

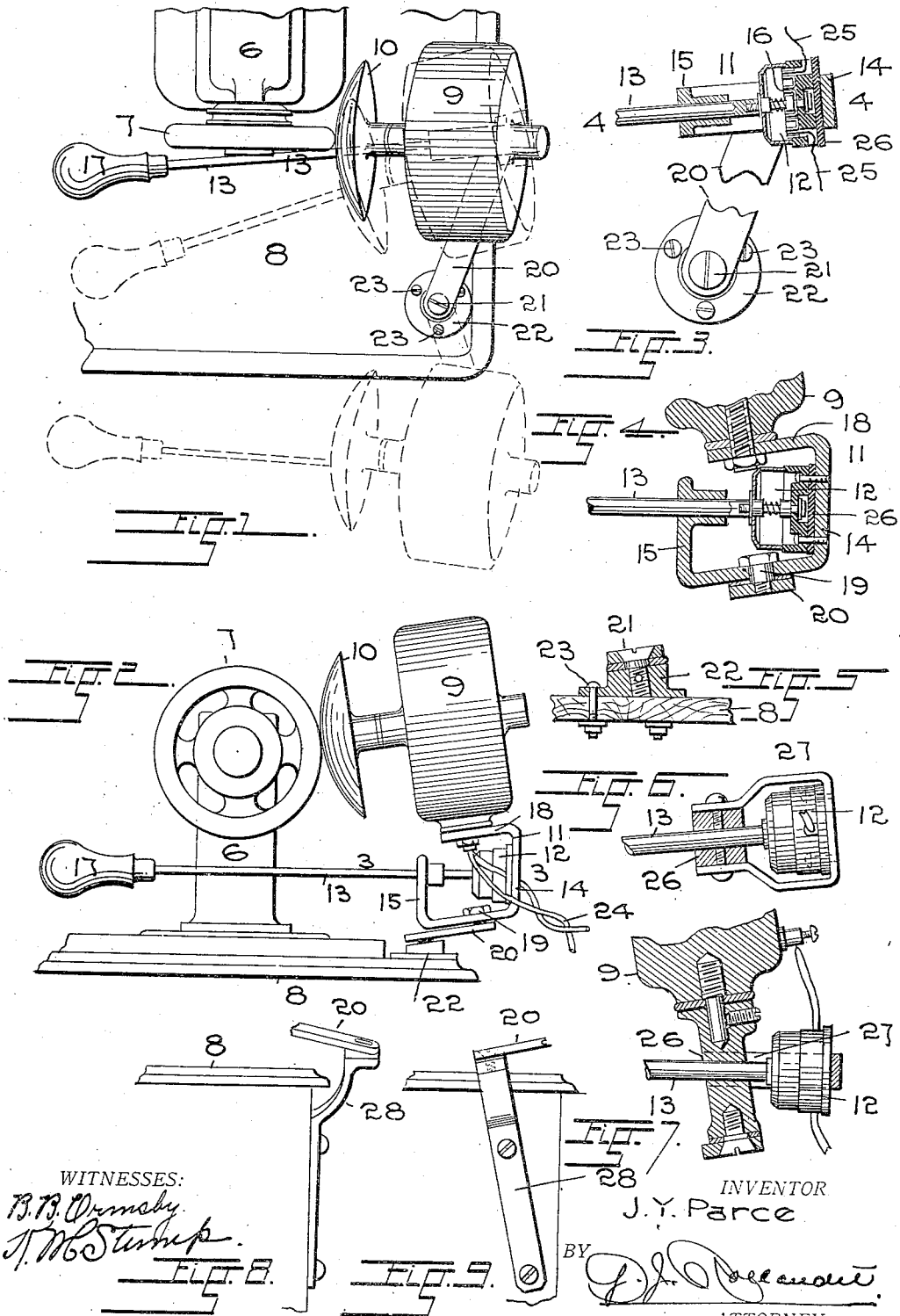
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J. Y. PARCE.

MOTOR ATTACHMENT FOR SEWING MACHINES.

APPLICATION FILED JUNE 1, 1906.



UNITED STATES PATENT OFFICE.

JOSEPH Y. PARCE, OF DENVER, COLORADO.

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No. 862,652.

Specification of Letters Patent.

Patented Aug. 6, 1907.

Application filed June 1, 1906. Serial No. 319,733.

To all whom it may concern:

Be it known that I, JOSEPH Y. PARCE, a citizen of the United States of America, residing at Denver, in the county of Denver and State of Colorado, have invented certain new and useful Improvements in Motor Attachments for Sewing-Machines, of which the following is a specification.

My invention relates to a motor attachment for sewing machines and kindred apparatus and has for its object to provide means by which a motor may be mounted in proximity to a machine of the class named in a manner to insure constant contact of a spherical disk connected with its armature, with the driven wheel of the machine, and so as to permit its being readily removed to clear the table upon which it is mounted.

My construction furthermore provides means within reach of the operator to vary the velocity of the machine, by changing the position of the driving disk in relation to the driven wheel, to alter the position of the motor relative to the machine mounted upon the table to which it is attached, and to operate a switch arranged to actuate the motor by connecting its field with a suitable source of electricity.

I attain these objects by the mechanism illustrated in the accompanying drawings, in the various views of which like parts are similarly designated and in which,

Figure 1—shows a fragmentary plan view of a sewing machine and the table upon which it is mounted, with my device in operative position, Fig. 2—a side elevation thereof, Fig. 3—an enlarged section taken along a line 3—3, Fig. 2, Fig. 4—a vertical section through the motor-supporting frame, along a line 4—4, Fig. 3, Fig. 5—a vertical section through the base 22 and showing the table 8 and arm 20 in section, Figs. 6 and 7—respectively a horizontal and a vertical section illustrating a modified manner of supporting the motor and the electric switch and Figs. 8 and 9—respectively a front and a side elevation of a modified construction for attaching the apparatus to the sewing machine table.

Referring to the drawings, 6 represents the sewing machine carrying the driven wheel 7 and mounted upon the table 8.

9 is the preferably vertically inclined electric motor which may be of any suitable variety and whose armature is connected with a driving disk 10, the face of which is of spherical form and which, if so desired, may be covered with any suitable friction producing substance. Motor 9 is rigidly secured upon a vertically disposed parallelogrammic-supporting frame 11, two opposite sides 14 and 15 of which are substantially perpendicular when the device is mounted and respectively support the electric switch 12 and the operating rod 13. The former is secured to the sides 14 within the frame 11, while the rod projects through a bearing aperture in the opposite parallel side 15 and is operatively connected with the reversible contact blade 16 of the

switch. The opposite extremity of rod 13, which in practice, extends within easy reach of the operator of the machine, is provided with a suitable handle 17.

To render the upper portion of the frame resilient and thereby further insure the frictional contact between the wheel 7 and the disk 10, the upright side 15 and the in practice slanting upper side 18 of frame 11 may be disconnected by omission of the adjacent corner of the frame as shown in the drawings. Frame 11 is pivotally mounted by means of a screw 19 upon the outer extremity of an obliquely disposed arm 20, the opposite end of which is pivotally secured by a vertically inclined pivot-screw 21, upon the inclined upper surface of a flanged base 22 which in practice is rigidly secured to the table 8 by means of screws or nails 23.

24 are the conductors leading from the field of motor 9 while 25 represents the wires which connect the poles of switch 12 with a suitable source of electricity, such as an incandescent lamp socket.

A washer 26 made of fiber or other non-conducting substance is interposed between the switch and the adjacent side of frame 11 for insulating purposes.

In the construction illustrated in Figs. 6 and 7, a standard 26 is substituted for frame 11 and the electric switch secured thereto by means of a stirrup 27. Figs. 8 and 9 illustrate a modified manner of connecting arm 20 with the table. A bracket 28 secured to the side of the table, takes the place of base 22 and the slanting arm is pivotally secured to its upper extremity which preferably extends above the top of the table. This construction particularly adapts the motor for use on machines of the cabinet type in which the entire deck of the table is displaced to bring the machine in operative position.

Having thus described the mechanical construction of the device, its operation will be readily understood. The motor being mounted upon base 22 through instrumentality of frame 11 and arm 20, occupies a vertically inclined position, the disk 10 being normally in engagement with the peripheral surface of the driven wheel 7 of the machine. Its elevation relative to the machine is such that its horizontal axis, prolonged, will extend through the center of the wheel 7. When the center of disk 10 is in engagement with the driven wheel, no motion will be imparted thereto even while the motor is operating, but when the latter is turned around its pivot 19 by means of the operating handle 17, the movement of the armature is communicated to wheel 7 through instrumentality of disk 10, which remains constantly in engagement therewith by reason of the spherical form of its face which is described from a center coincident with the intersection of the horizontal and vertical axes of the motor, the latter of which passes, if extended, through the pivot 19 and may be parallel with the inclined pivot screw 21 on a base 22. The inclined position of pivots 19 and 21 in cooperation

with the specific gravity of the motor as well as the resiliency of frame 11, insures constant frictional contact of the disk with the wheel. By turning the operating handle around its longitudinal axis, the circuit of electricity which energizes the motor may be closed or opened at will, while when the services of the motor are not employed, it may readily be removed from contact with the machine and out of the way of the operator, thus clearing the table for other purposes as illustrated in broken lines in Fig. 1. This feature of my device besides affording the advantages named, permits its use on so-called drop head machines.

Having thus described my invention what I claim is:—

1. In combination with a suitable supporting base and rotatable driven wheel, an arm pivotally carried upon said base to one side of the plane of rotation of said driven wheel and having an inclined axis of rotation, a motor carried upon the free end of said arm, a driving disk carried by the motor and adapted for contact with said driven wheel, said arm extending from its pivot point towards the plane of the wheel whereby the driving disk will be held against the driven wheel by the force of gravity acting on the motor, substantially as described.

2. In combination with a suitable supporting base and rotatable driven wheel, an arm pivotally carried upon said base to one side of the plane of rotation of said driven wheel and having an inclined axis of rotation, a motor pivotally carried upon the free end of said arm, a driving disk carried by the motor and adapted for contact with said driven wheel, said arm extending from its pivot point towards the plane of the wheel whereby the driving disk will be held against the driven wheel by the force of gravity acting on the motor, substantially as described.

3. In combination with a suitable supporting base and rotatable driven wheel, an arm pivotally carried upon said base to one side of the plane of rotation of said driven wheel and having an inclined axis of rotation, a flexible frame mounted upon the free end of the arm, a motor carried by said flexible frame, a driving disk carried by the motor and adapted for contact with said driven wheel, said arm extending from its pivoted point towards the plane of the wheel whereby the driving disk will be held against the driven wheel by the force of gravity acting on the motor substantially as described.

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

JOSEPH Y. PARCE.

Witnesses:

G. J. ROLLANDET.
K. M. STUMP.