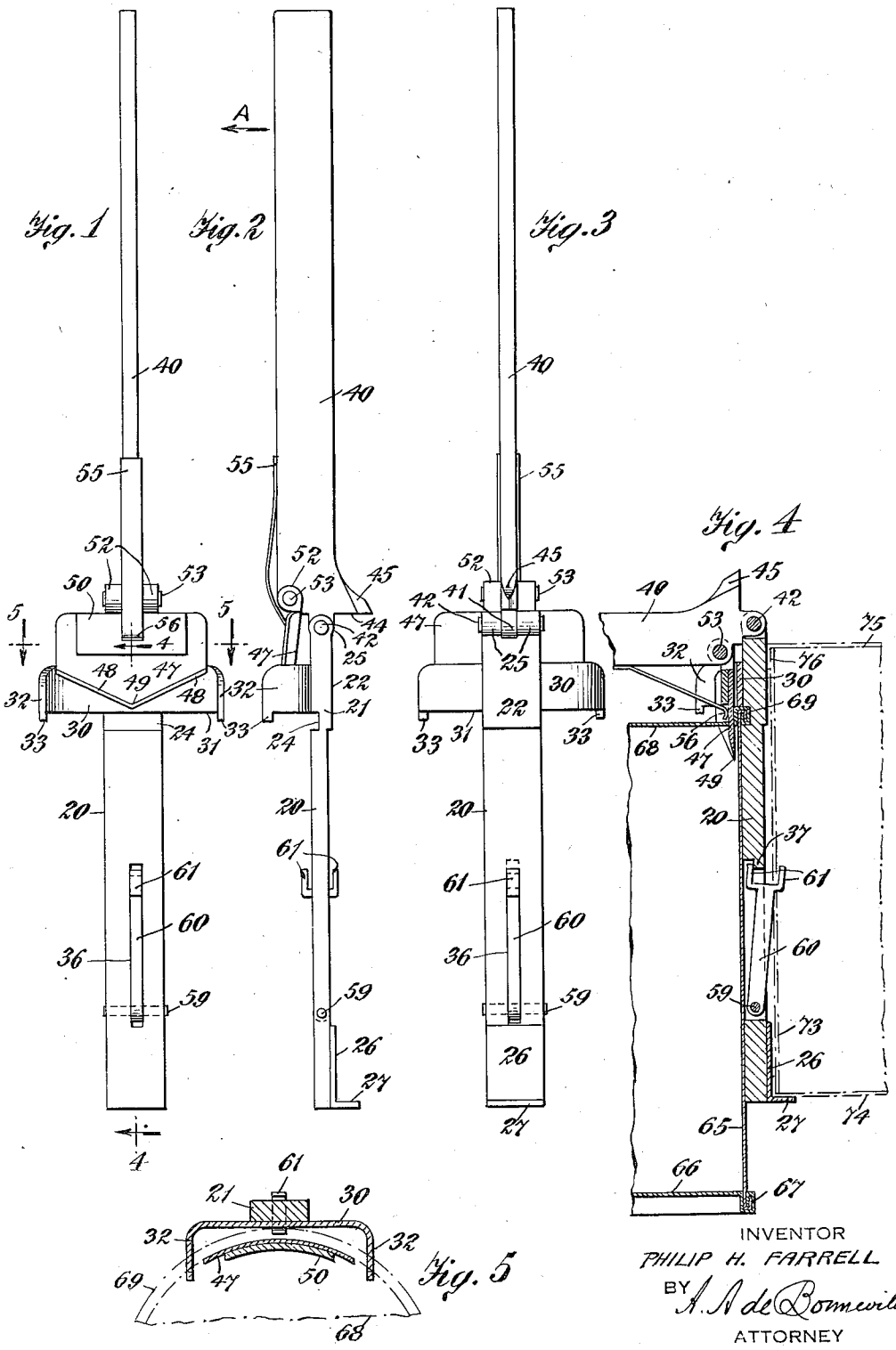
May 14, 1935. P. H. FARRELL 2,001,303

CAN OPENER

Filed May 11, 1933 2 Sheets-Sheet 1



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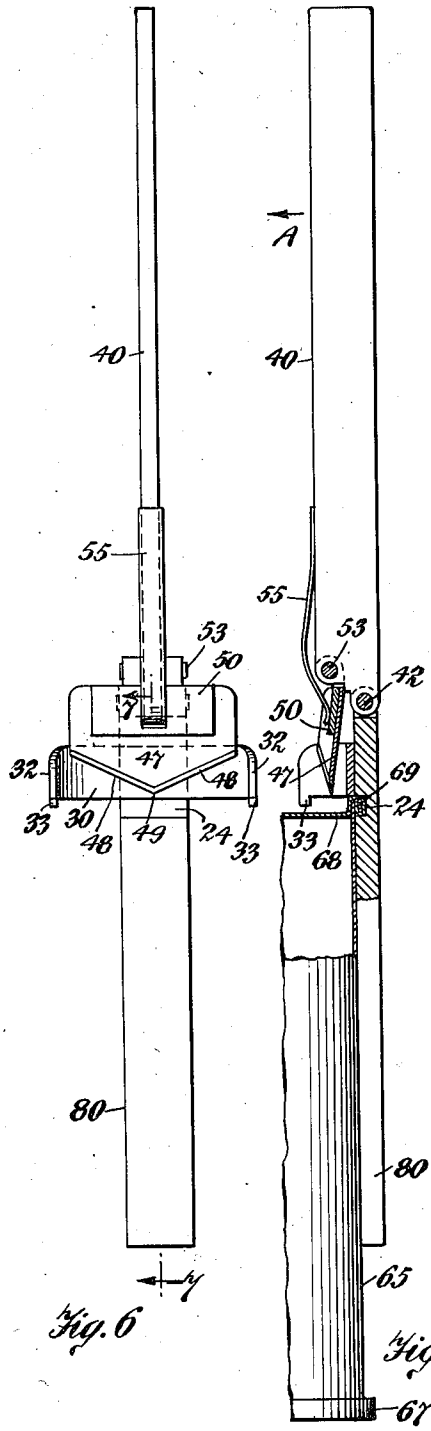

Fig. 6

Fig. 7

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CAN OPENER

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4 Claims. (Cl. 30—3)

This invention relates to a can opener.

The object of the invention is the production of a can opener, with which the covers of cans of different diameters and depths can be easily cut or severed therefrom, without leaving any burs or rough edges on the cans.

In the accompanying drawings Fig. 1 represents a front elevation of an exemplification of the can opener in its open or extended position; Fig. 2 shows a right hand side view of Fig. 2; Fig. 3 indicates a rear view of Fig. 1; Fig. 4 represents a partial side view and section as on the line 4, 4 of Fig. 1 with the can opener in its closed position with a fragmentary portion of a can in sectional elevation and a fragmentary portion of a can in dotted lines; Fig. 5 shows a section of Fig. 1 on the line 5, 5 and the top view of a can in dotted lines; Fig. 6 represents a front elevation similar to Fig. 1 with a modification and Fig. 7 shows a partial right hand view and section of Fig. 6 as on the line 7, 7 and a fragmentary elevation of a can partly in vertical section.

Referring to Figs. 1 to 5 the can opener is indicated in this instance, to comprise the lower supporting arm having the body portion 20 which at its upper end has integral therewith the head 21, with the projecting portion 22. A notch 24 is indicated in the front face of the lower portion of the head 21, and ears 25 are integral with the upper portion of said head. A supporting heel 26 having the horizontal supporting flange 27 is fastened to the outer face of the body portion 20. To the inner face of the head 21 is fastened the supporting bracket 30 having the lower edge 31, and the side walls 32. The walls 32 have integral therewith locking heels 33.

In the body portion 20 of the supporting arm is indicated an elongated opening 36, and at the upper end of said opening 36 there is indicated the shouldered portion or rabbet 37 integral with said body portion 20. The operating lever of the can opener is designated in its entirety by the numeral 40, which at its lower end has projecting therefrom the lug 41. The latter is pivoted to the ears 25, by means of the pivot 42. The lower face 44 of the lever 40 is at right angles to its longitudinal axis and a cutter 45 is integral with the lower end of the lever 40. A curved knife blade 47 is indicated having the tapered cuttting edges 48 at its lower end. The latter meet in the piercing point 49. A reinforcing member 50 is secured to the inner face of the knife blade 47, and it is to be noted that it could be integral with the blade. At the upper end of the knife blade 47 are indicated the ears 52. The latter are pivoted to the operating lever 40 by means of the pivot 53. A plate spring 55 is shown with the curved lower end 56. The upper end of the spring 55 is fastened to the inner edge of the lever 40, and its curved lower end 56 in this instance bears against the inner face of the curved knife blade 47.

In the opening 36 of the supporting arm having the body portion 20 is pivoted by means of the pivot 59, the supplemental supporting arm 60, having an upper forked end with the members 61. The arm 60 can be positioned with one of the members 61 of its forked end bearing against one of the faces of the rabbet 37, as indicated in Fig. 4 or with its other member 61 bearing against the other face of said rabbet 37.

A can, see Figs. 4 and 5 is shown with the cylindrical wall 65, the bottom wall 66 with the bottom circumferential seam 67, and the top wall or cover 68 with the circumferential seam 69. A second and smaller can is indicated with the cylindrical wall 73, the bottom wall 74 and the top wall or cover 75 with its flange 76. To use the can opener described and shown in Figs. 1 to 5, if a large can as shown with the cylindrical wall 65, is to be opened, its upper circumferential seam 69 is positioned into the notch 24, and the outer face of its wall 65 is brought to bear against the inner face of the body portion 20 of the lower supporting arm and held in place. At the same time the lower edge 31 of the supporting bracket 30 is positioned to bear on the top face of the seam 69 and the locking heels 33 are brought to bear against the inner face of the seam 69. In this instance one of the members 61 of the supplemental supporting arm 60 is forced against the rabbet 37 to clear the said arm 60 from the wall 65 of the can. The user now swings the operating lever 40 in the direction of the arrow A, Fig. 2, and the piercing point 49 of the curved knife blade 47 is positioned at the circumferential edge of the cover 68 adjacent to its seam 69. The curved lower end 56 of the spring 55 positions the knife blade 47 in proper operative position.

The lever 40 is swung in the direction of the said arrow until it assumes a horizontal position as indicated in Fig. 4, when the knife blade 47 will have pierced the cover 68 of the can and be positioned in a vertical plane. The operating lever 40 is then swung in a direction opposite the arrow A, Fig. 2, by which the knife blade 47 will be withdrawn from the can. The user then moves the can opener a short distance on the circumferential seam 69 and repeats the steps described until the cover 68 is completely cut from the cir-

cumferential wall **65**. It will be noted that the cut in the cover **68** is made at its outer circumferential edge adjacent to the seam **69** and therefore no burs or rough edges are left protruding from the seam **69**.

It will be noted the diameter of the outer face of the knife blade **47** is made equal to the diameter of the inner face of the seam **69** of the smallest can to be operated upon, and which will permit cans of larger diameters to be operated upon.

If a can as indicated in dotted lines in Fig. 4 is to have openings pierced in its top wall **75**, the bottom wall **74** is supported upon the supporting flange **27** of the heel **26**, and the flange **76** is brought to bear against the projecting portion **22**. The supplemental supporting arm **60** is positioned to locate one of the members **61** of its forked end against the outer face of the rabbet **37**. The operator then swings the operating lever **40** in a direction opposite to the arrow A, Fig. 2 and the cutter **45** will cut an opening in the cover **75** of the can. The user then moves the can opener to another position on the can and a second opening is cut in the cover as desired.

If a very small can is to have its cover cut therefrom the supplemental supporting arm **60** is swung to a position opposite to that shown in Fig. 4, and the bottom of the can is supported on the member **61**, protruding from the supporting arm having the body portion **20**. The upper seam of the small can may be positioned in the notch **24**, and the cover is cut as described for the can having the cylindrical wall **65**.

Referring to Figs. 6 and 7 the invention is modified by not including the cutter **45**, and the supplemental supporting arm **60**.

In this modification the can opener is indicated with the lower supporting arm having the body portion **80** with its notch **24**. To the upper portion of the body portion **80** is fastened the supporting bracket **30** with its side walls **32** and locking heels **33**. The operating lever is again indicated at **40**, which is pivoted to the supporting arm **80**, by means of the pivot **42**. The curved knife blade is again indicated at **47** with its tapered cutting edges **48** and piercing point **49**. The reinforcing member for the knife blade is again indicated at **50**. The said knife blade **47** is again pivoted to the operating lever **40** by means of the pivot **53**. The plate spring for knife blade is again indicated at **55**. The can is again shown with the cylindrical wall **65**, the bottom circumferential seam **67**, and the top wall or cover **68** with its seam **69**. The cover **68** is cut by swinging the operating level **40** in the direction of the arrow A, Fig. 7 and the same steps are taken as already described. In this modification the lever **40** is not provided with any cutter **45**.

It will be noted that when the can having the cylindrical wall **63** is operated upon, that its circumferential seam **69** is positioned in the notch **24**, which with the supporting bracket **30** locks the can in place, and prevents it rising or lowering when the knife blade **47** rises or lowers. The said can may be of different diameters and depths.

Various modifications may be made in the invention and the present exemplification is to be taken as illustrative and not limitative thereof.

Having described my invention what I claim is:

1. In a can opener the combination of a supporting arm, said arm having a notch in its front face at the upper end thereof, a supporting bracket fastened to the front face of said arm above said notch, locking heels depending from said bracket, an operative lever pivoted to the upper end of said supporting arm and a knife blade pivoted to the lower end of said operating lever, said supporting arm adapted to support a can with its upper seam positioned in said notch, and the lower edge of the said supporting bracket bearing on the upper face of the seam of the can and the said locking heels positioned opposite the inner face of said seam.

2. In a can opener the combination of a supporting arm having a notch in its front face at the upper end thereof, a supporting bracket fastened to the front face of said arm above said notch, an operating lever pivoted to the upper end of said supporting arm, a knife blade pivoted to the lower end of said operating lever and a spring having one end thereof fastened to said operating lever and its other end bearing on the inner face of said knife blade.

3. In a can opener the combination of a supporting arm having an elongated opening therein, a rabbet formed with said supporting arm at the upper end of its elongated opening, a supplemental supporting arm positioned in the said elongated opening of said supporting arm and its lower end pivoted thereto, an upper forked end comprising a pair of members integral with said supplemental supporting arm, an operating lever pivoted to the upper end of said supporting arm and a knife blade pivoted to the lower end of said operating lever, said supplemental supporting arm adapted to be positioned with one of the members of its forked end bearing against said rabbet and its other member adapted to support a can.

4. In a can opener the combination of a lower supporting arm, a head integral with said supporting arm having a projecting portion at the rear face of said arm and having a notch in its front face, said supporting arm having an elongated opening, a rabbet integral with said supporting arm at the upper end of its elongated opening, a supplemental supporting arm positioned in said opening, and pivoted to said arm, an upper forked end for the supplemental supporting arm comprising a pair of members adapted to coact with the opposite sides of said rabbet, a supporting bracket fastened to the inner face of said supporting arm, locking heels depending from said bracket, an operating lever having its lower end pivoted to the upper end of said supporting arm, a curved knife blade pivoted to the lower end of said operating lever at the front face thereof and a spring having one end thereof fastened to inner face of the operating lever and its other end bearing on said curved knife blade.

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