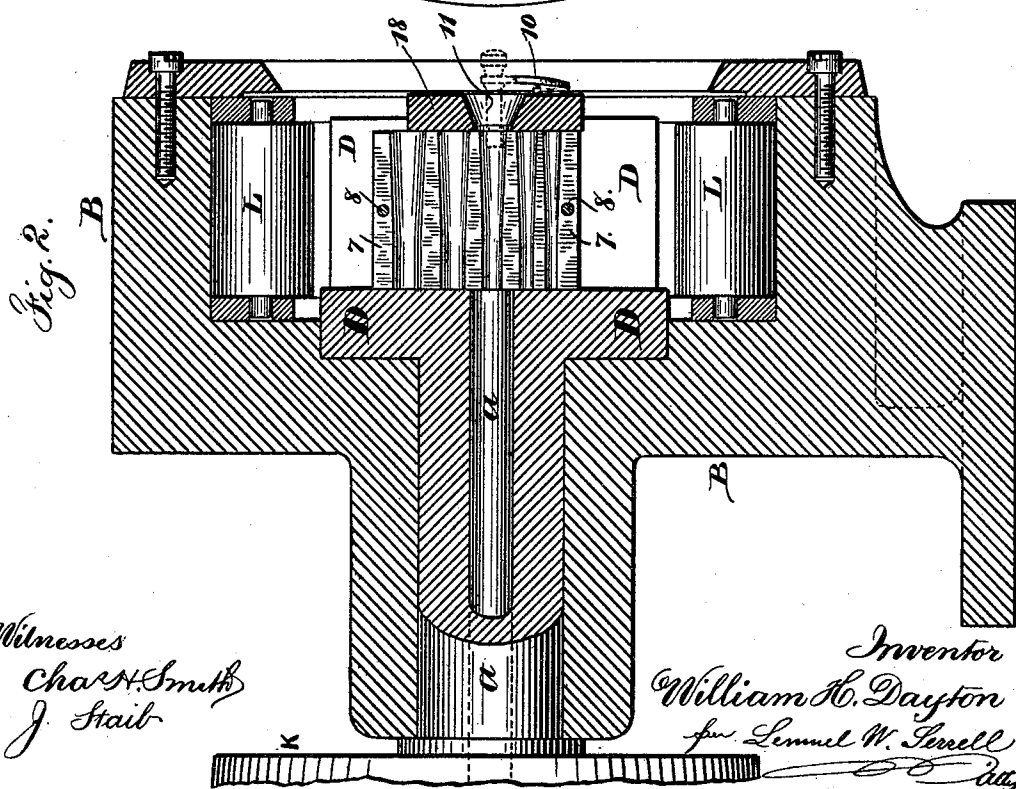
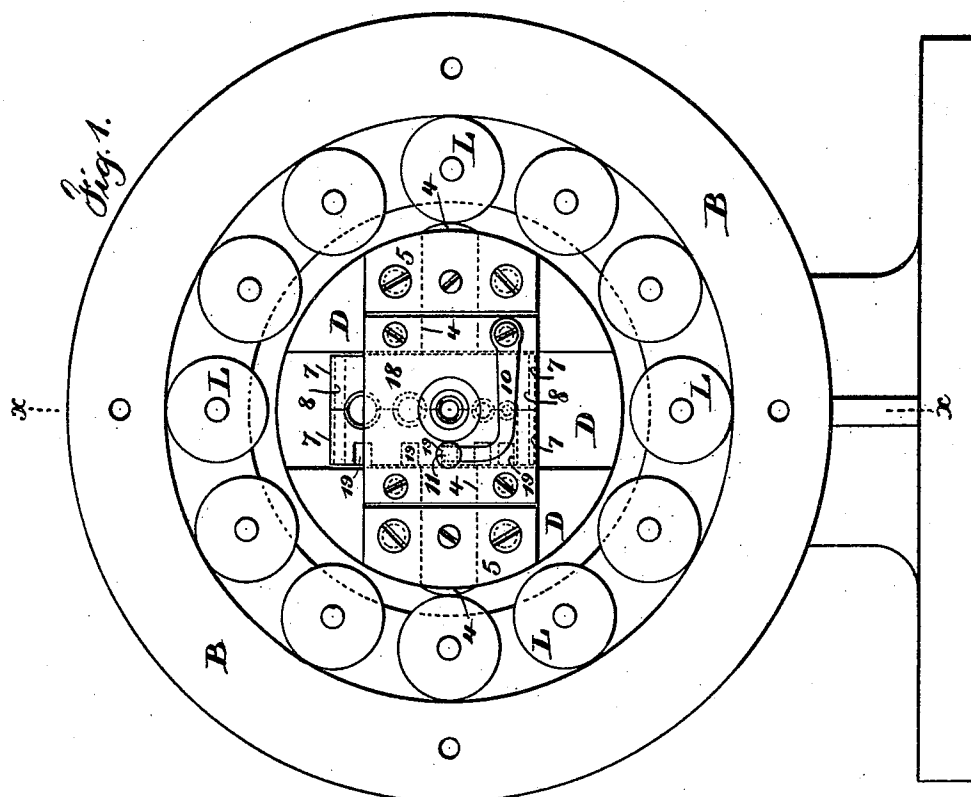


(No Model.)

W. H. DAYTON.
WIRE SWAGING MACHINE.

No. 460,566.

Patented Oct. 6, 1891.



Witnesses
Charles Smith
J. Strait

Inventor
William H. Dayton
per Lemuel W. Snell

UNITED STATES PATENT OFFICE.

WILLIAM H. DAYTON, OF TORRINGTON, CONNECTICUT.

WIRE-SWAGING MACHINE.

SPECIFICATION forming part of Letters Patent No. 460,566, dated October 6, 1891.

Application filed January 16, 1891. Serial No. 377,956. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM H. DAYTON, a citizen of the United States, residing at Torrington, in the county of Litchfield and State of Connecticut, have invented an Improvement in Swaging-Machines, of which the following is a specification.

In Letters Patent No. 268,874, granted to me, a revolving tubular shaft is provided with a head carrying a pair of dies and die-blocks that are revolved within a cylindrical shell, with an intervening circular range of rollers, the ends of the die-blocks coming into contact with the rollers in succession, so that the dies are pressed together to swage the wire or other article introduced between such dies.

The present machine is a modification of and improvement upon the aforesaid patent, whereby I am enabled to act upon wires of different sizes for pointing the same, and this machine is especially useful in establishments where wire is manufactured into different articles and in which the swaging-machines require to be frequently changed from one size of wire to another. I make use of a die having two or more tapering openings of different size for different sizes of wires, and this compound die is received into a cross-slot in the revolving head, so that the die can be moved laterally to bring either one of its recesses into position for use in swaging the wire or similar article.

In the drawings, Figure 1 is an end view representing the apparatus complete. Fig. 2 is a vertical section at the line *x x*.

The tubular shaft *a* is supported in suitable bearings and provided with a head revolved within the stationary cylindrical shell B by suitable power applied to the wheel or pulley K, and there are rollers L within the cylindrical shell B and around the circular head D upon the shaft *a*, substantially as in my aforesaid patent. The die-blocks 4 are fitted to slide beneath the plates 5, that are fastened to the surface of the head D, and this head D is grooved transversely and at right angles to the die-blocks 4 for the reception of the compound die 7, which is formed of two parts held in their proper relative positions by transverse pins 8 within holes in the respective parts or by any other suitable

means; and in the adjacent faces of the two parts of this die 7 there are two or three openings. I have represented five of such openings adapted to different sizes of wire or similar material, and each opening or recess is trumpet-shaped or provided with an inclined entrance end, so that the wire or similar article can easily be forced in between the dies, and in so doing the dies are slightly opened and then forced together to compress and swage the wire by the ends of the die-blocks passing in contact with the rollers L in succession, the operation being the same as that set forth in my aforesaid patent.

In order to hold the die 7 in its proper place, I make use of a cap-plate 18, screwed to the face of the head D, and this die 7 can slide beneath this plate 8 in order to bring either one of the openings of such die axially with the shaft *a*, and any suitable device is made use of for holding the die in position after it has been adjusted to place.

I have represented a spring 10 secured upon the plate 18 and having a tooth 11 passing into one of the range of notches 19 in the die 7, so that by lifting or drawing back this tooth 11 the die 7 can be slid endwise until the proper opening of the die is in its axial position, and then such tooth 11 is allowed to spring back into the recess provided for it in the die 7. Hence by this means the swaging apparatus can be adapted to wires of various sizes by momentarily stopping the machine and shifting the die-blocks 7 endwise to their proper positions; and my machine is simple and cheap to construct, and there are no parts that are liable to get out of order in consequence of the concussion and rapid movements to which they are subjected.

It is to be understood that the dies 7 fit the transverse groove in the head D sufficiently loose to allow the dies to be opened laterally within such groove the amount necessary before each swaging operation, and this is not detrimental, because the opening movement given to such dies by forcing in the wire is limited by the width of such transverse groove in which the dies are contained.

I claim as my invention—

1. The combination, with the shaft *a* and cylindrical shell B, of the two-part die having two or more swaging-cavities, the head of

the revolving shaft being slotted for the reception of such two-part die, die-blocks within the revolving head for giving the motion to the dies, and rollers between the revolving head and cylindrical shell, substantially as set forth.

2. The combination, with a revolving shaft having a head slotted transversely, of a two-part die having two or more swaging-recesses, die-blocks for acting upon the dies, and mechanism for moving such die-blocks as the shaft is revolved, substantially as set forth.

3. The combination, with the revolving shaft having a head, of a two-part die having two or more swaging-recesses and adjustable within the slot of the revolving head, mechanism for holding such two-part die in position after adjustment to bring either of the swaging-recesses in line with the axis of the

shaft, and mechanism for acting upon the two-part dies to press them toward each other, substantially as set forth.

4. The combination, with the tubular revolving shaft *a* and the cylindrical shell, of the two-part die having two or more swaging-recesses, such die being received into a transverse-slot in the end or head of the revolving shaft, a movable tooth for holding the dies in position when adjusted, die-blocks within grooves at right angles to the two-part die, and a circular range of rollers within the cylindrical shell, substantially as set forth.

Signed by me this 12th day of January, 1891.

W. H. DAYTON.

Witnesses:

GEO. T. PINCKNEY,
HAROLD SERRELL.