June 2, 1925. 1,540,740

T. C. WEISS

PORTABLE ELECTRIC SEWING MACHINE MOTOR

Filed Oct. 2, 1922 3 Sheets-Sheet 1

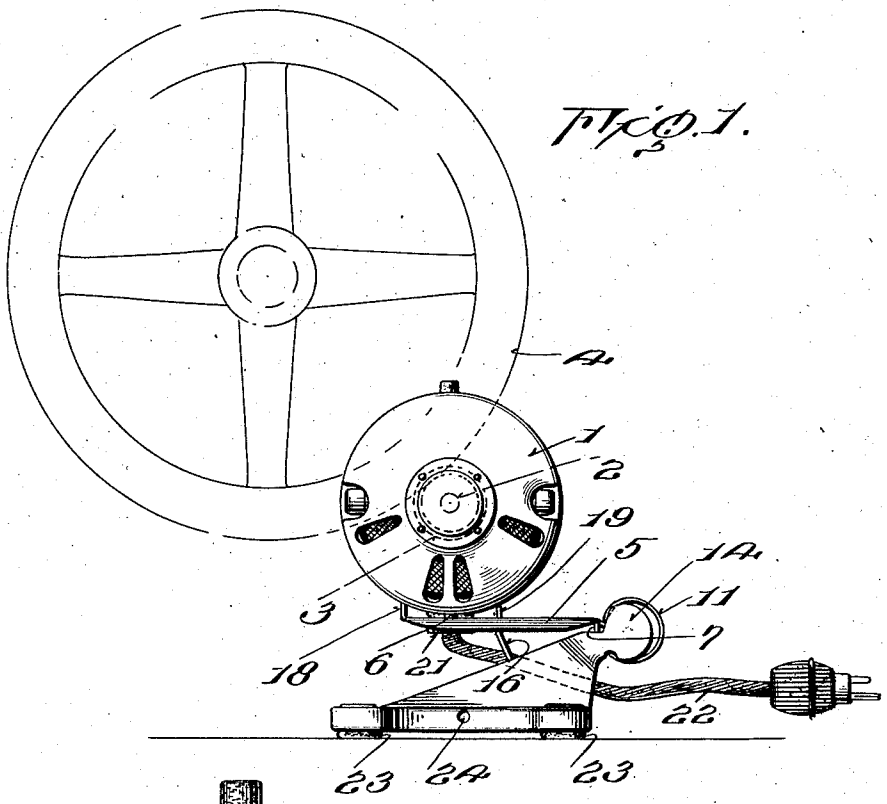


FIG. 1.

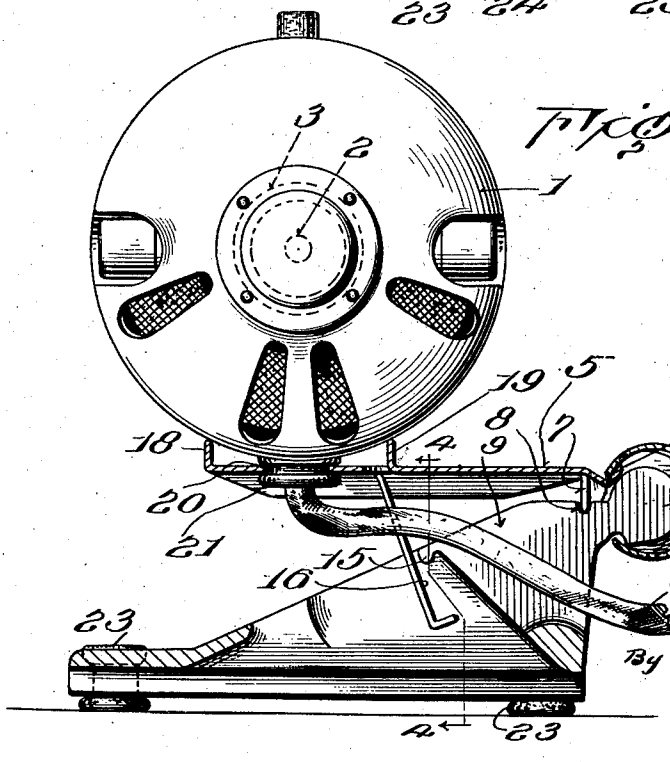


FIG. 2.

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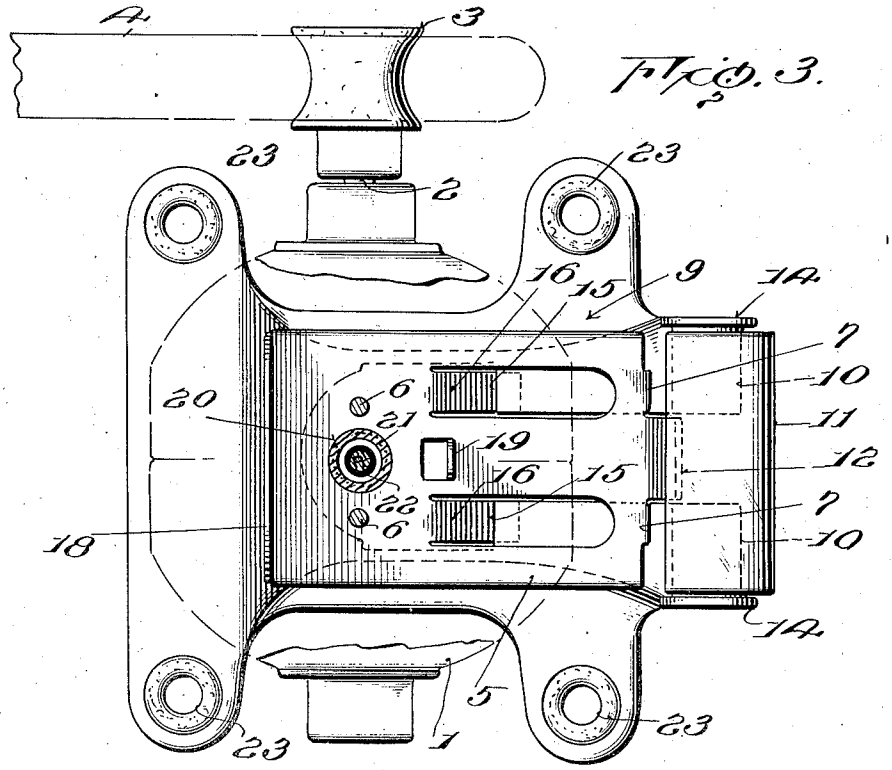


FIG. 3.

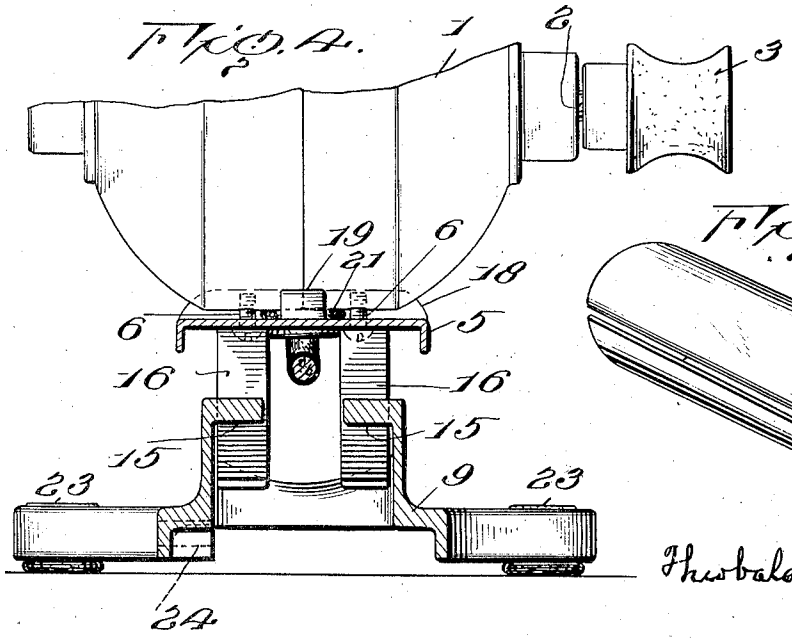


FIG. 4.

FIG. 5.

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PORTABLE ELECTRIC SEWING MACHINE MOTOR

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FIG. 6.

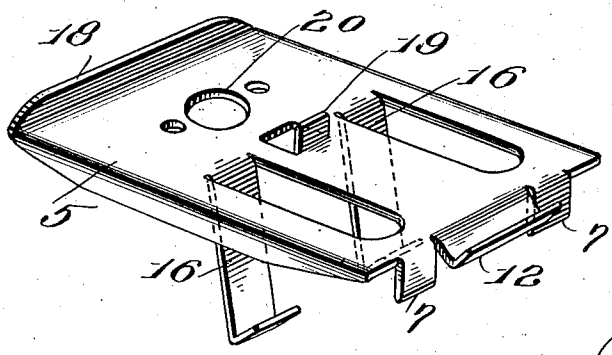


FIG. 7.

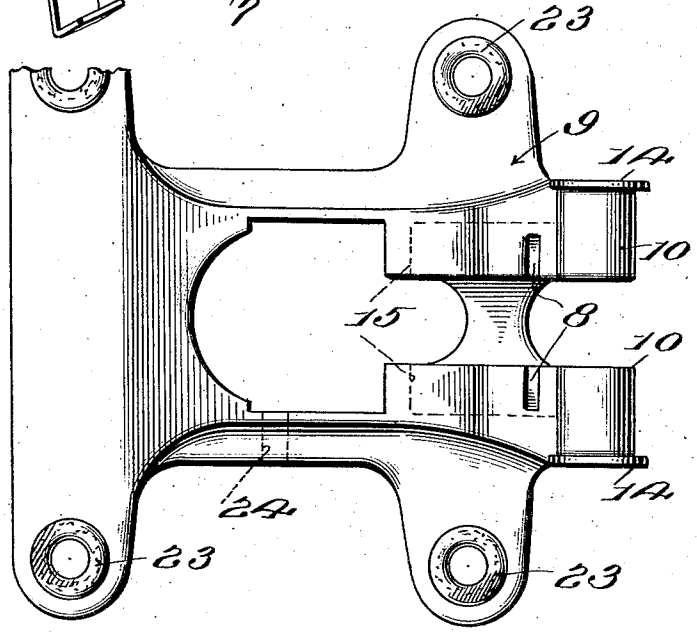


FIG. 8.

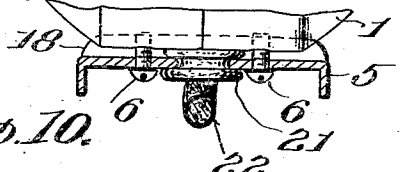


FIG. 9.

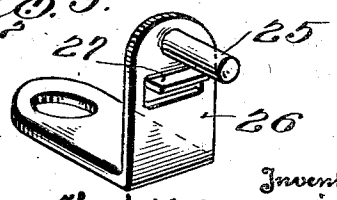
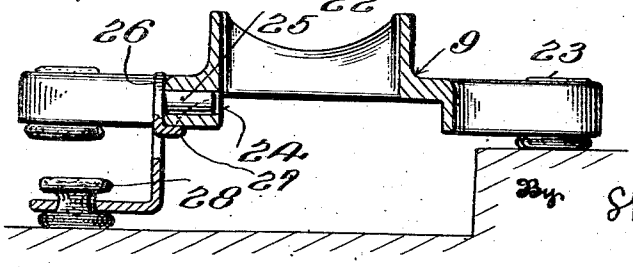


FIG. 10.



Inventor
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Attorneys

Patented June 2, 1925. 1,540,740

UNITED STATES PATENT OFFICE.

THEOBALD C. WEISS, OF RACINE, WISCONSIN, ASSIGNOR TO THE FITZGERALD MANUFACTURING COMPANY, OF TORRINGTON, CONNECTICUT, A CORPORATION OF CONNECTICUT.

PORTABLE ELECTRIC SEWING-MACHINE MOTOR.

Application filed October 2, 1922. Serial No. 591,964.

To all whom it may concern:

Be it known that I, THEOBALD C. WEISS, of Racine, county of Racine, Wisconsin, a citizen of the United States, now residing at Torrington, in the county of Litchfield, State of Connecticut, have invented certain new and useful Improvements in Portable Electric Sewing-Machine Motors, of which the following is a description, reference being had to the accompanying drawing, and to the figures of reference marked thereon.

My invention relates to portable electric sewing machine motors.

The object of the invention is to provide an electric sewing machine motor with a simple, effective and novel means of supporting it on the sewing machine table and holding it yieldingly toward the hand wheel of the machine.

This object I accomplish by the construction shown in the accompanying drawings, in which—

Figure 1 is a side elevation of the improved sewing machine motor;

Fig. 2 is a sectional end elevation thereof;

Fig. 3 is a plan with the motor removed;

Fig. 4 is a section side elevation;

Fig. 5 is a perspective of the spring;

Fig. 6 is a perspective of the motor carrying arm;

Fig. 7 is a plan of the base;

Fig. 8 is a detail section through the motor carrying arm, at lower part of motor, showing the electric wire and its bushing;

Fig. 9 is a perspective of the auxiliary foot; and

Fig. 10 is a section through the base showing the said foot in use.

The electric motor 1 of any approved construction has its shaft 2 extended beyond its casing where it is provided with a friction drive wheel 3 adapted to engage the hand wheel 4 of a sewing machine at any point other than directly thereunder. This point of engagement will vary according to the size of the hand wheel and make of sewing machine. This engagement of the drive wheel 3 with the hand wheel 4 is effected by mounting the motor 1 upon the outer end of a vertically swinging arm 5 by means of screws 6—6, or otherwise; the rear end of said arm having its axis parallel with the axis of the motor shaft. This is effected by forming the arm 5 at its inner end with depending lugs 7—7 which enter bearing recesses 8—8 formed in the upper side of the rear end of a base 9. The base 9 has its rear end formed with a raised transverse rounded bar 10 in rear of the recesses 8—8, which bar is encircled by a tubular slit plate-spring 11, the lower edge of which engages the under side of the base 9 where the bar 10 joins it and the upper edge of the spring 11, engages an actuating projection 12 projecting rearwardly from the swinging arm 5 and beyond its pivot lugs or knife edges 7—7, so that the spring 11 acting on the projection 12 will raise the arm 5 and with it the electric motor and hold it yieldingly to the hand wheel 4. The ends 14—14 of bar 10 are enlarged so that there can be no endwise movement of the spring 11 and consequent separation of parts held together thereby. The base 9 is preferably a casting open at its top as at 13 and formed at the side of the opening with stop lugs 15 which are engaged by the stops 16 formed on the lower ends of depending arms punched out of the arm 5 which is formed of sheet metal. These stop lugs 15 and stops 16 limit the upward swing of the arm 5 and the motor. The axis of the arm 5 is obviously parallel with the axis of the motor and the above construction lends itself to cheapness in manufacture and the ready assembling of parts.

Arm 5 at its front end is formed with an upturned lip 18 and, in rear of the screws 6—6 with a punched-up lip 19 and the lower side of the motor 1 is held and centered between these lips 18 and 19. The arm 5 is apertured as at 20 between the screws 6—6, which aperture has a bushing 21 through which passes the conducting wire 22 of the motor.

The four corners of the base 9 are apertured and provided with rubber or like bushings 23 to engage the table top and hold the motor as an entirety in place frictionally when in operation. The right side of the base 9 is provided intermediate its ends with a horizontal aperture 24 into which fits a horizontal pin 25 at the upper end of an auxiliary removable foot. This auxiliary foot is formed of an angle plate 26, the vertical arm of which directly below the pin 25 is formed with a laterally extending flange 27 which underlies the base below the aper-

ture 24 and so holds the pin 25 against rotation. The horizontal arm of the auxiliary foot is also provided with an aperture and a rubber bushing 28. This auxiliary foot is readily slid into place when the base 9 has to rest on different levels as when the machine base is in a higher plane than the table top.

It will be noticed that the axes of the hand wheel, motor shaft and swinging motor carrying arm are all parallel, and that the movement of the motor toward the hand wheel follows a curve of a circle which causes the drive wheel of the motor to engage the hand wheel of the machine most efficiently.

The base 9 and swinging arm 5 are held in pivotal relation without connections other than the tubular spring which not only holds them together but at the same time forces the motor carrying arm 5 up to its operative position.

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

1. In a portable electric motor, the combination of a base to rest on a table top, a bearing member on said base having its axis parallel to the axis of the motor shaft, a vertically swinging motor carrying arm rocking at one end on said bearing member, a spring holding said arm on said bearing member and also acting on the arm to press its free end upwardly, and an electric motor mounted on the free end of said arm.

2. In a portable electric motor, a base to rest on a table top and provided at one end with a raised transverse bearing member, a vertically swinging motor-carrying arm rocking at one end on said bearing member, and a clamp-like spring holding said arm on said bearing member and also acting on the arm to throw its free end upwardly.

3. In a portable electric motor, a base to rest on a table top and having a cross bar, a motor-carrying arm pivotally engaging said base adjacent to said bar and having an operating projection or extension beyond its pivotal point, and a tubular split spring encircling said bar and engaging said operating projection to thereby hold the motor-carrying arm on the base and at the same time throw its motor-carrying end upwardly.

4. In a portable electric motor, a base to rest on a table top and provided with an overhanging cross bar, pivot or bearing recesses in front of said bar, a motor carrying arm provided at its pivotal end with depending pivot lugs engaging said recesses and with an intermediate projection or extension, and a tubular split spring encircling said bar and engaging said projection or extension to hold the motor-carrying arm to the base and at the same time swing the free end upwardly.

5. In a portable electric motor, a base, a vertically swinging motor-carrying arm pivoting at one end on the base, a tubular split spring operatively engaging the base and arm to hold them in pivoted relation and also swing said arm upwardly into operative position, stop lugs on the base, depending stops on the swinging arm to engage said stop lugs and limit upward movement of the swinging arm.

6. In a portable electric motor, a base, a vertically swinging motor-carrying arm provided on the upper side of the free end with motor engaging flanges, and in pivotal engagement at the opposite end with said base, a split tubular spring holding the arm to the base and also swinging it into its operative position.

7. In a portable electric motor, a base having friction feet at the four corners to engage a table top, a spring pressed motor carrying arm, and a supplemental foot adapted to be attached to a side of said base intermediate its ends.

8. In a portable sewing machine motor, a base having cushion feet or pads at its four corners and a horizontal aperture in one side intermediate the ends thereof, a vertically swinging spring pressed motor-carrying arm mounted at one end on said base with its axis parallel to that of the motor, shaft, and an auxiliary cushioned foot having a transverse pin at the upper end to enter said aperture and a flange to underlie the adjacent portion of the base.

9. In a portable electric motor, the combination with a base to rest on a table top; of a vertically swinging motor-carrying arm overlying the base, and a bowed spring connecting adjacent ends of the arm and base and pressing the free end of the arm upwardly.

10. In a portable electric motor, the combination with a base having friction pads on the under side to rest on a table top and hold it from slipping, of a vertically swinging motor-carrying arm overlying the upper side of said base, and a bowed spring connecting one end of the said arm with one end of the base and pressing the free end of the arm upwardly.

In testimony whereof, I affix my signature.

THEOBALD C. WEISS.