

(No Model.)

C. E. SCRIBNER.

DASH POT FOR ELECTRIC ARC LIGHTS.

No. 356,211.

Patented Jan. 18, 1887.

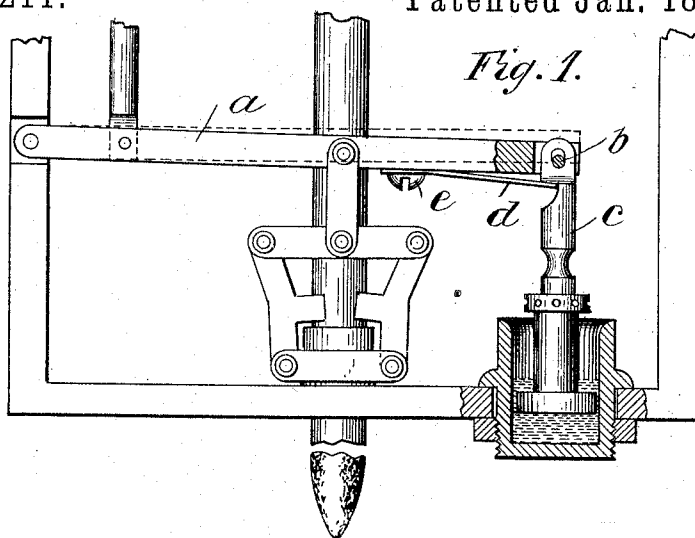


Fig. 2.

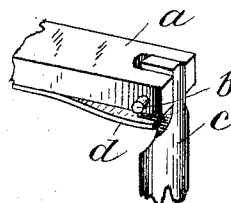
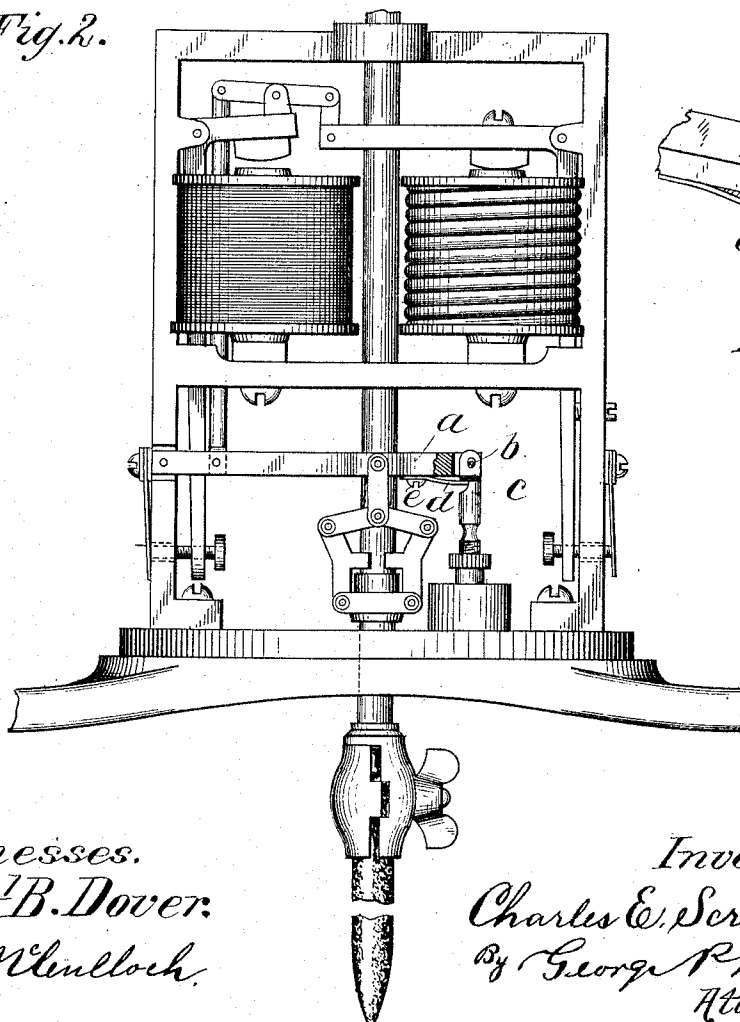


Fig. 3.

Witnesses.
Sam^l B. Dover.
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UNITED STATES PATENT OFFICE.

CHARLES E. SCRIBNER, OF CHICAGO, ILLINOIS, ASSIGNOR TO THE WESTERN
ELECTRIC COMPANY, OF SAME PLACE.

DASH-POT FOR ELECTRIC-ARC LIGHTS.

SPECIFICATION forming part of Letters Patent No. 356,211, dated January 18, 1887.

Application filed June 1, 1886. Serial No. 293,748. (No model.)

To all whom it may concern:

Be it known that I, CHARLES E. SCRIBNER, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented a certain new and useful Improvement in Dash-Pots for Electric-Arc Lamps, (Case 106) of which the following is a full, clear, concise, and exact description, reference being had to the accompanying drawings, forming a part of this specification.

In electric-arc lamps dash-pots are used to steady the action of the levers which carry the clutches and regulate the feed of the lamp. I have found, however, that at a certain point in the feeding of the carbon it is desirable to relieve the levers of arc lamps from the sluggish retardation of the dash-pots. The lifting-lever in its normal position carries and sustains the carbon-rod. At the moment of feeding the lever moves so as to open the clutch and release the rod. The return of the lever to its normal position stops the feed and prevents too great a shortening of the arc. It is at the time the lever is thus returning to stop the feed that it should be free of the retardation of the dash-pot.

My invention consists in connecting the piston of the dash-pot with the lifting-lever of the arc lamp in such a manner that the lever may move a short distance unretarded by the sluggish action of the dash-pots. The lever, after each feed, is thus permitted to return promptly a short distance without retardation. The lamp is thus prevented from becoming dim, as heretofore, since the downward motion of the carbon-rod is promptly checked. This will be readily understood by the accompanying drawings, in which—

Figure 1 is a detailed view, partly in section, of the lever carrying the clutch and the piston of the dash-pot suspended to said lever in accordance with my said invention, so that there may be a little independent or lost motion between them. Fig. 2 is a side elevation showing the magnets and armature-levers of an arc lamp in connection with the lever, clutch, and dash-pot shown in Fig. 1. Fig. 3 is a detailed view of the manner of connecting the piston of the dash-pot with the lifting-lever.

Like parts are indicated by similar letters of reference in the different figures.

The action of the regulating-magnets of arc lamps is well known, and need not, therefore, be described in detail.

The lifting-magnets operate to separate the carbons and establish the arc. As the resistance of the arc increases more current is shunted through the magnet in the shunt of the arc, until finally the clutch opens and the rod is released; thus effecting a feed of the carbon. The resistance of the arc is thus diminished, and the magnet in the shunt of the arc operates to raise the clutch and cause it to grasp and arrest the descent of the rod. It is this upward movement of the clutch that I have found should be unobstructed by the sluggish action of the dash-pot, in order that the carbon may not descend far enough to dim the light and cause it to "wink."

The lever *a*, which carries the clutch, is provided with the pin *b*, which passes through the bifurcated end of said lever, as shown. The end of the piston-rod *c* of the dash-pot is provided with a slot or opening through which the pin *b* is inserted. The slot at the end of the piston-rod is preferably about twice the diameter of the pin vertically. The spring *d* is secured to the lever, as shown at *e*, and its tension is so adjusted that it will normally hold the piston-rod of the dash-pot, as shown in Fig. 1, so that the pin *b* will rest in the lower portion of the slot in the upper end of the piston-rod. It is evident that when the lever is thus connected with the piston-rod the lever may move upward so as to bring the pin to the top of the slot without retardation from the dash-pot. The resistance the spring offers to the movement of the lever is not of such character as to cause the lever to move sluggishly, and hence the descent of the carbon is checked at once and the lamp is prevented from "winking" at each feed of the carbon. After the lever has lifted the clutch and stopped the feed, the dash-pot piston is lifted by the spring *d* to the position shown. Thus it will be seen that at the moment of returning to its normal position the lever is free from the retardation of the dash, and at other times is acted upon by the dash-pot in the usual manner.

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

1. The combination, with the lifting-lever

of an arc lamp, of a dash-pot, a slot and pin
for connecting the piston-rod of said dash-pot
with the said lever, and a spring for holding
said piston-rod normally toward the lever,
5 whereby the lever, as it returns to its normal
position after a feed, is unretarded by the dash-
pot.

2. The combination, in an electric-arc lamp,
of the lifting-lever with the piston-rod of the
10 dash-pot connected to said lever by a loose
connection, and a spring, *d*, for holding said
piston-rod when the lever is in its normal po-
sition, whereby the lever is unretarded by the
dash-pot immediately after each feed of the
15 carbon.

3. The combination, with the lever *a*, which
carries the clutch, of the piston-rod *c*, the pin
b, and the slot in which pin *b* rests, and the
spring *d*, attached at *e* to the lever, and serv-
ing to sustain the piston of the dash-pot, 20
whereby the lever is unretarded by the dash-
pot as it returns to its normal position after
each feed of the carbon.

In witness whereof I hereunto subscribe my
name this 29th day of May, A. D. 1886.

CHARLES E. SCRIBNER.

Witnesses:

GEORGE P. BARTON,
F. H. McCULLOCH.