Aug. 15, 1961 R. J. SCOTT ET AL 2,995,818

POWER OPERATED CAN OPENER WITH AUTOMATIC SHUT-OFF

Filed April 11, 1960 3 Sheets-Sheet 1

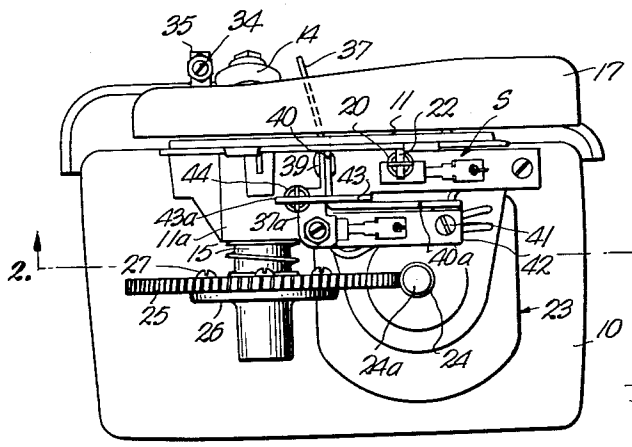


Fig. 1.

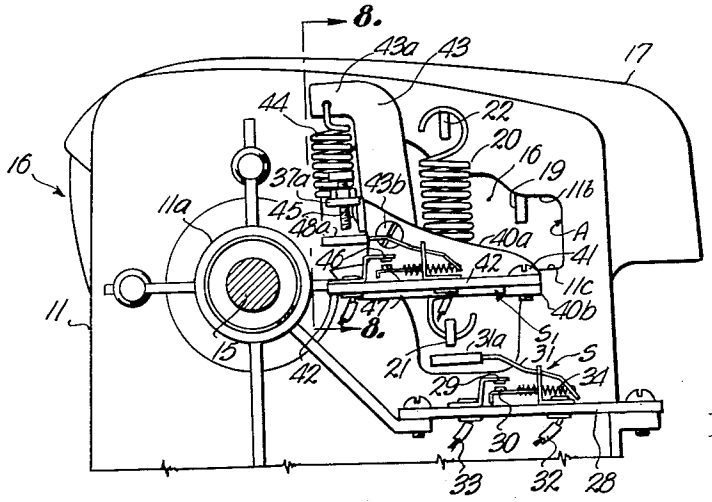


Fig. 2.

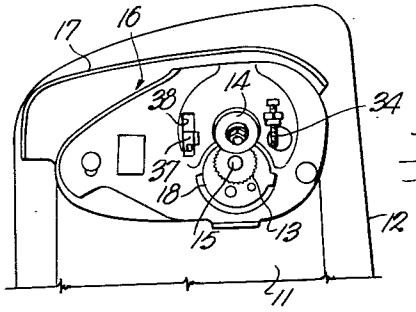


Fig. 3.

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POWER OPERATED CAN OPENER WITH AUTOMATIC SHUT-OFF

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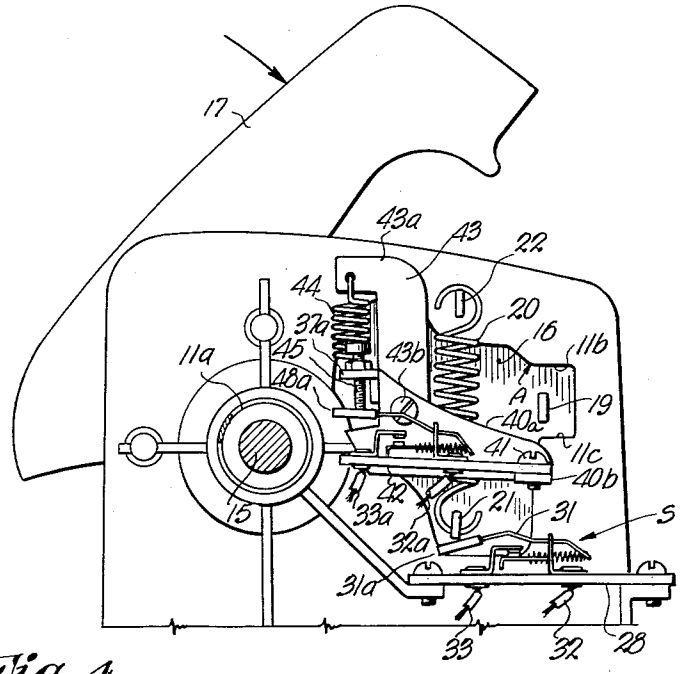


Fig. 4.

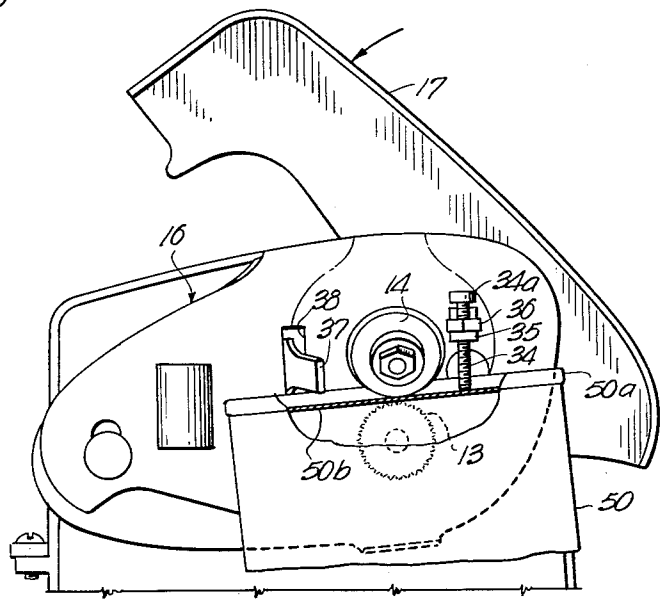


Fig. 5.

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POWER OPERATED CAN OPENER WITH AUTOMATIC SHUT-OFF

Filed April 11, 1960 3 Sheets-Sheet 3

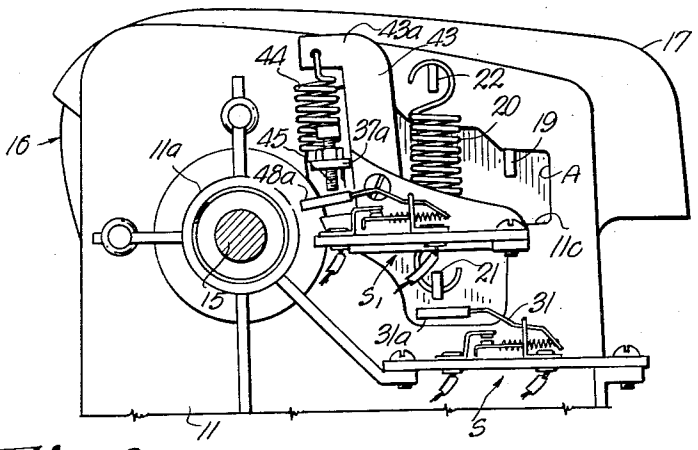


Fig. 6.

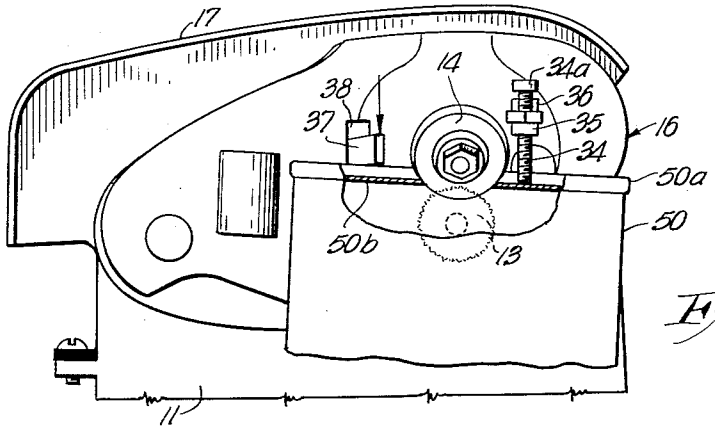


Fig. 7.

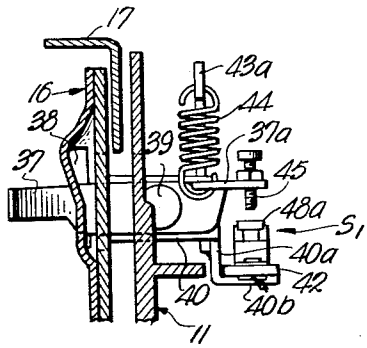


Fig. 8.

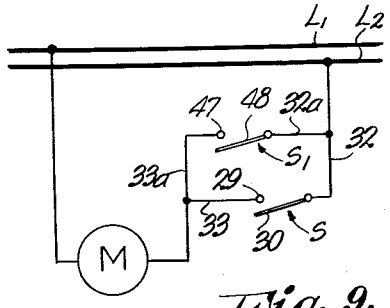


Fig. 9.

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United States Patent Office 2,995,818 Patented Aug. 15, 1961

2,995,818

POWER OPERATED CAN OPENER WITH AUTOMATIC SHUT-OFF

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Filed Apr. 11, 1960, Ser. No. 21,440
10 Claims. (Cl. 30—4)

This invention relates generally to electrically powered can openers and refers more particularly to improvements therein with respect to providing a can opener in which the electric drive means is automatically deenergized in response to and at the instant of complete severance of the can lid from the can body.

One of the principal objects of the present invention is to provide an electrically powered can opener of the character described in which once the can is in operating relationship with the cutting and feed mechanism, the electric drive is automatically maintained in the "on" condition until the end of the cut has been reached, that is, the lid completely severed from the can body, and in which the completion of severance of the lid results in the immediate stopping of the electric drive means without any activity being required on the part of the operator. It is a feature of our invention in this respect that the condition of the lid vis-a-vis the can body is continually sensed during the cutting operation by mechanism which is simple and sturdy, with the consequence that there is little chance of damage or accidental derangement of the parts during use.

Another important object of the invention is to provide an electrically powered can opener of the character described in which the setting of the control mechanism in operating condition is accomplished during the step of piercing the can lid with the cutting mechanism, thus to make necessary but one manual operating member.

In our invention the can body itself is utilized to achieve certain of the operating relationships necessary to achieving automatic control over the power means and this has made possible the provision of a structure which, considering the end attained, is of extreme simplicity and low in manufacturing costs.

Still another important object of the invention is to provide structure for use in combination with a power operated can opener of the lever type generally disclosed in the Aberer et al. Patent Number 2,902,757 issued September 8, 1959, to provide an automatically controlled cutting operation in which control is effected through sensing the condition of the can lid during the cutting operation. It is a feature of the invention in this respect that our present structure can be incorporated in can openers of the type disclosed in the aforementioned patent without interfering with the cutting mechanism or power drive therefor, thus leaving the can opener prepared for manual control in the event of failure or malfunction of the automatic control system.

A further object of the invention is to provide structure which is capable of being combined with a can opener of the type disclosed in the aforementioned Aberer et al. patent and is operable to maintain continuous sensing of the condition of the can lid without requiring any change in the basic can cutting and feeding structure disclosed in said patent.

Other and further objects of the invention together with the features of novelty appurtenant thereto will appear in the course of the following description.

In the accompanying drawings which are to be read in conjunction with the instant specification and in which like reference numerals indicate like parts in the various views;

FIG. 1 is a top plan view of a can opener embodying our invention, the casing having been removed to expose the internal structure;

FIG. 2 is an enlarged fragmentary view taken generally along the line 2—2 of FIG. 1 in the direction of the arrows;

FIG. 3 is a fragmentary view, on a reduced scale, showing the upper portion of the can opener with the outer casing in place;

FIG. 4 is a view similar to FIG. 2 but showing the manual hand lever in the position it occupies immediately prior to piercing of the lid;

FIG. 5 is a front view of the upper portion of the can opener with the parts in the positions of FIG. 4 and showing a can body in working relationship with the unit;

FIG. 6 is a view similar to FIG. 4 but showing the hand lever and other parts in the condition which obtains after the lid has been pierced and while the motor is driving the feed wheel to advance the can through the feeding and cutting mechanism;

FIG. 7 is a front view of the can opener in the condition corresponding to FIG. 6, showing the can in the orientation it assumes while cutting of the lid is taking place;

FIG. 8 is an enlarged sectional view taken generally along the line 8—8 of FIG. 2 in the direction of the arrows; and

FIG. 9 is a diagram illustrating the relationship between the motor switches in the unit.

Referring now to the drawings, in order to simplify the disclosure of the instant application and to prevent unnecessary repetition of known structure, the invention is shown and will be described as embodied in an electrically powered can opener having the construction disclosed in the aforementioned Patent 2,902,757. All of the details of the basic can opener structure and operating mechanism are described in full in that patent and will not be repeated here except as necessary to clarify the relationship with the improvements and elements herein set forth. In particular, we have made no effort to show the details of the motor and associated gear connection through to the feed wheel except as appears in FIG. 1.

Generally speaking, the over-all can opener unit includes a base **10** from the forward edge of which rises an essentially vertical face plate and support structure **11** which serves the purpose of supporting at its upper end the operating mechanism of the can opener. In the commercial unit a hollow, generally three-sided casing **12** (see FIG. 3) houses the various operating parts of the drive and control mechanism. For reasons of simplicity in description this housing has been shown only in FIG. 3, being absent from the remaining figures.

As may be determined in greater detail from the aforementioned patent, the basic operating mechanism of the can opener unit includes a rotary feed wheel **13** with which cooperates a cutter wheel **14**. The feed wheel is secured to a drive shaft **15** which is supported for rotation about a fixed axis extending horizontally with respect to the face plate **11**, being journaled by the latter in a housing **11***a* which projects from the rear side of the face plate. While the feed wheel is mounted for rotation about a fixed axis, the cutter wheel is carried by a plate structure **16** which is operable in response to manipulation of a hand lever **17** to separate the cutter wheel from the feed wheel to permit insertion of a can rim therebetween, and to again bring the two together so as to pierce the can lid. The position of the hand lever **17** and plate structure **16** illustrated in FIGS. 1–3, inclusive, and 6 and 7, is that which obtains after the lid has been pierced, that is, with the cutter wheel in overlapping rela-

tionship with the feed wheel. FIGS. 4 and 5 illustrate other positions of the hand lever in which the cutter wheel is raised above the feed wheel.

As again may be seen from the Aberer et al. patent, movement of the hand lever results in movement of the plate structure **16** in a fashion to raise and lower the cutter wheel with respect to the feed wheel. The plate is coupled with the hand lever through an eccentric cam arrangement, one element of which is seen at **18.** The cam is keyed to the hand lever **17** and acts as a crank arm for moving the main body of the plate about the feed wheel axis between the raised and lowered positions for the cutter wheel.

During manipulation of the hand lever **17** the left-hand end of the plate structure **16** (as viewed in FIG. 3) is retained against upward movement, although it does have slight horizontal linear motion due to the eccentric cam coupling between the plate structure and the hand lever. This is due to the fact that the plate structure **16** is provided with a rearwardly extending lug **19** which extends through a large aperture A formed in the face plate **11.** (See FIG. 2). The aperture A is provided with a horizontal upper edge **11***b* and spaced therebelow a lower shelf portion **11***c*. Normally the upper surface of lug **19** is maintained in sliding engagement with edge **11***b* by a tension spring **20** which is connected at its lower end with a second lug **21** extending rearwardly from and secured to plate **16**, and at its upper end with a fixed lug **22** extending rearwardly from the face plate above the aperture. As is evident, lug **21** is positioned in the open area of the aperture A so as to be free to move up and down without striking any interfering structure on the face plate.

As is also disclosed in the aforementioned patent, plate structure **16** and hand lever **17**, when in the closed position illustrated in FIGS. 1–3, inclusive, are coupled to operate as a unit capable of limited rotary displacement in a clockwise direction (FIG. 2) about the axis of the feed wheel. In other words, if hand lever **17** is pressed downwardly at its outer end when the parts are in the relative position illustrated in FIGS. 1–3, inclusive, both the hand lever and plate **16** are caused to rotate about the shaft **15** a limited distance in the direction of pressure. The extent of movement is limited by lug **19**, the lug striking the lower edge **11***c* and preventing rotation past this point.

Rotation of the plate structure **16** relative the feed wheel shaft when the hand lever is separated from the plate (as in FIGS. 4 and 5) can also be occasioned, this occurring when the can lid is inserted between the cutter wheel and feed wheel. In this condition, when a pressure is applied to the hand lever the can lid serves to transmit the thrust supplied to the hand lever and transforms it into a moment tending to turn the plate about the shaft **15.** More will be said of this later.

The left-hand end of the plate structure **16** (as viewed in FIG. 3), of course, is biased toward and normally maintained in the position illustrated in FIGS. 2 and 3 by the tension spring **20** as previously described. The aperture A is large enough to accommodate the necessary movement of the lug **19**, and thus plate structure **16**, about the shaft **15** upon depression of the hand lever.

The driving power for the can opener is supplied through the medium of an electric motor **23** (FIG. 1). The motor is vertically oriented on the base **10** and has a driveshaft terminating in a worm **24***a*. The worm drivingly engages the teeth of a gear **25** secured to the horizontal feed wheel shaft **15**. Preferably the gear **25** is constructed of nylon or other tough plastic. It is secured to shaft **15** by means of a flanged collar **26** press fitted onto the end of the shaft, one face of the gear body being secured to the collar by screws **27.**

To control the motor by means of the hand lever **17** there is provided a snap acting switch S which is mounted by suitable supporting structure on an insulating base **28** disposed on the rear side of the face plate **11** and below the aperture A. As best seen in FIG. **2**, switch S includes a fixed contact **29** and the movable contact **30**, the latter of which is normally spaced from the fixed contact. The switch may be of the conventional over-center type illustrated, having the operating arm **31** terminating in the depressor portion **31***a* at its free end. As will be evident, the portion **31***a* is positioned in the downward path of lug **21** so that the contacts will be closed when the latter lug is displaced downwardly by limited movement of the plate structure **16** from its normal position against the force of the spring **20.**

It will be understood from FIG. 9 that the switch S is interposed in series in the motor electrical circuit, the leads **32** and **33** being connected with the respective contacts **29** and **30** and leading from power line L_2 through the motor to line L_1. The switch operating arm **31** is continually biased upwardly by switch spring **34** so that when downward pressure is removed from the portion **31***a*, the arm will return to its original position and cause contact **30** to disengage from the fixed contact and cause the motor to stop. The arm is so arranged with the movable contact that the initial increment of downward movement of the arm causes closing of the contact. By the same token, reopening of the contacts does not occur until the arm is near the upper end of its movement.

It may help in obtaining a clear understanding of the invention to realize that all of the features and elements of the can opener thus far described are disclosed in the Aberer et al. patent referred to above and that such details of construction as are not herein specifically set forth can be gained from that patent. Thus far we have set forth a manually controlled power operated can opener in which the operation of the motor is made responsive solely to the application and release of external pressure to and from the hand lever by an individual, the period of operation depending on how long the pressure is kept on the hand lever. The present invention is designed to supplement this arrangement with means for automatically maintaining the motor energized following starting, even though no further pressure is applied to the hand lever, and to cause the motor to stop after the can lid has been completely severed from the can body.

To accomplish the purposes of our invention we have provided on the front of the plate structure **16** and adjacent the cutter wheel **14** a vertically oriented pressure element **34.** Conveniently, this element may consist of a machine screw having head **34***a* and which is threaded through a suitably tapped aperture in a carrier bracket **35** secured to and extending forwardly from the plate structure. A lock nut **36** may also be threaded on the screw to permit locking of the tip of the screw in various elevations.

The spacing of the pressure element **34** forwardly of the plate structure **16** is such that when a can flange is properly engaged between the cutter wheel **14** and feed wheel **13**, the lower end of the pressure element will be located inside the can rim and in a position to engage the lid of the can inside the line of cut as the plate structure **16** is moved downwardly to bring the cutter wheel **14** into cutting relationship with the feed wheel **13.** More will be said of this later. The pressure element is located on that side of the cutter wheel from which the uncut portion of the can lid advances into the cutting mechanism. Since the feed wheel in the illustrated embodiment turns counterclockwise, as viewed in FIGS. 3, 5 and 7, the pressure element **34** is to the right of the cutter wheel when viewed from the front. As the level of the lower end of the pressure element depends to some extent on the location of other parts of the apparatus, discussion of this will be taken up subsequently.

Located on the opposite side of the cutter wheel **14** from pressure element **34** is a forwardly projecting arm **37.** Arm **37** extends through a vertically elongated aperture **38** which permits limited upward movement of the

arm from the normal position illustrated in FIGS. 3 and 8. The arm **37** is pivotally supported by a horizontally disposed pin **39** to a rearwardly extending bracket **40** having one end rigidly secured to and extending rearwardly from the plate structure **16**. It will be understood that arm **37** and bracket **40** extend to the rear side of the plate structure **11** through the enlarged aperture A earlier described. This aperture is so formed as to accommodate these elements and permit their untrammeled movement with the plate structure **16** during certain phases of the operation.

The rearward end of bracket **40** is provided with a portion **40***a* turned parallel with plate structure **16** and having at its lower edge a horizontal shelf or ear **40***b* to which is secured, as by screw **41**, an insulating base **42** for a second switch S_1, more of which will be said later. Rigidly affixed to portion **40***a* as by screw **43***b* and extending vertically thereabove is an inverted L-shaped bracket **43** which terminates in the horizontal leg **43***a*. The hook-like upper end of a tension spring **44** is coupled with leg **43***a* through the medium of a suitable aperture in the latter. The lower end of spring **44**, also formed as a hook portion, is coupled with a lateral flange **37***a* forming a part of and extending sidewise from the arm **37** on the rearward side of its pivot pin **39**. An adjustable screw **45** is threaded through the flange **37***a* with the tip of the screw below the flange. As will be seen, screw **45** serves to operate switch S_1 in response to displacement of arm **37** about its pivot pin **39**.

The switch S_1 is connected in parallel with switch S by leads **32***a* and **33***a* (FIG. 9) and is normally open. It is constructed identically with switch S, having the fixed contact **46** and movable contact **47**. The operating arm **48** of the switch terminates in the depressor portion **48***a* which underlies and is disposed in the path of the tip of screw **45**. The relationship between the tip of the screw and the switch depressor portion **48***a* is such that any appreciable lifting of the forward end of arm **37** (that portion ahead of the plate structure **16**) results in downward displacement of the switch operating arm **48** and closing of the contacts **46** and **47**.

The relationship established between the forwardly projecting portion of the arm **37** and the pressure element **34** will perhaps be clearer if at this point some preliminary description of the manner of operation of the can opener is given.

As will be clear from the disclosure of the Aberer et al. Patent 2,902,757, to which reference has earlier been made, the can opener is prepared for the reception of an unopened can by lifting the left-hand end of the lever **17** (as viewed in FIG. 3), thus causing the hand lever to rotate clockwise about the feed wheel shaft **15**. Through the eccentric coupling between the hand lever and plate structure **16**, that portion of the plate structure carrying the cutter wheel **14** is shifted upwardly to separate the cutter wheel from the feed wheel **13** sufficiently to permit insertion therebetween of the flange and adjacent lid portion of a can. While holding the can in this position with one hand, the hand lever is moved back toward its original position until the lid is firmly engaged by the periphery of cutter wheel **14** with the feed wheel underlying and bearing against the bead of the flange. The general relationship between the hand lever **17**, plate structure **16**, cutter wheel **14** and feed wheel **13** at this juncture is illustrated in FIGS. 4 and 5, although as will now be explained, the operation has been carried one step further in FIGS. 4 and 5. The can body is indicated at **50**, the flange at **50***a* and the lid at **50***b*.

In order to force the cutter wheel on through the lid **50***b* of the can, additional pressure is applied to the hand lever **17** in the direction of the arrow. Sufficient pressure is applied to overcome the resistance of spring **20** to downward movement of the plate structure so that the plate structure is pivoted along with the hand lever, causing lug **19** to disengage from edge **11***b* and move downward-

ly toward edge **11***c*. The tension in spring **20** is ordinarily insufficient to hold the plate structure against the turning moment imposed thereon by the engagement of the cutter wheel **14** with the can lid. As the plate structure moves downwardly, the lug **21** on the plate structure engages and depresses the switch operating arm **31** to close contacts **29** and **30** and start the motor. As explained in the aforementioned Aberer et al. patent, the starting of the motor assists in piercing of the lid.

FIGS. 4 and 5 illustrate the condition of the unit at the instant that the motor is started but before piercing of the can lid has been completed. In this condition, arm **37** remains in the normal position to which it is biased by its tension spring **44** and the pressure element **34** may lightly engage the lid of the can. It will be noted that the can axis is slightly inclined from the vertical.

As the motor starts the operator continues to hold the closing or piercing pressure on the hand lever **17** and the combination of the rotation of the feed wheel and hand applied pressure causes the cutter wheel to pierce the can lid and move into overlapping relationship with the feed wheel. As the cutter wheel moves through the lid the hand lever approaches and comes into its aligned or closed position relative to the plate structure **16**. Ordinarily the tension spring **20** will, once the lid is pierced, serve to again raise the end of plate structure **16** back to the FIG. 2 position. In other words, once piercing of the can lid has taken place and the hand lever has reached the closed position of FIG. 3, the pressure on the hand lever can be removed. As will be seen, however, despite the release of the hand lever and the return of plate structure **16** to its upper position as limited by lug **19** with the consequent removal of depressing pressure from the switch arm **31**, the motor will continue to operate. The reason for this is that as the hand lever is completely closed against the plate structure, and as the cutter wheel **14** moves through the can lid to overlap the feed wheel **13**, the arm **37** is forced upwardly by the can flange **50***a* and causes switch S_1 to close.

The manner in which switch S_1 is closed may be perhaps best understood by referring to FIGS. 6 and 7, which show the condition of the can opener when the hand lever has been closed against the plate structure and the lid has been completely pierced by the cutter wheel. As the plate structure moves from the FIG. 5 to the FIG. 7 position the arm **37** is engaged by the flange of the can and is restrained while the plate structure continues to move downwardly. The pressure element **34** engages the lid of the can to prevent tilting of the can under the influence of arm **37**. It will be evident, therefore, that the can has the analogous effect of lifting the outer end of the arm **37**, causing the arm to pivot about its pin **39** and depress the screw **45** into engagement with the switch operating member **48** of switch S_1. As the hand lever **17** is completely closed, the outer portion of arm **37** is displaced upwardly sufficient distance to result in closing of the contacts **46** and **47** of switch S_1. Switch S_1 therefore takes over from switch S to maintain the circuit to the motor closed, and to continue the operation despite removal of pressure from the hand lever **17**.

The reaction established between the can lid **50***b* and pressure element **34** continues arm **37** up in switch closing position until the can has completed a full revolution about its own axis. As the can completes the revolution, the cut between the lid and can body becomes complete, thus severing all portions of the lid from the flange **50***a*. As this occurs, the pressure element **34** no longer exerts any holding force on the can body which permits arm **37** to descend under the influence of its spring **44** accompanied by a return of the can body to an essentially vertical position. As the arm **37** returns to its normal position, pressure exerted by screw **45** on the switch depressor **48***a* is removed, permitting the depressor to return to its normal position and opening contacts **46** and **47**. Power to the motor is thus cut off and rotation of the feed wheel

13 is thereby halted. To remove the can body from the unit it is necessary only to lift hand lever 17 sufficiently to disengage the cutter wheel from the feed wheel.

It will be apparent that if any malfunction occurs in switch S_1, the unit is still capable of normal manual power control through the medium of hand lever 17 and switch S. Thus, our unit is not disabled by failure in the automatic shut-off mechanism and can continue to be used until it is convenient to effect repairs to the automatic shut-off.

From the foregoing it will be seen that this invention is one well adapted to attain all of the ends and objects hereinabove set forth together with other advantages which are obvious and which are inherent to the structure.

It will be understood that certain features and subcombinations are of utility and may be employed without reference to other features and subcombinations. This is contemplated by and is within the scope of the claims.

As many possible embodiments may be made of the invention without departing from the scope thereof, it is to be understood that all matter herein set forth or shown in the accompanying drawings is to be interpreted as illustrative and not in a limiting sense.

Having thus described our invention, we claim:

1. In a power operated can opener for severing a can lid from a can body and arranged to automatically cease operation in response to completion of the severing of the lid, the combination of can cutting means operable to pierce the lid at one point adjacent the rim thereof, said means including a feed wheel drivingly engaging the can body, an electrically powered motor drivingly connected with said feed wheel for rotating same to advance the can lid through said cutting means whereby to turn the can about its own axis and progressively sever the lid from the can body adjacent the rim thereof, a resiliently biased movable control element slidably engaging the can body when the can lid is pierced and arranged to continually apply a force on the can body tending to tilt the can body from a selected orientation, a relatively fixed pressure element slidably engaging the can lid and arranged to resist tilting of the can under the influence of said control element so long as a portion of the lid remains connected with the can body, and switch means for the motor operatively connected with said control element and operable to cause said motor to stop in response to the tilting of the can body from said selected orientation and consequent displacement of said control element which occurs at the moment said lid is completely severed from the can.

2. In a power operated can opener for severing a can lid from a can body having a flange circumscribing and projecting above the lid and arranged to automatically cease operation in response to completion of the severing of the lid, the combination of can cutting means operable to pierce the lid at one point adjacent the flange, said means including a feed wheel drivingly engaging the can body, an electrically powered motor drivingly connected with said feed wheel for rotating same to advance the can lid through said cutting means whereby to turn the can about its own axis and progressively sever the lid from the can body adjacent the rim thereof, a resiliently biased, movable control element having a portion thereof overlying the flange and slidably engaging said flange to one side of the feed wheel axis and arranged to continually apply a downward force on said flange tending to tilt the can body from a selected orientation, a relatively fixed pressure element slidably engaging the can lid at a point spaced from and on the other side of said feed wheel axis whereby to resist tilting of the can body from said selected orientation under the influence of said control element so long as a portion of the lid remains connected with said can body, and switch means for the motor operatively connected with said control element and operable to cause said motor to stop in response to the tilting of the can body from said selected orientation and consequent displacement of said control element which occurs at the moment said lid is completely severed from the can.

3. In a power operated can opener for severing a can lid from a can body and arranged to automatically cease operation in response to completion of the severing of the lid, the combination of a feed wheel drivingly engaging the can body and mounted for rotation about a fixed axis, an electric motor drivingly connected with said feed wheel for rotating same thereby to advance the can body with respect to the feed wheel, an electric circuit for said motor, a cutter adapted to cooperate with said feed wheel, a shiftable carrier member for said cutter operable to move said cutter toward and away from said feed wheel between non-cutting and cutting positions with respect thereto, a resiliently biased control element mounted on said carrier member to one side of said feed wheel axis and overlying the can body, a fixed pressure element also mounted on the carrier member, but on the opposite side of the feed wheel axis from said control element, said fixed pressure element having a portion adapted to engage the can lid as the carrier member is shifted toward the cutting position for the cutter and hold said can body in a selected orientation wherein the can body will engage and deflect said control element to a deflected position, and switch means in said motor circuit operatively connected with said control element and operable to close said circuit when the control element is in said deflected position and to open same upon return of the control element from the deflected position, said pressure element being arranged so as to permit return of the control element and concurrent tilting of the can thereby from said selected orientation in response to the complete severance of the lid from the can body.

4. The combination as in claim 3 wherein said control element is pivotally connected with said carrier member, the pivot axis being remote from said portion.

5. The combination as in claim 3 wherein said switch means is normally open and includes a resiliently biased operating member positioned in the path of said control element.

6. The combination as in claim 3 including a manually controllable circuit for said motor operable to power the motor independently of said first named circuit.

7. In a power operated can opener for severing a can lid from a can body having a flange circumscribing and projecting above the lid, said can opener arranged to automatically cease operation in response to completion of the severing of the lid, the combination of a feed wheel drivingly engaging the can body and mounted for rotation about a fixed axis, an electric motor drivingly connected with said feed wheel for rotating same to advance the can body with respect to said feed wheel, an electric circuit for said motor, a cutter adapted to cooperate with said feed wheel, a shiftable carrier member for said cutter operable to move said cutter toward and away from said feed wheel between non-cutting and cutting positions with respect thereto, a resiliently biased movable control element mounted on said carrier member, said control element having a portion thereof positioned to overlie said flange to one side of the feed wheel axis, a pressure element fixedly secured to said carrier member and having a lid engaging portion located to the other side of said feed wheel axis and operable to engage said lid and limit said can body against tilting toward said pressure element as the carrier is shifted to the cutting position for the cutter whereby to cause said flange to engage and deflect said control element, said pressure element operable to resist tilting of the can body through the influence of said deflected control element so long as a portion of the lid remains connected with said body, switch means in said motor circuit operatively connected with said control element and arranged therewith so as to close said circuit when the control element is deflected and to open said circuit upon return of the control element from the deflected position as the lid is completely

severed from the can and the force exerted on the can body by contact of the pressure element with the lid is removed.

8. The combination as in claim 7 wherein said switch means is normally open and includes a resiliently biased operating member positioned in the path of said control element for engagement thereby in response to deflection of the control element.

9. The combination as in claim 7 including a manually controllable circuit for said motor operable to power the motor independently of said first named circuit.

10. The combination as in claim 7 wherein said control element is pivotally connected with said carrier member, the pivot axis being remote from the point of engagement of the control arm with the can flange.

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