

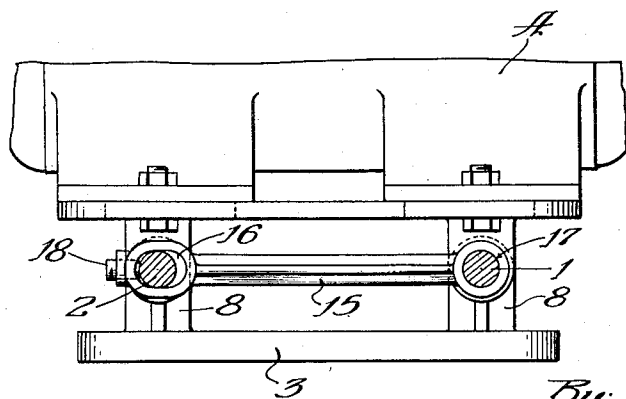
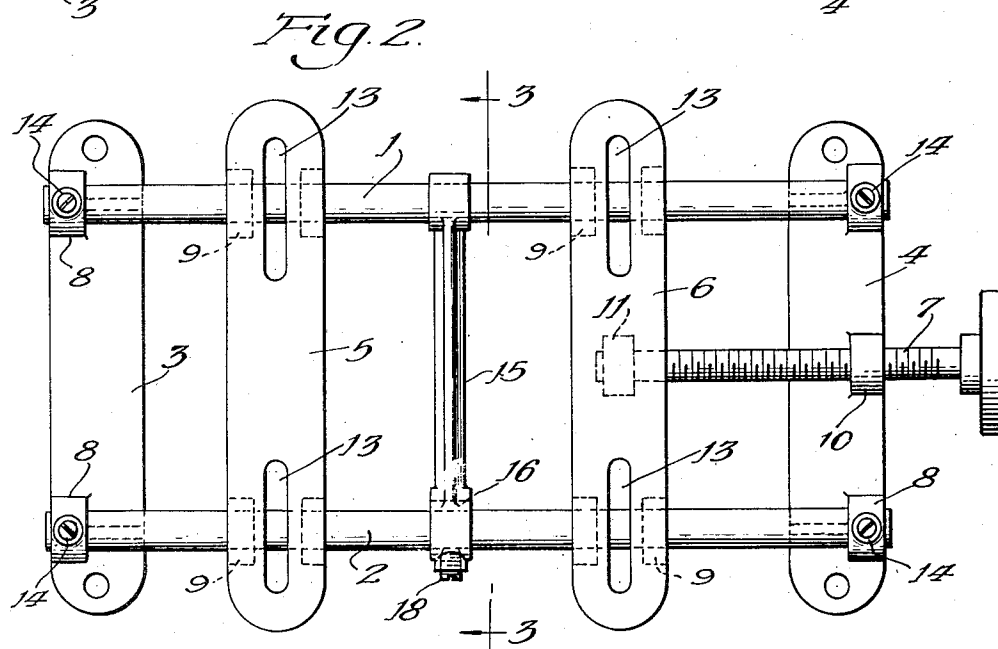
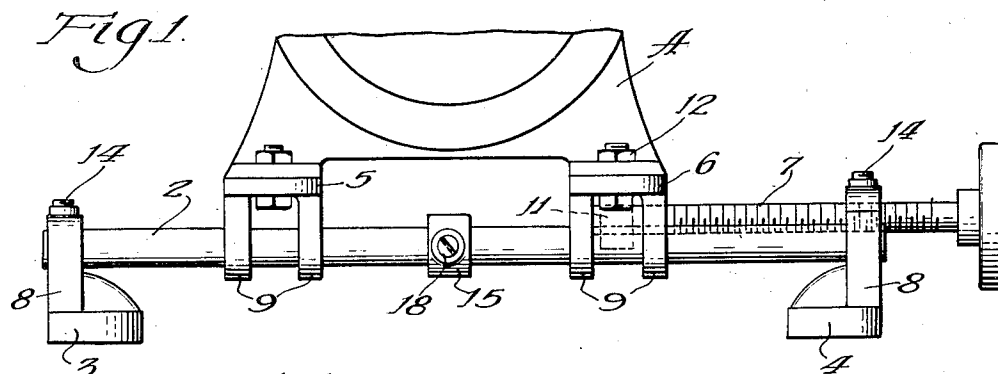
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NONCHATTERING MOTOR BASE

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NONCHATTERING MOTOR BASE

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4 Claims. (Cl. 248—23)

There is in use at the present time a base for little motors along which a motor may readily be adjusted to loosen or tighten a belt connecting the motor to a driven member. In this construction the motor is borne upon a pair of parallel, stationary rods along which it may be moved in making an adjustment, and it is held in the desired position by the screw which is used to move it. Since it is impossible to make the bearings between the motor and the supporting rods so tight as to prevent it, chattering occurs when the motor is running.

The object of the present invention is, in a simple way, to prevent the aforesaid chattering.

The various features of novelty whereby my invention is characterized will hereinafter be pointed out with particularity in the claims; but, for a full understanding of the invention and of its objects and advantages, reference may be had to the following detailed description in connection with the accompanying drawing, wherein:

Figure 1 is a side elevation of a motor base embodying the present invention, a fragment of a motor mounted being shown; Fig. 2 is a top plan view of the device, the motor being omitted; and Fig. 3 is a section on line 3—3 of Fig. 2, the motor being in place.

The particular motor base to which I have shown my invention applied comprises a pair of long, parallel, round rods, 1 and 2, mounted on a pair of transverse shoes, 3 and 4, below the ends thereof; together with a pair of cross pieces, 5 and 6, slidably supported on the rods, and a long screw 7 arranged between and parallel to the rods and connecting the cross piece 6 to the shoe 4. The rods extend at their ends through and are fixed in the upper parts of little pedestals 8 rising from the shoes. Each cross piece has near each end a pair of downwardly-projecting ears 9, spaced apart from each other in the direction of the lengths of the rods. Each rod passes through and is a sliding fit in holes in the pairs of ears on the near ends of the cross pieces. The screw 7 is screwed through the upper part of a central post or pedestal 10 on the shoe 4, and has the usual swivel connection with a lug 11 on the under side of the cross piece 6; so that by turning the screw the cross piece can be moved along the rods. The motor A is fastened to the cross pieces by bolts 12 that pass through slots 13 in such pieces.

In accordance with my invention I provide means for stressing those portions of the rods which at the time lie in the space between the two cross pieces, bowing them very slightly but to a sufficient degree to cause the rods to bind in the

ears on the cross pieces. By this means the rods and the cross pieces act as a single, unitary structure to absorb stresses set up in the same when the motor is running. In short, the effect is the same as that produced by the screws 14 which secure the rods to the shoes and prevent chattering at these points. The preferred means for this purpose consists of a sturdy bar 15 having therein holes through which the rods pass. One of these holes is elongated in the direction of the length of the bar, as indicated at 16, while the other hole 17 may be round and of such diameter that the rod is a sliding fit therein. A set screw 18, coaxial with the bar, enters one end of the oblong hole through the adjacent end of the bar and is adapted to exert pressure against the side of the rod in that hole.

Assuming that the screw 18 is loose in the state of things illustrated in the drawing, it is possible to move the motor in either direction along the rods by turning the operating screw 7. When the motor is in the desired position, the bar is shifted to place it about midway between the cross pieces and the set screw 18 is tightened. This results in forcing the rod 2 toward the right as viewed in Fig. 3 and, because the two rods are alike, in drawing the rod 1 toward the left. In other words, those sections of the rods extending from one cross piece to the other act as beams supported at their ends and both became slightly bowed. Thus the rods function as the two jaws of a clamp closing tightly on the cross pieces. Therefore, since chattering can occur only when there is a looseness between the rods and the cross pieces, all danger of chattering is eliminated.

It will thus be seen that by tightening a single set screw I am able to obtain the same result as with four such screws, one at each end of each cross piece.

While I have described and illustrated only a single preferred form of my invention, I do not desire to be limited to the details found in this particular form; but intend to cover all forms and arrangements which come within the definitions of my invention constituting the appended claims.

I claim:

1. The combination with a base member having thereon a pair of stationary parallel rods and a pair of spaced motor-supporting cross pieces each spanning the space between the rods and provided with holes through which the rods extend and in which they are a sliding fit, of a tie member connecting said rods in the space between the cross pieces and slidable along the rods, and means on said member to vary its effective length and bend

the rods slightly so as to cause them to clamp the cross pieces thereto against chattering when the motor is running.

2. The combination with a base member having thereon a pair of stationary parallel rods and a pair of spaced motor-supporting cross pieces each spanning the space between the rods and provided with holes through which the rods extend and in which they are a sliding fit, of a bar extending transversely from one rod to the other in the space between the cross pieces, said bar having at one end a hole in which one of the rods is a sliding fit, and means at the other end of the bar for causing the bar, including a single set screw, to stress the rods in a manner to clamp the cross pieces thereto against chattering when the motor is running.

3. The combination with a base member having thereon a pair of stationary parallel rods and a pair of motor-supporting cross pieces each spanning the space between the rods and provided with holes through which the rods extend and in which they are a sliding fit, of a bar extending transversely from one rod to the other in the space between the cross pieces, said bar having at one end a hole in which one of the rods is a sliding

fit and having at the other end a hole elongated in the direction of the length of the bar, through which the second rod loosely extends, and a set screw passing lengthwise of the bar into one end of the elongated hole for engagement with the side of the second rod.

4. The combination with a base member having thereon a pair of stationary parallel rods and a pair of motor-supporting cross pieces each spanning the space between the rods and provided with holes through which the rods extend and in which they are a sliding fit, of a bar extending transversely from one rod to the other in the space between the cross pieces, said bar having near its ends holes through which the rods pass to support the bar while permitting it to be moved along the rods, one of the holes being elongated in the direction of the length of the bar, and a set screw extending lengthwise of the bar through an end of the latter into the outer end of the elongated hole for engagement with the side of the corresponding rod to cause the rods to be drawn toward each other and thus bind in all four holes in the cross pieces.

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