Sept. 2, 1952 N. G. GODSHALL ET AL 2,609,262

SEWING MACHINE TABLE MOTOR MOUNT

Filed July 5, 1951 2 SHEETS—SHEET 1

Fig. 1.

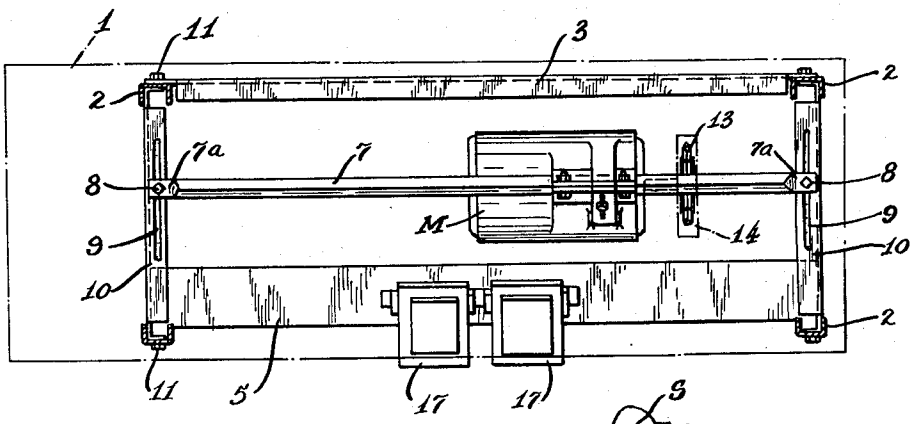
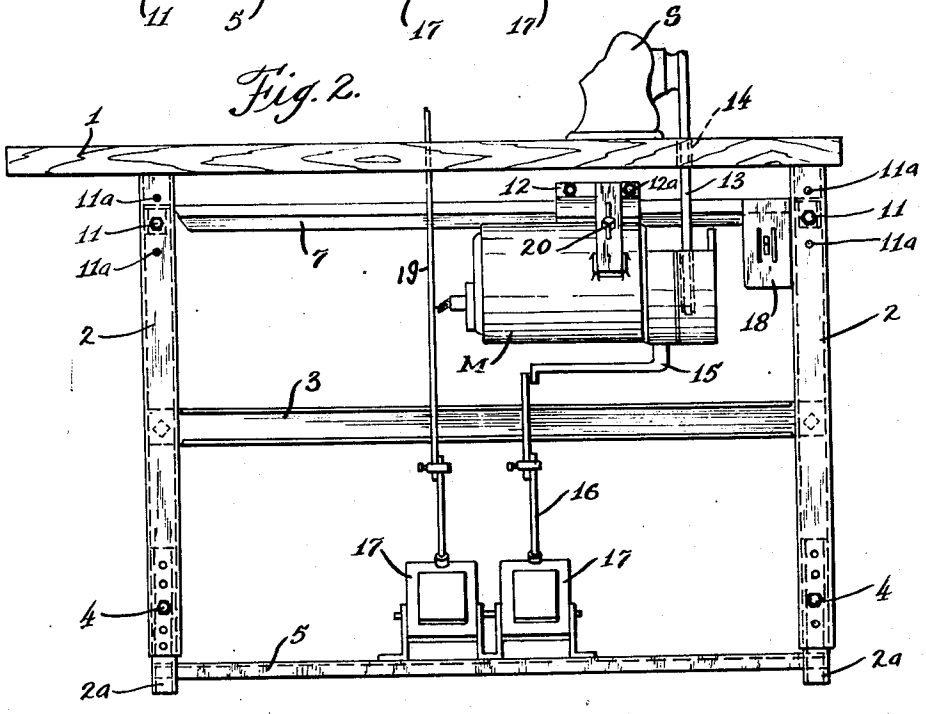


Fig. 2.



Inventors

NICHOLAS G. GODSHALL

ROY L. MARKS

By William J. Ruano

Attorney

Sept. 2, 1952 N. G. GODSHALL ET AL 2,609,262

SEWING MACHINE TABLE MOTOR MOUNT

Filed July 5, 1951 2 SHEETS—SHEET 2

Fig. 3.

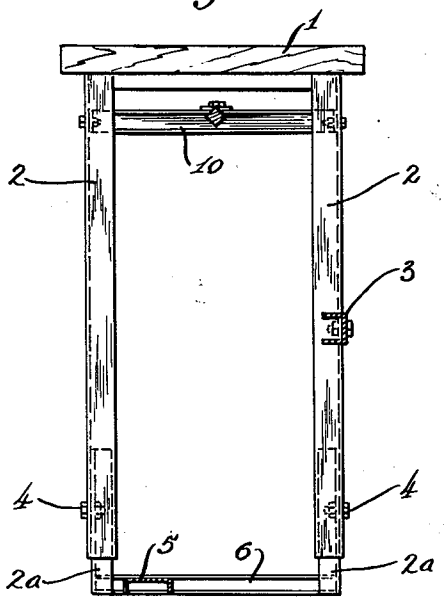
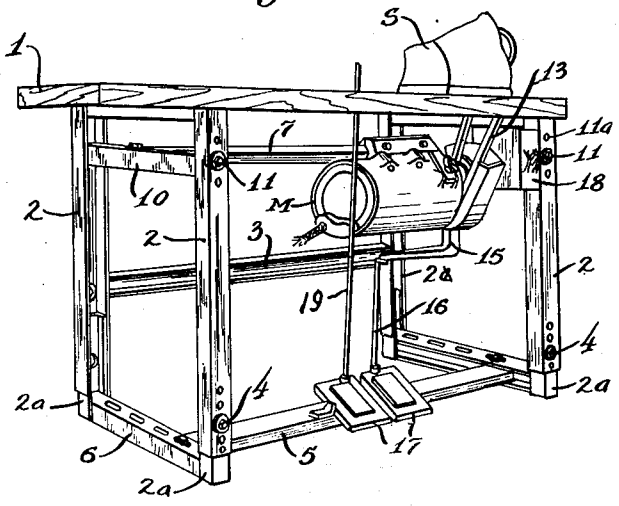


Fig. 4.



Inventors
NICHOLAS G. GODSHALL
ROY L. MARKS

By
William J. Ruano
Attorney

Patented Sept. 2, 1952

2,609,262

UNITED STATES PATENT OFFICE

2,609,262

SEWING MACHINE TABLE MOTOR MOUNT

Nicholas G. Godshall and Roy L. Marks, Ephrata, Pa., assignors to Walter W. Moyer Company, Ephrata, Pa., a partnership

Application July 5, 1951, Serial No. 235,252

1 Claim. (Cl. 311—16)

1

The present invention relates to a sewing machine power table motor mount for the mounting of one or more sewing machines.

In well known types of sewing machine power tables, the motor for driving the sewing machine is usually mounted at the rear of the table with provisions for adjustment thereof only in a longitudinal direction. An outstanding objection of this type of table is that it does not afford adjustment in a forward and rearward direction with the consequence that a somewhat unbalanced condition of the table results giving rise to vibration and noise. And when machines of different types are substituted, it is often necessary to change the attaching position of the machine to the table top. Moreover, substantial lengths of belt must be used to span the distance between the motor drive shaft and machine drive shaft resulting in a greater slippage, less efficiency, as well as necessitating the stocking of various sized belts. Additionally, the treadle rod connecting the treadle with the clutch of the motor must be disposed at an angle of perhaps less than 60°, therefore only small components of vertical forces applied to the treadle are transmitted to the rod, thus requiring a great exertion of manual effort on the part of the operator for the clutching or declutching operation as well as imposing a greater amount of strain on the treadle rod, requiring frequent adjustment and replacement thereof. Horeover, as different types of sewing machines are mounted on the table, particularly in the center or back half of the table, it is usually necessary to cut a greater length of slot in a forward to rearward direction of the table in order to accommodate the angularity of the belt.

An object of the present invention is to provide a novel sewing machine table motor mount which is devoid of all of the above named disadvantages.

A more specific object of the present invention is to provide a novel sewing machine table motor mount having a fully adjustable motor mounting which enables elimination of unbalance of the motor mounting and vibration of the table, and eliminates the necessity of long belts or the carrying of a large inventory of various sized belts —also, which eliminates the cutting of longer slots in the table for accommodating belts for different types of machine mountings.

A further specific object of the invention is to provide a novel sewing machine table motor mount wherein the treadle rod may be disposed in a substantially vertical direction, thereby minimizing strain on the treadle parts and

2

fatigue of the operator as in the case of conventional treadle designs wherein the treadle rod is disposed at a substantial angle with respect to the treadle.

Other objects and advantages of the present invention will become apparent from a study of the following description taken with the accompanying drawings wherein:

Fig. 1 is a top view of a sewing machine table with the table top removed and embodying the principles of the present invention;

Fig. 2 is a front elevational view of the sewing machine table shown in Fig. 1 but with the table top in place;

Fig. 3 is an end elevational view of the sewing machine shown in Figs. 1 and 2, and

Fig. 4 is a perspective view of the sewing machine table shown in Figs. 1 to 3.

Referring more particularly to Figs. 1 and 2 of the drawings, numeral 1 denotes a table top which may be of wood, such as maple, or metal, as desired, and which is supported by a metal framework of pressed steel or other sheet metal construction. The framework comprises four legs 2 of channel cross-section and a back brace 3 whose ends are bolted or otherwise secured to the rearmost legs of the table as shown more clearly in Figs. 2 and 3. Telescopically fitted within legs 2 are correspondingly shaped channel leg extensions 2a which provide vertical adjustment of the height of the table 1 by the mere loosening and then tightening of bolts 4, thereby clamping extensions 2a to legs 2 in any desired relative position. A base member 5 extending longitudinally of the table has ends which are bolted or otherwise integrally secured to the bottom, laterally extending braces 6, which, in turn, are secured to leg extensions 2a to form a rigid base structure.

Adjustable means are provided for mounting a driving motor M, which means comprises a motor mounting bar 7 preferably of rectangular cross-section and having flattened end portions 7a provided with holes through which bolts 8 may extend. Bolts 8 also extend through slots 9 formed on the top flange of a pair of adjustable motor mounting brackets 10 preferably of angle iron construction having perforated end flanges bolted to legs 2 by bolts 11. It will be seen, therefore, that by loosening bolts 8 so that they may freely slide in slots 9, motor mounting bar 7 may be selectively moved in a forward or rearward direction to any desired position so as to bring the motor centrally, forwardly or rearwardly of the table.

In order to permit raising or lowering of the motor mounting bar 7, a plurality of holes, such as 11*a*, are provided in the legs 2 of the table through which may be extended bolts 11 which extend through the end flanges of the angle iron motor mounting brackets 10, and in this way enable a certain degree of vertical adjustment of the motor mounting, particularly for accommodating different table thicknesses.

The motor is adjustable also in a longitudinal direction of the table by means of a slidably adjustable motor supporting bracket 12 which snugly surrounds and is adjustably clamped to motor mounting bar 7 in any desired longitudinal position by means of bolts 12*a*. By this and other adjustments hereinbefore described, the motor may be slidably adjusted to any longitudinal or lateral position so as to properly position the driving belt 13 by bringing the motor drive shaft as close as possible to the sewing machine drive shaft in order to provide a smaller belt, less slippage and therefore greater efficiency of the drive, as well as eliminate the necessity of enlarging the slot 14 through which belt 13 extends when different types of machines, such as S, are substituted, or when the sewing machine is to be mounted in different forward to rearward positions of the sewing machine table. The electric motor M is provided with a clutch (not shown) which is actuated by a clutch arm 15 having adjustably connected thereto a treadle rod 16 whose lower end is adjustably connected to a treadle 17 supported on the base member 5. A V-belt bracket take-up 20 of any well known type may be used to adjust the slack of the belt.

It will be particularly noted that by providing adjustment of the motor mounting in a forward to rearward direction of the table, it is possible to place the motor directly above the treadle 17 and thus dispose the treadle rod 16 in a substantially vertical direction, thus enabling the operator to transmit a maximum amount of force to the clutch arm 15 as compared to previous constructions wherein the treadle rod 16 had to be disposed at a considerable angle, requiring substantially greater physical force to operate the clutch arm and causing considerable strain and, frequently, loss of adjustment of the treadle rod 16.

The electric motor may be controlled from switch box 18 and energized by any suitable source of power (not shown). A presser foot rod 19 may also be attached to the treadle and to the presser foot (not shown) of the sewing machine S to enable lifting of the presser foot of the machine as desired.

Thus it will be seen that we have provided an efficient sewing machine power table incorporating motor mounting means having universal adjustment in longitudinal, lateral and vertical directions to enable the mounting of the motor in any desired position underneath the table so as to bring it as closely as possible to the machine to be driven thereby, thus shortening the belt connection to the machine, eliminating slippage and loss of efficiency; also eliminating the necessity for cutting large slots through the table top to accommodate different types of machines, as well as permitting the disposition of the treadle rod in a substantially vertical direction so as to facilitate manual operation of the clutch arm and thus minimize fatigue of the operator, vibration and noise. In short, we have provided a combination of elements which provides a wide range of adjustment of the motor mounting in a simple manner and simplifies operation of the sewing machine and substitution of different types of sewing machines so as to obtain maximum efficiency with minimum manual effort, therefore which will considerably increase production of sewed goods.

While we have illustrated and described a certain specific embodiment of our invention, it will be understood that this is by way of illustration only, and that various changes and modifications may be made within the contemplation of our invention and within the scope of the following claim.

We claim:

In a sewing machine power table of the type have a slotted table top supported by a metal framework including four legs, an adjustable motor mounting bracket construction for adjustably mounting a motor for driving a sewing machine mounted on the top of and substantially centrally of the table and including a clutch and operating arm therefor; comprising, in combination, a motor mounting bar of square cross section extending longitudinally of and in close proximity underneath said top for adjustably mounting a supporting bracket of the motor in any of a plurality of positions longitudinally of the table, the ends of said bar being flattened and each having a hole extending therethrough, a pair of brackets extending transversely of the framework between said legs and each having an elongated slot extending throughout a large central portion thereof, and bolts extending through said holes and slots for adjustably mounting said motor mounting bar transversely of the table, said legs having a plurality of vertically spaced holes for mounting the ends of said brackets in selective vertical positions, a treadle mounted on the base portion of said framework underneath said motor, and a treadle rod interconnecting said treadle and clutch arm and extending in a substantially vertical direction so that force applied to the treadle by the feet of the operator may be easily transmitted to said clutch arm.

NICHOLAS G. GODSHALL.
ROY L. MARKS.

REFERENCES CITED

The following references are of record in the file of this patent:

UNITED STATES PATENTS

Number	Name	Date
1,514,083	Herr	Nov. 4, 1924
1,681,896	Eames et al.	Aug. 21, 1928
1,721,069	Chason	July 16, 1929
1,926,392	Kritzer	Sept. 12, 1933
2,192,170	Adams	Mar. 5, 1940
2,370,048	Koch	Feb. 20, 1945
2,469,968	Kessler	May 10, 1949
2,496,230	Peterson	Jan. 31, 1950