(No Model.)

E. DODGE.

MACHINE FOR MAKING INSULATOR CLIPS.

No. 319,206. Patented June 2, 1885.

Fig 1

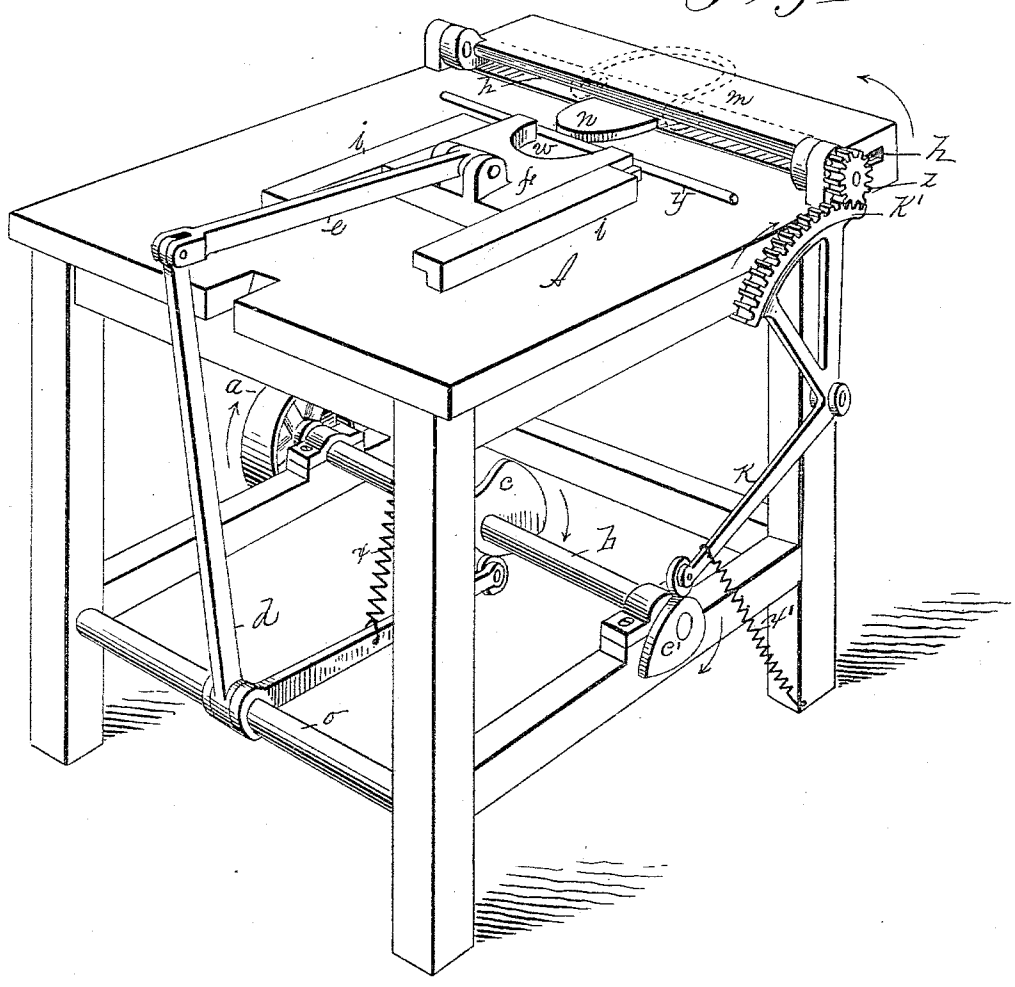
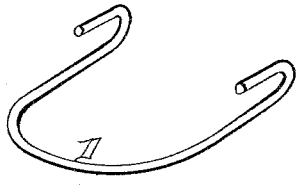


Fig 2



WITNESSES:

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MACHINE FOR MAKING INSULATOR-CLIPS.

SPECIFICATION forming part of Letters Patent No. 319,206, dated June 2, 1885.

Application filed April 20, 1885. (No model.)

To all whom it may concern:

Be it known that I, ELLIS DODGE, a citizen of the United States, residing at Palmer, in the county of Hampden and State of Massachusetts, have invented new and useful Improvements in Machines for Making Insulator-Clips, of which the following is a specification.

This invention relates to improvements in machines for making wire insulator-clips, the object being to provide an improved machine for said manufacture, whereby the making of said clips is rendered easy and rapid, and uniformity of shape is secured.

In the drawings forming part of this specification, Figure 1 is a perspective view of a machine for making insulator-clips, constructed according to my invention. Fig. 2 is a perspective view of a finished clip.

In the drawings, A is the table of the machine. *f* is a bending-plate adapted to have a sliding movement on said table, guided and held in position thereon by two strips, *i i*, which overlap its opposite edges, as shown. Said bending-plate is provided with a half-round recess, *w*, in its forward end, and is pivotally connected with the pitman or connecting-rod *e*, as shown. A former-plate, *n*, is fixed on the table A, opposite the recessed end of the bending-plate *f*, having its edge curved concentrically with the recess *w*, in plate *f*.

At the end of the table A, behind the plate *n*, is hung in suitable bearings a bending-bar, *m*. Said bending-bar has a groove, *h*, in its edge, whose open side is in a plane with the line of movement of the sliding plate *f*, and its upper edge is of a half-round form, as shown. Said bending-bar *m* is adapted to have a reciprocating rotary motion, and to so operate it a pinion, *z*, is secured to the end of one of the short shafts constituting its end supports, which pinion engages with the geared segment K′, which constitutes one arm of the cam-lever K, the second arm of the latter engaging with the edge of the cam *c′* on the driving-shaft *b*, which is hung in suitable bearings on the frame of the machine. A spring, *x′*, holds the end of the arm of lever K in contact with cam *c′*, and serves to swing the bar *m* to its position, as shown in Fig. 1, after having been swung over against the plate *n*, as hereinafter described. An elbow-lever, *d*, is hung loosely on the shaft *o*, one arm of which is pivotally connected to the rod *e*, and its other arm has its end engaging with the edge of the cam *c*, on said shaft *b*, a spring, *x*, holding said arm against said cam and serving to retract the sliding plate *f*, after it has been driven forward against the former *n*, as below set forth. A suitable belt running on pulley *a* on shaft *b* gives motion to the machine.

The above-described machine is adapted to bend a piece of wire, *y*, (shown on the machine between the plate *f* and the former *n*,) and give it the form shown in Fig. 2, which illustrates the finished insulator-clip or double hooked piece used for securing telegraph-wires by the side of insulators on telegraph-poles, &c., and operates as follows: The operator places the piece of wire *y* on the machine, in the position shown. Cam *c* operates on lever *d*, sliding the plate *f* and carrying said wire against the edge of the former *n*, whereby the ends of the wire are bent around and carried into the groove *h*, in the bar *m*, which then, by the action of cam *c′* on lever K, swings over upon the former *n* and bends the hooks on the ends of the clip, the plate *f* meanwhile retiring. The bar *m*, after having formed said hooks, immediately swings back to the position shown, carrying with it the fully-formed clip, which adheres to it in the position shown thereon by dotted lines in Fig. 1, whence it is removed by the operator and the operation is repeated, thus making rapidly and accurately said clips.

What I claim as my invention is—

In a machine for making insulator-clips, the sliding plate *f*, having the circular recess *w* therein, the forming-plate *n*, located opposite the recessed end of the plate *f*, the bending-bar *m*, pivoted at the end of plate *n*, and having the groove *h* therein, and suitable mechanism for giving a reciprocating motion to the plate *f* and a rotary reciprocating motion to the bending-bar *m*, combined and operating substantially as set forth.

ELLIS DODGE.

Witnesses:
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