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CAN OPENER

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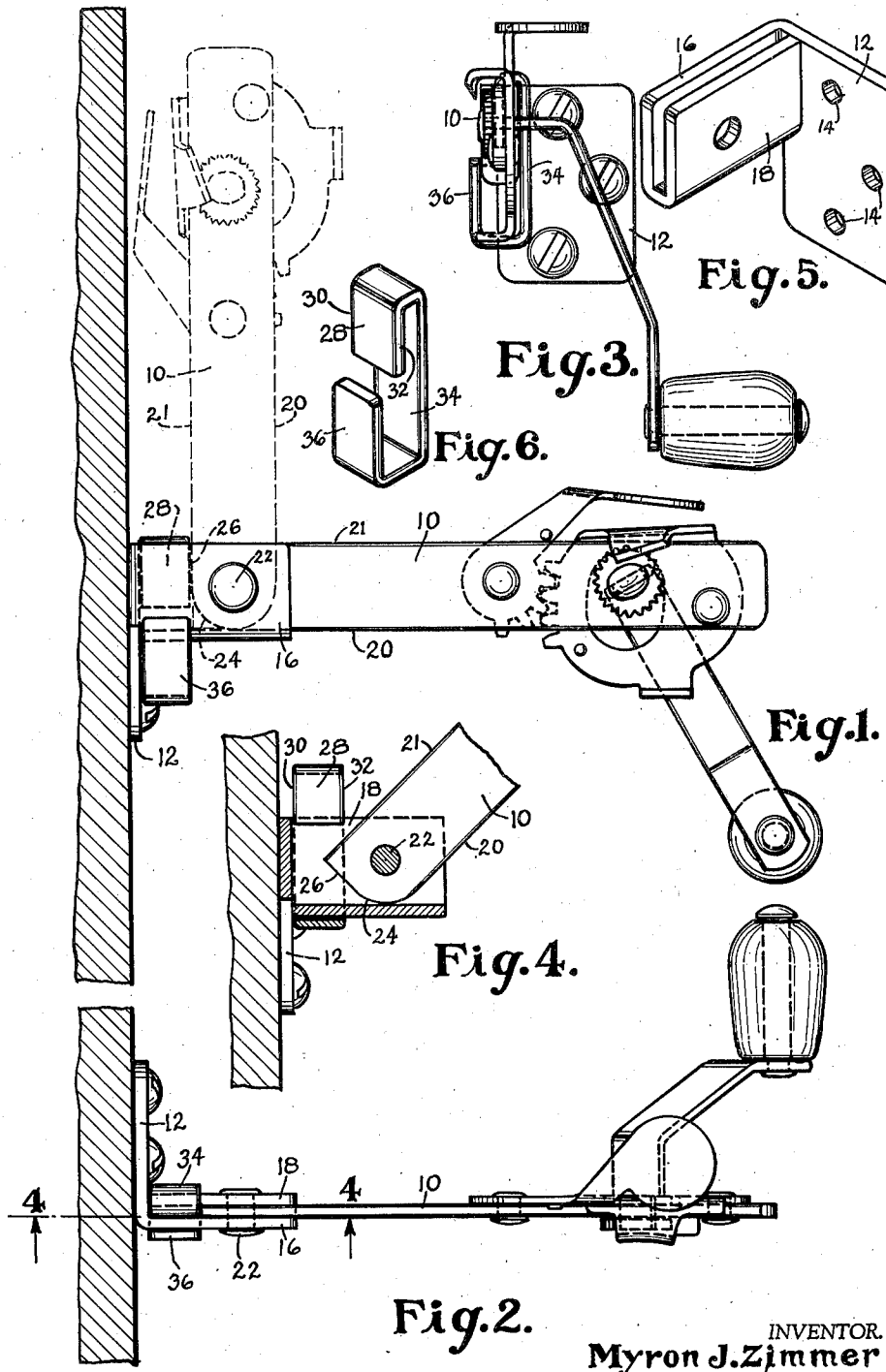

Fig. 1.

Fig. 2.

Fig. 3.

Fig. 4.

Fig. 5.

Fig. 6.

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CAN OPENER

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3 Claims. (Cl. 248—293)

This invention relates to can openers, and more particularly to the so-called wall type can openers wherein the operating parts are mounted on a frame piece or carriage pivotally mounted on a support for vertical swinging from an upper vertical position to a lower horizontal position, and vice versa.

In accordance with this invention, an adjustable member slidably positioned on the support is adapted to cooperate with relatively flat bearing portions on the frame piece, defining an angle corresponding to the range of vertical swinging of the frame piece, so as to normally prevent swinging of the frame piece when disposed in either limit of its swinging range. Thus the can opener frame piece is locked in lower horizontal position or in upper vertical position, as desired.

Another object of this invention resides in the provision of a new and improved wall type can opener support of desired strength and rigidity without impairing its ease of manipulation and operation.

With the above and other objects in view, as will be apparent, this invention consists in the construction, combination and arrangement of parts, all as hereinafter more fully described, claimed and illustrated in the accompanying drawing, wherein:

Fig. 1 is a side elevation of a can opener embodying the features of this invention, showing the device in lower horizontal operative position, and in dotted lines illustrating the same in upper inoperative position.

Fig. 2 is a top view of the device shown in Fig. 1.

Fig. 3 is an end elevation thereof.

Fig. 4 is a fragmentary view taken on line 4—4 of Fig. 2.

Fig. 5 is a detail perspective view of a supporting device suitable for use in connection with the present mounting.

Fig. 6 is a similar view of the adjustable locking member.

Referring to the drawing, wherein for the purpose of illustration is shown a can opener frame and operating parts mounted thereon of the type disclosed in copending application Serial No. 235,885, the numeral 10 may designate generally the relatively flat metal frame piece.

The support preferably includes a plate 12 provided with openings 14 for receiving screws or the like for fastening the same on a wall or other fixed structure, and a projecting plate 16 disposed at right angles to the plate 12, which has a folded and overlapped portion 18. The portions 16 and 18 thus provide a channel shaped fixture opening upwardly and forwardly for the reception therein of the end of the frame piece 10. The inner faces of the parts 16 and 18 provide bearing surfaces for the opposed flat sides of the frame piece 10 while the closed bottom end of the fixture provides a seat for the lower longitudinal edge 20 of the frame piece. The enclosed end of the arm 10 is pierced by a shaft 22 which has bearing support in the parts 16 and 18 of the support in such a manner as to dispose the shaft in uniform radial relation to all parts of an arc defined by the rounded corner 24 connecting the flat transverse edge portion 26 and the flat longitudinal edge portion of the arm or frame piece 10. It is also desirable to position the edge 26 of the frame piece 10 in outwardly spaced relation to the plate 12. As a consequence the lower corner of the arm 10 is given clearance to accommodate swinging movement of the latter from a horizontal operative position (as per full line illustration in Fig. 1) to a vertical inoperative position (as per dotted line illustration in Fig. 1), and vice versa.

An adjustable member for blocking or preventing swinging of the frame piece 10 between limits of its range of vertical movement, as desired, consists of a plate 34 disposed flatwise against the outer face of the support portion 18 having a laterally disposed flange at its upper end adapted to span the upper edge of the support portion 18 and having a downwardly extending dog 28 disposed in the plane of swinging movement of the frame piece 10. The dog 28 presents a forward flat bearing surface 32 adapted to abut edgewise with the flat transverse edge portion 26 of the frame piece 10 when the latter is in horizontal position, as will be observed from Fig. 2. When the frame piece is disposed in upper vertical position, the flat bearing surface 32 of the dog 28 is adapted to abut edgewise with the flat upper longitudinal edge 21 of the frame piece 10. In this connection it will be seen that the inner limits 30 of the dog 28 are adapted to abut the adjacent surface of the support plate 12. Thus the dog 28 is prevented from moving horizontally in a direction away from the pivot 22, whereby the dog 28 is operative to obstruct rotation of the frame piece 10. Furthermore, it will be observed that the lower limits of the dog 28 terminate somewhat below a plane passed horizontally through the shaft 22 whereby the edge 32 thereof serves as an abutment on both sides of the pivot center defined by the shaft 22. Under this arrangement, the frame piece 10 when in upright or inoperative position, even though the weight of its operating mechanism tends to tilt the frame

piece 10 toward a horizontal position, is effectively locked against such action. As a consequence, the dog 28 cooperates with the flat portion 21 of the frame piece 10 to lock the latter in upright or inoperative position and cooperates with the flat portion 26 of the frame piece 10 to lock the latter in horizontal operative position.

At its lower end, the plate 34 extends a substantial distance below the lower limits of the parts 16 and 18 of the support, and is provided with a lateral keeper 36 which extends upwardly therefrom adapted to bear slidably against the outer face of the support part 16. This extension of the plate 34 permits the keeper 36 and the parts associated therewith to be lifted sufficiently to permit the upper corner of the frame piece 10, said corner being defined by the juncture of edges 21 and 26 thereof, to clear the lower forward corner of the dog 28 when it is desired to swing the arm or frame piece 10 from a horizontal to a vertical position and vice versa, as shown in Fig. 4, and yet prevent complete withdrawal of the dog 28 from between the parts 16 and 18 of the support.

Sufficient play between the dog 28 and the cooperating flat portions 26 and 21 of the frame piece 10 is contemplated in order that the dog 28 may freely fall of its own weight into a position of rest across the upper edge of the support part 16. Accordingly, when it is desired to swing the frame piece 10 from horizontal to vertical position, it is merely necessary to exert slight upward pressure on the keeper 36 to bring about clearance for turning the frame piece 10, whereupon the keeper 36 may be released and allowed to seat itself by gravity to dispose the dog 28 in locking position with the selected flat portions 26 and 21 of the frame piece 10.

What is claimed is:

1. In a can opener, the combination with a frame piece having angularly spaced flat bearing surfaces, a support comprising a wall attaching plate having a pair of spaced arms projecting outwardly from said plate between which said frame piece, including said angularly spaced bearing surfaces are receivable, a pivotal connection between said arms and said frame piece through which the latter is mounted for limited swinging movement, an adjustable plate slidably positioned against an outer face of one of said arms, a flange projecting laterally from the upper end of said plate and providing a dog projecting downwardly between said arms, means for obstructing horizontal movement of said dog away from said pivotal connection, said dog having an edge portion adapted to selectively engage the flat bearing surfaces of the frame piece for locking the latter in either of two positions.

2. In a can opener, the combination with a frame piece having angularly spaced flat bearing surfaces, a support comprising a wall attaching plate having a pair of spaced arms projecting outwardly from said plate between which said frame piece including said angularly spaced bearing surfaces are receivable, a pivotal connection between said spaced arms and said frame piece through which the latter is mounted for limited swinging movement, an adjustable plate slidably positioned against an outer face of one of said arms, a flange projecting laterally from the upper end of said plate and providing a dog projecting downwardly between said arms, means for obstructing horizontal movement of said dog away from said pivotal connection, said dog having an edge portion adapted to selectively engage the flat bearing surfaces of the frame piece for locking the latter in either of two positions, and a flange projecting laterally from the lower end of said plate cooperating with a stop on said support to limit upward movement of said dog.

3. In a can opener, the combination with a frame piece having angularly spaced flat bearing surfaces, a support on which said frame piece is mounted for vertical swinging movement from an upright position to a horizontal position, and vice versa, means coacting with the angularly spaced flat bearing surfaces of said frame piece for locking said frame piece in upright or horizontal position including a gravity actuated member mounted for sliding movement in a fixed vertical path on said support.

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