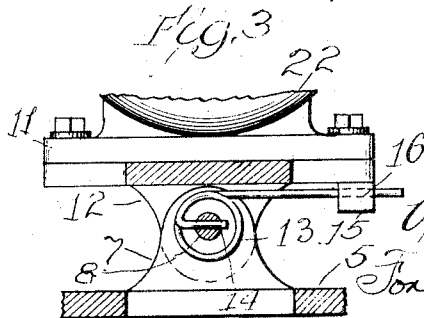
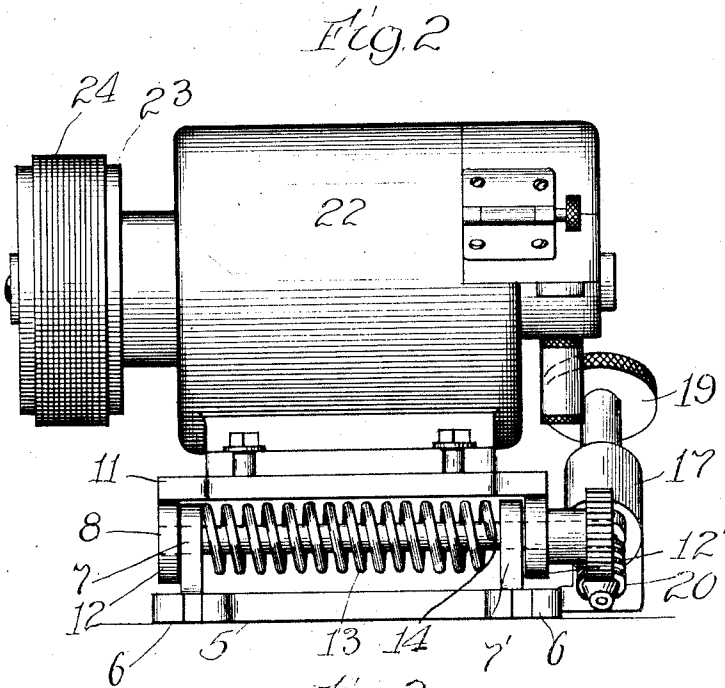
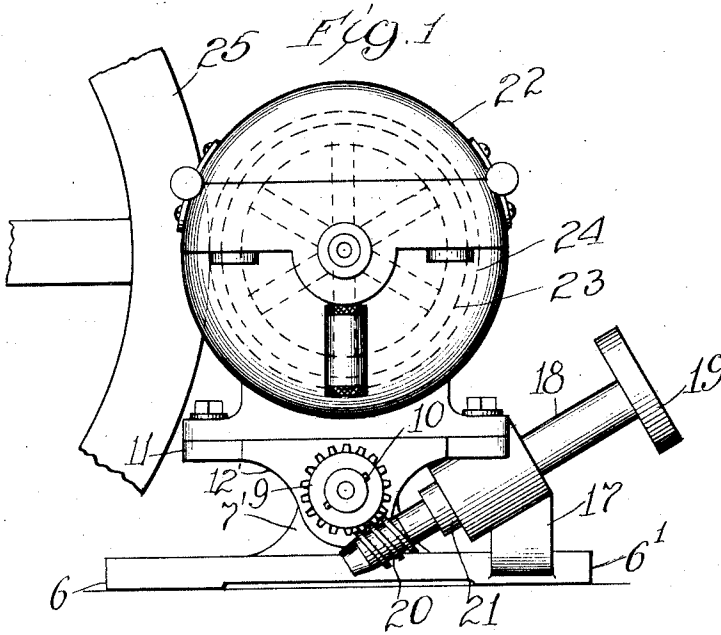


V. G. APPLE.  
 POWER TRANSMISSION DEVICE.  
 APPLICATION FILED MAR. 21, 1910.

980,044.

Patented Dec. 27, 1910.



Witnesses  
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# UNITED STATES PATENT OFFICE.

VINCENT G. APPLE, OF DAYTON, OHIO.

## POWER-TRANSMISSION DEVICE.

980,044.

Specification of Letters Patent. Patented Dec. 27, 1910.

Application filed March 21, 1910. Serial No. 550,639.

*To all whom it may concern:*

Be it known that I, VINCENT G. APPLE, a citizen of the United States, residing at Dayton, in the county of Montgomery and State of Ohio, have invented certain new and useful Improvements in Power-Transmission Devices, of which the following is a specification.

One of the objects of my invention is to provide a friction power drive, especially well adapted for driving small dynamo-electric machines whereby the speed of the machine may be varied, or whereby it may be driven at maximum speed, or entirely stopped.

Another object of my invention is to provide in a device of the character described means for yieldingly holding the driven and driving wheels in frictional contact, and means for positively separating said wheels and maintaining them so separated.

Other and further objects of the invention will become apparent to persons skilled in the art from consideration of the specification taken in conjunction with the drawing, wherein—

Figure 1 is an end elevation of the driving device, showing a fragment of the driving wheel; Fig. 2 is a side elevation of same; and Fig. 3 is a fragment of a lower part of the device, showing a part of the fixed base; a part of the rocking base, the shaft upon which they are pivoted, and the spring for producing the yielding contact.

In the drawing, 5 is a fixed base, provided with four, preferably slotted, feet, 6-6', for the reception of screws to secure same to the floor. Lugs, 7-7', one near each end of the base, are perforated for the reception of the shaft, 8. The shaft overhangs the lug, 7', sufficiently to afford bearing for a worm wheel, 9, which is secured thereon by means of the pin, 10.

A superposed base, 11, is provided with downwardly depending lugs, 12-12', which are separated just enough to admit the lugs, 7-7', therebetween to prevent any objectionable lateral movement between the two base members. The lugs 12-12' are perforated for the shaft 8, and thus pivoted action is provided between the base members. An open helical spring, 13, somewhat larger than the shaft, 8, surrounds said shaft, one end of which passes through the shaft, as at 14, the other end is extended under the movable base, and passes loosely through a

lug, 15, as at 16. Secured to the base member, 5, is a lug, 17, supporting an angulated shaft, 18, which is provided on one end with a hand wheel, 19, and fixed to the other end thereof is a worm, 20, which engages the worm wheel 9. The shaft, 18, where it passes through the lug, 17, is smaller than the outwardly projecting part, at the conjunction of which a shoulder is formed to prevent the shaft from moving axially toward the worm wheel. A collar 21 is secured to the shaft, 18, and prevents it from moving axially in the opposite direction.

I have shown a dynamo, 22, mounted on the superposed oscillating base member, 11, but it is apparent that any device requiring to be rotated may be secured thereto and driven in the same manner.

Secured to the shaft of the dynamo is a pulley, 23, provided with a relatively soft face, 24, to provide a proper frictional surface for contact with the driving wheel, 25.

In the operation of the device, when the hand wheel, 19, referring more particularly to Fig. 1, is turned to the right, the worm, 20, will turn the shaft, 8, to the left, by means of the worm, 9; the tension of the spring, 13, is thereby brought into effect and the superposed tilting base, with the dynamo thereon is moved toward the driving wheel, 25; and after the wheels are thus brought into contact, a further turn of the hand wheel will tension the spring 13 and thereby increase the pressure applied to the wheel, 23, in its contact with the wheel, 25. A turn of the hand wheel, 19, in the opposite direction, will, therefore, decrease, instead of increase, the spring tension and reduce the pressure between the wheels, 23 and 25. A further turn of the hand wheel, 19, will cause the wheel, 23, to be entirely moved out of contact with the wheel, 25. The spring tension may be so adjusted relatively to the constant load of the dynamo, that the slip between the two wheels, 23 and 25, will be a constant quantity, and, therefore, by this means, the dynamo may be operated at a uniform but reduced speed, so that its output may not be materially increased by any increase in the speed of the driving pulley, or decrease of resistance in the dynamo circuit. The worm gear adjustment is such that the device is held firmly in its adjusted position after each movement of the hand wheel.

To produce the most satisfactory results, the contacting frictional surfaces of the driving and driven wheels should be amply large to operate the driven member under full load without any appreciable slip.

Having thus described my invention, what I claim is:

1. In a device of the character described, the combination of a base member providing on opposite sides thereof two alining upwardly projecting apertured lugs, and a single third apertured lug longitudinally and laterally beyond one of said alining lugs, a superposed base member providing on opposite sides two alining downwardly projecting apertured lugs, the apertures thereof arranged to register with the apertures in said lugs of the underlying base member, a horizontal shaft passing through said apertures and connecting said base members for relative pivotal movement, said shaft at one end extending beyond the alining lugs to a point in lateral alinement with the single third lug of the underlying base member, a gear on said end of the shaft, a shaft in the aperture of the said third lug of the base, a worm on one end thereof engaging the gear, a handle on the other end, and means for establishing a yielding connection between the base

members comprising a spiral spring around the horizontal shaft secured at one end to the shaft and at the other to the superposed base member, whereby turning of the handle may vary the stress of said spring and through the lateral pressure of the superposed base member for the purpose described, said superposed base member provided with a small downturned apertured lug on the outer edge of its lower surface, for the reception of the spring end, as described.

2. In a device of the character described, a casting providing upturned lugs, a coacting casting providing downturned lugs, a shaft passing through apertures in said several lugs, a spring around said shaft and connected to the second casting member, said upper casting providing an upper table for reception of a part to be mounted thereon, and means for adjusting the pressure of said spring between the shaft and upper casting.

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

VINCENT G. APPLE.

In the presence of—

CHAS. D. KIDD,

E. V. MARTIN.