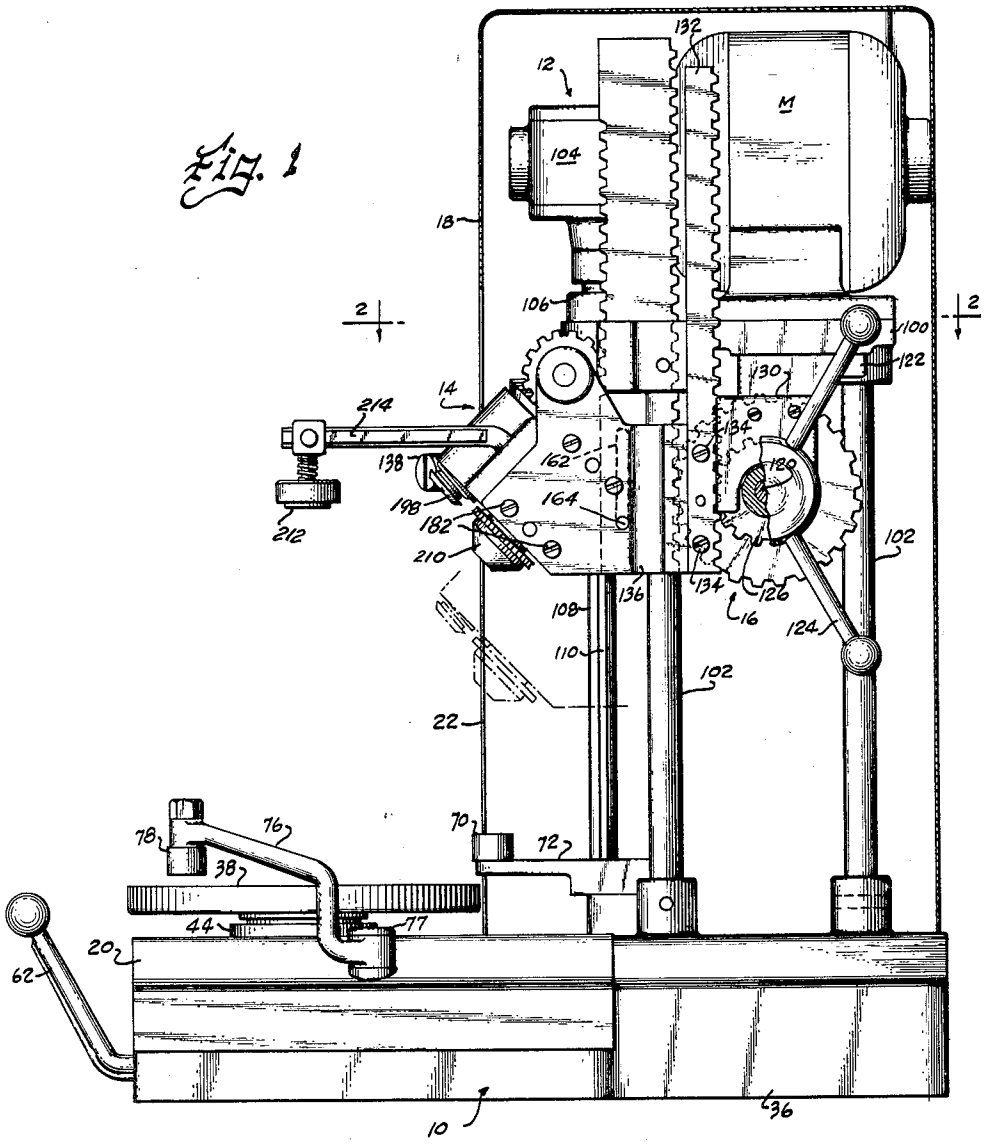
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POWER-DRIVEN CAN OPENER

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Fig. 1



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Fig. 2

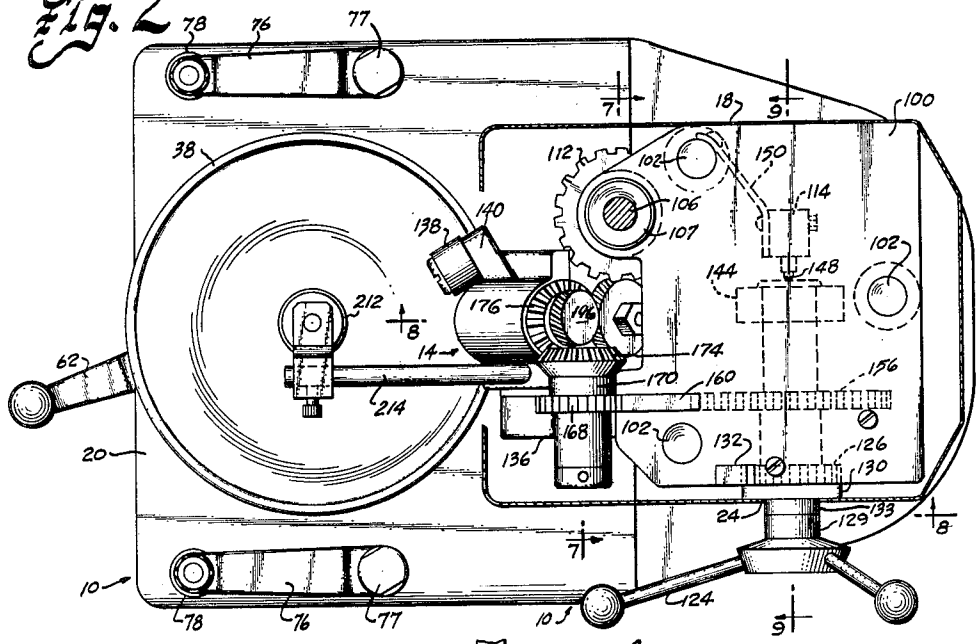
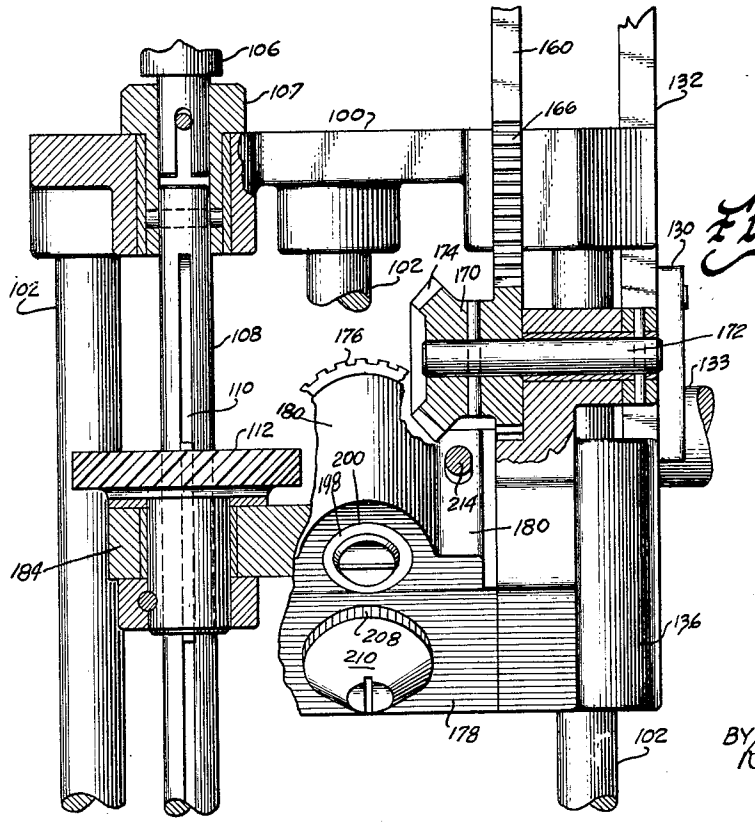


Fig. 7



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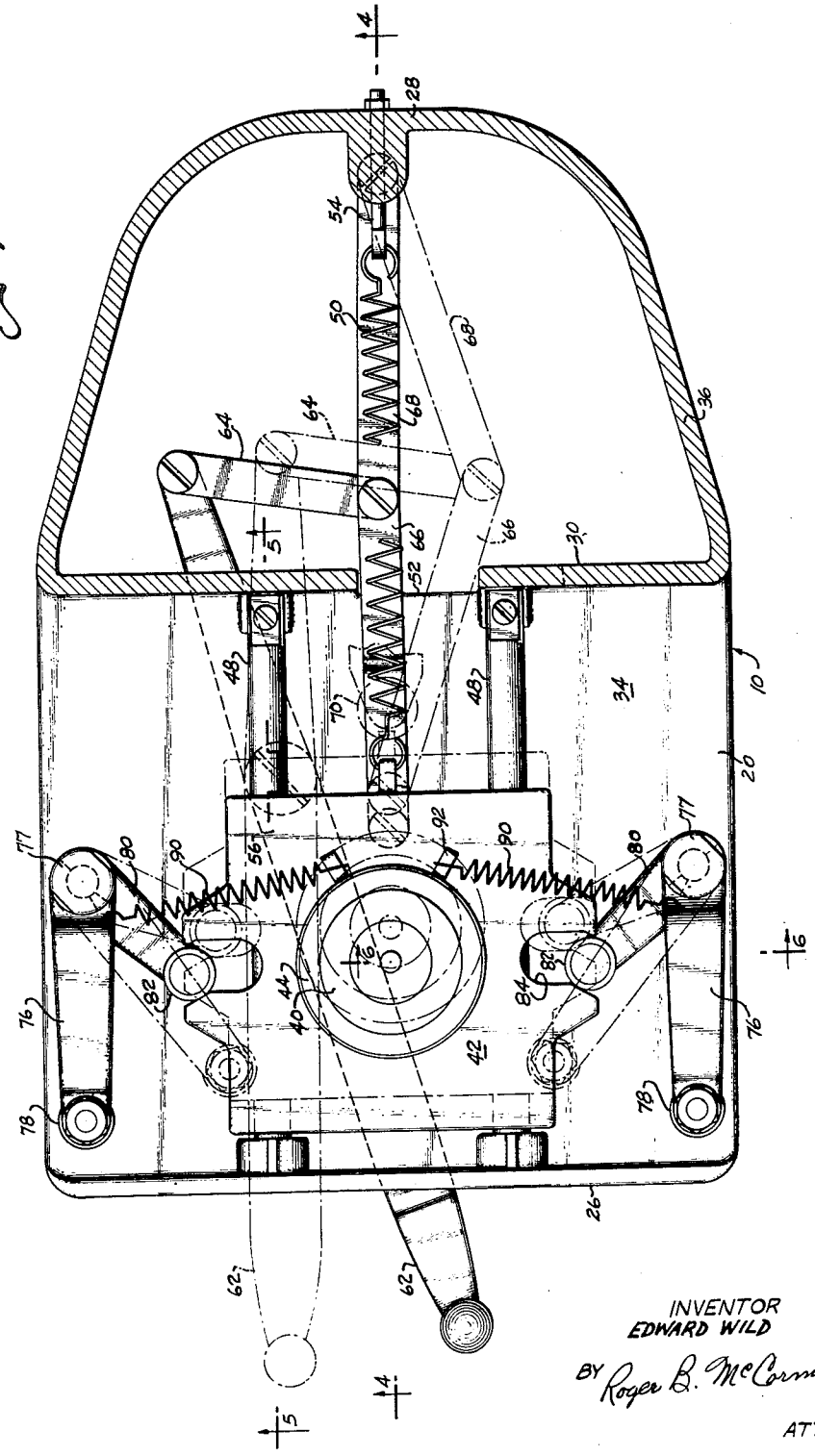
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Fig. 3



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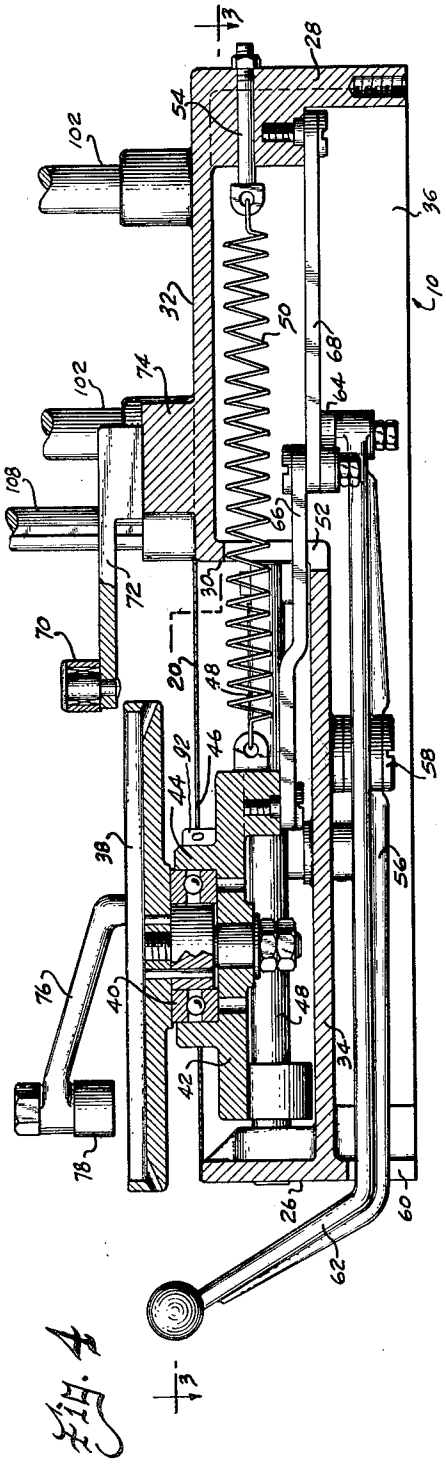


FIG. 4

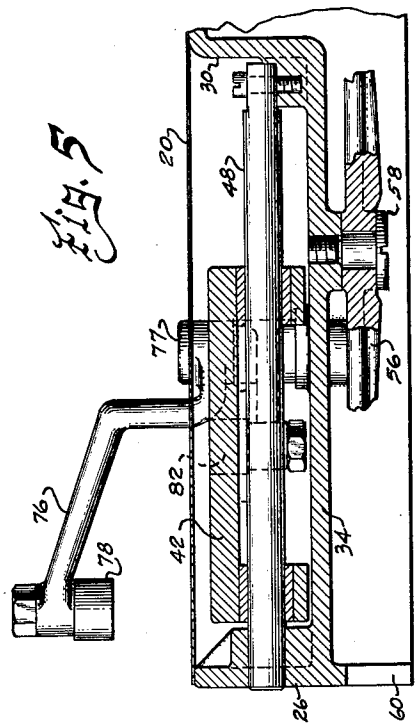


FIG. 5

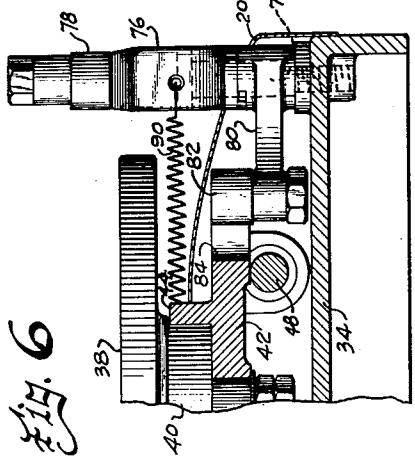


FIG. 6

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Fig. 8

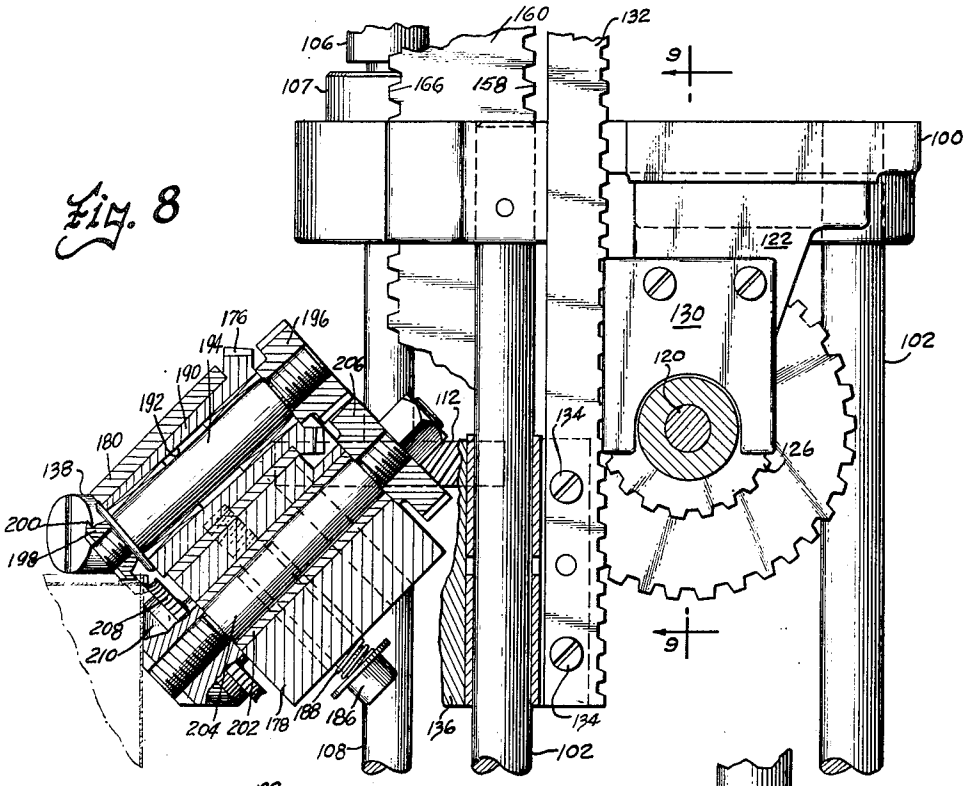
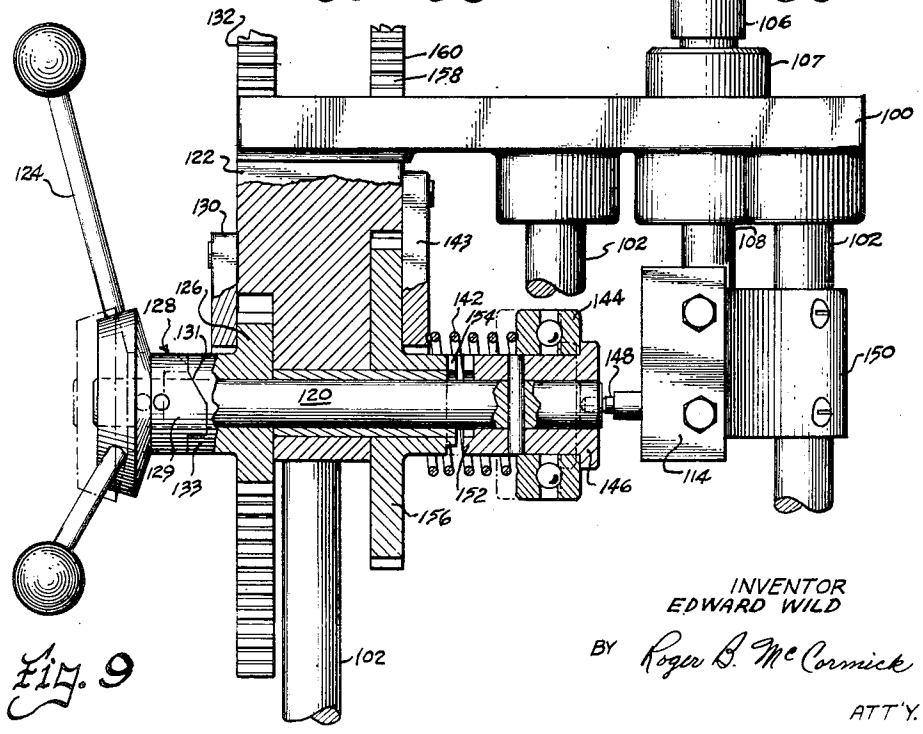


Fig. 9



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UNITED STATES PATENT OFFICE

2,677,175

POWER-DRIVEN CAN OPENER

Edward Wild, West Hartford, Conn., assignor, by mesne assignments, to H. H. Jaeger, Incorporated, Hartford, Conn., a corporation of Connecticut

Application September 17, 1952, Serial No. 309,964

5 Claims. (Cl. 30—4)

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This invention relates to a can opener and, more specifically, to improvements in can openers of the type adapted for heavy duty, automatic operation.

It is the general object of the invention to provide a sturdy and durable motor driven can opener which is particularly adapted for heavy duty use in opening cans of various sizes and which is capable of high speed operation.

Another object of the invention is to provide a can opener of the aforementioned type having means for engaging and holding a can while the same is being opened thereby relieving the operator of the tasks of positioning the can for opening and of holding the can while it is being opened.

A further object of the invention is to provide a can opening machine of the aforedescribed type which eliminates all but a few simple manual operations.

Other and more detailed objects and advantages will become apparent to those skilled in the art from the following description of the accompanying drawings which, by way of preferred example only, illustrate one specific embodiment of a can opener constructed in accordance with the present invention.

In the drawings:

Fig. 1 is a side elevational view of the can opener with parts shown in vertical section to illustrate details of construction;

Fig. 2 is a horizontal cross sectional view taken as indicated by the line 2—2 of Fig. 1;

Fig. 3 is a horizontal cross sectional view taken through the base of the machine as indicated by the line 3—3 of Fig. 4;

Fig. 4 is a vertical cross sectional view taken longitudinally of the base as indicated by the line 4—4 of Fig. 3;

Figs. 5 and 6 are fragmentary vertical cross sectional views taken through the base as indicated by the lines 5—5 and 6—6 of Fig. 3 to illustrate details of the cam engaging and supporting mechanism;

Figs. 7 and 8 are fragmentary views taken as indicated by the lines 7—7 and 8—8 of Fig. 2 to show details of the cutter mechanism; and

Fig. 9 is a fragmentary view taken as indicated by line 9—9 of Fig. 8 to show details of the cutter elevating mechanism.

With reference to Figs. 1 and 2, the can opener or can opening machine of the present invention may be described generally as comprising a base 10 having means for receiving and positioning a can to be opened and which supports in an elevated position a drive unit 12 including an electric motor M adapted to drive a cutter unit 14 which can be lowered and raised into and out of engagement with the top portion of the can by cutter elevating mechanism indicated generally by the reference numeral 16.

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Preferably, the base 10 is formed as a relatively wide heavy casting which will support the other elements of the machine and withstand operational vibration and movements without being secured to other support means. Although the machine can be constructed in any size desired, it is contemplated that a readily portable machine which can be placed upon a table or work bench will suit most needs, because, as will be shown hereinafter, such a machine can be used to remove the tops of cans of a wide variety of sizes.

It is also preferred that cover members 18 and 20 be provided to enclose the operating components of the machine as a safeguard for the operator. The cover member 18 encloses the drive unit 12 and the major portion of the cutter unit 14 and its elevating mechanism 16. A vertical slot 22 is provided in the front face of the cover 18 through which extend the can engaging elements of the cutter unit and a vertical slot 24 is provided in the right hand face of the cover 18 through which extends the drive shaft of the elevating mechanism. The cover member 20 encloses the base 10 forwardly of the cover member 18.

The can engaging and positioning mechanism

Attention is now directed to Figs. 3–6 which show in detail the construction of the base 10 and the can engaging and positioning mechanism. It will be noted that the base casting 10 has an open bottom, a front wall 26 and a rear wall 28. A transverse wall 30 is provided rearwardly of the midpoint between the front and rear walls and a top wall 32 joins the said transverse wall and the rear wall 28. The transverse wall 30 extends downwardly approximately half way to the bottom of the casting where it is joined to a false bottom 34 which extends to the front wall 26. As more particularly shown in Fig. 4, the aforementioned walls are enclosed by a skirt 36 and the cover member 20 is adapted to extend from the front wall 26 to the transverse wall 30 above and in spaced relation to the false bottom 34.

In accordance with the present invention, the can engaging and positioning means include a rotatable circular table 38 which is supported by an anti-friction bearing unit 40 upon a carriage 42. The carriage is slidably supported within the

base 10 adjacent and above the false bottom 34 and the carriage has an annular boss 44 projecting through a suitable slot 46 in the cover member 20 and receiving the bearing unit 40. The means slidably supporting the carriage comprise a pair of horizontally disposed cylindrical ways 48, 48 which extend longitudinally of the base 10 and are secured in suitable bosses adjacent the front wall 26 and the transverse wall 30 thereof. Accordingly, the carriage can be moved between the front wall and transverse wall of the base.

The means effecting rearward movement of the carriage comprises a spring 50 which extends longitudinally of the base 10 through a suitable aperture 52 in the transverse wall 30. The spring is connected at one end to the front of the carriage and at the other end to the rear wall 28 of the base. Preferably, an adjustable connecting pin 54 is utilized to connect the spring and rear wall so that the tension of the spring can be adjusted. As will be apparent from the drawings, the spring 50 urges the carriage 42 and table 38 rearwardly of the base in what may be referred to as feeding movement since it is by such movement that a can placed upon the table will be advanced toward operative position relative to the cutter unit 14.

A toggle mechanism is employed for moving the carriage forwardly of the base against the force of the spring 50 to a retracted position as shown in Fig. 3. The said toggle mechanism includes an operating lever 56 pivotally secured as at 58 to the underside of the false bottom 34. The forward end portion of the lever 56 projects through a suitable aperture 60 in the front wall 26 and provides a handle 62 positioned for convenient operation by an attendant. The rear end of the lever 56 is pivotally connected to one end of a link 64 which is pivotally connected at its other end to the inner ends of toggle linkages 66 and 68. The outer end of linkage 66 is pivotally secured to the carriage 42 and the outer end of linkage 68 is pivotally secured to the base 10 adjacent the rear wall thereof.

As shown in the full line position of Fig. 3, the operating lever engages the right hand end of the slot 60 so that the pivot between toggle linkages 66 and 68 is disposed slightly to the left of the center line of the spring 50 so that the table 38 and carriage 42 are held in the full line or retracted position. When the operating lever 56 is shifted by an attendant toward the broken line position, the toggle linkages are shifted into angular relation to the right of the spring center line thereby permitting the spring 50 to draw the table and carriage rearwardly in the feeding movement.

It will be readily understood that if the attendant places a can upon the table 38, the can will be carried rearwardly by the table during the aforedescribed feeding movement. Such movement of the can is limited by stop means comprising a roller 70 mounted for rotation about a vertical axis on the end of a forwardly extending arm 72 which is secured at its other end to a suitable boss 74 on the top wall 32 of the base. When the can engages the stop roller 70, its rearward edge will be located below the cutter mechanism 14 so that the cutter elements can be brought into engagement with the can to effect removal of the top thereof.

In further accord with the invention, a pair of arms 76, 76 are pivotally mounted on posts 77, 77 at opposite sides of the base 10 and arranged to swing inwardly toward engagement with the can during feeding movement of the table. The swinging end of each arm 76 carries a roller 78 rotatable about a vertical axis and engageable with the sides of the can. The means for pivoting the arms 76, 76 comprise a pair of actuating arms 80, 80 each of which is connected at one end to one of the posts 77 and by a lost motion connection to the end of one arm 76. The other end of each arm 80 mounts, on a vertical axis, a roller or cam follower 82 which rides within one of a pair of generally transverse slots 84, 84 located on opposite sides of the carriage 42.

It will be understood from Fig. 3 that as the carriage shifts rearwardly in the feeding movement, the actuating arms 80, 80 will be pivoted as the cam followers 82, 82 ride within the slots 84, 84. By means of the lost motion connection, the actuating arms 80, 80 cause the arms 76, 76 to swing inwardly so that the rollers 78, 78 carried thereby will engage a can supported on the table 38. Since the arms 76, 76 are symmetrically located on opposite sides of the base 10, when they engage a can placed on the table 38 they will center the can relative to the stop roller 70. More specifically, the arms 76, 76 will shift the can on the table to a position wherein the center of the can lies on the extended centerline of the stop arm 72 and the rollers 78, 78 will be equidistant from the stop roller 70. The aforedescribed can positioning arms 76, 76 will operate in the same manner to position cans of various sizes with respect to the stop means.

The positioning arms 76, 76 and their actuating arms 80, 80 also serve to locate the can with respect to the axis of rotation of the table. When the arms 76, 76 engage the can, the carriage is moving rearwardly. Rearward movement of the carriage is permitted to continue until the slack is taken up in the lost motion connection between the arms 76, 76 and 80, 80. When the slack is taken up, further movement of the carriage is prevented because the arms 80, 80 can no longer pivot and movement of the cam followers 82, 82 within the slots 84, 84 can not take place. Accordingly, sliding movement of the carriage 42 ceases with the axis of rotation of the platform 38 located in approximate coincidence with the center line of the can. Locating the can as described with respect to the axis of rotation of the table is a distinct operational advantage, since, as will be shown later, the can, during removal of the top, is rotated about its longitudinal axis and rotation of the supporting table 38 facilitates such movement of the can.

The arms 76, 76, as described, resiliently engage the can so that irregularities in the contour of the can may be accommodated as the can is turned in the top removal operation. To assure engagement of the arms with the sides of the can during such turning movement, a pair of springs 90, 90 are provided each of which is secured at one end to an arm 76 and at the other end to a lug 92 formed on the bearing boss 44. As will be apparent from Fig. 3, the springs 90, 90 urge the arms 76, 76 toward the can to assure engagement despite any slack in the lost motion connections.

The cutter unit and drive and the elevating mechanism

Having described the can engaging and positioning apparatus, attention is now directed to Figs. 1, 2 and 7–9 for a more complete understanding of the components utilized to cut and remove the top of a can.

As best shown in Fig. 1, the drive unit 12, including the motor M, is mounted upon a platform 100 supported in an elevated position on a plurality (3 shown) of posts 102 extending vertically from the top wall 32 of the base 10. Included in the cutter drive mechanism is a conventional transmission unit 104 which interconnects the motor shaft and a vertically disposed driven shaft 106 (Fig. 7). By means of a drive coupling 107 journaled in the platform 100, the driven shaft 106 turns the cutter drive shaft 108. The cutter drive shaft is provided with an elongated keyway 110 by means of which a spiral drive gear 112 is permitted to move vertically with respect to the drive shaft while being fixed for rotation therewith. Accordingly, the cutter unit 14 can be driven in any adjusted vertical position along the cutter drive shaft 108. However, the aforedescribed drive is operative only when a micro-switch 114 (Figs. 2 and 9) is closed, the said micro-switch being in the power circuit to the motor M. As will be shown hereinafter, the micro-switch is closed by the elevating mechanism after the cutter elements have operatively engaged a can.

The elevating mechanism which is utilized to adjust the vertical position of the cutter unit 14 is best shown in Figs. 7, 8 and 9. The said mechanism includes an operating or drive shaft 120 which is journaled in a bracket 122 depending from the platform 100, the shaft being horizontally disposed and projecting through the slot 24 in the side of the cover member 18. An operating handle 124 is fixed to the projecting end of said shaft so as to be readily accessible to an attendant. As will be apparent, turning of the handle 124 causes rotation of the shaft 120. When the handle is turned in a clockwise direction as viewed in Fig. 1, a gear 126, freely rotatable on the shaft 120, is engaged by clutch means 128 (Fig. 9) to turn the shaft 120. A retaining plate 130 locates the gear 126 on the shaft 120 adjacent the outer face of the bracket 122 and in engagement with a rack 132 movable vertically with the cutter unit 14. More specifically, the rack 132 is secured as by cap screws 134, 134 to a casting 136 which supports the cutter unit and which is vertically slidably mounted on the front, left-hand post 102. As will be understood from Figs. 1 and 8, counterclockwise turning movement of the handle 124 and the gear 126 will shift the rack 132 and thus the casting 136 and cutter unit 14 downwardly.

Downward movement of the cutter unit is limited by stop means engaging a can supported on the previously described table 38. The preferred stop means comprises a cam follower or roller 138 which is rotatably fixed on a horizontal axis to engage the top rim of a can positioned on the table 38. The roller is supported on an appendage 140 formed on a part of the cutter housing, so that when the roller engages the can, further downward movement of the cutter unit is thereby prevented. As will be shown later, at the limit of downward movement, the cutter elements are positioned for cutting engagement with the top of the can.

When downward movement of the cutter unit has been stopped, further turning of the handle effects disengagement of the clutch means 128 with the handle member 129 of the clutch riding up the inclined face 131 of the gear member 133 of the clutch. As the clutch means 128 is disengaged thereby disengaging the drive connection to the gear 126, the shaft 120 is drawn outwardly to the broken line position shown in Fig. 9 against the force of a coil spring 142. The spring 142 is disposed between a retainer plate 143 secured to the inner face of bracket 122 and an anti-friction bearing unit 144 supported adjacent the inner end of the shaft 120 on a coupling member 146 fixed to the said shaft. The said inner end of the shaft engages a spring biased switch actuating pin 148 included in the micro-switch 114 which is supported on bracket means 150 below the platform 100. When the shaft 120 is in normal position, i. e., when the clutch means 128 is engaged, the actuating pin 148 is held in open position and the drive motor M is not energized. When the shaft 120 is drawn outwardly, during disengagement of clutch means 128, the actuating pin 148 is biased outwardly to closed position thereby energizing the drive motor.

It will be noted in Fig. 9 that the coupling member 146 has a drive lug 152 engageable with a lug 154 defined on the hub of a gear 156 which is freely rotatable about the shaft 120. However, when the shaft 120 is withdrawn as described, the lugs 152 and 154 interengage so that the gear 156 will be driven and rotated by further counterclockwise rotation of the operating handle. Engagement and drive of gear 156 occurs when the clutch drive connection to gear 126 is disengaged and at the time the micro-switch 114 energizes the drive motor M.

The gear 156 is located on shaft 120 by retainer plate 143 adjacent the inner face of the bracket 122 so as to engage the teeth 158 along one edge of a vertically disposed rack 160. The rack 160 has a longitudinal slot 162 (Fig. 1) wherein rides a pin 164 carried by the casting 136 so as to be vertically movable with the cutter unit 14. The rack 160 is resiliently secured to the platform 100 as by spring means (not shown), but when the pin 164 engages the bottom of the slot 162, as when the cutter unit 14 is lowered, the rack 160 is shifted downwardly with the cutter unit. Downward movement of the rack 160 causes the gear 156 to be freely turned on the shaft 120, since, as explained above, such downward movement of the cutter unit and rack occurs before the gear 156 is drivingly interconnected to the shaft 120. Therefore, the pin 164 will be adjacent the bottom of the slot 162 when the cutter unit engages the top of a can and when the gear 156 is drivingly connected to the shaft 120.

Further counterclockwise rotation of the handle 124 cannot cause gear 126 to drive rack 132 downwardly because the can has been engaged and the clutch unit 128 will slip. However, such further rotation of the handle will cause gear 156 to drive rack 160 downwardly because gear 156 is now drivingly connected to the shaft 120.

Gear teeth 166 are provided on the longitudinal edge of rack 160 opposite the teeth 158 and engage teeth 168 on a compound gear 170 (Figs. 2 and 7) mounted on stub shaft 172 which is horizontally supported by bracket 136. The gear 170 also has a set of bevel teeth 174 engaging bevel gear teeth 176 formed on one operating member of the cutter unit 14 which will now be described in detail.

As previously mentioned, the cutter unit 14 is supported by the bracket 136 for vertical movements therewith. A lower casting 178 and an upper casting 180 journal the operating elements of the cutter unit. The lower casting 178 is secured to bracket 136 as by screws 182, 182 (Fig. 1) and is provided with an annular lateral ex-

tension 184 (Fig. 7) which carries the cutter drive gear 112 on cutter drive shaft 198 so that as the cutter unit 14 is shifted vertically with the bracket 136, the cutter drive gear will also be shifted along the said drive shaft. The upper member 180 is resiliently secured to the lower member 178 by a plurality of screws 186 which are countersunk in the under side of the member 178 and threaded upwardly into the member 180. For resiliency, a spring 188 embraces each screw 186 abutting the head thereof and the bottom of the countersink. The purpose of the resilient interconnection between the members 178 and 180 will be explained hereinafter.

Each of the members 178 and 180 have central bores which are parallel to each other and which are inclined rearwardly. The bore in the upper casting or housing 180 accommodates a bushing 190 having a generally longitudinal bore 192 which is angularly related to the longitudinal axis of the bushing. The bushing 190 extends upwardly and rearwardly from the member 180 and the bevel gear teeth 176, which as previously explained are engaged by the bevel teeth 174 on gear 170, are formed on the said extension of the bushing. The bore 192 in the bushing 190 accommodates a stub shaft or spindle 194 which extends beyond the ends of the bushing 190 and the housing 180. A spiral gear 196 is fixed to the extending upper end of the shaft 194 and a cutter element 198 having a beveled circular cutting edge 200 is secured to the extending lower end of the said shaft.

The bore in the lower casting or housing 178 accommodates a bushing 202 which receives a stub shaft or spindle 204 which extends beyond the ends of the bushing 202 and the housing. A spiral gear 206 is fixed to the upper extending end of the shaft 204 and is engaged by the spiral drive gear 112 and also engages and drives the spiral gear 196 fixed to the cutter shaft 194. At the lower extending end of shaft 204 a serrated drive wheel 208 is fixed so that the serrated periphery thereof will engage and turn a can placed upon the table 38 as shown in Fig. 8. The serrations engage the top portions of the side of the can to rotate the same when the shaft 204 is driven by the cutter drive gear. The wheel 208 is also provided with a tapered roller portion 210 which rolls along the side of the can during the cutting operation which will now be described.

When the cutter unit 14 has been lowered by the elevating mechanism 16 to effect engagement between the stop roller 138 and the top edge of a can placed upon the table 38, further counterclockwise movement of the operating handle 124 will effect, in the manner described, a driving connection between operating shaft 120 and gear 156. The gear 156 will lower rack 160 which drives compound gear 170. The bevel teeth on gear 170 engage the bevel teeth 176 on bushing 190 to rotate the said bushing in the casting 180. When the said bushing has been rotated 180° from the position shown in Fig. 3, the cutting element 198 will have been brought into the broken line position shown in Fig. 8 so as to pierce the top of the can. As previously explained, when the operating handle 124 is given the aforementioned further movement, the drive motor M is energized by the micro-switch 114 and spiral drive gear 112 is rotated. Drive gear 112 rotates spiral gear 206 and thus stub shaft 204 and the serrated wheel 208 to turn the can. Spiral gear 206 drives spiral gear 196 and thus rotates stub shaft 194 and the cutting element 198. The cutting element and serrated wheel will continue to turn the can and in the process, the top of the can is severed from the body thereof. As illustrated in Fig. 8, the top is severed closely adjacent the side of the can. It is expected that the upper edge or bead of many cans will vary in thickness and the thicker portions thereof might become wedged between the cutting element and serrated wheel. However, the previously described resilient interconnection between the lower and upper casting or housing members 178 and 180 permit separation of the cutting element and serrated wheel so that the anticipated thicker portions of the upper edge of the can will pass therethrough without disrupting the cutting operation.

It is also to be expected that the upper edge of the can will be deflected radially outwardly during the cutting operation so that the severed top might fall into the can and be difficult to retrieve. However, the present construction includes a magnet 212 carried on the end of an arm 214 above the top of the can and thus arranged to secure or "pick up" the severed top of the can. The magnet support arm 214 is fixed to the upper casting or housing member 180 so as to be movable with the cutter unit 14.

General operation

A brief description of the over all operation of the can opening machine will probably make for a better and more complete understanding of the invention.

Before attempting to sever the top from a can, an attendant should assure himself that the cutter unit 14 is in elevated position and that the operating handle 62 for the can engaging and positioning mechanism is in loading position i. e., against the right hand end of the slot 60 in the front wall of the base. Then the can to be opened is placed in an upright position on the table 38 and the operating handle shifted toward the left within the slot 60.

Shifting of the operating lever displaces the toogle linkages 66 and 68 so that the feed spring 66 will pull the carriage 42 and table 38 rearwardly. The can engaging arms 76, 76 are swung inwardly by such movement of the carriage to engage and position the can relative to the stop 70 for engagement by the cutter unit 14. The rotatable table 38 and carriage 42 will assume a position such that the axis of rotation of the table is aligned generally with the central longitudinal axis of the can.

Then the attendant lowers the cutter unit onto the can by rotating the operating handle 124 of the elevating mechanism in a counterclockwise direction as viewed by Fig. 1. When the stop roller or cam follower 138 engages the top of the can, additional downward movement of the cutter unit 14 is prevented. However, the attendant continues counterclockwise rotation of the operating handle to bring the cutter element 198 into operative relation with the can and to energize the cutter drive motor M. The top of the can is severed in the manner described above as the can is rotated by the cutter drive mechanism. The table 38 will rotate with the can on its anti-friction bearing unit 40.

When the top of the can has been completely severed, the attendant rotates the operating handle in the clockwise direction to effect disengagement of the cutter unit from the can. Initial clockwise rotation will effect a drive through gear 156 to elevate rack 160 which causes bushing 190 to rotate toward the position shown in Fig. 8.

When the said bushing has been rotated to the position shown, the clutch means 128 will engage thereby shifting the operating shaft 120 inwardly to open the micro-switch 114 and de-energize the drive motor M. Continued clockwise rotation of handle 124 effects a drive to rack 132 through gear 126 thus elevating the cutter unit 14. As the cutter unit is lifted, the magnet 212 lifts the top of the can.

Then the attendant shifts the operating lever for the can engaging mechanism to the right to disengage the can and to move the table forwardly of the base to the retracted or "loading" position. Upon removal of the severed lid from the magnet, the can opening machine is again ready for operation.

From the foregoing it will be readily understood that the machine requires little effort on the part of even the most unskilled attendant for efficient operation at high speeds and for heavy duty usage on cans which may vary broadly as to size.

It should also be understood that the illustrated and described embodiment is exemplary, although preferred, and that elements of structure can be substituted without departing from the scope of the invention as indicated by the claims which follow.

I claim:

1. In a can opening machine of the type having a base and a cutter unit including a cutting element supported above the base for engagement with a can, improvements in can positioning means comprising, a carriage supported by the base and movable therealong, means on said carriage for receiving a can in an upright position, means for moving said carriage between a loading position for receiving a can and an operating position wherein the cutting element is engageable with the can, can positioning arms adapted to engage the side of the can, and motion transmitting means for swinging said arms toward engagement with the can in response to movement of said carriage from loading position to operating position.

2. In a can opening machine of the type having a base and a cutter unit including a cutting element supported above the base for engagement with a can, improvements in can positioning means comprising, a carriage supported by the base and movable therealong, can support means rotatably mounted on said carriage and adapted to receive a can in an upright position, means for moving said carriage between a loading position and an operating position wherein the cutting element is engageable with the can, can positioning arms pivotally supported on the base and adapted to engage the side of the can, and motion transmitting means for swinging said arms into engagement with the can in response to movement of said carriage from loading position to operative position.

3. In a can opening machine of the type having a base and a cutter unit including a cutting element supported above the base for engagement with a can, improvements in can positioning means comprising, a carriage supported by the base and movable therealong, means for positioning said carriage in a loading position to receive a can in upright position, means for moving said carriage toward the cutter unit, stop means engageable with the can when the top thereof is engageable by the cutting element, can positioning arms adapted to engage the side of the can, and motion transmitting means for swinging said arms toward engagement with the can in respose to movement of said carriage toward the cutter unit.

4. In a can opening machine of the type having a base and a cutter unit including a cutting element supported above the base for engagement with a can, improvements in can positioning means, comprising, a carriage supported by the base and movable therealong, can support means rotatably mounted on said carriage and adapted to receive a can in an upright position, means for moving said carriage toward the cutter unit, stop means engageable with the side of the can when the top thereof is disposed for engagement by the cutting element, can positioning arms pivotally supported on the base and adapted to engage the side of the can in circumferentially spaced relation to said stop means whereby the longitudinal center line of the can will be aligned generally with the axis of rotation of said can support means, and motion transmitting means for swinging said arms into engagement with the can in response to movement of said carriage toward the cutter unit.

5. In a can opening machine of the type having a base and a cutter unit including a cutting element supported above the base for engagement with a can, improvements in can positioning means comprising, a carriage supported by the base and movable therealong, means urging said carriage toward the cutter unit, toggle means for retracting said carriage and retaining the same in a loading position, can support means rotatably mounted on said carriage and adapted to receive a can in upright position, stop means engageable with the side of the can when the top thereof is disposed for engagement by the cutting element, can positioning arms pivotally mounted on the base and adapted to engage the side of the can in equally circumferentially spaced relation to said stop means whereby the longitudinal center line of the can will be aligned generally with the axis of rotation of said can support means, and motion transmitting means engaging said carriage and said arms arranged to swing said arms into engagement with the can in response to movement of said carriage toward the cutter unit.

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