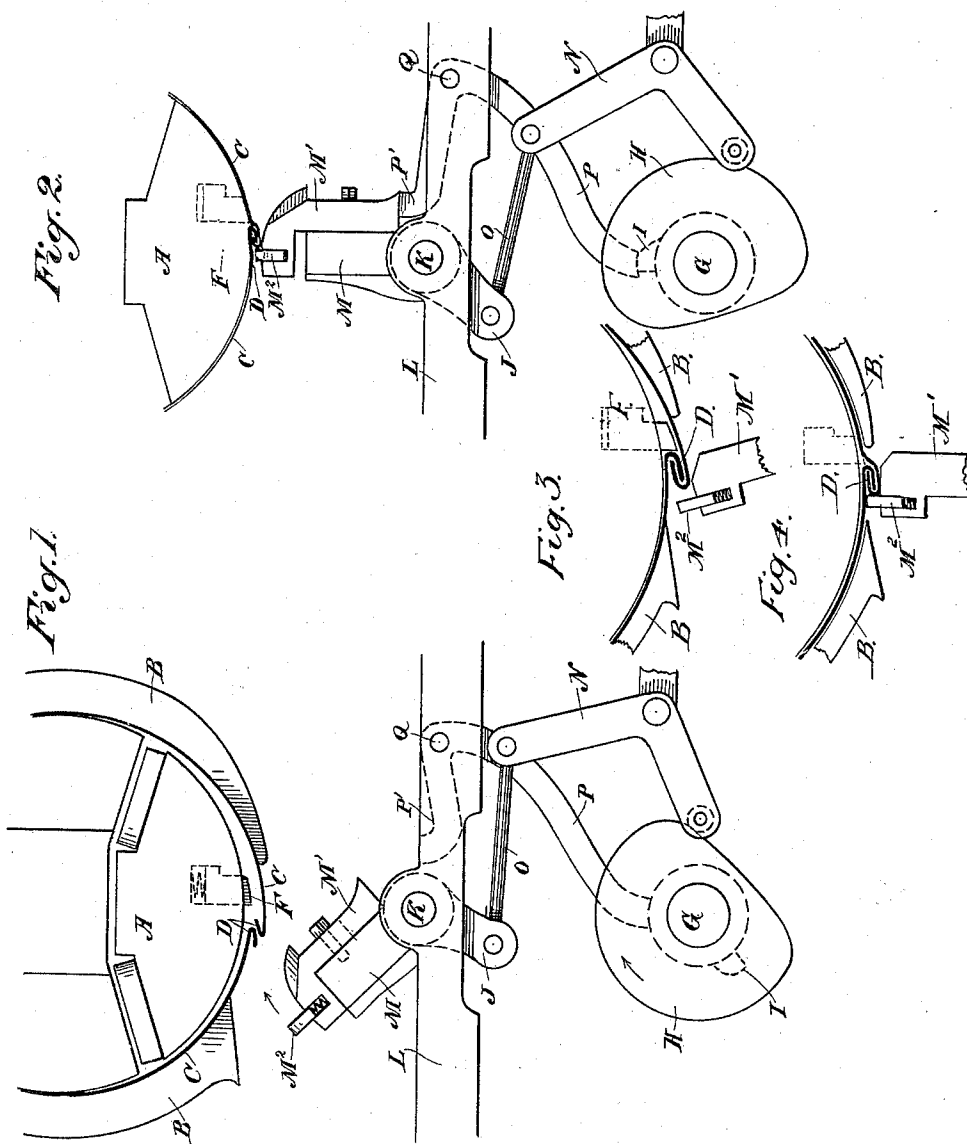


(No Model.)

R. D. HUME.
CAN BODY FORMING MACHINE.

No. 488,476.

Patented Dec. 20, 1892.



Witnesses,
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UNITED STATES PATENT OFFICE.

ROBERT D. HUME, OF SAN FRANCISCO, CALIFORNIA.

CAN-BODY-FORMING MACHINE.

SPECIFICATION forming part of Letters Patent No. 488,476, dated December 20, 1892.

Application filed January 27, 1892. Serial No. 419,411. (No model.)

To all whom it may concern:

Be it known that I, ROBERT D. HUME, a citizen of the United States, residing in the city and county of San Francisco, State of California, have invented an Improvement in Can-Body-Forming Machines; and I hereby declare the following to be a full, clear, and exact description of the same.

My invention relates to certain improvements in machines for forming sheet metal can bodies.

It consists in certain details of construction which will be more fully explained by reference to the accompanying drawings, in which—

Figure 1 is a view showing the position of my device before the seam in the can body is finished. Fig. 2 shows the device after the seam is finished. Fig. 3, is an enlarged view showing the position of the lug M^2 just before it engages the interlocked folds. Fig. 4, is a similar view showing the position of the lug M^2 during the pressing of the folds.

The object of my invention is to provide an improved means for closing lock seams which form the longitudinal junction of the meeting edges upon the side of a can body. This mechanism may be applied to any can body forming machine in which a mandrel or horn is employed, around which the body is formed.

A is the mandrel or horn.

B B are the jaws by which the sheet C is bent around this horn to form the can body and D D are the interlocking edges of the sheet, these edges having been bent by mechanism not here shown, previous to the sheet being brought to its present position. These interlocking edges having been brought together by the closing of the jaws, they are then forced to actually lock with each other by the closing of the jaws.

G is a shaft carrying a cam H and a cam or pin I which projects from it in a position relative to the cam H, so that the cam and pin will actuate the connected mechanism with due reference to the movements of each other.

J is a crank arm fixed to a shaft K which is journaled upon a suitable bearing support L of the machine.

M is an arm or bar projecting radially from the shaft, and having a slide M' moving upon it in the same radial direction, these parts having a length along the edge equal to that

of the seam to be closed. As shown in Fig. 1, these parts lie horizontally beneath the overlapping folds D D of the can body, but when these folds have been closed together, as previously described, the crank J is turned so as to raise the parts M M' into a vertical position beneath the seam of the can body. This is done by the action of the cam H operating through the fulcrumed lever N and the connecting rod O which unites the movable end of the lever with the crank J. When the parts M M' are in the vertical position, and in line beneath the interlocked edges of the seam, the pin I will have reached the point where it will act upon the bell crank lever P fulcrumed to the frame as shown at Q. The arm P' of this lever then acts against the foot of the sliding part M' and forces it upward, the part M serving as a guide upon which it slides. The part M' being thus forced upward acts as a hammer or press, and forces the interlocking edges which form the seam in the side of the can, firmly together, after which the parts are returned to their normal positions by the continued action of the rotary shafts by which they are operated, and the can is removed from the horn in any usual or well known manner, the operation continuing automatically so that can bodies are being formed continuously while the machine is in operation. The bar M^2 has in its end a spring-actuated lug M^2 which strikes the edge or wall of the outer fold D when the bar M' is turned up as shown in Fig. 4, and holds it against the edge or wall of the inner fold so as to hold the two folds locked tightly together. When the part M' is forced against the folds to form the seam, the lug partially recedes into the chamber in the part M' by reason of the yielding of the spring upon which it rests.

I have not here shown any of the preceding or succeeding details of the apparatus, as my invention is designed simply to close the seam which is formed upon the can body in any well known machine already in use.

Having thus described my invention, what I claim as new and desire to secure by Letters Patent is—

1. In a can body forming machine, the combination with a horn supporting the sheet metal can body, of a rotary shaft parallel with

the line of the side seam of the can body, and in the radial plane projected through the seam of the can body to the line of the shaft, a bar M projecting radially from said shaft, a second bar M' guided by and sliding radially upon the bar M, mechanism by which these bars may be turned so as to stand in the plane of the seam of the can body and a mechanism by which the movable portion is forced up so as to close and lock the full length of the seam at one motion, substantially as herein described.

2. In a can body forming machine, the combination with the horn supporting the sheet metal can body, of a shaft situated exterior to the can body, and in the radial plane passing through the seam of said body, the longitudinal bar M projecting radially from said shaft, a bar M' sliding upon and guided radially upon the first bar, a second shaft G carrying the cams H and I, the lever N and the connecting rod O by which motion is transmitted from the cam H to rotate the shaft J and move the bars M and M' into position, and the lever arm P P' whereby motion is

transmitted from the cam I to force the bar M' radially outward whereby the seam upon the side of the cam is closed and locked, substantially as herein described.

3. In a can body forming machine, the stationary horn, a spring actuated retractile stop F projecting therefrom against which the interlocking edges of the seam are closed, the rotatory oscillating bar M', and mechanism by which it receives a radial motion to close the seam after it is interlocked, and a spring actuated retractile lug M' projecting from the compressing face of the bar M', whereby the folds of the seam are closely interlocked against the stock, and retained while the pressure bar M' is forced against the seam, the lug yielding during the compression, substantially as herein described.

In witness whereof I have hereunto set my hand.

ROBERT D. HUME.

Witnesses:

S. H. NOURSE,
H. F. ASCHECK.