

No. 877,974.

PATENTED FEB. 4, 1908.

G. K. WINCHENBACH.
CAN OPENER.

APPLICATION FILED APR. 20, 1907.

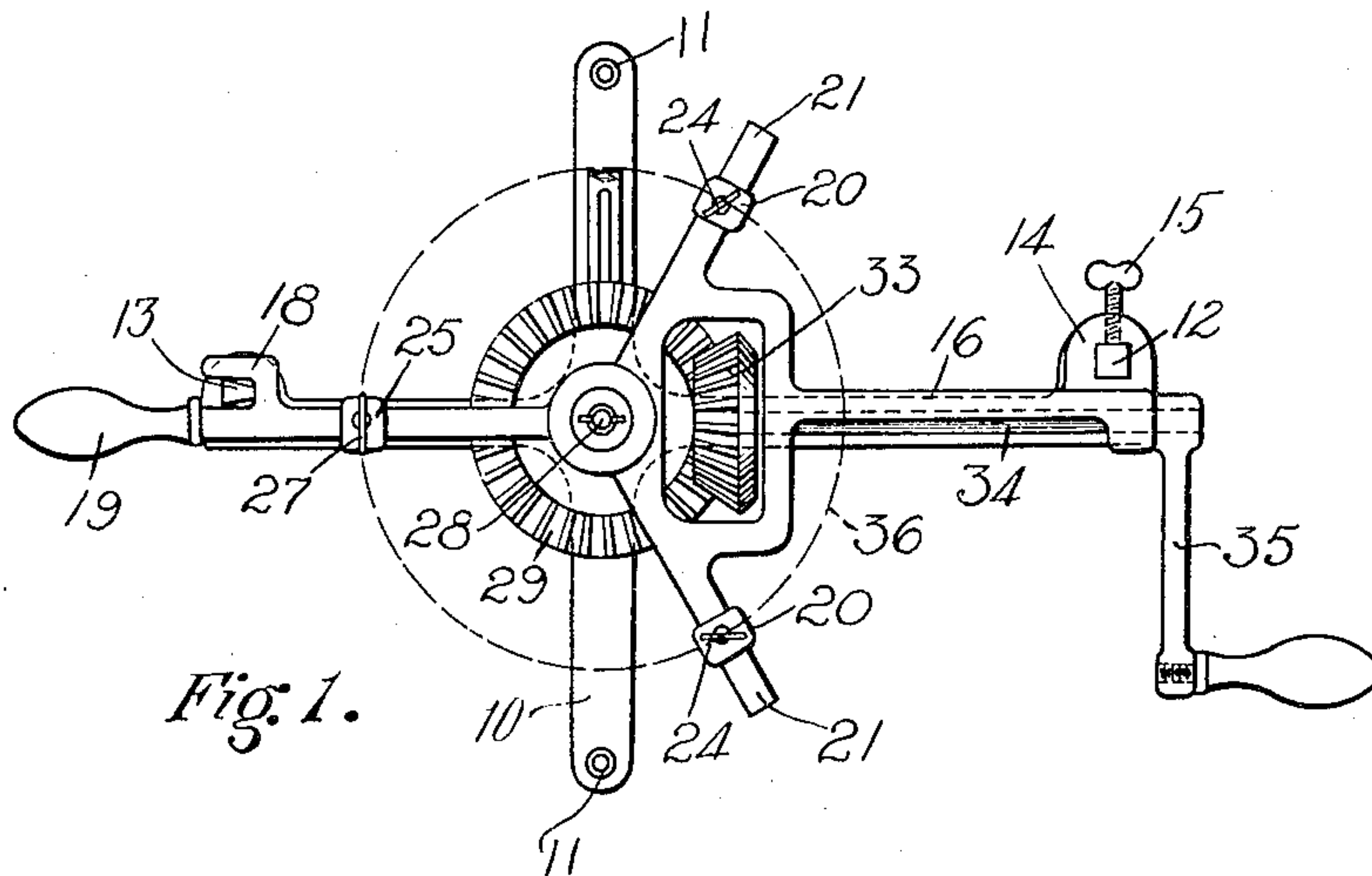


Fig. 1.

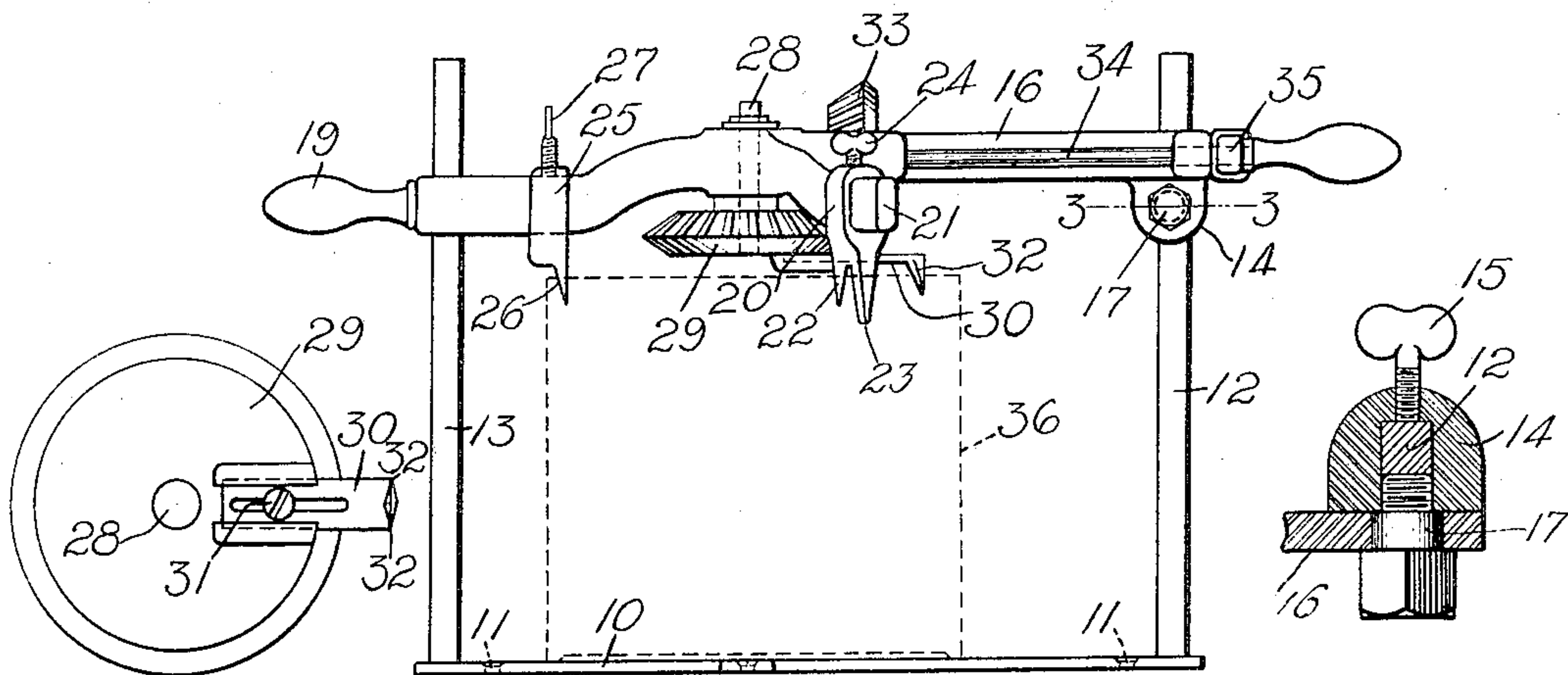


Fig. 4.

Fig. 2.

Fig. 3.

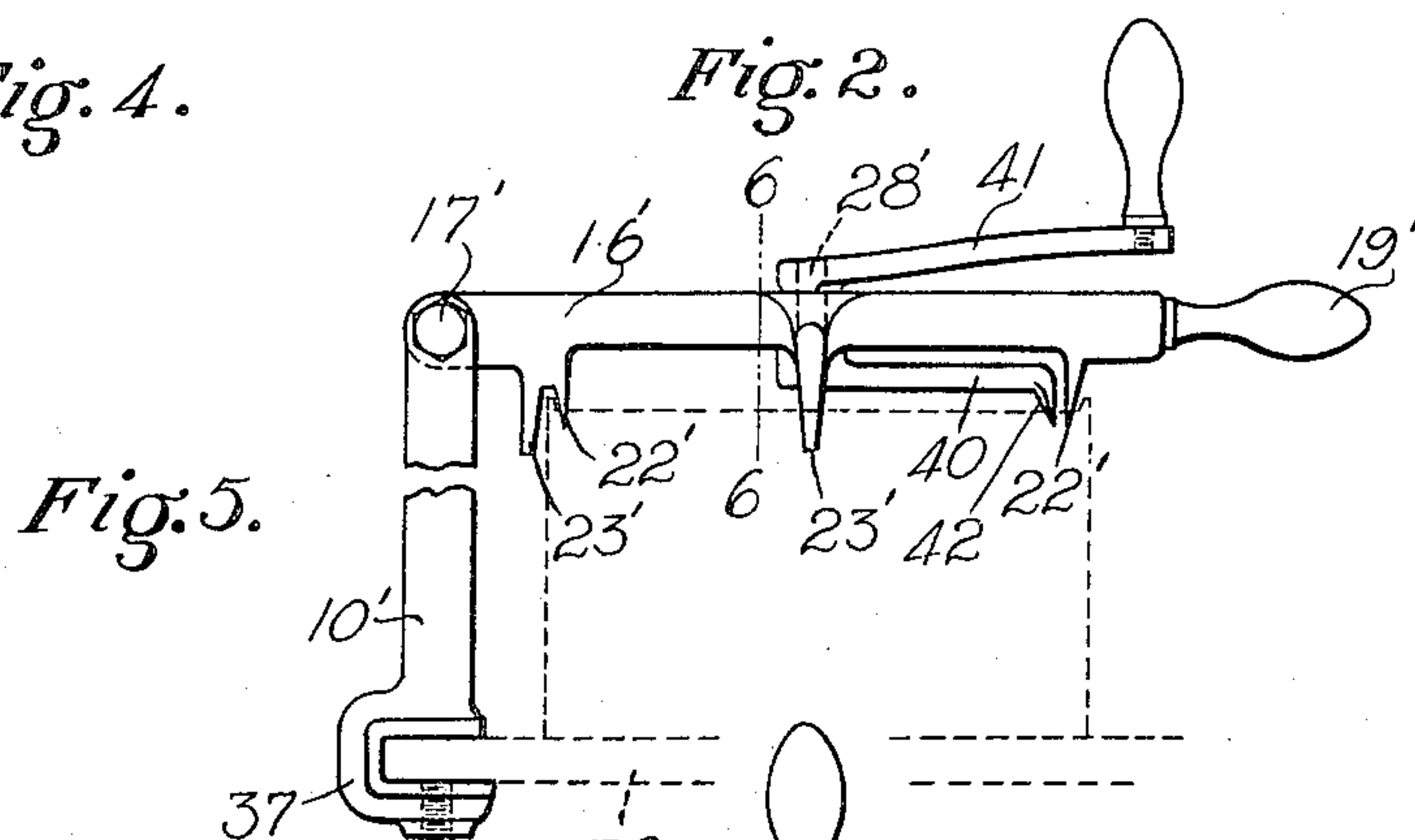


Fig. 5.

Witnesses:
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Inventor:

Fig. 6.

Gautier K. Winchenbach
by his attorney
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UNITED STATES PATENT OFFICE.

GARDNER K. WINCHENBACH, OF WALDOBORO, MAINE.

CAN-OPENER.

No. 877,974.

Specification of Letters Patent.

Patented Feb. 4, 1908.

Application filed April 20, 1907. Serial No. 369,222.

To all whom it may concern:

Be it known that I, GARDNER K. WINCHENBACH, a citizen of the United States, residing at Waldoboro, in the county of Lincoln and State of Maine, have invented new and useful Improvements in Can-Openers, of which the following is a specification.

This invention relates to improvements in can openers, and the object is to provide a device for opening tin cans so constructed and arranged that but little strength need be exerted to accomplish the same, the device being so constructed that the can is securely held during the cutting of the top.

The invention consists in the combination and arrangement of parts set forth in the following specification and particularly pointed out in the claims thereof.

Referring to the drawings: Figure 1 is a plan view of one form of my improved can opener, the can being shown in dotted lines. Fig. 2 is a side elevation of the same the can being shown in dotted lines. Fig. 3 is an enlarged detail plan section taken on line 3—3 of Fig. 2. Fig. 4 is an enlarged detail underneath plan view of the bevel gear and knife. Fig. 5 is a side elevation, partly broken away, of a modified form of my invention, a can and a table being indicated in dotted lines. Fig. 6 is a section taken on line 6—6 of Fig. 5 looking toward the right.

Like numerals refer to like parts throughout the several views of the drawings.

In the drawings, referring now to Figs. 1 to 4, inclusive, 10 is a main frame provided with screw holes 11 by means of which said frame may be secured to a suitable support, such, for instance, as a table. Two vertical posts 12 and 13 constituting a part of the frame 10 are rigidly secured thereto. A block 14 is slidably mounted on the post 12 and may be secured thereto by means of a thumb set screw 15. A secondary frame 16 is pivoted at 17 to the block 14, said secondary frame being provided with a jaw 18 adapted to engage the post 13; there being a handle 19 by means of which said secondary frame may be rocked on its pivot 17. Two collars 20, 20 are slidably arranged on arms 21, 21 forming a part of the secondary frame 16, each of said collars being provided with a spur 22 and a stop or guard 23. Thumb set screws 24, 24 are adapted to secure the collars 20, 20 to the arms 21, 21, respectively. A third collar 25 is slidably mounted on the secondary frame 16, said collar being provided with a spur 26.

The collar 25 may be secured to the frame 16 by a thumb set screw 27. A vertical shaft 28 is journaled in the secondary frame 16, there being a bevel gear 29 fast to said shaft below said frame. A knife 30 is adjustably mounted on the bevel gear 29 toward and away from the shaft 28, there being a screw 31 extending through a slot formed in said knife and having screw-threaded engagement with said gear, said screw being adapted to secure said knife in any desired position. The knife 30 is provided with two cutting edges 32, 32 which lie in a substantially vertical plane.

A bevel pinion 33 meshing into the bevel gear 29 is fast to a horizontal shaft 34, said shaft being journaled on the secondary frame 16, there being a crank 35 fast to said shaft by means of which said shaft may be rotated. A cylindrical can 36 is indicated in dotted lines.

The operation of this form of my invention is as follows: The operator grasps the handle 19 and rocks the secondary frame on its pivot 17 into a substantially vertical position. He then places the can 36 on the frame 10 in the position shown in dotted lines, Figs. 1 and 2. He adjusts the knife 30 so that its cutting edge 32 is at the proper distance from the axis of the shaft 28. He also adjusts the collars 20, 20 and 25 in their proper relation to said shaft. He then rocks the frame 16 toward the position shown in Fig. 2 and in doing so locates the can 36 against the guards or stops 23, 23. Continued movement of the frame 16 to the position shown in Fig. 2 causes the spurs 22, 22 and 26 to puncture the top of said can. The knife 30 will also simultaneously puncture the top of the can. He then with one hand presses downwardly on the handle 19 thereby securely holding the can 36 in position while with the other hand he operates the crank 35, thereby causing the knife 30 to make a circular cut in the top of the can. It will be seen that the spurs 22, 22 and 26 prevent the can 36 from rotating during the operation of cutting. After the can has been opened the frame 16 is again raised to a vertical position and the can is removed and is replaced by another and so on. It will be seen that in restaurants and hotels where a large number of cans are opened during each day that the same may be accomplished with great ease and with an outlay of but little strength.

Referring now to Figs. 5 and 6 showing a

modified form of my invention, 10' is a main frame having a jaw 37 which may be placed on the edge of a table 38, said table being indicated in dotted lines. A thumb-screw 39 is adapted to secure the frame 10' to the table 38. A secondary frame 16' is pivoted at 17' to the frame 10', said secondary frame being provided with spurs 22' and guards 23'. The frame 16' is also provided with a handle 19' by means of which said frame may be rocked on its pivot 17'. A vertical shaft 28' is journaled in the frame 16', there being an arm 40 fast to said shaft below said frame. A crank 41 is fast to the shaft 28'. A knife 42 may be formed on the arm 40 or may be secured thereto in any suitable manner.

The operation of this form of my device is similar to that of the other form hereinbefore described and a description of its operation will be unnecessary.

Having thus described my invention what I claim and desire by Letters Patent to secure is:

1. In a can opener, a frame, a vertical shaft journaled in said frame, a plurality of vertical spurs on said frame adapted to puncture a can, said spurs being adjustably mounted toward and away from said shaft, a member fast to said shaft below said frame, a knife fast to said member, said knife having a vertical cutting edge, and a crank operatively connected to said vertical shaft.

2. In a can opener, a main frame, two vertical posts fast to said frame, a block vertically movable on one of said posts, means to secure said block to said post, a secondary frame pivotally mounted on said block to swing about a horizontal axis, said secondary frame provided with a jaw adapted to engage one of said posts, a handle fast to said secondary frame, a vertical shaft journaled in said secondary frame, a plurality of spurs adjustably mounted on said secondary frame toward and away from said shaft, said spurs adapted to puncture a can, a bevel gear fast to said shaft below said secondary frame, a knife adjustably mounted on said gear to move toward and away from said shaft, said knife having a vertical cutting edge, a bevel pinion meshing into said bevel gear, a horizontal shaft to which said pinion is fast, said horizontal shaft journaled on said secondary frame, and a crank fast to said horizontal shaft.

3. In a can opener, a frame, a vertical shaft journaled in said frame, a plurality of stops against which a can may be located, said stops being adjustably supported on said frame to be moved toward and away from said shaft, a member fast to said shaft below said frame, a knife supported on said member, and a crank operatively connected to said vertical shaft.

4. In a can opener, a frame, a vertical shaft

journaled in said frame, a plurality of collars adjustably mounted on said frame to be moved toward and away from said shaft, a plurality of stops on said collars, respectively, against which a can may be located, a plurality of spurs on said collars, respectively, adapted to puncture said can, a member fast to said shaft below said frame, a knife fast to said member, said knife having a vertical cutting edge, and a crank operatively connected to said vertical shaft.

5. In a can opener, a main frame, a secondary frame supported on said main frame, a vertical shaft journaled in said secondary frame, a plurality of vertical spurs on said secondary frame adapted to puncture a can, said spurs being adjustably mounted to be moved toward and away from said shaft, a bevel gear fast to said shaft below said secondary frame, a bevel pinion meshing into said bevel gear, a horizontal shaft to which said pinion is fast, said horizontal shaft being journaled on said secondary frame, a knife supported on said gear, and a crank fast to said horizontal shaft.

6. In a can opener, a main frame, a secondary frame pivotally supported on said main frame, a vertical shaft journaled in said secondary frame, a plurality of collars adjustably mounted on said secondary frame to be moved toward and away from said shaft, a plurality of stops on said collars, respectively, against which a can may be located, a plurality of spurs on said collars, respectively, adapted to puncture said can, a bevel gear fast to said shaft below said secondary frame, a bevel pinion meshing into said bevel gear, a horizontal shaft to which said pinion is fast, said horizontal shaft being journaled on said secondary frame, a knife supported on said gear, and a crank fast to said horizontal shaft.

7. In a can opener, a main frame adapted to be secured to a support, a secondary frame pivotally mounted on said main frame, a vertical shaft journaled in said secondary frame, a member fast to said vertical shaft below said secondary frame, a knife supported on said member, a crank operatively connected to said vertical shaft, a plurality of vertical spurs supported on said secondary frame and adapted to puncture a can, and a plurality of stops on said secondary frame adjacent to said spurs, respectively, against which said can may be located to position said can with relation to said spurs.

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.

GARDNER K. WINCHENBACH.

Witnesses:

S. E. WINCHENBACH,
I. E. WALLACE.