

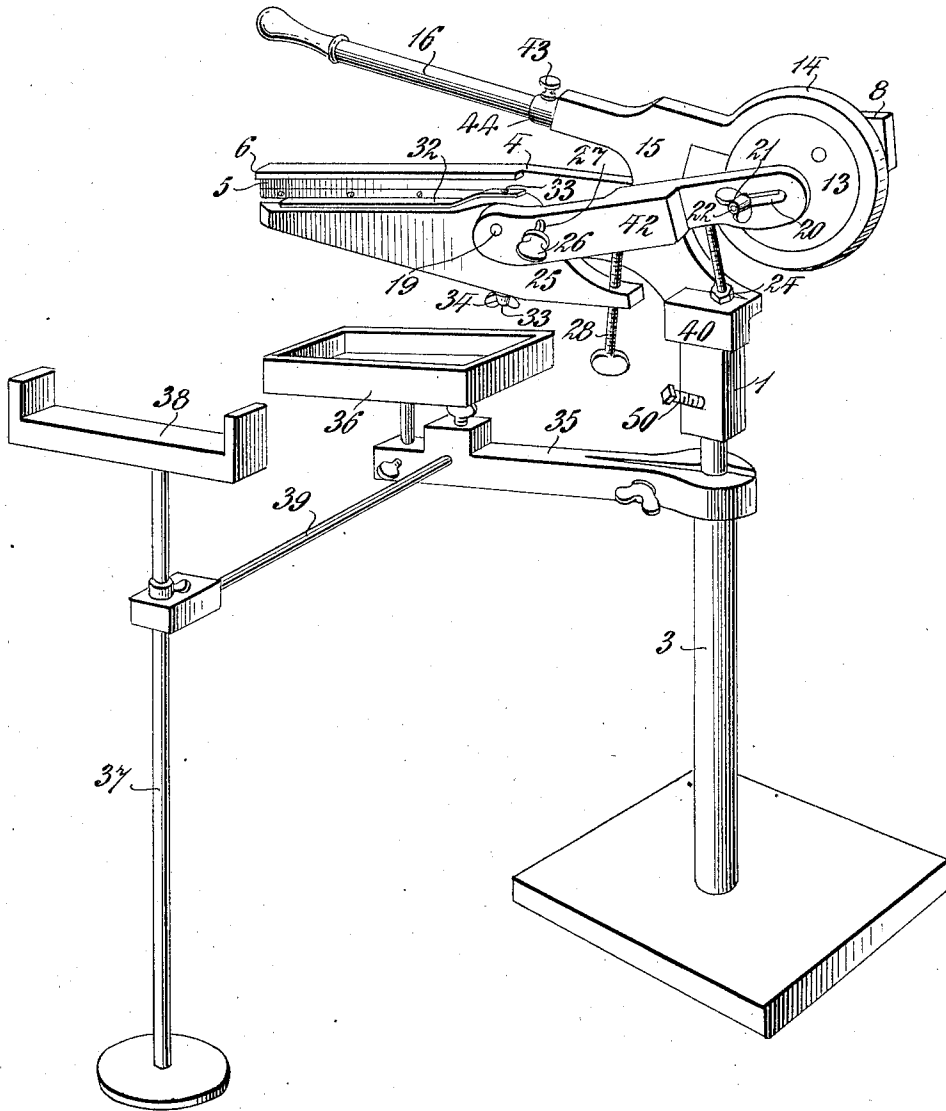
G. W. WEISS.  
METAL CUTTING MECHANISM.  
APPLICATION FILED OCT. 19, 1909.

1,003,557.

Patented Sept. 19, 1911.

3 SHEETS—SHEET 1.

Fig. 1.



WITNESSES:

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# UNITED STATES PATENT OFFICE.

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METAL-CUTTING MECHANISM.

1,003,557.

Specification of Letters Patent. Patented Sept. 19, 1911.

Application filed October 19, 1909. Serial No. 523,538.

*To all whom it may concern:*

Be it known that I, GEORGE W. WEISS, a citizen of the United States, residing at Brooklyn, in the county of Kings and State  
5 of New York, have invented certain new and useful Improvements in Metal-Cutting Mechanism, of which the following is a specification, reference being had therein to the accompanying drawing.

10 This invention relates particularly to implements employed for cutting sheet metal, and has for its object to provide a hand-operated implement of this class possessing great cutting power and adaptable to per-  
15 form various operations in relation thereto.

To attain this end the invention consists in a certain novel construction, combination and arrangement of parts hereinafter described and pointed out in the claims, refer-  
20 ence being had to the accompanying drawings, in which:

Figure 1 is a perspective view of a cutting implement embodying my invention, Fig. 2 is a side elevation thereof, Fig. 3 is a  
25 plan view, Fig. 4 is a view in elevation of the sides of the device opposite to that illustrated in Fig. 3, Fig. 5 is a cross-sectional view on the line *a-a* of Fig. 3.

Similar numerals of reference are used  
30 to indicate the same parts in all the figures.

In the drawing, 1 designates a base piece or block preferably rectangular in shape and provided with a socket 2, indicated by dotted lines in Figs. 2 and 4, for supporting  
35 the implement upon a standard 3 or its equivalent; or the base piece or block may be clamped in a vise, the shoulders 40 thereof resting upon the top of the vise jaws, thus dispensing with the standard. When  
40 the standard is used the base piece or block is fixedly connected thereto by means of set screw 50, which when loosened, permits the removal of the implement from the stand-  
45 ard. Attached to the base piece or block 1 is a fixed cutting jaw 4 having a removable cutting piece 5, and a longitudinal rib 6 extending longitudinally of said jaw at the  
50 back thereof above the cutting piece 5. The fixed jaw 4 is offset, or secured to the base piece 1, at one side, for the purpose of leaving a free passage when operating longi-  
55 tudinally on a long piece of metal, the passage permitting said metal to pass without straining or bending it out of position.

Pivoted to the fixed jaw at 19 is an arm 8

having a transverse slot 9 therein, through which extend a bolt 10, preferably provided with a thumb nut, screwed into said jaw. A set screw 41 is screwed into the  
60 lower edge of the arm 8, and projects into the slot 9 to form a back-stop for the arm 8. A longitudinal slot 11 is formed in the free end of the arm 8 through which extend an adjusting bolt 12, carried by a disk 13, upon  
65 which it is eccentrically located. A thumb nut threaded on said bolt 12 enables the latter to be fixed in various positions in the slot 11, and thus varies the leverage of said arm 8, as desired and in accordance  
70 with the work to be done. Furthermore, this slot enables the operating handle 16 to be placed in forward position as shown in Fig. 1, or in rearward position as in Fig. 4.

A strap 14 surrounds the disk 13 and is  
75 integral with or secured to a lateral projection 15 therefrom, to which the operating handle 16 is attached. A thumb screw 17, which may be arranged as shown, is used for tightening the strap 14 on the disk 13,  
80 thus enabling the handle to be adjusted to any position desired or most convenient for the operator to obtain the best results possible with the implement. The handle 16 is preferably extensible as shown and is  
85 clamped after being adjusted by means of a set screw 43 threaded into a collar 44 surrounding said handle.

A movable cutting jaw 25 mounted on the pivot 19 which also forms a pivot of the  
90 arm 8, is provided with a cutting piece 5 similar to that on the fixed jaw and a like rib 6 similarly situated. These ribs serve to prevent the metal curling up as it is being cut. Also mounted on the pivot 19, at one  
95 of its ends, is a lever 42 having a longitudinal slot 20 near its other end through which passes a bolt 21 having a thumb nut 22 threaded thereon. The inner extremity of said bolt 21 extends through and  
100 is adapted to slide in a slot 23 formed in the disk 13. A thumb screw 26 threaded into the movable jaw 25 extends through a slot 27 in the lever 42 concentric with the axis of the pivot 19, by means of which the relative  
105 position of the removable jaw 25 and said arm 42 may be changed. A stop screw 24 threaded into the under side of the lever 42 forms an adjustable stop to limit the downward movement of said lever. Thread-  
110

ed into the tail of the movable jaw 25, in rear of the pivot 19, is a thumb screw 28 adapted to bear against the under side of the lever 42 and assist the thumb screw 26 to hold said jaw and the lever 42 in fixed relation, that is to say, to prevent the lever 42 slipping on the jaw when pressure is brought to bear in the operation of the cutting. The width of cut is regulated by a gage plate 29 attached to a rod 30 adjustably held in a perforation in the movable jaw 25 and held in fixed position by means of a thumb screw 31. A plate 32 is adjustably secured to the cutting edge of the movable jaw 25, but out of contact therewith, by means of a bolt 33 for the purpose of preventing the metal being fed laterally to the jaws from rising. When, however, the metal is fed longitudinally to the jaw the plate 32 will be swung out of the way.

When desired or found necessary, a movable clamp-arm 35 will be attached to the standard 3 for the purpose of supporting a box or tray 36 for the reception of small cuttings. A standard 37 carrying a rest 38 may also be provided for supporting the metal fed to the jaws, said standard 37 being connected by a stay rod 39 to the arm 35.

When constructed and arranged in accordance with the foregoing description, this cutting device will be found admirably adapted for the uses and purposes for which it is intended. The operating handle may be turned upon the disk 13 and clamped at any part by means of the strap 14 and screw 17. Furthermore, an increase or decrease of leverage and length of opening of the jaws may be obtained through the connection between the slotted lever 42 and the disk 13 by moving the bolt 21 in the slot 20 of the lever 42, and in the slot 23 in the disk 13.

It is to be understood that the invention is not limited to the exact mechanism specified and shown, as various modifications may be made without departing from the spirit of the invention.

Having now fully described my invention, what I claim as new therein, and desire to secure by Letters Patent, is:

50 1. In a device of the character herein specified, the combination with a fixed jaw and a movable jaw, of a compound lever comprising an actuating member, a member adjustably connected to the movable jaw, and an adjustable connection between said members.

2. In a device of the character described, the combination with a fixed jaw and a movable jaw, of a compound lever comprising an actuating member adjustably fulcrumed to a substantially fixed part, a member adjustably connected to the movable jaw, and an adjustable connection between said members.

65 3. In a device of the character herein

specified, a compound cutting member in which is comprised a movable jaw, an actuating part, means for variably adjusting said actuating part with relation to the movable jaw, and an adjustable stop carried by the cutting member. 70

4. In a device of the character herein specified, a fixed jaw, a compound cutting member comprising a movable jaw, a slotted lever, and an adjustable stud on the movable jaw passing through the slot in said lever adapted and arranged to vary the relations of said lever and jaw whereby the leverage is increased or decreased. 75

5. In a device of the character herein specified a fixed jaw and a movable jaw, an actuating lever, a slotted disk eccentrically pivoted to the fixed jaw and having a binding strap to which the actuating handle is secured, means for rotatably adjusting said strap around said disk, said handle having an extensible member attached thereto. 80 85

6. In a device of the character herein specified, the combination with the movable jaw, of a manipulating lever therefor and means for adjusting said lever about its fulcrum, independently of said jaw, whereby it may be operated either in front of or behind said fulcrum. 90

7. In a device of the character herein specified, the combination with the movable jaw of a manipulating lever, a slotted bar connected directly and adjustably to said jaw, and adjustable connecting means between said manipulating lever and the slotted bar. 95 100

8. In a device of the character herein specified, the combination with a fixed jaw and a movable jaw, of a manipulating lever fulcrumed on the fixed jaw, and a sliding connection between said lever and the movable jaw. 105

9. In a device of the character herein specified, a rib projecting laterally from the cutting face of each cutting jaw back from the cutting edge and projecting beyond the same and over the cutting edge of the opposite jaw for preventing severed metal from curling up or spreading apart. 110

10. In a device of the character herein specified, a rib projecting laterally from the cutting face of the movable cutting jaw and projecting over the cutting edge of the fixed jaw for the preventing of the rising or spreading apart of the metal being cut. 115 120

11. In a device of the character herein specified; a fixed jaw, a movable jaw, a compound member in which is comprised a cutting part, an actuating part, and an adjustable gage supported and carried by the cutting member of the movable jaw. 125

12. In a device of the character herein specified, the combination with the support for the cutting mechanism of a support for the metal being cut, vertically adjustable 130

with relation to the cutting jaws, and connected with the main frame of the cutting mechanism by a laterally adjustable rod.

13. In a device of the character herein  
5 specified, the combination with a fixed jaw, a movable jaw, a slotted fulcrum lever pivoted to the fixed jaw, and a clamping screw threaded in the fixed jaw and extending

through a slot in said lever to permit of vertical adjustment of the lever. 10

In testimony whereof I hereto affix my signature in presence of two witnesses.

GEORGE W. WEISS.

Witnesses:

C. W. COUMBE,  
M. J. GORDON.

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Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."

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