(No Model.)

J. W. GWYNN.

LANTERN FOR ELECTRIC ARC LIGHTS.

No. 427,986. Patented May 13, 1890.

Fig. 2.

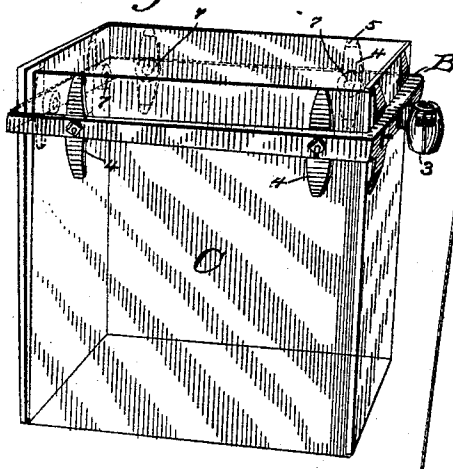


Fig. 3.

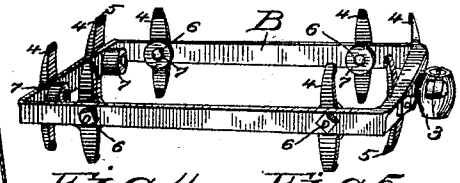


Fig. 4.

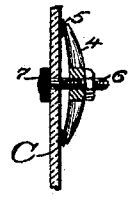


Fig. 5.

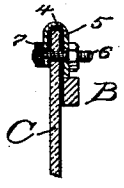
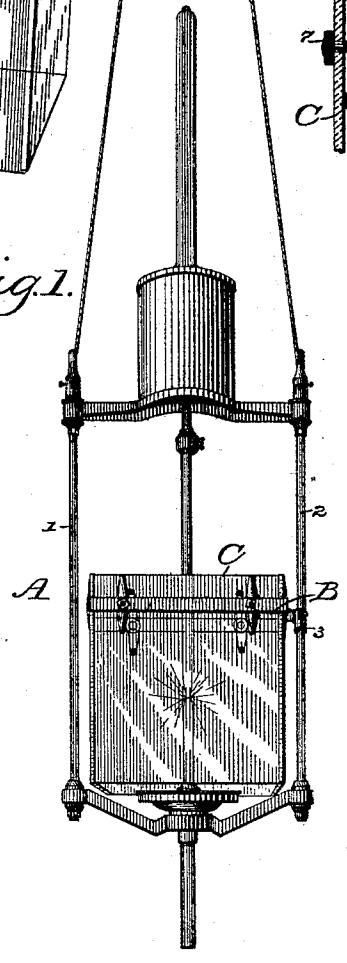


Fig. 1.



WITNESSES

Wm. Musser.

B. W. Sommers.

INVENTOR

John W. Gwynn.

by A. G. Dyrenforth,

Attorney

THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

JOHN W. GWYNN, OF BUCYRUS, OHIO, ASSIGNOR OF FOUR-FIFTHS TO J. B. GORMLEY, ROBERT MAUDSLEY, MARY BLANCH LEMERT, AND KATE E. LEMERT, ALL OF SAME PLACE.

LANTERN FOR ELECTRIC-ARC LIGHTS.

SPECIFICATION forming part of Letters Patent No. 427,986, dated May 13, 1890.

Application filed September 24, 1889. Serial No. 324,894. (No model.)

To all whom it may concern:

Be it known that I, JOHN W. GWYNN, a citizen of the United States of America, residing at Bucyrus, in the county of Crawford and State of Ohio, have invented new and useful Improvements in Lanterns for Electric-Arc Lights, of which the following is a specification.

My invention has relation to improvements in lanterns for electric-arc lights; and the object is to provide a lantern of improved construction and improved means for suspending and supporting the lantern.

The common globes now used as the lanterns for shielding and modifying the electric lights are liable to break, owing to the unequal expansion of the material, caused by the heat of the light, the currents of air, and other causes.

In my invention has been devised a construction which permits such expansion of and resultant contraction and prevents the glass from being broken from these causes, and at the same time the means for holding the plates of the lantern together and securing the lantern to the light-frame are simple in construction and durable for the purposes intended.

Another object of my invention is to so construct the mechanism holding the lantern that it is specially applicable to hold the plates of the lantern by the upper ends, so that there will be no part of the frame below the light to throw shadows or otherwise detract from the efficiency of the light.

I have illustrated my invention by the accompanying drawings, wherein—

Figure 1 is a side view in elevation of an electric-arc-light frame having my improved lantern applied thereto. Fig. 2 is a perspective of the lantern removed from the lamp. Fig. 3 is a perspective of the lantern-frame removed from the lantern. Fig. 4 is a detail view of one of the clamps on a larger scale than shown in the other figures. Fig. 5 is a modified form of clamp intended to take over the ends of the plates of the lantern.

A designates the electric-arc lamp arranged in the ordinary frame, having vertical side suspension-bars 1 2 to sustain the bridge which supports the lower carbon. Either or both of these bars may be utilized as means to which to connect the frame of my improved lantern.

B designates an angular metallic frame, shown rectangular in conformation and provided on one of its bars with a clamp 3, by which it can be secured to the rod of the light-frame, as shown, or to such other support as may be desired or convenient. On each bar of the frame are vertically-arranged clamping projections 4, which are slightly curved in vertical direction, so that their ends bear on the plates forming the lantern. At the ends of the clamping projections are secured pieces of insulating material 5, so that the frame may be suspended with as little liability to disturb the current as possible and a slight elastic function imparted to the clamping means. Through the bars at the middle of the clamps are small bolt-holes, through which the fastening-bolts 6 are projected and passed through holes in the plates of the lantern. On the ends of the bolts 6 are rubber nuts 7, which hold the bolts clamped to the lantern. If it be desired, the clamping means 3, which support the lantern and frame to the rods of an electric light may be duplicated, in which case one of the supports should be insulated to prevent an induced cross-current.

C designates the lantern, composed of glass plates arranged substantially as shown and clamped at the upper ends by the frame and clamps. I have shown the lantern as consisting of four plates of glass; but any number of plates of glass may be used and the shape of the angular inclosing-frame made to conform to the angles made by the plates. In Fig. 5 of the drawings I have shown the frame having clamps hooked to take in the ends of the plates and the set or clamping screw let through them, as shown.

It will be perceived that by the arrangement of the plates of the lantern they are held together with the function of independent expansion and contraction without danger to the other plates forming the inclosure, and

that should one plate become broken the others may remain whole and the lantern be repaired by the substitution of a new plate.

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

1. The lantern for an electric-arc light herein described, consisting of glass plates arranged at angles to inclose the light, and a holding-frame clamped to the upper ends of the plates and provided with means for attaching the lantern to a support, substantially as described, and for the purpose specified.

2. The lantern for an electric-arc light herein described, consisting of an angular metallic frame B, formed with vertically-arranged clamping projections 4, provided with clamping-bolts adapted to clamp and hold the plates of the lantern, and glass plates arranged in the frame and clamped together at their upper ends, substantially as described, and for the purpose specified.

3. In a lantern for an electric-arc light, the combination of an angular metallic frame B, formed with clamping projections 4, curved in vertical direction and provided with insulated linings, bolts projected through the frame and lantern-plates, lantern-plates arranged in the frame, and rubber nuts on the bolts, substantially as described, and for the purpose specified.

4. In a lantern for an electric-arc light, the combination of an angular metallic frame formed with clamping projections having rubber linings, clamping-bolts through the clamping projections, and lantern-plates arranged in the frame and held at their upper ends independently of each other by the clamps of the metallic frame, substantially as described.

In witness whereof I hereunto set my hand in the presence of two attesting witnesses.

JOHN W. GWYNN.

Attest:

FREDERICK E. FREY,

O. C. BARTH.