

(No Model.)

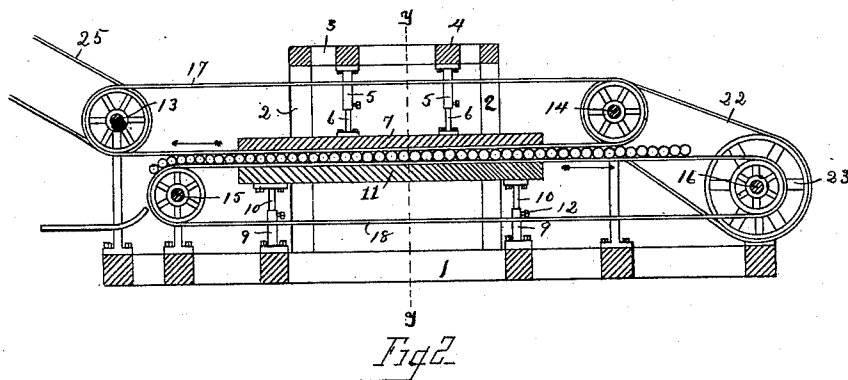
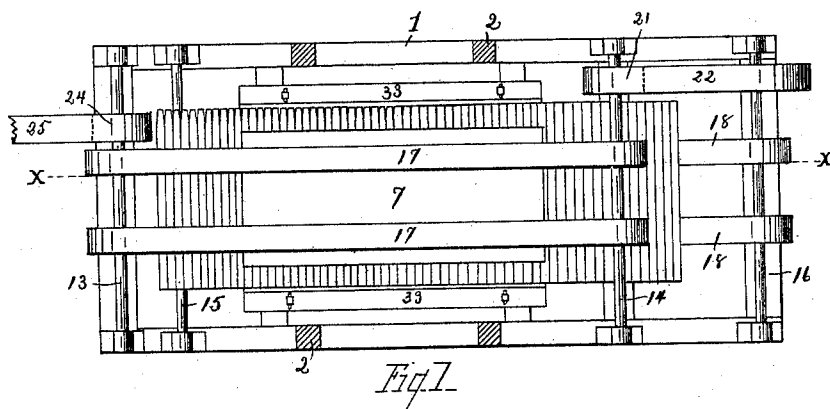
2 Sheets—Sheet 1.

P. MOSES.

APPARATUS FOR POINTING CARBON PENCILS.

No. 469,486.

Patented Feb. 23, 1892.



WITNESSES

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INVENTOR

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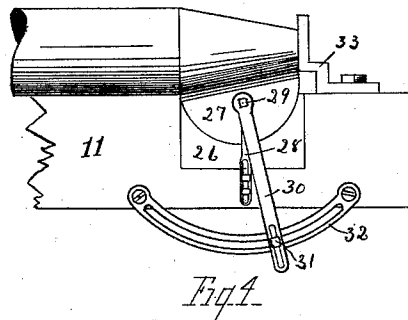
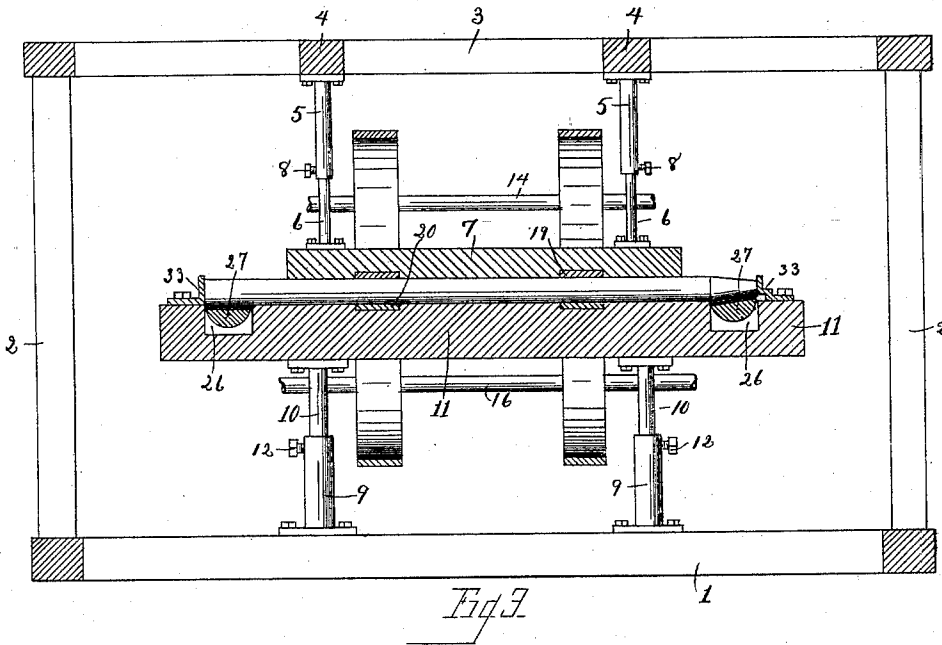
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UNITED STATES PATENT OFFICE.

PHILO MOSES, OF FREMONT, OHIO.

APPARATUS FOR POINTING CARBON PENCILS.

SPECIFICATION forming part of Letters Patent No. 469,486, dated February 23, 1892.

Application filed April 21, 1890. Serial No. 348,898. (No model.)

To all whom it may concern:

Be it known that I, PHILO MOSES, a citizen of the United States, and a resident of Fremont, in the county of Sandusky and State of Ohio, have invented certain new and useful Improvements in Methods of and Apparatus for Pointing Carbon Pencils; and I do hereby declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the figures of reference marked thereon, which form part of this specification.

This invention relates to a method of and apparatus for pointing carbon points.

Heretofore a large proportion of the carbons manufactured were warped at the ends, which warping was a source of considerable loss to the manufacturer, inasmuch as that portion had to be cut off and the remaining point sold at a reduced rate as seconds.

It is the object of the present invention to overcome these obstacles by producing a machine which will rapidly and effectively point one end of the carbon and at the same time straighten the opposite end.

A further object is to produce a machine which will at one and the same operation point one end of the carbon, straighten the opposite end, and form a shoulder on the said straightened end.

A final object is to produce a carbon-point-pointing machine which shall be simple of construction, efficient and durable in use, and comparatively inexpensive of production.

With these objects in view the invention consists in the various novel details of construction of a carbon-point-pointing machine, as will be hereinafter fully described in the specification, illustrated in the drawings, and more particularly pointed out in the claims.

In the accompanying drawings, forming part of this specification, and in which like figures of reference indicate corresponding parts, I have illustrated one form of machine capable of carrying my method into effect, although the same may be carried into effect in other ways without in the least departing from the spirit thereof.

Figure 1 is a top plan view of my device,

partly broken away, showing more clearly the position occupied by the carbon points and the motion-imparting mechanism. Fig. 2 is a longitudinal vertical sectional view taken on the line $x x$, Fig. 1, showing the relative position of the carbons and mechanism for actuating the same. Fig. 3 is a transverse sectional view taken on the line $y y$ of Fig. 2, showing a carbon point in contact with the grinding-surface; and Fig. 4 is an enlarged detail view of the mechanism for adjusting the grinding-surface to any desired angle.

Referring to the drawings, 1 designates the base of the device, 2 the vertical supports, and 3 a beam or support extending parallel to the base. As shown in Fig. 1, there are two base-beams, four vertical beams, and two top beams; but in construction the number may be increased if found desirable or necessary. To the vertical beams are secured two transverse beams 4, (shown in section in all the views,) from which depend hangers 5, preferably tubular in form, in which fit shanks or supports 6, secured to the upper surface 7. The hangers are provided with bolts 8, adapted to engage with the shanks of the supports 6, whereby the upper surface or platen 7 may be raised or lowered to any desired point and securely clamped in that position. The base is likewise provided with vertical hollow supports 9, in which fit the shanks of supports 10, secured to the under side of the lower surface or bed 11, bolts 12 serving to hold the said surface in any position desired.

Mounted on suitable journal-boxes secured to the top beams are shafts 13, 14, 15, and 16, around which pass belts 17 and 18, which belts move in longitudinal grooves 19 and 20, formed, respectively, in the under side of the platen and in the upper side of the bed, the function of which will be described further on. Upon the shaft 14 is mounted a pulley 21, around which passes a belt 22 to a large pulley 23 upon the shaft 16, and upon the shaft 13 is mounted a pulley 24, carrying a belt 25, which connects with a motion-imparting mechanism. It will be seen that the upper belts 17 revolve with greater rapidity than the lower belts 18, as the pulley 23 is designed to be made of such a size as to impart a speed to the belts 18 equal only to one-half

of the speed of the belts 17. Thus when the device is in operation the lower belts 18, upon which the carbon points are mounted, as shown in Fig. 1, impart a rotary motion thereto, while the upper belts 17, which move with twice the rapidity of the lower belts, carry them along, at the same time imparting a rotary motion thereto. Within the lower surface and extending parallel to the edges thereof are formed grooves 26, in which are mounted grinding-surfaces 27. These surfaces are constructed, preferably, of wood having a facing of leather coated with emery or an equivalent grinding material and are journaled in arms 28, (one only being shown,) which are movably secured to the frame, as shown. The outer end of the bearing of the grinding-surface is squared, as shown at 29, to which squared part is secured an arm 30, carrying at its lower end a bolt 31, which extends through a curved slotted plate 32 upon the frame. The object of this mechanism is to adjust the grinding-surface to any desired angle, as will be readily understood by reference to Fig. 4. Upon the bed are likewise secured guides 33, which are designed to hold the carbon points in position and prevent any lateral play. If desired, these guides may be made adjustable, so as to admit of their being regulated to carbons of different lengths.

Having thus fully described my device, I will describe the manner of its operation. The carbons to be pointed are fed upon the lower belts 18 and are carried thereby between the platen, the bed, and the guides 33 and into contact with the grinding-surface, where they are pointed at one end, as shown in Fig. 3, which result is attained by adjusting the grinding-surface at an angle, as shown in Fig. 4, while the opposite end of the carbon point, which is usually warped, is ground and straightened by means of the grinding-surface located at that end of the point, which, as will be seen, is arranged in a plane parallel with the upper side of the bed 11.

In the first part of this specification I have referred to the function of putting a shoulder on the points. The object of this is to enable carbons of greater diameter than those usually employed in an ordinary arc lamp to be used, and to do this the grinding-surface at the end opposite that which points the carbon is elevated a sufficient distance above the surface to admit of its cutting into the carbon and forming a shoulder or reduced portion of the same diameter in cross-section as the ordinary carbon.

Although I have shown in this instance but one of the grinding-surfaces adjusted to grind a point, it is to be understood that both of the said surfaces may be so adjusted, whereby a double-pointed carbon point may be produced.

Having thus fully described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. In a carbon-pointing machine, the combination, with two parallel surfaces, of a grinding surface or surfaces attached to one of the said parallel surfaces and endless belts passing between the parallel surfaces in opposite directions, one of said belts revolving more rapidly than the others.

2. In a carbon-pointing machine, the combination, with two adjustable parallel surfaces, of a grinding surface or surfaces attached to one of said parallel surfaces and adjustable at an angle thereto and the endless belts passing between the parallel surfaces in opposite directions and at different speeds.

3. In a carbon-pointing machine, the combination, with two adjustable parallel surfaces, one of which is broader than the other, of a grinding surface or surfaces attached to the broader surface end guides, attached also to the broader surfaces, and the endless belts passing between the said parallel surfaces in opposite directions and at different speeds.

4. In a carbon-pointing machine, the combination, with a flat surface, of a grinding-surface, vertically-adjustable supports connecting the flat and grinding surfaces and to which the said grinding-surface is pivoted, an arm secured to the grinding-surface, and a curved slotted plate secured to the flat surface to which the arm is adjustably attached.

5. In a carbon-pointing machine, mechanism for feeding the carbon points along the same, in combination with grinding-surfaces arranged in the path of travel of the ends of the said points at opposite sides of the table, an arm for adjusting one or both of the surfaces at an angle to the ends of the points, and guides with which the ends contact to keep them in operative position with the grinding-surfaces.

In testimony that I claim the foregoing as my own I hereby affix my signature in presence of two witnesses.

PHILO MOSES.

Witnesses:

S. C. GARVER,
WILLIAM WEBSTER.