

No. 834,141.

PATENTED OCT. 23, 1906.

H. T. KINGSBURY.

SEESAW.

APPLICATION FILED NOV. 21, 1905.

2 SHEETS—SHEET 1.

Fig. 3.

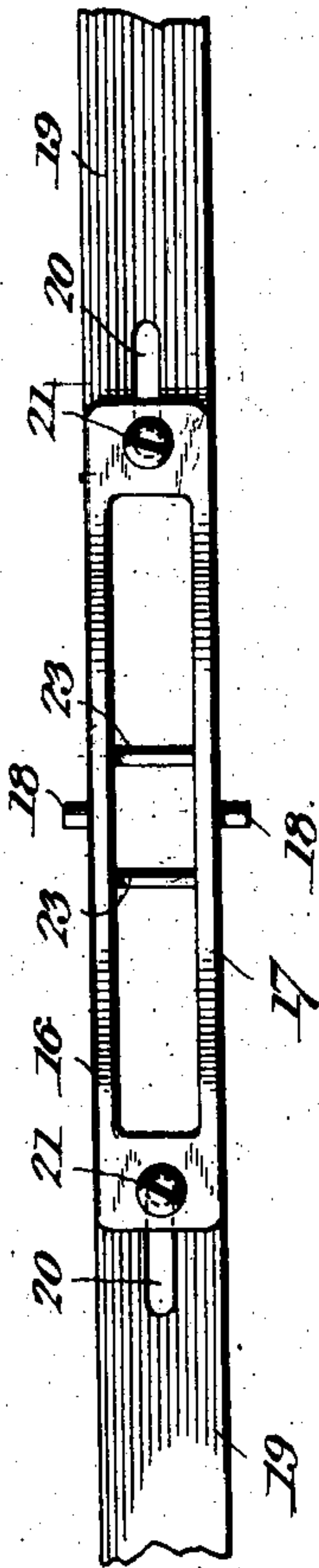
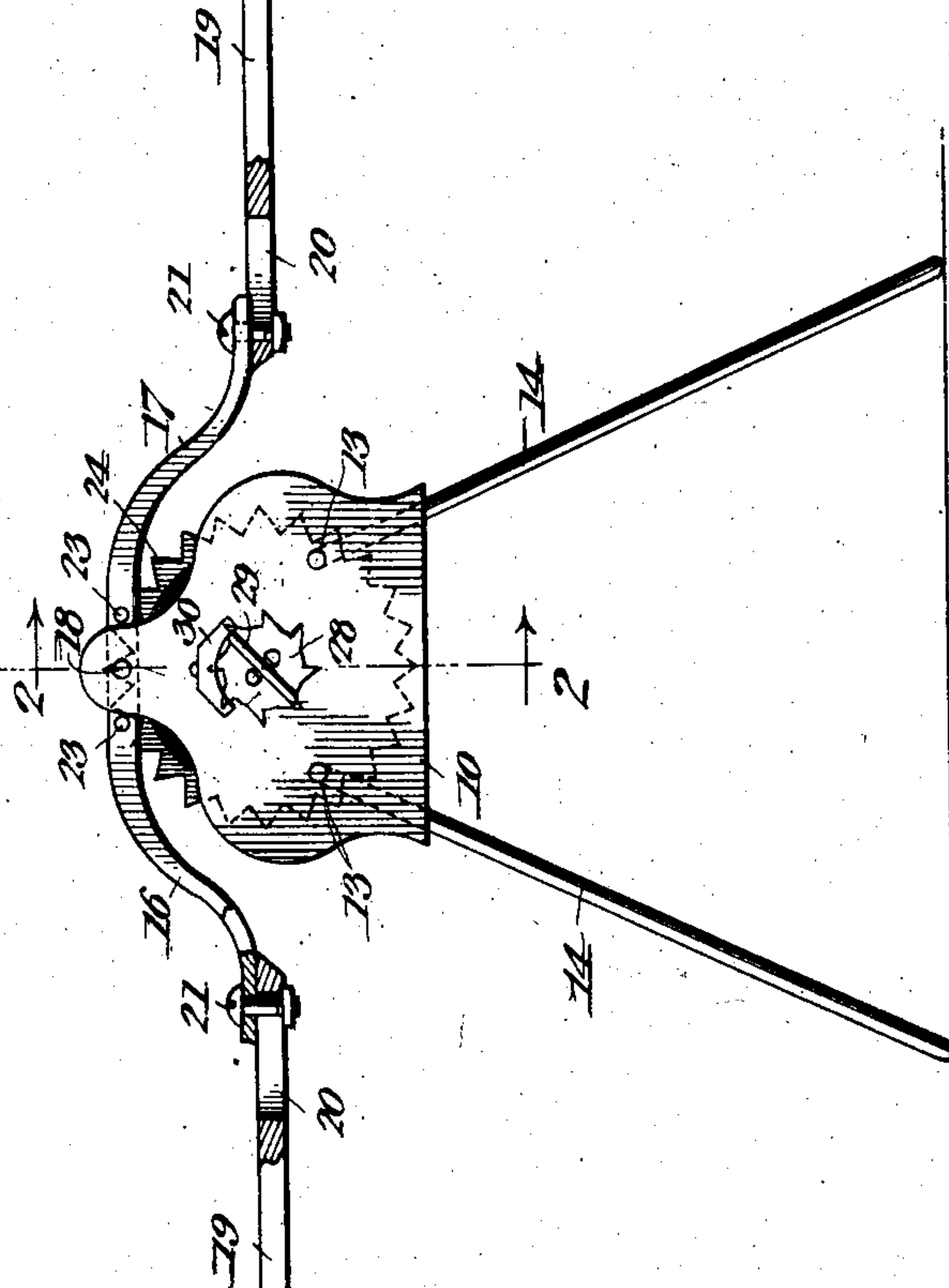
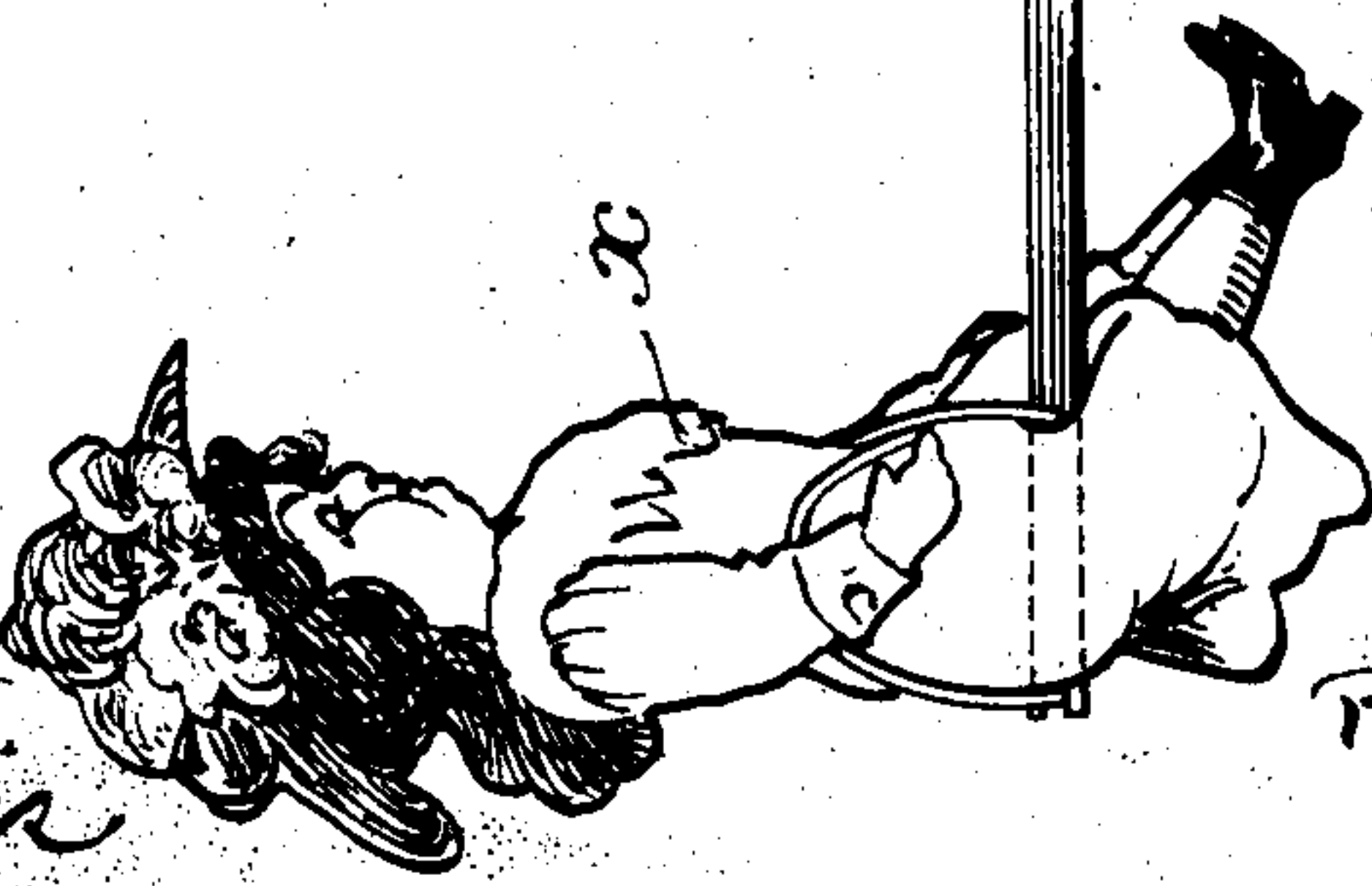


Fig. 1.



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2 SHEETS—SHEET 2.

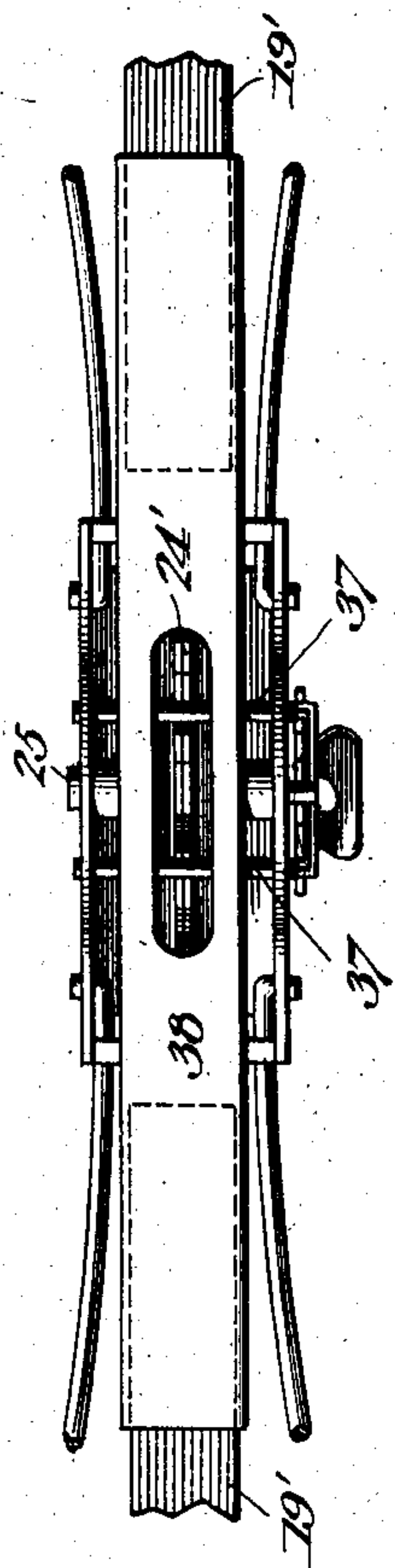


Fig. 4.

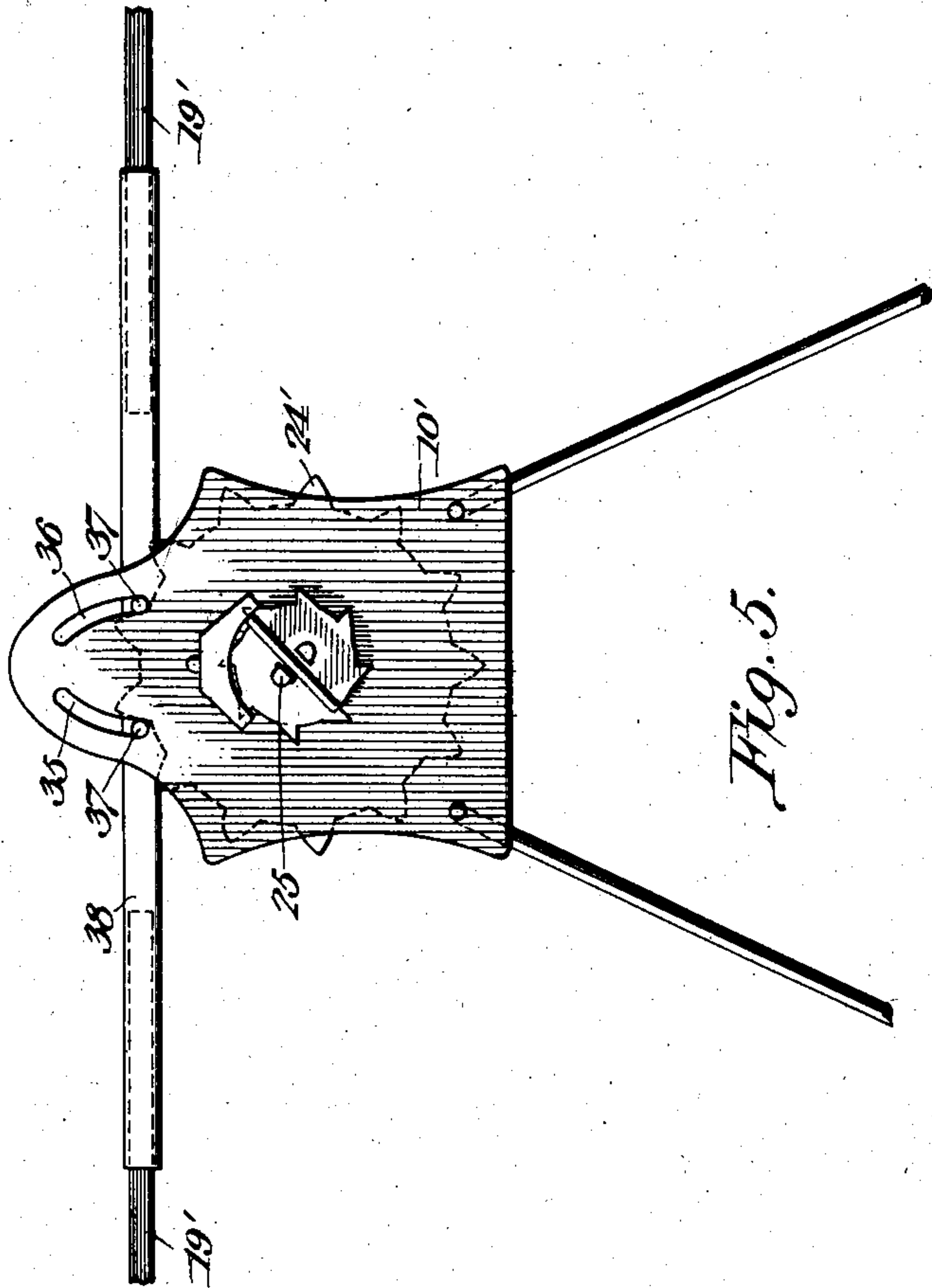


Fig. 5.

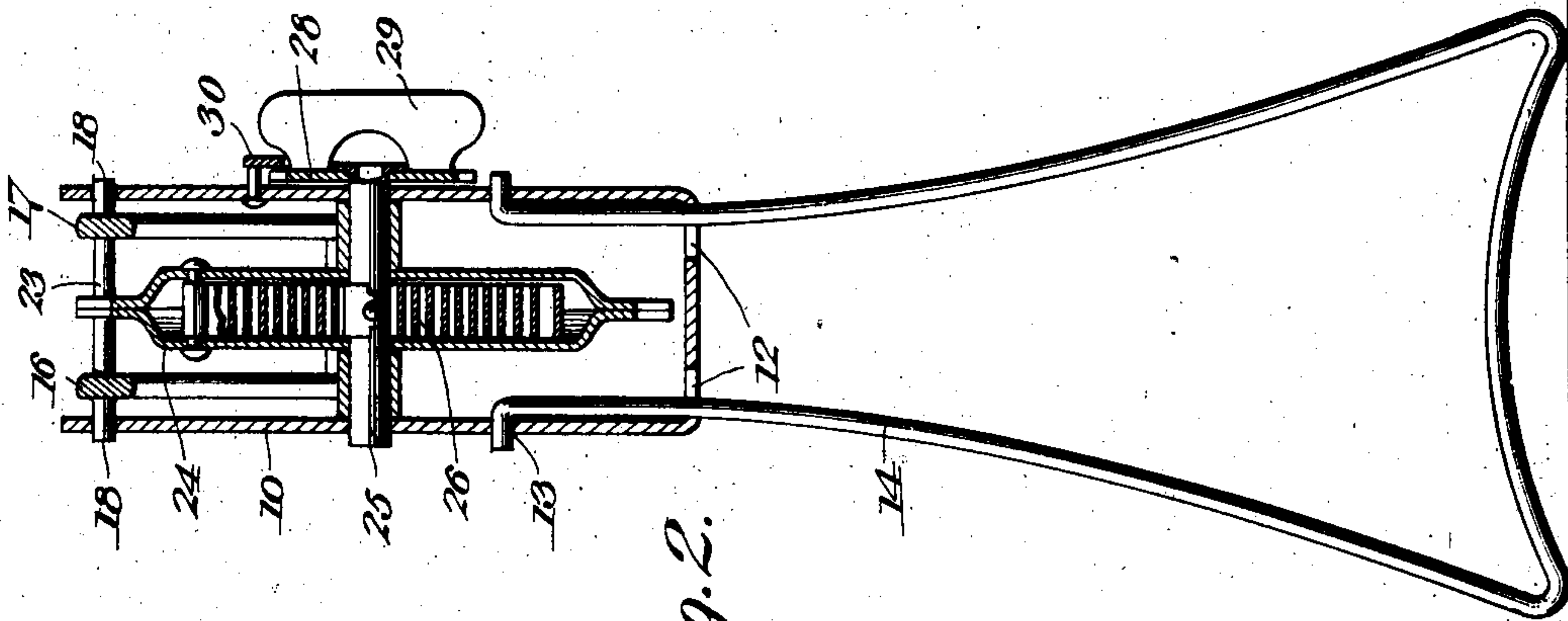


Fig. 2.

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UNITED STATES PATENT OFFICE.

HARRY T. KINGSBURY, OF KEENE, NEW HAMPSHIRE.

SEESAW.

No. 834,141.

Specification of Letters Patent.

Patented Oct. 23, 1906.

Application filed November 21, 1905. Serial No. 288,416.

To all whom it may concern:

Be it known that I, HARRY T. KINGSBURY, a citizen of the United States, residing at Keene, in the county of Cheshire, State of New Hampshire, have invented certain new and useful Improvements in Seesaws, of which the following is a description, reference being had to the accompanying drawings, and to the characters of reference marked thereon.

This invention relates to seesaws, and while intended primarily for use as a toy it may also be employed to advantage as an amusement device and constructed on a large scale in order to carry passengers.

One of the principal objects of the invention is to provide a spring-actuated seesaw in which the movable member or swinging seesaw-lever constitutes the regulating means for timing the movement, and, further, to provide a device of this type in which the motor and seesaw-lever are so arranged and constructed that a single toothed wheel serves to transmit positive vibratory movement in both directions to the seesaw-lever.

A still further object of the invention is to provide a device of this type in which all of the parts are so constructed as to permit their ready separation for packing in small compass and in which all of the working parts are substantially constructed and not readily damaged.

With these and other objects in view the invention consists in the combination of elements hereinafter described, and referred to in the appended claims.

The invention is illustrated in the accompanying drawings, in which—

Figure 1 is a side elevation of a seesaw constructed in accordance with the invention. Fig. 2 is a transverse sectional view of the same on the line 2 2 of Fig. 1. Fig. 3 is a detail plan view of the central portion of the device. Fig. 4 is an elevation of the central portion of a slightly-modified construction, and Fig. 5 is a plan view of the same.

The main frame includes a substantially U-shaped plate 10, formed of sheet metal, the lower cross member of which has transversely-extending slots 12 and the side walls being provided with openings 13. The legs or standards 14 are formed of spring-wire, each leg comprising a section of wire bent into U shape and its ends being bent outward for introduction into the openings 13. In placing the legs in position the wire legs

are bent toward each other and the ends passed through the slots 12, after which the legs are allowed to spring apart until the ends are inserted in the openings 13.

Between the side walls of the frame is pivoted a center piece 16, preferably in the form of an elongated link 17, having pivot members 18 projecting from its opposite sides and entering suitable openings formed in the side walls. The center piece 16 is preferably formed of cast-iron and is curved downward from its center toward its opposite ends in order to bring the center of gravity below the pivot-point. To the opposite ends of the center piece are secured arms 19, having slits 20 for the passage of bolts 21, the slots permitting lengthwise adjustment of the arms until the necessary balance is secured. At the outer ends of the arms are dolls or other figures *x*, which may be secured in place in any suitable manner.

Extending across the open space of the center piece are bars or pins 23, arranged one on each side of the plane of the pivots, and these are adapted to be engaged by the teeth of a wheel 24, that is mounted on a winding shaft or arbor 25, extending transversely across the frame. The toothed wheel is formed of two disks, the central portions of which are dished to form a spring-barrel, and in the barrel is a motor-spring 26, having its inner end secured to the shaft and its outer end to the toothed wheel. This wheel is held in a central position by suitable collars on the shaft. To the outer end of the shaft is secured a ratchet-wheel 28 and winding key or handle 29. The teeth of the ratchet-wheel are engaged by a suitable pawl 30, pivoted to one of the side walls of the frame.

In the operation of this device the teeth of the wheel in riding under the cross-bars 23 will act as cams and will raise said bars alternately to vibrate the seesaw member or lever. During the operation the lever acts as a regulating device for governing the speed of operation.

In the construction shown in Figs. 4 and 5 the frame 10' has arcuate slots 35 36 in its side walls, each slot being on a circular arc struck from the bottom or lower portion of the other. These slots receive the projecting ends of a pair of pins or cross-bars 37, that extend through a center piece 38, formed of sheet metal. The opposite ends of the center piece are arranged to form sockets for the reception of the arms 19', which are slid-

ably adjustable in the sockets to secure an even distribution of weight. When not in operation, the two pins rest at the bottom of the slots and the seesaw member or lever is supported in a horizontal plane. At a point below the center piece the side walls of the frame are provided with bearing-openings for the reception of a shaft 25, having at its center a wheel 24', the teeth of which are specially shaped to act as cams in raising the pins 37 alternately. In action the highest arm is always on the longer arm of the lever and will descend by gravity as soon as its momentum is overcome.

15 A seesaw constructed in accordance with this invention may be readily knocked down and packed in small space, and its parts may be assembled quickly and without the exercise of mechanical skill.

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

1. In a seesaw, a frame, a pivoted seesaw member, and a motor for operating the same, the seesaw member having an escapement connection with and serving as a means for governing the speed of the motor; substantially as described.

2. In a seesaw, a frame, a pivoted seesaw lever, and a motor acting directly thereon, the lever having an escapement connection serving as a governor for the motor; substantially as described.

3. In a seesaw, a frame, a pivoted seesaw lever including a center piece and detachable arms independently adjustably secured thereto and arranged in alinement with each

other, a pair of spaced pins or bars carried by the center piece, and a driven wheel having teeth for engaging said pins; substantially as described.

4. In a seesaw, a frame having arcuate slots in its side walls, a seesaw-lever having pins projecting into said slots and normally supported in a horizontal plane, and a toothed wheel arranged to engage said pins; substantially as described.

5. In a seesaw, a U-shaped upper frame, legs detachably secured thereto, a motor carried by the frame, and a seesaw-lever supported by the frame and operated by said motor; substantially as described.

6. In a seesaw, a frame, a seesaw-lever, having a pair of alternately-operable pivots, and motor-driven means for operating said lever; substantially as described.

7. In a seesaw, a frame, a seesaw-lever, a pair of supports alternately forming fulcrums for the swinging movement of the lever, and means for operating said lever; substantially as described.

8. In a seesaw, a frame, a seesaw-lever having a pair of alternately-operable pivots, the leverage distance between each pivot and its rising load being approximately the same, and a motor-driven means arranged to engage said pivots.

In testimony whereof I affix my signature in presence of two witnesses.

HARRY T. KINGSBURY.

Witnesses:

W. L. MASON,
L. C. GREENLEAF.