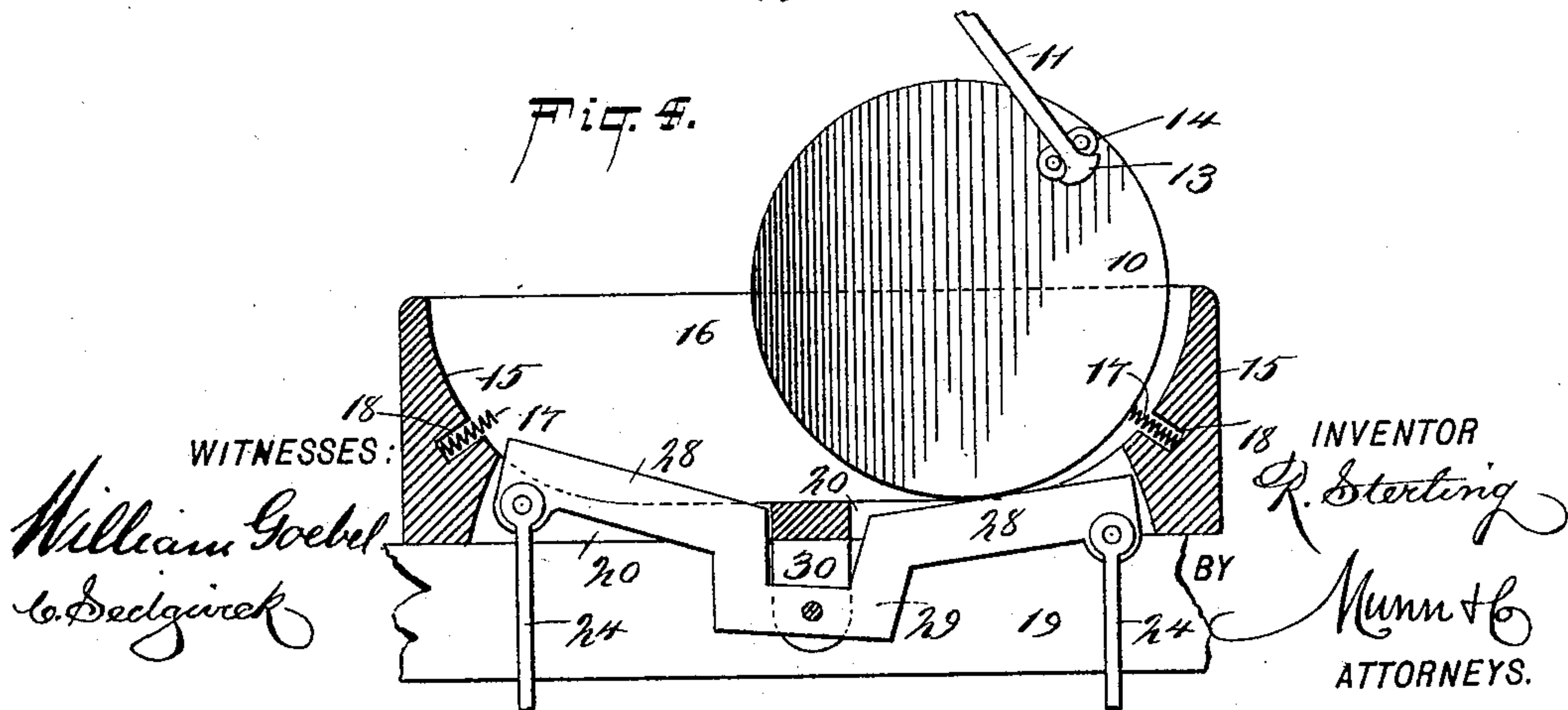
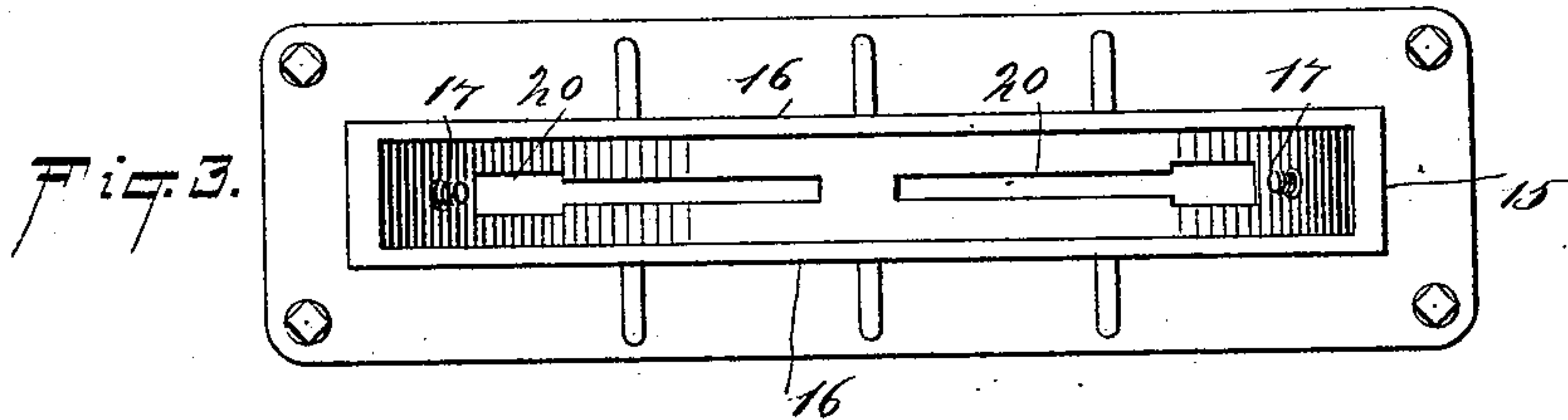
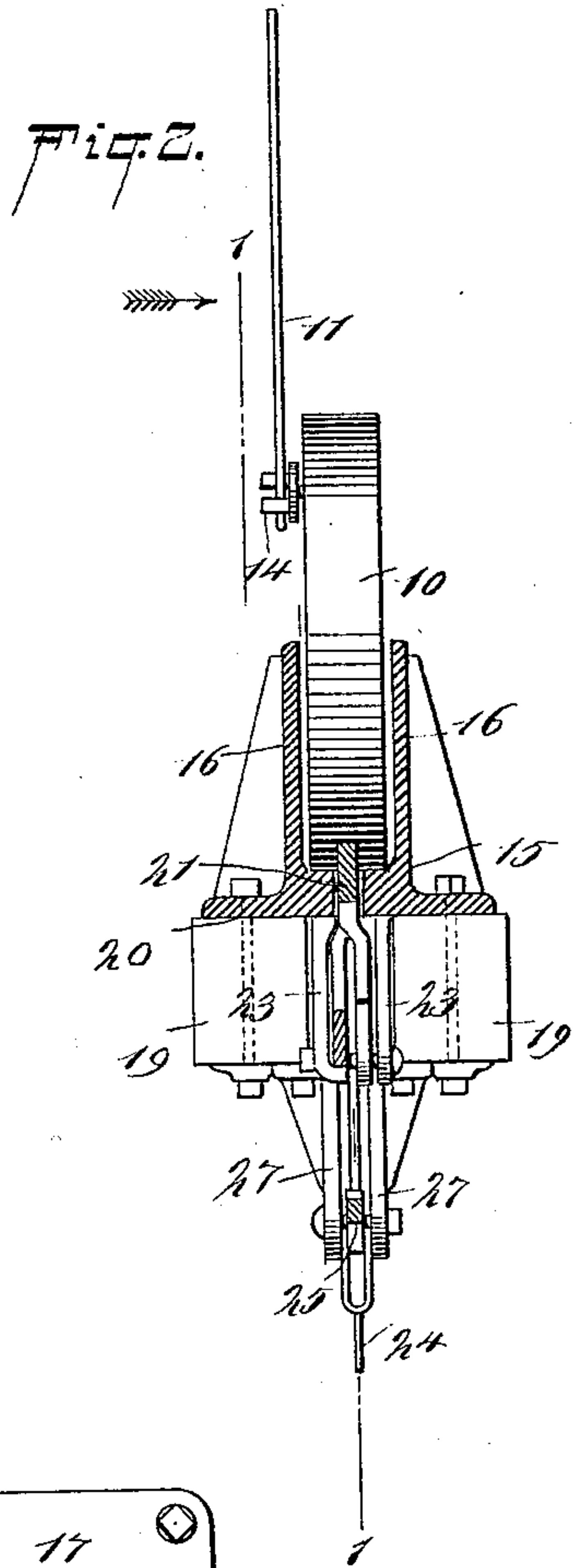
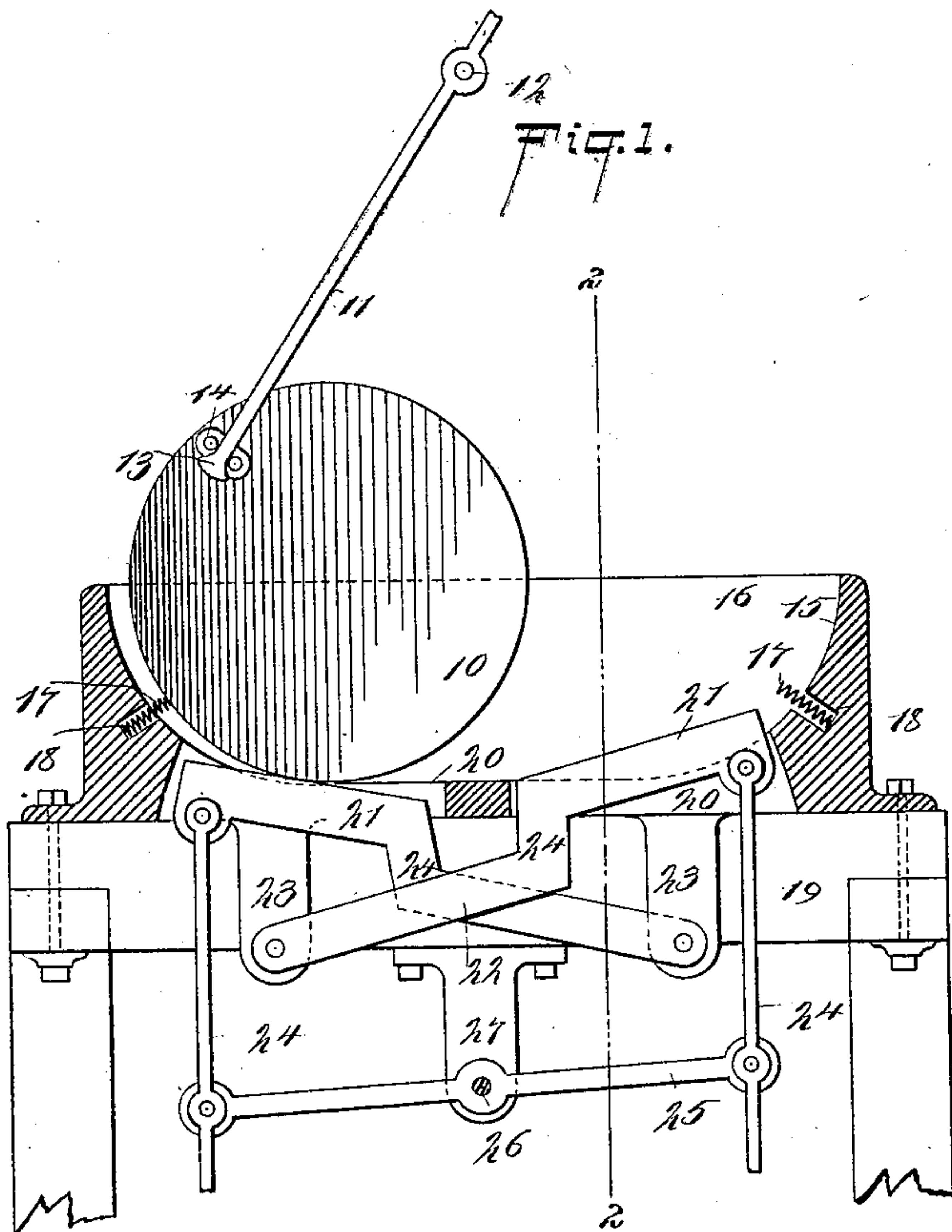


(No Model.)

R. STERLING.  
MECHANICAL MOVEMENT.

No. 521,393.

Patented June 12, 1894.





# UNITED STATES PATENT OFFICE.

ROBERT STERLING, OF HARTINGTON, NEBRASKA.

## MECHANICAL MOVEMENT.

SPECIFICATION forming part of Letters Patent No. 521,393, dated June 12, 1894.

Application filed September 27, 1893. Serial No. 486,629. (No model.)

*To all whom it may concern:*

Be it known that I, ROBERT STERLING, of Hartington, in the county of Cedar and State of Nebraska, have invented a new and Improved Mechanical Movement, of which the following is a full, clear, and exact description.

My invention relates to improvements in mechanical movements; and the object of my invention is to produce a very simple and economical apparatus which may be used as a convenient means for transmitting power, which is adapted to operate for a long time without getting out of repair, and which is particularly intended to take the place of windmills for furnishing light power, although it may be used for any analogous purpose.

To these ends my invention consists of certain features of construction and combinations of parts, as will be hereinafter described and claimed.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar figures of reference indicate corresponding parts in all the views.

Figure 1 is a vertical longitudinal section on the line 1—1 of Fig. 2, and shows the general arrangement of my improved apparatus. Fig. 2 is a cross section on the line 2—2 of Fig. 1. Fig. 3 is a plan view of the bed on which the movable wheel runs; and Fig. 4 is a section similar to that shown in Fig. 1, but illustrating a slightly modified form of the apparatus.

In carrying out my invention I utilize the force of a heavy rolling wheel 10 which is actuated by a lever 11 fulcrumed at 12 and having an enlarged end 13 which connects with a clip 14, this being pivoted eccentrically on the wheel so that when power is applied to the lever 11 to oscillate it it will transmit motion to the wheel 10 and cause the latter to roll back and forth on its bed 15. The lever 11 may be oscillated by any suitable means, such as a clockwork mechanism. The bed 15 is flat and straight in the center but at the ends it is curved, as shown best in Fig. 1, and it is provided with side flanges 16 which serve to guide the wheel 10, and near the ends of the bed are spiral springs 17 which are held in recesses 18 and which serve as cushions

against which the wheel strikes, and the rebound of the springs tends to start the wheel on its return stroke. The bed is supported on suitable framework 19 and is longitudinally slotted, as shown at 20; these slots being for the purpose of receiving the levers 21 which project upward through the slots and lie at a slight inclination to the bed, the levers extending downward beneath the bed, crossing near the center, as shown at 22, and being pivoted at their lower ends to hangers 23 or other suitable supports. The levers are bent downward in the center, as shown at 24, to enable them to lie in proper position in relation to the bed and to their fulcrums. The levers are pivoted at their upper ends to depending parallel driving rods 24 which are adapted to reciprocate vertically and which are connected together by a walking beam 25, this being pivoted, as shown at 26, to a hanger 27 or equivalent support and the walking beam holds the driving rods the proper distance apart and permits one to ascend while the other descends.

When the wheel 10 is rolled back and forth it strikes on the upper ends of the levers 21, first depressing one lever and then the other, and in this way a constant reciprocation of the levers is kept up and power may be taken from them in the usual manner. Instead of having two levers, as shown in Fig. 1, a single lever may be made to operate in a similar way, as illustrated in Fig. 4, and as here shown the lever 28 has inclined ends adapted to alternately project through the slots in the bed 15, and it has also a depending bend 29 which is held beneath the bed and pivoted to a suitable support 30.

The ends of the lever 28 connect with rods 24 substantially as described above. When the wheel 10 rolls over the lever 28 it causes the lever to rock on its pivot and the rods 24 are actuated, as above specified.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

1. A mechanical movement, comprising a fixed and slotted bed, a wheel adapted to roll forward and backward thereon, a lever normally projecting through said bed and into the path of the wheel, and a vibrating lever,

which is pivoted above the wheel and has a loose connection with the latter at its lower end, as shown and described.

2. In a mechanical movement, the combination of two levers, which cross each other as shown, being arranged side by side, but fulcrumed on opposite sides of a central point and their free ends normally projecting above a horizontal plane, means for holding them normally in such position, and a wheel adapted to roll forward and backward on the projecting ends of the levers, as shown and described.

3. A mechanical movement, comprising a slotted bed, having side flanges and springs arranged at the ends of the slot, a wheel held to roll on the bed, levers fulcrumed beneath the bed and having their upper ends projecting normally through the slots, and driving rods connected to the levers and held together by a walking beam, substantially as described.

ROBERT STERLING.

Witnesses:

CHARLES GERLEB,  
STANLEY MOORE.