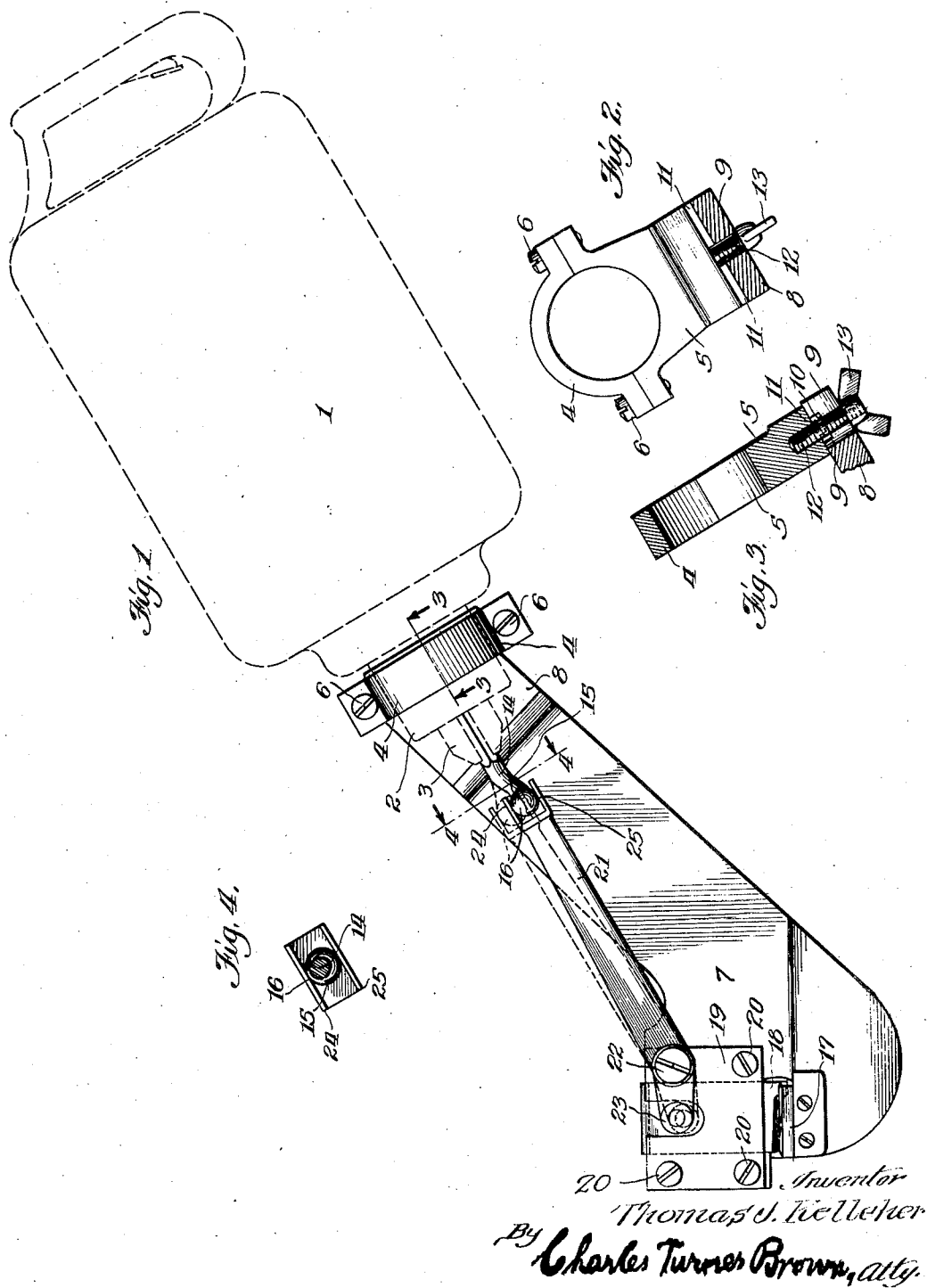


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ELECTRICAL SHEET METAL CUTTER

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UNITED STATES PATENT OFFICE.

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ELECTRICAL SHEET-METAL CUTTER.

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This invention relates to a sheet metal cutter which is electrically operable, and which is adapted to cut single sheets of metal.

Among the objects of this invention is to obtain an electrical sheet metal cutter which is easily attached to the shell of motors which are usually used in what are known as electrical drills, by means which will permit the principal parts of the device embodying this invention to be removed from said shell when it is desired to use the motor for other purposes, and to be re-placed thereon without loss of adjustment. An additional object is to obtain a device by means of which a sheet of metal may be rapidly cut along determined lines marked or indicated by a pattern laid thereon. A further object is to obtain a cutter of the kind named which is simple in construction, of few parts, economically made, durable, and not liable to be broken or to get out of order.

In the drawing referred to Fig. 1 is a side elevation of a construction embodying this invention, with broken lines indicating the shell of an electric motor to which it is attachable.

Fig. 2 is a side elevation of a clamp forming a member of the construction illustrated in Fig. 1, removed from the motor shell indicated in said Fig. 1, and a cross section of one end of the base of said construction.

Fig. 3 is a section taken on line 3—3 of Fig. 1, viewed as indicated by arrows.

And Fig. 4 is a section taken on line 4—4 of Fig. 1, viewed as indicated by arrows.

A reference character applied to designate a given part indicates said part throughout the several figures of the drawing wherever the same appears.

1 represents the shell of an electrical motor. 2 represents a cylindrical member of shell 1. 3 represents an ordinary drill chuck which is rigidly mounted on the shaft of the motor, 4, 5, represent the two parts of a clamp, and 6 screws or bolts by means of which the clamp is rigidly mounted on cylindrical member 2. 7 represents the base of the construction embodying the invention and 8 the end of said base which is attachable to part 5 of clamp 4, 5. 9 represents a slot in end 8, and 10 a groove in said end, which is at substantially right angles to slot 9. 11 represents a rib on part 5 of clamp 4, 5, which fits closely in groove 10. 12 represents a screw threaded bolt which fits in corresponding internal screw threads in an aperture in part 5, and

13 the head of said bolt. I prefer the head 13 should correspond with what is known, when the term is applied to nuts, as a butterfly. By this construction the base 7 may be readily removed from part 5 of clamp 4, 5, and as readily replaced thereon, without removing said clamp from cylindrical member 2, and without loss of the adjustment of said base on the motor shell, when it is desired to use the motor for other purposes than to drive the cutter. 14 represents a shaft which is attachable to drill chuck 3, in the same manner that an ordinary drill is attachable thereto. Shaft 14 is provided with bend 15, and 16 represents a hardened steel ball which is rigidly mounted on the end of shaft 14 which is adjacent to bend 15. 17 represents a cutter which is rigidly mounted on base 7, and 18 represents a movable cutter which is mounted on said base to slide in head 19. Said head is secured on base 7 as by screws 20. 21 represents a lever which is pivotally mounted on base 7, as by means of screw or bolt 22, and which is connected at one end to movable cutter 18, as by pin or pivot 23. 24, 25, represent parallel members which are on the free end of lever 21, and between which the ball 16 fits closely. Parallel members 24, 25 are of sufficient width to permit the ball 16 to slide or move horizontally, or at right angles to the movement of lever 21, and said ball fits so closely to said parallel members that a vertical movement is imparted to lever 21 by the rotation of shaft 14, and thereby the movable cutter 18 is actuated to co-act with cutter 17.

I claim:

1. In an electrical cutter comprising a base, a cutter rigidly secured on said base and an additional cutter slidably mounted on said base, a pivotally mounted lever connected at one end to said movable cutter and provided with parallel members at the opposite end, in combination with means to attach said base to the shell of an electric motor, and a shaft attachable to the shaft of said motor, said shaft provided with an angular bend and a ball rigidly mounted on the end of said shaft adjacent to said bend, said ball slidably positioned between said parallel members and fitting closely thereto.

2. In an electrical sheet metal cutter, a base, one end of said base provided with a slot, a clamp adapted to be rigidly secured to the shell of an electric motor, a screw threaded bolt rigidly mounted in said clamp, said slotted end of said base and said clamp

provided with a co-acting groove and rib, and a nut mounted on said screw threaded bolt, in combination with a rigidly mounted and a slidably mounted cutter on said base, 5 a lever pivotally mounted on said base, one end of said lever connected to said slidably mounted cutter and the opposite end provided with parallel members, a shaft provided with an angular bend, and a ball rigidly 10 secured on said shaft, said ball slidable between said parallel members and fitting closely thereto.

3. In an electrical sheet metal cutter, in combination, a base, a clamp rigidly attach- 15 able to the shell of an electric motor, means to removably attach said base to said clamp, said means to attach comprising a co-acting groove and rib on said base and clamp, a

slot on said base, a screw threaded bolt, and a nut on said bolt. 20

4. In an electrical sheet metal cutter, in combination, a base, cutters on said base, a pivoted lever arranged to control the movement of one of said cutters, said lever provided with parallel members at one end thereof, a clamp rigidly attachable to the shell 25 of an electric motor, means to removably attach said base to said clamp, a shaft provided with an angular bend attachable to said motor, and a ball rigidly mounted on 30 said shaft adjacent to said angular bend and adapted to slide between said parallel members and to actuate said lever when said motor is energized.

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