April 21, 1931. L. H. BRIDWELL ET AL 1,802,232

FENDER AND BODY ROLLER

Filed March 10, 1930

Fig. 1.

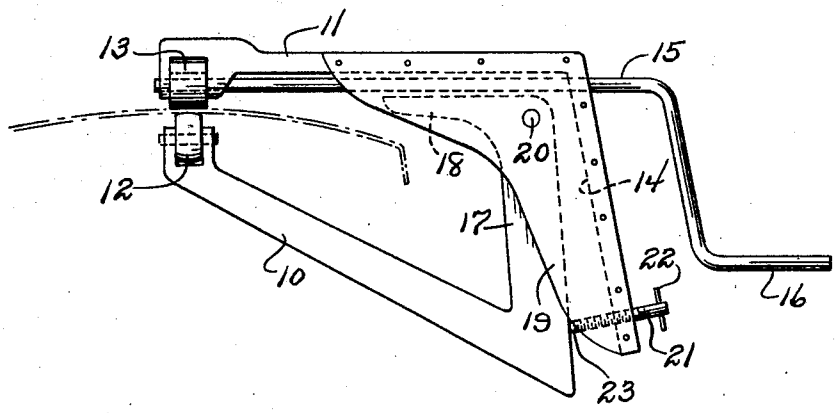


Fig. 2.

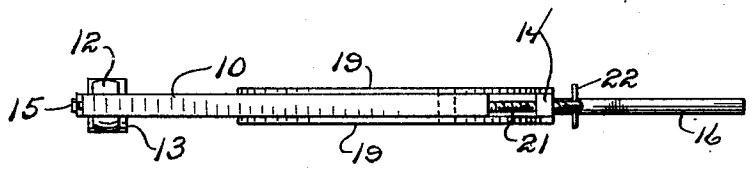
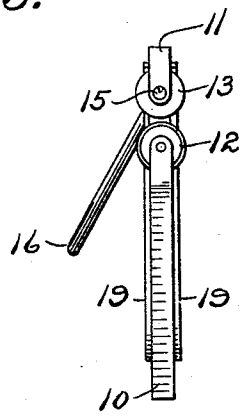


Fig. 3.



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FENDER AND BODY ROLLER

Application filed March 10, 1930. Serial No. 434,737.

This invention relates to metal working tools of a type designed for the removing of dents, bulges and other defacements therefrom.

One of the principal objects of the invention contemplates the provision and arrangement of rotatably mounted metal engaging elements shaped and arranged in such manner that protuberances, indentations and the like may be readily removed from articles of sheet metal having characteristically different contour.

Another object of the invention consists of a supporting structure for the work engaging elements.

An additional object of the invention embodies a propulsion apparatus having positive connection with one of the work engaging elements.

More specifically stated the supporting structures for the work engaging elements are adjustably associated to facilitate accommodation of the work between said elements.

A further object of the invention resides in the arrangement of an adjusting element for the structures to cause the work engaging elements to be disposed in position for use.

With the above and other objects in view, the invention further consists of the following novel features and details of construction, to be hereinafter more fully described, illustrated in the accompanying drawing and pointed out in the appended claims.

In the drawing:—

Figure 1 is a side elevation of the present invention illustrative of one of its many instances of employment.

Figure 2 is a bottom plan view thereof.

Figure 3 is an end elevation of the invention.

Referring to the drawing in detail wherein like characters of reference denote corresponding parts, the reference characters 10 and 11 indicate the respective members or sections of the supporting apparatus, each of which having spaced ears angularly disposed upon the adjacent ends thereof for the accommodation of roller members or work engaging elements 12 and 13 respectively. In the application of the invention for motor vehicle fender repair work and as shown in Figure 1 of the drawing, the upper portion of the supporting member 11 is disposed in a horizontal plane whereas an arm 14 downwardly, outwardly and obliquely inclined from the outermost end thereof is provided with an opening in alignment with that of the openings in the ears for the roller member 13 to facilitate accommodation of an operating shaft 15 having positive connection with the roller or work engaging element 13 upon one end and a crank handle 16 upon its other end. The supporting element or apparatus 10 is downwardly and outwardly obliquely inclined at an angle more acuate than that followed by the arm 14 and subsequently terminates to provide an upstanding arm 17 spaced for an appreciable distance from the adjacent side of the arm 14. A projection 18 rightangularly disposed upon the uppermost end of the arm 17 is designed for use as a guide in a manner to be better understood in the following description of the invention. Aprons 19, carried by the supporting member 11 and the arm 14 therefor and upon opposite sides thereof, telescopically receive the projection 18 and an appropriate portion of the arm 17. A pivot pin 20, carried by the arm 17, is projected terminally thereof through registering openings in the apron 19 whereby the two supporting members may swing from this point to regulate the working clearance between the adjacent surfaces of the rollers 12 and 13 respectively.

An adjusting screw 21 threadedly and adjustably mounted upon the arm 14 and adjacent the lowermost end thereof carries a cross pin 22 upon its outermost end and terminates to provide a rounded extremity 23 upon its innermost projecting extremity for abutting engagement with the adjacent surface of the arm 17, substantially as illustrated in Figure 1 of the drawing. In the latter mentioned view, it is noted that the working surface of the roller 13 is flat whereas the roller 12, being narrower than the former, is rounded to provide an apex centrally of the width thereof; this being the only portion of the roller 12 working in conjunction with the aligned surface portion of the flat

faced roller 13. In this manner different shapes of fenders and other sheet metal may be worked upon by the present invention and the work may be fed to and fro therebetween incident to the operation of the shaft 15 carrying the crank handle portion 16 and having positive operative connection with the flat faced roller 13 at its opposite end. The task will be lightened inasmuch as only a small portion of the irregular surface is worked upon at one time and consequently the shaft 15 may be rotated or oscillated more freely. As the depression, knoll, protuberance or other defacement is being ironed out, the adjusting screw 21 may be tightened at intervals to take up the slack occurring between the working surfaces of the respective rollers.

Although we have shown our invention operating upon motor vehicle fenders for the express purpose of removing defacements therefrom, it is to be understood that we do not limit our invention to this work alone inasmuch as it is obviously apparent that vessels of different types and sorts may be readily accommodated to restore the commercial or artistic shapes thereof.

It is to be noted that the depending flange portions as well as appropriate portions of the upper curved portions of fenders may be accommodated within the space defined between the respective supporting members 10 and 11 and otherwise inaccessible body and fender dents may be reached and removed.

The invention is susceptible of various changes in its form, proportions and minor details of construction, and the right is herein reserved to make such changes as properly fall within the scope of the appended claims.

Having described the invention, what is claimed is:—

1. A tool for shaping sheet metal comprising pivotally connected rockingly mounted supporting members, aprons carried upon one of the members overlapping the opposite sides of the other member to retain the members in the same plane, rollers carried upon the adjacent ends of the members, and an adjusting element carried by one of the members engageable with the other beyond the pivot connection therefor to regulate the amount and degree of clearance between the rollers.

2. A tool for shaping sheet metal comprising complemental supporting members, aprons carried upon one of the members accommodating the adjacent member therebetween for pivotal connection therewith, a roller member upon one of the members having a flat surface, a second roller mounted upon the other member having a rounded surface, and an adjusting element carried by one of the members engageable with the other member to regulate the amount of clearance between the surfaces of the rollers.

3. A tool for shaping sheet metal comprising complemental supporting members, aprons carried by one of the members accommodating a portion of the other member for pivotal connection therewith to retain the members in the same plane, a roller having a flat surface mounted upon one of the members, a companion roller mounted upon the other member having a rounded surface, and an adjusting element carried by one of the members engageable with the adjacent portion of the other member to regulate the amount of clearance between the working surfaces of the rollers, and an operating shaft journaled upon one of the members having positive operative connection with the flat surfaced roller.

4. A tool for shaping sheet metal comprising angularly shaped oppositely disposed complemental supporting members, aprons arranged upon opposite sides of a projecting portion of one of the members to pivotally accommodate a portion of the other member therebetween, a roller having a flat surface mounted upon one of the members, a companion roller mounted upon the other member having a rounded surface, an adjusting element carried upon the first mentioned member engageable with that portion of the second mentioned member between said aprons for the regulation of the amount of clearance between the working surfaces of the rollers, and an operating shaft journaled upon the first mentioned member having positive operative connection with the flat surfaced roller.

In testimony whereof we affix our signatures.

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