

No. 751,515.

PATENTED FEB. 9, 1904.

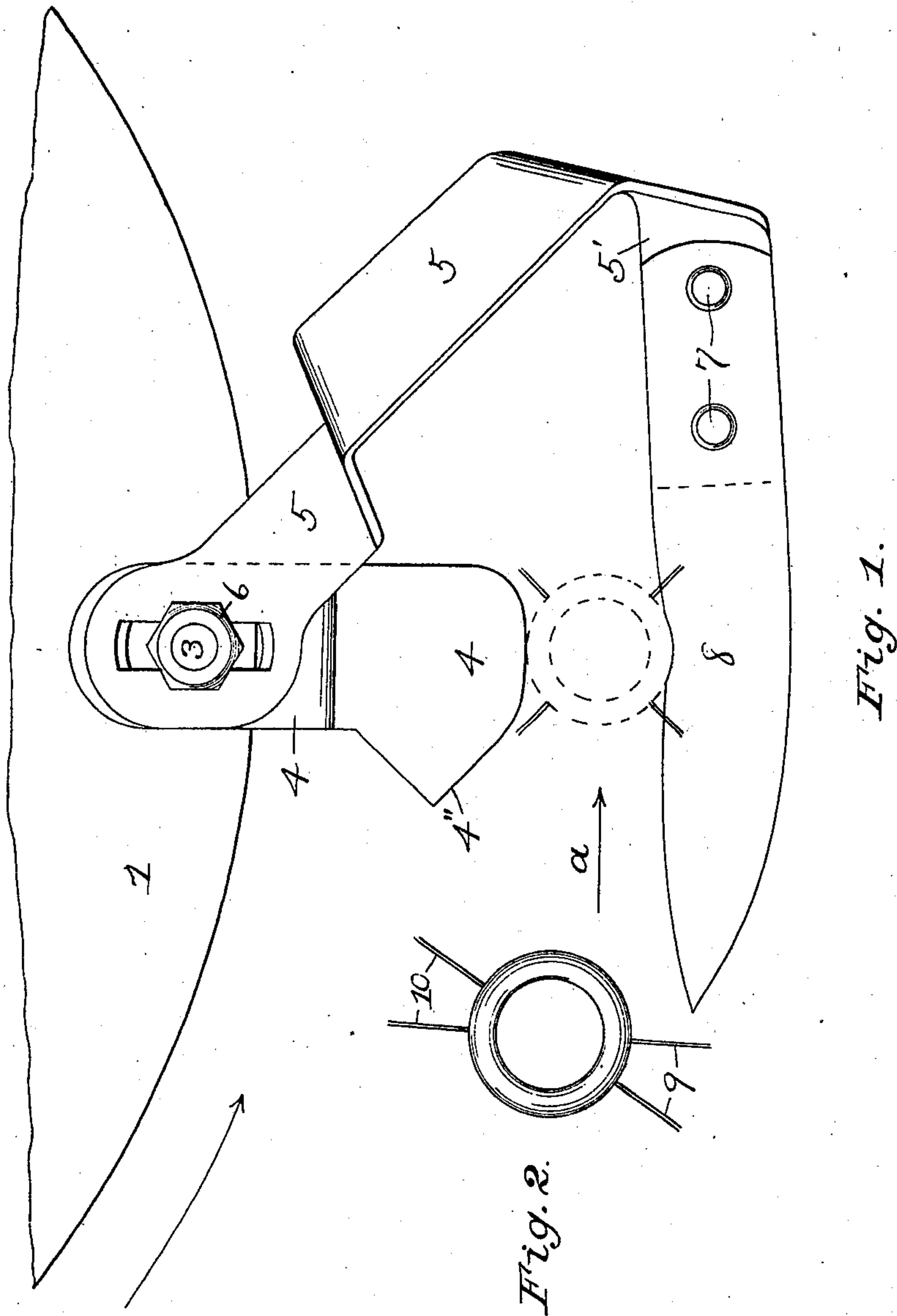
J. P. SCHMIDT & J. E. JACOBS.

ATTACHMENT FOR BOTTLE CORKING, CAPPING, AND WIRING MACHINES.

APPLICATION FILED MAY 12, 1903.

NO MODEL.

2 SHEETS—SHEET 1.



WITNESSES:

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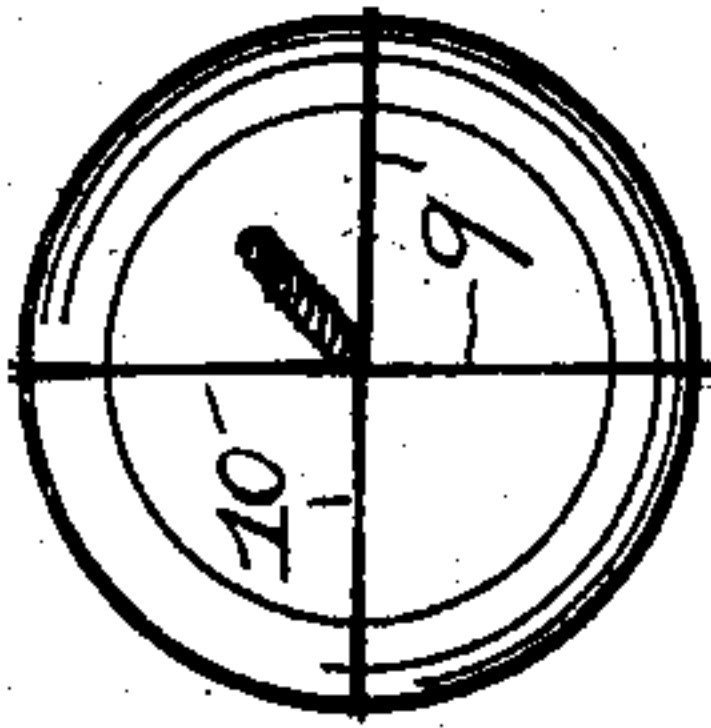


Fig. 5.

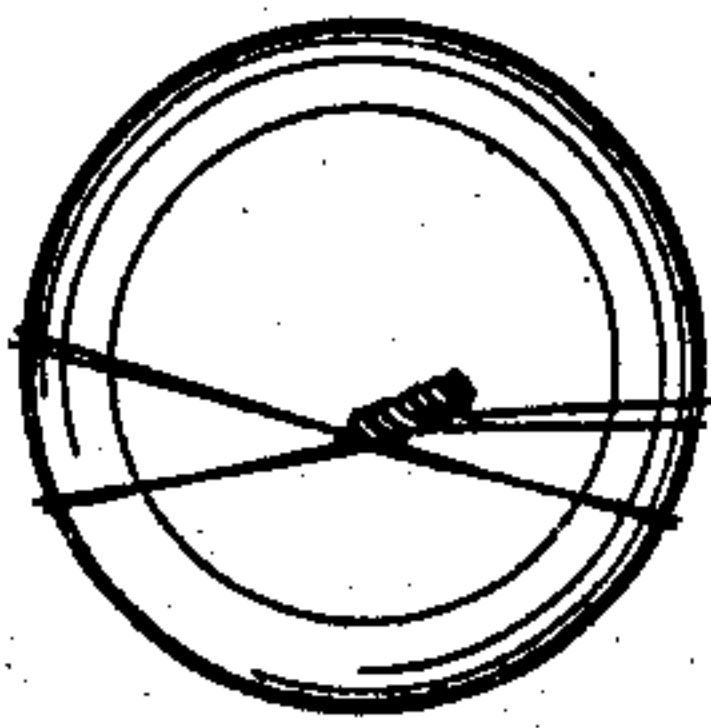


Fig. 4.

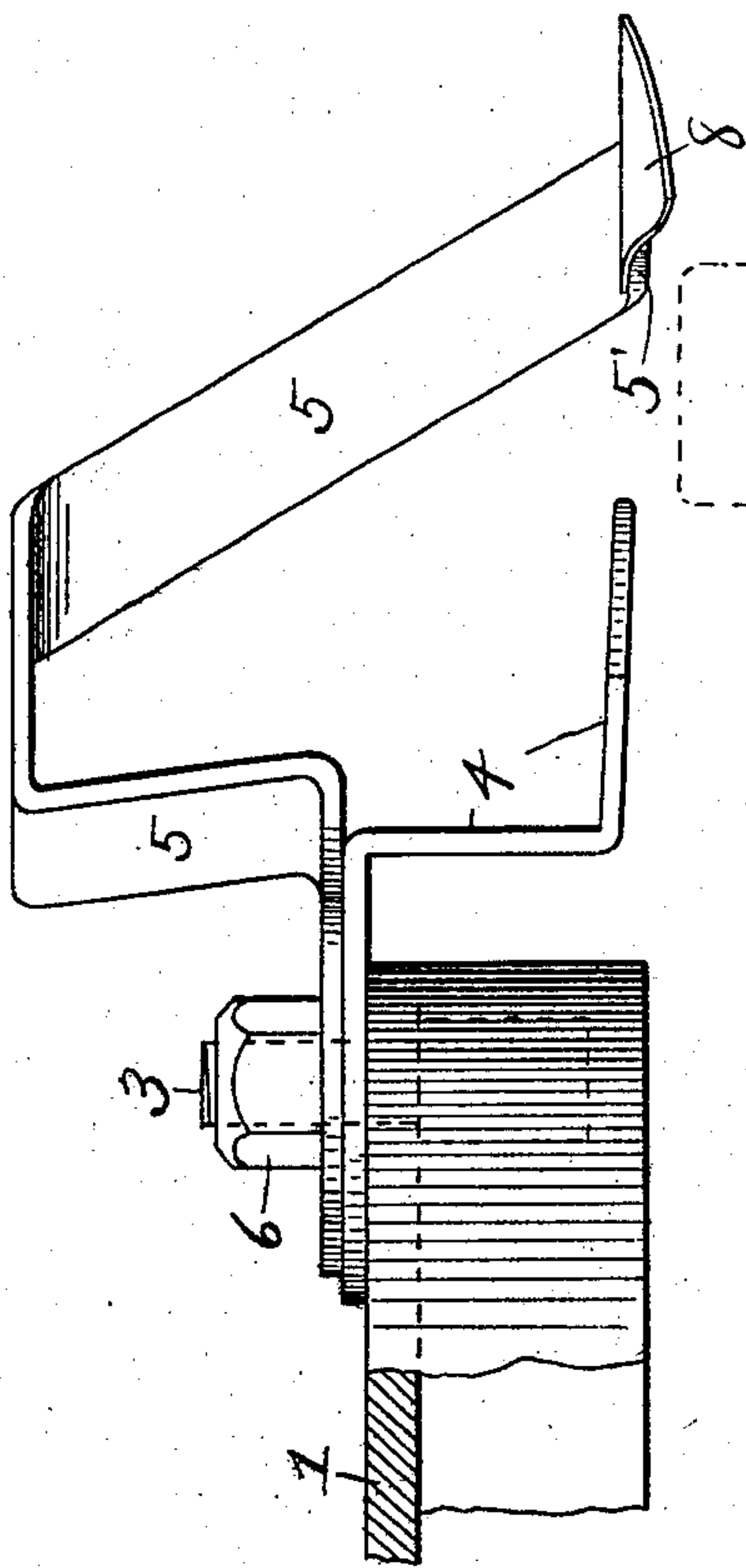


Fig. 3.

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UNITED STATES PATENT OFFICE.

JOSEPH P. SCHMIDT AND JOHN E. JACOBS, OF KANSAS CITY, MISSOURI.

ATTACHMENT FOR BOTTLE CORKING, CAPPING, AND WIRING MACHINES.

SPECIFICATION forming part of Letters Patent No. 751,515, dated February 9, 1904.

Application filed May 12, 1903. Serial No. 156,857. (No model.)

To all whom it may concern:

Be it known that we, JOSEPH P. SCHMIDT and JOHN E. JACOBS, citizens of the United States, and residents of Kansas City, in the county of Jackson and State of Missouri, have invented new and useful Improvements in Attachments for Bottle Corking, Capping, and Wiring Machines, of which the following is a specification.

Our invention relates to an attachment for a bottle corking, capping, and wiring machine, which may be identified by means of the following patents—to wit, No. 400,776, April 2, 1889; No. 406,450, July 9, 1889, and other patents.

In order to explain the object of our invention, it is necessary to call attention to a certain defect which occurs in the operation of the wire-lifting devices of the "carrier" of the above-named machine. The carrier in said machine is a rotating mechanism which carries the bottles around while they are being capped and wired. This carrier is provided with jaws which are provided with internal rubber pads, and after the wires are affixed upon the neck of a bottle a pair of these jaws close together upon opposite sides of the neck of the bottle for the purpose of holding the wires in their proper (crossed) position until the ends of the wire are twisted together by the final twister; but in four cases out of five when these jaws close upon the wires (and the bottle-neck) they disarrange the wires by turning them partially around, so that the upwardly-projecting wires instead of being held ninety degrees apart, as shown in Fig. 1 of the accompanying drawings, are turned in such a manner that they form acute and obtuse angles, as shown in Fig. 2. The result is that on four out of five bottles the wires when finally twisted are drawn to one side of the cap, as shown in Fig. 4. After being capped and wired the bottles of beer are placed in a steaming-vat and their contents are boiled, which of course creates a powerful pressure within the bottles, and if the wires are not properly arranged across the caps the corks will be blown out of the bottles. At present it is customary to employ a

man to attend each capping and wiring machine to properly cross the wires before they are finally twisted.

The object of our invention is to save the cost of the wages of these operatives and to insure the proper wiring of each bottle, so that no corks can be blown out in the steaming-vats.

Referring now to the drawings, Figure 1 is a top plan view of an attachment embodying our invention, showing the wires of a bottle before final twisting. Fig. 2 represents the neck or top of the bottle approaching the attachment, its wires being disarranged by the wire-lifter jaws. (Not shown.) Fig. 3 is a side elevation of our attachment looking in the direction of the arrow *a* in Fig. 1. Fig. 4 represents the top of a capped and wired bottle with the wires as they may be twisted by a machine unprovided with our attachment. Fig. 5 represents the wires as twisted by a machine provided with our attachment.

1 designates a portion of a stationary circular plate that covers the bottle-carrier in the aforesaid corking, capping, and wiring machine. Projecting upwardly from a point on the rim of said plate is a stud-bolt 3, which may be utilized as a means for attaching our invention to said plate. Our attachment comprises two metallic pieces 4 and 5, of which the piece 4 will be termed the "inner guide" and the piece 5 will be termed the "outer guide-bracket." The inner end of each of said pieces is slotted, as shown, to receive the bolt 3, on which is a nut 6, by which said pieces are rigidly secured to the circular plate 1. The inner guide 4 is bent downwardly, then outwardly, as shown in Fig. 3. Its lower horizontal portion 4' is provided with a pointed portion 4'', which projects in the opposite direction to that in which the bottles are moved by the carrier. In other words, said point 4'' projects toward the approaching bottles.

The outer guide-bracket 5 is bent upwardly, then outwardly in a direction oblique to that of the inner guide 4, then downwardly, then horizontally to the left, as shown. Its lower horizontal portion 5' lies in about the same plane as the lower horizontal portion 4' of the

inner guide 4. Secured to the lower portion 5' of the outer guide-bracket 5 by rivets or screws 7 is the outer guide 8. This is a pointed piece of rather thin springy metal, and it extends to the left past the inner guide 4. Said outer guide is slightly inclined downwardly toward its point, so that it will "pick up" the outer pairs of wires 9 as a bottle approaches it, the bottles being revolved by the carrier in the direction of the arrow, Fig. 1. A recess is necessarily cut in the inner edge of the outer guide 8 at the point when the bottle stops to receive its tin cap, the said recess being provided to allow the cap to be deposited upon the mouth of the bottle.

The space between the inner guide 4 and the outer guide 8, measured radially, is about equal to the diameter of the mouth or top of a bottle. The slots in the inner ends of said guides extend radially and provide means for adjusting the guides radially in or out or toward or from each other.

The operation of our invention is as follows: In this machine two pairs of wires are attached automatically to the neck of the bottle, and the wires are so twisted and cut that apparently four pairs of wires 9 and 10 are left projecting outwardly from the bottle-neck. These wires are lifted to almost vertical positions by a pair of opening and closing jaws, (not shown,) and owing to the closing movement of said jaws the wires are usually turned out of their proper relative angle, as shown in Fig. 2; but even when said jaws are closest together they do not press tightly enough upon the wires to prevent them from turning, so that when the bottle is carried in between the guides 4 and 8 of our attachment the outer wires 9 will be engaged by the outer guide 8, which is so adjusted that it will turn said wires around to their correct positions—i. e., ninety degrees apart—as shown in Fig. 1. The bottle is now stopped and capped and moved on to the final twisting mechanism, which twists all the wires together, and the wires then appear as shown in Fig. 5.

The outer guide 8 might be formed integral with its bracket 5, if preferred.

Having now described our invention, what

we claim as new, and desire to secure by Letters Patent, is—

1. In a machine for wiring bottles by means of two pairs of wires having four pairs of ends for final twisting, the combination, with the stationary plate above the carrier, of an inner guide, an outer guide-bracket, and an outer guide secured to the outer guide-bracket; said inner guide and outer guide-bracket being rigidly secured to said plate, said outer guide being held at about the same height as said inner guide, and pointing oppositely to the direction in which the bottles are carried, substantially as described.

2. In a machine for wiring bottles by means of two pairs of wires having four pairs of ends for final twisting, the combination, with the stationary plate above the carrier, of a rigid inner guide, an outer bracket, and a flexible outer guide; said inner guide and outer guide-bracket being rigidly secured to said plate, and said outer guide being secured to the outer guide-bracket, and inclined downwardly toward its end and pointing oppositely to the direction in which the bottles are carried, substantially as described.

3. In a machine for wiring bottles by means of two pairs of wires having four pairs of ends for final twisting the combination, with the stationary plate above the carrier, of a rigid inner guide, an outer guide-bracket, and a flexible outer guide; said inner guide and outer guide-bracket being rigidly secured to said plate, and said outer guide being secured to the outer guide-bracket, and inclined downwardly toward its end, and pointing oppositely to the direction in which the bottles are carried, said guides being so adjusted as to arrange the pairs of wire ends ninety degrees apart, so that when the wires are finally twisted they will cross the cap of the bottle at right angles, substantially as described.

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

JOSEPH P. SCHMIDT.
JOHN E. JACOBS.

Witnesses:

JAMES F. YEAGER,
M. L. LANGE.