

No. 778,112.

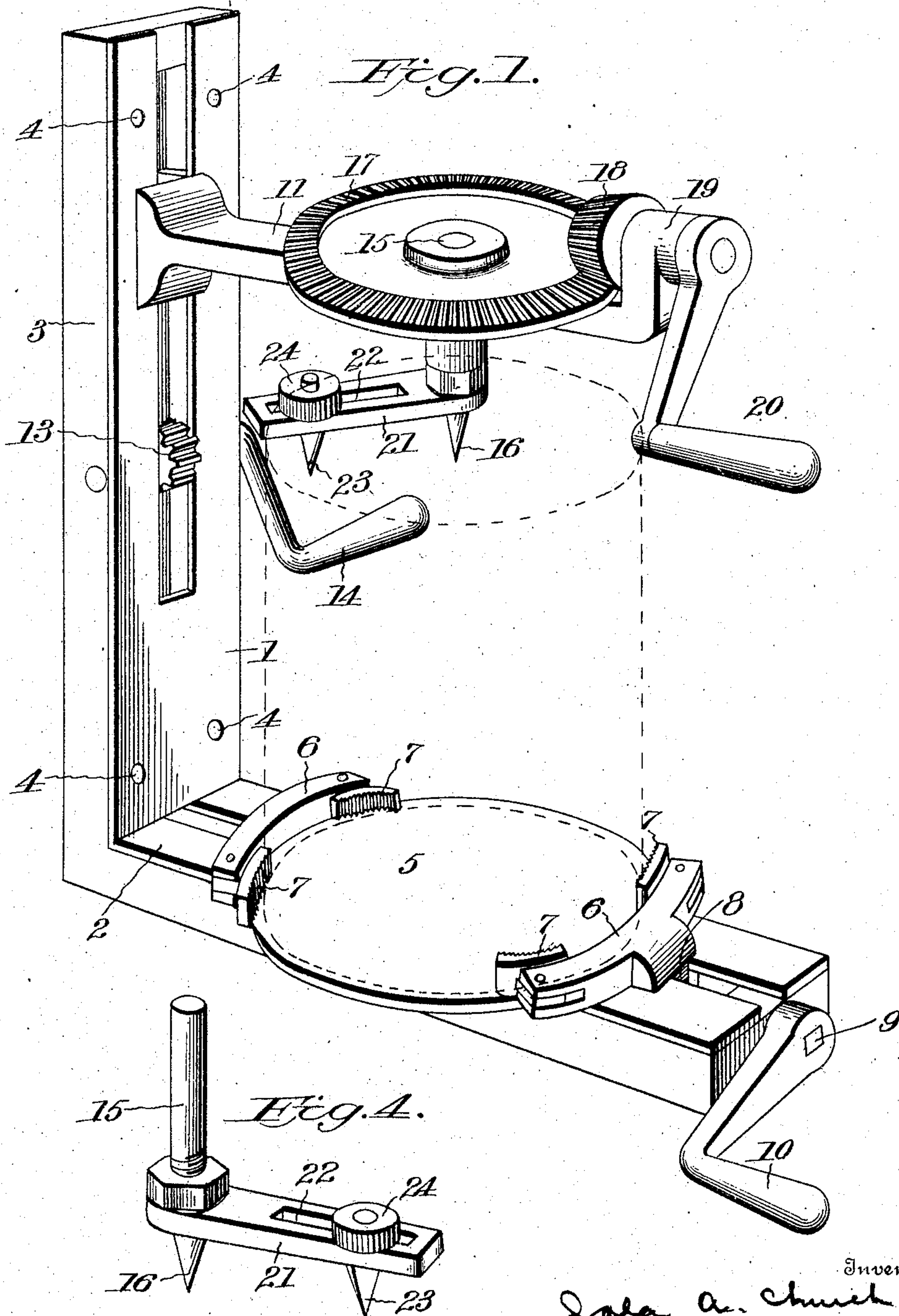
PATENTED DEC. 20, 1904.

Z. A. CHURCH & S. A. SMITH.
CAN OPENER.

APPLICATION FILED FEB. 4, 1904.

NO MODEL.

2 SHEETS—SHEET 1.



Witnesses

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34

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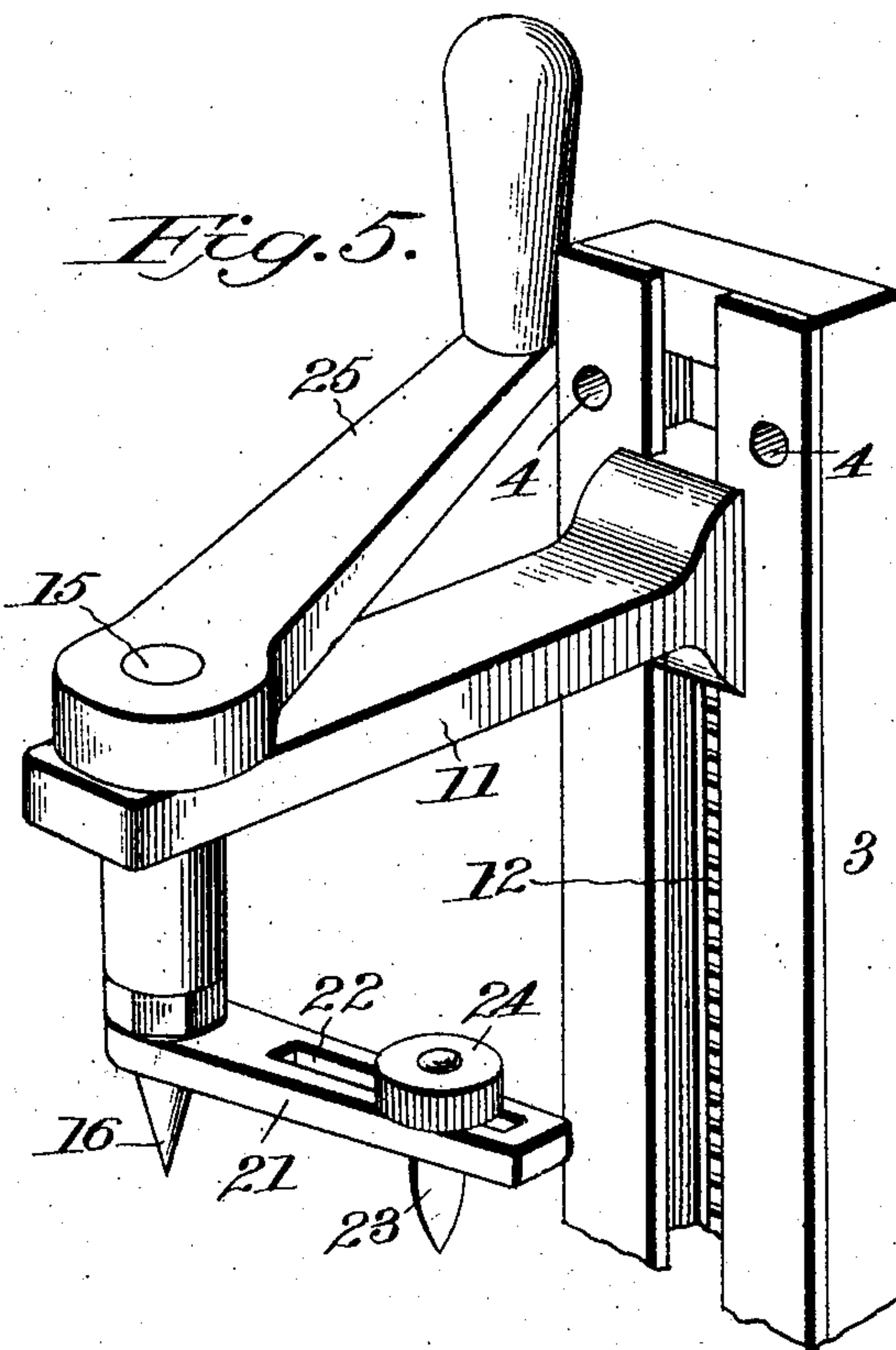
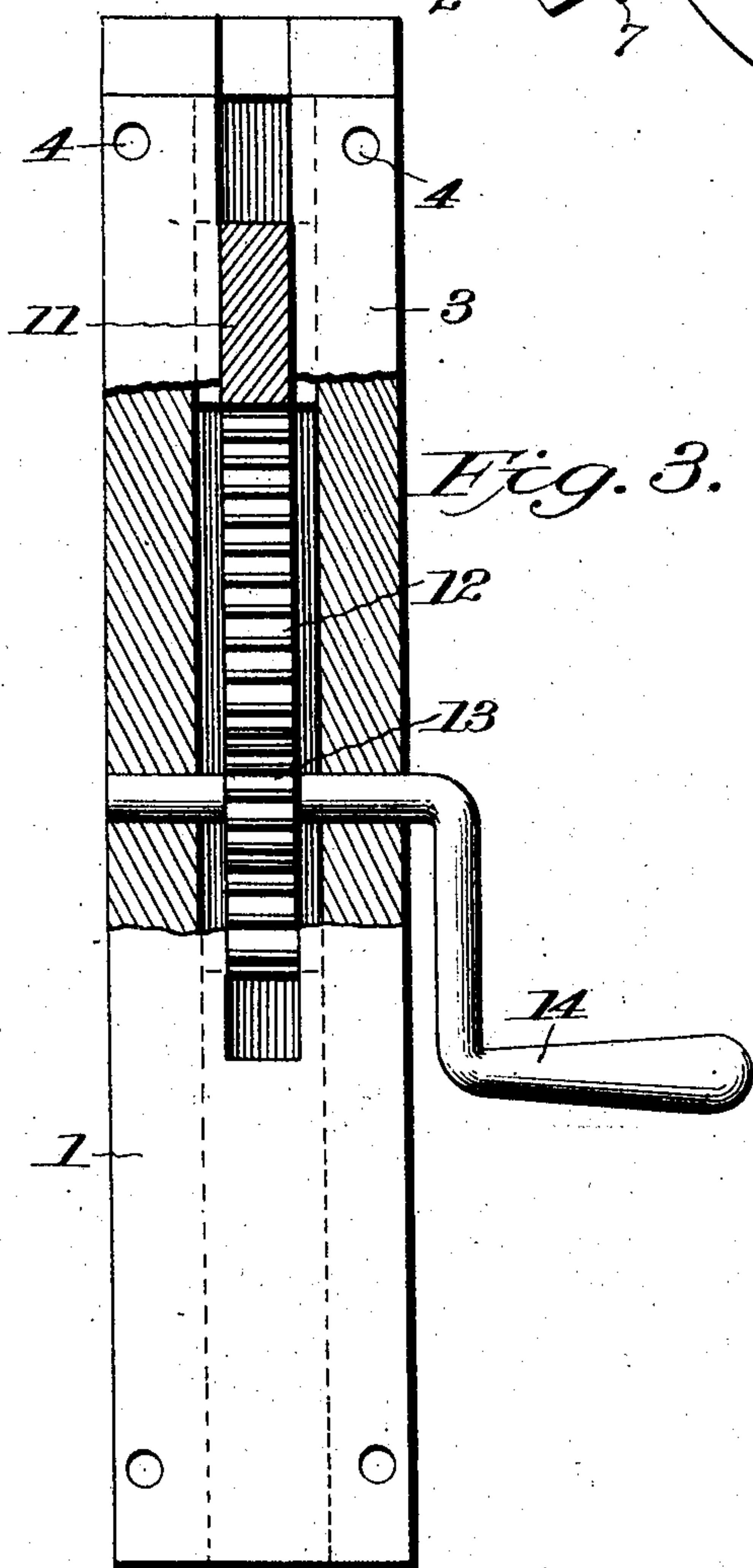
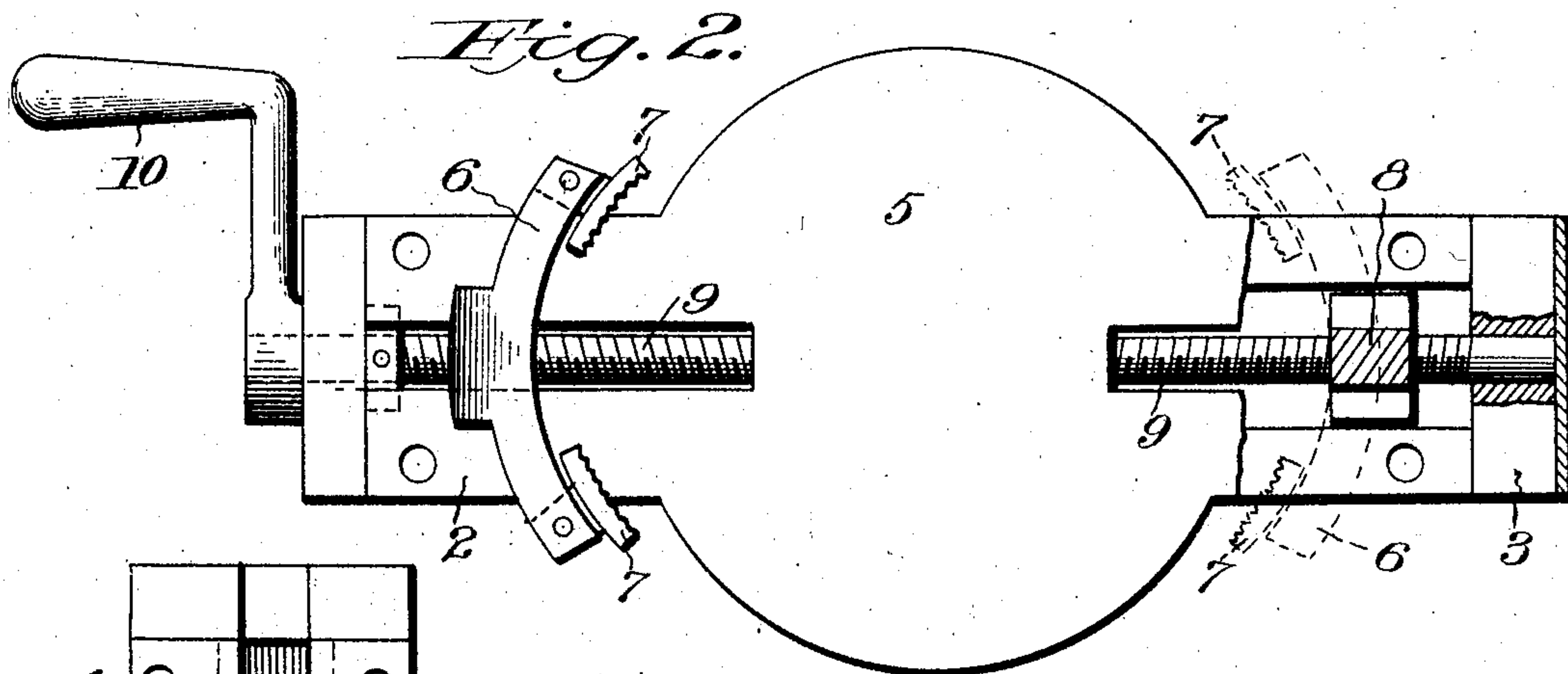
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2 SHEETS—SHEET 2.



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J. W. Moore.

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UNITED STATES PATENT OFFICE.

ZALA A. CHURCH, OF JEFFERSON, AND SAMUEL A. SMITH, OF ROCKWELL CITY, IOWA.

CAN-OPENER.

SPECIFICATION forming part of Letters Patent No. 778,112, dated December 20, 1904.

Application filed February 4, 1904. Serial No. 191,913.

To all whom it may concern:

Be it known that we, ZALA A. CHURCH, of Jefferson, Greene county, and SAMUEL A. SMITH, residing at Rockwell City, in the county of Calhoun, State of Iowa, citizens of the United States, have invented certain new and useful Improvements in Can-Openers, of which the following is a specification.

This invention relates to can-openers.

The object of the invention is to provide a can-opener of such construction as to adapt it for the rapid cutting of the top of a can of any size and shape by easily-operated means so arranged as to obviate possible danger of injury to the operator from the cutting-tool or other parts during use.

With this object in view the invention consists of a device constructed substantially as herein shown, described, and claimed.

The invention is illustrated in the accompanying drawings, in which—

Figure 1 is a perspective view of the can-opener, showing by dotted lines a can in position to have its top severed. Fig. 2 is a plan view of the lower portion of the frame of the implement, parts being broken away to show the means for operating the holding-clamps. Fig. 3 is a side view of the upright portion of the frame, the inner face of the latter being broken away to show the means for adjusting the cutting-tool and its operating means. Fig. 4 is a perspective view of the centering-point and cutting-tool removed from their supporting-arm, and Fig. 5 is a perspective view of a modified form of means for operating the cutting-tool.

In the drawings, 1 represents the frame of the implement, which may be of wood, metal, or other suitable material, and is preferably L-shaped, as shown.

Both the base or horizontal portion of the frame (designated by the number 2) and the upper vertical portion 3 thereof are pierced, providing openings 4 for the reception of screws or the like for attaching the device to a flat surface, such as a table, or to a wall or other vertical object. The rigid fastening of the opener in place, removing the necessity for

holding it when in use, allows the free use of both hands of the operator in manipulating the operative parts.

The base 2 of the frame has attached to or formed with it a plate 5, forming a support for a can or the like to be opened, and arranged to slide upon the plate are the clamps 6, adapted to move toward or away from each other to grip or release the base of a can the upper end of which is to be cut by the means to be described hereinafter.

The clamps 6 are each provided with pivoted shoes 7, arranged on the inner faces of the clamps and provided with serrated inner faces. These shoes by their form and arrangement being capable of movement independently of the clamps facilitate the firm grasping of a can whose lower end is of a circular or of any irregular shape.

Each clamp 6 has extending downward from it a lug 8, having therethrough a screw-threaded opening, and mounted in bearings below the plate 5 is a shaft 9, having a right-hand screw at one end and a left-hand screw at the other end, the respective ends engaging adjacent lugs of the clamps. By this means rotation of the shaft 9 by the crank 10, with which it is provided, in one direction will cause the clamps to move simultaneously toward each other, while the reverse movement will cause them to recede.

The cutting-tool is arranged on a horizontal bar 11, extending over the plate 5 and having one end adapted to move up or down in a way in the upright 3 of the frame. Formed with or attached to the arm is a rack 12, which when the parts of the device are aggrouped extends longitudinally of the way in the upright 3. Mounted in the upright in a position to mesh with the rack 12 is a pinion 13, having a shaft provided with a crank-handle 14, rigidly attached to or formed with it. By this means the bar carrying the cutting-tool may readily be raised or lowered or retained at any desired elevation.

Arranged in an opening in the bar 11 above the center of the plate 5 is a shaft 15, the lower end of which terminates in a point 16,

and to the upper end of which in the preferred form of the device is fixed a gear 17. Rotary movement is given the shaft 15 through the gear 17 by a pinion 18, meshing with the gear 17 and mounted on a shaft set in an opening in the upturned end 19 of the bar 11. A crank-handle 20, attached to the shaft of the pinion, affords means for rotating the pinion.

Formed with or attached to the shaft 15 is a horizontal arm 21, having therein a longitudinal slot 22, carrying the cutting-blade 23. The shank of the blade extends through the slot and has a jam-nut 24 on its upper end, by which it may be fixed at any desired point on the arm to adapt it in the operation of the implement to cut a circular opening of any desired diameter in a can or the like arranged and held on the plate 5.

In the modified form of means for operating the cutting-tool (shown in Fig. 5 of the drawings) the gear 17 and its impelling-pinion are dispensed with, as well as the upturned end of the bar 11, and the shaft 15 has attached to it a horizontal handle 25, by which the shaft and cutting-tool carried by it are operated. The handle is allowed to perform almost a complete circle, being only interrupted by the upright portion of the frame, and therefore the modified form is adapted for all uses excepting where it is necessary or desirable to have the cutting-tool completely sever a portion of the top from a can or the like.

In the operation of the implement a can or the like is placed on the plate 5, and the clamps are moved toward each other until the shoes are brought with their serrated faces firmly pressing against lower portions of the sides of the can. The bar 11 is then moved downward by its operating means to cause the point 16 and the end of the cutting-tool to pierce the material of the can or the like, and the cutting-tool is then moved in a circular direction to cut an opening. After cutting, the bar 11 is raised and the clamps moved away

from each other, immediately freeing the can and permitting its removal.

Having thus described our invention, what we claim as new, and desire to secure by Letters Patent, is—

1. A can-opener comprising a frame, means for supporting and holding a can including a supporting-plate and pivoted shoes arranged to approach and recede from each other simultaneously, a vertically-movable bar extending over the plate, a pointed shaft mounted on the bar, a cutting-tool carried by the shaft, and means for adjusting the bar and for imparting movement to the cutting-tool, substantially as described.

2. A can-opener comprising a frame having a vertical way therein, means for supporting and holding a can including a supporting-plate and pivoted shoes adapted to approach and recede from each other simultaneously, a bar extending over the plate and having a rack arranged in the way in the frame, a pointed shaft mounted on the bar, a cutting-tool carried by the shaft, a shaft carrying a pinion meshing with the rack, and means for imparting rotary movement to the pointed shaft, substantially as described.

3. A can-opener comprising a frame, means for supporting and holding a can, a bar extending over the support, and having a vertical rack at one end, the other end being upturned, a pointed shaft mounted in the bar, a gear fixed to the shaft, a pinion mounted on a shaft located in the upturned end of the arm and meshing with the gear, and a cutting-tool attached to the pointed shaft, substantially as described.

In testimony whereof we affix our signatures in presence of two witnesses.

ZALA A. CHURCH.
SAMUEL A. SMITH.

Witnesses:

A. D. HOWARD,
T. D. HOWARD.