May 13, 1958 F. R. HERMANNS 2,834,222

ADJUSTABLE TREADLES FOR SEWING MACHINES

Filed Dec. 29, 1955 2 Sheets-Sheet 1

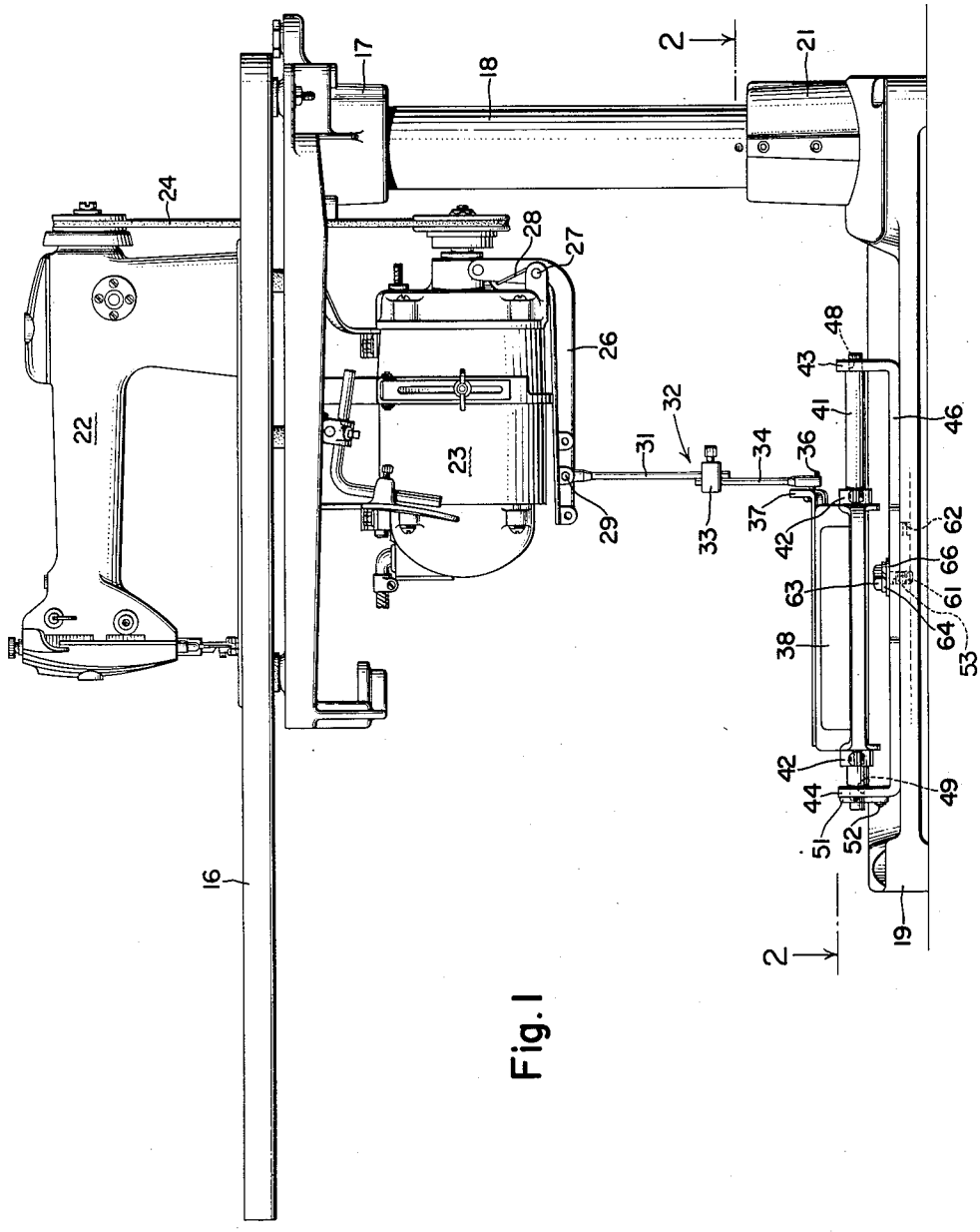


Fig. 1

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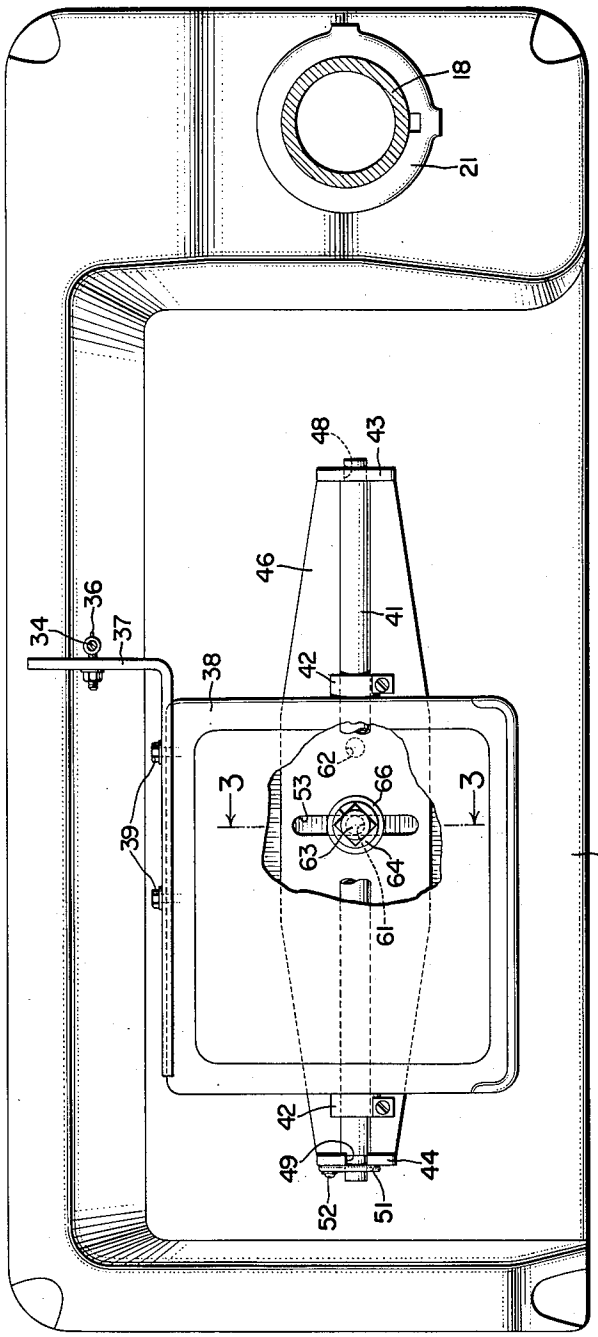


Fig.2

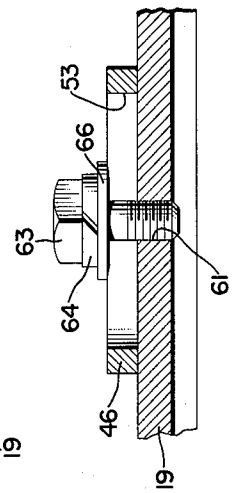


Fig.3

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ADJUSTABLE TREADLES FOR SEWING MACHINES

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2 Claims. (Cl. 74—561)

This invention relates to sewing machines, and more particularly to industrial type sewing machines powered by a motor-driven transmitter and controlled by a foot operated treadle.

The industrial sewing business is highly competitive, and any improvement that will increase the efficiency of a sewing machine operator is important. A sewing machine operator who is comfortably seated at a sewing machine will produce more work, make fewer mistakes, and be able to work longer at a higher rate of productivity than an equally skilled operator who is uncomfortable. Therefore, the primary object of the present invention is to provide an improved adjustable treadle which will make it possible for an operator to assume a comfortable position when seated at an industrial sewing machine.

Another object of the invention is to provide an improved treadle that can be adjusted to accommodate the preferences of different operators and which can be adjusted to make it possible for the same operator comfortably to perform different sewing operations on the same sewing machine.

With the above and other objects in view, as will hereinafter appear, the invention comprises the devices, combinations, and arrangements of parts hereinafter set forth and illustrated in the accompanying drawings of a preferred embodiment of the invention, from which the several features of the invention and the advantages attained thereby will readily be understood by those skilled in the art.

In the drawings, which form a part of this specification:

Fig. 1 is a front elevational view of an industrial sewing machine apparatus embodying the present invention,

Fig. 2 is a plan view, partly broken away and partly in section, taken on the line 2—2 of Fig. 1, and

Fig. 3 is a fragmentary sectional view taken on the line 3—3 of Fig. 2.

Referring to the drawings, this invention is illustrated as embodied in a stand having a substantially rectangular sewing machine table-top 16 supported on a bracket 17 mounted on the upper end of an upstanding cylindrical column 18, the column 18 being supported from an elongated cast iron base 19 by means of a boss 21. Both the table-top 16 and the base 19 have two axes, in each case the one axis extending parallel to the longer dimension is termed the longitudinal axis, and the other axis which extends parallel to the shorter dimension is termed the front-to-back axis. A sewing machine 22 is supported by the table-top 16 in such a manner that the longer dimension of the sewing machine 22 extends parallel to the longitudinal axis of the table-top 16.

A motor-driven power transmitter 23, which may be similar to the transmitter shown in U. S. patent application Serial No. 285,504, filed May 1, 1952, now Patent No. 2,822,903, is supported below the bracket 17 and drives the sewing machine 22 by means of a belt 24. The power transmiter 23 has a control arm 26 pivoted at 27 and biased upwardly, in a known manner, by a spring 28.

Lowering and raising the arm 26 starts and stops the sewing machine 22 in a conventional manner.

The free end of the control arm 26, by means of a pivot pin 29, is connected to the top end of an upper section 31 of a two-piece pitman 32. The bottom end of the section 31 is, by means of an adjustable connector 33, secured to the top end of a lower section 34 of the pitman 32. The bottom end of the section 34, by means of a pivot pin 36, is connected to the free end of an L-shaped bracket 37, which is secured to a treadle 38 by screws 39. The treadle 38 is adjustably held to a treadle-rod 41 by clamp brackets 42—42, and the treadle-rod 41 is pivotally carried in upturned bearing supports 43 and 44 formed integral with and at opposite ends of a treadle-plate 46. The treadle-plate 46 is elongated and, like the base 19, has two axes, one, the longitudinal axis being parallel to the longer dimension and the other the front-to-back axis being parallel to the shorter dimension. Reference to Fig. 2 shows that the longitudinal axis of the treadle-plate 46, in a general way, is parallel to the longitudinal axis of the base 19. The bearing support 43 is apertured at 48 and thereby pivotally receives one end of the treadle-rod 41. The top of the bearing support 44 has a U-shaped recess 49 which pivotally receives the other end of the treadle-rod 41, this end of the treadle-rod 41 being held in the recess 49 by an easily releasable hooked latch 51 pivotally held to the bearing support 44 by a screw 52.

The treadle-plate 46 is provided with a centrally located elongated or slotted hole 53, the longer dimension of which extends parallel to the front-to-back axis of the treadle-plate 46. In other words the slotted hole 53 extends from the front to the back of the treadle-plate 46. The bottom of the treadle-plate 46 rests on the upper surface of the base 19 and the base 19 is provided with a pair of threaded holes 61—62. The central axes of the holes 61 and 62 define a plane which extends parallel to the longitudinal axis of the base 19. In other words when the treadle-plate 46 is in the position shown in Fig. 2, the longer dimension of the hole 53 will extend perpendicular to the plane defined by the axes of the holes 61 and 62. A headed screw 63, which is provided with a lock-washer 64 and a plate-washer 66 the latter being larger in outer diameter than the smaller dimension of the hole 53, passes through the slotted hole 53 and may selectively be screwed into either one of the threaded holes 61 or 62. By loosening the screw 63, the treadle-plate 46 may be adjusted forward or backward on the base 19 within limits of the elongated hole 53. Also, by removing the screw 63 from the hole 61 and screwing it into the hole 62, the treadle-plate 46, and thus the treadle 38, are shifted longitudinally of the base 19. In this second position the treadle can also be adjusted forward and backward of the base 19, within limits of the elongated hole 53. Also, since the treadle-plate 46 is secured to the bed 19 by the single screw 63, the treadle-plate 46 can, within limits, be turned about the screw 63 thereby permitting an operator to sit comfortably at an angle with respect to the base 19 and the sewing machine 22.

From the above it will be seen (Fig. 2) that the treadle-plate 46 and thus the treadle 38 can be adjusted forward and backward, to the left or to the right, or may be turned at an angle with respect to the base 19, thus providing an inexpensive, though advantageous means for helping the operator to be comfortable while operating the industrial type sewing machine 22.

Having thus set forth the nature of the invention what I claim herein is:

1. In a support and treadle mechanism adapted for supporting and controlling an industrial type sewing machine and before which an operator sits when operating the sewing machine; a base member having a longitudinal axis which extends to the right and to the left of the

operator, and said base having a front-to-back axis which extends away from the operator, and said base having two fastening means defining a vertical plane extending parallel to the longitudinal axis of said base; a treadle-plate having a longitudinal axis and a front-to-back axis both of which in general extend in the same direction as the respective axes of said base, and said treadle-plate having a centrally located elongated hole the longitudinal axis of said hole extending along and parallel to the front-to-back axis of said treadle-plate; a single fastening means passing through the elongated hole in said treadle-plate, and being engageable with a selected one of said two fastening means in said base; bearing supports carried by said treadle-plate and located on the longitudinal axis of said treadle-plate; a treadle-rod pivotally carried by said bearing supports; and a treadle secured to said treadle-rod.

2. In a support and treadle mechanism adapted for supporting and controlling an industrial type sewing machine and before which an operator sits when operating the sewing machine; a base member having a longitudinal axis which extends to the right and to the left of the operator, and said base having a front-to-back axis which extends away from the operator, and said base having two threaded holes the central axes of said holes

defining a vertical plane extending parallel to the longitudinal axis of said base; a treadle-plate having a longitudinal axis and a front-to-back axis both of which in general extend in the same direction as the respective axes of said base, and said treadle-plate having a centrally located elongated hole the longitudinal axis of said hole extending along and parallel to the front-to-back axis of said treadle-plate; a single threaded screw passing through the elongated hole in said treadle-plate, and being engageable with a selected one of said threaded holes in said base; bearing supports carried by said treadle-plate and located on the longitudinal axis of said treadle-plate; a treadle-rod pivotally carried by said bearing supports; and a treadle secured to said treadle-rod.

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