E. BUELL.

SHEARS.

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1,362,599. Patented Dec. 21, 1920.

Fig. 1.

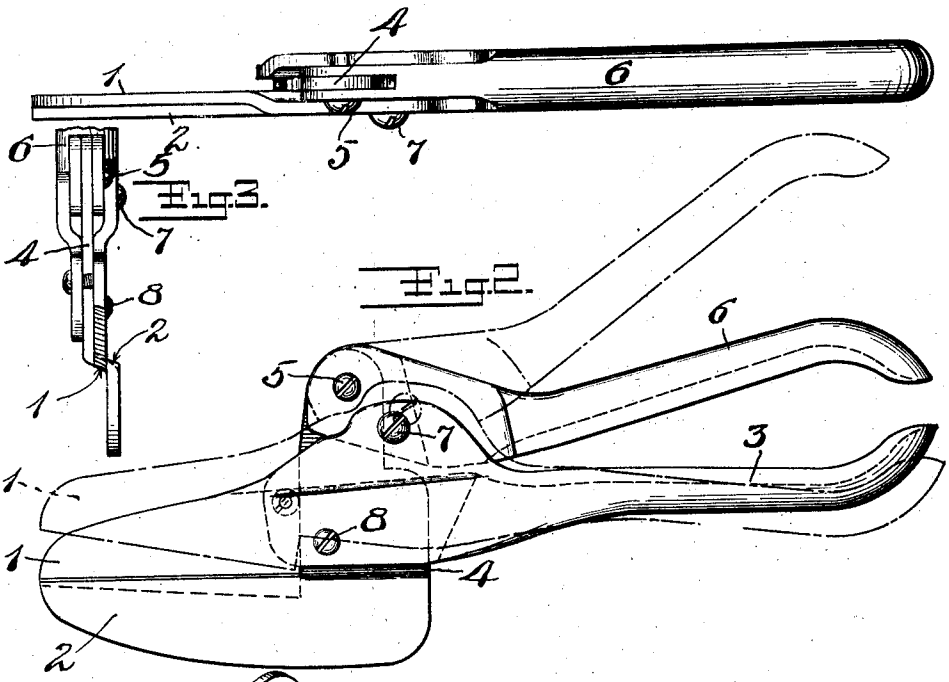
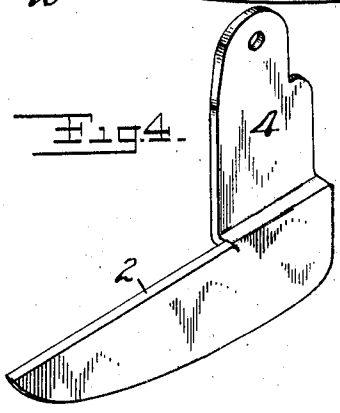


Fig. 3.

Fig. 2.

Fig. 4.



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UNITED STATES PATENT OFFICE.

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SHEARS.

1,362,599. Specification of Letters Patent. Patented Dec. 21, 1920.

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To all whom it may concern:

Be it known that I, EDGAR BUELL, a citizen of the United States of America, residing at Clinton, Connecticut, have invented a new and useful Shears, of which the following is a specification.

My invention relates to improvements in shears, and is of particular utility in connection with heavy shears designed to cut tough material such as sheet metal.

The object of my invention is to provide a construction whereby such shears can be used in cutting a long or wide sheet of metal, the construction being such that the two opposite edges of the slitted metal will clear the shears so that the latter may be advanced through the metal without interruption and without the necessity of bending to one side the material at one side of the shears to afford clearance of the latter.

In the drawings:

Figure 1 is a plan view of my invention embodied in one type of shears.

Fig. 2 is a side elevation thereof.

Fig. 3 is a front end view thereof (the blades being open).

Fig. 4 is a perspective view of a detail.

In the preferable form, 1 represents the upper blades. 2 represents the lower blade. The blade 1 is provided with a rigid rearwardly extending handle 3. This handle where it joins the blade is so constructed as to form in effect a guide frame for supporting the blade 2. The blade 2 is provided with a laterally offset upwardly projecting arm 4 which, as shown in the drawings, is guided in a slot in said frame portion of handle 3. The upper end of this arm 4 is connected by a pivot 5 with a lever 6 pivoted to the said guide frame at 7. This lever 6 constitutes the operating handle for the lower blade 2. When the handles are open to the position indicated in dotted lines, the two blades 1 and 2 will stand apart ready to receive the material to be cut between them. When the handles 3—6 are moved toward each other the cutting edges of the blades 1 and 2 will co-act and sever the material to be cut in the usual manner. When the metal is severed, the shears are advanced for another cut and it will be noted that, by reason of the offset 4 for the blade 2, the severed material on the lefthand side of the shears may freely clear the side of the shears to the rear of the edge of the blade 2, and pass under the handle 3. So also on the opposite side of the shears, the severed metal will freely clear the frame and handles. It follows that the pair of shears constructed in this manner may be advanced step by step through a sheet of any width or length without interruption and without interference. The value of this construction is not only manifest when the shears are being used to cut flat metal, but they may be successfully used to cut metal in other shapes; for example, a stovepipe may be cut off true and accurate at any point in its length. 8 is an adjusting screw carried by one side of the frame adjacent to the guide slot in which the arm 4 moves. This screw furnishes one simple and effective means for adjusting the two blades so that they will coöperate properly. By simply turning down the screw, the inner end will engage with the side of the arm 4, and press the blade 2 toward the blade 1, so that the edges will coöperate with the proper cutting action.

Obviously the form of the handles may be varied at will as well as the method of connecting the same to the blades.

I claim:

1. In a pair of shears, an upper blade with a handle rigidly connected thereto, the connecting portion being enlarged to form a guide frame for the other blade, a lower blade having a laterally offset upwardly projecting arm arranged to move in the aforesaid frame, a second handle in the form of a lever pivoted to a portion of said frame and connected to said arm for moving the lower blade relatively to the upper blade, the offset portion of the lower blade affording clearance to permit slitted material to pass freely in a rearward direction relatively to the rear end of the edge of the lower blade.

2. In a pair of shears, an upper blade having a rigid handle including a guide frame where the handle meets the blade, a lower blade having an extension operating in said guide frame, a lever handle pivotally mounted on said guide frame and operatively connected with said lower blade extension to move the lower blade relatively to the upper blade, the lower blade being offset from said extension to afford clearance to permit slitted material to pass freely in a rearward direction from the rear end of the edge of the lower blade.

3. In a pair of shears, an upper blade having a rigid handle including a guide frame

where the handle meets the blade, a lower blade having an extension operating in said guide frame, a lever handle pivotally mounted on said guide frame and operatively connected to said lower blade extension to move the lower blade relatively to the upper blade, the lower blade being offset from said extension to afford clearance to permit slitted material to pass freely in a rearward direction from the rear end of the edge of the lower blade, and an adjusting device carried by said guide frame and coacting with the lower blade to vary the degree of pressure between the cutting edges of the respective blades.

EDGAR BUELL.