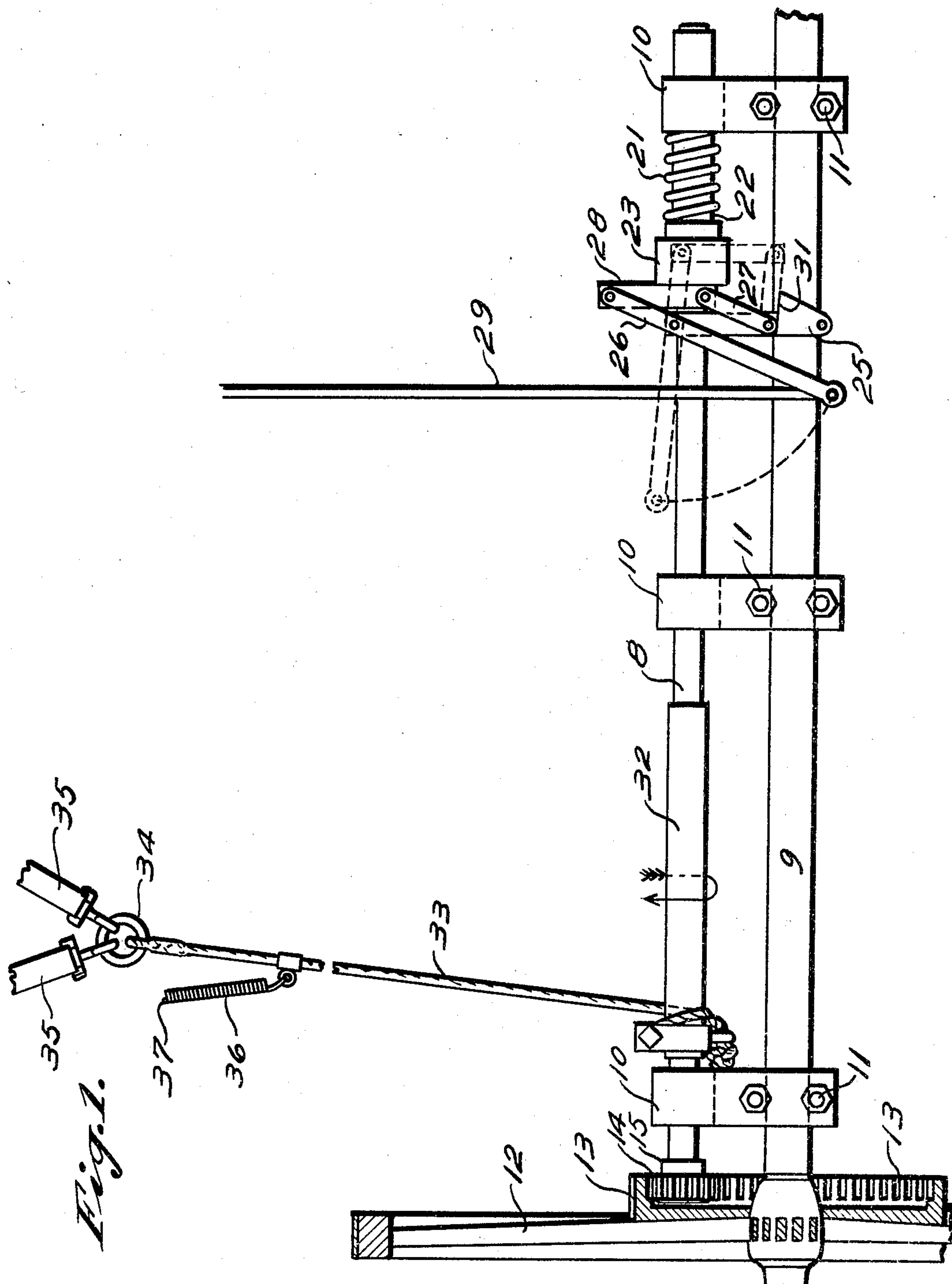


No. 793,378.

PATENTED JUNE 27, 1905.

O. A. JONES.
VEHICLE ATTACHMENT.
APPLICATION FILED JULY 25, 1904.

2 SHEETS—SHEET 1.



Witnesses:
Rudow Rummel,
Glen C. Stephens

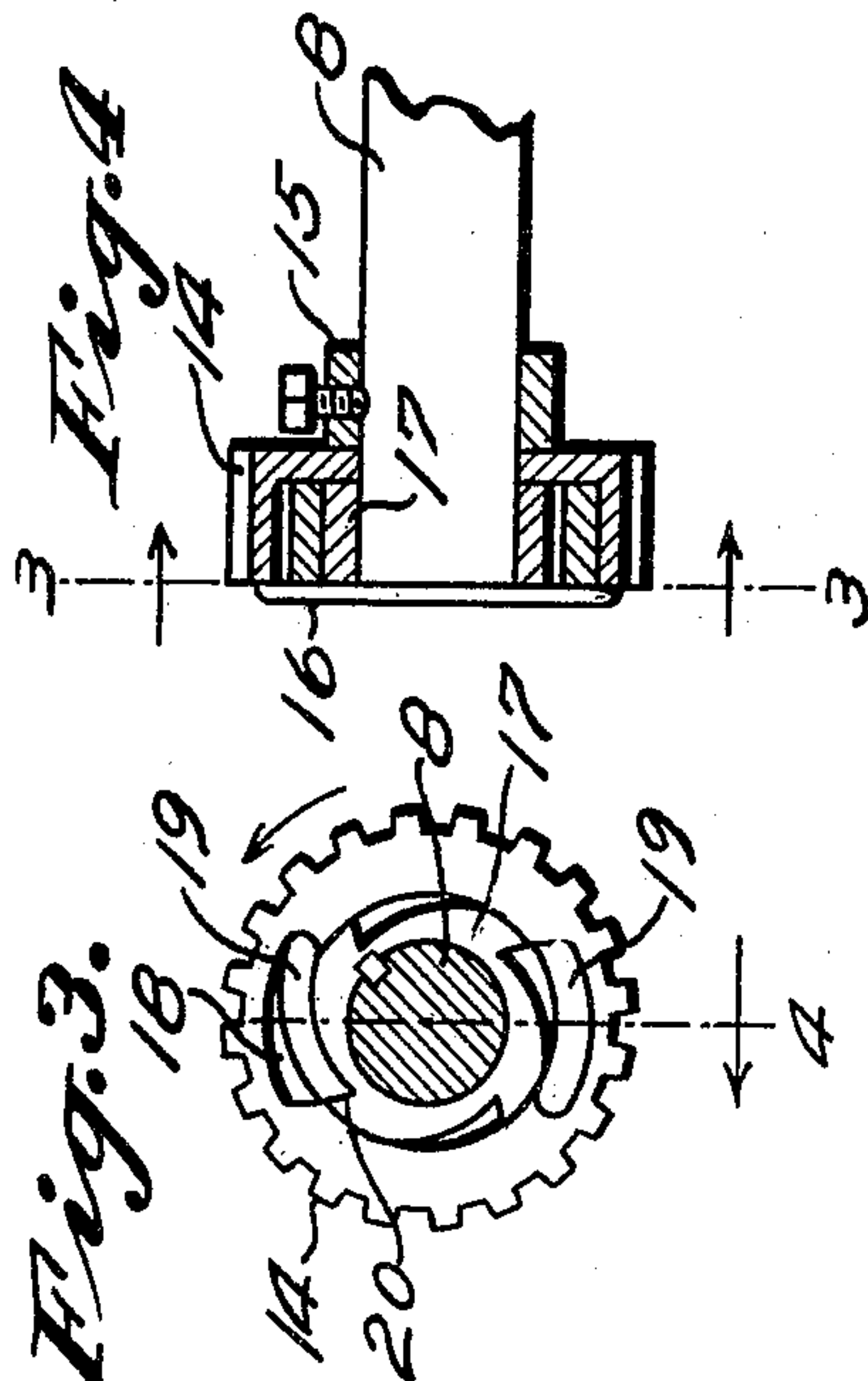
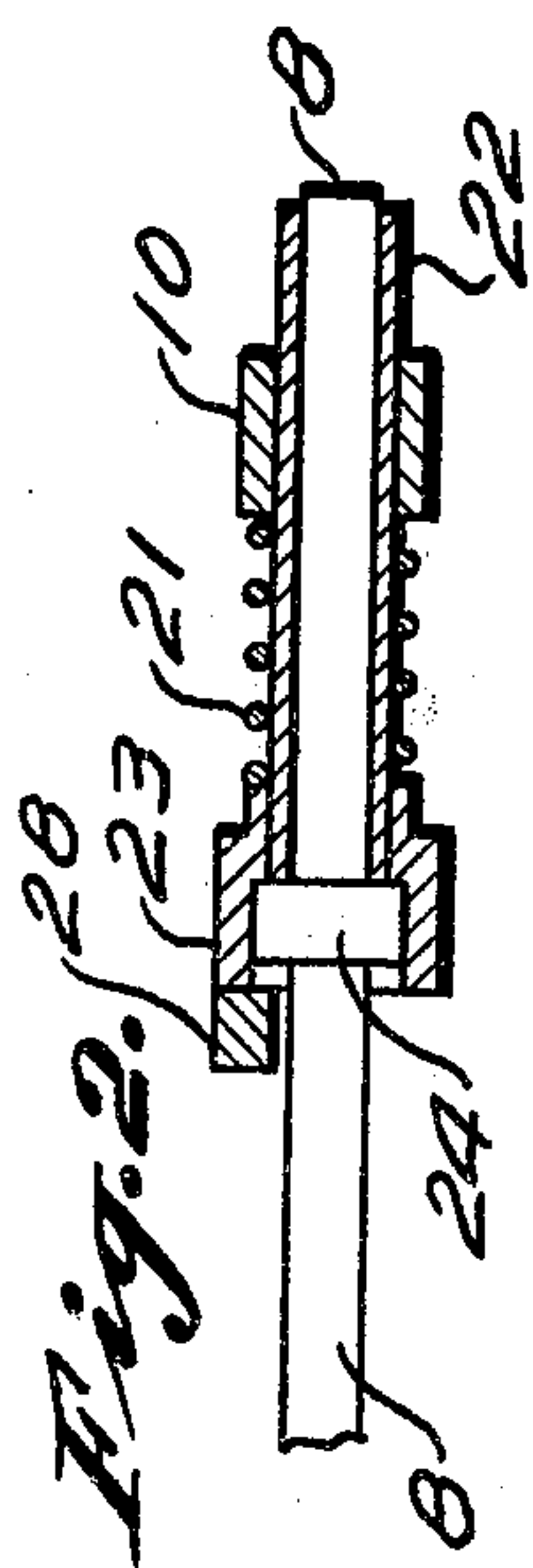
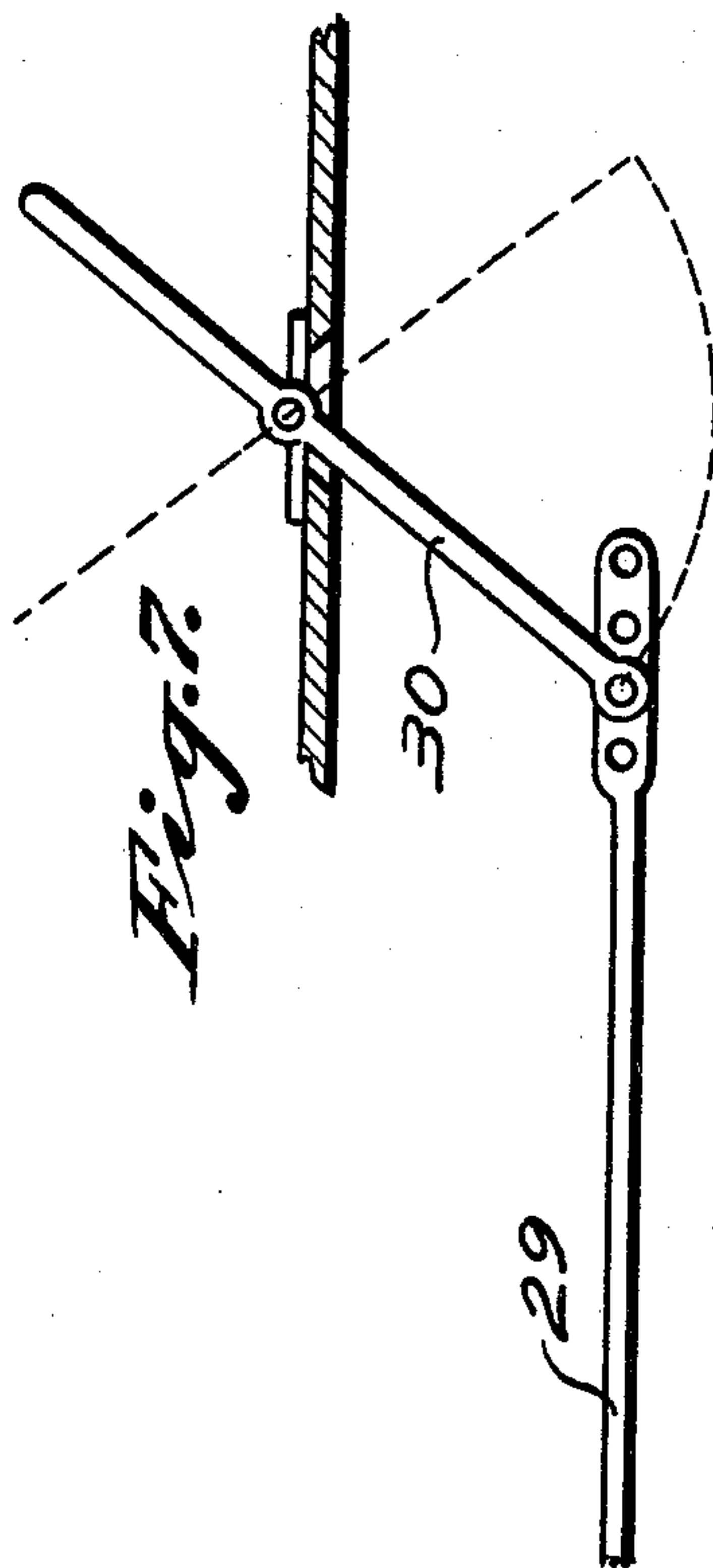
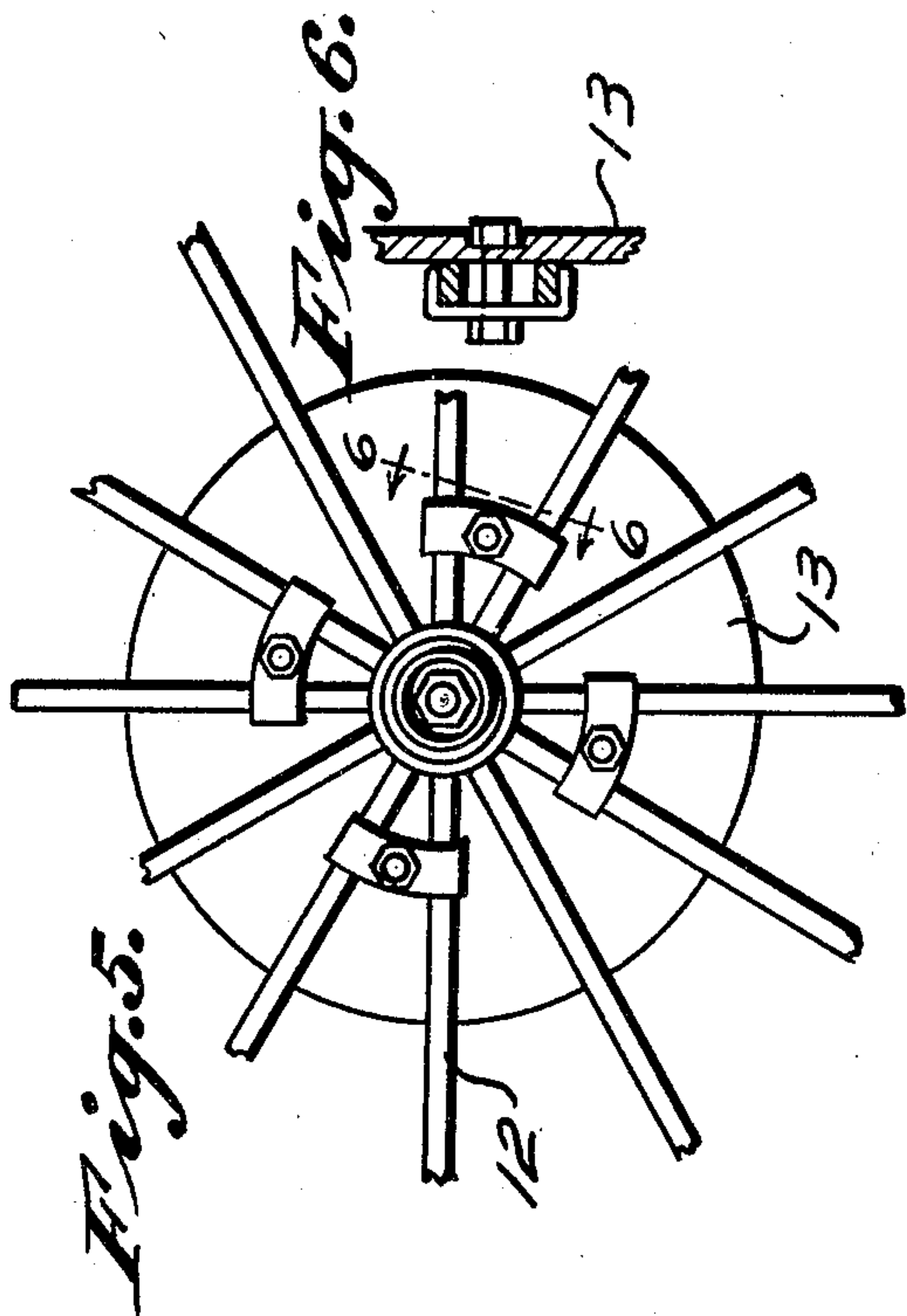
Inventor;
Oscar A. Jones,
Rummel & Rummel
Attorneys.

No. 793,378.

PATENTED JUNE 27, 1905.

O. A. JONES.
VEHICLE ATTACHMENT.
APPLICATION FILED JULY 25, 1904.

2 SHEETS—SHEET 2.



Witnesses:

Rudow Rummel,
Glen C. Stephens.

Inventor,

Oscar A. Jones,

by Rummel & Rummel,
Attorneys.

UNITED STATES PATENT OFFICE.

OSCAR A. JONES, OF CHICAGO, ILLINOIS.

VEHICLE ATTACHMENT.

SPECIFICATION forming part of Letters Patent No. 793,378, dated June 27, 1905.

Application filed July 25, 1904. Serial No. 217,978.

To all whom it may concern:

Be it known that I, OSCAR A. JONES, a citizen of the United States of America, and a resident of Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Vehicle Attachments for Preventing Runaways, of which the following is a specification.

The main object of my invention is to provide a simple and improved device for attachment to vehicles and adapted to be connected to the harness of a horse and to operate in such manner as to cause the movement of the vehicle to stop the horse when the device is in its operative position, thus preventing a horse from running away or wandering along if left unattended. I accomplish this object by the device shown in the accompanying drawings, in which—

Figure 1 is a plan, partly broken away and partly in section, of a device constructed according to my invention, the parts of the vehicle which are not directly concerned in the invention being omitted from the drawings for the sake of clearness. Fig. 2 is a vertical section of the spring-and-toggle mechanism for holding the device into either of its operative or inoperative positions. Fig. 3 is an end elevation of the clutch-pinon, showing its ratchet connection with the drum-shaft. Fig. 4 is a section on the line 4 4 of Fig. 3. Fig. 5 is a side elevation showing the method of connecting the annular gear to one of the wheels of the vehicle. Fig. 6 is a section, partly broken away, on the line 6 6 of Fig. 5. Fig. 7 is a side elevation of the operating-lever.

In the construction shown a shaft 8 is journaled to the frame of the vehicle in parallel relation to one of the axles 9, preferably the rear axle. The shaft 8 is supported by a plurality of bearings 10, which are rigidly connected to the axle 9 by means of U-bolts 11, extending around the axle. One of the wheels 12 has rigidly mounted thereon concentrically of its axis an annular gear 13, and the shaft 8 has loosely mounted on its adjacent end a pinion 14 and is slidable longitudinally in the bearings 10 to move the pinion 14 into and out of mesh with the gear 13. The pinion 14 is prevented from sliding along

the shaft 8 by means of the collars 15 and 16. A ratchet-wheel 17 is rigidly keyed to the shaft 8 concentrically of the pinion 14, and the pinion 14 is provided with a pair of internal recesses 18, within which are seated the pawls 19, which are adapted for engaging the notches 20 in the ratchet-wheel, and thereby causing the pinion to drive the shaft 8 when said pinion rotates in the direction of the arrow in Fig. 3. The pinion is free to rotate in the reverse direction without turning the shaft 8. The gear 13 is preferably clamped to the spokes of the wheel 12, as shown in Fig. 5, and may be readily fitted to any vehicle without requiring special construction of the wheel.

The shaft 8 is normally urged toward the left of Fig. 1 to bring the pinion 14 and gear 13 into mesh with each other by means of the spiral spring 21, which bears between the bearing 10 and a shoulder on the sleeve 22, which surrounds the shaft 8, and is enlarged at 23 to receive a collar 24, which is rigidly secured to the shaft. A bracket 25 is rigidly secured to the axle 9 near the end of the sleeve 22 and has mounted thereon, by means of parallel links 26 and 27, a shoe 28, which is adapted to engage the sleeve 22 and collar 24 on the shaft 8 for shifting the shaft against the action of the spring 21 and throwing the pinion 14 out of mesh with the gear 13. The part 23 extends slightly beyond the left-hand side of the collar 24 to prevent wear between the collar 24 and the shoe 28 when the shaft 8 rotates and to avoid friction between the shaft 8 and the spring 21 when the pinion and gear are disconnected. The link 26 is extended beyond one of its pivots to form a lever for shifting the shoe 28. This lever is operated by means of a link 29, which is in turn operated by a lever 30, pivotally mounted on the frame of the vehicle and having a short arm extending through the floor of the vehicle and being located in convenient position for being shifted by the foot of the driver. This lever is shown in Fig. 7. The dotted lines in Fig. 1 show the shoe 28 and its operating-levers in their other extreme position, as in the case when the pinion 14 is thrown out of mesh with the gear 13. The bracket

25 is provided with a stop 31 for limiting the angular position of the link 27 to a point slightly beyond the dead-central position of the links with respect to the direction of movement of the shoe 28, thus serving to hold the spring in its contracted position and holding the pinion 14 out of mesh with the gear 13. The shaft 8 is somewhat enlarged for a portion of its length to form a drum 32, to which is rigidly secured one end of a cord 33. A few turns of the cord 33 are wound upon the drum 32, and its free end is provided with a ring 34, to which are detachably secured a pair of reins or straps 35, which form part of the harness of the horse and may extend directly to the bit or may each be attached to one of the usual reins. A spring 36, having its end 37 secured to the body of the vehicle and having its other end secured to the cord 33, normally urges the unwinding of the cord 33.

The operation of the device shown is as follows: When the parts of the device are in the position shown by full lines in the drawings, then a forward movement of the vehicle will cause the wheel 12 to rotate, driving the pinion 14 and winding the cord 33 around the drum 32, thus pulling backward on the reins and stopping the horse. As the horse then backs, the strain on the reins is released until the drum returns to its normal position. If the horse should back while the parts are in the position shown, the ratchet connection between the pinion 14 and the shaft 8 permits the wheel 13 to rotate in a backward direction without affecting the shaft 8 otherwise than releasing the forward pull upon the shaft and permitting the spring 36 to unwind the cord 33 and release the backward pull upon the reins. Continued backward movement of the vehicle would have no effect upon the shaft 8. When the driver is ready to permit the free advance of the horse, he throws the lever 30 into position, (shown by the dotted lines,) and thereby throws the pinion 14 out of mesh with the gear 13. When intending to leave his horse standing unattended, all that is necessary for the driver to do is to push over the lever 30 to throw the controlling device into operative position. Other features of the operation will be readily understood from the foregoing description.

It will be seen that numerous details of the construction shown may be altered without departing from the spirit of my invention.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. The combination with a horse-drawn vehicle, of mechanism connected with one of the wheels and adapted to exert a backward pull

upon the reins when the vehicle moves in a forward direction, a clutch for throwing said mechanism into or out of operative position, a member having loose contact with any part of the clutch for controlling the position of the same; a spring normally urging said member toward one of its limiting positions; and toggle mechanism adapted through the action of said spring to secure said member in each of its limiting positions, substantially as described.

2. The combination with a horse-drawn vehicle, of a drum journaled on the vehicle, a cord wound on the drum and connected with the reins, a gear mounted concentrically on one of the wheels of the vehicle, a pinion connected with the drum and slidable into and out of mesh with the gear, a spring normally urging the pinion into one of its limiting positions, and toggle mechanism adapted through the action of said spring to secure the pinion in each of its limiting positions, substantially as described.

3. The combination with a horse-drawn vehicle, of a gear secured to one of the wheels of the vehicle; a shaft journaled in parallel relation to the axis of said wheel and slidable in its bearing; a pinion secured to said shaft and movable therewith into and out of mesh with said gear; a collar rigid on the shaft; a member loosely engaging the collar for moving the pinion into and out of mesh with the gear; a spring normally urging said member toward one of the limits of its movement; and toggle mechanism adapted through the action of said spring to secure said member in each of its limiting positions, substantially as described.

4. The combination with a horse-drawn vehicle, of a gear secured to one of the wheels of the vehicle; a shaft journaled in parallel relation to the axis of said wheel and slidable in its bearings; a pinion secured to said shaft and movable therewith into and out of mesh with said gear; a collar rigid on the shaft; a sleeve loosely mounted on the shaft and extending around the collar for loosely retaining the same; a spiral spring surrounding said sleeve and adapted to normally urge the same toward one end of the shaft; and toggle mechanism for shifting the sleeve and adapted through the action of said spring to secure the sleeve in each of its limiting positions, substantially as described.

Signed at Chicago this 22d day of July, 1904.

OSCAR A. JONES.

Witnesses:

EUGENE A. RUMMLER,
GLEN C. STEPHENS.