(No Model.)

A. SWAN.

DEVICE FOR FORMING SOCKETS FOR CARBON POINTS.

No. 264,970. Patented Sept. 26, 1882.

Fig. 1.

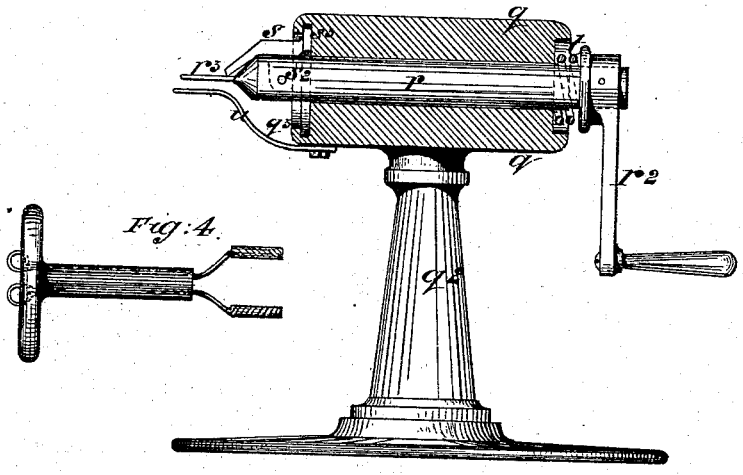


Fig. 2

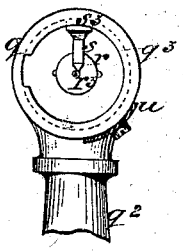


Fig. 4.

Fig. 3.

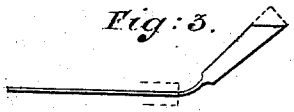
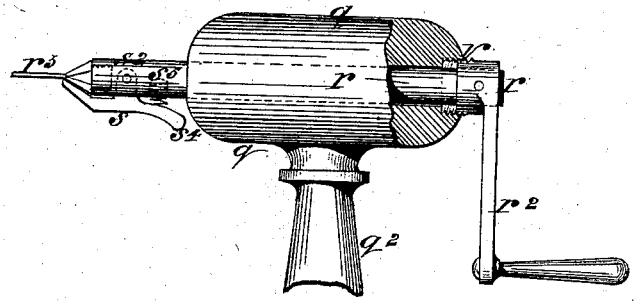


Fig. 5.



Witnesses:

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UNITED STATES PATENT OFFICE.

ALFRED SWAN, OF GATESHEAD, COUNTY OF DURHAM, ENGLAND.

DEVICE FOR FORMING SOCKETS FOR CARBON POINTS.

SPECIFICATION forming part of Letters Patent No. 264,970, dated September 26, 1882.

Application filed July 20, 1882. (No model.) Patented in England June 19, 1882, No. 2,898.

To all whom it may concern:

Be it known that I, ALFRED SWAN, a subject of the Queen of Great Britain, and residing in the borough of Gateshead, in the county of Durham, England, have invented certain improvements in and apparatus for forming the ends of wires into sockets for the reception of the carbons of incandescent electric lamps, (for which I have obtained a patent in Great Britain, No. 2,898, dated 19th June, 1882,) of which the following is a specification.

My invention relates to apparatus for effecting the coiling or twisting of the ends of the terminal wires for incandescent electric lamps, so as to form them into a socket or equivalent form for the reception of the carbon filament of the lamp.

Figure 1 of the drawings represents in sectional elevation an apparatus constructed according to my invention, and Fig. 2 is a partial end view of the same.

In a tubular piece, q, carried by the standard q^2, is mounted a spindle or mandrel, r, capable of being rotated in the said tubular piece q by means of the handle r^2. The said spindle r has projecting from its end a needle, r^3, of the size and shape (tubular, flat, or other shape) of the carbon to be inserted in the ends of the terminal wires. The end of the spindle is tapped to receive a stock-piece or nipple in which the needle is mounted. Needles, when broken, can then be easily replaced, or a fresh stock-piece, carrying a needle of any convenient size or shape, can be introduced. A clip-piece, s, is centered at s^2 to the spindle r, being furnished with a tail-piece, s^3, engaging behind the flange q^3 of the tubular piece q, so that as the spindle r is forced back by the spring t the end of the said catch-piece s presses upon the root end of the needle r^3. By pressing forward the spindle r against the spring t the catch s is lifted off the needle, and the tip of the end of the wire to be coiled flattened and cut into the form shown in Fig. 3 is placed upon the needle r^3, so that when the spindle r is released and again forced back by the spring t the clip-piece s pinches the said tip of the flattened end of the wire down upon the needle. On rotating the spindle r by the handle r^2 and keeping the flattened end of the wire at the requisite angle to the said needle the said flattened end is coiled upon the needle into a tubular or other form suitable for the reception of the ends of the carbon filament.

I may attach to the stand of the apparatus an adjustable arm upon an upright support, and with a slot in it, which, when the arm is in its proper position, acts as a guide to the wire while it is being coiled round the needle.

I prefer to act upon the wires in this apparatus when they are embedded in the glass stem, as shown in Fig. 4, which represents the wires as having been coiled by the apparatus. The apparatus may be provided with a surface, u, upon which to rest the said stem while the apparatus is operating.

Fig. 5 shows a modification wherein the spring t is dispensed with, and the catch s is provided with a thumb-piece, s^4, to be depressed against the spring s^5 for raising the tip of the catch-piece s from the needle r^3. In this modification I have also shown the spindle r as being provided with a screw-thread, v, working in a screw in the tubular piece q, the number of turns of this screw corresponding with the number of coils to be given to the ends of the wires, so as to prevent overwinding.

The junction of the wires and carbons may be completed by deposition of carbon in the ordinary manner.

I claim as my invention—

1. The combination of the needle, the rotating support therefor, and the catch-piece, substantially as described.

2. The apparatus for coiling or twisting the ends of wires of incandescent electric lamps into flat, cylindrical, or other sockets for the reception of the carbon filament, the said apparatus consisting in the combination of the spindle r, carried in the standard q^2, and provided with means for rotating it, and also with a catch-piece, s, for retaining and releasing the wire, as described and illustrated.

3. The combination of the spindle having a slight longitudinal motion, the needle carried in the end thereof, the spring, and the catch-piece so supported and arranged that its pressure is released when the spindle is moved back and restored when the spindle is returned by said spring, substantially as described.

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

ALFRED SWAN.

Witnesses:

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