

L. WILSON.
CIRCUIT SWITCH.
APPLICATION FILED FEB. 3, 1910.

970,410.

Patented Sept. 13, 1910.

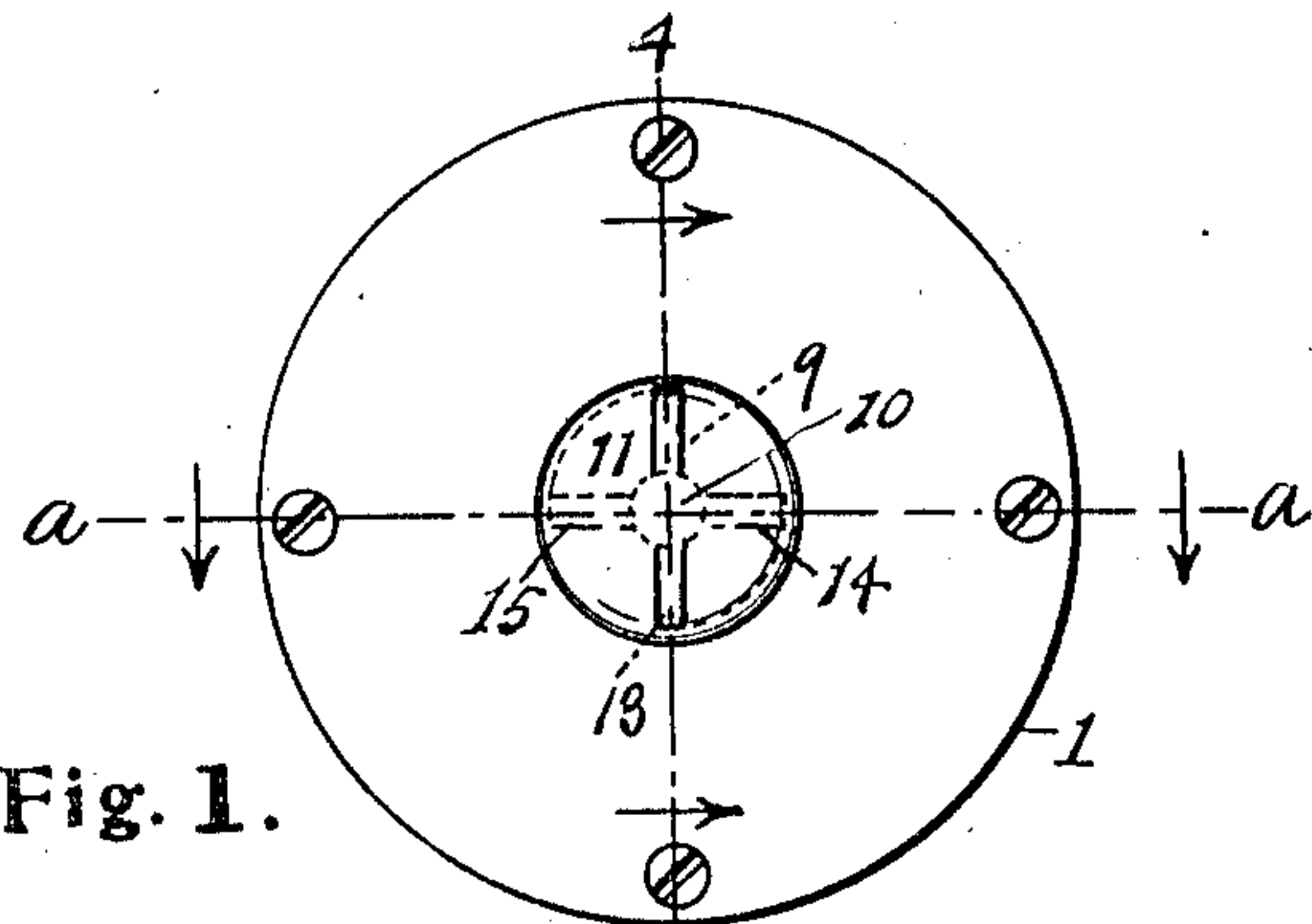


Fig. 1.

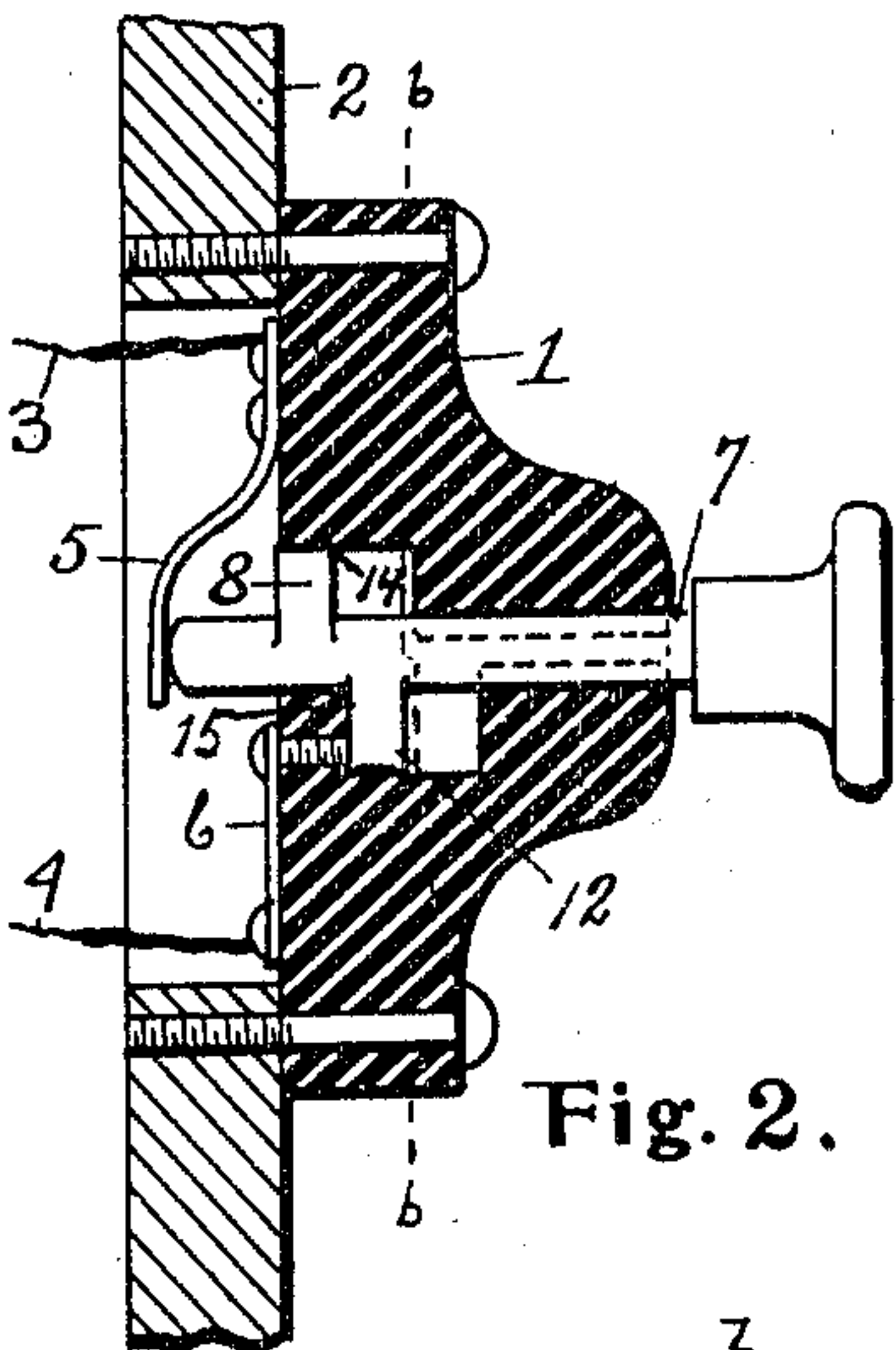


Fig. 2.

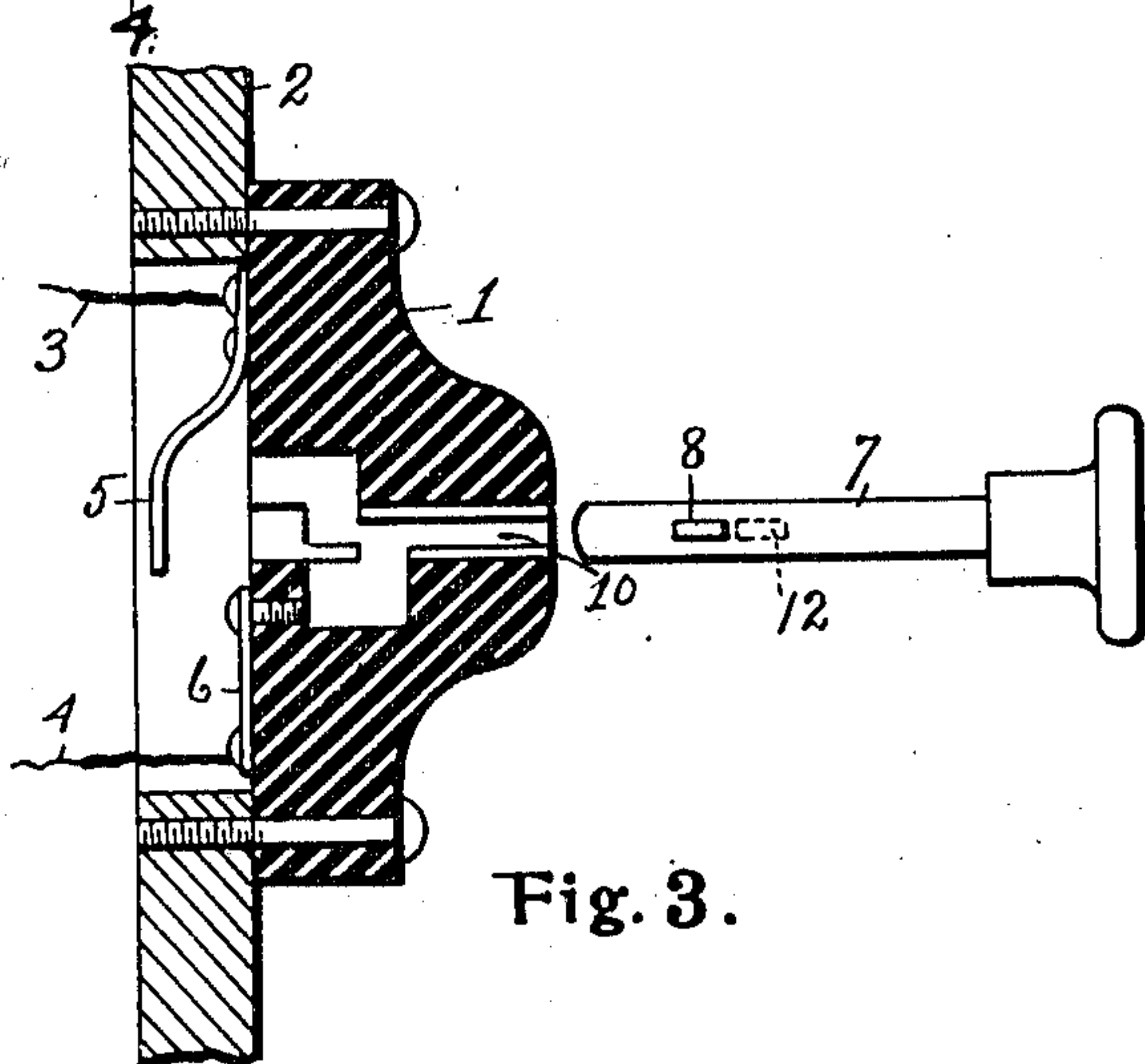


Fig. 3.

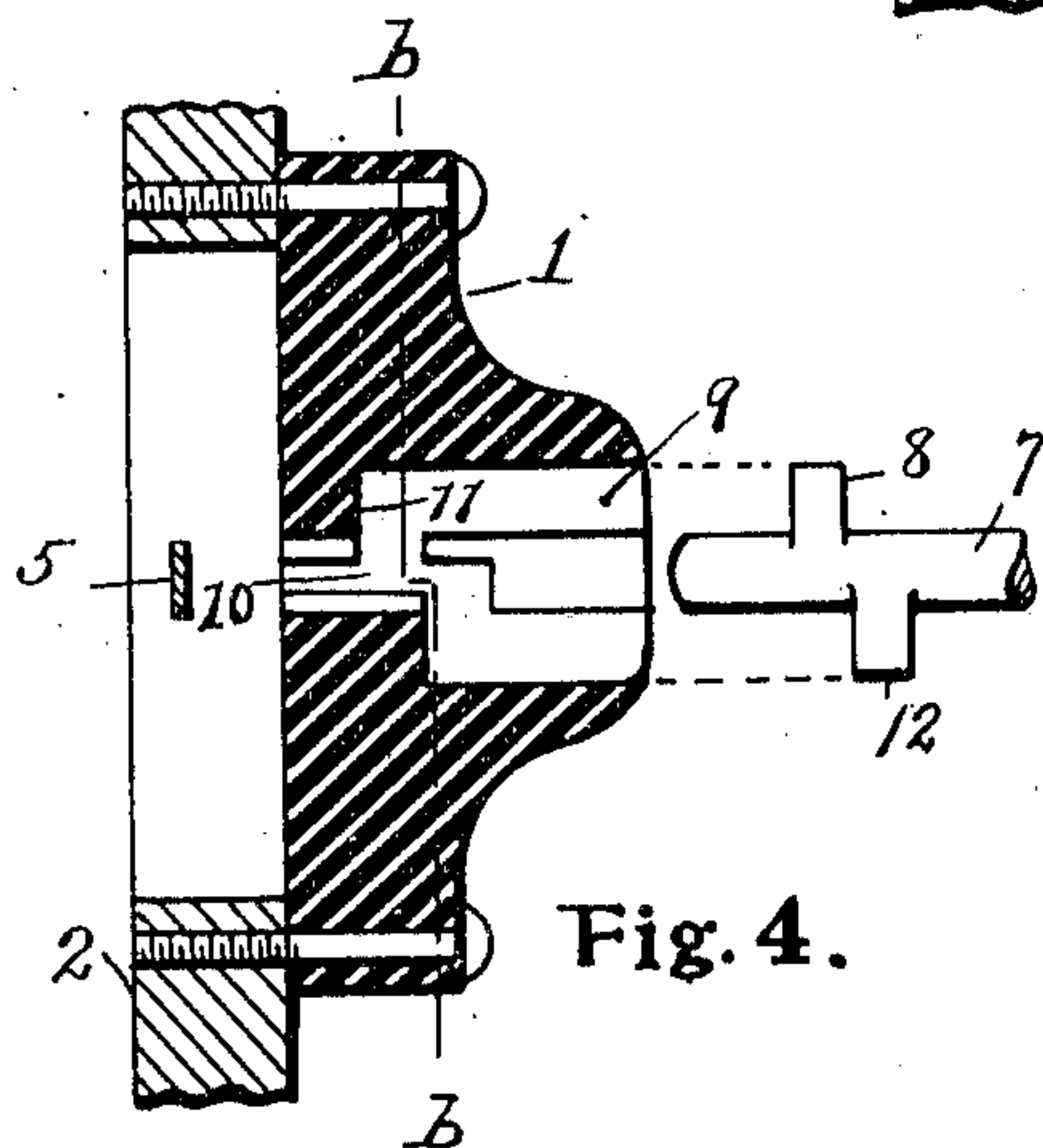


Fig. 4.

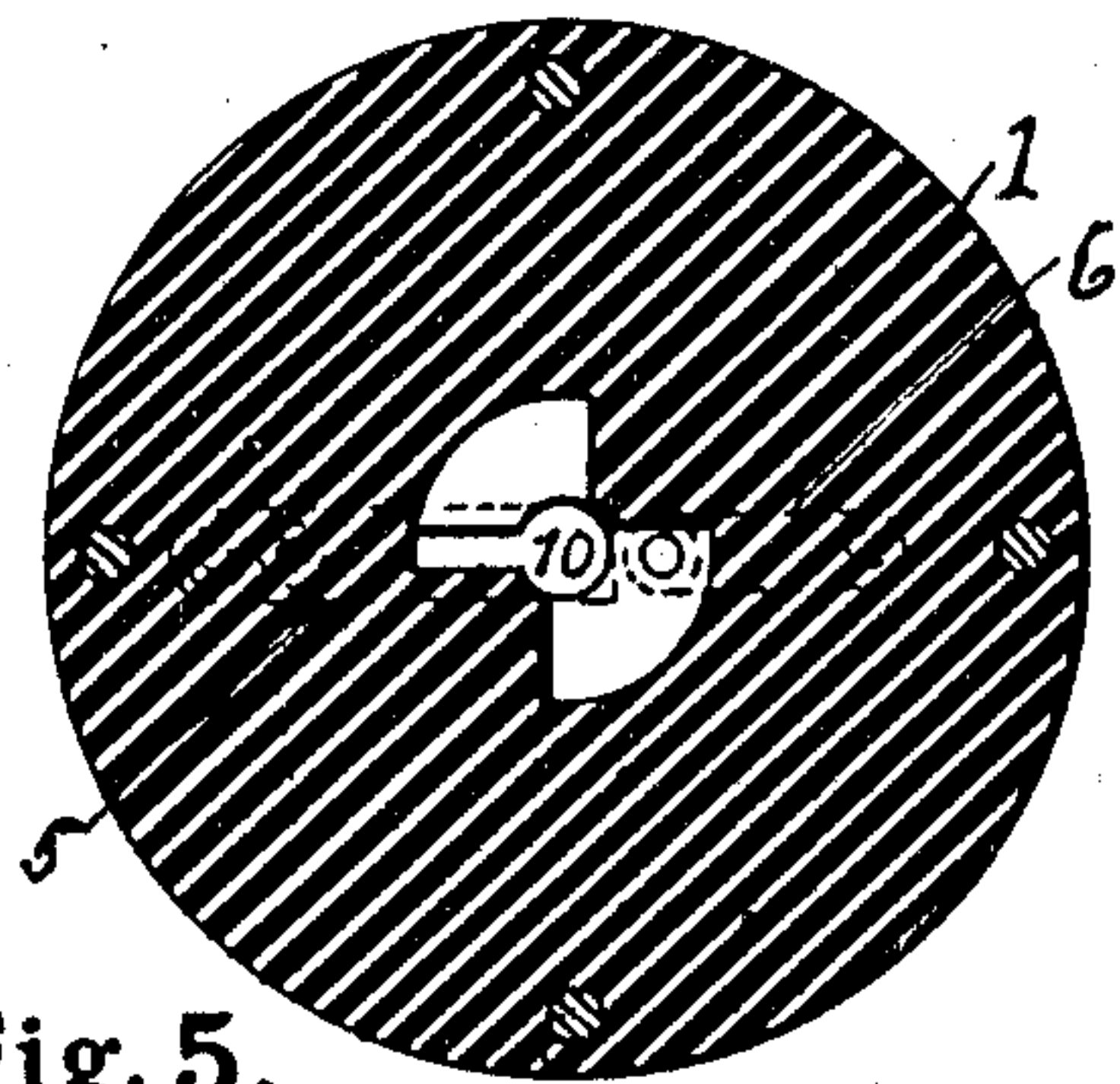


Fig. 5.

Witnesses

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LOYD WILSON, OF DETROIT, MICHIGAN.

CIRCUIT-SWITCH.

970,410.

Specification of Letters Patent. Patented Sept. 13, 1910.

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To all whom it may concern:

Be it known that I, LOYD WILSON, who am a citizen of the United States, residing at Detroit, county of Wayne, State of Michigan, have invented a certain new and useful Improvement in Circuit-Switches, and declare the following to be a full, clear, and exact description of the same, such as will enable others skilled in the art to which it pertains to make and use the same, reference being had to the accompanying drawings, which form a part of this specification.

This invention relates to circuit switches, and has for its object an improved device of this type, which, while capable of general use, is adapted especially for use with automobiles, wherein it is arranged to make it impossible for any one except the owner to possess an operative key to the motor machine, while the vehicle is at rest.

In the drawings:—Figure 1, is a plan view of the body block of the device. Fig. 2, is a side elevation in section along the line *a— α* of Fig. 1, showing the key in place, and in contact with the circuit terminals. Fig. 3, is a sectional elevation with the key removed but shown adjacent thereto. Fig. 4, is a detail section showing one of several possible variations in the interior construction of the device. Fig. 5, is a section on the line *b— β* of Fig. 2.

1 represents the body block of the device, which may be of any desired material of non-conducting character. This may be mounted upon a frame or wall piece 2, which is sufficiently apertured to permit the entrance from the rear of the circuit terminals 3 and 4, and the undisturbed presence of the leaf spring 5 which may constitute one of the terminals. The second terminal 6 is preferably brought to an end well within the body portion of the device, and adjacent a cut-away portion into which the key member 7, after certain turnings and actuation known only to the owner of the device, is finally brought to a position of circuit closing.

The key 7 is constructed with one or more wings 8 projecting laterally from the stem thereof in such position as to engage in the desired one of the radial cut-away portions 9 when the stem 7 is inserted in the central bore 10. The radial cut 9, in which the wing is first inserted, extends only a portion of the distance from the top or entrance side of the switch body toward the inner

bottom end, at which point of ending the wing strikes a shoulder 11, which prevents its further progress in that direction without being turned about the stem 7 as an axis through an arc of predetermined size, when it encounters another cut-away portion extending from that level or plane in the body block the remainder of the distance to the bottom or inner face thereof. If a key with more than one wing is used, the two wings are preferably set at points on the stem 7 more or less removed from one another lengthwise of the stem so that the wing 8 must be inserted in the cut-away portion 9, while the wing 12 must be inserted on the side through which the cut-away portion 13 projects, in order that these two wing portions may reach their proper and intended levels at the same time as the stem 7 is sunk in the body of the block, which then participates in the turning or swinging about the stem 7 as a center until the wing 8 incloses its supplemental radial cut 14, and the wing 12 incloses its supplemental cut 15, when they may be forced through the remainder of the distance into contact with the terminal faces 5 and 6. In these positions the key completes the closure of the circuit and the use of the device, but if the key were in another or strange arrangement of the wings when one wing reached its first opposite shoulder, the other, fixed as it is to the stem of the key, would still be some distance therefrom and thus held in a position wherein turning would be impossible. Similarly, it would be impossible to attempt to close the circuit by means of an inserted bent wire, since the uncertainty as to the direction and degree of turning which would be required to get the first shoulder level would make its adjustment, even after considerable experimenting, almost impossible. And while I have shown the circuit terminal clips 5 and 6 adapted to contact one wing and the end of the key stem 7, it would, of course, be simply a matter of convenience and arrangement to make each of these contact a lateral wing. The unauthorized insertion of a strange key can be further guarded against by inserting in the interior rounded surface of the cut-away portion of the body block in which the wings swing, as the stem is to be turned about its axis, projections or especially formed tracks ways complementarily in cross section to the correspondingly toothed edge of the

wing members of the original key. These tracked or projecting parts must begin and end short of the location of the initial drop of the wing on that shoulder through the radial cut-away portions of the body block, and through the part at the end of the curved swing of the wing from which it is to drop into the second radial cut-away portion, since otherwise the interengaging of these toothed portions would prevent the further sliding of the wings lengthwise of the block, that is, parallel to the stem of the key.

What I claim is:—

1. A circuit switch, having, in combination with a longitudinally bored body portion, and laterally extending cuts therein extending radially therefrom, each of said cuts extending only a portion of the distance through the block and being placed at desired angles with respect to one another, a circuit terminal located adjacent the lower end of the longitudinal bore, a second circuit terminal located adjacent the outer end of one of said radial cuts, and a removable key member adapted to be inserted in said bored

and cut portions, and, by turning of the same about its axis to be moved to a position where both of said circuit terminals are engaged by it, substantially as described.

2. In a switch, in combination with a body block having a central longitudinal bore and radial cut-away portions reaching therefrom in a variety of directions, circuit terminals located thereon adjacent to a plurality of diversely located points in the cut-away portion, and a removable key member provided with laterally projecting wing pieces complementarily located on the stem thereof with respect to the cut-away portions of the body block, adapted to pass therethrough and to register with those portions wherein the circuit terminals are located when the closure of the circuit is desired, substantially as described.

In testimony whereof, I sign this specification in the presence of two witnesses.

LOYD WILSON.

Witnesses:

VIRGINIA C. SPRATT,
WILLIAM M. SWAN.