W. T. HOLLAND.

Sheet-Metal Bending-Machine.

No. 204,043. Patented May 21, 1878.

Fig. 1.

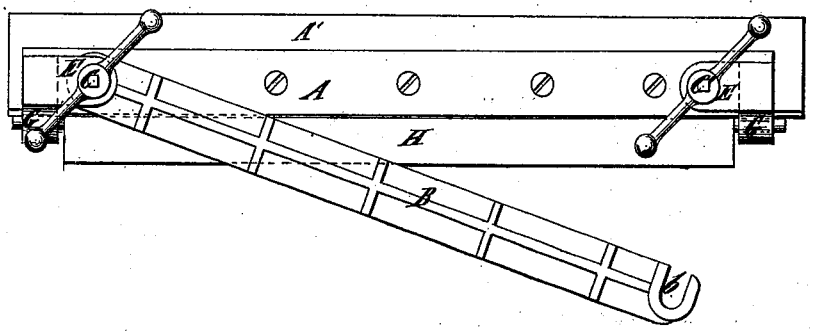


Fig 3.

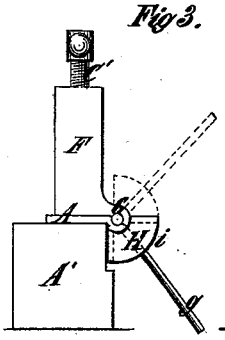
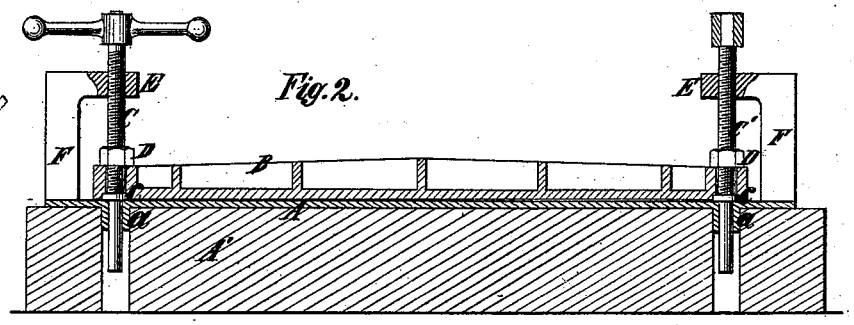


Fig. 2.



Witnesses:

Thomas C. Birch

Oscar Prentiss

Inventor:

William T. Holland

by his attorney

Edwin F. Brown

UNITED STATES PATENT OFFICE.

WILLIAM T. HOLLAND, OF BROOKLYN, NEW YORK.

IMPROVEMENT IN SHEET-METAL-BENDING MACHINES.

Specification forming part of Letters Patent No. **204,043**, dated May 21, 1878; application filed January 19, 1878.

To all whom it may concern:

Be it known that I, WILLIAM T. HOLLAND, of the city of Brooklyn, in Kings county and State of New York, have invented certain new and useful Improvements in Machines for Bending Sheet Metal, of which the following is a specification:

An important object of this invention is to produce a machine in which articles of sheet metal may be formed and from which such articles can be readily removed after the desired shape is secured.

To this end it consists in the combination, with such a machine, of a former or beam, whereon the metal is to be bent, hinged or pivoted, so that upon releasing one end the said former or beam may be readily swung outward, and the finished article can be easily slipped from the beam longitudinally, and thus removed from the machine without being unbent or marred.

It also consists in certain improvements in the construction of the machine, whereby it is rendered stronger and more durable.

In the accompanying drawing, Figure 1 represents a plan of a machine embodying these improvements. Fig. 2 is a longitudinal section thereof, and Fig. 3 an end view thereof.

Similar letters of reference designate corresponding parts in all the figures.

A designates the bed-plate of the machine, which may be secured to any suitable support, A′. B designates the former or beam whereon the metal is bent or formed. It rests upon the bed-plate A, and is secured in position at each end by screws C C′, so that it may be raised or lowered by turning the said screws. Preferably these screws are provided below the screw-threads with shoulders *c*, impinging against the bed-plate, and their lower ends fit in bearings *a*.

The screws C C′ pass through the former or beam B, and the latter is capable of being moved up or down upon turning the screws, and may be secured in place rigidly by collars D, mounted on the screws.

At one end the former is permanently secured on the screw C, with which it engages; but at the other end it has an open-sided or hook-like socket, *b*, for engaging with the other screw, wherefore the said former may be swung radially outward upon the screw C, as a pivot, as illustrated by dotted outline in Fig. 1.

The screws C C′ work in screw-threaded sockets E, which I have shown as being arranged on standards F, mounted on each end of the bed-plate A. These standards F may, if desirable, also form the caps of bearings G, wherein the journals of the presser-bar H of the machine are supported. This presser-bar is angular in its transverse section, and is preferably provided with sector-shaped strengthening-ribs *i*, to preclude it from bending or yielding.

To insert the metal to be bent, the presser-bar is dropped to the position shown in Fig. 3, and the former is raised and adjusted to clamp and hold the metal so that its forward edge overlaps the presser-bar. The presser-bar is then swung into the position shown in dotted outline in Fig. 3, and the metal overlapping it is bent against the front of the former, and two sides of a girder or beam are thus formed.

This presser-bar H may be manipulated in any suitable manner, as, for instance, by bars *g*, fitted in sockets located about the middle of its length, and adapted to suitably swing or oscillate it; but, if preferable, one of the journals of the said presser-bar may extend beyond the bearing therefor, and be provided with a hand-wheel, which, if desirable, may be weighted to balance the weight of the presser-bar H, and thus facilitate its operation.

It will be seen that by this invention, providing for swinging the former radially outward, I am enabled to readily remove therefrom any article having a square or rectangular section without unbending it, which has been difficult, if not impossible, in the machines now in use.

It will also be seen that my construction provides for producing a very strong, accurate, and durable machine with few parts.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. In a machine for bending sheet metal, the combination, with the bed-plate, of a former, whereon the metal is bent, pivoted at one end, so that it may be swung radially outward, substantially as and for the purpose set forth.

2. The combination of the bed-plate A, former B, the screws C C′, and presser H, strengthened by sector-shaped ribs *i*, substantially as and for the purposes set forth.

WILLIAM T. HOLLAND.

Witnesses:

CHANDLER HALL,

THOMAS E. BIRCH.