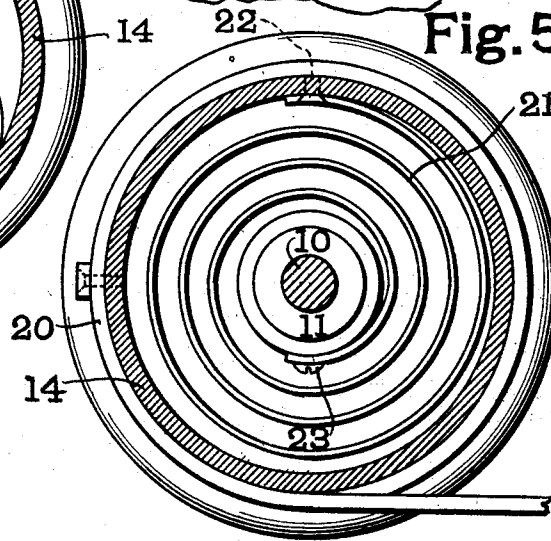
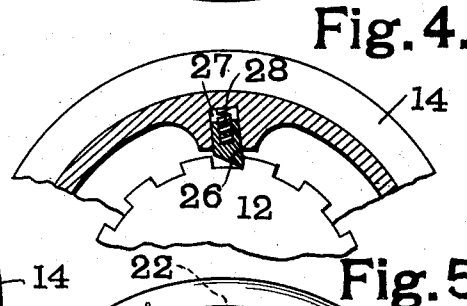
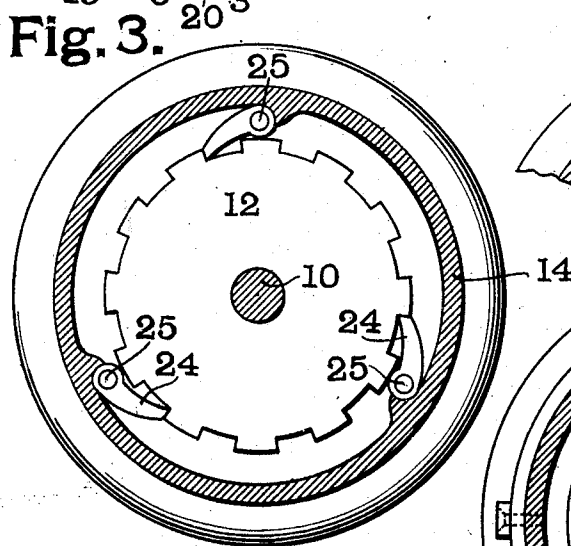
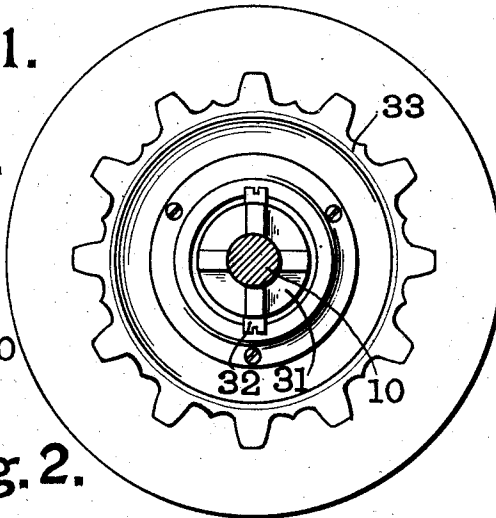
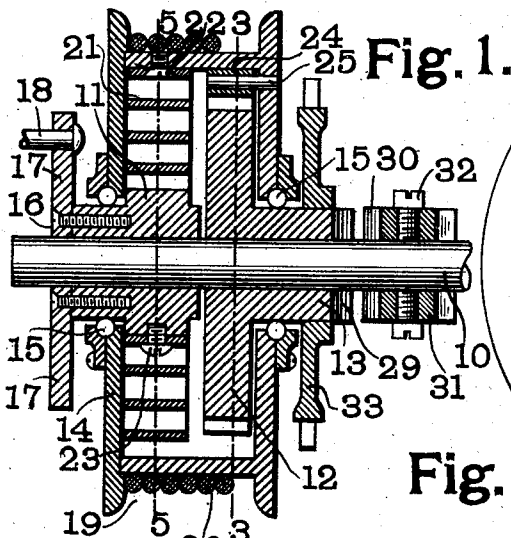


C. J. MENGES.
POWER TRANSMITTING MECHANISM.
APPLICATION FILED DEC. 27, 1909.

992,577.

Patented May 16, 1911.



WITNESSES.

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UNITED STATES PATENT OFFICE.

CHARLES J. MENGES, OF ST. LOUIS, MISSOURI.

POWER-TRANSMITTING MECHANISM.

992,577.

Specification of Letters Patent.

Patented May 16, 1911.

Application filed December 27, 1909. Serial No. 535,033.

To all whom it may concern:

Be it known that I, CHARLES J. MENGES, a citizen of the United States, residing at St. Louis, Missouri, have invented a certain new and useful Power-Transmitting Mechanism, of which the following is such a full, clear, and exact description as will enable any one skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, forming part of this specification.

My invention relates to power transmission mechanism and more particularly to mechanism by means of which rotary motion can be imparted to a shaft or other device from intermittent longitudinal movement of a cable or cord.

In the accompanying drawings which illustrate one form of mechanism made in accordance with my invention, Figure 1 is a vertical longitudinal section; Fig. 2 is an end view; Fig. 3 is a section on the line 3—3 of Fig. 1; Fig. 4 is a detailed view showing a slight modification and Fig. 5 is a section on the line 5—5 of Fig. 1.

Like marks of reference refer to similar parts in the several views in the drawings.

10 is the shaft to which the power is to be transmitted. Loosely mounted upon this shaft 10 is a non-rotary member 11 and a ratchet wheel 12 which is provided with a hub 13. Mounted upon the hub 13 of the ratchet 12 and the non-rotary member 11 is a hollow drum 14. In mounting this drum I prefer to use ball bearings 15, as shown in Fig. 1. The non-rotary member 11 has a portion which projects through the end of the drum 14 at one end while the hub 13 projects through the other end of the drum. Secured to the projecting portion of the non-rotary member 11 by means of screws 16 is a disk 17. This disk 17 is provided with a pin 18 by means of which it is attached to any suitable fixed object to prevent the rotation of the part 11. This pin 18 may be also connected with suitable devices (not shown) for shifting the drum 14 longitudinally on the shaft 10. Wound around the periphery of the drum 14 in a groove 19 is a rope or cable 20 by means of which motion is imparted to the drum. Within the drum 14 is a coil spring 21, one end of which is attached to the periphery of the drum by means of a screw 22 and the other to a non-rotary member 11 by means of a screw 23. This spring is so arranged that

it is tightened when the rope 20 is drawn off the drum and when the rope is released the drum will consequently be rotated into its initial position to again wind the rope 20 thereon. Carried by the drum 14 are a number of pawls 24 which engage with the teeth of the ratchet wheel 12. It will be evident that when motion is imparted to the drum 14 by means of the rope 20 an intermittent forward movement will be imparted to the wheel 12 by means of the pawls 24. The pawls 24 are pivoted to the drum 14 at 25, as shown in Fig. 3. In place, however, of using pivoted pawls I may use pawls 26, as shown in Fig. 4, which pawls slide radially in slots 27 in the periphery of the drum 14 and are actuated either by gravity or by a coil spring 28. In order to impart movement from the ratchet wheel 14 to the shaft 10 I provide the end of the hub 13 with grooves 29 adapted to engage with corresponding teeth 30 on a hub 31 which is secured to the shaft 10 by means of set screws 32. It is evident that if longitudinal movement be imparted either to the shaft 10 or to the drum 14 so as to bring the teeth 30 into engagement with the grooves 29, the ratchet wheel 12 and the shaft 10 will be rigidly connected together so that the movement of the wheel will be imparted to the shaft. Either the wheel or the shaft may be moved but as hereinbefore described I prefer to move the drum or casing 14 by means of the pin 18 in the disk 17. In case it is desired to use the power of the mechanism for other purposes than driving the shaft 10, a gear wheel 33 may be rigidly secured to the hub 13 of the wheel 12, as shown in Figs. 1 and 2.

Having fully described my invention, what I claim as new and desire to secure by Letters Patent of the United States, is:

1. The combination with a rotary shaft, of a drum forming a casing and loosely mounted on said shaft, said drum having an actuating cord wound on its periphery, a non-rotary member loosely mounted on said shaft and extending into the interior of said drum at one end, a spring attached at one end of said drum and at the other to said non-rotary member, a ratchet wheel situated within said drum and provided with a hub extending through said drum at the end opposite said non-rotary member, said ratchet wheel being loosely mounted on said shaft, a pawl carried by said drum and engaging

said ratchet wheel, and a connection between said shaft and the hub of said ratchet wheel.

2. The combination with a rotary shaft, of a drum forming a casing and loosely
5 mounted on said shaft, said drum having an actuating cord wound on its periphery, a non-rotary member loosely mounted on said shaft and extending into the interior of said drum at one end, a spring attached at one
10 end to said drum and at the other end to said non-rotary member, a ratchet wheel situated within said drum and provided with a hub extending through said drum at the end opposite said non-rotary member,
15 said ratchet wheel being loosely mounted on said shaft, a pawl carried by said drum and

engaging with said ratchet wheel, anti-friction bearings carried by said drum and running on said non-rotary member and the hub of said ratchet wheel, and a member carried by said shaft and adapted to engage with the hub of said ratchet wheel, whereby the relative longitudinal movement of said shaft and drum throws the device into and out of operation.

In testimony whereof, I have hereunto set my hand and affixed my seal in the presence of the two subscribing witnesses.

CHARLES J. MENGES. [L. S.]

Witnesses:

W. A. ALEXANDER,
ELIZABETH BAILEY.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents Washington, D. C."
