

Oct. 8, 1929.

E. E. OLLER

1,730,474

TIN CUTTING DEVICE

Filed April 21, 1928

2 Sheets-Sheet 1

Fig. 1.

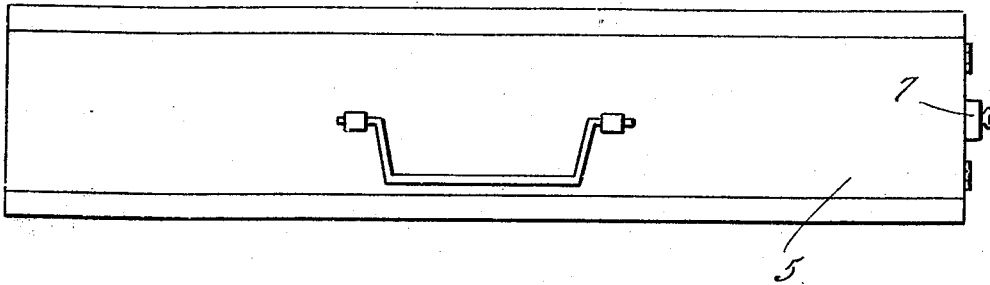


Fig. 2.

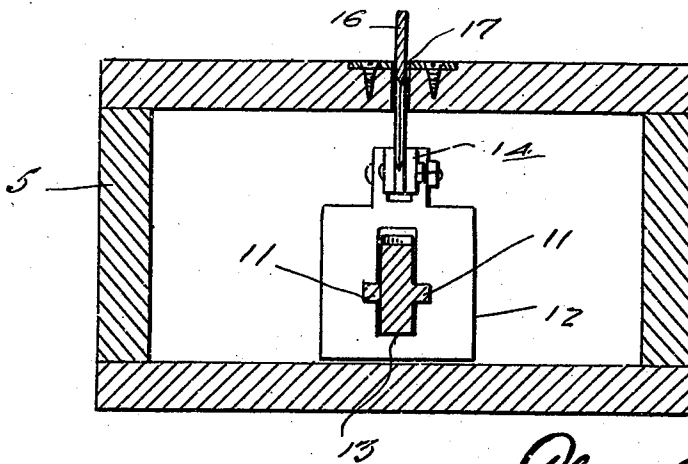
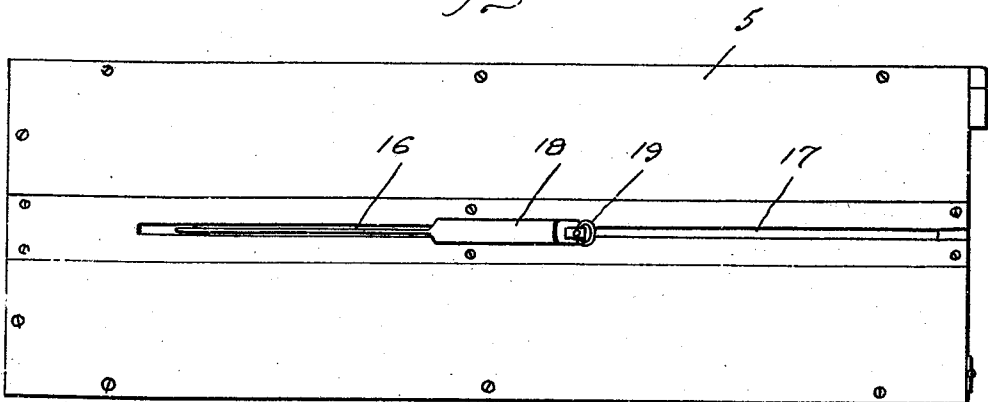


Fig. 4.

Inventor
E. E. Oller

By *Clarence A. O'Brien*
Attorney

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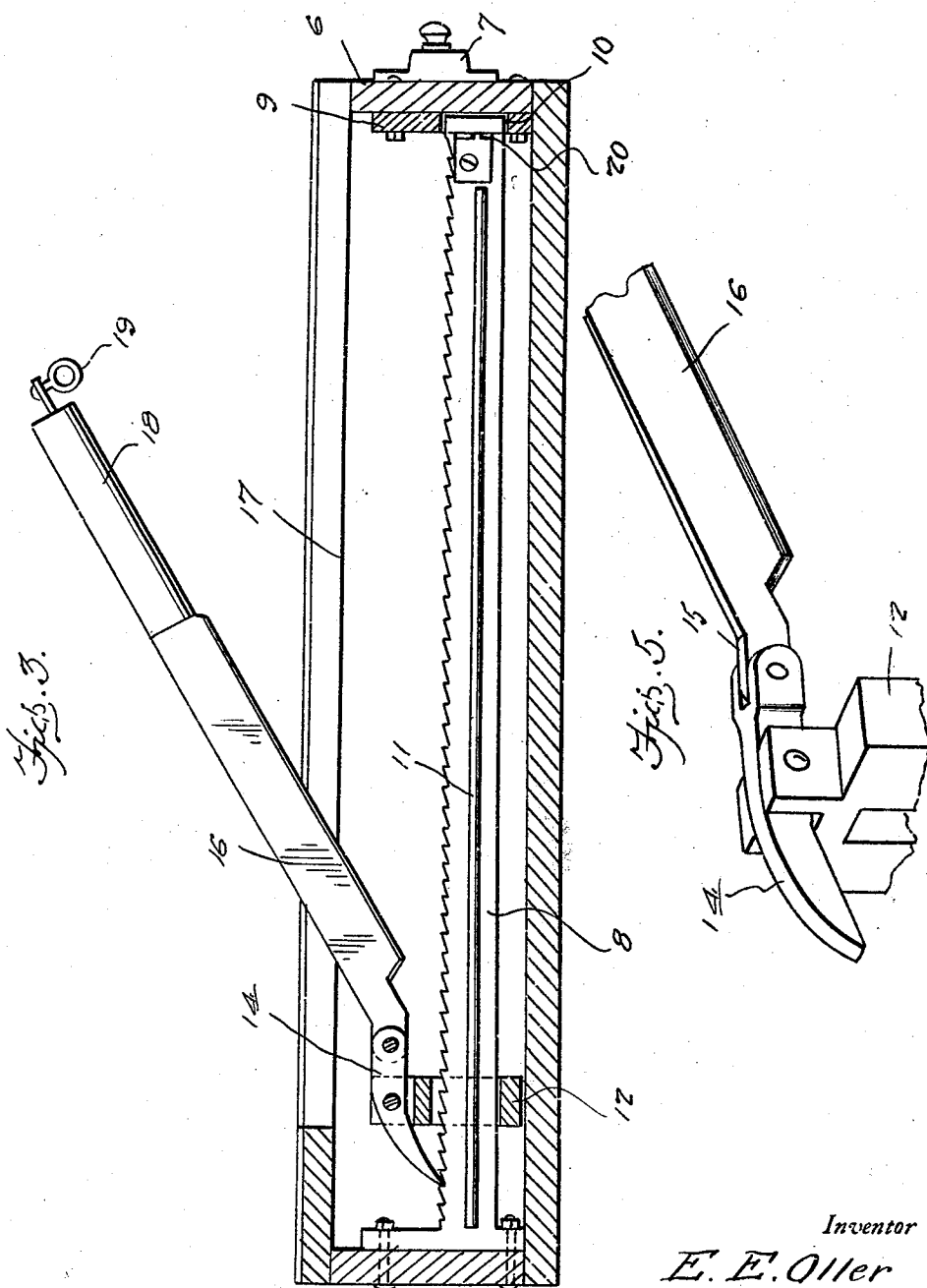
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Inventor

E. E. Oller

By *Clarence A. O'Brien*
Attorney

UNITED STATES PATENT OFFICE

EMMETT ELMER OLLER, OF LEITCHFIELD, KENTUCKY

TIN-CUTTING DEVICE

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This invention relates to new and useful improvements in devices for cutting lengths of tin or other sheet metal and aims to provide a very novel, simple and efficient device suitable for use by carpenters, tinnerns, other sheet metal workers as well as in tin shops, hardware stores, machine shops and the like.

The most important object of this invention is to produce a device wherein sheet metal may be cut in a much more rapid, smooth and truer manner than tinnerns' shears or snips now generally used in the cutting of tin and other sheet metal. Furthermore, sheet metal may be cut in a much easier and less laborious manner than is now possible with the use of tinnerns' shears and other tools. Further the invention aims to provide a relatively simple and inexpensive cutting device wherein there is little likelihood of the same becoming out of order the invention consisting of but few structural elements and these so correlated as to reduce the possibility of disarrangement to a minimum.

With the foregoing and other objects in view as the nature of the invention will be better understood, the same comprises the novel form, combination and arrangement of parts hereinafter more fully described, shown in the accompanying drawings and claimed:

In the drawings wherein like reference characters indicate corresponding parts throughout the several views:

Figure 1 is a side elevation of my improved cutting device,

Figure 2 is a top plan view thereof,

Figure 3 is a detail longitudinal section,

Figure 4 is a transverse section, and

Figure 5 is a fragmentary perspective of the pivoted inner end of the cutting blade and its associated dog which is pivoted to a member slidable upon a rack bar provided within the box-like housing of the device.

Now having particular reference to the drawings, my novel cutting device consists

of a box-like housing 5 of somewhat elongated nature but of any predetermined dimensions one end of the housing being open and being provided at this end with a swinging door 6 equipped with a suitable latch 7 whereby the door may be locked in closed position. Secured at its inner end to the closed end of the box-like housing is an elongated rack bar 8 the lower edge of which has spaced relation with the bottom surface of the housing as clearly disclosed in Figures 3 and 4. The inner face of the swinging door 6 at the opposite end of the housing is equipped with a plate 9 having a socket 10 therein for receiving the outer end of the rack bar 8 when said door is closed to support this end of the rack bar.

The opposite sides of this rack bar 8 are formed with longitudinally extending ribs 11, 11 while slidable upon said rack bar is a block 12 the same being formed centrally with a slot 13 through which the rack bar projects, opposite vertical sides of the slot being notched for receiving the ribs 11, 11 of the rack bar, see Figure 4. Pivoted to the top side of this block 12 is a dog 14 the rear end of which projects downwardly for engagement within the teeth at the upper edge of the rack bar, see Figure 3. To the opposite end of this dog is pivoted a longitudinally extending somewhat offset tongue or extension 15 of a cutting blade 16 the cutting edge thereof being adjacent said rack bar 8. This blade 16 is freely movable within a longitudinal slot 17 formed in the top wall of said housing. This slot terminates at one end adjacent the closed end of the housing and opens at the opposite end of the top wall as clearly disclosed in Figures 2 and 3. Arranged upon the outer end of this cutting blade 16 is a suitable handle 18 carrying at its outer end an eye or other member 19 for engagement with a bracket 20 attached to the outer end of the rack bar 18 when the blade has been swung entirely downwardly through

the slot 17 and the same thence moved to a substantially longitudinal position within the housing after the cutting operation has been performed so that there will be no liability of bending the blade or breaking the handle.
 5 Obviously in use the blade is swung upwardly with respect to the housing and the sheet metal to be cut laid upon the housing. A downward movement of the handle will force the blade through the material and if the width
 10 of the material is greater than the stroke of the blade it will only be necessary to again raise the blade and draw rearwardly thereon thus sliding the block 12 upon the rack bar 8
 15 said block being held against reverse movement by the engagement of the dog 14 with the teeth of said rack bar. If desired, a quick ratcheting movement of the blade may be had for facilitating the quick and accurate cutting of the metal.

20 Having thus described my invention, what I claim is:—

1. In a metal cutting device of the character described, a housing having a longitudinal slot within its top wall, a ratchet bar arranged
 25 longitudinally within the housing, a member slidably arranged upon said rack bar, a dog pivoted to said member and adapted for engagement with the teeth of the rack bar, and
 30 a cutting blade pivoted to the upper end of the dog and adapted to extend through and move within the slot in the top wall of said housing.

2. In a cutting device of the character described, a housing having a longitudinal slot within its top wall, a rack bar arranged longitudinally within said housing, a member
 35 slidable upon said rack bar, a cutting blade pivoted to said member and extending upwardly through the slot in the top wall of the housing, and means for limiting the sliding movement of the member in one direction upon said rack bar.

3. In a metal cutting device of the character described, a housing having a longitudinal slot within its top wall, a ratchet bar arranged longitudinally within the housing, a member
 45 slidably arranged upon said rack bar, a dog pivoted to said member and adapted for engagement with the teeth of the rack bar, a
 50 cutting blade pivoted to the upper end of the dog and adapted to extend through and move within the slot in the top wall of said housing, said slot extending completely through one
 55 end of the top wall of said housing, and a hinged door at this end of the housing whereby the blade may be swung into position totally within the housing.

4. In a metal cutting device of the character described, a housing having a longitudinal slot within its top wall, a ratchet bar arranged longitudinally within the housing, a member
 60 slidably arranged upon said rack bar, a dog pivoted to said member and adapted for engagement with the teeth of the rack bar,

a cutting blade pivoted to the upper end of the dog and adapted to extend through and move within the slot in the top wall of said housing, said slot extending completely through one end of the top wall of said housing, a hinged door at this end of the housing
 70 whereby the blade may be swung into position totally within the housing, and means associated with the inner end of said swinging door whereby to brace the adjacent end of said
 75 rack bar when the door is closed.

In testimony whereof I affix my signature.
 EMMETT ELMER OLLER.

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