

No. 695,928.

Patented Mar. 25, 1902.

M. W. HANKS.
REMOVABLE HEATER FOR ELECTRIC LAMPS.

(Application filed Mar. 28, 1901.)

(No Model.)

Fig. 1.

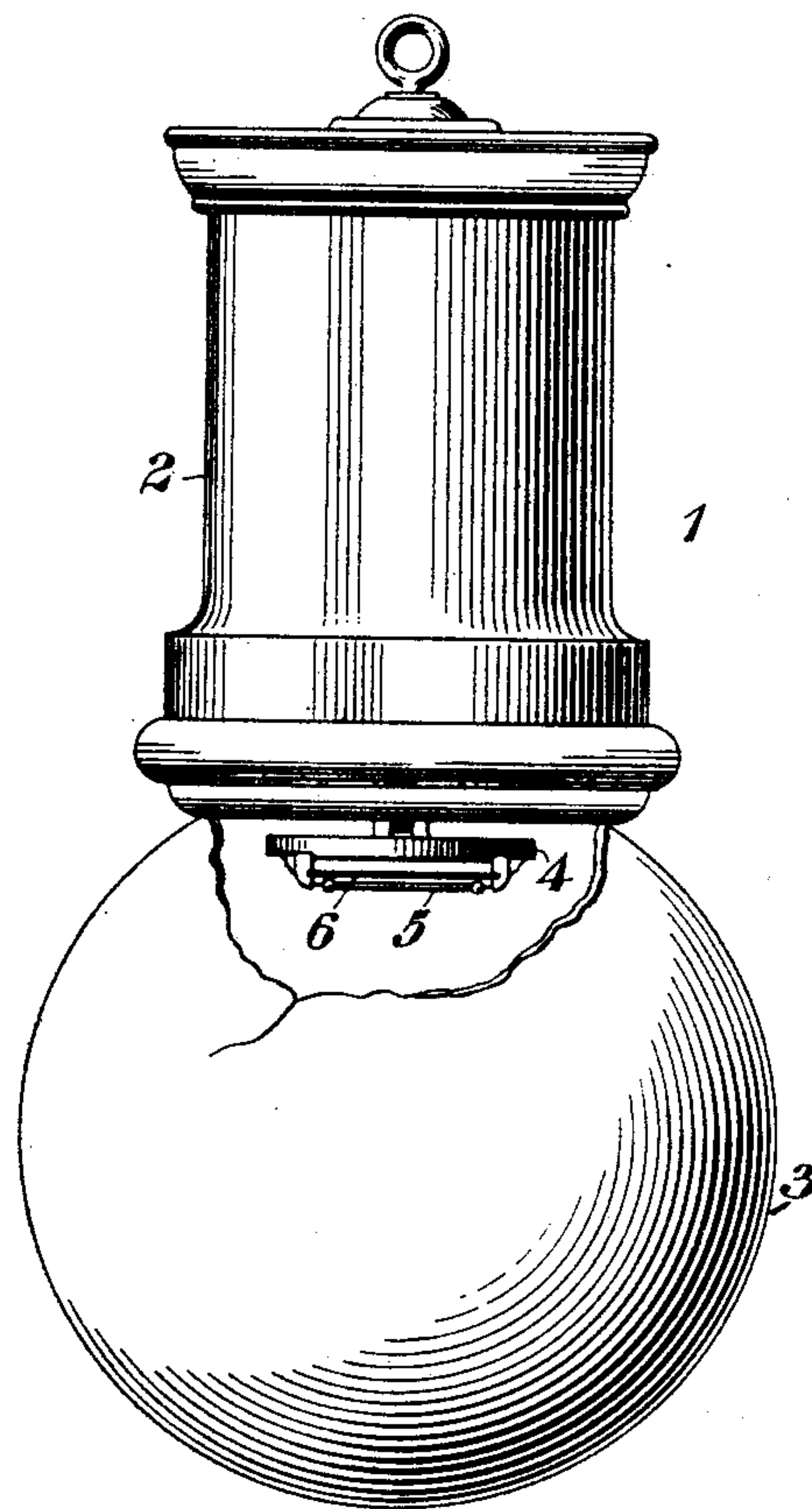
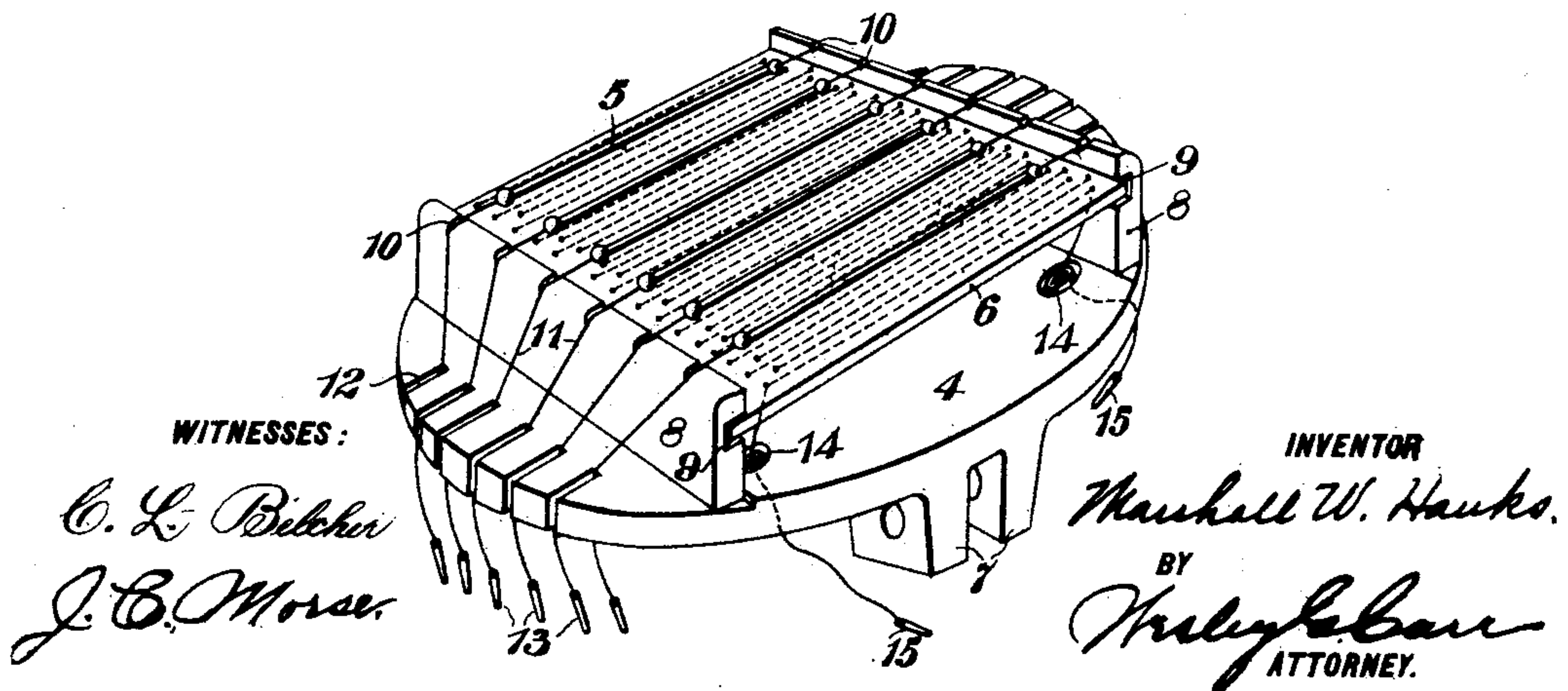


Fig. 2.



WITNESSES:

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REMOVABLE HEATER FOR ELECTRIC LAMPS.

SPECIFICATION forming part of Letters Patent No. 695,928, dated March 25, 1902.

Application filed March 23, 1901. Serial No. 52,650. (No model.)

To all whom it may concern:

Be it known that I, MARSHALL W. HANKS, a citizen of the United States, residing at Pittsburg, in the county of Allegheny and State of Pennsylvania, have invented a new and useful Improvement in Removable Heaters for Electric Lamps, of which the following is a specification.

My invention relates to lamps of the class in which the light-giving members or glowers are non-conductors when cold and become conductors when heated to a relatively high temperature.

The object of my invention is to provide a simple and efficient means for so supporting an electric heater in proximity to the glowers of a lamp of the type above indicated that it may be readily removed and replaced without disturbing the glowers.

My invention is illustrated in the accompanying drawings, in which—

Figure 1 is a side elevation of a lamp provided with my improvement, a portion of the lamp-globe being broken away. Fig. 2 is a perspective view, on an enlarged scale, of that portion of the lamp shown in Fig. 1 which embodies my improvement.

It has been found desirable in practice to so construct lamps of the type to which my invention belongs that the glowers and heaters may be independently removable from their holders or supports, since the holder is in general an indestructible part of the lamp, while both glowers and heaters are liable to be burned out or otherwise injured or destroyed.

The details of construction illustrated in the drawings are as follows: The lamp 1 is what is known as a "multiple-glower" lamp and comprises a housing 2, that surrounds and incloses all the operating parts of the lamp except those to which my present invention directly pertains. The globe 3 is suitably supported by the housing, and in the upper part of the globe, adjacent to the housing, is the holder 4 for the glowers 5 and heater 6. As shown, the holder 4 is of disk form and is made of porcelain or other suitable non-conducting refractory material and provided at one side with lugs 7, by means of which it

is attached to the fixed portion of the lamp, comprising the housing 2 and the frame (not shown) inclosed therein.

On the side of the holder 4 opposite that having the lugs 7 are lugs 8, the inner sides of which are provided with grooves 9, which extend from end to end of the lugs and parallel to the face of the main body of the holder 4. The edges of the lugs 8 are provided with grooves 10, in which lie the glower leading-in wires 11, the disk portion of the holder 4 being provided with slots 12 in its edge adjacent to the lugs 8, through which the leading-in wires 11 project. The leading-in wires may be provided at their extremities with plugs 13 for engagement with suitable sockets in the terminal rods or plugs constituting parts of the stationary portion of the lamp.

The heater 6 in the present instance comprises a comparatively thin plate of non-conducting refractory material on which is disposed the heater-wire, the terminals of which project through openings 14 in the disk portion of the holder 4 and are provided with friction-plugs 15, similar to the plugs 13, with which the leading-in wires of the glowers are provided.

It will be readily understood from the illustration and foregoing description that the terminal wires of the heater and their plugs 15 may be drawn through the openings 14 and that the heater may be then readily removed without disturbing or interfering with the glowers, the heater being located in and movable into and out of the grooves 9 after the manner of a drawer.

The specific details shown and described may obviously be varied within limits without departing from the invention, and I therefore desire it to be understood that the invention is not restricted to what is shown except in so far as limitations may be imposed by the state of the art and expressed in the claims.

I claim as my invention—

1. In an electric lamp of the type described, the combination with one or more glowers, of a non-conducting support having guideways and a heater mounted in said guideways and removable therefrom.

2. In an electric lamp of the type described, the combination with a plurality of glowers, of a non-conducting holder having guideways substantially parallel to the plane of the
5 glowers and a plate-heater mounted in and movable along said guideways.

3. In an electric lamp of the type described, the combination with one or more glowers, and a non-conducting holder provided with
10 supporting-recesses, of a heater, the ends of which are removably located in said recesses.

4. In an electric lamp of the type described, the combination with one or more glowers and a non-conducting holder having guide-
15 ways, of a non-conducting plate having a

heater-wire disposed thereon and removably supported in said guideways.

5. In an electric lamp of the type described, the combination with one or more glowers, and a non-conducting holder provided with
20 recesses adjacent to the glower or glowers, of a heater having its ends removably supported in said recesses.

In testimony whereof I have hereunto subscribed my name this 20th day of March, 1901. 25

MARSHALL W. HANKS.

Witnesses:

H. A. CROOKS,
A. J. WURTS.