

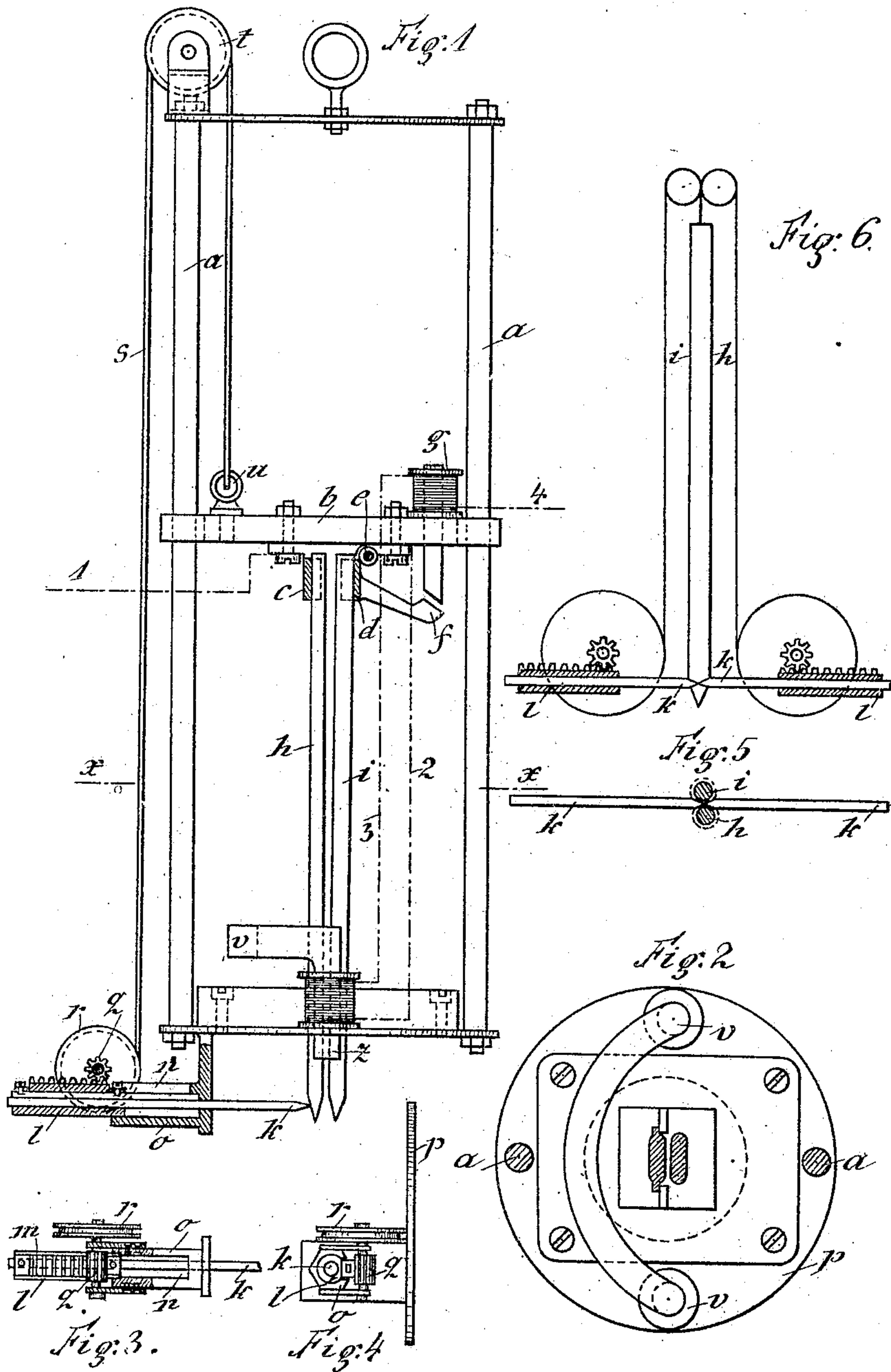
No. 896,935.

PATENTED AUG. 25, 1908.

L. OČENASĚK.

## ARC LAMP.

APPLICATION FILED NOV. 27, 1906.



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# UNITED STATES PATENT OFFICE.

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## ARC-LAMP.

No. 896,935.

Specification of Letters Patent.

Patented Aug. 25, 1908.

Application filed November 27, 1906. Serial No. 345,371.

*To all whom it may concern:*

Be it known that I, LUDVIK OČENÁŠEK, electrician, subject of the Emperor of Austria-Hungary, residing at Prague, in the Kingdom of Bohemia, Empire of Austria-Hungary, have invented new and useful Improvements in Arc-Lamps, of which the following is a specification.

In the arc lamp which forms the object of the present invention two carbons one of which may be moved away from the other to produce the arc are arranged side by side and adapted to be simultaneously raised or lowered and are supported by a pin which burns or melts away in the arc. An arrangement is provided whereby the weight of the carrier *b* holds the movable pin pressed against the carbons near their burning ends, so that, if the pin should melt, the carbons will descend and their movement will be transmitted to the pin, so that the latter is again caused to engage said pin. It is evident, that by a normal operation of the arc lamp and by the choice of pins of suitable cross-section the descending of the carbons is scarcely perceptible.

The arc lamp is shown in the accompanying drawing, in which

Figure 1 is an elevation, Fig. 2 a section on the line *x—x* of Fig. 1 the supporting mechanism for the carbons being omitted, Figs. 3 and 4, a plan view and side view respectively of a detail; and Fig. 5 another form of construction of the lamp. Fig. 6 is an elevation of Fig. 5.

The carbon holders *c, d* are mounted on a plate *b* sliding along bars *a*. The carbon holder *d* is mounted on a hinge *e* and provided with an armature *f*. This faces the core of the electro-magnet *g* and has for its object to bring the ends of the carbons into contact in the non-working position and to separate the ends to strike the arc.

The carbons *h* and *i* which rest against one another in a position of repose are supported by a pin *k* inserted in a sheath *l*. On this sheath a rack-bar *m* is mounted, which projects into the slot *n* of a hollow cylinder *o* which serves as guide for the sheath *l*. The hollow cylinder is as shown in the present example of construction made in one piece with a plate *p* connecting the lower ends of the bars *a*. The rack-bar *m* gears with a pinion *q*, on

the axis of which a cord pulley *r* is mounted, which is connected by means of a cord *s* carried over a roller *t* with a ring *u* attached to the plate *b*. The cord *s* is passed in such a way round the rollers *r, t*, that the weight of the plate *b* and fittings and the carbons *h* and *i* presses the pin *k* against the carbons. In order that the arc may strike downwards and not draw upwards between the two carbons, an electromagnet *v* is provided, the pole *z* of which lies in proximity to the arc.

The current passes through the conductor 1 into the carbon *h* and through the carbon *i* and conductor 2 to the electromagnet *v* and from the latter through the conductor 3 and electromagnet *g* to the return wire 4.

As already mentioned the ends of the carbons *h, i* lie, when in the non-working position, against one another. Now if current be passed through the lamp the armature *f* is attracted. The carbon ends are thereby separated and the arc produced. When the carbons are consumed to the pin *k* a portion of the latter melts or vaporizes off. The carbons are no longer supported thereby and accordingly descend. The downward movement of the plate *b* is, however, again transmitted to the pin *k*, which is moved forward to be pressed against the carbons supporting thereby the latter in a suitable distance from their ends.

In the form of construction shown in Fig. 5, two pins *k* are provided which lie between the two carbons *h* and *i*. Of course instead of the cord arrangement *s* any other suitable mechanism for transmitting the movement of the plate *b* to the pin *k* may be employed.

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. In an arc lamp the combination with the carbons, of a fusible pin supporting the carbons against downward movement and means for moving the pin into engagement with the carbons when the end of the pin is melted, said means being controlled by the downward movement of the carbons.

2. In an arc lamp the combination with the carbons of a sliding plate carrying the carbons, a fusible pin engaging with the ends of the carbons to hold them against downward movement, said pin allowing the car-

bons to drop when its end is melted off,  
means for moving said pin and means for ac-  
tuating said means by the weight of the slid-  
ing plate so that as the carbons move down-  
ward the pin is brought into engagement  
therewith again by the movement of the car-  
bon carrying plate.

In testimony whereof I have signed my  
name to this specification in the presence of  
two subscribing witnesses.

LUDVIK OČENÁŠEK.

Witnesses:

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