

No. 725,010.

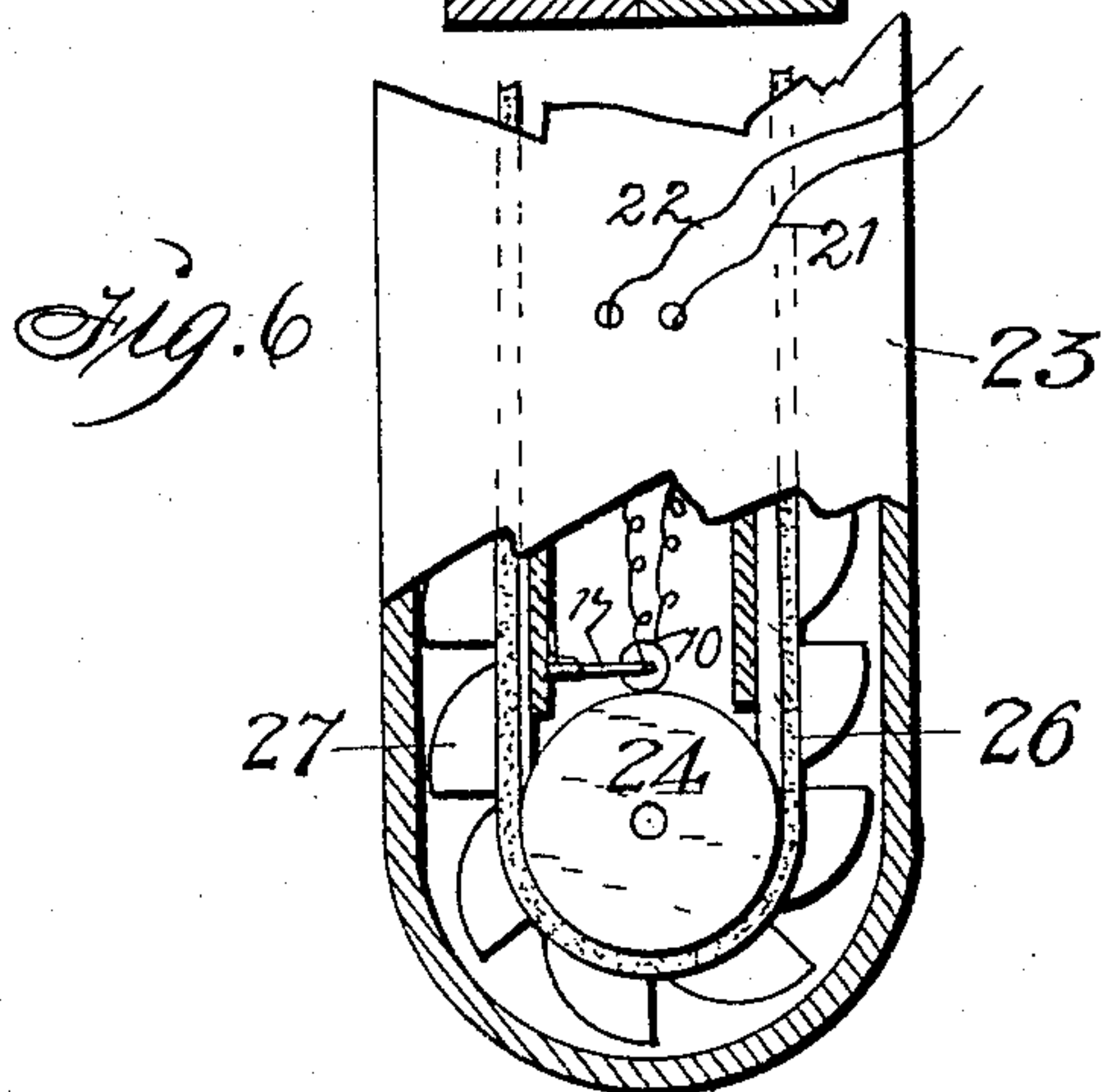
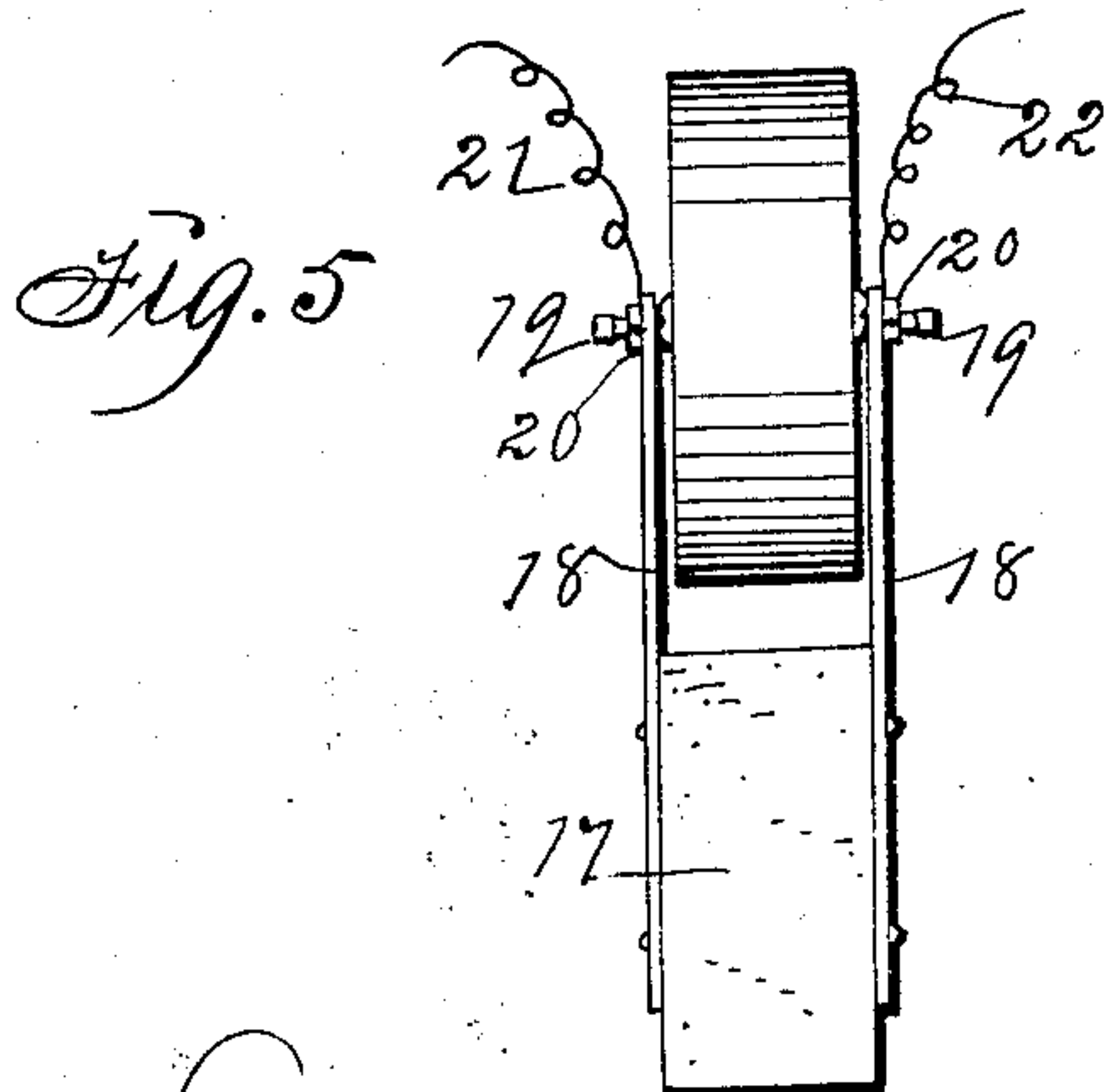
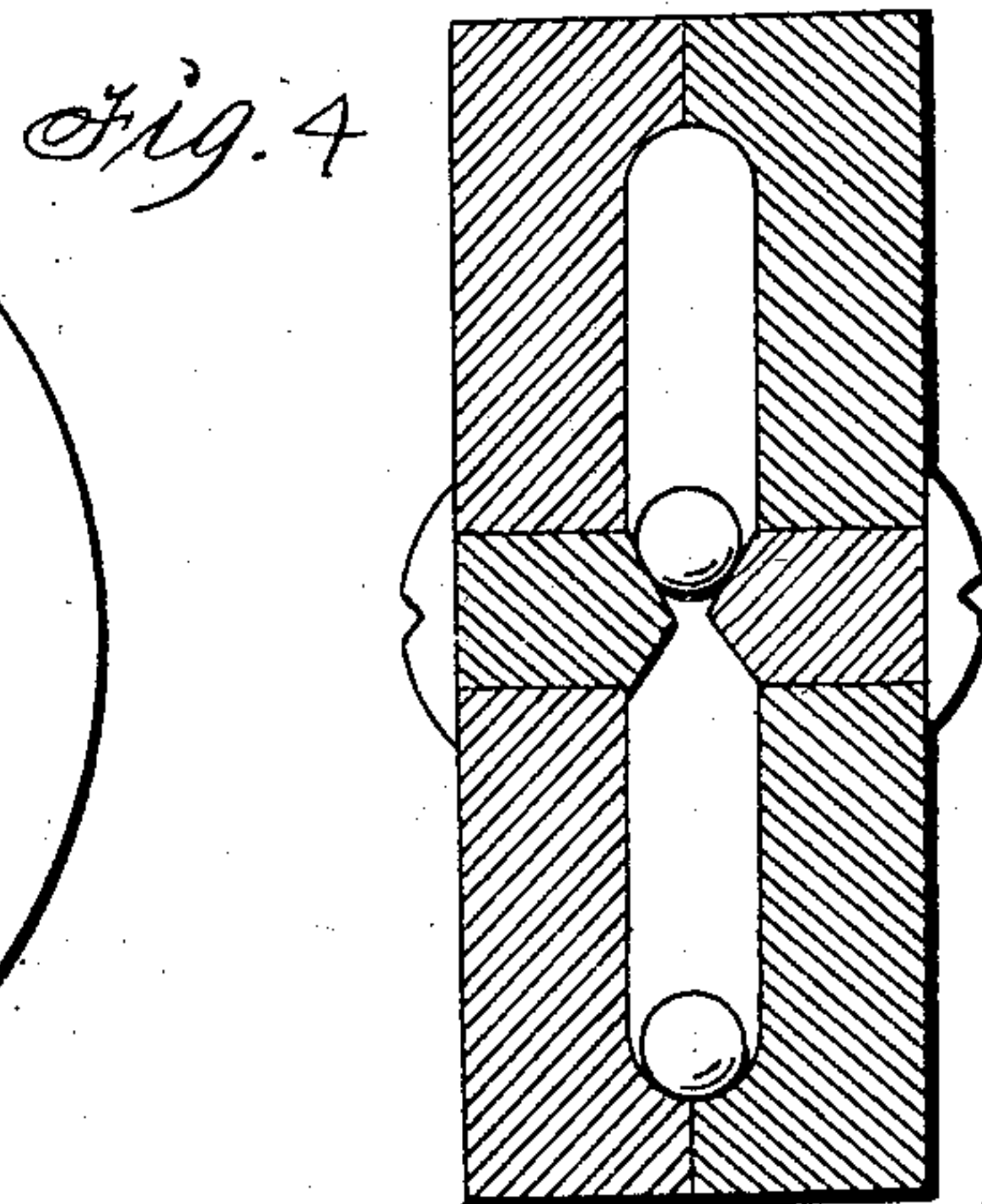
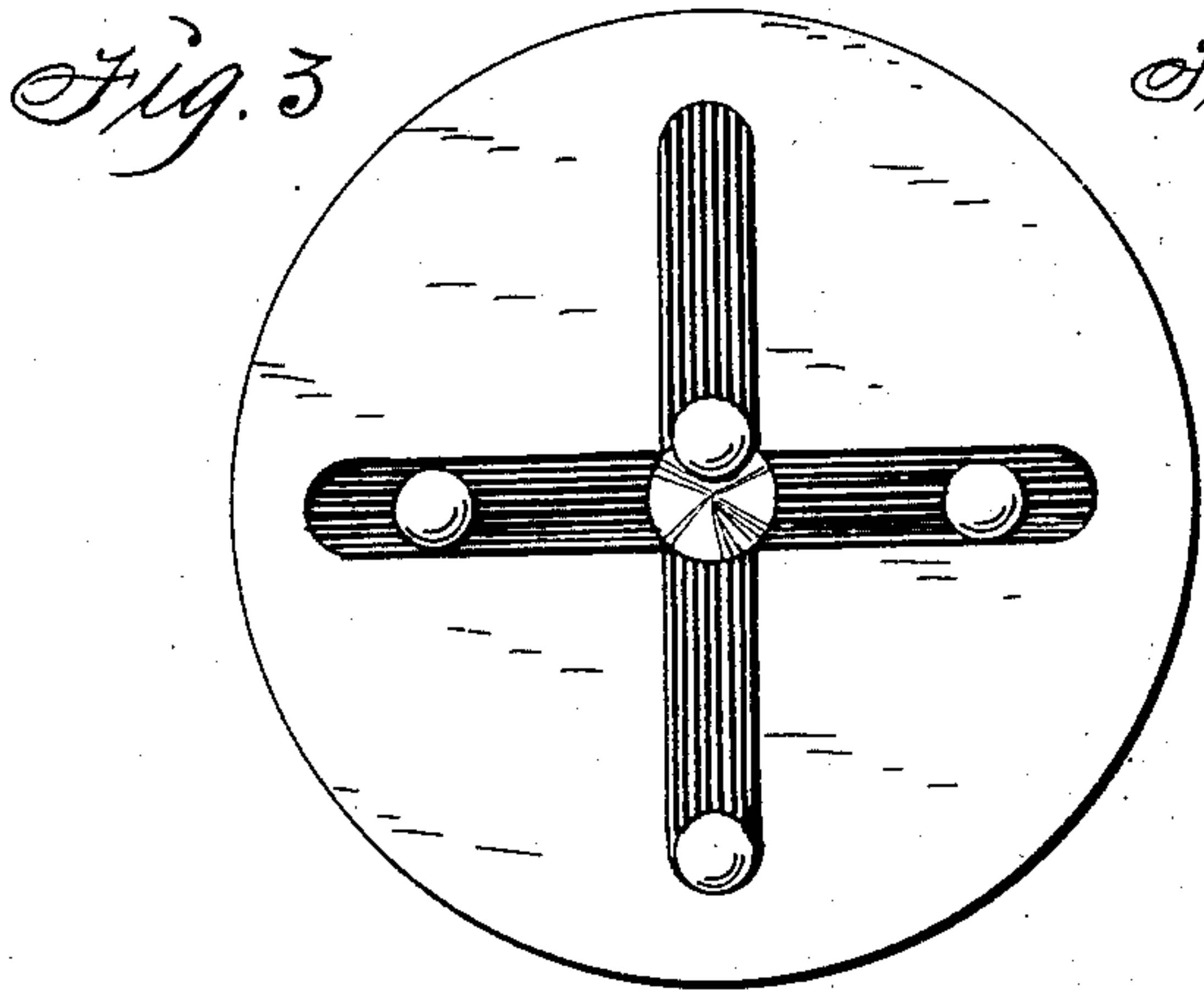
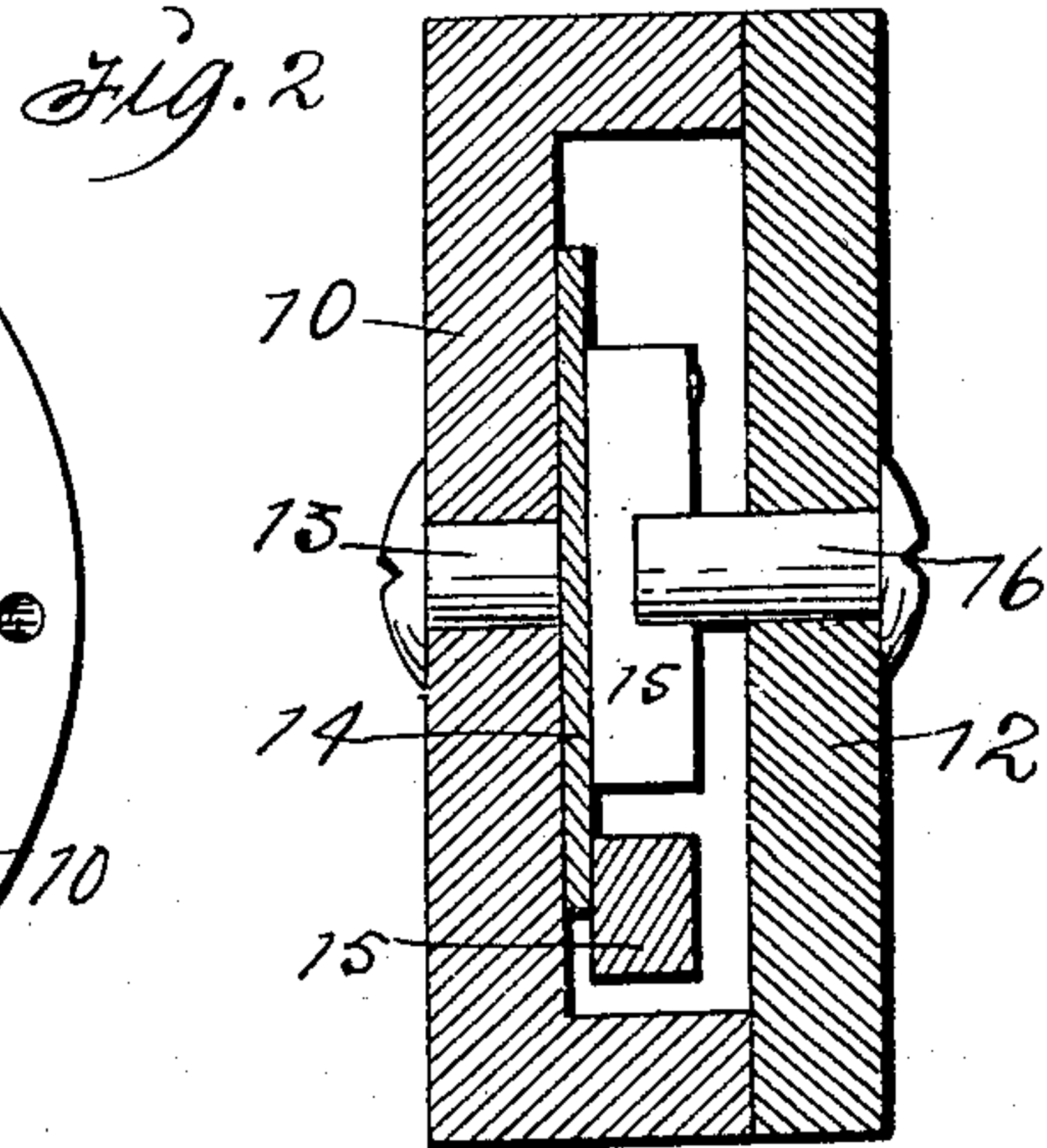
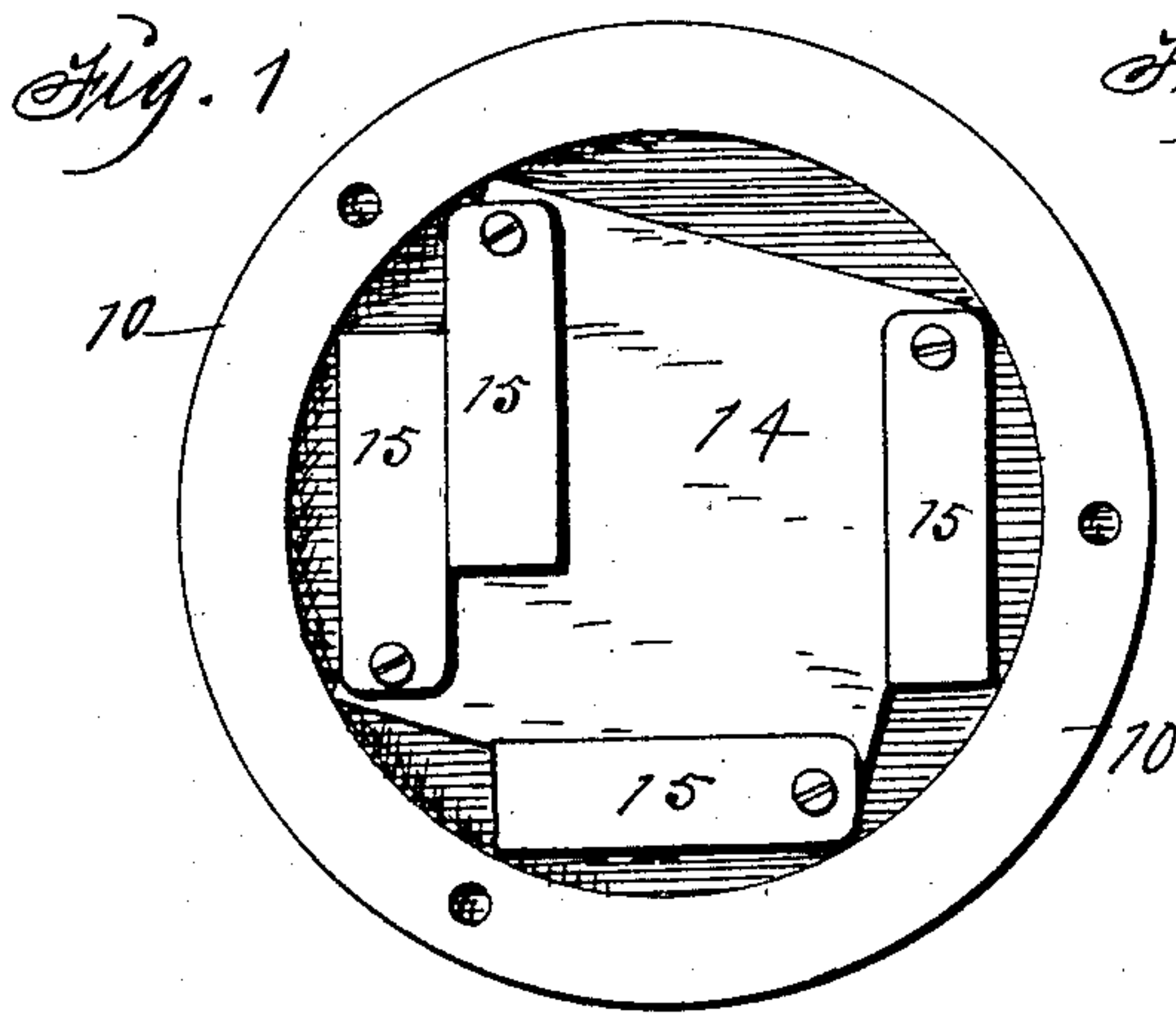
PATENTED APR. 7, 1903.

C. C. & H. P. RASMUSSEN.

AUTOMATIC CIRCUIT OPENER OR CLOSER FOR ELECTRIC BELLS, &c.

APPLICATION FILED SEPT. 26, 1902.

NO MODEL.



Witnesses: { Inventors: Carl C. Rasmussen,
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UNITED STATES PATENT OFFICE.

CARL C. RASMUSSEN, OF HARLAN, AND HANS P. RASMUSSEN, OF
CALLENDER, IOWA.

AUTOMATIC CIRCUIT OPENER OR CLOSER FOR ELECTRIC BELLS, &c.

SPECIFICATION forming part of Letters Patent No. 725,010, dated April 7, 1903.

Application filed September 26, 1902. Serial No. 125,015. (No model.)

To all whom it may concern:

Be it known that we, CARL C. RASMUSSEN, residing at Harlan, in the county of Shelby, and HANS P. RASMUSSEN, residing at Callender, in the county of Webster, State of Iowa, citizens of the United States, have invented a new and useful Automatic Circuit Opener or Closer for Electric Bells, &c., of which the following is a specification.

Our object is to provide an automatic electric circuit closer and breaker specially adapted for use in mills for actuating electric bells connected with elevators as required to give notice whenever an endless band carrying fixed buckets gets clogged in the elevator-trunk and remains stationary while the machinery for operating the elevator continues in motion and is subject to undue friction and wear and damage.

Our invention consists in the construction, arrangement, and combination of elements, as hereinafter set forth, pointed out in our claims, and illustrated in the accompanying drawings, in which—

Figure 1 shows a rotatable case from which the cover is removed to disclose the arrangement and combination of parts inclosed therein. Fig. 2 is a transverse sectional view on the line *xx* of Fig. 1. Figs. 3 and 4 are modifications of Figs. 1 and 2 and show metal balls substituted for pivoted electric connectors. Fig. 5 shows the case mounted, and Fig. 6 shows the invention applied to an elevator as required for practical use in a mill.

The numeral 10 designates a circular case, and 12 a detachable cover made of wood, hard rubber, or other suitable material and may vary in size as desired. A metal contact 13 in the form of a bolt is fixed in the center of the case and a conductor-plate 14 fixed to the inside of the case. A plurality of adjustable circuit-closers 15 are pivoted to the plate 14 or inside face of the case 10 in such a manner that when the case is stationary one or two of them will by force of gravity be circuit-closers, and when the case is rotated they will by centrifugal force become circuit-breakers. In the center of the cover 12 is fixed a contact 16, corresponding in form with the contact 13, fixed in the center of the case 10, and both of those contacts have heads

provided with conical journal-bearings that coincide with each other and the axis of the rotatable case. The inner end portion of the contact 16 projects into the case in such a manner that the pivoted circuit-closers will engage it when it is at rest as required to close the circuit.

In the modification of construction shown in Figs. 3 and 4 the fixed contacts are cone-shaped at their inner ends and the case has radial grooves in which balls are placed to accomplish the same purposes that the circuit-closers 15 are designed for—that is, to automatically close and break the circuit.

A frame composed of a wooden or hard-rubber bar 17 and mating metal straps 18, fixed to its edges, is provided with screw-seats in the projecting ends of the bars and screws 19, having cone-shaped ends, are fitted in said seats to enter the conical bearings in the heads of the contacts 13 and 16, as required to rotatably mount the case in the frame. By placing nuts 20 on the screws 19 they serve as binding-posts for clamping wire conductors 21 and 22 to the frame as required for establishing a circuit with an electric bell that may be located at a distance and connected with our automatic circuit closer and breaker or any other electrical device, instrument, or machine to which it may be advantageously connected.

To apply our invention to an elevator in a mill for the special purpose mentioned, the frame 17 is pivoted to the trunk 23, as shown in Fig. 6, or in any suitable way, so the rotatable case 10 and its fixed cover will contact with the periphery of a fixed pulley 24 at the lower end of the trunk in such a manner that when the endless band 26, carrying cups 27, is in motion the pulley will rotate and impart motion to the case 10, and centrifugal force will disconnect the circuit-closers from the fixed contact 16, as required to break the electric circuit, and when the speed of the endless conveyer-band 26 slackens and stops they will by force of gravity close the electric circuit, as required, to ring an electric bell to give notice that the endless conveyer band or elevator is clogged and inoperative.

Having thus described the purpose of our

invention, its construction, application, and operation, its practical utility will be readily understood by persons familiar with the art to which it pertains, and

5 What we claim, and desire to secure by Letters Patent, is—

1. In a circuit closer and breaker, a rotatable case, a contact fixed in each side of the center of the case, adjusted circuit-closers in
10 the case, and means for rotatably mounting the case to operate in the manner set forth for opening and closing an electric circuit.

2. In a circuit closer and breaker, a frame adapted for supporting a rotatable case, a
15 case mounted in the frame, a contact fixed in each side of the center of the case and provided with a bearing on its outside, screws seated in the frame and their ends fitted in said bearings and self-adjusting circuit-
20 closers inclosed in the case, arranged and combined to operate in the manner set forth for the purposes stated.

3. In a circuit closer and breaker, a frame adapted for supporting a rotatable case, a
25 case mounted in the frame, a contact fixed in each side of the center of the case and provided with a bearing in its outside, screws seated in the frame and their ends fitted

in said bearings and self-adjusting circuit-closers inclosed in the case, nuts on the screws
30 and wires clamped to the frame under the nuts, arranged and combined to operate in the manner set forth for the purposes stated.

4. In a circuit closer and breaker, a frame adapted for supporting a rotatable case, a
35 case mounted in the frame, a contact fixed in each side of the center of the case and provided with a bearing in its outside, screws seated in the frame and their ends fitted in said bearings, self-adjusting circuit-closers
40 inclosed in the case, nuts on the screws, wires clamped to the frame under the nuts, an elevator-trunk, a pulley in the end of the trunk and an endless band having fixed cups, arranged and combined to operate in the man-
45 ner set forth for the purposes stated.

CARL C. RASMUSSEN.

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