(No Model.)

P. H. KLEIN, Jr.

ELECTRIC LIGHT FIXTURE.

No. 297,269. Patented Apr. 22, 1884.

Fig. 1.

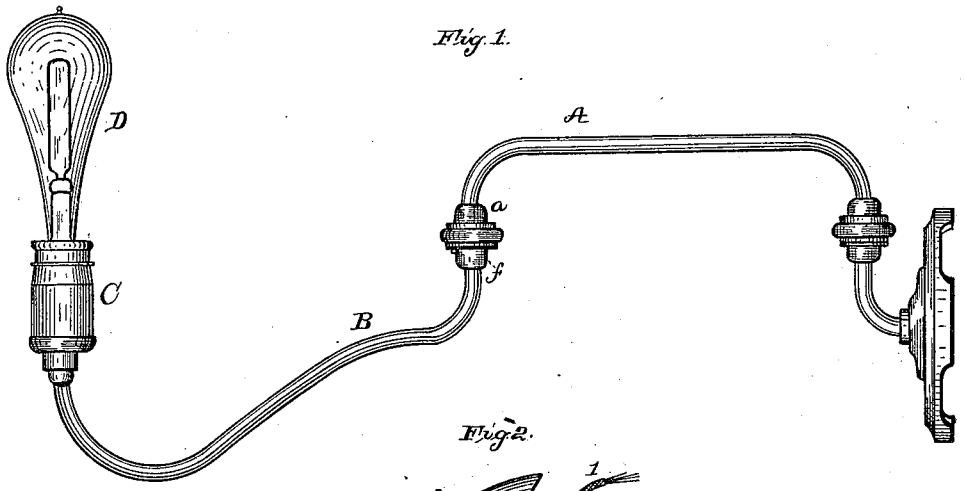


Fig. 2.

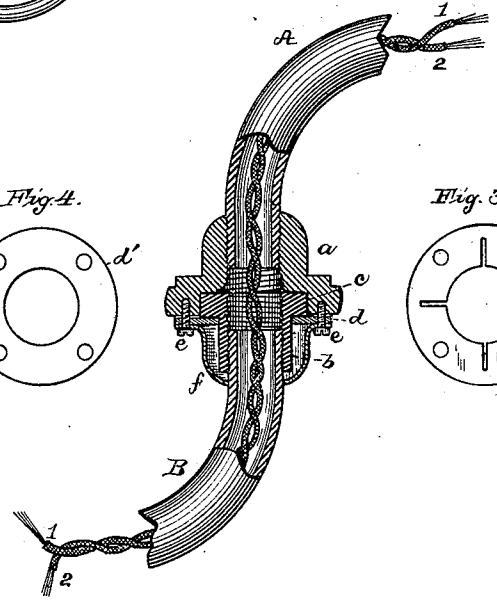


Fig. 4.

Fig. 3.

ATTEST:

E. C. Rowland

A. W. Seeley

INVENTOR:

Philip H. Klein Jr.

By Richd. N. Dyer,

Atty

N. PETERS, Photo-Lithographer, Washington, D. C.

UNITED STATES PATENT OFFICE.

PHILIP H. KLEIN, JR., OF NEW YORK, N. Y., ASSIGNOR TO BERGMANN & CO., OF SAME PLACE.

ELECTRIC-LIGHT FIXTURE.

SPECIFICATION forming part of Letters Patent No. 297,269, dated April 22, 1884.

Application filed December 12, 1883. (No model.)

To all whom it may concern:

Be it known that I, PHILIP H. KLEIN, Jr., of New York, in the county and State of New York, have invented a certain new and useful Improvement in Electric-Light Fixtures, of which the following is a specification.

The object of my invention is to provide a simple, efficient, and durable swinging bracket for incandescing electric lamps, in which there are no frictional or spring contacts, but a direct connection through flexible conductors, which is provided with means preventing such flexible conductors from being twisted to an injurious extent, whose swinging joints can be so adjusted as to work easily and loosely or tightly, or can be arranged not to work at all, if desired.

My invention consists in the novel devices and combinations of devices employed by me in accomplishing the above-named objects, as hereinafter set forth and claimed.

My invention is illustrated in the annexed drawings, in which Figure 1 is a view in elevation of a swinging bracket embodying my invention; Fig. 2, a sectional view of a joint; and Figs. 3 and 4 are views of different forms of flexible washers used in the joint.

A B are respectively two parts of a jointed or swinging bracket, supporting a socket, C, and an incandescing electric lamp, D, and which may be attached at its other end to a wall or other suitable support. Upon the screw-threaded end of part A is placed the internally screw-threaded cap *a*, which forms one side of the joint, and upon the end of part B is fixed the sleeve *b*, whose flanged head *c* fits in the cap *a*, so as to turn therein. The lower side of the head *c* projects slightly beyond the cap *a*, and a flexible plate or washer is clamped against the head *c* by screws *e e*, which enter the cap *a*, passing through the shell *f*, which is used to give a finish to this side of the joint corresponding to the cap *a*. The flexible plate or washer may be one *d*, of metal, as shown in Fig. 3, split to give flexibility, or it may be a plain disk, *d'*, of vulcanized fiber, as shown in Fig. 4. By screwing the screws *e e* in more or less tightly, thus altering the pressure of the flexible washer, the joint may be made more or less tight; or, if desired, the plate may be clamped so tightly that the bracket cannot work at all. The cap *a* may, if desired, be made the lower side of the joint, and the flanged sleeve *b* the upper side. Flexible conductors 1 2 pass through the whole length of the bracket, each consisting of a number of fine flexible wires massed together and covered with insulating material. Such conductors may be very much twisted without injury. I, however, construct the swinging bracket in such manner that it cannot be swung entirely around, this being accomplished, preferably, by so arranging the relative height of the parts that the outer end of the bracket will strike against the inner end when the former is swung in. This prevents the bracket from being continually swung around in the same direction, which might ultimately result in injury to the conductors. A pin at the joint could be used as a stop to accomplish the same result. The tubes of the bracket extend from the ends of the joints instead of from its sides, as heretofore; hence there is a longer curve to the parts instead of a short angle, and the conductors are not bent sharply against the sides of the fixture, so that no insulation of the interior of the fixture is required. In addition the twist, when the fixture is turned, comes upon a greater length of the conductors than in the short angle formed where the tubes extend from the sides of the joint.

What I claim is—

1. The combination of a jointed or swinging bracket having open wireways through its joints and continuous flexible electrical conductors extending through said bracket from end to end, substantially as set forth.

2. The combination of a jointed or swinging bracket having open wireways through its joints and two continuous flexible separately-insulated electrical conductors extending through said bracket from end to end, substantially as set forth.

3. The combination of a jointed or swinging bracket having open wireways through its joints, continuous flexible electrical conductors passing through said bracket from end to end, and means for preventing the bracket-arms from making a complete revolution, substantially as set forth.

4. In an electrical swinging bracket, the

combination of two parts, one turning within the other, and the flexible plate holding them together, substantially as set forth.

5. In an electrical swinging bracket, the combination of the cap on one part, the flanged sleeve, on the other, fitting into said cap, and the flexible plate holding them together, substantially as set forth.

6. The combination of the cap forming one side of the joint, the sleeve turning therein, forming the other side, and the shell *f*, covering said sleeve, substantially as set forth.

7. In a swinging bracket containing continuous flexible electrical conductors extending through the bracket from end to end, the tubes of the bracket extending from the ends of the joints, substantially as set forth.

This specification signed and witnessed this 16th day of November, 1883.

PHILIP H. KLEIN, JR.

Witnesses:
H. W. SEELY,
EDWARD H. PYATT.