

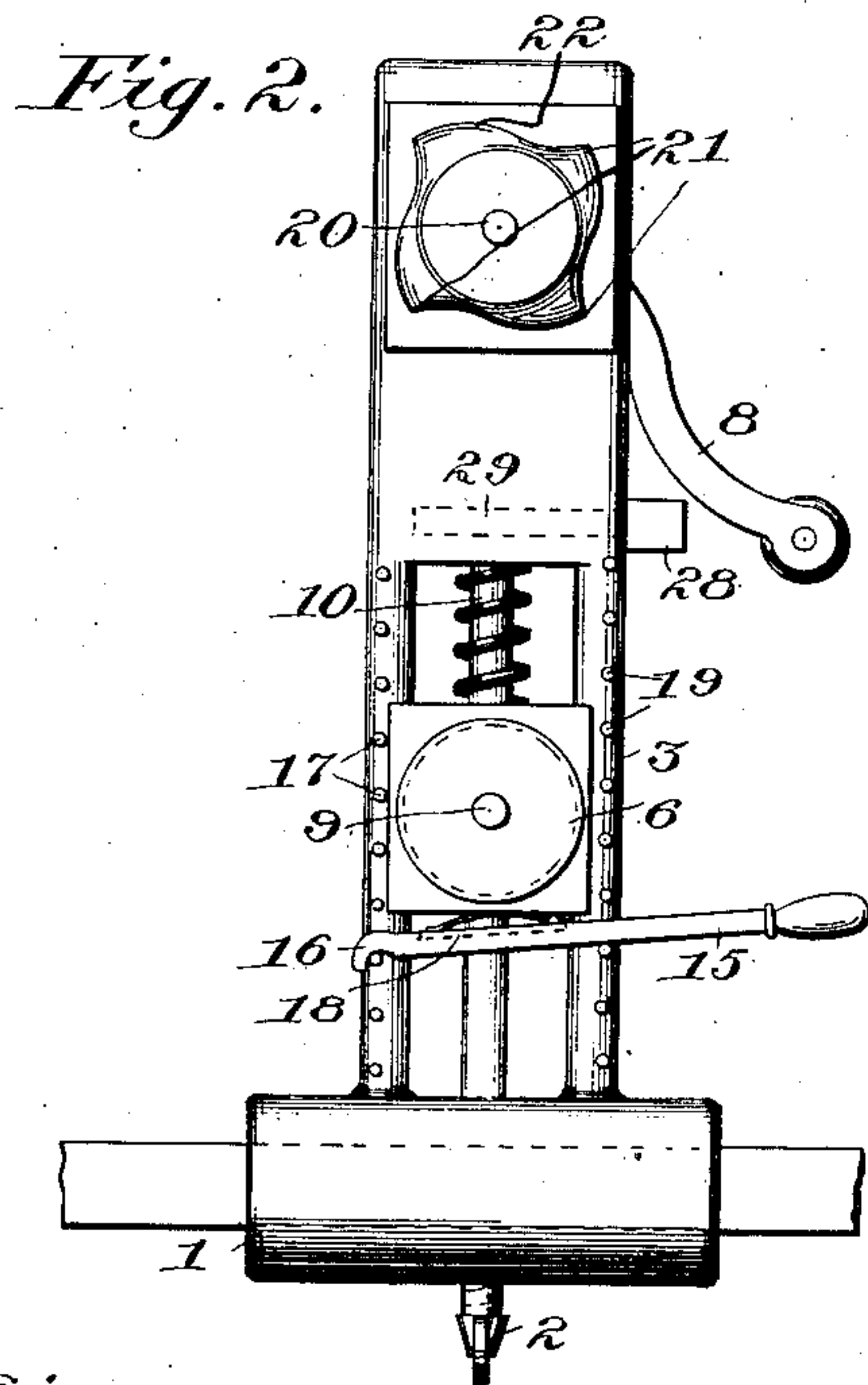
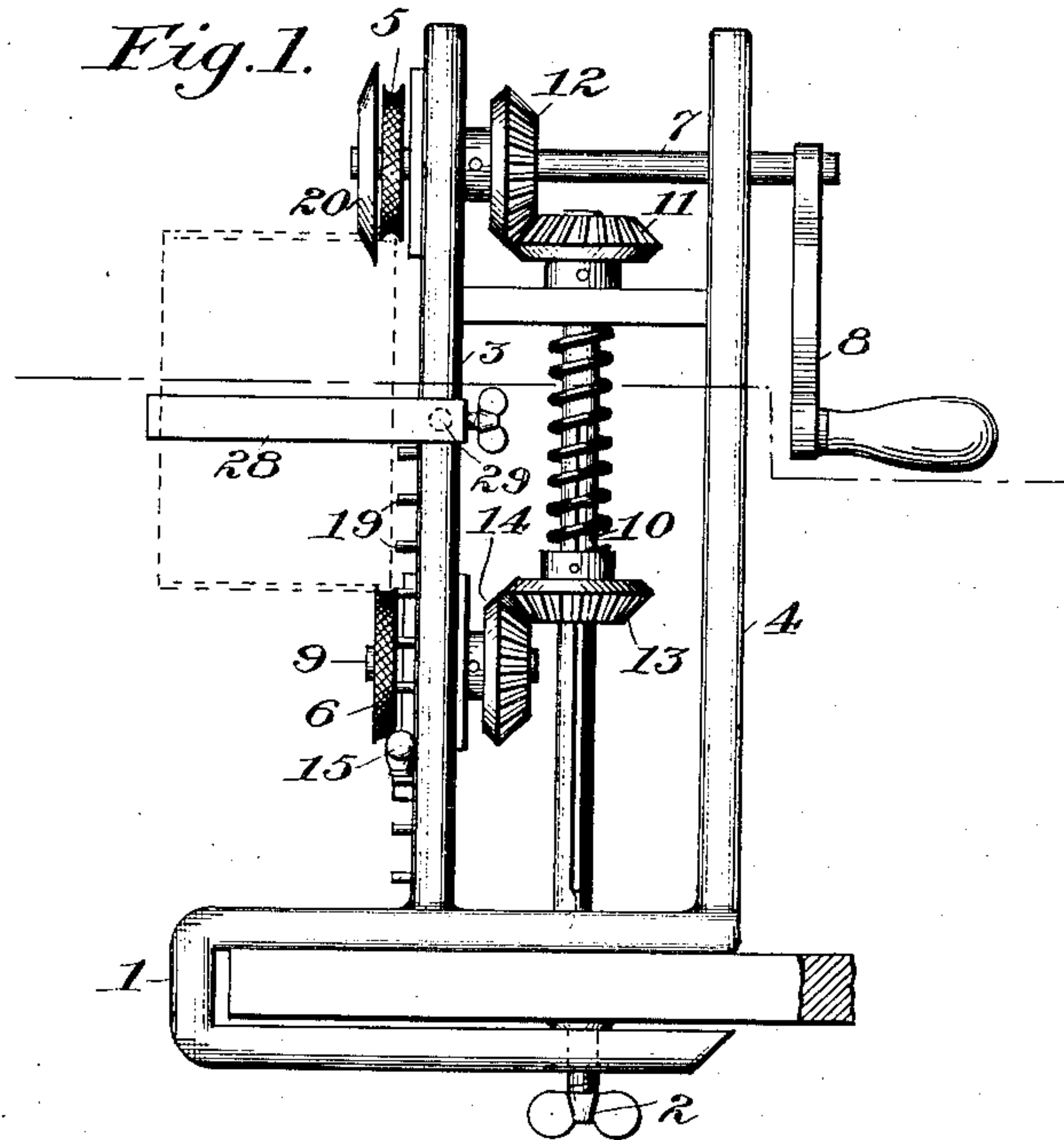
No. 836,744.

PATENTED NOV. 27, 1906.

M. J. FERREN.  
CAN OPENER.

APPLICATION FILED JULY 11, 1905.

2 SHEETS—SHEET 1.



Witnesses:

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Inventor:

*M. J. Ferren*  
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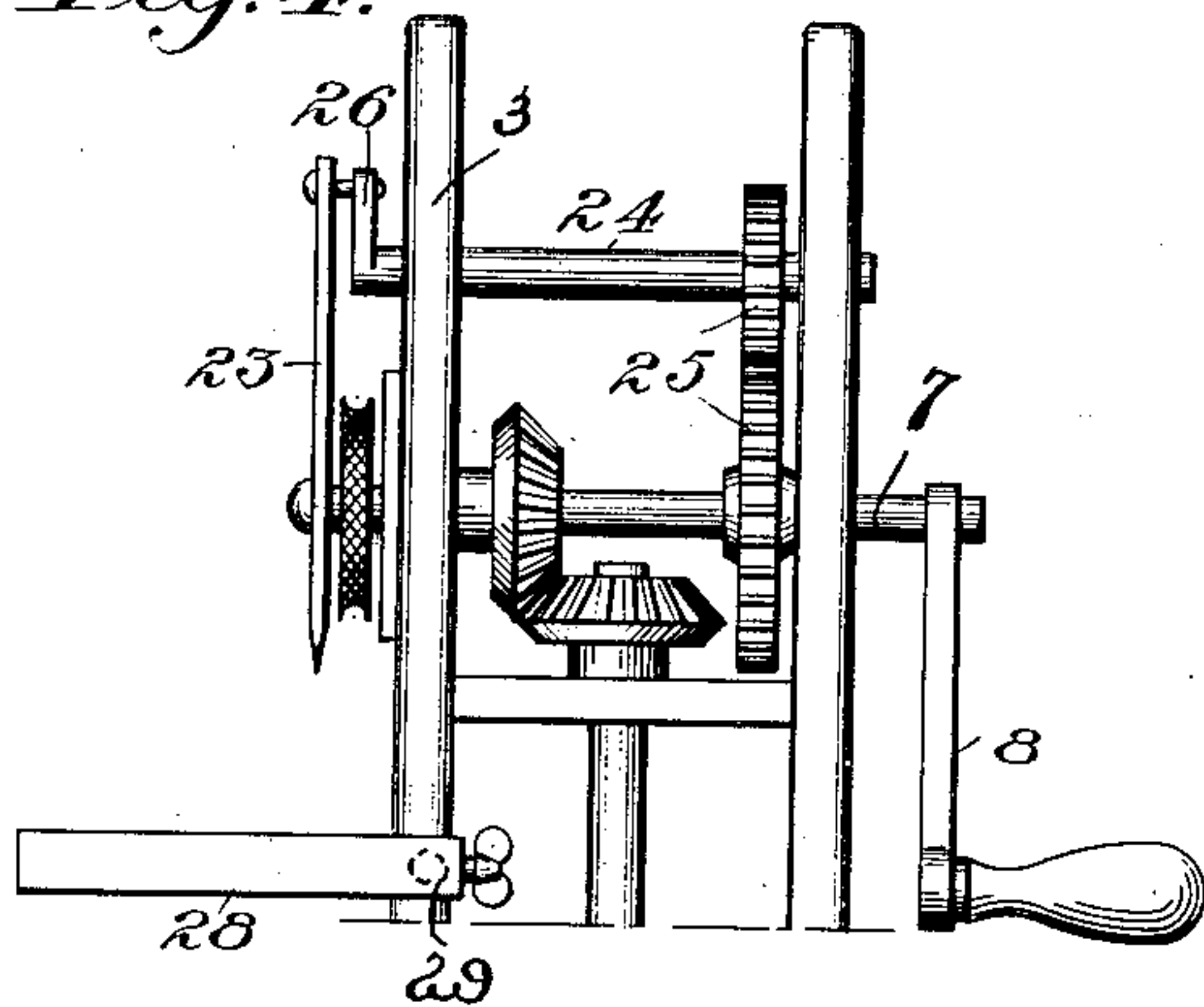
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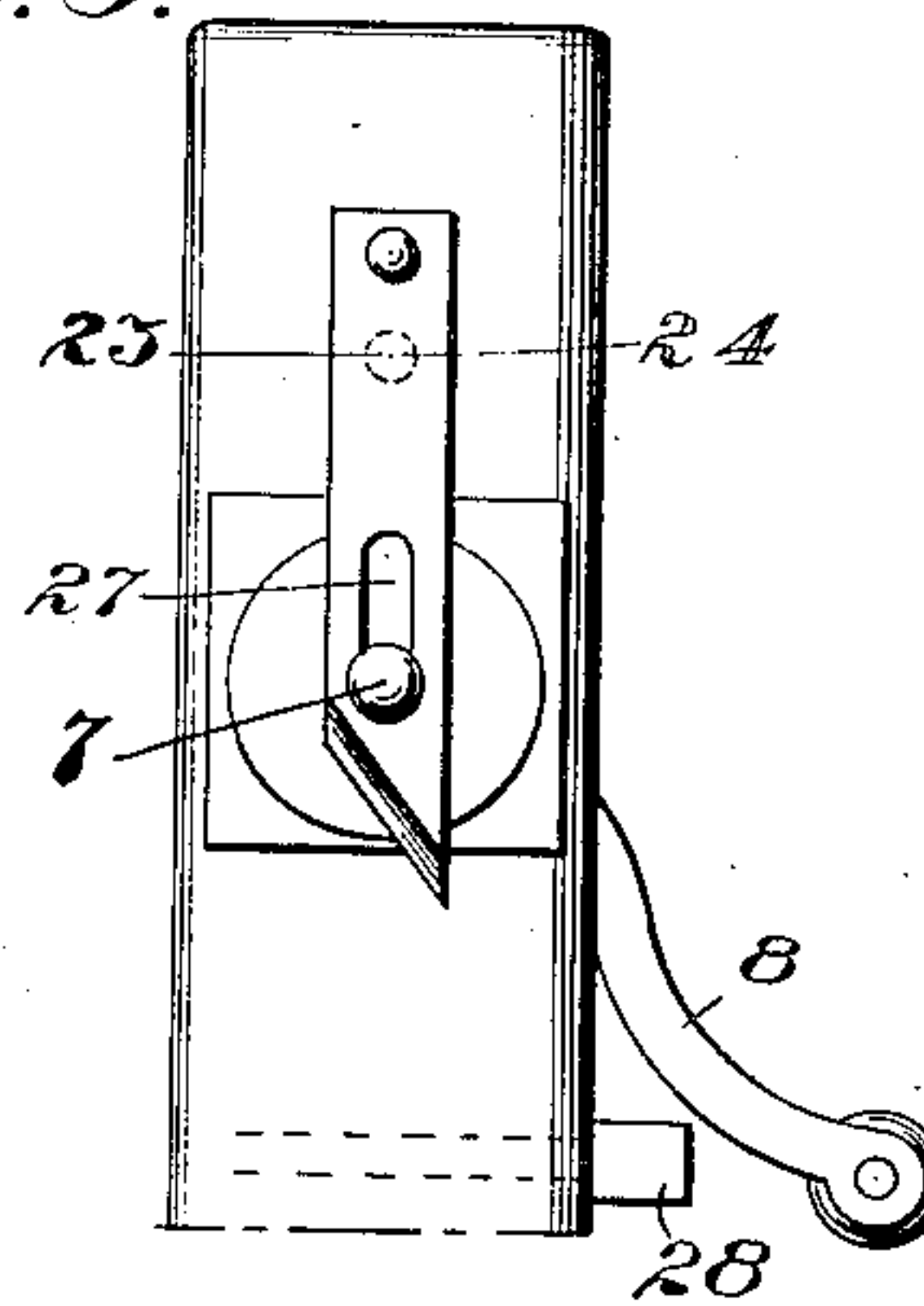
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2 SHEETS—SHEET 2.

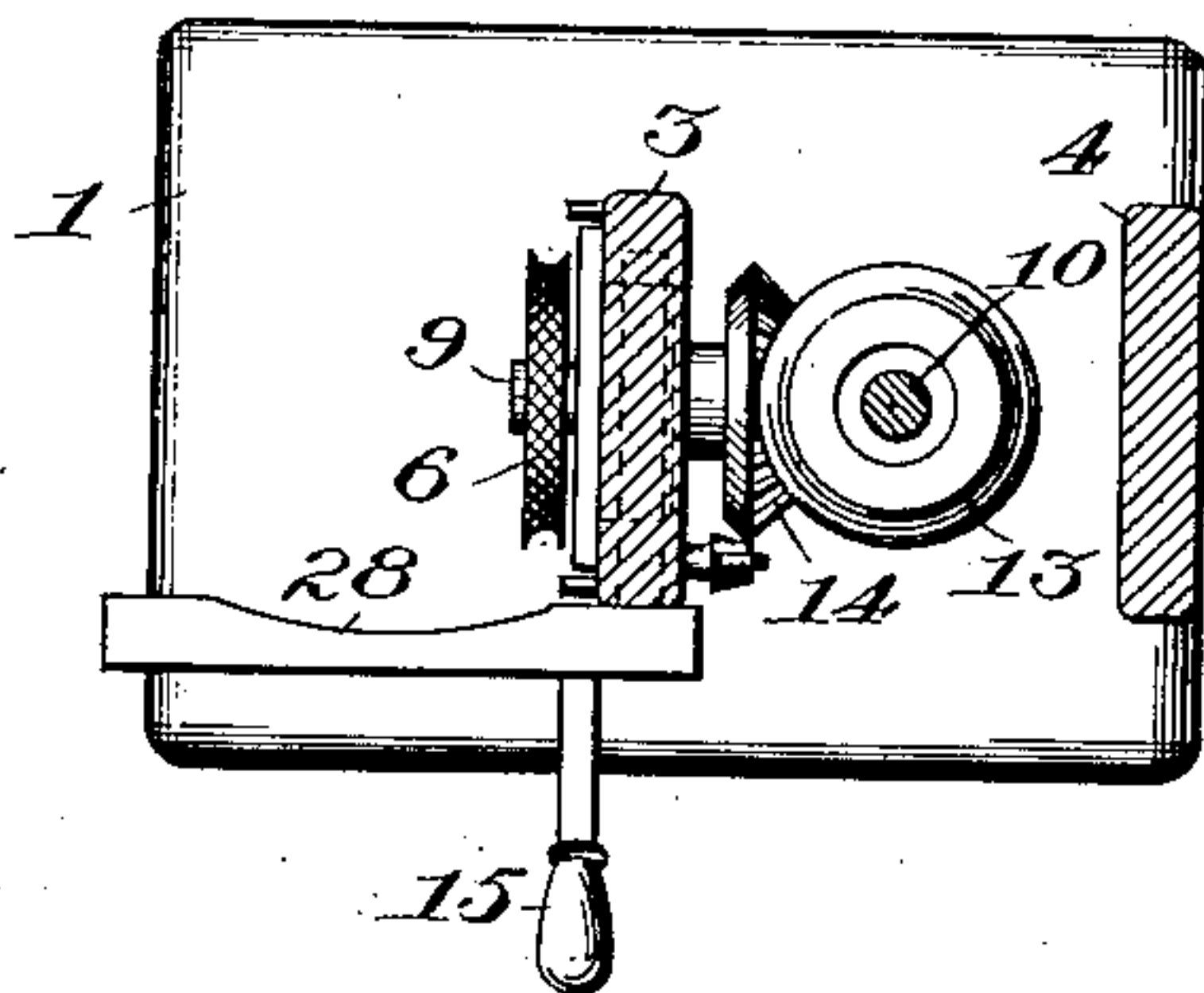
*Fig. 4.*



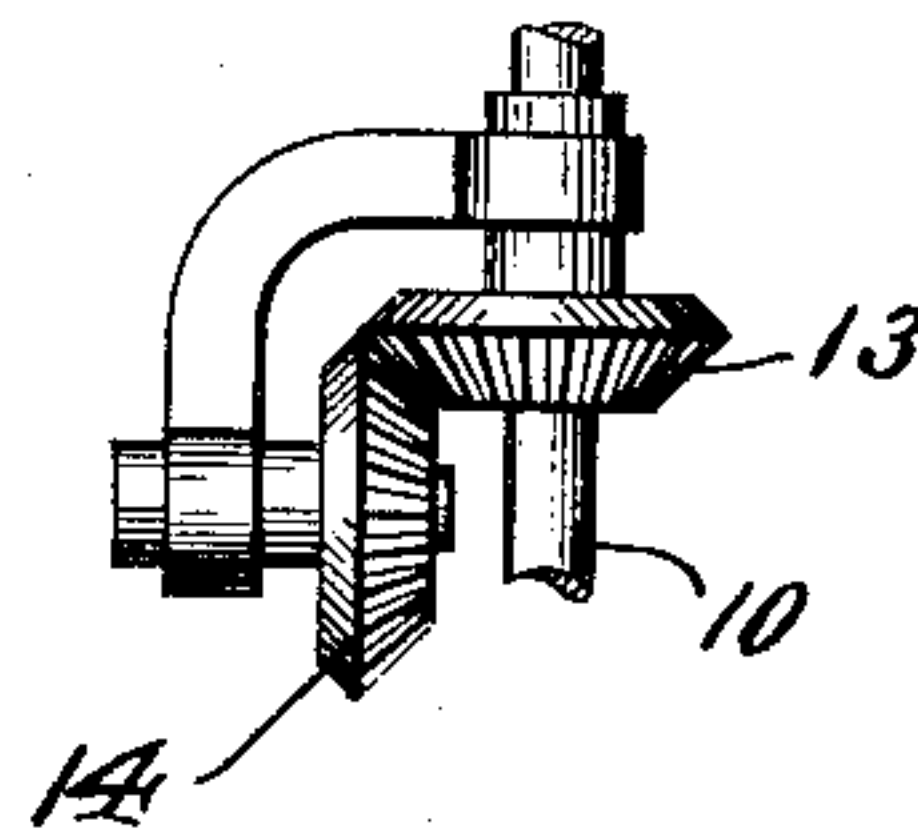
*Fig. 5.*



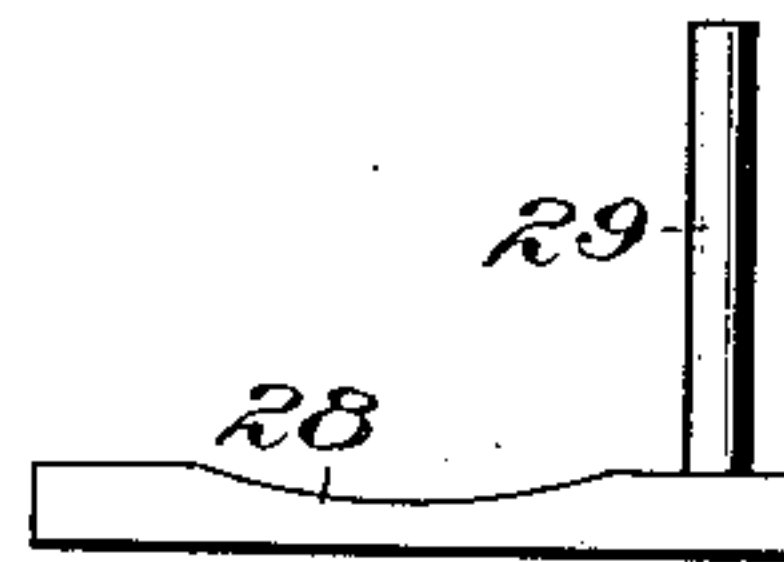
*Fig. 3.*



*Fig. 6.*



*Fig. 7.*



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*M. J. Ferren*  
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# UNITED STATES PATENT OFFICE.

MYRON J. FERREN, OF WASHINGTON, DISTRICT OF COLUMBIA.

## CAN-OPENER.

No. 836,744.

Specification of Letters Patent.

Patented Nov. 27, 1906.

Application filed July 11, 1905. Serial No. 269,203.

*To all whom it may concern:*

Be it known that I, MYRON J. FERREN, a citizen of the United States, residing in the city of Washington, in the District of Columbia, have invented certain new and useful Improvements in Can-Openers, of which the following is a specification.

My invention relates to can openers or cutters; and its object is to provide a device of simple construction by the aid of which a can may be cut or opened with great rapidity and with a minimum expenditure of effort.

The invention includes the combination and arrangement of component parts and the details of construction to be hereinafter described, and particularly pointed out in the claims.

The invention is susceptible of various embodiments without departing from the spirit or scope thereof; but for the purpose of clearly explaining the same it has been deemed necessary to illustrate and describe but a single exemplification of the complete device and a modification of the cutting mechanism proper.

In the accompanying drawings, Figure 1 is a side elevation of the device; Fig. 2, a front elevation thereof; Fig. 3, a transverse sectional view; Fig. 4, an elevation of the modified construction of cutting mechanism proper; Fig. 5, a detail view of the same. Fig. 6 is a detail view of a modified form of connection between two of the gears, and Fig. 7 is a plan view of the stop-arm.

The illustrated exemplification of the invention comprises generally a suitable supporting-frame intended to rest upon or be secured to a table, shelf, or the like, a cutter for operating upon the can, means engaging the can for supporting and rotating the same during the cutting operation, a hand-operated crank, and drive mechanism interposed between the latter and the supporting devices and cutter.

The supporting-frame shown in the accompanying drawings includes a horizontally-disposed base 1, having a forwardly-extending loop portion for the reception of the edge of the table, shelf, or the like, and a suitable screw 2 for clamping the base to the table, and vertically-disposed standards 3 4, preferably cast integral with the base 1.

The supporting and rotating means for the can, illustrated in the drawings, consists of two disks 5 6, intended, respectively, to co-act with the peripheral edge or bead at the

edge of the upper and lower ends of the can, each of which disks is preferably provided with a grooved periphery roughened or milled to afford a good gripping-surface. The disk 5 is shown as secured upon a horizontal shaft 7, which is journaled in the standards 3 4, and has fixed thereto an operating-crank 8. The disk 6 is arranged beneath and in alinement with the disk 5 and is mounted upon a horizontal shaft 9, journaled in a bearing-block movably mounted in the standard 3. Suitable drive mechanism is interposed between the shafts 7 9. The illustrated embodiment of this mechanism includes a vertically-disposed transmission-shaft 10, having a beveled gear 11 fixed thereto at one end, which intermeshes with a companion gear 12 on the shaft 7, and a second beveled gear 13, keyed thereon and capable of sliding lengthwise thereof, which intermeshes with a companion gear 14 on the shaft 9.

The shaft 9 is mounted in a movable bearing, as premised, in order that the disk 6 may be shifted toward and from the disk 5 to facilitate the placing of a can between the two and for varying the distance between the disks to accommodate cans of varying lengths.

It is preferable that the disk 6 be yieldingly pressed toward the disk 5, and the means for effecting this purpose (illustrated in the drawings) includes a shiftable rest 15 and a suitable spring interposed between the same and the bearing-block for the shaft 9.

On reference to Fig. 2 it will be seen that the rest 15 is provided at one end with a hook 16, designed to engage with any one of a vertical series of pins or projections 17 on the front face of standard 3, with a laterally-disposed lug 18, intended to project beneath the bearing-block of the shaft 9 and with an under edge upon the opposite side of the lug from the hook 16, designed to engage with one of a series of pins or projections 19 on the front face of standard 3. Between the lug 18 and the under side of the bearing-block a suitable spring is placed, the same being illustrated herein as a leaf-spring, secured intermediate of its ends to the under side of the bearing-block and having its ends arranged to find bearings on the face of the lug 18.

A cutter 20 for the can is illustrated in Figs. 1 and 2 as a disk, which is fixed to the end of the shaft 7 in advance of the disk 5 and is provided with a series of radial blades, each



having an entering-point 21 and a cutting edge 22.

The cutter illustrated in Figs. 4 and 5 consists of a reciprocating knife 23, which is actuated from a counter-shaft 24, driven from the shaft 7 through interposed multiplying-gearing 24. A crank 26 on the end of the counter-shaft 25 is connected to the upper end of the knife, and the latter is guided in its movement by means of the shaft 7, the end of which extends through a slot 27 in the body of said knife.

To hold the can properly centered during the cutting operation and to resist the tendency of the can to ride from between the disks 5 6, a suitable stop 28 is provided. In the accompanying drawings this stop is shown as an arm adjustably mounted on the standard 3, so that it may be moved toward and from the vertical plane of the axes of the disks 5 6 in order to accommodate cans of varying diameters and in addition may be thrown entirely out of action, or to the rear of the plane of the disk, so that it will be out of the way in case it is desired to cut a square can, or a can other than a round one is to be operated upon. The arm here shown is provided with a laterally-extending pin 29, revolving in a socket in the standard 3, with which a binding-screw 30 coacts for holding the arm in adjusted position.

The construction and operation of my invention will be readily understood upon reference to the foregoing description and accompanying drawings, and it will be appreciated that the parts and combinations recited may be varied within a wide range without departing from the spirit and scope thereof.

Having thus described the invention, what is claimed as new, and desired to be secured by Letters Patent, is—

1. In a can-opening device, means for engaging the peripheral beads on the upper and lower heads of the can while the latter is in an uncut condition, means for rotating the engaging means to impart a rotary movement to the can and means for cutting the can during the rotation thereof.

2. In a can-opening device, disks having concave peripheries to receive the beads at the opposite ends of the can, means for rotating the disks whereby a rotary movement is imparted to the can, and a cutter.

3. In a can-opener, means for supporting and directly imparting a rotary movement to the can, a cutter having movement during the rotation of the can, and means common to the cutter and supporting means for operating said mechanisms.

4. In a can-opener, means for supporting and rotating a can, a cutter and means for reciprocating the cutter in synchronism with the rotation of the can.

5. In a can-opener, means for supporting

and rotating a can comprising a drive-shaft, a counter-shaft, transmitting mechanism interposed between the same and the drive-shaft for driving the former from the latter, a cutter driven from the counter-shaft and operating during the rotation of the can.

6. In a can-opener, means for supporting and rotating a can including a drive-shaft, a counter-shaft, transmitting mechanism interposed between the same and the drive-shaft for driving the former from the latter, a cutter and a crank on the counter-shaft operatively connected to the cutter for reciprocating the latter.

7. In a can-opener, means for supporting and rotating a can including a drive-shaft, a counter-shaft, transmitting mechanism interposed between the same and the drive-shaft for driving the former from the latter, a cutter, a crank on the counter-shaft operatively connected to the cutter for reciprocating the same, and an extension on the drive-shaft coacting with the cutter to guide the same.

8. In a can-opener, disks engaging the peripheral beads at the ends of the can, said disks having peripheral grooves and the surface of the grooves being roughened, drive mechanism for the disks, and means for cutting the can, substantially as described.

9. In a can-opener, adjustably-held upper and lower disks engaging the opposite edges of the can, means for rotating the disks whereby a rotary motion is imparted to the can, and a knife for cutting the can-head during the rotation thereof, substantially as described.

10. In a can-opening device, a frame, a cutter, disks for engaging the can, a shaft carrying one of said disks, a hand-operated crank thereon, a second shaft carrying the other disk, and drive mechanism interposed between the shafts, substantially as described.

11. In a can-opening device, an upper disk for engaging the upper end of the can, a lower disk for engaging the lower end of the can, the latter being movable toward and from the first-named disk, means for rotating said disk whereby rotary movement is imparted to the can, and a knife for operating upon the can during the rotary movement thereof, substantially as described.

12. In a can-opening device, an upper disk, a lower disk movably mounted, means for yieldingly pressing the lower disk toward the upper disk, means for rotating the upper disk, and a knife for operating upon the can during the rotation thereof, substantially as described.

13. In a can-opener and in combination, an upper disk, a shaft carrying the same, an operating-crank mounted on the shaft, a lower disk, a second shaft carrying the same, a movable bearing for the lower disk, transmission-gearing interposed between the first



and second shafts, and a cutter for operating upon the can, substantially as described.

14. In a can-opener and in combination, an upper disk, a shaft carrying the same, an operating-crank mounted on the shaft, a lower disk, a second shaft carrying the same, a movable bearing for the lower disk, transmission-gearing interposed between the first and second shafts, a cutter for operating upon the can, and means exerting a yielding pressure on the bearing including a rest, and a spring interposed between the rest and the bearing, substantially as described.

15. In a can-opener and in combination, an upper disk, a shaft carrying the same, an operating-crank mounted on the shaft, a lower disk, a second shaft carrying the same, a movable bearing for the lower disk, transmission-gearings interposed between the first and second shafts, a cutter for operating upon the can, and means exerting a yielding pressure on the bearing including an adjustable rest, and a spring interposed between the same and the bearing with which it is associated, substantially as described.

16. In a can-opener and in combination, a frame, a shaft journaled therein, a disk mounted on one end of the same for engaging the periphery of the can, an operating-handle mounted upon its opposite end, a second shaft, a bearing mounted in the frame and movable lengthwise thereof in which said second shaft is journaled, a disk for engaging the can fixed to the second shaft, transmis-

sion-gearing interposed between the first and second shafts, a cutter for operating on the can, two series of vertical pins projecting from the frame, a member supported by said pins, and a spring interposed between said member and the movable bearing for the second shaft, substantially as described.

17. In a can-opener and in combination, a support for one end of the can, a support for the other end of the can having a rotary movement whereby a rotary movement is imparted to the can, a cutter for operating upon the can, and a stop for retaining the can in operative position, substantially as described.

18. In a can-opener and in combination, a support for one end of the can, a support for the other end of the can having a rotary movement whereby a rotary movement is imparted to the can, a cutter for operating upon the can, and an arm constituting a stop adjustable in one direction to accommodate cans of varying diameters and having a movement in another direction to carry the same out of active position, substantially as described.

In testimony whereof I have hereunto signed my name, in the presence of two attesting witnesses, at Washington, District of Columbia, this 3d day of July, 1905.

MYRON J. FERREN.

Witnesses:

HENRY E. COOPER,  
FANNIE R. FITTON.