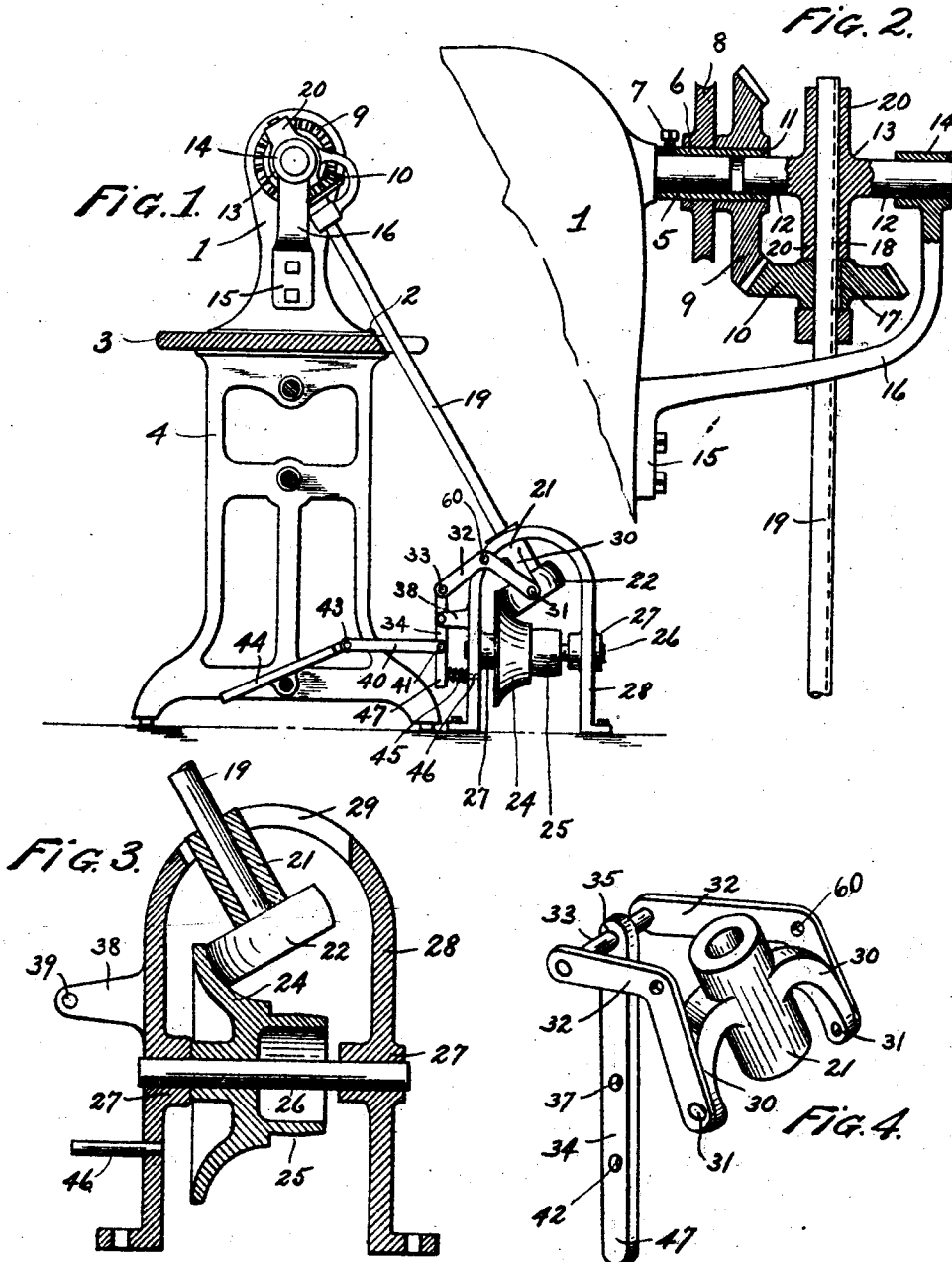


A. B. COHN.
POWER TRANSMITTER FOR SEWING MACHINES.
APPLICATION FILED JUNE 29, 1906.

941,857.

Patented Nov. 30, 1909.

2 SHEETS—SHEET 1.



WITNESSES:

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W. Talbot

INVENTOR

ALEXANDER B. COHN.

BY

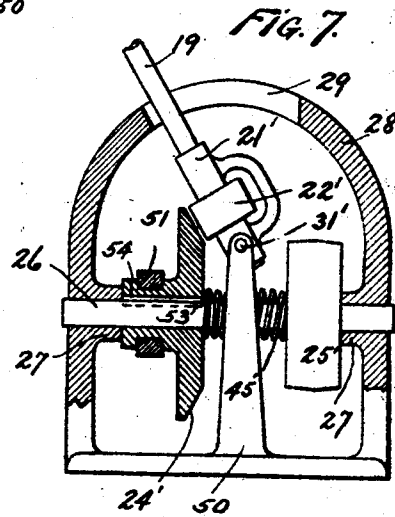
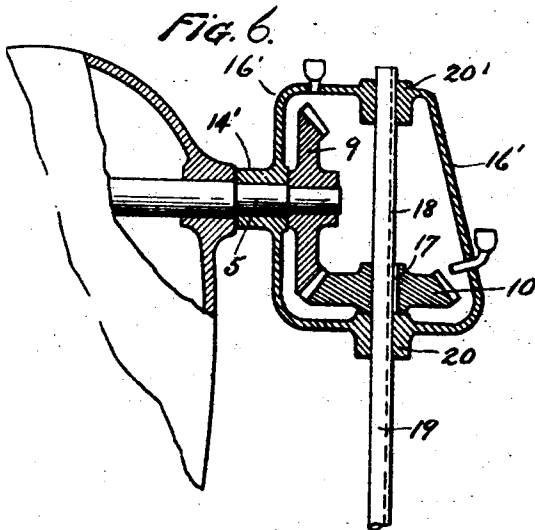
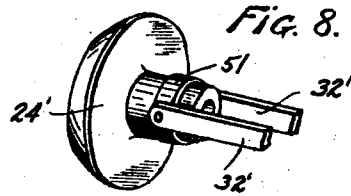
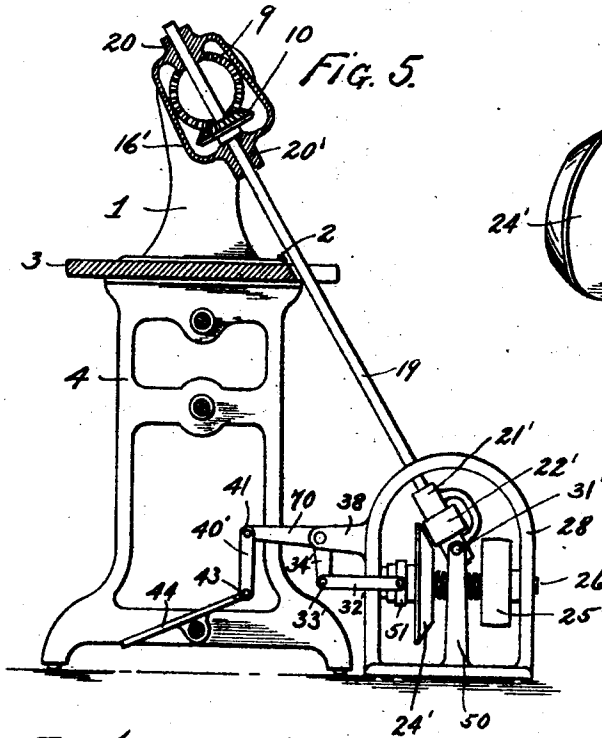
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2 SHEETS—SHEET 2.



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POWER-TRANSMITTER FOR SEWING-MACHINES.

941,857.

Specification of Letters Patent. Patented Nov. 30, 1909.

Application filed June 29, 1906. Serial No. 324,010.

To all whom it may concern:

Be it known that I, ALEXANDER B. COHN, a citizen of the United States, residing at Philadelphia, in the county of Philadelphia and State of Pennsylvania, have invented a new and useful Power-Transmitter for Sewing-Machines, of which the following is a specification.

My invention relates to improvements in the operation of sewing machines, in which a rigid link transmits the power from the driving device to the machine head shaft, and the objects of my improvement are, first, to provide a means which would facilitate the raising of the head of the machine, second, to permit the transmitting link to swing and, third, to prevent the transmitting arm from freezing.

It has also certain other novel constructions, combinations and arrangements of parts, as will be hereafter fully described and claimed.

I attain these objects by the mechanism illustrated in the accompanying drawing in which—

Figure 1, is a side elevation of a sewing machine and of the transmitting device; Fig. 2, is a section of the upper part of the transmitting device; Fig. 3, is a section of the lower part of the transmitting device; Fig. 4, is a detailed view of the lower bearing for the transmitting link; Fig. 5, is another side view of a sewing machine, showing a modified transmitting device; Fig. 6, is a section of the upper part of the transmitting device of Fig. 5; Fig. 7, is a section of the lower part of the transmitting device shown in Fig. 5; Fig. 8 is a detailed view of the clutch operating the transmitter of Fig. 5.

Similar numerals refer to similar parts throughout the several views.

In Fig. 1, 1 is the head of a sewing machine, attached by hinges 2 to a table 3, resting on horses 4. 1 carries a shaft 5.

In Fig. 2 is shown a collar 6, attached to 5 by a bolt 7. 6 carries a wheel 8, by means of which the machine could be operated by hand. 6 also carries a gear 9, which is driven by a gear 10. 6 also forms a bearing 11, for one of the journals 12 of a rocker 13. The other journal of the rocker revolves in a bearing 14, which is fastened to the machine head at 15, by the arm 16. At its lower end the rocker carries the gear 10 about which end 10 is free to revolve. 10 is

provided with a key 17, which fits loosely in a channel 18, milled in the transmitting shaft 19. This arrangement permits the gear and shaft to slide up and down relative to each other, while when the shaft revolves the gear must revolve with it and transmits this motion to gear 9. The upper part of the transmitting shaft 19, is free to revolve within the bearing 20, 20, formed by the rocker 13. The lower part of 19 revolves in a bearing 21, shown in section in Fig. 3, and in detail in Fig. 4. On the lower extremity of 19 is forced a friction disk 22, which can be brought in frictional contact with part 24, of a pulley 25. 25 is driven by a prime mover, not shown, and is mounted on a shaft 26, revolving in bearings, in a pedestal 28. The bearing 21 is extended through a slot 29, in pedestal 28, to allow the shaft to swing, but to prevent it from moving sideways. The bearing 21, carries the arms 30, 30, which arms carry pins 31, and which pass through the arms 32, 32. Through the arms 32, passes a pin 33, over which arm 34, rocks as at 35. The arms 32 are pivoted on frame 28 as at 60. The arm 34 is swingingly supported at 37 by a bracket 38 provided with a hole 39 attached to pedestal 28. An arm 40 is pivotally connected with arm 34 by a pin 41, and with a treadle 44 by a pin 43. Pedestal 28 has one end of a spring 45 fastened to it. 45 is slipped over a pin 46, fastened to pedestal 28. The other end of spring 45 is fastened to an extension 47 of arm 34.

When the operator presses the foot or feet against the treadle 44, 40 is forced forward reacting on 34, which in its turn forces 32 in a direction to bring the friction disk 22 in contact with 24. 24 being in motion transmits this motion to shaft 19. Gear 10 mounted on shaft 19, revolves with it and transmits this motion through gear 9 from which the head shaft of the machine is driven. To avoid the possibility of the friction disk 22 being pressed too hard against 24, the pin 46, is provided for the purpose of preventing bar 34 from being forced too far by the pressure on the treadle, while the spring acts as a cushion. When the head of the machine is being raised, it swings on its hinges. This causes the transmitting shaft 19 to move outward. Bearing 21 swings around its pins 31 and slides along slot 29 in pedestal 28. The upper part of 19, slides along the key of gear 10, and permits rocker

13 to rock. In the modified views Figs. 5, 6, 7, 8, I attain the same objects in a somewhat different manner. I do away with the support 16, of the upper rocker, and form it into a box 16', free to swing around the head shaft 5, by means of a bearing 14'. The lower bearing 21', swings about a pin 31', passing through a pedestal 50. On shaft 26, I mount a disk 24', having a key 54, free to slide in a channel 53 in the shaft 26. For starting the machine, the treadle transmits the pressure to a ring 51, mounted on bearing of disk 24', which forces 24' against the friction disk 22'. I mount the checking and cushioning spring 45', on shaft 26, between 24' and driving pulley 25'. Otherwise the same principle is embodied in the several views.

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

1. In a power transmitter, comprising driving, driven and transmitting means, a driven shaft a collar and a gear mounted thereon, a transmitter shaft and a gear mounted thereon, a rocker provided with bearings for the transmitter shaft and with a support for the gear mounted thereon, a driving shaft and a disk mounted thereon, and a pedestal with bearings for the driving shaft.

2. In a power transmitter, comprising driving, driven and transmitting means, a driven shaft, a gear fixedly mounted thereon, a transmitter shaft provided with a slot, a gear, provided with a key to be slidingly guided on the shaft and to prevent it from turning about the shaft, mounted thereon, a pivoted rocker provided with bearings for the transmitter shaft and with a support for the gear mounted thereon, a disk mounted on the transmitter shaft, a driving shaft and a disk mounted thereon, a pedestal provided

with bearings for said shaft and with a support for a pivoted means to bring the circumferential surface of the disk on the transmitter shaft in frictional contact with the circumferential surface of the disk on the driving shaft, and a means supported by the pedestal to prevent said frictional contact from becoming excessive.

3. In a power transmitter, comprising horizontally mounted driven means, horizontal driving means mounted at right angles to the driven means, rotatable transmitting means mounted vertically between the driving and driven means, pivoted means and a means to operate the pivoted means to cause rotation in the transmitting means in combination with a means to operate the pivoted means for preventing rotation in the transmitting means.

4. A power transmitter for sewing machines, comprising the combination of driving and driven means mounted at right angles, with transmitting means mounted between the driving and driven means, to receive motion from the driving means and to transmit motion to the driven means, pivoted means rockingly supporting the receiving end and rocking means slidingly supporting the transmitting end, means to cause the driven means to rotate with the transmitting means, and means operated by foot pressure to cause the transmission of motion from the driving to the transmitting means in combination with a means to prevent said transmission when said pressure is removed.

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

ALEXANDER B. COHN.

Witnesses:

N. W. TALBOT,
MARY E. HAMER.