

(No Model.)

O. D. WOODRUFF.

LANTERN.

No. 395,864.

Patented Jan. 8, 1889.

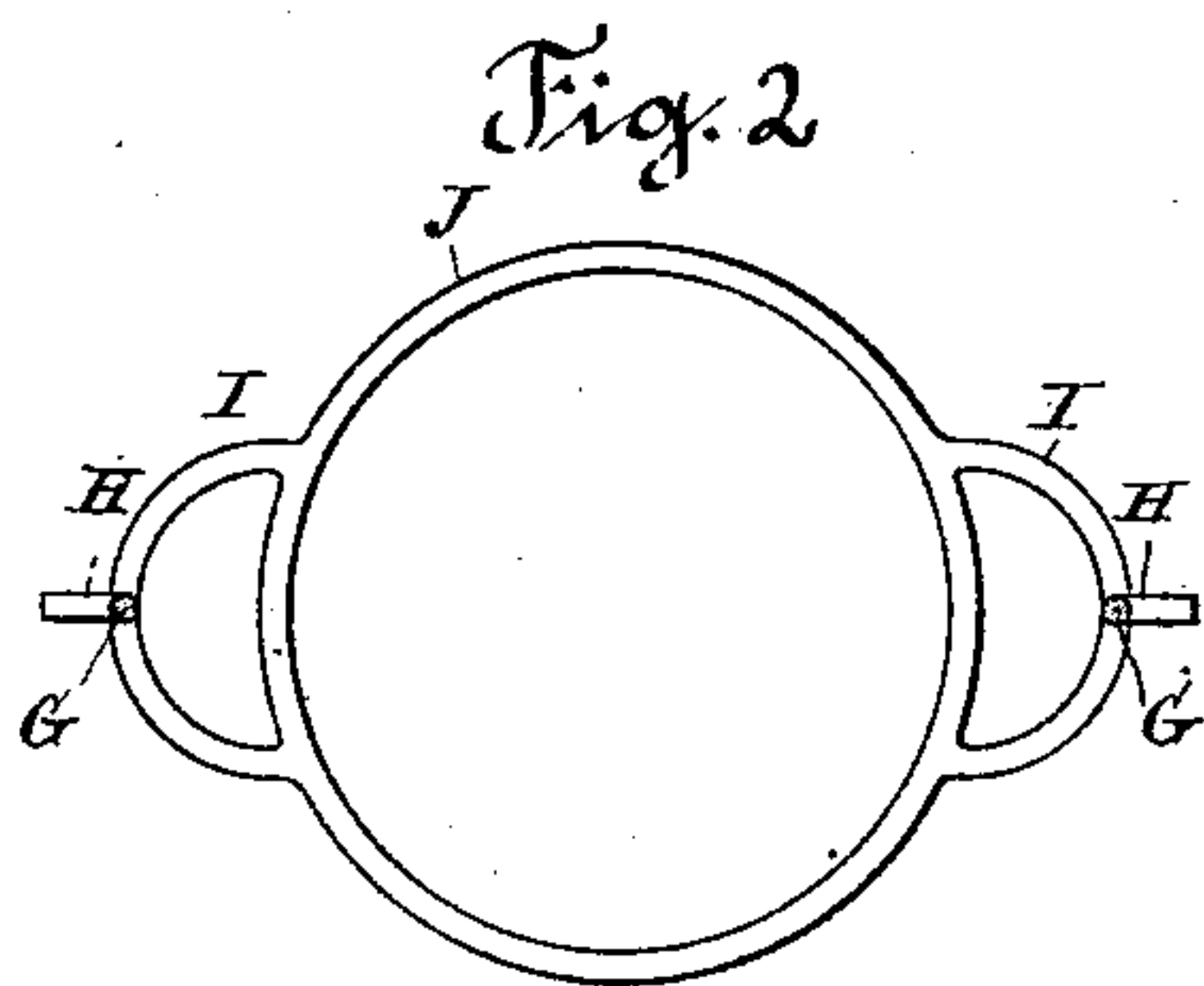
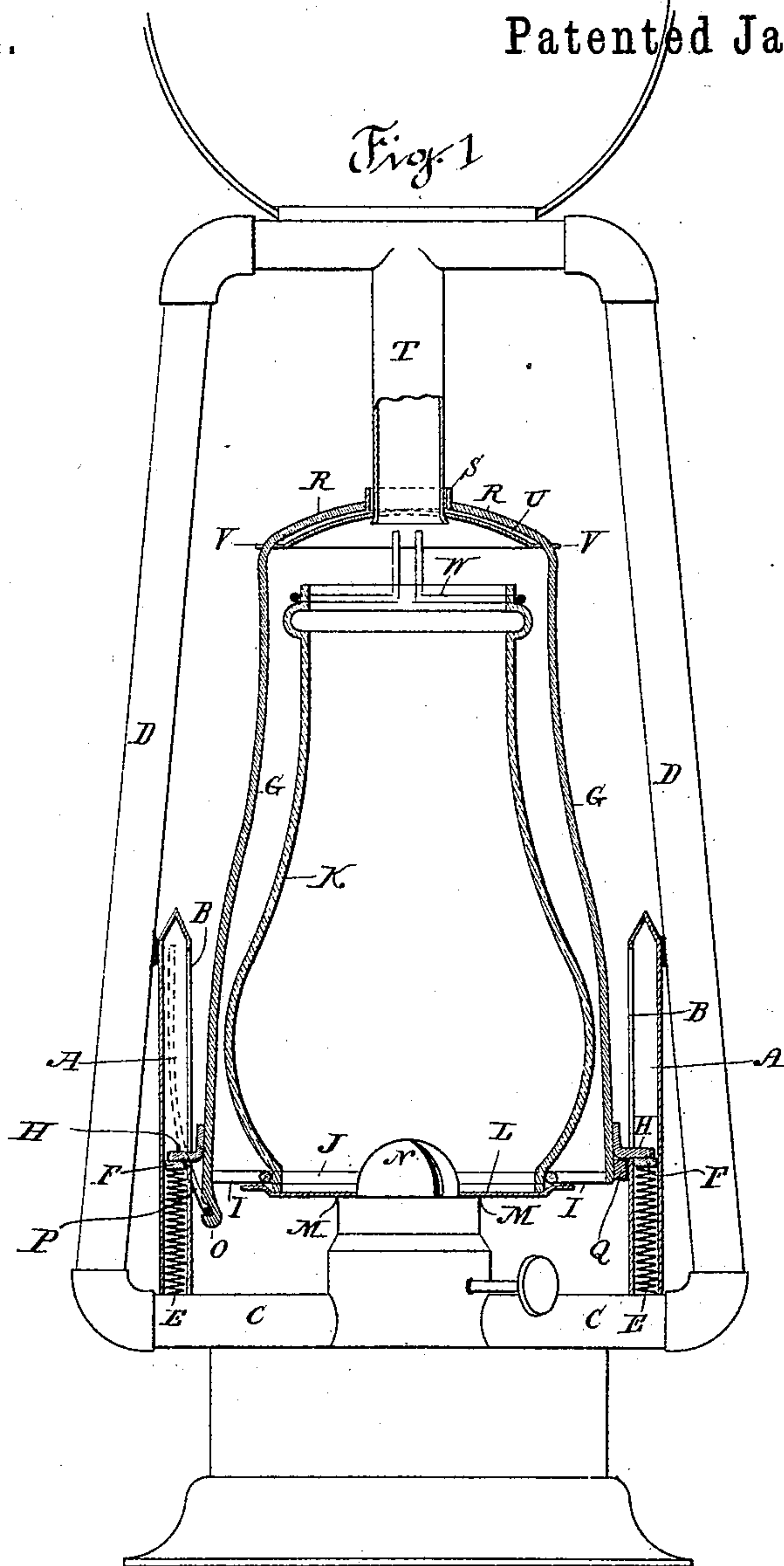
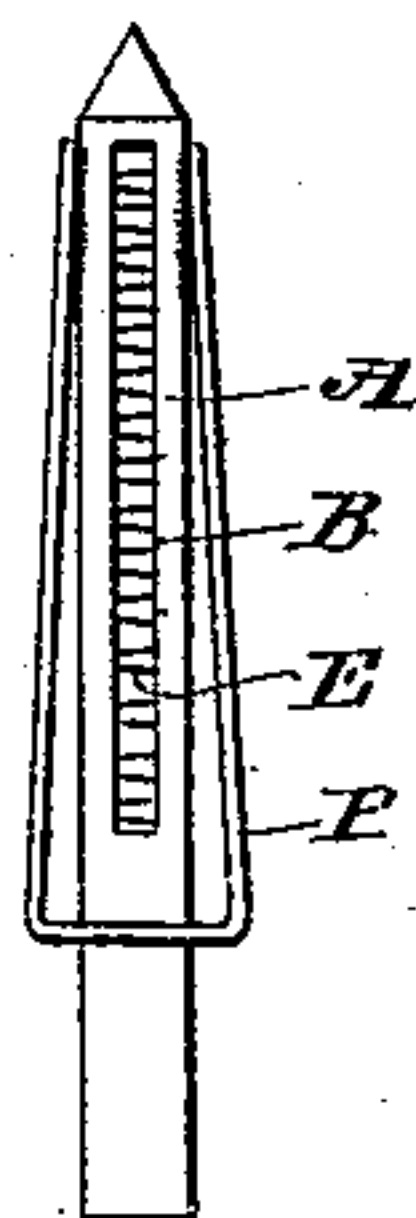


Fig. 3



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UNITED STATES PATENT OFFICE.

OLIVER D. WOODRUFF, OF SOUTHTON, CONNECTICUT.

LANTERN.

SPECIFICATION forming part of Letters Patent No. 395,864, dated January 8, 1889.

Application filed January 23, 1888. Serial No. 261,612. (No model.)

To all whom it may concern:

Be it known that I, OLIVER D. WOODRUFF, residing at Southington, in the county of Hartford and State of Connecticut, have invented certain new and useful Improvements in Lanterns; and I do declare the following to be a full, clear, and exact description of the same, reference being had to the accompanying drawings, which form a part of this specification.

My invention relates to an improvement in that class of portable or hand lanterns in which provision is made, by means of springs, for automatically lifting the globe and the globe-carrier for facilitating the lighting of the lantern and its attention in general, the object of the present invention being to produce a lantern of the type specified which shall be simple, compact, and cheap of construction, free and easy of operation, and durable in use.

With these ends in view my invention consists in certain details of construction and combinations of parts, as will be hereinafter described, and pointed out in the claim.

In the accompanying drawings, Figure 1 is a view of my improved lantern partly in vertical central section and partly in elevation. Fig. 2 is a detached plan view of the globe-carrier, the upper portion thereof being broken away; and Fig. 3 is a detached view in inside elevation of that one of the spring-inclosing tubes which carries the spring-catch for normally holding the carrier in its depressed or normal position.

As herein shown, my invention consists, in part, of two small perpendicular spring-inclosing tubes, A A, closed at their upper and open at their lower ends and each having a longitudinal slot, B, extending from a point just below its center to its upper end in its inner face. These tubes are respectively supported upon and attached to the outer ends of the lower horizontal draft-tubes, C C, of the lantern and attached at their upper ends to the inner faces of the adjacent upright draft-tubes D D thereof, provision being made at their lower ends for the escape of any moisture which may enter them through their slots. Each of the said tubes A is provided with a spiral spring, E, located in its lower end and

preferably provided at its upper end with a small cap, F, which may be dispensed with if desired. The globe-carrier is provided with two upright wires, G G, each provided with a short laterally-projecting lifting-arm, H; respectively, passing through the slot B of the adjacent tube A and engaging with the cap F of the spring inclosed thereby. The lower ends of these wires G G respectively terminate in the outer ends of operating-frames I I, joining at their inner ends a ring, J, adapted to embrace the lower end of the globe K, which projects below it, so as to engage with the perforated disk L, located directly below it, and, as herein shown, soldered as at M, to the burner-cap N, and therefore disconnected from the globe-carrier. It is not essential that this disk should be attached to the burner; but that construction makes it more stable, and is preferred. One of the wires G is provided at its outer end with a depending slotted lug, O, for engagement by a spring-catch consisting of a loop-shaped spring, P, arranged with its loop downward and having its ends respectively attached to the opposite faces of the spring-inclosing tube A, adjacent to the said lug.

If desired, the carrier may be provided on the side opposite from the said spring P with a block, Q, or its equivalent, so that if there should be any tendency on the part of the spring to crowd the carrier and tip the globe such tendency would be resisted. The upper ends of the wires G G are bent inwardly, as at R R, and terminate in a collar, S, encircling and adapted to slide freely up and down upon the depending central draft-tube, T, of the lantern. A cap, U, located below the collar S, also slides up and down upon the tube T, and is thereto centrally perforated. This cap is slotted at its edges, as at V V, to receive the respective wires G G, whereby it is prevented from rotating on the said tube, and provided with a wire frame, W, adapted to embrace and hold the upper end of the globe and to be operated for removing and replacing the same.

It will be noted that the carrier is independent at its upper end of the globe-cap and at its lower end of the perforated disk surrounding the burner.

Under the construction described the globe will be normally maintained in its depressed position and against the lifting power of the springs E E by the engagement of the slotted lug at the lower end of the carrier with the loop-shaped spring-catch. When access to the burner is desired for lighting the lantern or for any other purpose, the spring is taken hold of and drawn back and disengaged from the lug, the construction and vertical arrangement of the spring enabling this to be done very readily. The lug being disengaged from the spring, the springs E E will immediately operate to lift the globe-carrier and the globe and hold them in their elevated positions. Then, when it is desired to restore the globe to its normal position, the globe-carrier is drawn down against the power of the springs E E through one or both of its operating-frames. When the normal position of the carrier is reached, the loop-shaped spring will automatically engage with the slotted lug, and so hold the globe down, with its lower edge resting upon the perforated disk.

The described construction of the spring-inclosing tubes is simple, cheap, and compact. Their location secures them against injury in any ordinary use of the lantern, and their perpendicular arrangement insures a free action to the springs inclosed by them. They also serve, in connection with the short lifting-arms, to guide the globe and its carrier in their vertical movement. By locating the catch at one side of the flame it always remains cool, and there is no danger of burning the fingers in operating it.

By making the globe-carrier to move independently of the globe-cap I am enabled to make both the cap and carrier very light and compact and secure a construction at once substantial and elegant. The cap, not being relied upon to give stability to the carrier, is made of light stock of simple form and only large enough to fulfill its function as a cap for the globe. The described construction is also very flexible and avoids the binding of the cap upon the tube, securing a very free and prompt action of the carrier. The cap being made very small, the side wires of the carrier are connected with the central draft-tube with a reduction of leverage over old constructions, whereby steadiness of operation

and stability are secured. The catch described herein is simple, light, and cheap and convenient to operate, the hand being steadied by the draft-tube with which it is connected and which is clasped by the fingers and thumb in operating the catch.

I am aware that a spring-catch located at the lower end of a lantern is not new. I do not therefore claim that construction, broadly, but only my particular construction and combinations of parts.

The making of the globe-carrier movable independent of the globe-cap is herein claimed only in the particular construction shown and described; but it is broadly claimed by me in an application serially numbered 261,612, and filed December 23, 1887.

It is obvious in carrying out my invention some changes from the form herein shown and described may be made. Thus the lower part of the globe-carrier may be cast instead of being formed of wire, as herein shown. I would therefore have it understood that I do not limit myself to the exact construction represented, but hold myself at liberty to make such changes and alterations as fairly fall within the spirit and scope of my invention.

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

In a tubular lantern, the combination, with a globe, of a globe-carrier, two perpendicular tubes respectively located in the lower corners of the lantern-frame, two springs respectively located in such tubes and connected with the said globe-carrier, so as to automatically lift the same, and a long loop-shaped spring connected at its upper end with one of such tubes, having its lower end adapted to engage with the lower end of the carrier and arranged to be operated by grasping it on opposite sides of the adjacent draft-tube of the lantern which supports the hand, substantially as set forth.

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

OLIVER D. WOODRUFF.

Witnesses:

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