G. WESLEY.

MOTOR ATTACHMENT FOR SEWING MACHINES.

APPLICATION FILED JULY 10, 1914.

1,133,687. Patented Mar. 30, 1915.

Fig. 1.

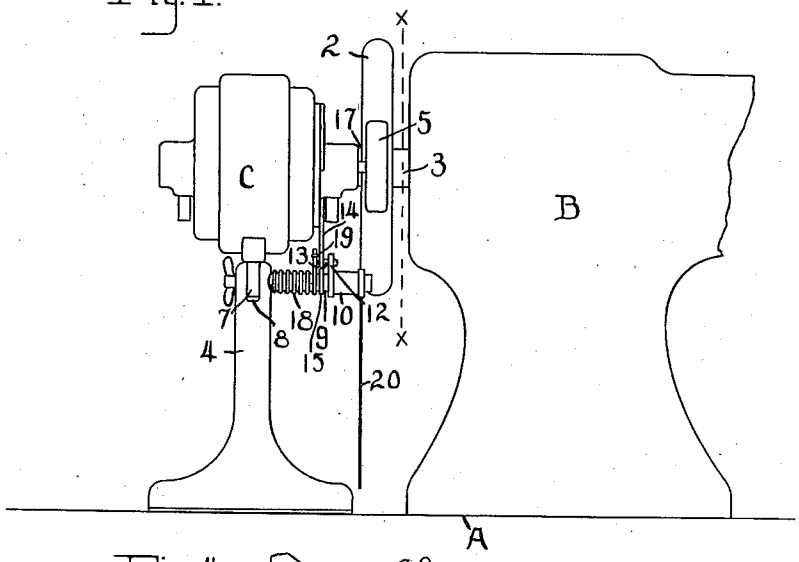


Fig. 4.

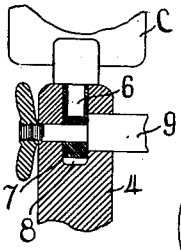


Fig. 2.

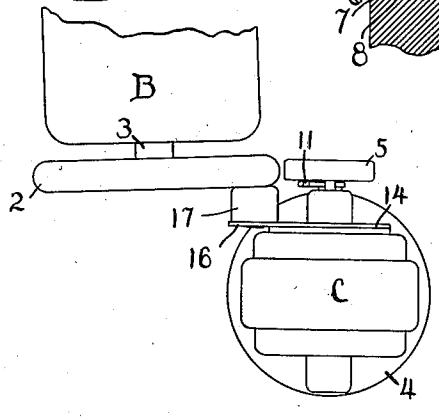
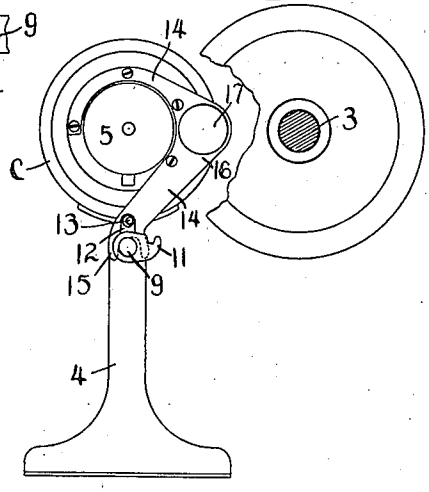


Fig. 3.



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MOTOR ATTACHMENT FOR SEWING-MACHINES.

1,133,687. Specification of Letters Patent. Patented Mar. 30, 1915.

Application filed July 10, 1914. Serial No. 850,228.

To all whom it may concern:

Be it known that I, GUSTAF WESLEY, a citizen of the United States, residing at St. Paul, in the county of Ramsey and State of Minnesota, have invented certain new and useful Improvements in Motor Attachments for Sewing-Machines, of which the following is a specification.

My invention relates to improvements in motor attachments for applying the power of motors to the driving of sewing machines, lathes, and other small machines to which the mechanism may be applicable.

The object of the invention is to provide simple, efficient, and easily operated means for applying the power of the motor to the machine and releasing the machine from the control of the motor, as well as for checking the momentum of the machine directly it has been released.

More particularly the invention consists in the construction, combination, and arrangement of parts hereinafter shown and described.

In the accompanying drawings showing an embodiment of the invention, Figure 1 is a rear elevation of a portable motor with a fragment of the adjacent part of the machine, showing the invention applied thereto; Fig. 2 is a plan view of the same; Fig. 3 is a vertical section through the main shaft of the machine on line *x*—*x* of Fig. 1, with part of the driving wheel broken away, and the motor in end elevation; Fig. 4 is a detail in vertical section of the upper part of the pedestal and pivot bearing for the motor.

In the drawings, A represents the upper face of the stand or table upon which is supported the machine B to be driven. Above the stand the machine has a driving wheel 2 mounted upon one end of the shaft 3.

C is a portable motor, preferably electrical, having a stand or pedestal 4 which enables it to be placed upon the table A adjacent the machine wheel 2.

Upon the projecting inner end of the main shaft of the motor is mounted a frictional driving wheel 5 having a peripheral covering of felt, rubber, or other friction material. The motor is revolubly mounted upon the pedestal 4 by means of a pivot bearing 6, so that the motor is free to oscillate upon a vertical axis. As here shown the bearing pivot is held rotatably in a bushing 7 arranged within a slot 8 in the pedestal, and the bushing has rocking support upon a horizontal pin or arm 9 which passes through the pedestal and extends inwardly toward the machine. Revolubly mounted upon the free end of the arm 9 is a sleeve 10 having at its outer end a hook 11 and at the other end an upwardly extending lug 12. The lug carries a transverse pin 13 which extends loosely through an enlarged hole in the depending end of an angular arm 14. This arm is bolted or otherwise secured to the inner end of the motor frame. As here shown it extends part way around the hub of the motor, and at its lower end it is bifurcated and formed with forked arms 15 which fit over and straddle the pin 9 as shown in Fig. 3. At a point between its ends it is formed with an elbow 16, upon the outer face of which is secured a brake cushion 17 of rubber or other friction material. By means of this elbow the brake cushion is extended forwardly of the motor wheel 5, as shown in Fig. 2, but it does not project out far enough to reach the vertical plane in which the wheel turns.

The oscillatory motor is held resiliently in a normal position by means of a spring 18 which is coiled about the arm 9 with one end secured to this arm or resting against the pedestal 4, and the other end resting against the arm 14 or the pin 19 carried thereby. The motor is arranged to be oscillated against the pressure of the spring by means of a treadle, which may be the usual operating treadle of the machine, through the medium of a cord, strap or other suitable connector 20 secured at one end to the treadle (not shown) and at the other end hooked over the hook 11 or otherwise detachably secured to the sleeve 10. A downward pull upon this connector will cause the sleeve to be turned so that its pin 13 will exert a forward pressure upon the lower end of the arm 14, and cause the motor to swing upon its pivot against the pressure of the spring. When the sleeve is relieved from the pull, the motor will be swung back by the spring into normal position again.

In use the motor is placed upon the stand or table in such position that the motor wheel 5 will be in substantial alinement with the driving wheel of the machine and just out of engagement therewith, as shown in

Fig. 2, while the brake cushion 17 will be held by the spring 18 resiliently pressed against the outer side face of the machine wheel. This is preferably the normal position of the parts and the normal relation of the motor wheel and brake to the machine wheel, when the machine is at rest. To release the brake and apply the power of the motor to the machine wheel it is only necessary to depress the treadle so as to exert a downward pull upon the cord 20, whereby, through the medium of the sleeve 10, pin 13, and arm 14, the motor will be swung forward on its vertical axis against the pressure of the spring 18 a sufficient distance to free the machine from the pressure of the brake, and at the same time to bring the periphery of the motor wheel 5 into frictional engagement with the periphery of the machine wheel 2. The wheel 2, being thus released from the brake, will be driven by the frictional pressure of the motor wheel so long as the treadle remains depressed and the downward pull upon the cord 20 continues. When the treadle is released so that the downward pull upon the cord 20 ceases, the spring 18 will cause the motor to swing back again into the position shown in Fig. 2, thus freeing the machine from the power of the motor and at the same time applying the brake to the machine wheel to stop its momentum. By having the lower end of the arm 14 bifurcated so that its forked arms will straddle the pin 9, as shown in the drawings, these arms will serve as a check to limit the swing of the motor under tension of its spring, when the motor is removed from the machine so as to disarrange the relation of the spring to the motor.

I claim as my invention:

1. The combination with the driving wheel of a machine, of a motor arranged adjacently thereto and mounted to oscillate upon a vertical axis, said motor having on its shaft a friction driving wheel engageable with the periphery of the machine wheel when the motor is swung in one direction, and on its frame a brake engageable with the side face of the machine wheel when the motor is swung in the opposite direction.

2. The combination with the driving wheel of a machine, of a motor arranged adjacently thereto and mounted to oscillate upon a vertical pivot, said motor having on its shaft a friction wheel alining with and engaging the periphery of the machine wheel when the motor is swung in one direction, and on its frame a brake engaging the side face of the machine wheel when the motor is swung in the opposite direction, spring means for keeping the motor normally swung into a predetermined position, and means for swinging the same against the pressure of the spring.

3. A motor attachment for machines comprising a motor mounted to oscillate on a vertical axis, a frictional driving wheel upon one end of the motor shaft, a downwardly extending arm upon the adjacent end of the motor frame, a brake cushion upon the outer face of said arm extending toward, but not into, the vertical plane of said wheel, spring means acting on said arm to hold the motor normally in a predetermined position, and mechanism operatively connected with the lower end of said arm whereby to move the same against the pressure of said spring and thereby swing the motor away from its normal position.

4. A motor attachment for machines comprising a motor mounted to swing upon a vertical axis, a frictional driving wheel upon one end of the motor shaft, a downwardly extending arm secured to the adjacent end of the motor frame, and having an elbow extending forwardly of the motor wheel, a brake cushion mounted upon said elbow and extending out toward, but not into, the vertical plane of the motor wheel, spring means engaging the lower end of said arm for holding the motor in normal position, and mechanism acting upon said arm for swinging the arm and motor against the pressure of said spring.

5. A motor attachment for machines comprising a pedestal, a motor mounted thereon upon a vertical pivot, a frictional driving wheel upon one end of the motor shaft, a laterally extending pin carried by the pedestal, a downwardly extending arm secured to the end of the motor frame with its lower end straddling said pin, spring means exerting pressure on said arm, a sleeve loosely mounted upon said pin and engaging said arm, and means for turning said sleeve whereby to move the arm against the pressure of its spring and thereby swing the motor.

6. A motor attachment for machines comprising a pedestal, a motor supported thereon so as to swing on a vertical axis, a frictional driving wheel mounted upon one end of the motor shaft, an arm secured upon the adjacent end of the motor frame, a brake cushion secured upon the side face of said arm and extending toward, but not into, the vertical plane of said wheel, a transverse pin carried by the pedestal, a sleeve loosely mounted upon the outer end of said pin and engaging said arm, spring means for holding the arm in normal position, and means for turning the sleeve so as to swing the arm and motor against the pressure of said spring.

7. A motor attachment for machines comprising a pedestal, a motor mounted thereon upon a vertical pivot, a frictional driving wheel upon one end of the motor shaft, a laterally extending pin carried by the pedestal, a downwardly extending spring pressed

arm secured to the end of the motor frame with its lower end forked and straddling said pin, whereby to limit the spring actuated swing of the motor, and means for moving said arm against the pressure of its spring whereby to swing the motor away from its spring held position.

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

GUSTAF WESLEY.

Witnesses:
H. SWANSON,
ARTHUR P. LOTHROP.