No. 649,501. Patented May 15, 1900.

E. M. WILKINS.

LAMP TRIMMER'S TOOL.

(Application filed Nov. 8, 1899.)

(No Model.)

Fig. 1.

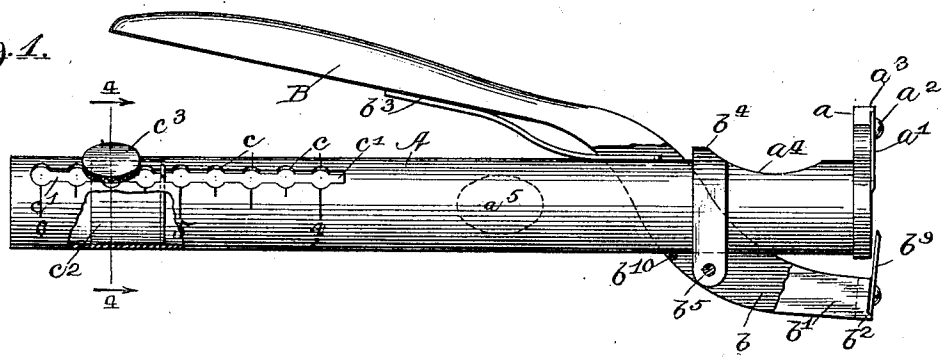


Fig. 2.

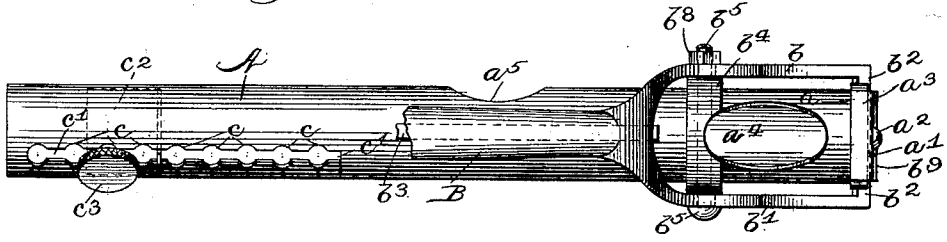


Fig. 3.

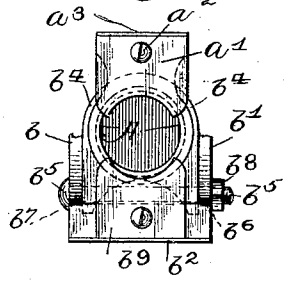


Fig. 4.

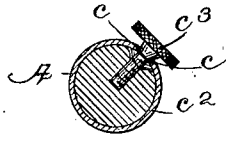
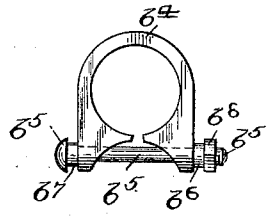


Fig. 5.



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UNITED STATES PATENT OFFICE.

EDGAR M. WILKINS, OF QUINCY, FLORIDA.

LAMP-TRIMMER'S TOOL.

SPECIFICATION forming part of Letters Patent No. 649,501, dated May 15, 1900.

Application filed November 8, 1899. Serial No. 736,245. (No model.)

To all whom it may concern:

Be it known that I, EDGAR M. WILKINS, a citizen of the United States, residing in Quincy, (post-office address, Box 163,) county of Gadsden, and State of Florida, have invented certain new and useful Improvements in Lamp-Trimmers' Tools; and I do hereby declare the following to be a full, clear, and exact description, such as will enable persons who are skilled in the art to which it appertains to make and use the same.

My invention has reference to a new article of manufacture consisting of a tool designed to be carried by electric-arc-lamp trimmers.

The object of my invention is to provide a tool adapted to be carried by electric-arc-lamp trimmers and to be used by them for the purpose of severing or cutting off the carbons used in such lamps to a uniform length.

In the process of trimming an arc-lamp the carbon occupying the upper vertical position with relation to the one in the lower vertical position is required to be practically double the length of the lower carbon. The consumption of the upper or positive carbon by the arc is practically double that of the lower or negative carbon within a given time. When lamps of the character referred to are trimmed, the carbons that are inserted in their respective holders bear this relation with respect to their lengths. In order to maintain the arc in the proper position and to maintain other conditions normal, it is highly desirable that this relation shall always exist.

Frequently when trimming an arc-lamp it is found that the upper carbon is a trifle longer than necessary or convenient for its use for the lower-carbon-holder. Heretofore such carbons have been taken back to the station by the trimmer, where all excessively-long carbons are cut to standard lengths by use of a hack-saw or other slow and tedious process to be used by the trimmer in the negative holders at a subsequent trip. Such a system is slow, expensive, and involves the necessity for the transportation of the stubs by the trimmer from the lamp to the station and back again. My invention avoids all of the difficulties referred to and provides a very efficient, practical, and portable tool by the use of which the carbons may be readily, quickly, and easily cut to a predetermined length at the time of trimming and by the use of which the carbon may be taken from the upper holder, inserted into the lower holder, and cut while hot and without touching the hot carbon with the hands.

In the drawings, Figure 1 is a perspective view showing my new tool ready for use. Fig. 2 is a plan view with the handles broken away. Fig. 3 is an end view of the tool with the handle B broken off. Fig. 4 is a section through line 4 4 of Fig. 1. Fig. 5 is a view of the yoke which surrounds the body of the tool and on which the handle is pivoted.

In the several views the same letters refer to like parts.

In Fig. 1, A is the body of the tool, preferably a tube. A handle B is forked at its lower end at b b', as shown in Fig. 2. They are joined by a bar b^2 at their respective ends. A spring b^3 is fixed to the handle and bears upon the tube A to hold the tool normally open, as shown. A yoke b^4 (shown in detail in Fig. 5) carries a bolt b^5 and spacing-washers b^6 b^7. These washers are slightly thicker than the forks b b' of the handle B. The perforations in the handle-forks are large enough to slip over these washers b^6 b^7, on which it is pivoted, as shown. When the nut b^8 of the bolt b^5 is tightened, the yoke is thereby drawn tightly in contact with and thereby fixed to the body A of the tool. The spacing-washers permit a free movement of the handle B.

A washer a, extended at the side, may be shrunk or otherwise attached to the end of the tube A. A blade a', having a cutting edge, preferably semicircular in shape, as shown in Fig. 3, is attached to said washer by means of a screw a^2 or the like. To prevent the blade from becoming displaced when pressure is applied, a heel-piece a^3 is left on the washer a, against which the blade a' rests. A similar blade b^9 is fixed in a similar manner to the bar b^2 of the handle B. A stop b^{10} is fixed to the handle B to prevent it from opening too far. In the end of the tube removed from the cutting end a series of holes c are drilled through the wall of the tube A.

A slot c' is cut through the center of the holes. The holes may be spaced a regular distance apart in fractions of an inch, as shown.

The stop c^2 (shown in Fig. 4) is contained within the tube and is held in position by means of the screw c^3. The shank of the screw c^3 may be moved freely through the slot c', and therewith the stop c^2 may be located. The screw c^3 has a tapering shoulder between the shank and head. This shoulder is too large to slip through the slot c'; but it may be made to enter the holes c when the screw c^3 is screwed home within the stop c^2, and when so screwed home it renders the stop c^2 practically immovable and able to resist severe concussions of the carbons as they are dropped within the tool to be cut without being displaced thereby.

The openings a^4 and a^5 are made into the tube for the purpose of emptying the tube of any fragments of carbon that may lodge therein and for the further purpose of providing openings through which the carbon may be moved while within the tube.

The use and operation of my device are as follows: When the screw c^3 is placed within one of the holes c and the screw tightened, the stop c^2 will remain immovably in place. A carbon may then be placed in the tube A between the blades a' and b^9 until the end thereof abuts against the stop c^2. If the carbon is longer than desired, it will project outside beyond the cutting-blades. When the handle B and the tube A are grasped in the hand and when pressure is applied thereto, the cutting-blades come in contact with the carbon on opposite sides and over a considerable surface thereof and nip the carbon square off at this point. The length of the carbon remaining within the tube will be indicated by the hole in which the screw c^2 is placed. The holes may be indexed, so that when the stop is inserted therein the length of the carbon after being cut will correspond with the index-number into which the stop is placed.

The nature of arc-light carbons makes it a difficult matter to cut them smoothly and surely without fracturing them elsewhere than at the point designed. Therefore I have found it necessary to provide a sharp cutting edge on each side of the carbon in a nipper designed for this purpose in order to accomplish this result with the desired infallibility.

The handle may be a grooved cast piece or of other form than a tube, as shown, and other variations may be made in the construction and arrangements of the parts without departing from the gist of my invention.

Having described my invention, what I claim as new, and desire to secure by Letters Patent of the United States, is—

A tool for cutting electric-lamp carbons, comprising a hollow body portion, a cutting edge or blade removably fixed to the end thereof, a handle pivotally attached to the said body portion, a cutting edge, or blade removably fixed thereto, a spring for holding the said tool open, and an index and stop on the said hollow body portion for gaging the length of the said carbon, substantially as set forth.

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