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J. M. OLVEY ET AL

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APPARATUS FOR SMOOTHLY ROUNDING TUBULAR CAN BODIES

Filed March 23, 1951

2 SHEETS—SHEET 1

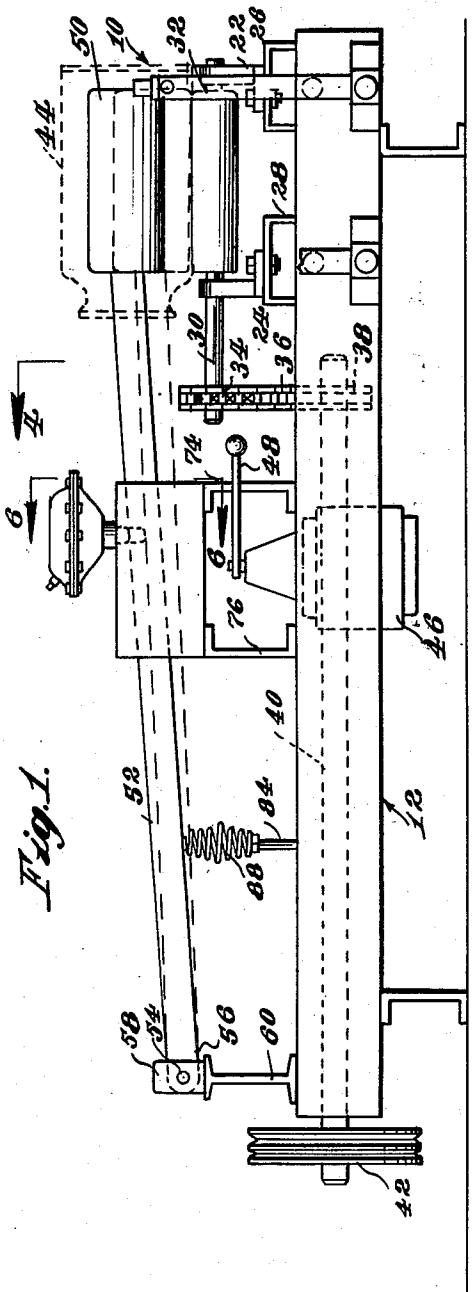


Fig. 1

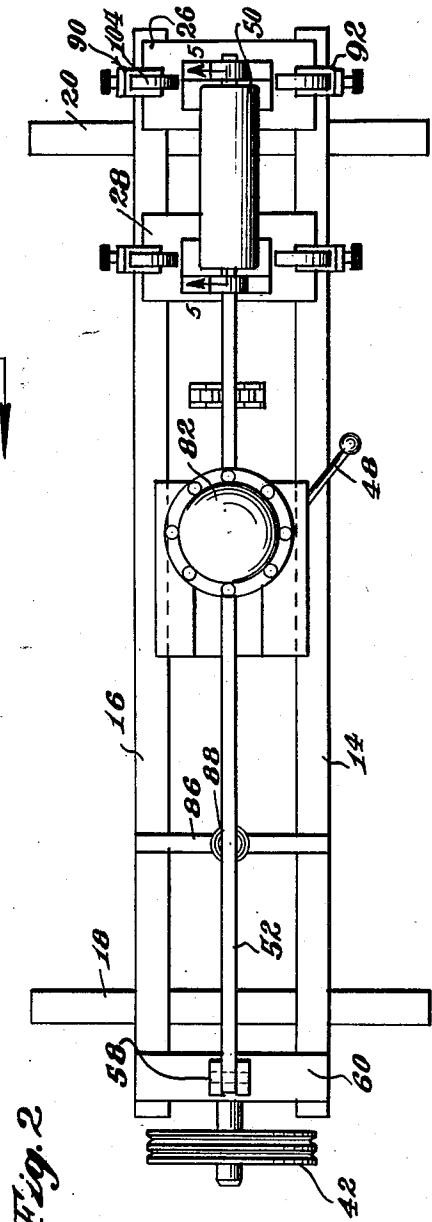


Fig. 2

INVENTOR.  
JUELL M. OLVEY  
BY HOLLMAN B. OLVEY

MENNEMAN, PERLMAN & DAVIDSON  
ATTORNEYS

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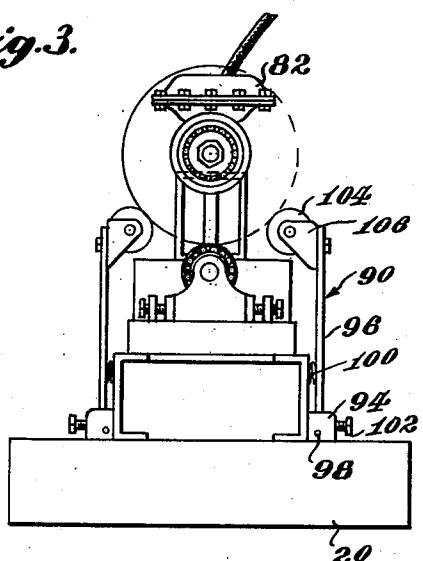
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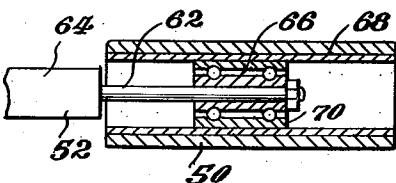
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2 SHEETS—SHEET 2

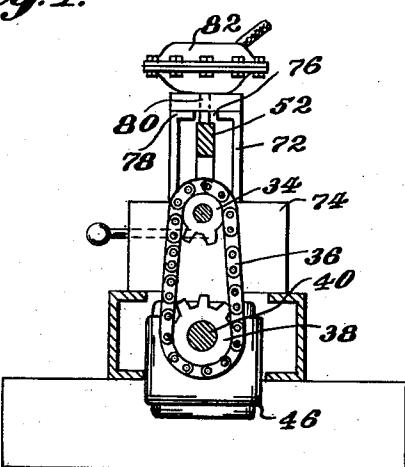
*Fig. 3.*



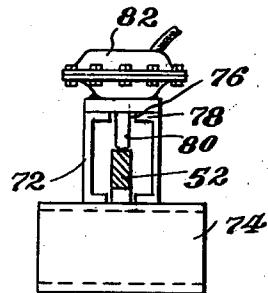
*Fig. 5.*



*Fig. 4.*



*Fig. 6*



INVENTOR.  
JUELL M. OLVEY  
BY HOLLMAN B. OLVEY

McMorrow, Berman + Davidson  
ATTORNEYS



which is affixed at its upper end to the under-side of the lever 52, intermediate the pivot 54 and the plunger 80 and serves to yieldably urge the lever upwardly.

A pair of longitudinally spaced guide roller elements 90 are carried by the side bar 16 and a circular pair of guide roller elements 92 are carried by the side bar 14, the pairs of guide roller elements being in opposed arrangement and being positioned to engage a lower part of the external surface of the side wall of the can 44 at points adjacent to opposite ends of the can on a level above the driven roller 32.

Each of the guide rollers is similarly constructed and, as seen in Figure 3, includes a base block 94, which is fixedly mounted on one of the frame side bars 14 or 16 and in which an up-standing bar 96 is pivoted by a pin 98, the bar being thereby swingable toward and away from the roller 32 about a horizontal axis. The blocks are fixed to the outer sides of the side bars 14 and 16, and springs 100 compressed between the side bars and the bars 96 urge the bars 96 outwardly. Stop screws 102 are threadingly carried by the blocks above the pivots 98 and bear against the bars 96 for locking the bars in selected vertical planes, against the tension of the springs 100. Rollers 104 are rotatably journaled in U-shaped supports 106, which are affixed to the laterally inward sides of and at the upper ends of the bars 96.

In operation, a can body is disposed on the idler roller 50 and the guide roller bars 96 are adjusted to bring the rollers 104 into positive engagement with the external surface of the side wall of the can, as seen in Figure 3. The ram 80 is then actuated to move the lever 52 about the pivot 54 and bring the rollers 50 and 32 into co-operative relationship, so that the rollers engage externally and internally the wall of the can with sufficient force to roll and shape the can side wall to its original cylindrical contour.

Upon release of the ram 82 the spring 88 is operative to raise the lever 52 and thereby elevate the idler roller 50 away from the fixed roller 32 and free the reshaped can for removal from the idler roller 50.

Obviously, by employing the hand lever 48, the driven roller 32 may be rotated in opposite directions, dependent upon the particular operation or the desires of the workman, which, of course, would be influenced by the condition of the can body.

Having thus described this invention, what is claimed is:

1. In apparatus for restoring the plane cylindrical contour of a dented can sidewall, a base, a drive shaft extending longitudinally of said base and journaled thereon, said drive shaft having an end located at one end of said base provided with means for connection to a power source, the other end of said drive shaft terminating in longitudinally spaced relation to the other end of the base, a fixed shaping roller mounted on said base between the said other end of the drive shaft and the said other end of the base, said fixed roller having its axis parallel to and spaced laterally from one side of said base, said fixed roller having an end operatively connected to said other end of the drive shaft, a pressure lever extending longitudinally along said one side of the base and laterally spaced therefrom, means pivoting one end of said lever to the said one end of the base, spring means acting between said one side of the base and an intermediate part of said lever and

normally urging said lever outwardly away from said one side of the base, a movable shaping roller journaled on the other end of said lever with its axis paralleling the axis of said fixed shaping roller, said movable roller being positioned at the side of said fixed roller remote from the said one side of the base, and pressure exerting means mounted on said base and engaging an intermediate part of said lever for swinging said lever laterally inwardly toward the said one side of the base with a can circumscribed on said movable roller so as to engage the can sidewall with the fixed roller with sufficient selected force to roll and reshape the can sidewall between the rollers.

2. In apparatus for restoring the plane cylindrical contour of a dented can sidewall, a base, a drive shaft extending longitudinally of said base and journaled thereon, said drive shaft having an end located at one end of said base provided with means for connection to a power source, the other end of said drive shaft terminating in longitudinally spaced relation to the other end of the base, a fixed shaping roller mounted on said base between the said other end of the drive shaft and the said other end of the base, said fixed roller having its axis parallel to and spaced laterally from one side of said base, said fixed roller having an end operatively connected to said other end of the drive shaft, a pressure lever extending longitudinally along said one side of the base and laterally spaced therefrom, means pivoting one end of said lever to the said one end of the base, spring means acting between said one side of the base and an intermediate part of said lever and normally urging said lever outwardly away from said one side of the base, a movable shaping roller journaled on the other end of said lever with its axis paralleling the axis of said fixed shaping roller, said movable roller being positioned at the side of said fixed roller remote from the said one side of the base, and pressure exerting means mounted on said base and engaging an intermediate part of said lever for swinging said lever laterally inwardly toward the said one side of the base with a can circumscribed on said movable roller so as to engage the can sidewall with the fixed roller with sufficient selected force to roll and reshape the can sidewall between the rollers, said base having laterally adjustable guide roller elements mounted on said base at opposite sides of said fixed roller, said roller elements including rollers for engaging the can sidewall and being laterally adjustable to support and center a can relative to said fixed roller.

JUELL M. OLVEY.  
HOLLMAN B. OLVEY.

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