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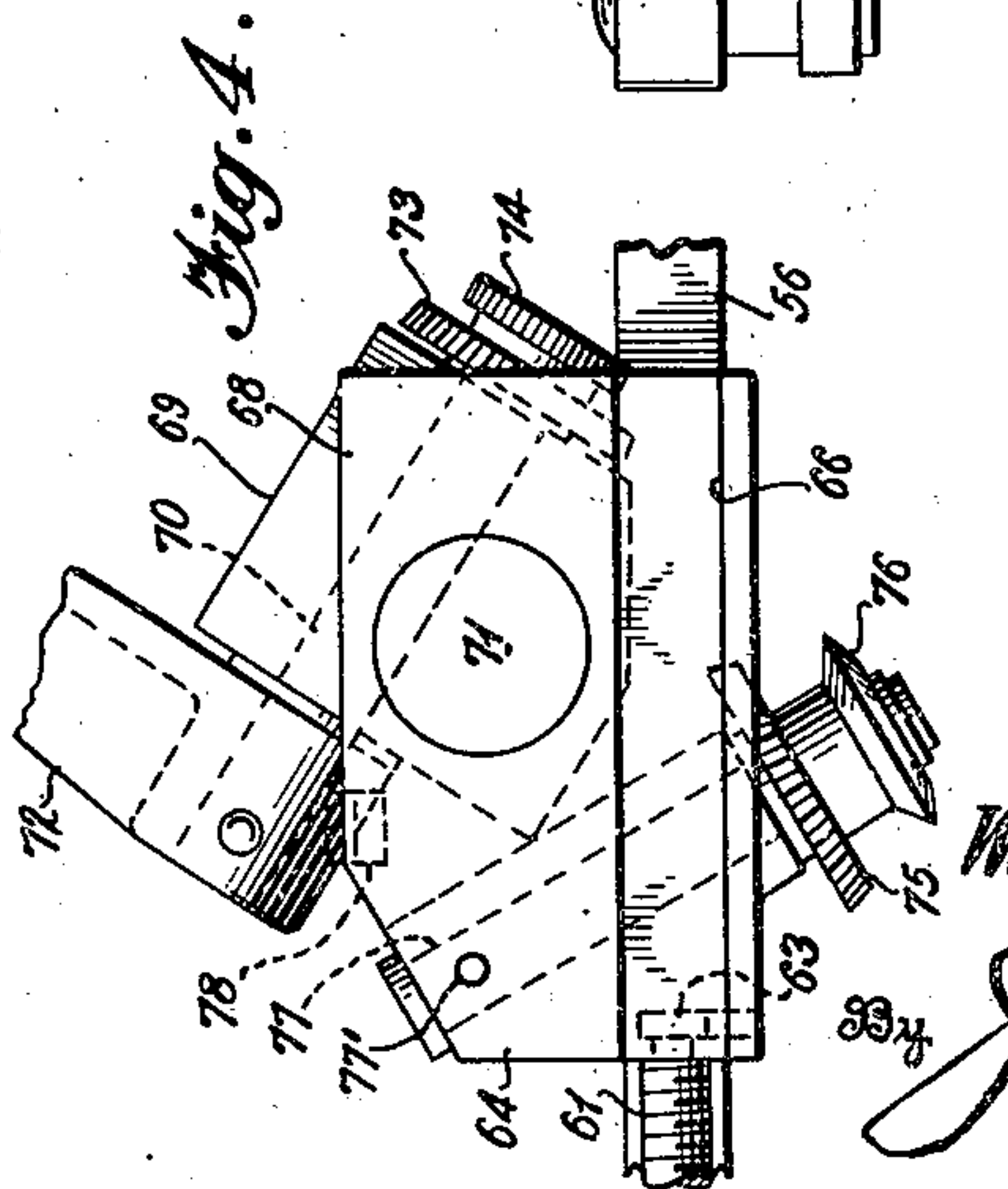
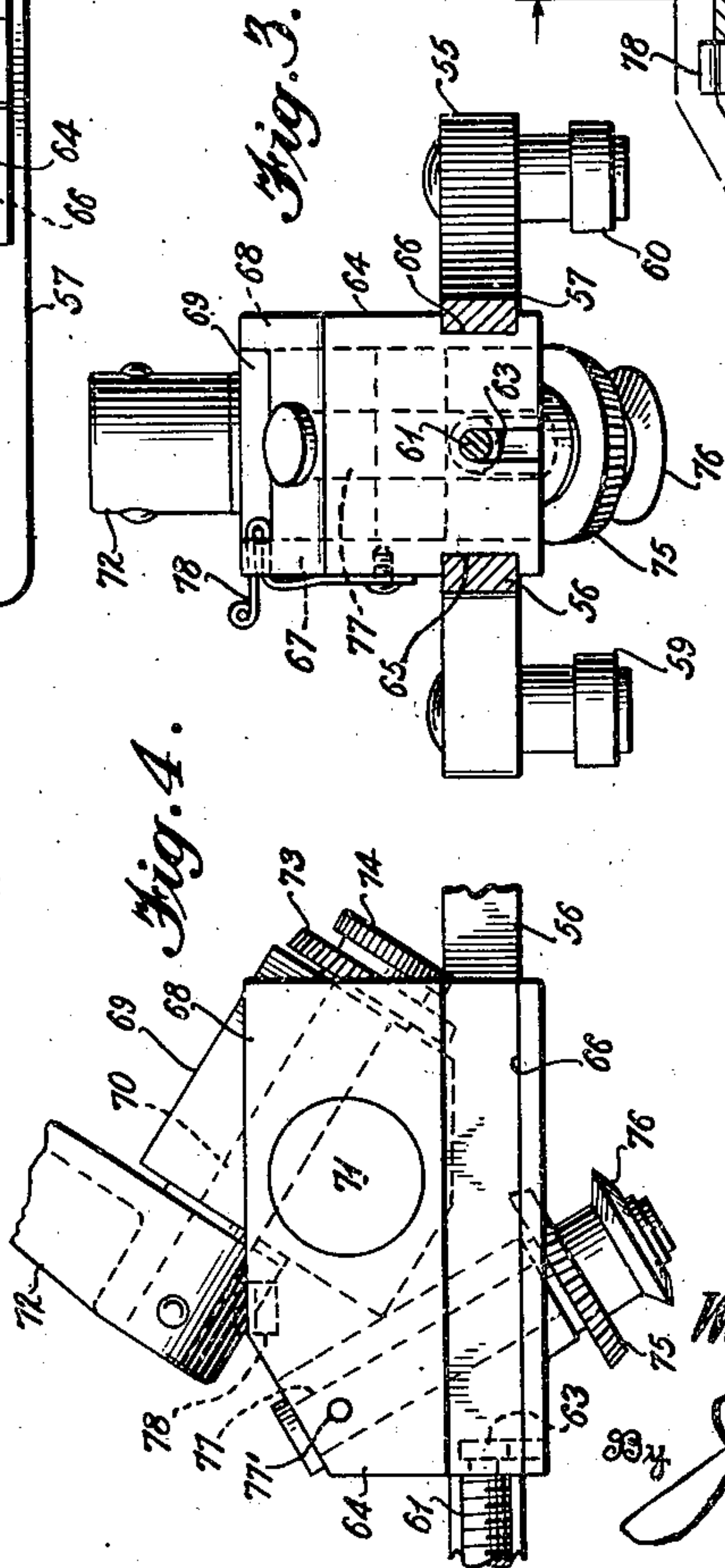
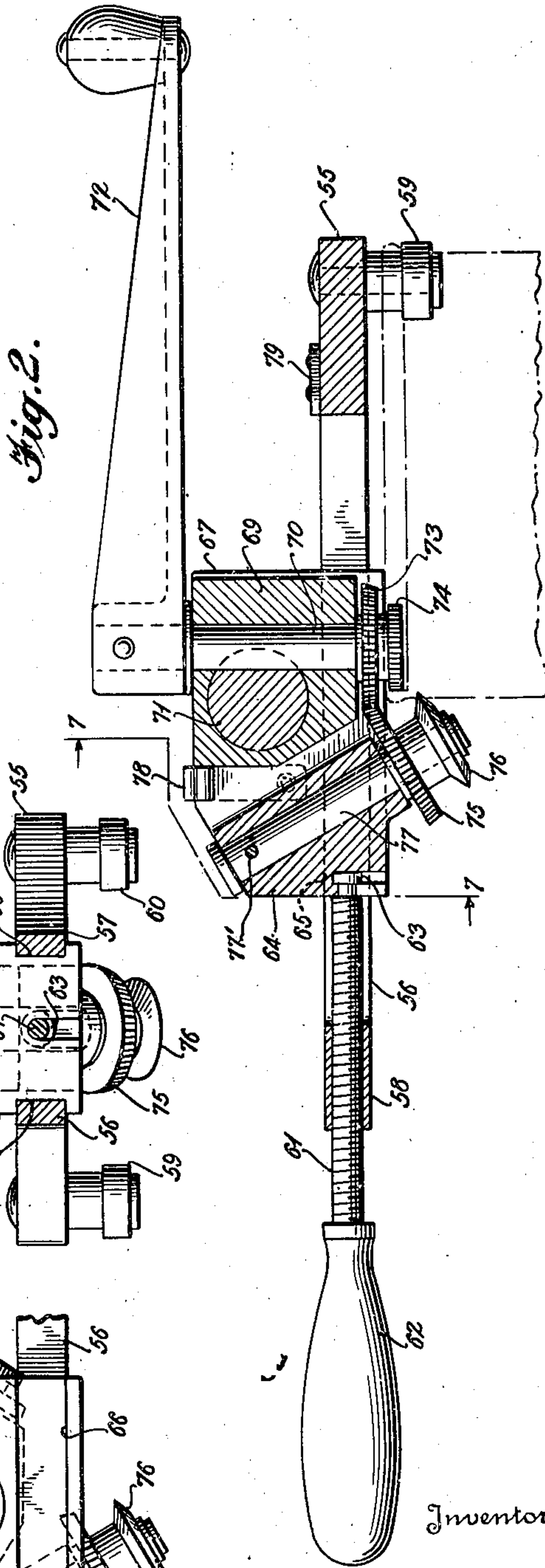
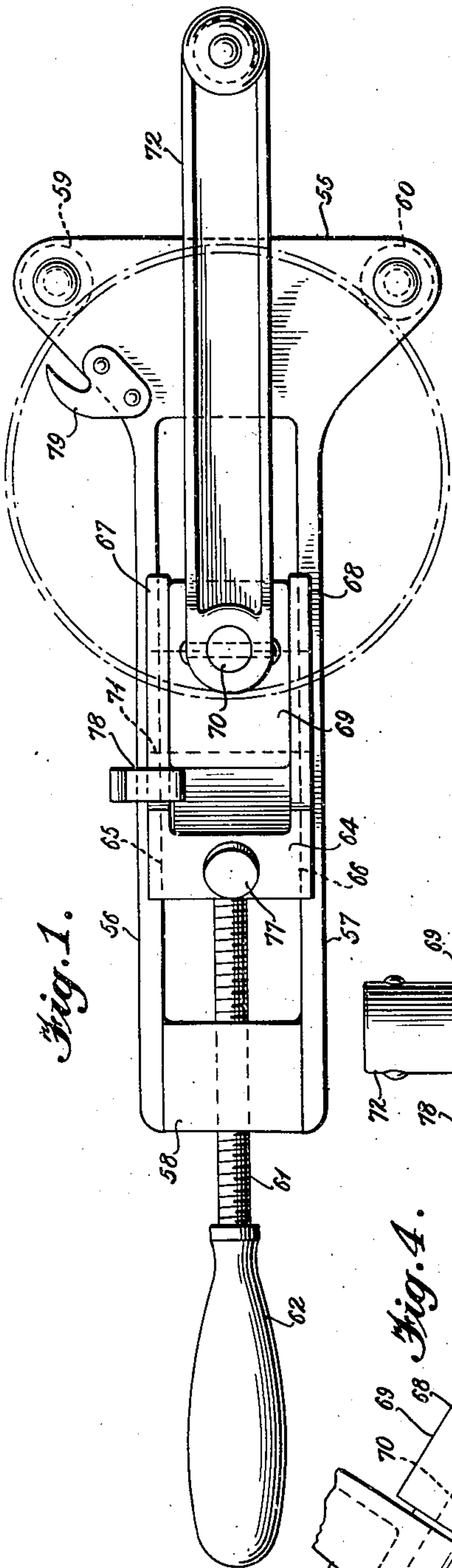
W. H. MONTGOMERY

2,486,314

CAN OPENER

Filed Jan. 30, 1945

2 Sheets-Sheet 1



Inventor

Walter H. Montgomery

James C. Burns

Attorney

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Fig. 5.

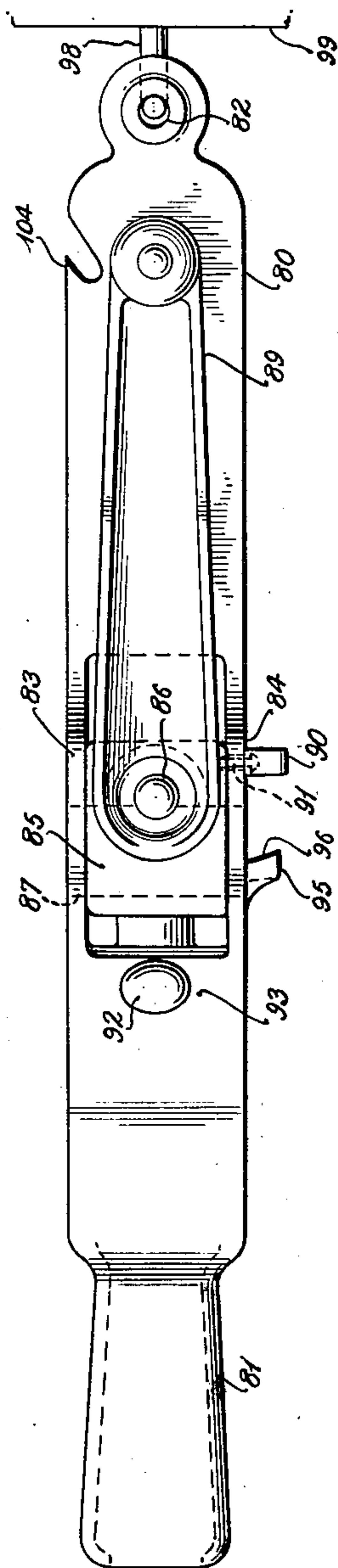


Fig. 6.

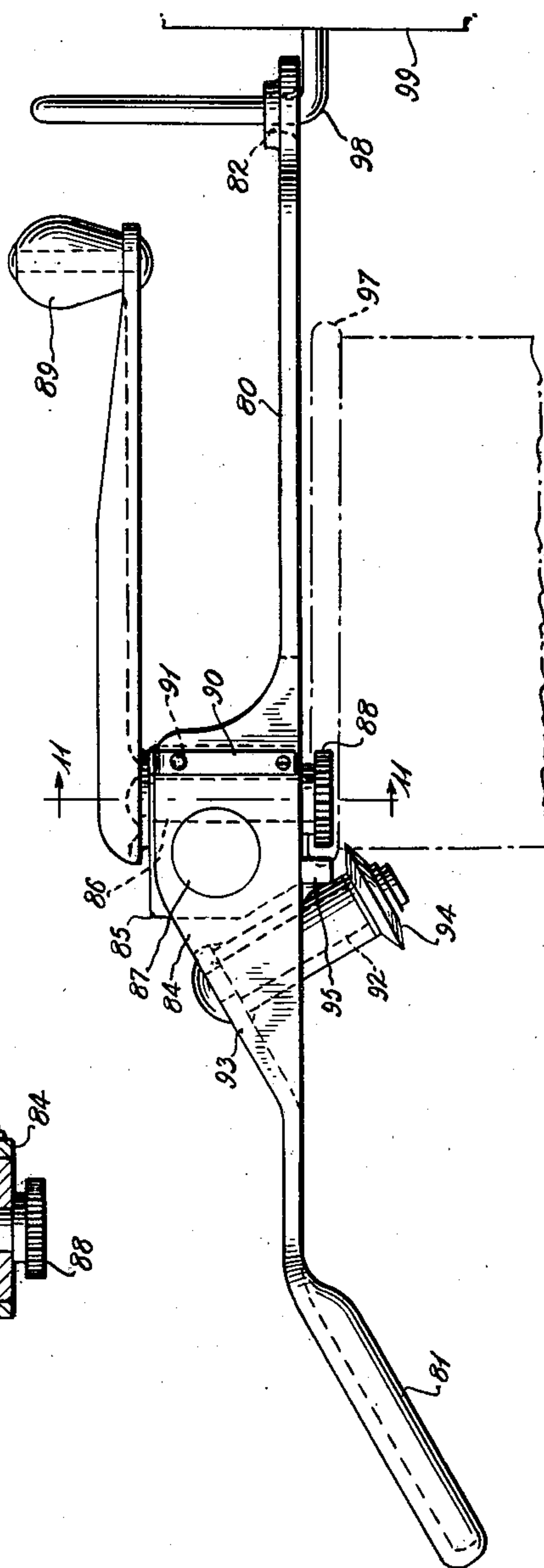


Fig. 7.

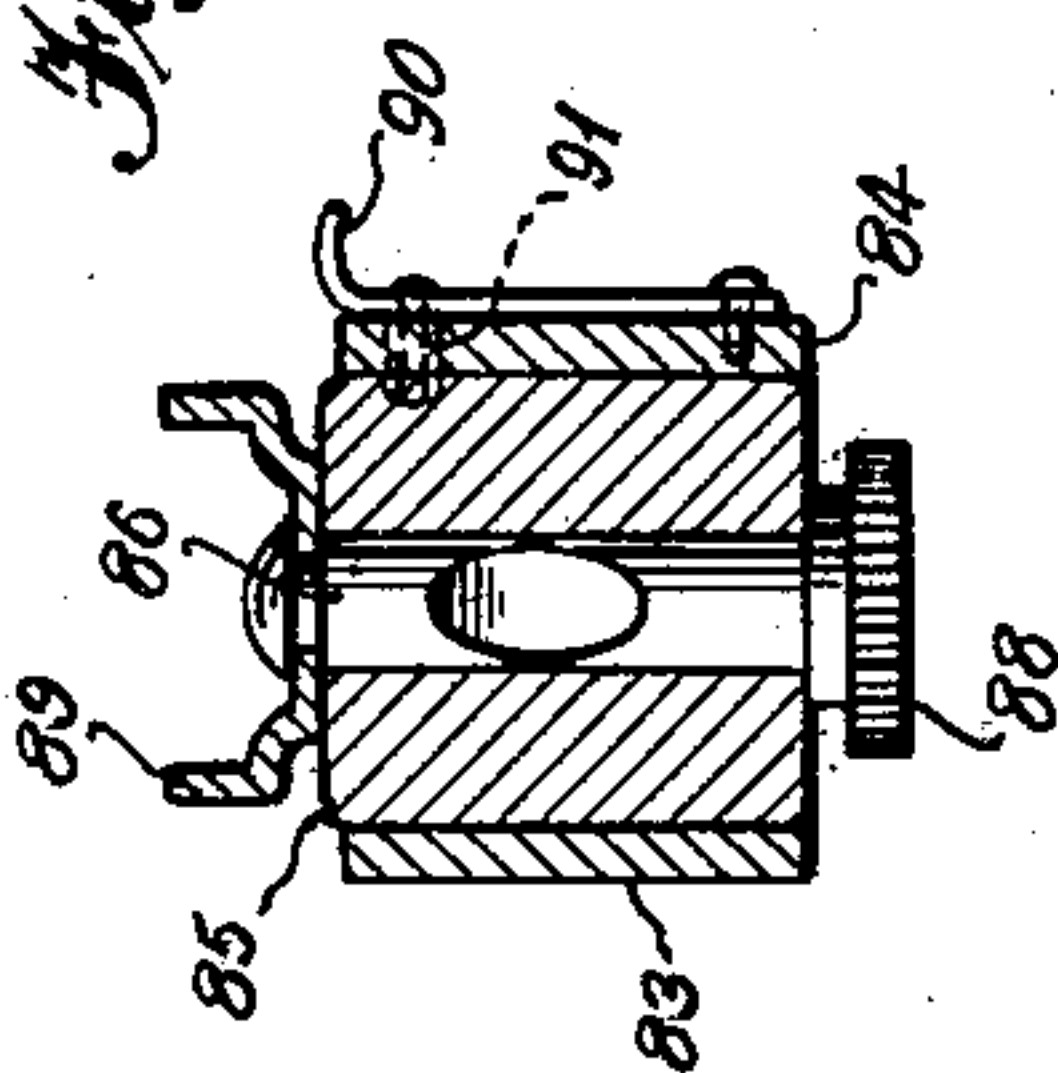
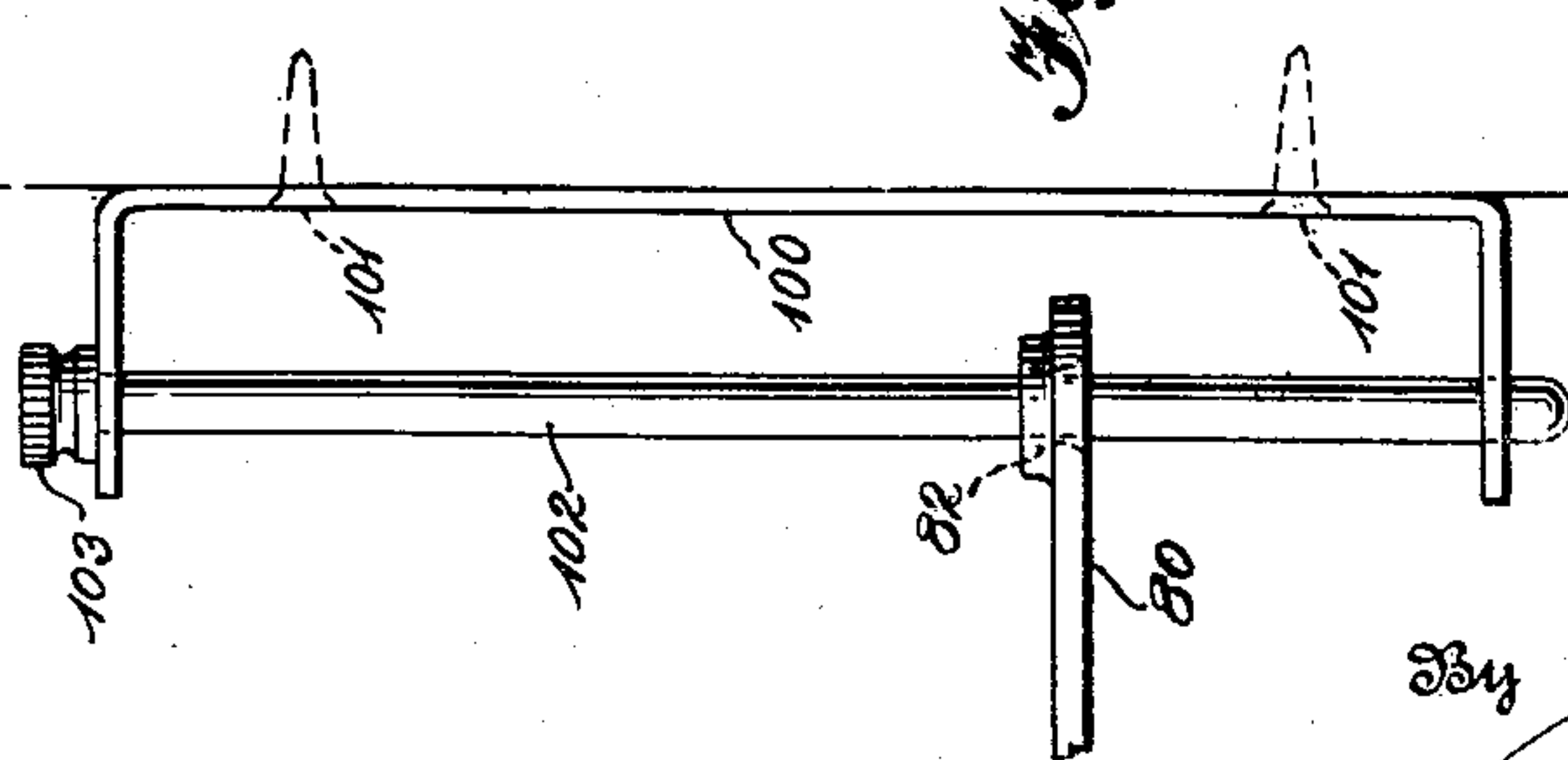


Fig. 8.



Inventor

Walter H. Montgomery

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James P. Burns

Attorney

UNITED STATES PATENT OFFICE

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CAN OPENER

Walter H. Montgomery, Washington, D. C.

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1 Claim. (Cl. 30—13)

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This invention relates to a novel can opener. The invention has for its object the provision of a sturdy, dependable, portable can opener that can be effectively employed by the housewife without injury to herself and without dropping the can top into the contents of the can.

The prior art is replete with attempts to provide an effective, simple, portable can opener, but these devices have various deficiencies. They are either dangerous from the standpoint of operation; require attachment to wall or fixed support before operation; necessitate suspension of the can in mid-air with the resulting likelihood of mishap, or result in the cutting out of the can top in such manner that it sinks into the contents of the can.

It is the object and purpose of the present invention to provide a safe and effective portable can opener that can be applied to the can while the same is firmly placed on a table, cupboard, or the like structure, which can be effectively set in operating position on the can, may be easily actuated, cuts the can top cleanly and completely from the can, and retains the same separated from the can precluding the entry thereof into the contents of the can.

More specifically, the invention contemplates a sturdy, self-contained, portable, easily applied can opener having a pivotally mounted unit adapted when in operative position to hold the feed roller against the inner surface of the upright flange of the can top without requiring rigid attachment to a fixed support for efficient operation.

The invention will be described by reference to the accompanying drawings, in which—

Fig. 1 is a plan view of one form of the can opener of the present invention;

Fig. 2 is a side elevational view with parts shown in section;

Fig. 3 is a detailed sectional view on line 7—7 of Fig. 6;

Fig. 4 is a fragmentary detailed view showing the manner of application of the device to a can;

Fig. 5 is a plan view of a still further modified form of the invention;

Fig. 6 is a side elevational view of the form of invention shown in Fig. 5;

Fig. 7 is a detailed sectional view on line 11—11 of Fig. 6; and

Fig. 8 is a detailed view of an appropriate wall bracket for use in association with the form of the invention shown in Fig. 5.

Referring to the form of the invention shown in Figs. 1 to 4, the cutter roller is driven from the

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feed roller shaft. In this case, the body member 55 is divided and has side rails 56 and 57 between the ends of which the internally threaded nut 58 is brazed. The opposite end of the body member 55 carries the can-engaging rollers 59 and 60. A screw 61 having a handle 62 is threadedly received in the nut 58, and has a bayonet slot connection 63 with a block 64 having recesses 65 and 66 in the side walls thereof for reception of the side rails 56 and 57. In this case, the block 64 is also bifurcated and has side walls 67 and 68 between which the member 69, carrying the feed roller shaft 70, is pivotally mounted by transverse shaft 71, the member 69 being keyed to the shaft 71 through the medium of the feed roller driving shaft 70, which in this instance rotates in the block 69 and is actuated by the handle 72.

The shaft 70 carries at its lower end the driving pinion 73 integrally connected to the feed roller 74. The driving pinion 73 meshes with the driven pinion 75 integral with the cutting roller 76 together mounted on the cutter roller shaft 77, which is fixedly mounted in the block 64, being held against rotation by the pin 77'. In this case, the spring clip 78 seats behind the member 69 when the latter is in the position shown in Fig. 2, holding the same against movement toward inoperative position.

In the position shown in Fig. 2, the driving pinion 73 meshes with driven pinion 75, and on actuation of handle 72 the feed roller 74 causes the cutter roller 76 to advance about the can as shown in Figs. 1 to 4. The block 64 is adapted to be brought into proper position with respect to a can of given size by operation of the screw 61 by handle 62.

The form of invention shown in Figs. 1 to 4 is advantageous, in that the handle 72 is adapted to be actuated in a plane parallel to the top of the can acted upon.

When the spring clip 78 is released, the handle 72 may itself be used to move the member 69 and its associated parts pivotally about the axis of the transverse shaft 71 into the position shown in Fig. 2. In this position, the block 64 can readily be adjusted through the medium of the screw 61 to the appropriate position for application of the can opener to a can of any conventional size. A convenient bottle opener 79 may be attached to the body member 55.

Referring next to the form of the invention shown in Figs. 5 to 8, it will be observed that this form of the invention is somewhat simplified over the form shown in Figs. 1 to 4. In this form, the body portion 80 is provided with an integral

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primary handle 81 at one end and an opening 82 at the opposite end. At an intermediate point the body member 80 is provided with upstanding side walls 83 and 84 between which the block 85 carrying the feed roller shaft 86 is pivotally mounted through the medium of the transverse shaft 87. In this instance, the rotatable feed roller shaft 86 is adapted to key the member 85 to the transverse shaft 87. The feed roller shaft 86 carries for rotation therewith the feed roller 88 at its lower end, and is provided with the handle 89 at its upper end. A spring clip 90 having detent 91 extending through the side wall 84 of body member 80 acts to releasably hold the member 85 and its associated parts in the position shown in Fig. 6. The cutter roller shaft 92 in this instance is directly mounted in a suitable bearing portion 93 of the body member 80, and carries the cutter roller 94 as shown in Fig. 6. The body portion 80 is also provided with struck out side portion 95 inclined at 96, adapted to assist in the application of the device to a can and act as a supporting guide for feed roller 88. In this form of the invention, the cutter roller is not directly driven, but has a rolling action on the can wall in response to the advancing movement imparted thereto by actuation of the driven feed roller 88. In the position of the elements shown in Fig. 6, the rim 97 of the can is clamped between the feed roller 88 and the cutting roller 94, and upon actuation of the handle 89 the feed roller 88 advances the cutting roller 94 around the can, severing the top therefrom.

While the can opener in the form shown in Figs. 5 to 8 may be used without association with a wall bracket of any kind, it is often found desirable to use the same in association with a wall bracket or hook, and an appropriate hook 98 affixed to the wall 99 is shown in Figs. 5 and 6. By placing the body member 80 on the hook through the medium of the opening 82 therein, the entire assembly may be held in more or less stable position when cutting the top from a can, as diagrammatically shown in Fig. 6. An alternative form of wall bracket is shown in Fig. 8 in which the bracket 100 is affixed to the wall by screws 101, and is adapted to receive the removable pin 102 having the knurled head 103. Both forms of bracket permit ready removal of the can opener, so that it may be used elsewhere than in association with the bracket, and also allow the can opener to be turned against the wall about the pin 102 to bring the same into convenient out of the way position. A bottle opener 104 may also be provided in body member 80.

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From the foregoing it will be appreciated that the present invention provides a highly effective can opener in which the actuating elements can be readily clamped into operative position on the can, releasably held in such position, and retained in that position through the can opening operation, holding the can top so that it does not enter the contents of the can. The manner of actuation is such as to safeguard the operator against possible injury and to provide for the effective and expeditious opening of cans of all conventional sizes.

Having thus described my invention, what I claim is:

15 A portable self-contained can opener comprising a frame, terminating at one end in a handle and at the opposite end in an extension of sufficient length to substantially completely overlie a can, said frame being provided with spaced side portions intermediate its ends, a block pivotally mounted between said spaced side portions of said frame, a feed roller shaft rotatably mounted in said block, a can-engaging feed roller carried at one end of said shaft, a feed roller actuating handle carried at the opposite end of said shaft, said can-engaging feed roller adapted to be brought into and out of can-engaging position by pivotal movement of said block through the medium of said feed roller actuating handle, a cutter roller shaft carried by said frame, a cutter roller on said shaft adapted to be effectively advanced around a can upon actuation of said feed roller actuating handle and means for automatically locking said block to said frame when said feed roller reaches operative position.

WALTER H. MONTGOMERY.

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