

(No Model.)

C. T. COX.
DISINFECTING APPARATUS.

No. 525,646.

Patented Sept. 4, 1894.

Fig. 1.

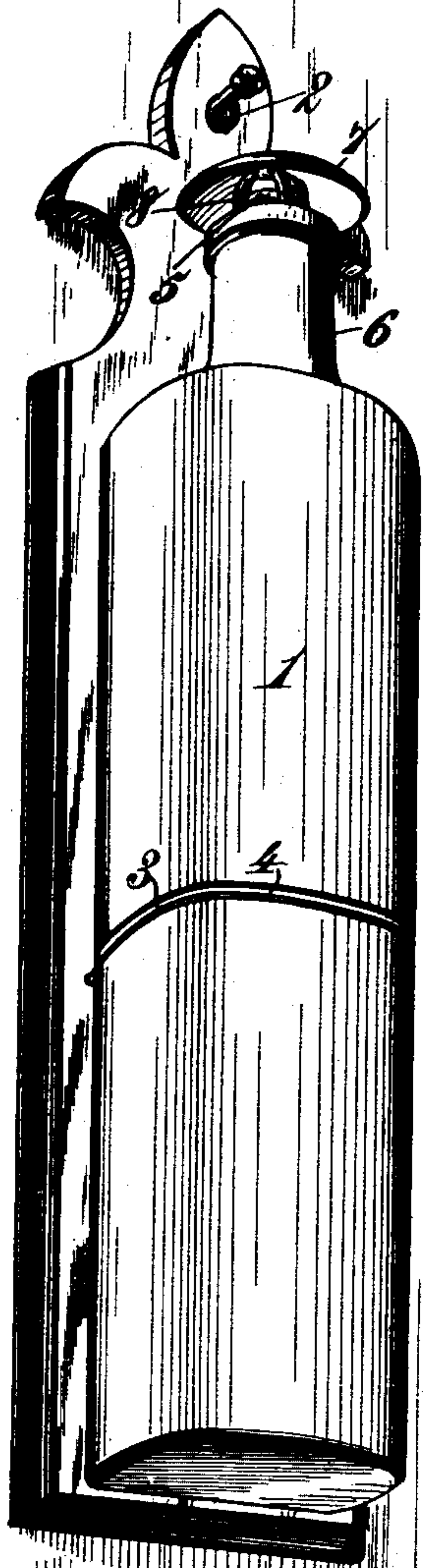
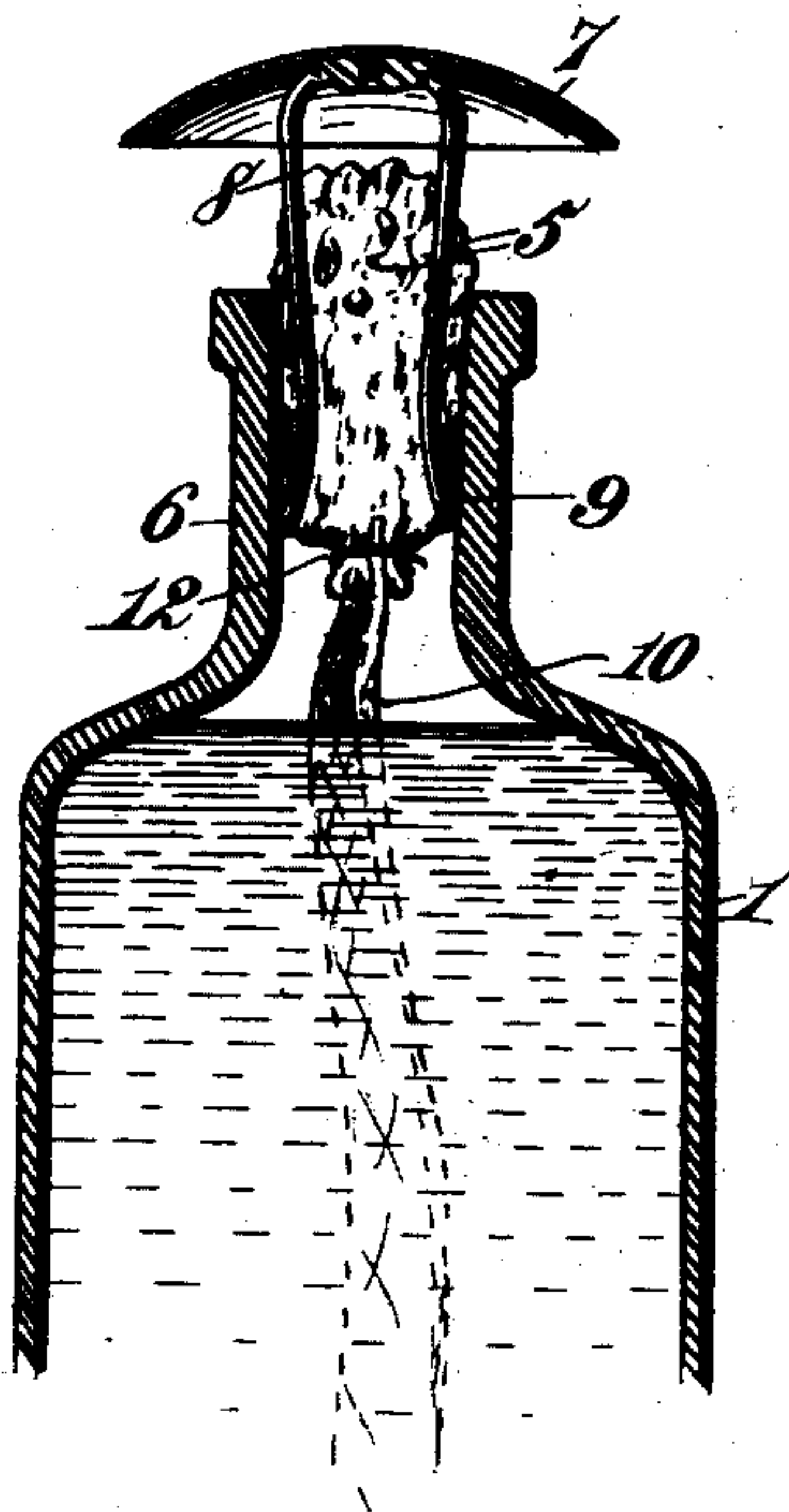


Fig. 2.



Witnesses.
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UNITED STATES PATENT OFFICE.

CHARLES T. COX, OF LIBERTY, INDIANA, ASSIGNOR OF TWO-THIRDS TO
MILTON J. MOON AND WINFIELD T. BOWERS, OF SAME PLACE.

DISINFECTING APPARATUS.

SPECIFICATION forming part of Letters Patent No. 525,646, dated September 4, 1894.

Application filed January 27, 1894. Serial No. 498,202. (No model.)

To all whom it may concern:

Be it known that I, CHARLES T. COX, a citizen of the United States, residing at Liberty, in the county of Union and State of Indiana, have invented new and useful Improvements in Sponge or Absorbent Holders for Disinfectant-Vessels, of which the following is a specification.

This invention relates to that type of disinfectant holders composed of a bottle or similar vessel having a sponge in its mouth from which the disinfectant liquid evaporates or passes off in a vapor for disinfecting an apartment or room.

The objects of the invention are to provide a new and improved device for holding the sponge or absorbent material and to shield it and the mouth of the bottle or vessel from dust, dirt, and the like; to provide novel means for supporting the dust shield and holding the sponge or absorbent within the bottle mouth, whereby the dust shield can be adjusted to different heights relative to the bottle and the sponge or absorbent held, and more or less compressed to increase or diminish the quantity of disinfectant evaporated therefrom into the apartment or room; and to provide means for conveying or supplying the disinfectant liquid to the sponge or absorbent so long as any of the liquid remains in the bottle or vessel, whereby the device is rendered efficient in action until the contents of the bottle is entirely exhausted.

To accomplish all these objects my invention consists in the features of construction and the combination or arrangement of parts hereinafter described and claimed, reference being made to the accompanying drawings, in which—

Figure 1 is an elevation of a disinfectant bottle secured to a supporting base-plate, and provided with my invention. Fig. 2 is a detail sectional view on a larger scale, showing a portion of the bottle and the dust-cap and sponge-holder applied thereto.

In order to enable those skilled in the art to make and use my invention, I will now describe the same in detail, referring to the drawings, wherein—

The numeral 1 indicates the bottle or vessel for containing the disinfectant liquid which

is to be discharged by evaporation into an apartment or room for disinfecting purposes. The bottle or vessel may be of any form, shape, or configuration suitable for the purpose in hand; but, as here shown, the bottle is of glass having a rounded front and a flat rear side to rest squarely against a flattened base-plate of wood, or other material, which is provided with an eye 2 for suspending it from a nail, screw, or similar support. The bottle is provided with a groove or indentation 3 extending around its front and sides to receive a wire 4 secured to the base plate. The wire is preferably secured by passing it through the base-plate and twisting or tying the ends together in rear thereof. But this I have not illustrated, since the wire may be secured to the base-plate in any suitable manner.

The disinfectant liquid contained within the bottle or vessel is designed to be supplied to an absorbent material, composed, preferably, of a piece of sponge 5 inserted into the mouth or neck 6 of the bottle, so that when the sponge is saturated with the disinfectant liquid, the latter will evaporate from the sponge into the apartment or room, for the purpose of purifying the same.

The improved device for holding the sponge and protecting it and the bottle mouth from dust, dirt, and the like, is composed of a dust-cap 7 having a series of elastic or yielding fingers 8 attached to its lower side, and adapted to grasp the sponge or absorbent material, and to enter the mouth or neck of the bottle, as clearly show in Fig. 2.

The elastic or yielding fingers 8 may all be formed by properly bending a single piece of wire; or the fingers may be composed of separate pieces of wire suitably attached to the dust-cap. I prefer to attach the fingers to the dust-cap by solder, but any other suitable means may be employed for the purpose.

The dust-cap is preferably composed of a concavo-convex disk of metal of a diameter considerably greater than the diameter of the mouth of the bottle, in such manner that the dust-cap will overhang the mouth of the bottle, and thereby shield and protect it from dust, dirt, and the like, and at the same time shield and protect the sponge or absorbent material which is held by the elastic or yield-

ing fingers within the mouth or neck of the bottle.

The elastic or yielding fingers are preferably so constructed and arranged that when the dust-cap is lowered and the fingers are forced farther into the mouth or neck of the bottle the sponge or absorbent material will be compressed, so that it will absorb and evaporate a less quantity of the disinfectant; while if the dust-cap be raised and the fingers moved upward, the sponge or absorbent material will expand, and thus take up and evaporate a greater quantity of the disinfectant liquid. By this means the porosity of the absorbent is regulated and the quantity of disinfectant liquid evaporated from the absorbent into the apartment or room can be increased or diminished according to the conditions required, which is very advantageous in this type of disinfecting apparatus. This result may be accomplished by any suitable construction of the fingers; but, as here illustrated, the result is attained by bending the fingers outward, as at 9, so that when pushed down into the mouth or neck of the bottle, the lower end portions of the fingers will be caused to move inward to compress the sponge, and, conversely, when the fingers are raised, the gripping action will be decreased. The spring fingers at all times have a frictional bearing against the internal surface of the bottle mouth or neck, so that the dust-cap is properly supported over the bottle mouth and the sponge is properly held in position. The extent to which the sponge projects above the bottle mouth regulates in a large measure the evaporation of the disinfectant liquid into the apartment or room, and by the co-operation of the devices described and shown the bottle mouth and sponge are not only protected from dust, dirt, and the like, but the quantity of disinfectant liquid evaporated into the apartment or room can be controlled at will.

The disinfectant liquid may be supplied to the sponge or absorbent by tipping the bottle or turning it upside down; but, since this is inconvenient, and in some respects objectionable, I have provided the sponge or absorbent 5 with an attached wick 10, tied or otherwise secured in place, as at 12, and of such length that it will reach the bottom of the bottle or vessel and serve, by capillary attraction, to convey or supply the disinfectant liquid to the sponge or absorbent so long as any of the absorbent remains in the bottle or vessel. This renders the device or apparatus effective in action until the contents of the bottle are entirely exhausted, and avoids the necessity of tilting or tipping the bottle or vessel at intervals to keep the sponge or absorbent supplied with the disinfectant liquid.

The provision of means to automatically convey or supply the disinfectant liquid to the sponge or absorbent is very advantageous, in that, after the device or apparatus is once prepared for use, it requires no

further attention so long as any disinfectant liquid remains in the bottle or vessel.

The flattened base-plate carrying the bottle or vessel can be suspended on a wall, out of reach of children, and the device can be adjusted in such manner that the disinfectant performs effective work day and night; and, further, the device or apparatus is ornamental as well as useful.

Having thus described my invention, what I claim is—

1. An evaporating attachment for a disinfectant bottle or vessel, consisting of a dust-cap having a series of attached elastic or yielding fingers, and a sponge or absorbent gripped between said fingers and raised and lowered relatively to the bottle mouth by raising or lowering the dust-cap, substantially as described.

2. An evaporating attachment for a disinfectant bottle or vessel, consisting of a concavo-convex dust-cap having attached sponge-holding fingers engaging the bottle mouth or neck, and raised or lowered therein by raising or lowering the dust-cap, and a sponge or absorbent gripped by the said fingers and moving therewith substantially as described.

3. An attachment for a disinfectant bottle or vessel, consisting of a dust-cap having attached yielding fingers provided with a sponge or absorbent and adapted to the interior of the mouth of the bottle or vessel, said fingers having bent portions which are acted upon by the mouth or neck of the bottle to increase or diminish the porosity of the sponge or absorbent by lowering or raising the dust-cap, substantially as described.

4. An attachment for a disinfectant bottle or vessel, consisting of an elastic sponge-holder adapted to have frictional contact with and adjustable in the mouth or neck of the bottle, a sponge held by said holder in the mouth of the bottle or vessel, and a wick attached to the sponge and dipping into the disinfectant liquid for conveying or supplying the latter to said sponge from which the disinfectant liquor evaporates into the apartment or room, substantially as described.

5. In an attachment for a disinfectant bottle or vessel, the combination of a dust-cap, a series of elastic or yielding fingers attached to the dust-cap and adapted to have frictional contact with the interior of the mouth of the bottle or vessel for supporting the dust-cap, a sponge or absorbent held by the elastic or yielding fingers, and a wick attached to the sponge or absorbent for supplying the disinfectant liquid to said sponge or absorbent, substantially as described.

In testimony whereof I have hereunto set my hand and affixed my seal in presence of two subscribing witnesses.

CHARLES T. COX. [L. S.]

Witnesses:

THOS. D. EVANS,
E. V. OWEN.