

(No Model.)

H. W. LIBBEY.  
KNOB ATTACHMENT.

No. 598,426.

Patented Feb. 1, 1898.

Fig. 1.

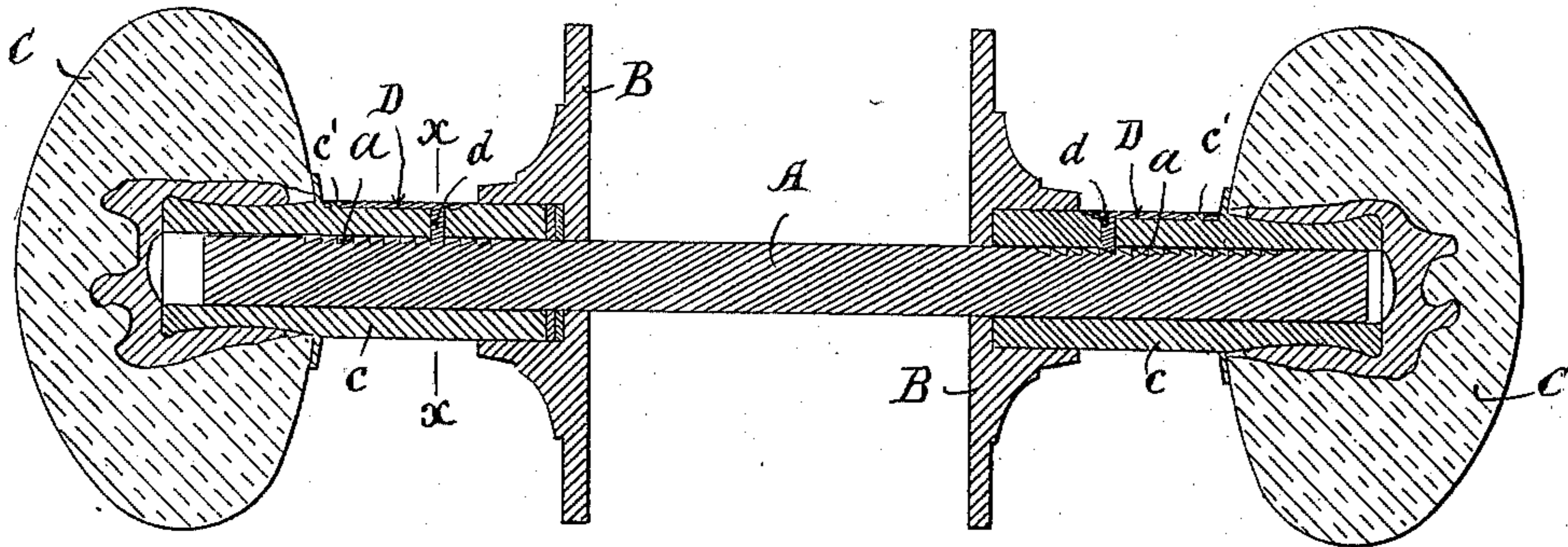


Fig. 2.

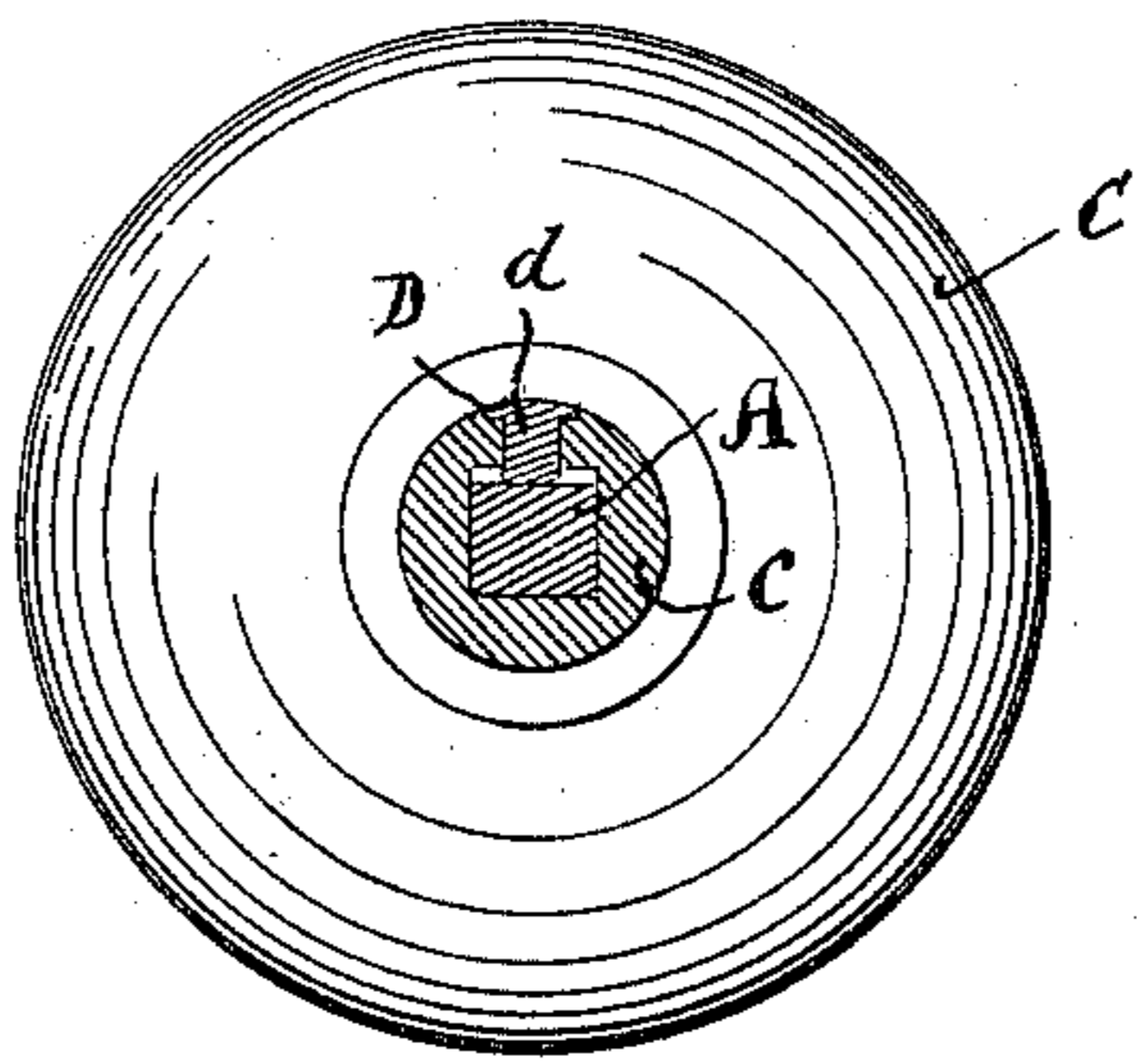
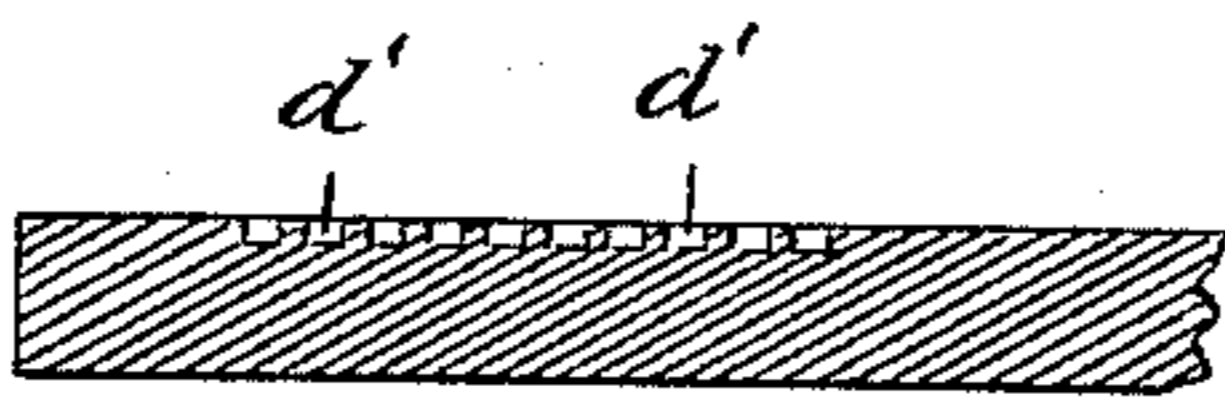
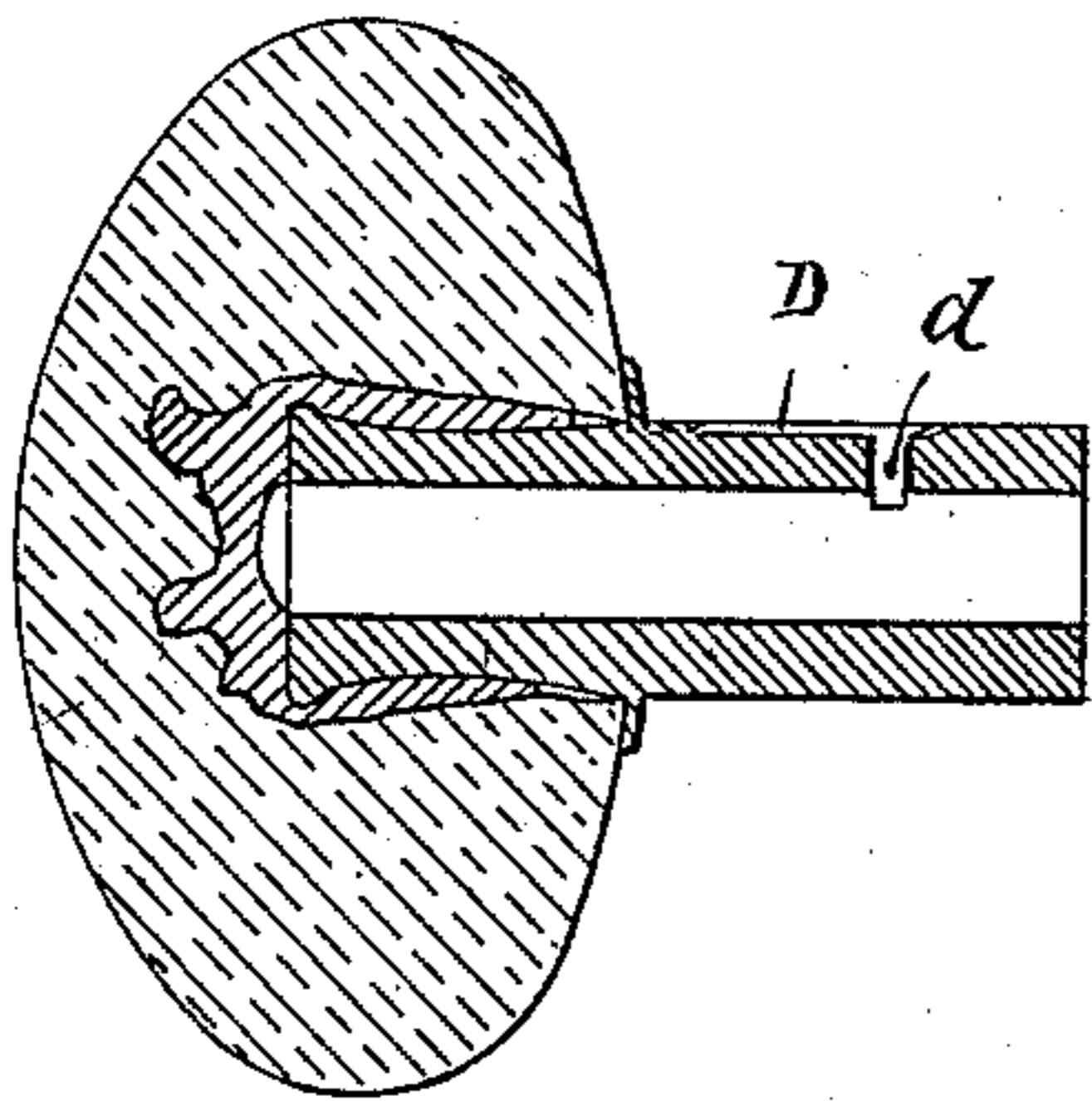


Fig. 3.



Witnesses.  
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# UNITED STATES PATENT OFFICE.

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## KNOB ATTACHMENT.

SPECIFICATION forming part of Letters Patent No. 598,426, dated February 1, 1898.

Application filed January 15, 1896. Serial No. 575,551. (No model.)

*To all whom it may concern:*

Be it known that I, HOSEA W. LIBBEY, a citizen of the United States, residing at Boston, in the county of Suffolk and State of Massachusetts, have invented certain new and useful Improvements in Door Knobs and Spindles, of which the following, taken in connection with the accompanying drawings, is a specification.

Door-knobs as usually constructed are attached to the spindle by means of a screw, which, by the constant jar of the door, soon works loose and if not tightened up falls out and is often lost, thus rendering said knob useless.

Now the object of my invention is to overcome this defect by so securing the knob to the spindle that it cannot of itself become detached, but can, if desired, be readily removed.

The invention consists of a knob provided with a peculiarly-recessed shank or handle; also, of a spring having a pin at its free end, said spring being secured in one of the recesses in the handle-shank and in a spindle having ratchet-teeth or small holes to receive the end of the pin on the spring, as hereinafter fully described, and pointed out in the claim.

Referring to the accompanying drawings, Figure 1 represents a longitudinal section through a pair of handles and a spindle embodying my invention. Fig. 2 is a vertical section taken on line  $x x$  of Fig. 1. Fig. 3 is a section of a handle and spindle and of a modification.

A represents a square spindle, one or more of its sides being formed with ratchet-teeth  $a$ .

B B are escutcheons to be secured to the door-frame, and C C are the handles, the stems  $c c$  of which are recessed out, and in each of said recesses is placed a flat spring D, rounded at the top to conform to and be flush with the shanks  $a$ . The outer end of said spring is secured to a pin or stud  $c'$ , formed in one with the stem  $c$ , and passing through a countersunk hole in the spring D is then riveted over, thus holding the spring D in place. The free end of said spring is formed with a pin  $d$ , the lower end of which is cut on an angle corresponding to the angle of the ratchet-teeth in the spindle.

In order to secure the knob to the spindle, all that has to be done is to place the shank of the knob on the spindle and press it in. The pin will thus ride over the ratchet-teeth in the spindle until the end of the shank comes into contact with the escutcheons, the pin being by the spring caused to fit into the nearest ratchet-tooth. Thus the knob is held firmly thereto.

In order to release the knob, if required, the end of a penknife or other suitable instrument is inserted under the free end of the spring, (a small space being left for same, as shown,) and the spring is raised up, carrying with it the pin and raising it out of contact with the ratchet-teeth of the spindle, when the knob can be withdrawn.

In Fig. 3 I have shown a modification. In this case the spindle is formed on one or more of its sides with small holes  $d'$ , and the spring D is provided with a pin  $d$ , adapted to fit into said holes. Otherwise the operation is as before described.

It will be seen that by this construction a door-knob can easily and readily be secured to its spindle, nothing being required but to push the said knob onto the spindle, the pin by means of the spring being free to ride over the ratchet-teeth in the spindle, and taking into one of them is firmly held, so that the knob cannot be withdrawn; but should it be desired to release the knob the free end of said spring can be raised by any suitable instrument, thus withdrawing the pin from the ratchet-teeth, when the knob can be pulled off.

With reference to the modification shown in Fig. 3 the operation is practically the same, except that the spring must be upheld while the knob is being placed in position or removed from the spindle, or else the spring would force the pin into each and every hole in the spindle, and the spring would have to be raised each time to release the same.

What I claim is—

In combination with a door-knob, the shank of which is provided with an interior and an exterior recess and a perforation leading from one recess to the other and having an integral stud projecting radially from one end of the exterior recess, of a spindle projecting into the interior recess, the surface of which is notched and a spring in the exterior recess,

one end of which is provided with a hole to  
fit over the stud and the free end is provided  
with a pin which projects through the opening  
in the shank and engages with the notched  
5 surface of the spindle, the exterior of said  
spring being rounded and lying even with the  
surface of the shank, substantially as set  
forth.

In testimony whereof I have signed my  
name to this specification, in the presence of 10  
two subscribing witnesses, on this 17th day of  
October, A. D. 1895.

HOSEA W. LIBBEY.

Witnesses:

CHAS. STEERE,  
EDWIN PLANTA.