

R. LINDNER.
MECHANICAL MOVEMENT.
APPLICATION FILED MAR. 9, 1909.

954,116.

Patented Apr. 5, 1910.

2 SHEETS—SHEET 1.

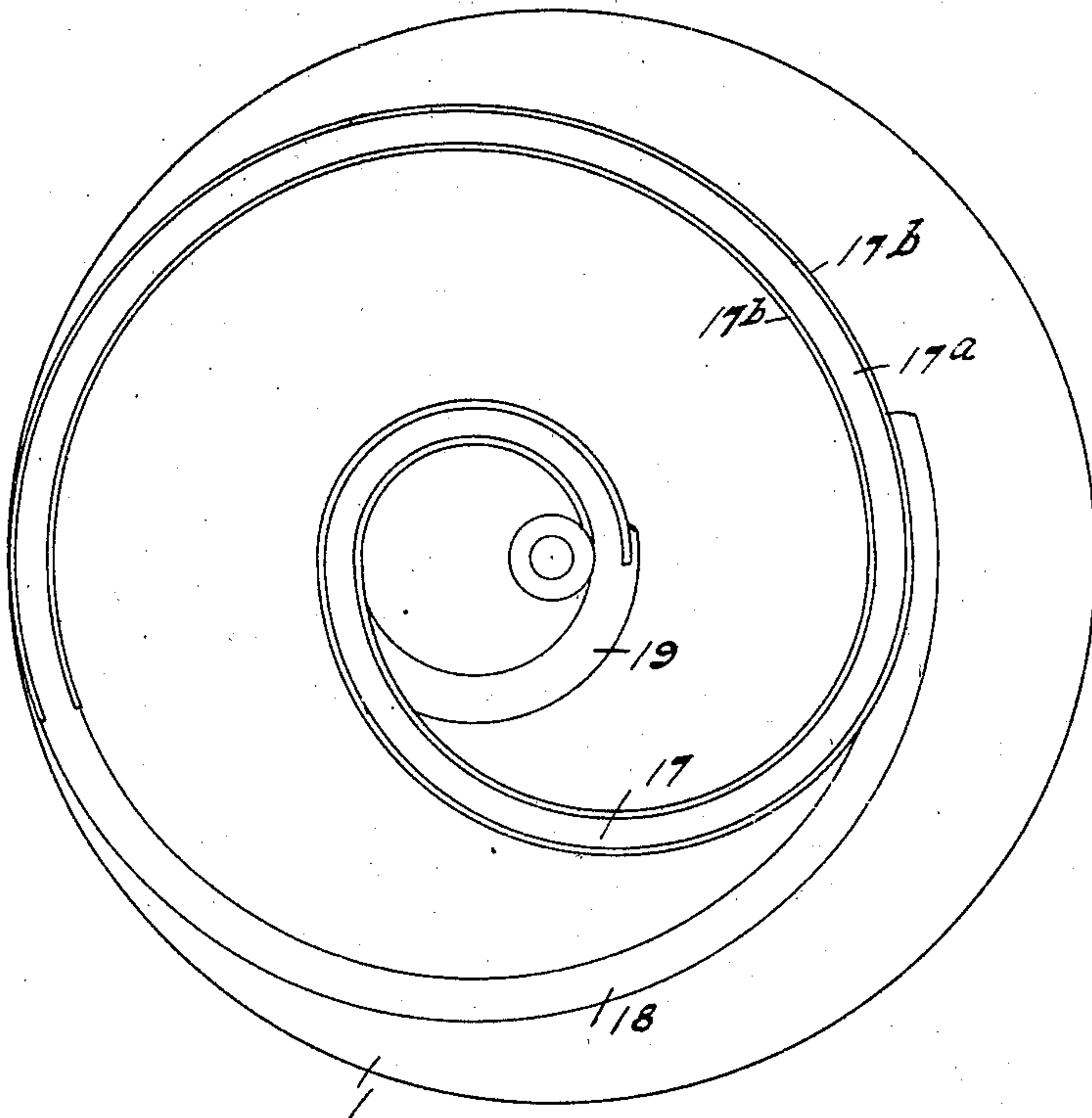


Fig. 1.

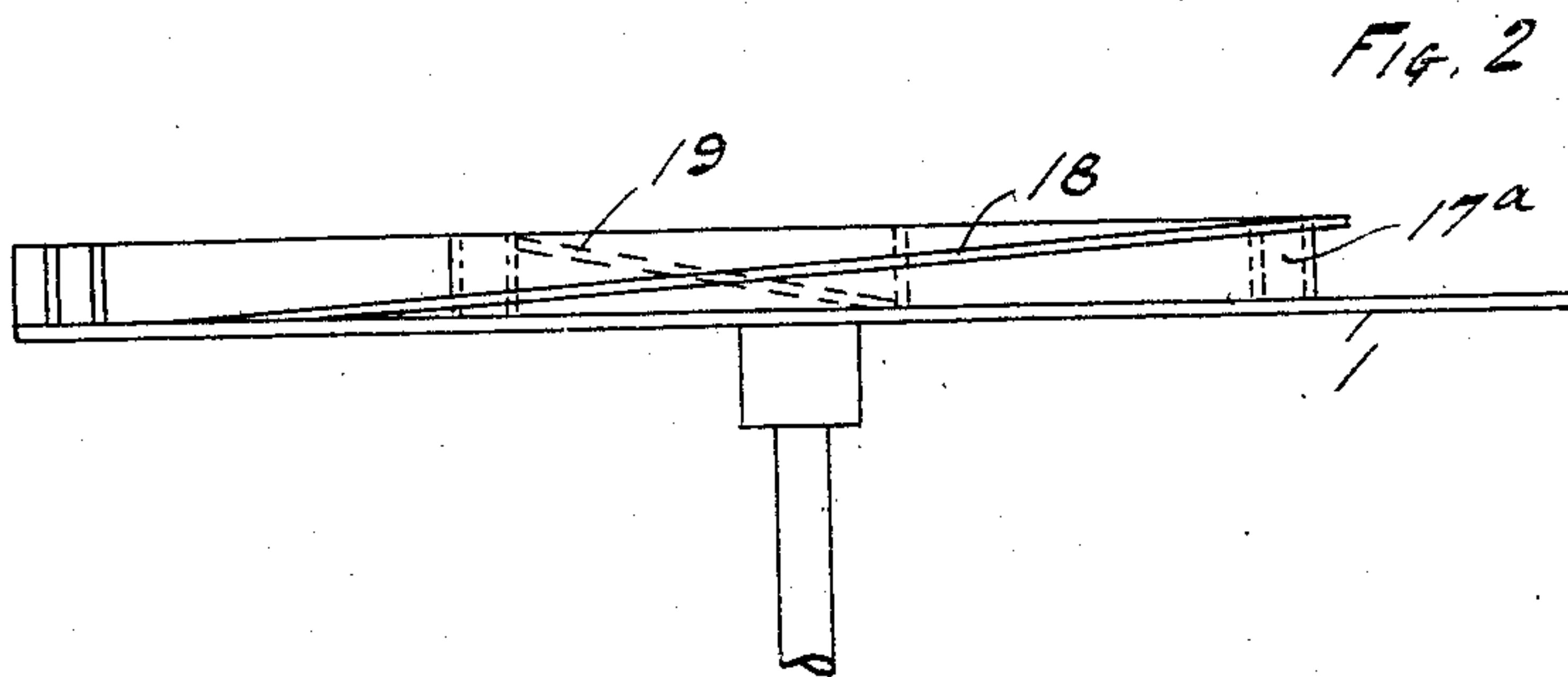


Fig. 2

Witnesses
Mary W. Hammer.
Albert Popkins

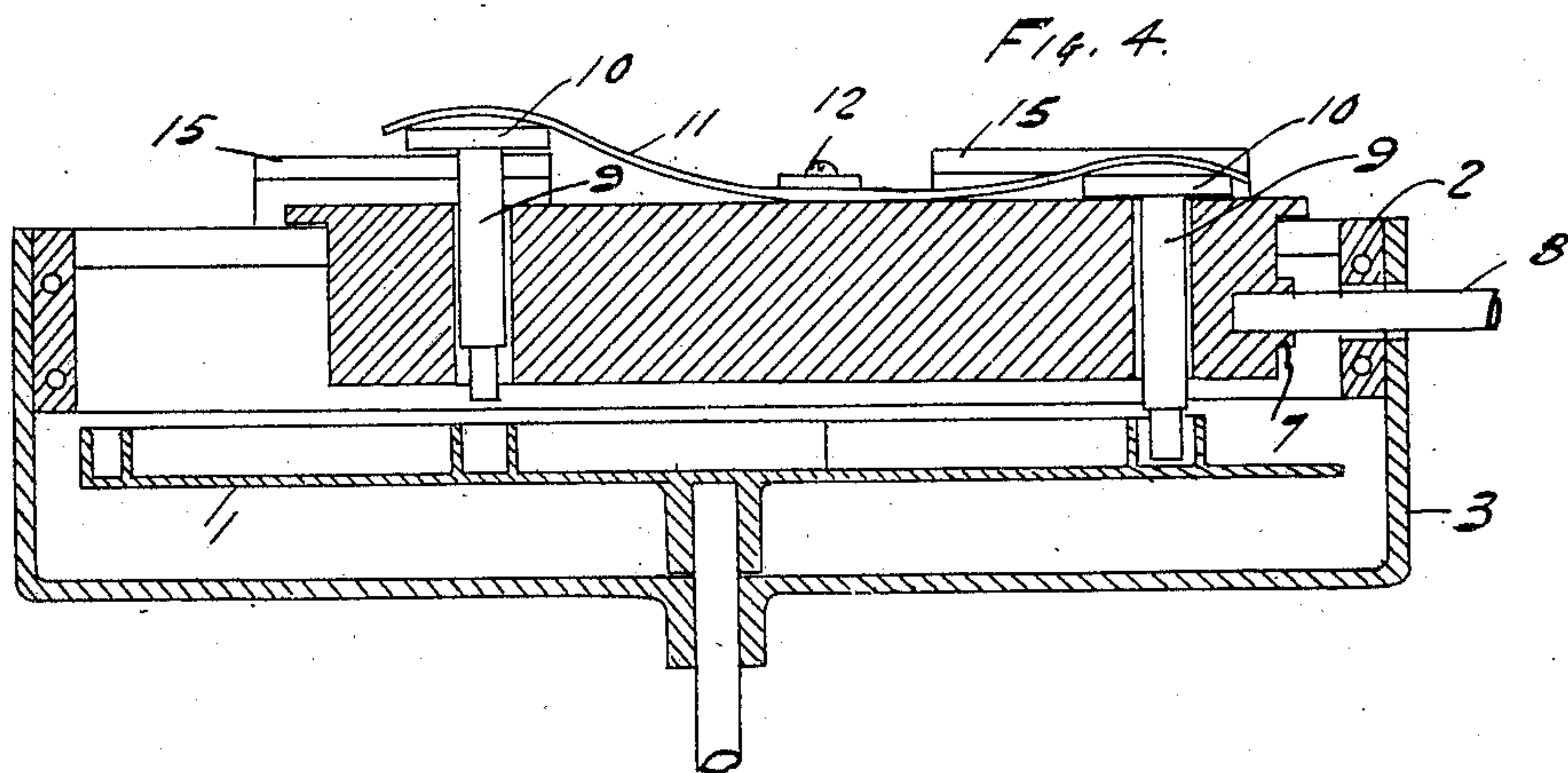
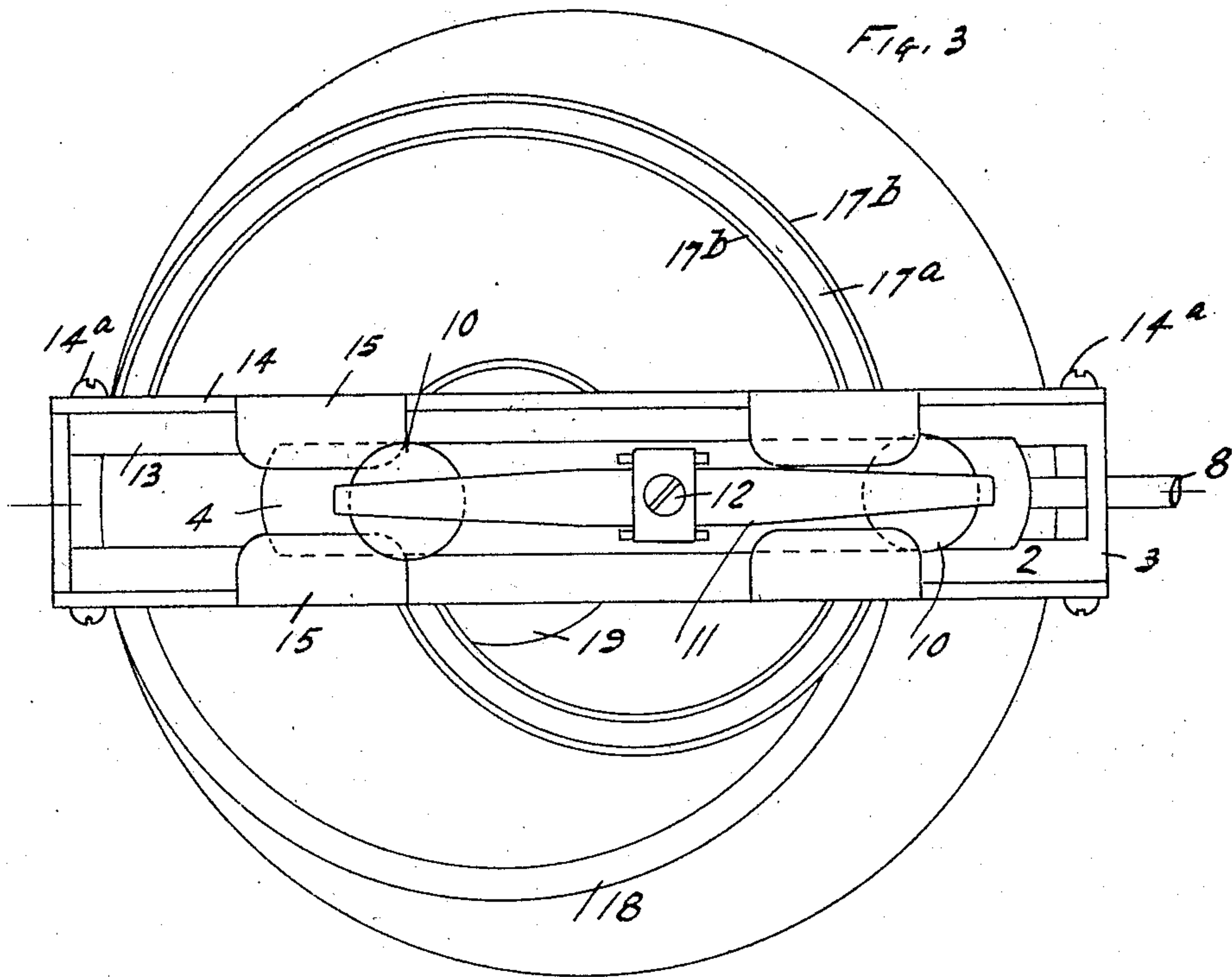
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UNITED STATES PATENT OFFICE.

RUDOLF LINDNER, OF ERIE, PENNSYLVANIA.

MECHANICAL MOVEMENT.

954,116.

Specification of Letters Patent.

Patented Apr. 5, 1910.

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To all whom it may concern:

Be it known that I, RUDOLF LINDNER, a citizen of the United States, residing at Erie, in the county of Erie and State of Pennsylvania, have invented new and useful Improvements in Mechanical Movements, of which the following is a specification.

This invention relates to mechanical movements, and consists in certain improvements in the construction thereof as will be hereinafter fully described and pointed out in the claims.

More particularly the invention relates to a mechanical movement in which a rotary motion is changed to a reciprocating motion.

The invention is illustrated in the accompanying drawings as follows:

Figure 1 shows a plan view of the rotating driving part. Fig. 2 a side elevation of the device. Fig. 3 a plan view of the device. Fig. 4 a central section through the reciprocating part and the driving scroll.

1 marks the rotating driving part. It is in the form of a disk. Above this is arranged a stationary frame made up of the side bars 2 and end pieces 3. The reciprocating member 4 has a projecting rib 5 which extends down through the slots 6 formed between the side members 2. A lug 7 extends from one end of the rib 5, and a rod 8 is secured to this lug, and extends to any device to which it is desired to give reciprocating motion. Two pins 9 are slidably mounted in the reciprocating part 4 extending through the rib 5. These have the heads 10 which are somewhat larger than pins 9, and they are forced downwardly by a spring 11. The spring 11 is in the form of a leaf or plate, and is secured to the reciprocating member by the screw 12. The sides have the lugs 13 at their ends and the pins of the carrying plates 14 are secured to the lugs 13 by screws 14^a. These have the inwardly extending flanges 15 which come sufficiently close together to make the intervening slots 16 sufficiently narrow to be of less width than the heads 10 of the pins, so that when the pins are lifted the heads will rest on the flanges 15 and retain the pins in this upper position. In the operation of the device, the pins slide under the flanges 15 when moving in one direction and are lifted up onto them and slide on them when moving in the opposite direction.

The guiding part is provided with the scroll 19 preferably in the form of a groove

17^a formed between parallel ribs 17^b. A pin at one or the other side of the center is in the groove at all times, and as the rotating part is driven in one direction the pins at each side of the center will move away from the center or toward the center in each instance, thus as each pin is dropped into the groove, and the other removed from it, the reciprocating part is reversed. This general scheme of converting rotating movement into reciprocating movement is not new, but in all the devices so far as I know the rotating part must be driven in one direction. I place the cam 19 in continuation of the groove 17^a at the center and the cam 18 in continuation of the same groove at the outer periphery. These cams will raise the pins as they pass out of the ends of the groove to a position placing the head of the pin on the flanges 15 and at an elevation that will carry the pin over the ribs 17^b. As the reciprocating part 4 is moved to either extremity the pin which is carried on the flanges drops off that flange at the end of the movement, and the pin passes into the groove. On the other hand the continued movement of the rotating part carries the opposite pin upwardly by means of either the cam 18 or 19 depending on the direction of the rotation. By operating the pins separately and independently one pin may be moved completely into its groove before the other pin disengages therefrom, as shown in Fig. 4. Pin 9 at the left will have been dropped into its groove before the head 10 of pin 9 at the right will pass from under the guide 15. At this point therefore, both pins 9 will be in grooves and with a little further movement pin 9 at the right will begin to rise and the device reverses.

What I claim as new is.

1. In a mechanical movement, the combination of a driving part having a scroll thereon; a reciprocating part; engaging means independently mounted on the reciprocating part on each side of the center; and devices operating independently for alternately moving said means into and out of engagement as the driving part is rotated to actuate the reciprocating part.

2. In a mechanical movement the combination of a driving member having a scroll thereon; a reciprocating member; engaging means mounted on the reciprocating member at each side of the center, said means being adapted to engage simultaneously the scroll

at each side of the center; and devices independently operated for alternately moving said means into and out of engagement as the driving member is rotated to actuate the
5 reciprocating member.

3. In a mechanical movement, the combination of a driving part having a scroll thereon; a reciprocating part; engaging means for locking the reciprocating part
10 with the scroll; and devices for alternately throwing said means into and out of engagement as the rotating part is rotated, said means acting with the rotating part moving in either direction.

4. In a mechanical movement, the combination of a rotating driving part having a scroll thereon; a reciprocating part; engaging means for locking the reciprocating part with the scroll at each side of the center of
20 the rotating part alternately; and devices for actuating said means to throw said means alternately out of engagement at each side of the center with the rotating part moving in either direction.

5. In a mechanical movement, the combination of a rotating driving part having a scroll thereon; and cams in continuation of each end of the scroll; a reciprocating part; and engaging means for locking the reciprocating part with the scroll, said engaging
30 means being thrown out of locking position by the cams with the driving part rotating in either direction.

6. In a mechanical movement, the combination of a rotating driving part having a
35

scroll thereon; and cams in continuation of each end of the scroll; a reciprocating part; engaging means for locking the reciprocating part with the scroll, said engaging means being thrown out of locking position by the
40 cams with the driving part rotating in either direction; and a spring for throwing said engaging means into locking position.

7. In a mechanical movement, the combination of a rotating part having a scroll
45 thereon; and cams in continuation of the scroll at each end; a reciprocating part; sliding pins on the reciprocating part adapted to be thrown out of engagement with the scroll by said cams; and a guide for the re-
50 ciprocating part.

8. In a mechanical movement, the combination of a rotating driving part having a scroll thereon; and a cam in continuation of the scroll; a guide above the driving part;
55 a reciprocating part operating on the guide; sliding pins on the reciprocating part adapted to be thrown out of engagement with the scroll by the cam; heads on said pins; and plates for engaging the heads of the pins
60 and locking the pins out of engagement with the scroll; and springs for returning the pins.

In testimony whereof I have hereunto set my hand in the presence of two subscribing
65 witnesses.

RUDOLF LINDNER.

Witnesses:

CHARLES G. BREVILLIER,
H. C. LORD.