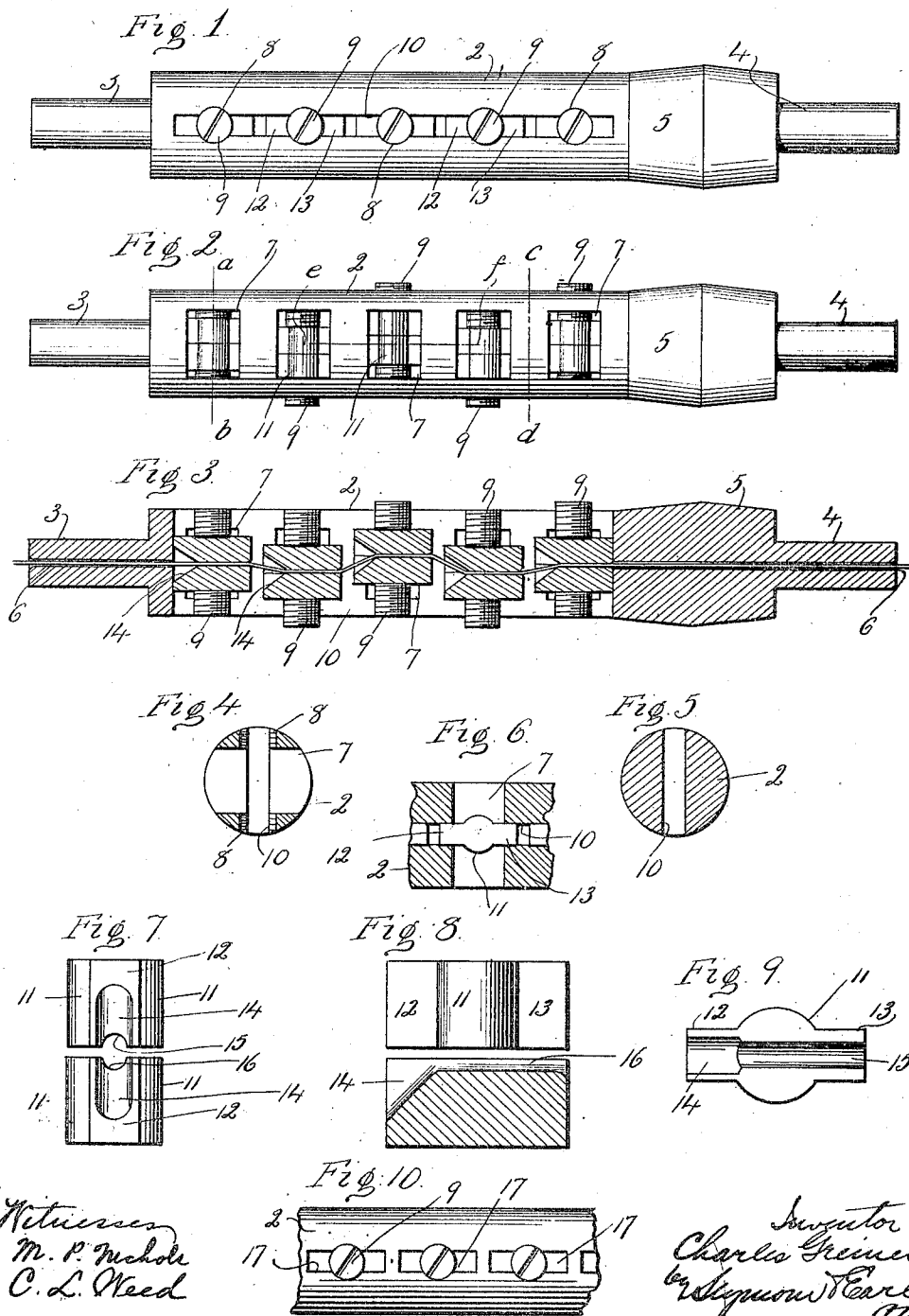


C. GREINER.
WIRE STRAIGHTENER.
APPLICATION FILED MAR. 4, 1912.

1,032,823.

Patented July 16, 1912.



UNITED STATES PATENT OFFICE.

CHARLES GREINER, OF NEW HAVEN, CONNECTICUT, ASSIGNOR TO THE HEMMING BROTHERS COMPANY, OF NEW HAVEN, CONNECTICUT, A CORPORATION.

WIRE-STRAIGHTENER.

1,032,823.

Specification of Letters Patent.

Patented July 16, 1912.

Application filed March 4, 1912. Serial No. 681,402.

To all whom it may concern:

Be it known that I, CHARLES GREINER, a citizen of the United States, residing at New Haven, in the county of New Haven and State of Connecticut, have invented a new and useful Improvements in Wire-Straighteners; and I do hereby declare the following, when taken in connection with the accompanying drawings and the characters of reference marked thereon, to be a full, clear and exact description of the same, and which said drawings constitute part of this application, and represent, in—

Figure 1 a side view of a wire straightener constructed in accordance with my invention. Fig. 2 a top view of the same. Fig. 3 a transverse sectional view. Fig. 4 a sectional view on the line *a-b* of Fig. 2. Fig. 5 a sectional view on the line *c-d* of Fig. 2. Fig. 6 a sectional view on the line *e-f* of Fig. 2. Fig. 7 a front end view of a pair of dies, enlarged. Fig. 8 a top view of a pair of dies showing one in transverse section. Fig. 9 an inside edge view of one of the dies. Fig. 10 a broken side view of a wire straightener illustrating a modified form of die retaining slots.

This invention relates to an improvement in wire straighteners; that is, a holder containing a series of dies arranged out of line with each other and adapted to be revolved as the wire passes through it, the object of the invention being to so construct the straightening dies so that they will be firmly held in position, and so that the mouth of one die will always be within the range of the opening in the rear of the preceding die and so that the wire may be inserted while the device is in motion; and the invention consists in the construction hereinafter described and particularly recited in the claims.

In carrying out my invention, I employ a body 2 provided with trunnions 3, 4, at the opposite ends by which it may be supported, and near the outer end the body is provided with a rounded surface 5 to receive a driving belt, this rounded surface practically forming a pulley. Extending longitudinally through the body and trunnion is a longitudinal hole 6 through which the wire passes. Extending vertically through the body are a series of openings 7 more or less in number according to the number of dies to be employed, and extending transversely through

the body at right angles to the openings 7 are a series of circular holes 8 which intersect the openings 7, and these holes are threaded to receive screws 9. These holes 8 are connected, so to speak, by a long slot 10. In connection with the head thus formed, I employ a series of dies arranged in pairs. These dies have central portions 11 which are substantially circular and adapted to enter the holes 8. The dies are also formed with extensions 12 and 13 on opposite sides of the central portion which extensions fit in the slot 10 and so that the dies when inserted will not turn with relation to the body. The inner ends of these dies are cut away to form mouths 14 which lead to grooves 15 and 16 in the respective dies which together form a round opening for the passage of the wire, these openings corresponding to the size of the wire to be straightened. These dies arranged in pairs are staggered with relation to each other, as shown in Fig. 3 of the drawings, and are held in place by the screws 9; but notwithstanding the extent to which one die may be moved out of line with the next adjacent die, any wire passing through one die will find the mouth of the next succeeding die owing to the extended taper of the mouth, this extended mouth being made possible by the extensions at the forward ends of the dies.

This device operates in the usual way of wire straighteners; namely, a wire is passed through the device and the device revolved so as to straighten the wire passing through it. But in my device, owing to the provision of the dies with flaring mouths, the wire may be inserted after, or while the device is in motion, thus avoiding the necessity of stopping the device when another wire is inserted and saving the power necessary to start the device in motion after the wire is between the dies. It is apparent that instead of forming a continuous slot 10, the body may be formed with a series of short slots 17, as shown in Fig. 10, it only being necessary to have the slots long enough to receive the extensions 12 and 13 of the dies, whereby they are prevented from turning. It is also apparent without further illustration, that instead of forming the dies with extensions at the front and rear, the extension at the rear might be omitted as the extension at the front will hold the dies in

place, or in fact the dies may be of uniform thickness corresponding to the width of the slot in which case if a separate slot is provided for each die, the ends of the slot will hold the die against longitudinal movement by the direct engagement with the head. In either case the longitudinal movement of the dies is by engagement with the head and not dependent upon the screws.

10 I claim:—

1. A wire straightener comprising a body having a longitudinal hole through it for the passage of the wire, said body formed with a series of transverse threaded holes, a slot intersecting said holes, combined with a series of dies each having a portion adapted to enter the transversely threaded holes in the body, and each die formed with an extension which has a bearing in the said slot, the forward ends of the dies formed with flaring mouths, and screws entering the opposite ends of said transverse holes and bearing on said dies.

2. A wire straightener comprising a body having a longitudinal hole through it for the passage of the wire, said body formed with a series of transverse threaded holes, a slot intersecting said transverse threaded holes, combined with a series of dies each having a portion adapted to enter the transverse threaded holes in the body, said dies formed with extensions entering the said transverse slot and the forward ends of said extensions provided with flaring mouths.

3. A wire straightener comprising a body having a longitudinal hole through it for the passage of the wire, said body formed with vertically arranged openings and with transverse threaded holes intersecting the vertical openings, slots on opposite sides of said transverse holes, combined with dies having central portions adapted to enter the transverse holes in the body, said dies formed with extensions entering the transverse slots, and screws entered into said transverse holes and bearing on said dies.

4. A wire straightener comprising a body having a longitudinal hole through it for the passage of the wire, said body formed with vertically arranged openings and with transverse threaded holes intersecting the vertical openings, slots on opposite sides of said transverse holes, combined with dies having central portions adapted to enter the transverse holes in the body, said dies formed with extensions entering the transverse slots, the forward extensions formed with flaring mouths, and screws entered into said transverse holes and bearing on said dies.

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

CHARLES GREINER.

Witnesses:

FREDERIC C. EARLE.

CLARA L. WEED.