F. JANECEK.

ELECTRODE FOR ARC LAMPS.

APPLICATION FILED MAY 16, 1907.

903,383. Patented Nov. 10, 1908.

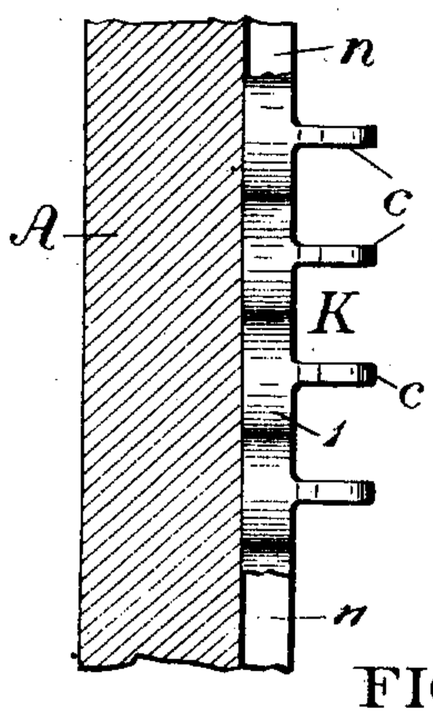


FIG. 1.

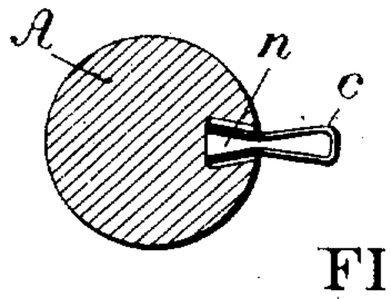


FIG. 2.

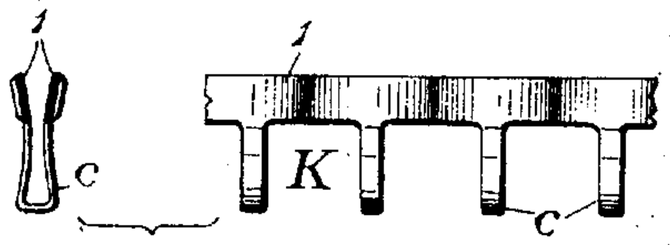


FIG. 3.

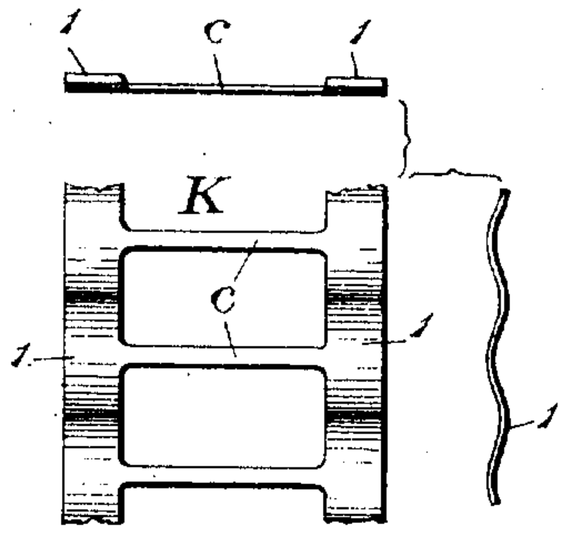


FIG. 4.

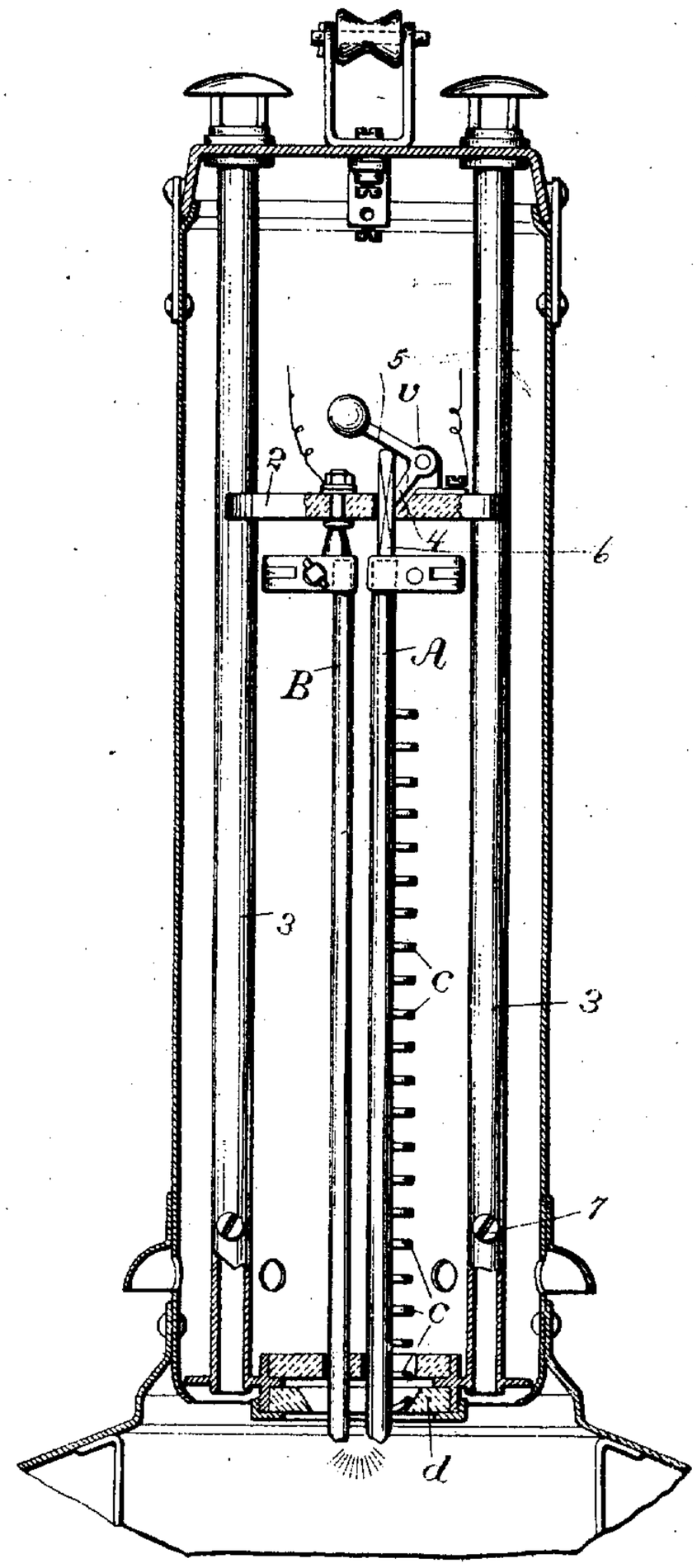


FIG. 5.

Witnesses,
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Inventor:
Franz Janeček,
by Paul S. Schilling
his attorney.

# UNITED STATES PATENT OFFICE.

FRANZ JANEČEK, OF KARLÍN, NEAR PRAGUE, AUSTRIA-HUNGARY

## ELECTRODE FOR ARC-LAMPS.

No. 903,383. Specification of Letters Patent. Patented Nov. 10, 1908.

Application filed May 16, 1907. Serial No. 373,997.

*To all whom it may concern:*

Be it known that I, FRANZ JANEČEK, a subject of the Emperor of Austria-Hungary, residing at Karlín, near Prague, Bohemia, Austria-Hungary, have invented certain new and useful Improvements in Electrodes for Arc-Lamps, of which the following is a specification.

The present invention relates to improvements in arc lamp electrodes of that type in which the rod is furnished with pins or stops, and my invention consists in providing the electrode with stops projecting from a strip of metal and therefore all in metallic connection.

The invention is illustrated in the accompanying drawing, in which—

Figure 1 is a vertical section through a portion of the new arc lamp electrode. Fig. 2 is a cross section through the same. Fig. 3 shows a cross section and side elevation respectively of a fragment of the metal strip folded ready for insertion into the electrode. Fig. 4 shows a cross section, edge view and plan of a fragment of the metal strip prior to being folded. Fig. 5 is a vertical section through a portion of an arc lamp fitted with the new electrode.

In carrying out my invention I employ a strip of sheet metal K having sinuous or corrugated marginal portions 1 (Fig. 4) and so stamped out centrally as to present cross bars *c*, somewhat resembling the rungs of a ladder. This metal strip K I bend or fold over on its longitudinal center-line, so that when seen in side elevation (Fig. 3) it presents approximately the form of a comb, whose back is constituted by the marginal bands 1, and whose teeth are represented by the doubled over bars *c*. This pectinate metal strip I insert into the electrode A (Fig. 1) which is longitudinally grooved at *n* to receive it. In Figs. 1 and 2 the groove *n* is shown of dovetail shape and the strip K can be readily inserted therein by pinching the two portions 1 together and pushing them into the groove. The resilience of the strip will cause the parts 1 to press outward, whereby sufficient hold is obtained without the aid of auxiliary means.

The corrugations on the margins 1 make intimate contact with the electrode A at a large number of places, so that the comb K also serves the purpose of a metal core and renders any such device for reducing the resistance altogether redundant.

Fig. 5 illustrates the manner in which the improved electrode is employed in an arc lamp. The coupling of the electrode A (Fig. 5), by means of its guide pin 6, with the sliding member 2, is obtained by means of the bell crank contact lever *v*, one contact arm 4 of which is turned down obliquely against the side of the pin, while its other, weighted, arm 5 rests upon the top of the pin 6. In this manner a reliable contact of pin 6 with the arm 4 is assured since the supported electrode presses with its guide pin 6 against the arm 5. If the electrodes burn down, whereby further movement of the sliding member 2 is stopped by the stop 7, and the last electrode tooth *c* has dropped off the rest *d*, then at the moment when the electrode A is no longer supported and drops, the contact between guide pin 6 and arm 4 will be interrupted without sparking because the arm 5 will form the contact with the guide piece, and the sparking takes place only upon breaking of the contact of the guide pin 6 with the arm 5. The contact arm 4 and the side wall of the guide pin, therefore, are protected against being damaged by sparking and a constant contact is assured.

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

1. An electrode for arc lamps comprising a rod provided with a longitudinal dovetail groove and a ladder-shaped metal strip doubled upon itself on its longitudinal axis, said doubled strip being located and held in the groove by its own resiliency and the points formed by the doubling projecting beyond the rod, substantially as described.

2. An electrode for arc lamps comprising a rod provided with a longitudinal dovetail groove and a corrugated ladder-shaped metal strip doubled upon itself on its longitudinal axis, said doubled strip being located and held in the groove by its own resiliency and the points formed by the doubling projecting beyond the rod, substantially as described.

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

FRANZ JANEČEK.

Witnesses:
MILOSLAV HRUBY,
ADOLPH FISCHER.