

T. E. MURRAY, JR.
 APPARATUS FOR BENDING METAL PLATES.
 APPLICATION FILED MAY 5, 1917.

1,237,371.

Patented Aug. 21, 1917.

Fig. 1.

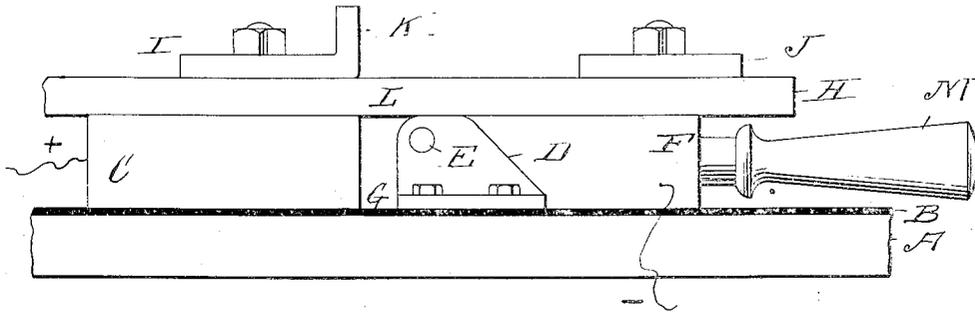
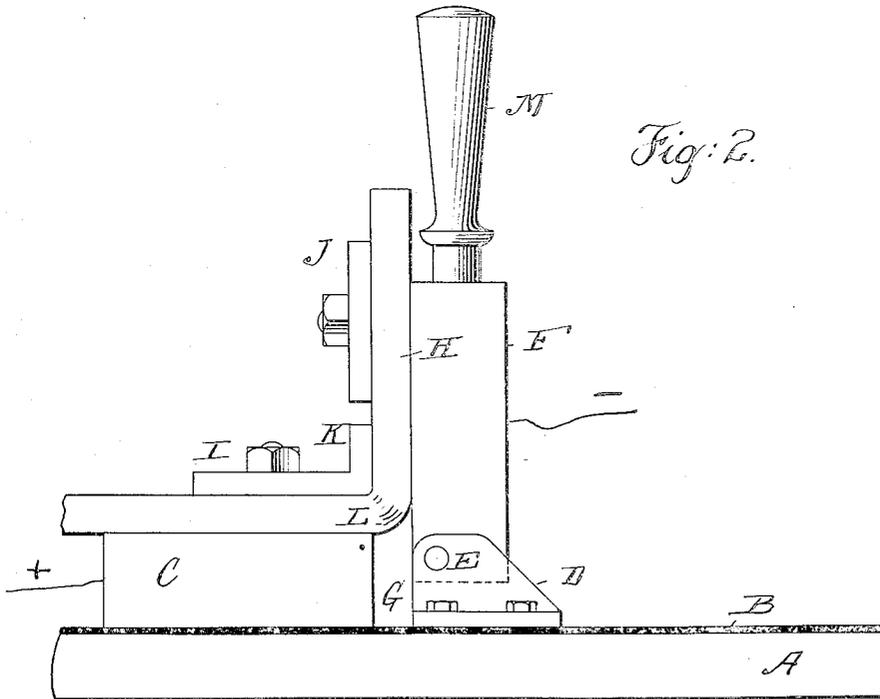


Fig. 2.



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 By his Attorney
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UNITED STATES PATENT OFFICE.

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Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, THOMAS E. MURRAY, Jr., a citizen of the United States, residing at Brooklyn, in the county of Kings and State of New York, have invented a certain new and useful Improvement in Apparatus for Bending Metal Plates, of which the following is a specification.

The invention is an apparatus for electrically softening a certain portion of a metal plate, and for bending said plate at said softened portion.

In the accompanying drawings—

Figure 1 is a side elevation of my apparatus for bending a plate, showing the swinging electrode in horizontal position. Fig. 2 is a similar elevation, showing the swinging electrode moved to vertical position to bend the plate at a right angle.

Similar letters of reference indicate like parts.

A is any suitable bed or support, the surface of which is covered with insulating material B, and upon which bed is secured the fixed electrode C. Also secured on said surface are two brackets, one of which is shown at D, which receive the pivots E of the swinging electrode F. The top surfaces of the electrodes C, F and of the brackets D lie in the same horizontal plane. Between the brackets and the opposing face of the electrode C is a gap G of predetermined width. The plate H, which is to be bent, extends over the gap G, and is secured to the upper side of electrode C and to the side of electrode F which is uppermost when said electrode F is in horizontal position, as shown in Fig. 1, by means of clamping bars I and J bolted to said electrodes. One edge of fixed electrode C is upwardly flanged at K, the outer face of said flange registering with the face of said electrode which bounds the gap G. Said flange forms a stop for the electrode when brought to vertical position.

The operation is as follows:

A current is established through the elec-

trodes C, F and that portion L of the plate H which covers said gap. Said current is to be of sufficient strength to heat, and so soften said portion L. When this softening is effected, the operator grasping a handle M on plate F easily swings said plate into vertical position, as shown in Fig. 2, and against the flange K of bar I. In this way, the softened portion L of plate H is bent at a right angle, as shown, after which the current is shut off, and the bent plate, after cooling, removed from the apparatus. It is to be noted that the angle of the bend is limited to the softened portion L of plate H, which softened portion is in turn limited by the predetermined width of gap G. In this way, I can produce as sharp an angle as may be desired, and still keep the parts of the plate on each side thereof flat.

While I here show my apparatus arranged for bending the plate H at a right angle, it is, of course, to be understood that I may bend said plate to any desired angle, the stop flange K being inclined to suit the desired divergence.

I claim:

1. An apparatus for electrically heating and angularly bending a metal plate, comprising a support, a fixed electrode on said support, a swinging electrode pivoted on said support, there being a gap between said electrodes, and means for securing said plate upon said electrodes in position to extend over said gap; whereby upon the softening of said plate at said gap by the current, said swinging electrode may be upwardly turned to bend said plate at said softened portion.

2. An apparatus as in claim 1, further comprising a stop for limiting the angle at the bend of said plate.

In testimony whereof I have affixed my signature in presence of two witnesses.

THOMAS E. MURRAY, JR.

Witnesses:

GERTRUDE T. PORTER,
MAY T. MCGARRY.