2 Sheets--Sheet 1.

J. SIGWALT, Jr.

Mechanism for Transmitting Motion from a Treadle to a Revolving Shaft.

No. 168,350. Patented Oct. 5, 1875.

Fig. 1.

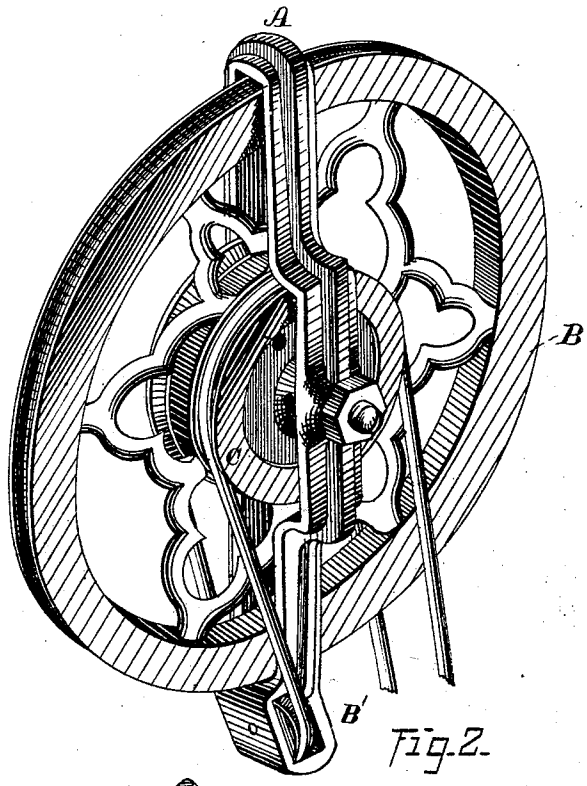
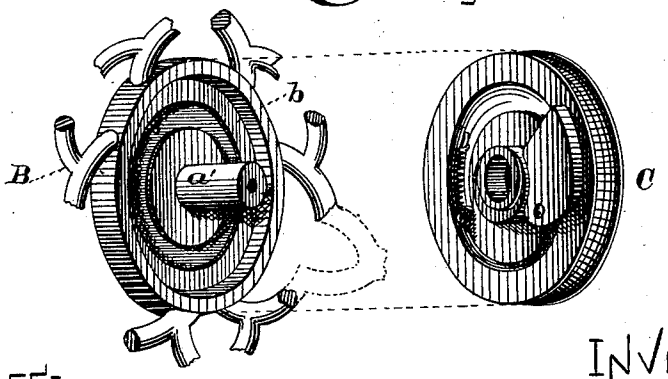


Fig. 2.



WITNESSES:

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John R. Young

INVENTOR.

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2 Sheets--Sheet 2.

J. SIGWALT, Jr.

Mechanism for Transmitting Motion from a Treadle to a Revolving Shaft.

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Fig. 3.

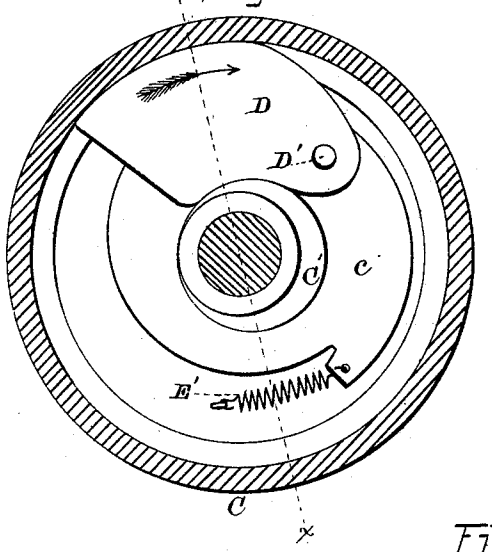


Fig. 4.

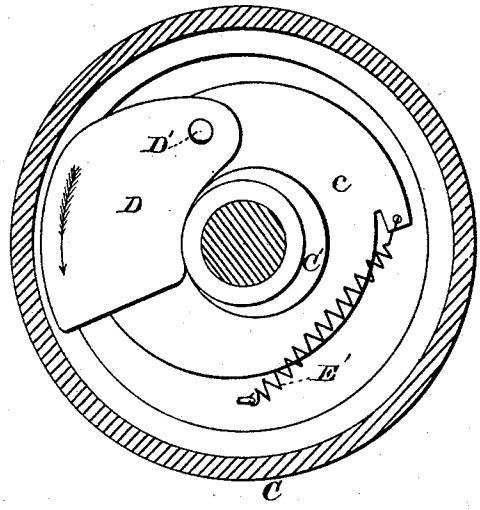
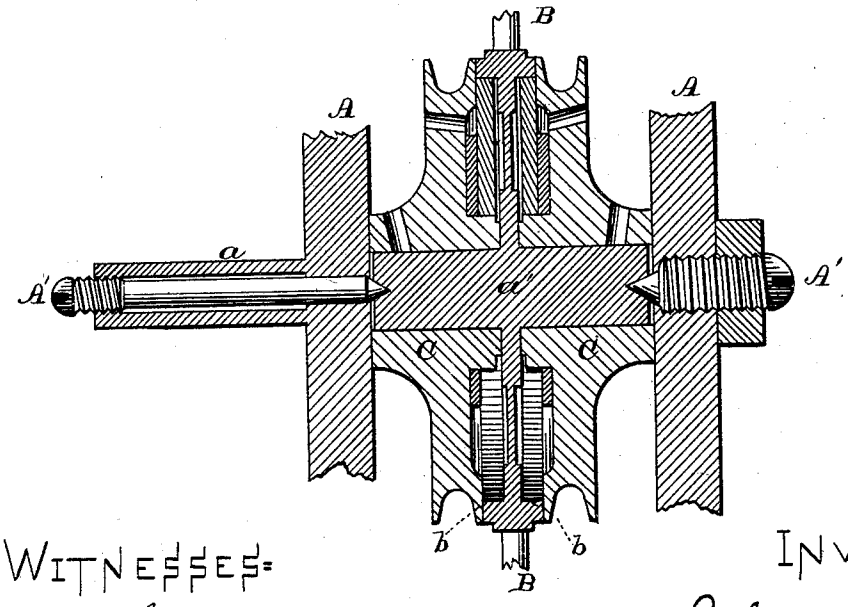


Fig. 5.



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UNITED STATES PATENT OFFICE.

JOHN SIGWALT, JR., OF CHICAGO, ILLINOIS.

IMPROVEMENT IN MECHANISMS FOR TRANSMITTING MOTION FROM A TREADLE TO A REVOLVING SHAFT.

Specification forming part of Letters Patent No. **168,350**, dated October 5, 1875; application filed August 14, 1875.

To all whom it may concern:

Be it known that I, JOHN SIGWALT, Jr., of Chicago, in the county of Cook and in the State of Illinois, have invented certain new and useful Improvement in Mechanism for Transmitting Motion from a Treadle to a Revolving Shaft; and do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, making a part of this specification, in which—

Figure 1 is a perspective view of my invention, ready for use. Fig. 2 is a like view of the recessed hub and the clutch-wheel, with locking-piece separated. Fig. 3 is a plan view of the clutch-wheel with eccentric, washer, spiral spring, and locking-piece engaging the clutch-wheel in a forward direction. Fig. 4 is a like view of the same, with locking-pieces disengaged and clutch-wheel moving in a backward direction; and Fig. 5 is a transverse section of the device upon line *x x*, of Fig. 3.

Letters of like name and kind refer to like parts in each of the figures.

It is well known that a large number of the different kinds of sewing-machines now in use cannot be run backward without injury both to the machine and work, and various devices have been constructed to obviate the difficulty, many of which are not positive in their action, and are likely to get out of order.

To remove these objections and difficulties is the object of my invention; and it consists principally in a balance-wheel and locking attachments suspended in an adjustable frame, substantially as and for the purpose hereinafter specified. It consists, further, in combining with said balance-wheel and frame a stud and small sheave-wheel, in such a manner as that the same may be readily attached to any sewing-machine, substantially as and for the purpose hereinafter specified. It consists, further, in combining with the balance-wheel two clutch-wheels, arranged one on each side of the balance-wheel in such a manner as to avoid side draft, substantially as and for the purpose hereinafter specified. It consists, further, in the means employed for locking the clutch-wheels, whereby a continuous forward motion is obtained, substantially as and for the purpose hereinafter specified. It consists, finally, in combining with the balance-wheel adjustable center pivots, whereby wear and loss of motion are compensated for, substantially as and for the purpose hereinafter specified.

In the annexed drawings, A represents a hanger or frame provided with two center pivotal bearings, A′ and A′, upon which the balance-wheel B is suspended, and at one end of said frame a small sheave, B′, is placed, as shown in Fig. 1, and held in position by a pivotal bearing. Upon one side of the frame A is fastened a stud, *a*, as shown in Fig. 5, by means of which the frame is made to swivel, enabling the small sheave-wheel to be turned to any desired angle, with relation to the front of the machine, so as to render the device adjustable to any sewing-machine.

The balance-wheel B is provided with recesses *b* and *b* on each side of the hub, into which the locking attachments of two clutch-wheels, C, are fitted, said clutch-wheels having their bearing upon the shaft *a′* of the balance-wheel, where they are held in position and prevented from working outward by the frame. An eccentric, C′, is formed upon the inside hub of each clutch-wheel, and around such eccentric is fitted a washer, *c*, as shown in Figs. 3 and 4. A locking-piece, D, is attached to said washer by means of a small pivot, D′, loosely fitted, and serves as a fulcrum for said locking-piece, and a spiral spring is attached at one end to the clutch-wheel, and at the other end to the washer, as shown in Figs. 3 and 4.

As thus constructed and arranged, the locking-pieces D and D and washers *c* and *c* form levers, with one end resting upon the small eccentrics C′ and C′, and the other against the periphery of the recessed parts of the balance-wheel, thus making a perfect lock when the said sheave-wheels are turned in one direction, and are perfectly relieved when turned in the other direction.

The several parts being put together, as shown in Fig. 1, the belt is passed around the

small sheave-wheel B′; from thence over the clutch-wheels C and C, and thence to the treadles.

Having thus fully set forth the nature and merits of my invention, what I claim as new is—

1. In combination with the balance-wheel B, the adjustable frame A, inclosing said balance-wheel, said parts being constructed in the manner and for the purpose substantially as shown and described.

2. The combination of the clutch-wheels C and C, constructed as described, with the balance-wheel B, the former being arranged upon opposite sides of the hub of the latter, in the manner and for the purpose substantially as shown and described.

3. In combination with the clutch-wheels C and C, the eccentrics C′ and C′, provided with the washers *c* and *c*, the locking-pieces D and D, and spiral springs E and E, said parts being relatively arranged in the manner and for the purpose substantially as shown and described.

4. In combination with the adjustable hanger A and the balance-wheel B, the center pivotal bearings A′ and A′, said parts being relatively arranged in the manner and for the purpose substantially as shown and described.

5. In combination with the hanger A, the small sheave-wheel B′, said parts being relatively arranged in the manner and for the purpose substantially as shown and described.

In testimony that I claim the foregoing I have hereunto set my hand this 22d day of July, 1875.

JOHN SIGWALT, JR.

Witnesses:
GEO. S. PRINDLE,
A. GORDON.