Oct. 10, 1933. G. W. DRESSEN 1,930,384

STRAIGHTENER

Filed Aug. 10, 1931

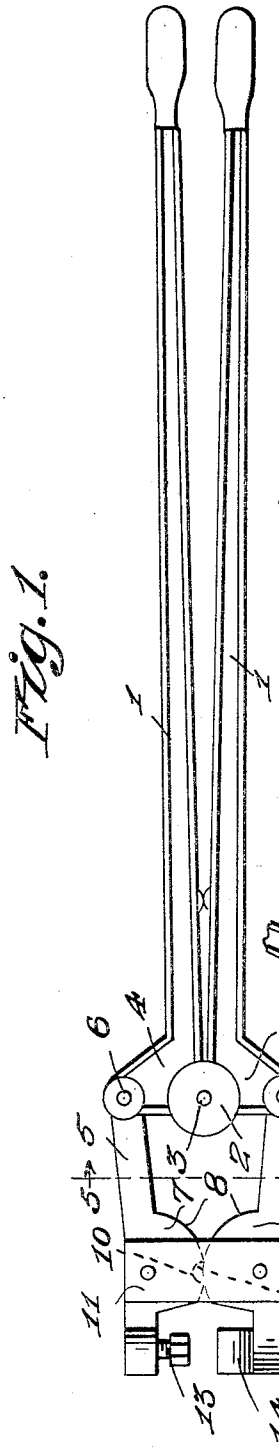


Fig. 1.

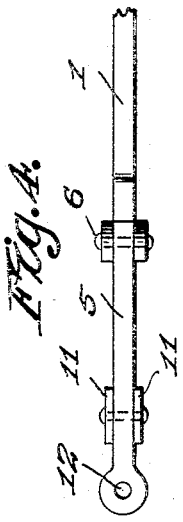


Fig. 4.

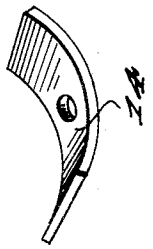


Fig. 6.

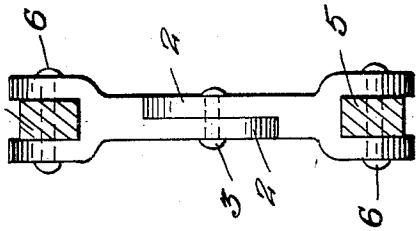


Fig. 5.

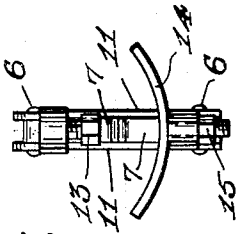


Fig. 5.

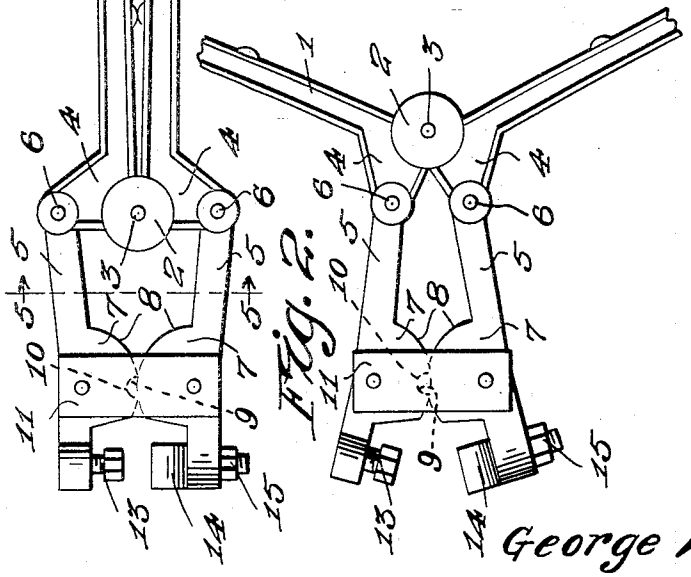


Fig. 2.

George W. Dressen, INVENTOR

BY Victor J. Evans and Co. ATTORNEY

WITNESS:

Patented Oct. 10, 1933

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UNITED STATES PATENT OFFICE

1,930,384

STRAIGHTENER

George W. Dressen, Mitchell, S. Dak.

Application August 10, 1931. Serial No. 556,237

1 Claim. (Cl. 81—15)

The object of this, my present invention, is the provision of a useful and convenient tool for the shaping or straightening of springs or other workable steel without resorting to heating or hammering, and the invention consists in the improvement as hereinafter described and definitely claimed.

In the drawing:—

Figure 1 is a side elevation of my improved tool.

Figure 2 is a fragmentary elevation thereof, showing the jaws spread.

Figure 3 is a front elevation of the tool.

Figure 4 is a fragmentary top view.

Figure 5 is a sectional view on an enlarged scale and approximately on the line 5—5 of Figure 1.

Figure 6 is a perspective view of the arched shaping plate.

The invention consists of a novel leverage and pressure arrangement, as shown by the drawing. The working or tool part of the device is constructed of malleable casting or other suitable material, with the exception of the shaping elements which are of steel or like hardened metal. As disclosed by the drawing, the tool comprises two handles 1—1 respectively. The handles, at their outer ends, have rounded interengaging parts 2 connected by a pivot 3, and the said handles from the pivot are formed with laterally and outwardly directed parts 4 whose ends are preferably bifurcated to receive therein the rounded ends of the arms 5 of what I will term the jaw members of the improvement. The arms 5 are pivoted as at 6 to the lateral extensions 4, and each arm upon its inner or confronting face is formed with a lug 7 that presents an outer arch or curved wall or edge 8. The rounded periphery of one of the lugs 7 is formed with an arched tooth 9 to be received in an arched opening 10 in the edge or face of the cooperating lug. Pivotally secured to the arms and partly covering the lugs 7 there are plates 11 which hold the arms as well as the lugs in proper alignment.

The arms project a suitable distance beyond the lugs, and the outer ends of the said arms are round in plan. Both of these rounded ends are provided with threaded openings 12 and adjustably screwed through one of said openings there is a shank of a bolt 13. The bolt is of hardened steel. Overlying the rounded end of the second arm there is a plate 14 provided with a central opening that is reamed for the tapered head of a bolt 15, the outer end of the bolt being engaged by a nut, as disclosed by the drawing.

The adjustably mounted steel bolt 13 has a shank provided with heavy or deep threads and the band of steel to be straightened is placed in the instrument between the shaping plate 14 and the steel bolt 13. This, of course, is done while the handles are open and as the handles are closed and the leverage comes into play, the steel band is shaped to conform to the shape of the plate 14. Obviously, shaping plates 14 are of different length, and from practice I have found that with my tool, straightened or bent metal sheets, springs or other workable steel may be shaped without the use of heat or without the necessity of hammering and that with the tool it will be possible to re-arch any sagged automobile spring to bring the same back to its original curve in approximately one-half of the time required by the methods now in vogue, and without the necessity of heating or re-tempering. Also with the employment of the tool, car bumpers or fenders may be straightened and brought back to proper position without damaging the nickel plating of said bumpers or without damaging the finish of the fenders, and this is also accomplished without the necessity of hammering or heating. The tool may also be employed for properly straightening the frames or rims of either automobiles or heavy trucks or straightening or shaping any similar bands of workable material without the necessity of hammering or heating.

Having described the invention, what I claim is:—

A shaping tool comprising elongated handles pivoted together at one of their ends, extensions formed on the pivoted ends of the handles and arranged angularly and in an outward direction to the handles, arms pivoted to the extensions, lugs formed on the opposing faces of the arms inwardly of the free ends of the latter and having curved faces, plates pivoted to said lugs for retaining the curved faces in engagement, said arms having their free ends enlarged and apertured, a headed element secured in the aperture of one of the arms, an arcuately curved shaping plate engaging the enlarged end of the other arm to cooperate with the headed element in gripping and shaping a metallic member, and means carried by the plate and extending through the aperture of the last-named arm for securing the plate thereto.

GEORGE W. DRESSEN.