No. 744,076. PATENTED NOV. 17, 1903.

J. W. HOWELL.

DEVICE FOR CLEANING FILAMENTS.

APPLICATION FILED MAY 19, 1902.

NO MODEL.

Fig. 1.

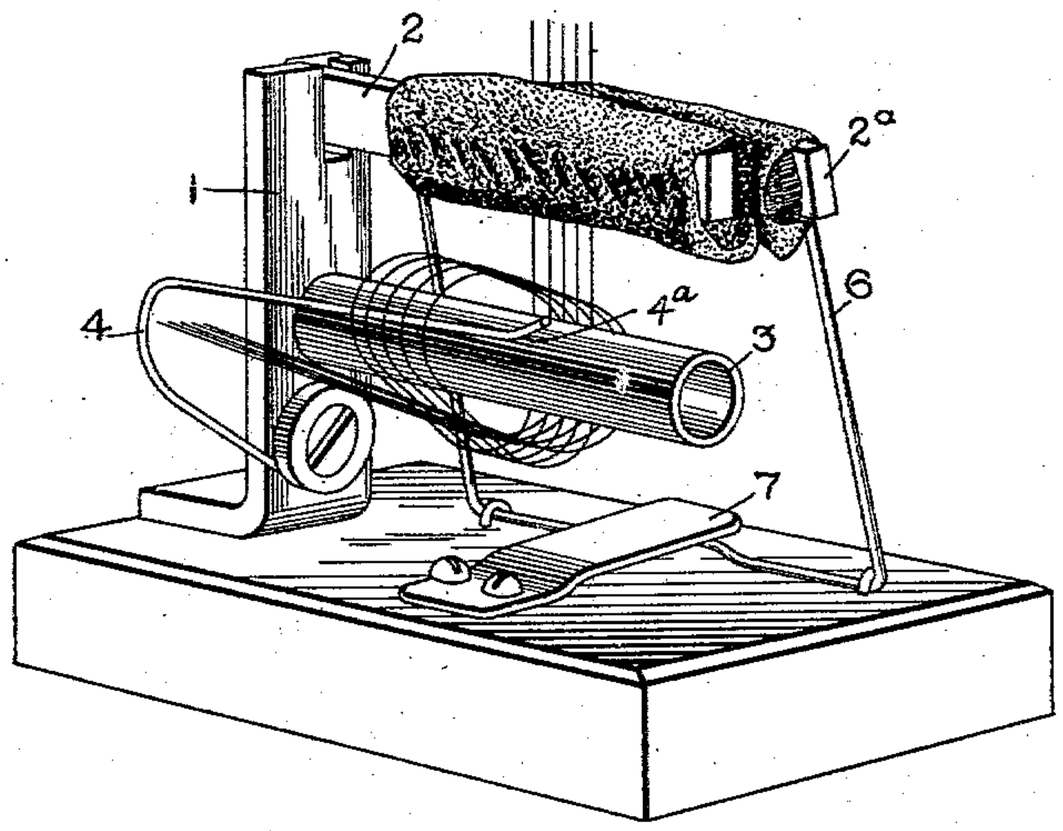
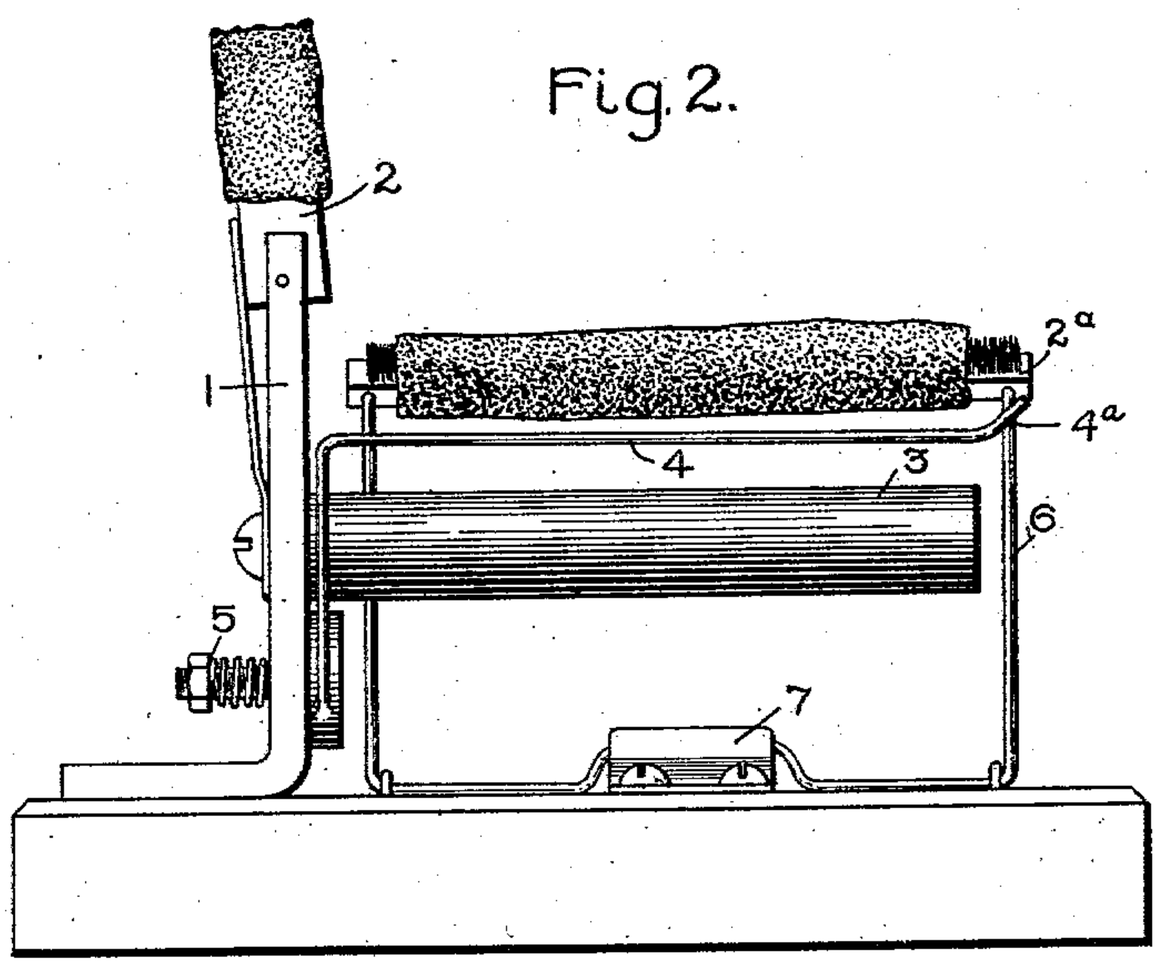


Fig. 2.



Witnesses.
Emmy R Gurney.
Helen De Ford

Inventor:
John W. Howell.
by Albert G. Davis
Atty.

No. 744,076. Patented November 17, 1903.

UNITED STATES PATENT OFFICE.

JOHN W. HOWELL, OF NEWARK, NEW JERSEY, ASSIGNOR TO GENERAL ELECTRIC COMPANY, A CORPORATION OF NEW YORK.

DEVICE FOR CLEANING FILAMENTS.

SPECIFICATION forming part of Letters Patent No. 744,076, dated November 17, 1903.

Application filed May 19, 1902. Serial No. 107,922. (No model.)

To all whom it may concern:

Be it known that I, JOHN W. HOWELL, a citizen of the United States, residing at Newark, county of Essex, State of New Jersey, have invented certain new and useful Improvements in Devices for Cleaning Filaments, of which the following is a specification.

In the manufacture of incandescent lamps the filament is carbonized in a closed flask, where it is surrounded by fine carbon-dust or graphite to exclude the air. It is desirable to remove the adherent dust from the filaments before subjecting them to the hydrocarbon treatment to bring them to a uniform conductivity. I have found that this may be conveniently effected by drawing the filament through a pair of jaws shod with soft material, and thus wiping off the adherent dust.

In carrying out the invention a bunch of the filaments as taken from the carbonizing-flasks is supported with one group of free ends between the soft jaws of the clamp, and the operator at her convenience in mounting the filaments for treatment draws them one at a time away from the clamp, the filaments being drawn through the jaws. I have found it is sufficiently elastic to stand the bending without breaking. I have devised a clamping device for holding and cleaning the filaments in this manner. The essential feature comprises a pair of soft clamping-jaws so mounted that the ends of the filaments may project through one side, and by preference a support is placed in convenient relation to the jaws acting as a guide and retainer for the group of filaments and preventing tangling.

In the accompanying drawings, which illustrate the invention, Figure 1 is an isometric projection of a device embodying my improvements, and Fig. 2 is a side elevation showing one of the clamping-jaws shifted to an open position.

The device comprises a support or base containing a standard 1, in the upper end of which is hinged one of the clamp-jaws 2 and near the middle of which is mounted a support and guide 3 for the filaments. A bent wire 4 is mounted on the standard, the free end extending substantially parallel to the support 3 and capable of turning in a plane transverse to the support, as indicated in Figs. 1 and 2. This acts as a spreader for the filaments. A tension device comprising a helical spring and set-screw, as indicated at 5, permits the wire to be adjusted so that it will stay in any angular position to which it is pushed. A companion clamp-jaw 2^a is mounted on a wire frame 6, which is hinged or otherwise mounted on the base and provided with an offset working underneath a leaf-spring 7, by which it is retained in an open or closed position. The offset may be simply a bend in the wire, as indicated in Figs. 1 and 2. It may be thrown back in a position at right angles to that indicated in the drawings, and the spring 7 will hold it in that position. A group of filaments may be inserted by first folding back the jaw 2^a and threading the filaments over the support 3, permitting one group of free ends to overlap the rear edge of the jaw 2. The jaw 2^a is then folded into working position, so as to clamp the free ends of the filaments and the wire 4 adjusted so as to engage the bend of the filaments. This wire has an angular bend, as indicated at 4^a, to prevent the group of filaments from slipping off. The jaws are covered with a soft yielding material, such as chamois, which acts as a wiper to clean the filament without abrading the filament itself. The operator grasps the free end of a filament and withdraws it from the bunch held in the clamp, during which operation it yields sufficiently to pass between the jaws. The support and guides prevent it interlacing with other filaments of the bunch. This operation is of great benefit to the finished carbon and greatly improves the quality of the lamp.

What I claim as new, and desire to secure by Letters Patent of the United States, is—

1. A cleaning device for carbon filaments, comprising a pair of clamp-jaws covered with a soft or yielding material between which the filament may be drawn, one of said jaws being adapted to fold back and be retained in that position.

2. A cleaning device for lamp-filaments, comprising a pair of clamp-jaws covered with soft or yielding material between which the

ends of a bunch of filaments may be held, and a support for the filament adjacent to the jaws.

3. A cleaning device for lamp-filaments, comprising a pair of clamp-jaws covered with soft or yielding material, a support for the filaments adjacent thereto, and a retaining device for holding the filaments in position on the support.

4. A cleaning device for lamp-filaments, comprising a pair of separable clamp-jaws covered with soft yielding material, a guide or support for a bunch of filaments adjacent thereto, and an arm adjustable relatively to the support to steady the filaments.

In witness whereof I have hereunto set my hand this 16th day of May, 1902.

JOHN W. HOWELL.

Witnesses:
CHAS. H. HEELEY,
JOHN E. MITCHELL, Jr.