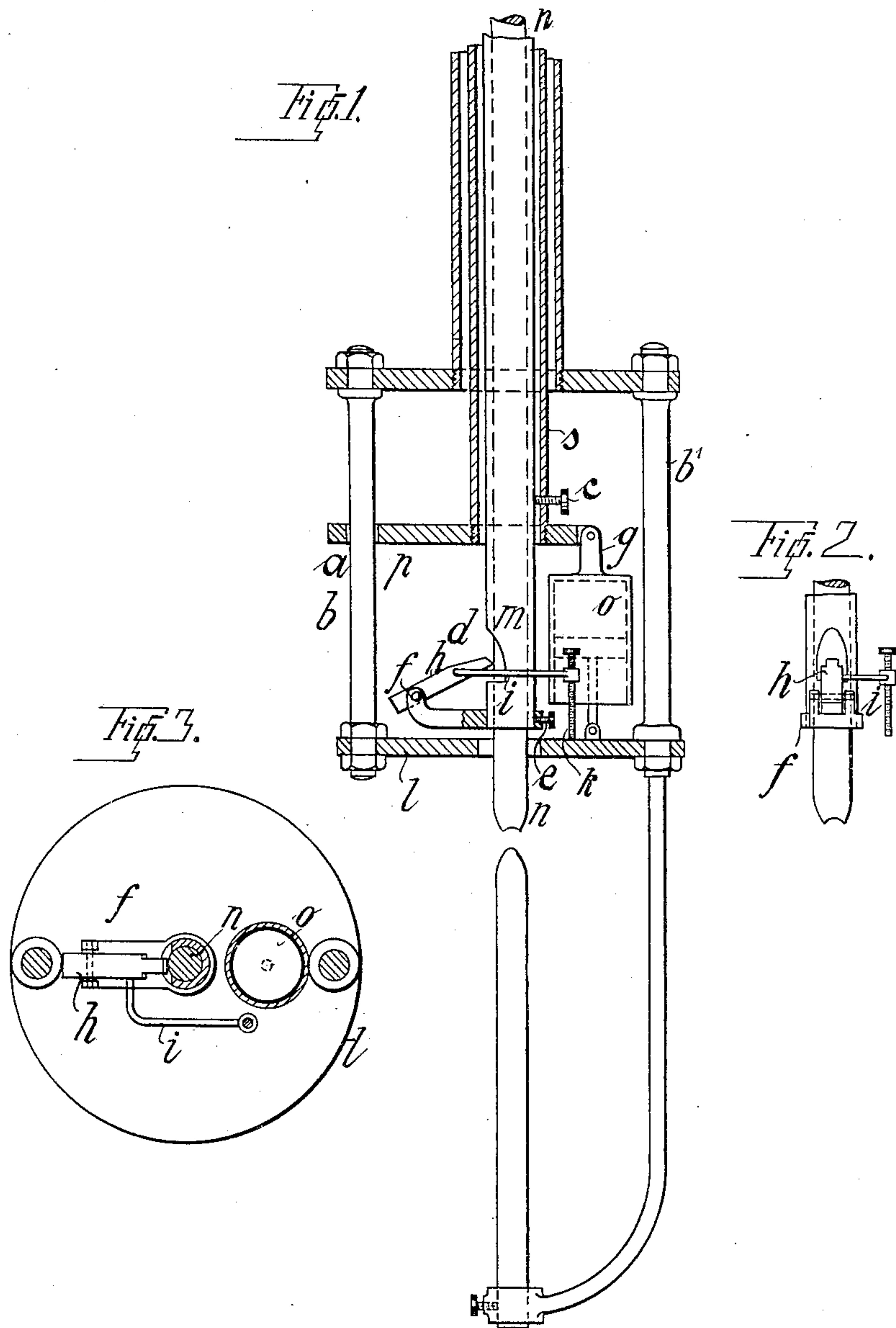


No. 770,489.

PATENTED SEPT. 20, 1904.

L. WOLFF.
ELECTRIC ARC LAMP.
APPLICATION FILED NOV. 25, 1903.

NO MODEL.



Witnesses:
L. B. Middleton
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Louis Wolff.
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Attorney.

UNITED STATES PATENT OFFICE.

LOUIS WOLFF, OF BERLIN, GERMANY.

ELECTRIC-ARC LAMP.

SPECIFICATION forming part of Letters Patent No. 770,489, dated September 20, 1904.

Application filed November 25, 1903. Serial No. 182,626. (No model.)

To all whom it may concern:

Be it known that I, LOUIS WOLFF, electrician, residing at Neuenburgerstrasse 24, Berlin, Germany, have invented certain new and useful Improvements in Means for Controlling Arc-Lamps; and I do hereby 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.

This invention relates to new or improved means for controlling arc-lamps, the simplicity and reliability of said means rendering them specially suitable for lamps working with low currents.

One form of the invention is illustrated in the annexed drawings, in which—

Figure 1 is a vertical section of the improved controlling device; Fig. 2, a side view of part thereof, and Fig. 3 a sectional plan view thereof.

The hollow iron core *s* is adapted to be operated in the known manner by means of a solenoid. To the lower end of the said core is fixed a horizontal plate *p*, provided with an aperture *a*, embracing a pillar *b* of the frame *b'*. To the edge of the said plate *p* opposite the said aperture is pivoted the rod *g* of an air-brake *o*.

Within the hollow iron core *s* is a metal tube *m*, which is fixedly connected to said core by means of a set-screw *c* or the like, and therefore takes part in the movements of the core. The tube *m* serves as a guide for the upper carbon *n* and is provided near its lower end with an aperture *d*, which exposes the said carbon. Below the said aperture two lateral supports *f* are fixed to the tube by means of a ring *e* or the like, and between the said support is pivoted a suitably-shaped catch *h*, which forms the actual controlling device. To this catch is fixed a bent horizontal arm *i*, which clears the tube *m* and is provided at its free end with a vertical adjustment-screw *k* or a downwardly-bent part adapted to rest

upon the fixed plate *l* and form an abutment. The provision of a screw *k* permits the action of said abutment to be regulated. The action of the controlling device is as follows: When the iron core *s* is attracted by the solenoid—that is to say, moved upward—the full weight of the catch *h* bears against the carbon *n*, and thus causes the latter to ascend with the core *s*. Assuming that the upper carbon was originally in contact with the lower carbon, the upward movement of the former will cause the electric arc to be formed. As soon as the current begins to fall owing to the combustion of the carbon the core *s* will begin to move gradually downward. When the core has descended to such an extent that the screw *k* or the downwardly-bent part of the arm *i* abuts against the plate *l*, the pressure of the catch *h* on the carbon *n* will be removed, so that the said pencil can descend independently by gravity. The distance between the carbons will thus be reduced and the current in the solenoid will be increased, so that the core *s* will ascend again and move the carbon *n* with it in the manner already described.

Having now particularly described and ascertained the nature of my said invention and in what manner the same is to be performed, I declare that what I claim is—

1. The combination, with a stationary supporting-frame, a plate slidable therein, a hollow core secured to the said plate, and an adjustable guide-tube for a carbon connected to the said core and provided with an opening; of a supporting-catch for the carbon pivotally connected with the said guide-tube and projecting through its said opening, a brake which controls the descent of the said frame and plate, and a releasing-tappet for the said catch which strikes the said frame and operates to free the carbon in the said guide-tube.

2. The combination, with a stationary supporting-frame having a vertical guide-pillar, a plate slidable on the said pillar, a hollow core secured to the said plate, and an adjust-

able guide-tube for a carbon connected to the
said core and provided with an opening near
one end thereof; of a supporting-catch for the
said carbon pivotally connected with the said
5 guide-tube and projecting through its said
opening, an air-brake arranged between the
said frame and plate, and a releasing-tappet
for the said catch which strikes the said frame

and operates to free the said carbon in the
guide-tube. 10

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

LOUIS WOLFF.

Witnesses:

WOLDEMAR HAUPT,
HENRY HASPER.