

(No Model.)

R. D. HUME.
CARRIER FOR CAN MAKING MACHINES.

No. 529,269.

Patented Nov. 13, 1894.

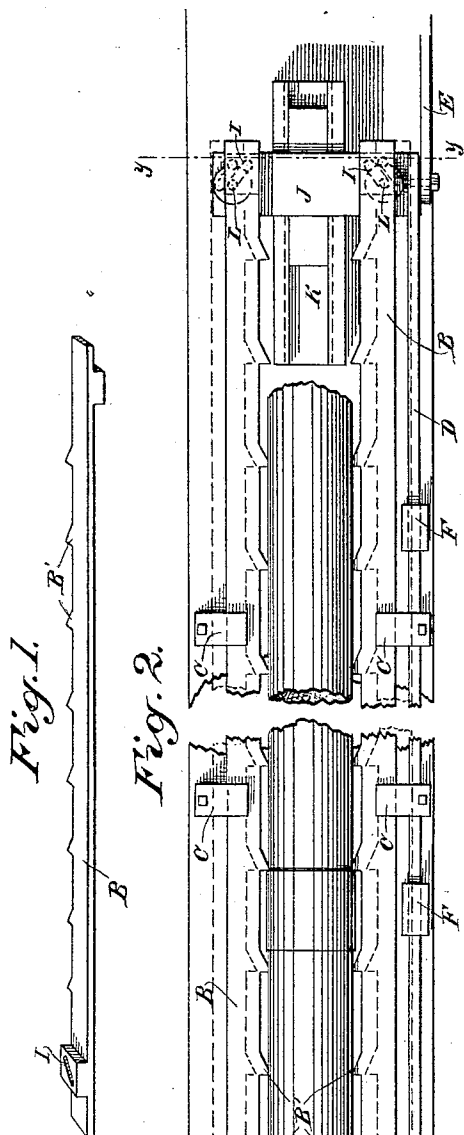


Fig. 1.

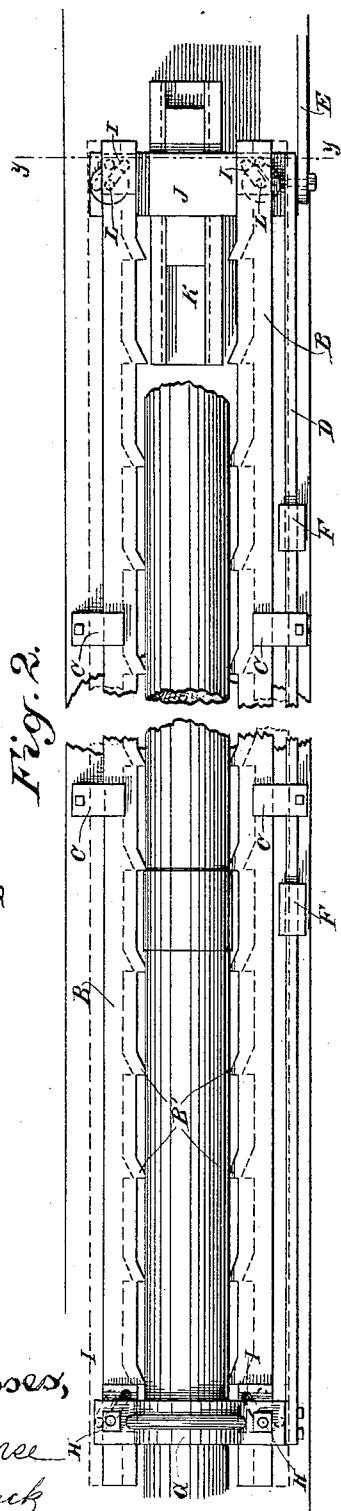


Fig. 2.

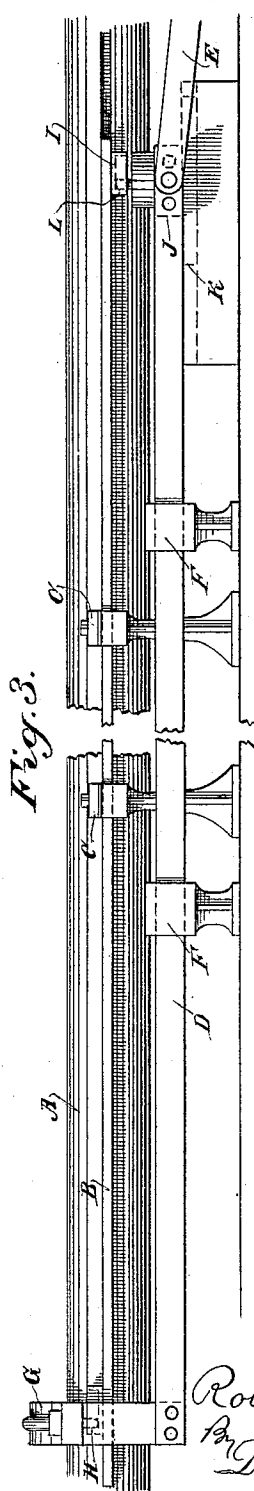


Fig. 3.

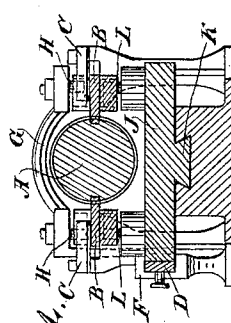


Fig. 4.c.

Witnesses,

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UNITED STATES PATENT OFFICE.

ROBERT D. HUME, OF GOLD BEACH, OREGON.

CARRIER FOR CAN-MAKING MACHINES.

SPECIFICATION forming part of Letters Patent No. 529,269, dated November 13, 1894.

Application filed July 30, 1894. Serial No. 513,985. (No model.)

To all whom it may concern:

Be it known that I, ROBERT D. HUME, a citizen of the United States, residing at Gold Beach, Curry county, State of Oregon, have invented an Improvement in Carriers for Can-Making Machines; and I hereby declare the following to be a full, clear, and exact description of the same.

My invention relates to a novel attachment for can making machines, which is adapted to move the can intermittently through the various stages and operations to which it is subjected in the process of forming.

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 perspective view of one of the carriers. Fig. 2 is a plan view of a part of the apparatus, showing the relationship of the carriers to the horn over which the cans pass. Fig. 3 is a side elevation of the same. Fig. 4 is a transverse section.

A is the horn which is of a shape suitable to allow the can body to pass over it and be moved along from one end toward the other. This horn may be polygonal or cylindrical, according to the form of the can to be made, and it may be adapted to various forms of mechanism which are employed for the shaping of the sheets of tin into the form of a can. This being foreign to my present invention I do not here enter into any detail of description of them, but confine myself merely to the carrier in its relation to the horn and the can body which may be advanced thereon. The can bodies are advanced along the horn by intermittent movements. These movements are effected by means of carriers B. These carriers consist of plates having projecting teeth or points B' along the edge which is adjacent to the horn over which the cans pass. These carriers B are movable in guides C which retain them in proper position vertically, but allow them a certain amount of movement horizontally. This movement is of two descriptions, first, a longitudinally reciprocating movement parallel with the horn, and a transverse movement to and from the horn. The longitudinal movement is effected by any suitable means, and acts when the teeth of the carriers are engaged with the rear edges

of the can bodies, to advance the latter along the horn. Then as the carriers are retracted, they are simultaneously moved outwardly away from the horn, so that as they return for the new stroke they are entirely clear of the cans upon the horn. The reciprocating movement is effected by a slide D driven by a pitman E from any suitable movable part of the machine, and traveling in guides F. Connected with one end of this slide bar D is a transverse yoke G arching over the horn A with sufficient space between to allow the cans to pass beneath the yoke; and connected with the opposite end of the bar D is a slide J having a dove-tailed tongue K fitting a corresponding channel in the bed-plate, so that the slide reciprocates with the sliding bar with which it is connected. The ends of the yoke have downwardly projecting pins H which are adapted to enter diagonal slots I made in the upper part of the carriers B, as plainly shown in Figs. 1 and 2.

Pins L project upwardly from the transverse bar J, or from posts or lugs which project upwardly from the bar on each side, and these pins enter diagonal slots made in the lower sides, at the opposite ends, and corresponding in their angle of inclination with those shown at I in Fig. 1.

The carriers B have flexible or frictional washers or plates fitted between them and the guides C in which they move so that they offer some resistance to their movement within these guides. The operation will then be as follows: The carriers B being at the rear end of their stroke, as soon as the reciprocating bar D commences to advance it moves the yoke G and the transverse slide J, both of which are connected with it, simultaneously. The action of the pins projecting into the diagonal slots will be, first, to cause the bars to approach each other by reason of the pressure of these pins and the frictional resistance of the guides which prevent the carriers from readily advancing. As soon as they have been drawn in, the points B' of the carriers will engage the rear edges of the cans upon the horn, and the continued advance of the bar D will then advance the yoke G and plate J with which the carriers are connected, so that they are advanced a distance equal to the length of a can or the desired amount of

advance for a stroke. As soon as the forward stroke is completed and the bar D commences to return, the action of the pins projecting into the diagonal slots in the carriers will first force the carriers outwardly, as shown in dotted lines in Fig. 2, after which the continued rearward movement of the bar D retracts the carriers to the position representing the commencement of the stroke. In this way the carriers are alternately forced in so that their teeth will engage the cans upon the horn, and moved forward to advance the can, after which the carriers are forced outwardly so as to be entirely clear of the cans, and are retracted to their original position, this continuing as long as the reciprocations of the machine are continued.

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

1. A carrier for can making machines, consisting of longitudinally reciprocating toothed plates or bars movable upon each side of the horn upon which the can bodies are to be advanced, mechanism by which said plates are alternately moved in transverse planes toward each other so that the teeth engage the can bodies to be advanced and then are moved forward to complete the stroke, then separated from each other so that the teeth are clear of the can bodies and returned to their first position.

2. A can making machine, carriers for advancing the can bodies, consisting of parallel toothed bars located upon each side of the horn upon which the can bodies are to be advanced, mechanism by which said bars are reciprocated longitudinally, and by which they are first caused to approach each other in transverse planes until the points of the teeth engage the can body, and longitudinal reciprocation is completed, the carriers then being separated and disengaged from the can body, and returned to the original position.

3. In a can making machine, horizontal

parallel toothed carriers movable upon each side of the horn upon which the can bodies are to be advanced, diagonal grooves or slots made in opposite ends of the carriers, transverse bars or yokes having pins engaging the diagonal slots at the opposite end of the carriers, and a longitudinally moving slide connected with the pin carrying bars or yokes whereby the latter are reciprocated and the carrier bars alternately caused to approach each other so that the points or teeth engage the can bodies upon the horn, advance the required distance along the horn, and then separate from each other to clear the can bodies and return to the original position.

4. The combination, with a horn upon which the can bodies are placed, of a means for advancing the can bodies thereon comprising a bar adapted to reciprocate upon each side of the horn, and a means for causing the bars to approach each other and engage the can bodies simultaneously with their reciprocation in one direction and to recede from each other and disengage the said bodies simultaneously with their reciprocation in the opposite direction.

5. In a can making machine having a horn upon which the can bodies are placed, a means for advancing the said can bodies comprising bars upon each side of the horn and adapted to reciprocate longitudinally in unison and a means whereby said reciprocating movement causes the bars to approach each other in one direction of reciprocation to engage and advance the can bodies, and to recede from each other and disengage the can bodies in the reverse direction of reciprocation.

In witness whereof I have hereunto set my hand.

ROBERT D. HUME.

Witnesses:

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