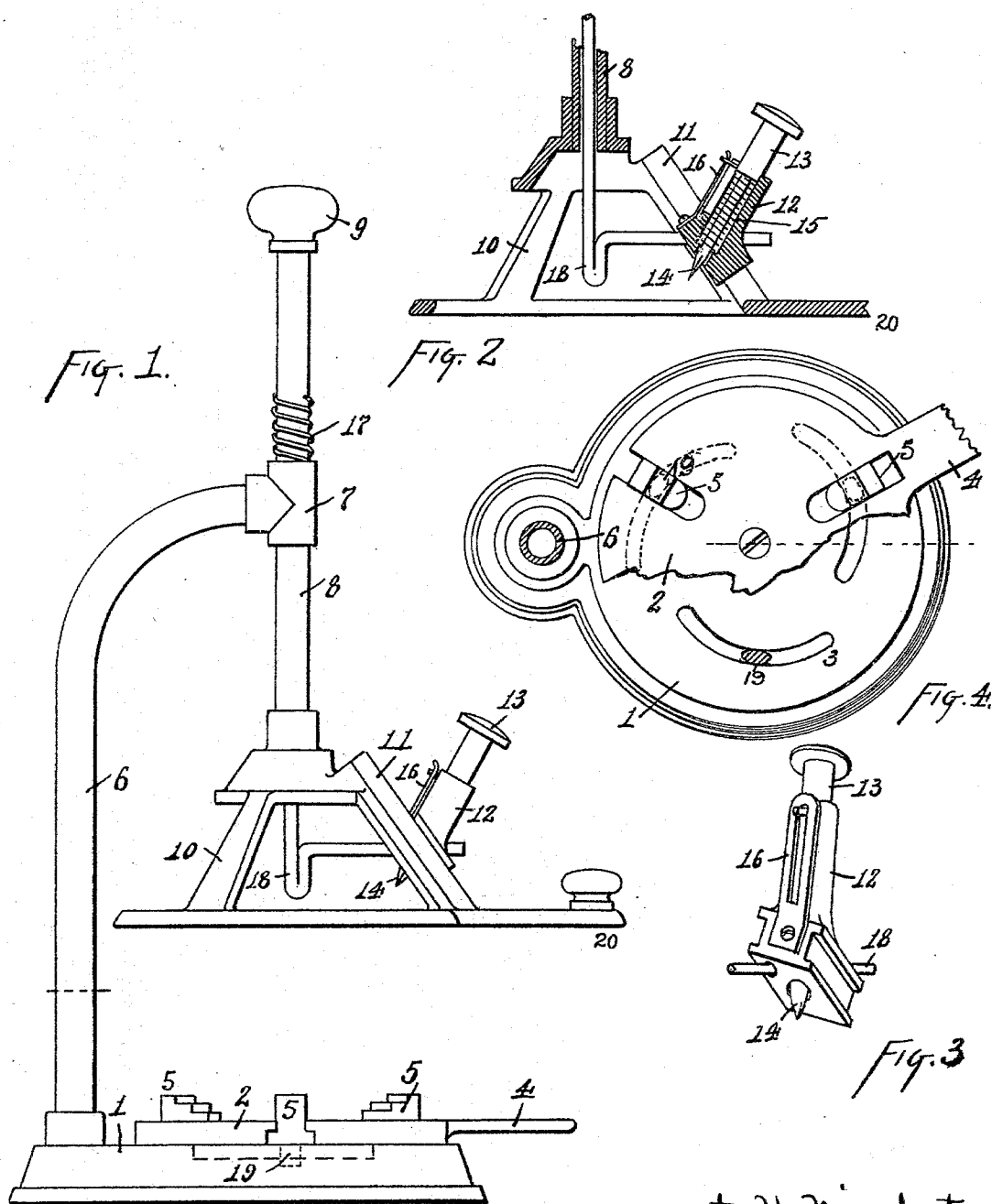


(No Model.)

C. H. WINCHESTER.
CAN OPENER.

No. 515,983.

Patented Mar. 6, 1894.



Witnesses:
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UNITED STATES PATENT OFFICE.

CLEMENT H. WINCHESTER, OF HAMILTON, OHIO, ASSIGNOR TO BENJAMIN F. F. BRODT, OF SAME PLACE.

CAN-OPENER.

SPECIFICATION forming part of Letters Patent No. 515,983, dated March 6, 1894.

Application filed July 10, 1893. Serial No. 430,089. (No model.)

To all whom it may concern:

Be it known that I, CLEMENT H. WINCHESTER, of Hamilton, Butler county, Ohio, have invented certain new and useful Improvements in Can-Opening Machines, of which the following is a specification.

This invention pertains to improvements in machines for opening metal cans, such, for instance, as those employed in canning fruits and vegetables.

My improvements will be readily understood from the following description taken in connection with the accompanying drawings in which—

Figure 1, is a side elevation of a machine exemplifying my improvements; Fig. 2, a vertical section of the cutter-carrying part thereof; Fig. 3, a perspective view of the tool-block; and Fig. 4, a plan of the chuck.

In the drawings:—1, indicates the base-plate of the machine; 2, a radially slotted disk centrally pivoted on the upper surface of the base-plate; 3, eccentric slots in the base-plate, one for each of the radial slots of the disk; 4, a handle on the disk by means of which the disk may be turned upon its pivot; 5, chuck-jaws fitted for radial sliding motion in the disk and having each a stud projecting down into the appropriate slot of the base-plate, whereby when the disk is partially rotated the chuck-jaws are forced to and from the center of the disk, the construction thus far described forming a chuck adapted to firmly grasp the base of the can to be opened; 6, a standard rising from the base-plate; 7, a bearing supported by the standard with its axis coincident with the axis of the chuck; 8, a hollow spindle fitted to turn and slide in the bearing; 9, a handle on the upper end of the hollow spindle for raising the spindle and its attachments; 10, an open bottom conical spider fixed upon the lower end of the spindle; 11, the interior dimensions of this spider being such that it may engage and rest upon the upper periphery of the various sizes of cans to be dealt with; 12, a focally disposed guide-way formed in one of the legs of the spider; 13, a tool-block arranged to slide focally freely in this guide-way; 14, a tool fitted to slide in and out through the tool-block in a direction substantially at right angles to the focal plane of the guide-way in which the

tool-block slides; 15, the spear-shaped cutting point of the tool, projecting from the guide-block into the interior of the spider; 16, a spring arranged around the tool, within the tool-block, and engaging a shoulder on the tool and a shoulder in the tool-block, this spring tending to press the tool outwardly from the spider so that the point of the tool will project but a trifle within the spider; 17, a slotted latch-spring secured to the tool-block and engaging a pin projecting outwardly from the tool through a slot in the tool-block and through a slot in the latch spring, whereby the latch spring limits the outward motion of the tool in the tool-block; 18, a cushion spring upon the hollow spindle between the bearing 7 and handle 9 and serving to prevent the structure carried by the spindle from dropping hard down upon the chuck; 19, a rod extending axially loosely from the spider up into the hollow spindle and having its lower end somewhat below the point of the cutting tool when the tool is in idle position, this rod having also a horizontal arm projecting outwardly loosely through a hole in the tool-block; 20, the studs previously referred to as projecting from the chuck jaws into the slots of the base-plate; and 21, a handle on the spider structure by means of which the spider may be turned upon its axis.

The operation of the device is as follows:—The chuck being opened, and the spider-structure elevated by means of the handle 9, the can to be opened is set within the chuck and firmly clamped and the spider-structure is lowered to engage the top of the can. As the spider goes down upon the top of the can the lower end of rod 18 engages the top of the can and is pushed upward, carrying the tool-block and tool with it so that whatever the diameter of the can the point of the tool will be supported a short distance above the top of the can. This rod is not essential as the periphery at the top of the can may itself engage the inwardly projecting portion of the tool-block and elevate it to the proper height, but the rod arrangement is much preferable as it avoids the necessity for care in adjusting the spider upon the can. The can will thus be fixed in the chuck and the spider will rest upon it with the point of the tool

near the top of the can inwardly beyond the rim of the can. The tool is then thrust inwardly, causing its point to penetrate the can. Handle 20 is now to be operated, thus turning the spider upon the top of the can and causing the tool to describe almost a complete circle, interrupted only by the standard 6, thus cutting the top of the can almost entirely free. The can being removed its top may be turned up to open the can, the uncut portion acting as the hinge.

By releasing the latch spring 16 the tool may be withdrawn from the tool-block and its point readily sharpened.

15 I claim as my invention—

1. In a can opening machine, the combination, substantially as set forth, of a chuck adapted to receive and clamp a can, a conical spider mounted on a spindle with its axis coincident with the axis of the chuck and arranged for rotary and endwise motion, a tool-block fitted to slide in the spider, and a tool carried by said tool block.

2. In a can opening machine, the combination, substantially as set forth, of a chuck adapted to receive and clamp a can, a conical spider mounted on a spindle with its axis in line with the axis of the chuck and arranged for rotary and endwise motion, a tool-block carried by the spider and fitted for sliding motion in the spider, and a tool carried by the tool-block and fitted for sliding motion therein.

3. In a can opening machine, the combination, substantially as set forth, of means for holding the can, a conical spider mounted on a spindle with its axis in line with the axis of the chuck and arranged for rotary and end-

wise motion, a tool-block arranged to slide in the spider, a tool carried by the tool-block and having its cutting point projecting within the spider, and a rod engaging the tool-block and presenting a portion downwardly within the spider at about the level of the point of the tool.

4. In a can opening machine, the combination, substantially as set forth, with the chuck, spider, and sliding tool-block, of a tool fitted for endwise motion in the tool-block, a spring tending to press the tool outwardly, and a latch spring upon the tool-block to limit the outward motion of the tool therein.

5. In a can opening machine, the combination, substantially as set forth, with the chuck, conical spider, the spindle which carries the spider, the tool-blocks sliding in the spider and the tool carried by the tool-block, of a rod fitted loosely within the spindle and presenting a portion centrally within the spider and having an outwardly projecting arm loosely engaging the tool-block.

6. In a can opening machine, the combination, substantially as set forth, with the conical spider, its spindle, the tool-block fitted to slide in the spider, and the tool carried by the tool-block, of a base-plate provided with eccentric slots, a radially slotted disk mounted on the base-plate with its pivot in line with the axis of the spider, and chuck-jaws fitted to slide in the slots of the disk and having studs projecting into the slots of the base-plate.

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