

I. W. CHENEY.
STEEL SHEARS.
APPLICATION FILED MAY 25, 1909.

981,166.

Patented Jan. 10, 1911.

Fig. 1.

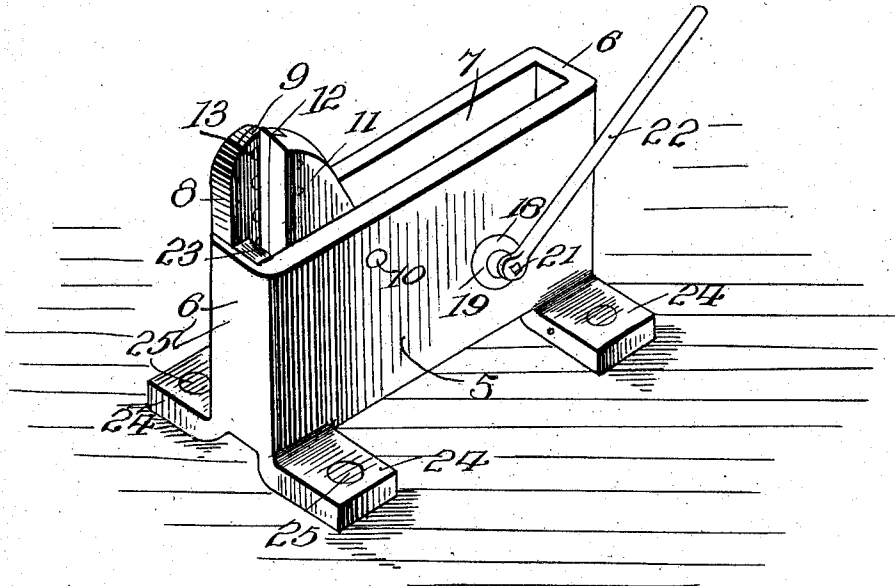


Fig. 2.

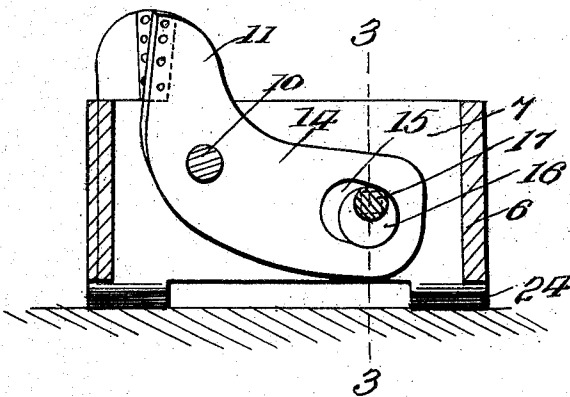
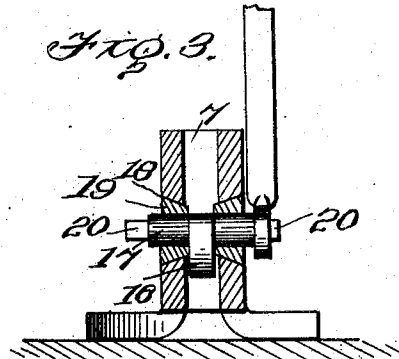


Fig. 3.



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UNITED STATES PATENT OFFICE.

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STEEL SHEARS.

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Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, IRA W. CHENEY, citizen of the United States, residing at Great Bend, in the county of Barton and State of Kansas, have invented certain new and useful Improvements in Steel Shears, of which the following is a specification.

This invention relates to machines for cutting sheet metal plates, bars and the like and has for its object to provide a strong, durable and thoroughly efficient machine of this character, the cutting jaws or blades of which are so arranged in the casing or housing as positively to prevent the same from working loose and mashing or producing a feather edge on the metal when the latter is cut.

A further object is to provide a portable metal shearing machine, the operating mechanism of which is entirely housed within the casing.

A still further object is generally to improve this class of devices so as to increase their utility, durability and efficiency, as well as to reduce the cost of manufacture.

For a full understanding of the invention and the merits thereof, and also to acquire a knowledge of the details of construction and the means for effecting the result, reference is to be had to the following description and accompanying drawings, in which;

Figure 1 is a perspective view of a metal shearing device constructed in accordance with my invention; Fig. 2 is a longitudinal sectional view of the same; and Fig. 3 is a transverse sectional view.

Corresponding and like parts are referred to in the following drawings and indicated in all the views of the drawings by the same reference characters.

The improved machine forming the subject matter of the present invention comprises an elongated casing 5, preferably rectangular in shape, as shown, and comprising longitudinally disposed side walls spaced apart by the end walls 6 to produce an intermediate chamber 7, the interior side walls of which are arranged parallel with each other throughout their entire length and height.

Projecting vertically from the upper longitudinal edge of the casing 5 at the front end thereof, and preferably formed integral therewith is a stationary jaw 8, having its inner face provided with a detachable plate 9, formed of hardened steel and constituting one of the shear blades.

Disposed within the chamber 7 and pivotally mounted at 10 is a movable jaw 11, having one end thereof projected vertically through the open end of the casing 5 and also provided with a strip of hardened steel 12, comprising the mating shear blade, the blades 9 and 12 being detachably secured to the adjacent jaws by means of bolts or similar fastening devices 13. The movable jaw 11 is extended at substantially right angles to the vertical plane of the blade 12 to produce a rearwardly disposed arm 14 having an elongated slot 15 formed therein and adapted to receive an eccentric 16 carried by the stub shaft 17.

Formed in the opposite side walls of the casing 5 are transversely alined tapered openings 18, in which are seated correspondingly tapered bearing sleeves or bushings 19 for the stub shaft 17. The opposite ends of the stub shaft 17 are projected laterally beyond the adjacent side walls of the casing 5, and are provided with angular terminals 20 one of which is adapted to receive the angular socket 21 of an operating handle, 22. By this arrangement the handle may be positioned on either side of the casing or housing without any material change in the construction of the machine. Thus it will be seen that by moving the operating handle or lever 22 in one direction the eccentric 16 will actuate the movable jaw 11 to cut or sever the sheet metal bar or plate being operated upon.

A filling block or spacing member 23 is interposed between the side walls of the casing at the forward end thereof with its inner face spaced from the active face of the stationary jaw 9 to permit the free movement of the movable jaw 11, said spacing member serving to reinforce and strengthen the casing at the stationary jaw.

Attention is here called to the fact that the opposite sides of the movable jaw are disposed in contact with the adjacent side walls of the chamber 7 so that the movable jaw is positively retained in position to co-act with the stationary jaw, thus effectually preventing wobbling of the movable jaw and mashing the metal during the cutting operation.

Extending laterally from the opposite ends of the casing 5 and preferably formed integral therewith, are attaching lugs 24 having openings formed therein, for the reception of screws or similar fastening de-

vices 25, which latter serve to anchor the casing on a floor or other suitable support and thus prevent the same from tipping over during the cutting or shearing operation.

Thus it will be seen that there is provided a strong, durable machine capable of being readily transported from place to place, and in which the operating mechanism is entirely housed within the casing or frame.

Having thus described the invention, what is claimed as new is:

The herein described metal shearing machine comprising a substantially rectangular casing formed with spaced and parallel sides, the said sides being provided with transversely alined conical shaped openings, a stationary cutting jaw extending vertically from one of the side pieces of the casing at one end thereof, the said stationary cutting jaw being arranged in the same plane as the side of the casing from which it projects, a pivot bolt connecting the sides of the casing, a movable cutting jaw mount-

ed upon the pivot bolt and having the body portion thereof received between the sides of the casing and frictionally engaging the same to hold the movable jaw against lateral displacement, one end of the movable jaw projecting upwardly into coöperative relation with the stationary jaw while the opposite end of the movable jaw is formed with a rearwardly extending angularly disposed slotted arm, frusto-conical bearings fitted within the before mentioned conical shaped openings in the sides of the casing, a shaft journaled within the said bearings and extending through the slotted arm of the movable jaw, an eccentric rigid with the shaft and operating within the slot of the movable jaw, and a handle applied to the shaft for turning the same.

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

IRA W. CHENEY. [L. S.]

Witnesses:

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