J. VINTILA.

ARC LAMP.

APPLICATION FILED JAN. 19, 1916.

1,211,016.

Patented Jan. 2, 1917.

2 SHEETS—SHEET 1.

FIG-2.

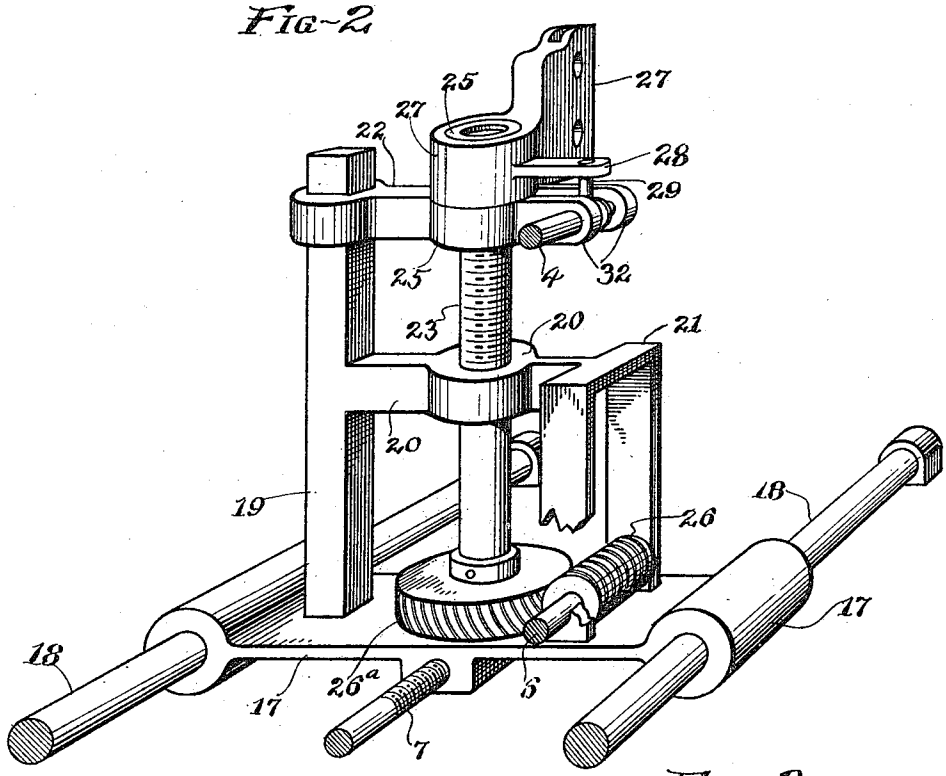


FIG-1.

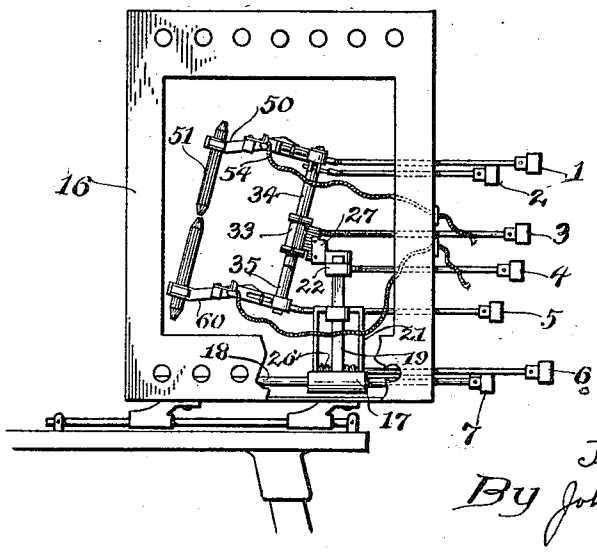
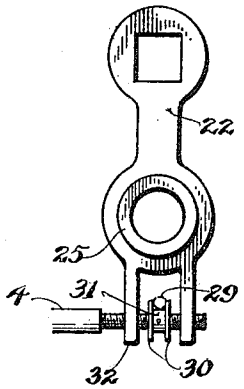


FIG-3.



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2 SHEETS—SHEET 2.

FIG-5

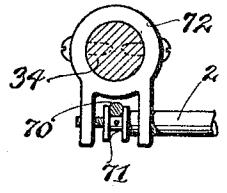


FIG-4

FIG-6

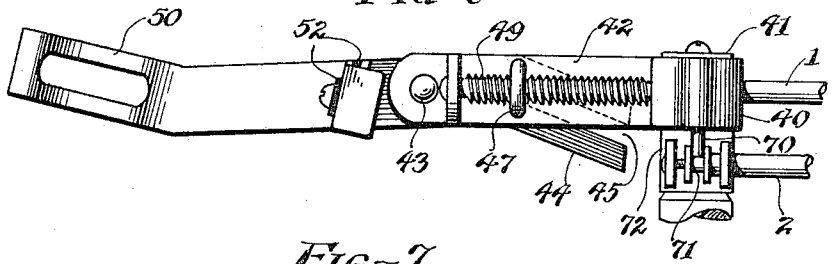


FIG-7

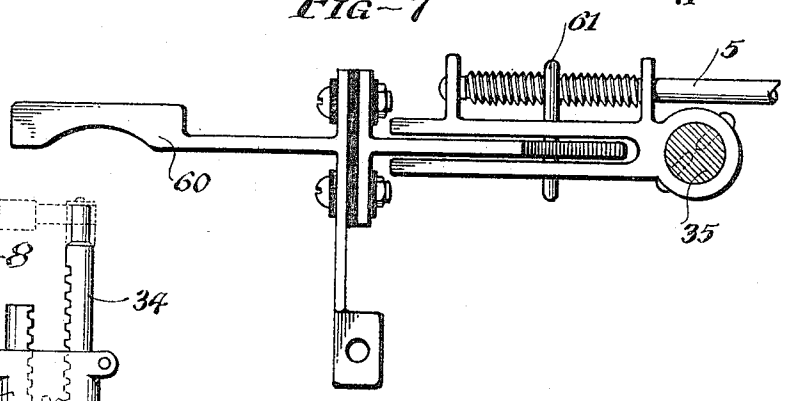
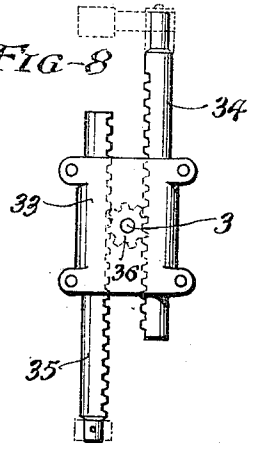


FIG-8



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UNITED STATES PATENT OFFICE.

JOHN VINTILA, OF CLEVELAND, OHIO.

ARC-LAMP.

1,211,016. Specification of Letters Patent. Patented Jan. 2, 1917.

Application filed January 19, 1916. Serial No. 72,993.

To all whom it may concern:

Be it known that I, JOHN VINTILA, a subject of the Emperor of Austria-Hungary, residing at Cleveland, in the county of Cuyahoga and State of Ohio, have invented certain new and useful Improvements in Arc-Lamps, of which the following is a specification.

This invention relates to arc lamps, and particularly to those used in motion picture work.

It is sometimes a matter of considerable difficulty to register the carbons, and to hold them in exact registry as they are consumed, and to adjust or vary the position of the lamp according to particular conditions. This is especially true where the carbons stand at an inclination from the vertical, as is usual.

The object of the present invention is to provide improved means whereby the carbons may be kept in correct alinement with each other.

Another object is to provide improved means for adjusting the carbon holders to various positions, and to raise or lower the lamp.

In the accompanying drawings Figure 1 is a front elevation of a lamp such as used on motion picture apparatus. Fig. 2 is a detail in perspective of the supporting base part of the lamp. Fig. 3 is a top view of some of the parts shown in Fig. 2. Fig. 4 is a perspective view of the arm for supporting the upper carbon. Fig. 5 is a detail showing the device for adjusting the same. Fig. 6 is a side view of Fig. 5, with the parts of the arm in somewhat different position. Fig. 7 is a top view of the lower arm. Fig. 8 is a detail in elevation of the device for adjusting the carbons, toward each other.

In the drawings, 16 is the frame of the lamp casing. Within the same is a base 17 slidable on rods 18 to position the lamp longitudinally, the base being shifted by a screw 7. Projecting from this base is a post 19 connected by a cross bar 20 to a yoke 21 fixed to the base. On the upper part of the post is a vertically adjustable arm or bar 22. A screw 23 turns in a bearing 24 on the bar 20 and at its upper end is threaded into a collar 25 on the arm 22, whereby the latter may be raised or lowered on the post by turning the screw. The screw is turned by a worm 26 which engages a worm gear 26ª on the screw, the worm being carried by a rod 6. A bracket 27 is loosely mounted on the upper end of the screw 23, being supported by the arm 22 and rising and falling therewith. This bracket 27 has a lateral arm 28 with a crank pin 29 thereon depending between the flanges 30 of a collar 31 mounted on a screw rod 4. By turning the screw 4, which is threaded into bearings 32 on the arm 22, the collar is shifted, and by the crank connection the bracket 27 is swung on the screw 23 as a pivot, thereby swinging the whole lamp in a horizontal plane.

A casing 33 is attached to the bracket 27, and carries two rack rods 34 and 35 which are engaged by a pinion 36 at the inner end of shaft 3, and by turning said shaft the rods 34 and 35 are extended or retracted to bring the carbons together. The upper rod 34 carries the upper arm shown in Figs. 4 and 6. This arm consists of a relatively fixed inner member 40 which is pivoted on the upper end of the rod at the opening 41, and has two cheeks 42 between which is pivoted, by a pin 43, a tilting section 44 which has an inclined slot 45 at its inner end. The cheeks 42 have straight slots 46.

47 is a threaded nut or block having an arm 48 which extends through the slots 45 and 46. This block travels on the screw at the inner end of a rod 1, said screw and rod being supported by the arm, and as the block 47 is shifted in or out, it rides up or down in the slot 45 and tilts the outer member of the arm on its pivot 43. This outer member carries a clamp member 50 for holding the upper carbon 51 by any suitable clamping device. Insulation 52 is provided between the arm sections and the outer section has projection 53 for the connection of the wire 54. It will be noted that the tilt occurs in a plane parallel to the axis of the carbons. The lower arm shown in Fig. 7 is similarly constructed, except that it is fixed to the rod 35, but its outer section 60 may be tilted by a screw block 61 and inclined slot in a manner similar to that described above, the screw being carried at the end of a rod 5. To swing the upper arm on its rod 34, I provide a crank pin 70 which depends between the flanges of a collar 71 on the screw rod 2 which is mounted on the collar 72 fixed to the upper rod 34 just under the arm. By turning the screw 2 the arm is swung laterally.

By the means described all the various adjustments necessary to raise or lower the lamp, or register the carbons, may be effected. The rod 7 may be turned to shift the whole lamp longitudinally. The rod 6 will operate to raise or lower the carbon holders with respect to the base. The rod 3 acts to feed the carbons. The rod 4 will swing the carbon holders horizontally. The rod 1 will tilt the upper arm section to register the upper carbon with the lower one in a vertical plane, and the rod 2 will produce such registration in a horizontal plane. The rod 5 will tilt the lower arm section in a vertical plane. By the various movements the carbons may be exactly alined irrespective of their length, and a fine adjustment is provided to all necessary positions.

What I claim is:

1. In an arc lamp, the combination of a base, a post and a yoke mounted thereon, a cross bar connecting the post and yoke, an arm slidable up and down on the post, a screw mounted in the cross bar and threaded into the arm to raise or lower the latter, means to turn the screw, including a worm mounted in the yoke, a bracket pivotally supported by said arm, means to swing the bracket, and carbon holders supported by said bracket.

2. In an arc lamp, an adjustable carbon holder, comprising an arm having a relatively fixed section, and a tilting section pivoted thereto and provided with a clamp for the carbon, the tilting section having an inclined surface extending lengthwise thereof, a non-traveling screw mounted on the fixed section and extending beside the tilting section, and a threaded block mounted to travel along the screw and slidable along said inclined surface to vary the tilt thereof.

3. In an arc lamp, a carbon holder comprising a tilting arm having a clamp at one end for the carbon and an inclined slot at the other end, a non-traveling screw mounted beside the end having the slot, and a threaded block mounted to travel on the screw and having a laterally-projecting part slidable lengthwise of the arm, in said slot, to vary the tilt of the arm.

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

JOHN VINTILA.

Witnesses:

J. B. DAVIS,

JOHN A. BOMMHARDT.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."