two subscribing witnesses, on this 10th day of September A. D. 1913.

CHARLES D. HITCHCOCK.

Witnesses:

CHANNING L. SENTZ,

J. H. JOCHUM, Jr.