(No Model.)

W. E. FREEMAN.

ELECTRIC ARC LAMP.

No. 491,095. Patented Feb. 7, 1893.

Fig. 1.

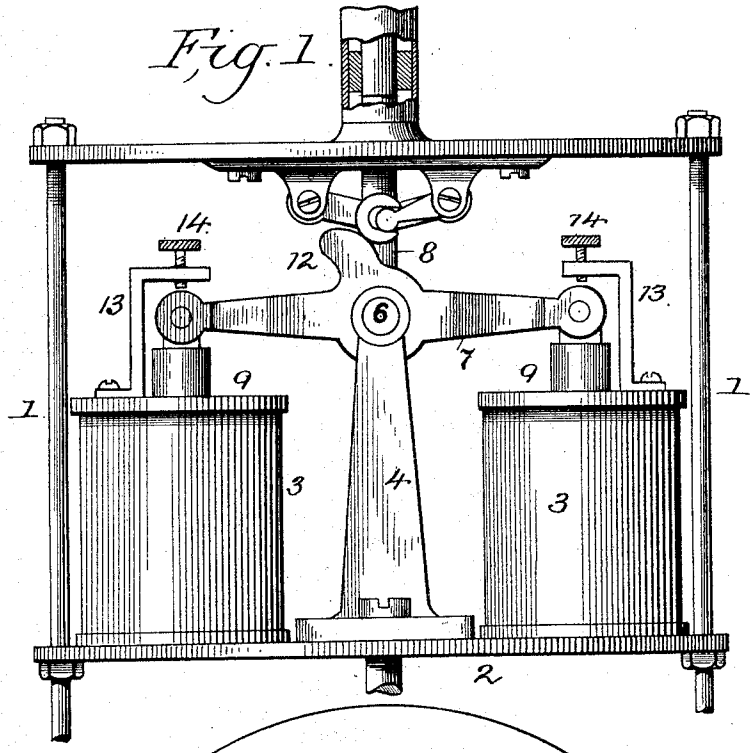
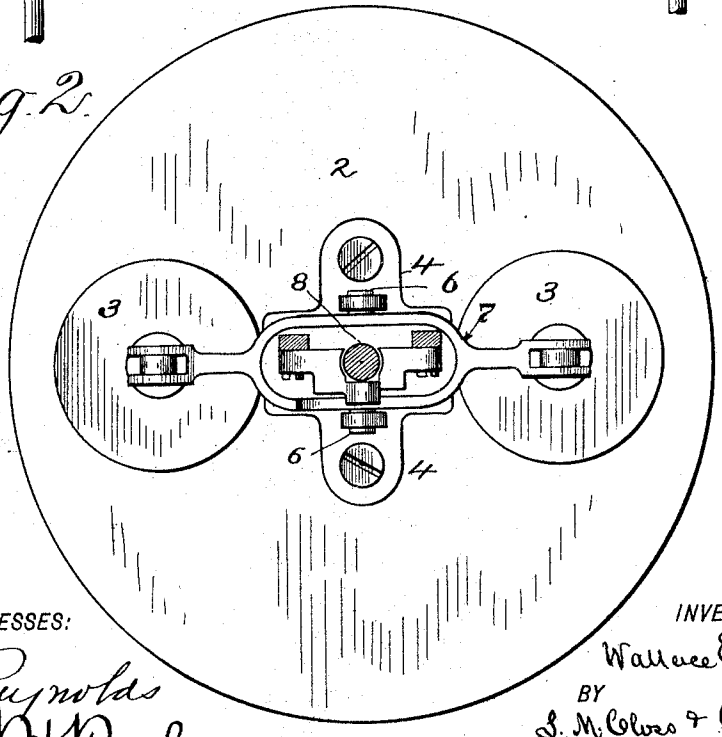


Fig. 2.



WITNESSES:

J. W. Reynolds

R. J. H. Taylor.

INVENTOR

Wallace E. Freeman

BY

L. M. Coles & C. L. Coombs

ATTORNEYS.

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

UNITED STATES PATENT OFFICE.

WALLACE E. FREEMAN, OF LONG ISLAND CITY, ASSIGNOR TO LAWRENCE M. CLOSS, OF NEW YORK, N. Y.

ELECTRIC-ARC LAMP.

SPECIFICATION forming part of Letters Patent No. 491,095, dated February 7, 1893.

Application filed July 8, 1892. Serial No. 439,311. (No model.)

To all whom it may concern:

Be it known that I, WALLACE E. FREEMAN, a citizen of the United States, residing at Long Island City, in the county of Queens and State of New York, have invented certain new and useful Improvements in Electric-Arc Lamps; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the figures of reference marked thereon, which form a part of this specification.

This invention relates to improvements in electric arc lamps and it has for its object to provide simple and efficient feed mechanism for the same which will not be liable to get out of order and which may be inexpensively constructed.

The above mentioned object is attained by the means illustrated in the accompanying drawings in which—

Figure 1 represents a side elevation of a portion of an arc lamp embodying my invention and—Fig. 2 a top view thereof.

Referring to the drawings the numeral 1 indicates the frame of the lamp, which is similar to those in ordinary use.

The numeral 2 indicates a cross piece or support for the spools 3, which are hollow and are secured to the cross piece or support in any convenient manner. To the support are secured two upright standards 4 which have bearings at their upper ends for the journals 6 of a rocking frame 7 through which the rod 8 which carries the upper carbon passes. The said frame is extended at each end, laterally, the ends having pivoted thereto the upper ends of the soft iron cores 9 which set and work freely in the hollow spools before mentioned.

The numeral 10 indicates two clutch levers pivoted to a cross piece 11, through which the carbon carrying rod also passes. The clutching ends of said levers are pivoted together, and embrace the said rod, being suitably shaped for the purpose as indicated in Fig. 2 of the drawings. To the rocking frame at one side of the rod 8 is secured a short cam 12 which bears against the lower side of one of the clutch levers, in order to elevate the same when the frame 7 is rocked in a proper direction. To each spool is attached a bracket 13 extending over the extended end of the rocking frame and each bracket is provided with an adjusting screw 14, by means of which the play of the rocking frame may be adjusted, so as to regulate the movement of the carbon.

The coils of the spools are connected in the circuit as usual, in such manner that one will attract and the other release the movable core, as the strength of the current varies, and thus clamp and release the carbon carrying rod as required to automatically regulate the feed of the upper carbon.

Instead of the clutch levers a pawl and ratchet or other mechanism may be employed to hold and release the carbon carrying rod, without departing from my invention.

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

The combination with the spools, the rocking frame and the cores, of the clutch levers, embracing the carbon carrying rod, and the cam on the rocking frame, whereby the levers are operated substantially as specified.

In testimony whereof I affix my signature in presence of two witnesses.

WALLACE E. FREEMAN.

Witnesses:
R. H. TAYLOR,
R. B. CASON.