

May 6, 1930.

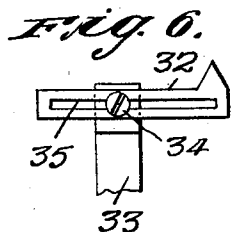
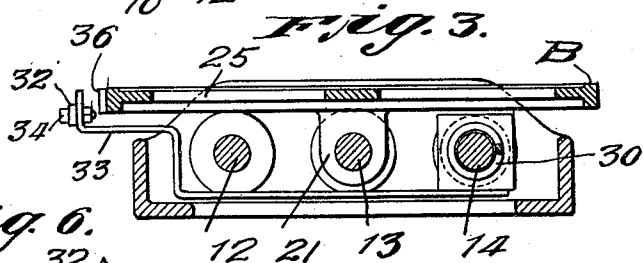
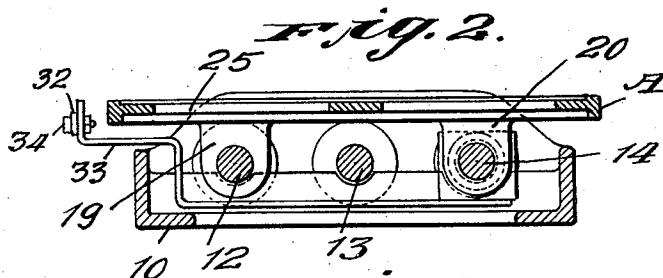
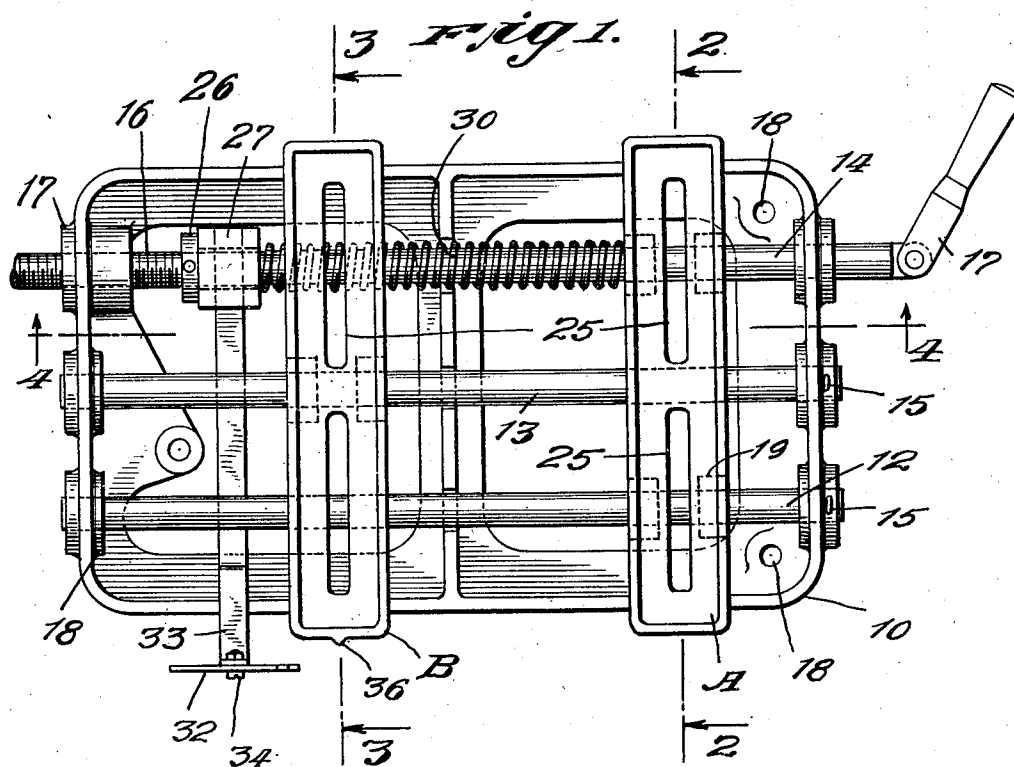
R. L. BACHER

1,756,932

MOTOR BASE

Filed June 26, 1925

2 Sheets-Sheet 1



INVENTOR.
Rollin L. Bacher
 BY *Morris & Walter*
 ATTORNEYS.

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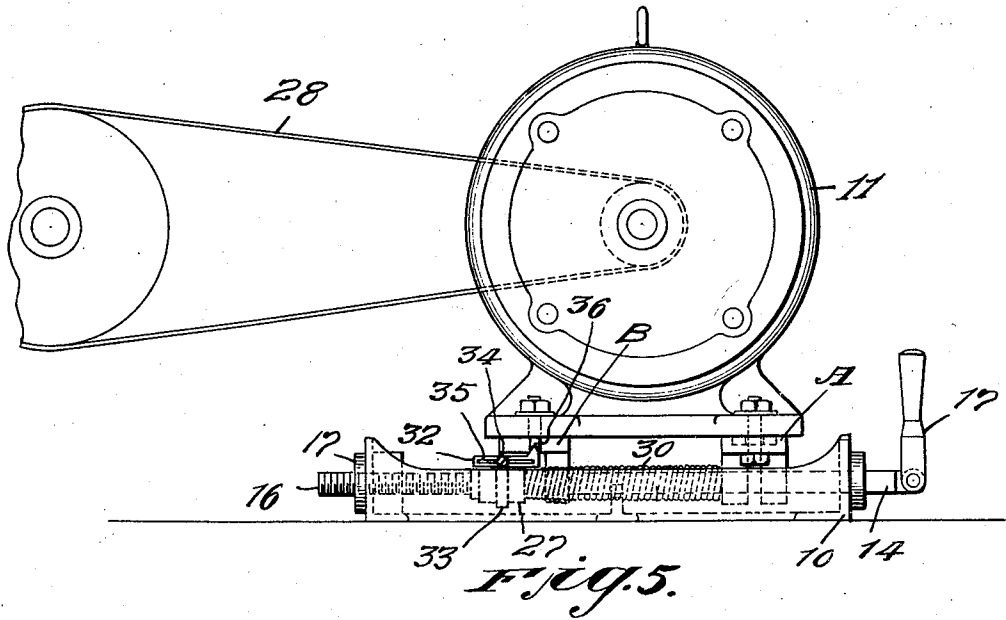
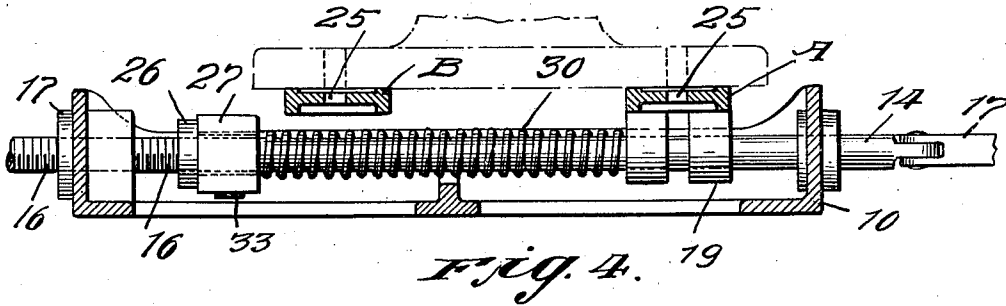
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MOTOR BASE

Filed June 26, 1925

2 Sheets-Sheet 2



INVENTOR.
Rollin L. Bacher
BY *Morris Noelle*
ATTORNEYS.

UNITED STATES PATENT OFFICE

ROLLIN L. BACHER, OF CLEVELAND HEIGHTS, OHIO, ASSIGNOR TO UNITED STATES AIR COMPRESSOR COMPANY, OF CLEVELAND, OHIO, A CORPORATION OF OHIO

MOTOR BASE

Application filed June 26, 1925. Serial No. 39,686.

The present invention relates to a motor base of the type in which a constant tension is exerted by the motor upon the belt passing around the motor pulley. More particularly, my invention is intended for use with motors in air compressor units for garage use but is obviously not limited to such use. My invention will be best understood by reference to the following detailed description and to the annexed drawing, in which;

Figure 1 is a plan view of an illustrative embodiment;

Figure 2 is a view in section taken along line 2—2 of Figure 1;

Figure 3 is a view in section along line 3—3 of Figure 1;

Figure 4 is a view in section taken along line 4—4 of Figure 1;

Figure 5 is an elevational view showing the motor in place; and

Figure 6 is a detailed view of a preferred form of indicator.

Referring to the drawings, 10 denotes a frame of suitable material as cast iron on which are mounted sections A and B of a carriage to which the motor 11 is to be secured. For the purpose of enabling the carriage sections A and B to slide freely I preferably employ rods 12, 13 and 14 secured in the ends of the frame 10 by suitable means, as for example by cotter pins 15 in the case of rods 12 and 13. One of the outside rods 14, however, is provided with a threaded portion 16 passing through and engaging the internal thread of a boss 17. On the opposite end of the rod 14 is a handle 17 preferably hinged as shown. Frame 10 may be bolted in place by bolts or other attaching means passing through holes 18 therein. Section A of the motor carriage engages rods 12 and 14 by means of apertured depending ears 19 and 20 respectively. For reasons which will later be fully apparent, section B engages only rod 13 by means of an apertured depending ear 21.

Sections A and B of the motor carriage are preferably provided with longitudinal slots 25 whereby motors of different widths may be accommodated. Since the carriage is made in separate sections it is apparent that motors of varying length of base may be held with-

in the range of the device. In order that the motor carriage AB may be moved along the supporting rods I provide a collar 26 affixed on shaft 14 against which is loosely mounted a block 27 also on shaft 14. In order to maintain the belt 28 under tension I preferably mount a spring 30 coiled around rod 14 between the block 27 and the depending ear 20 of section A of the motor carriage. Thus when handle 17 is rotated in the proper direction a block 27 will be moved against spring 30 compressing the latter against section A of the motor carriage and causing the motor to be placed under a tension depending upon the degree to which spring 30 is compressed.

An important feature of my invention is the provision of means for indicating when spring 30 has been placed under a predetermined tension as due to this feature the spring can be reset to the original tension upon stretching of the motor belt. To accomplish this I have provided a pointer 32 which may be made adjustable as shown in Figure 6 by engaging an arm 33 by means of a set screw 34 passing through a slot 35 in pointer 32. Arm 33 is rigidly attached to block 26. A pointer 36 or in lieu thereof a suitable mark is provided on section B of the motor carriage and the pointer 32 is so adjusted that when the latter is brought into alignment with the pointer 36 the desired tension will be imparted to spring 30 and hence to pulley belt 28.

It will be understood that where the base is to be manufactured for a particular type of motor the feature of adjustment of the indicator borne on arm 33 may be dispensed with and the spring 30 and the non-adjustable indicator 32 so chosen that when the latter is brought opposite the mark or pointer on carriage section B the spring will be under the proper tension.

It is now believed that the operation of my improved base will be apparent. When the motor has been bolted in place and connected to the pulley by means of belt 28, handle 17 is turned until the proper tension is obtained in the belt. When this has been done the pointer on arm 33 is moved opposite pointer 36 on carriage AB by extending

or retracting the pointer 32 with reference to arm 33. When the belt 28 stretches, the tension will still be maintained by the extending of spring 30 but the force exerted thereby will be less. The proper tension, however, may immediately be restored simply by turning handle 17 until pointer 32 is again opposite the mark 36.

A further important feature of my invention has to do with the fact above pointed out that one of the separate carriage sections B is supported on one rod only. It will be seen that when the motor has been bolted on carriage section A, for example, should section B be affixed to more than one rod it could not accommodate itself to the base proper of the motor should the plane of such base deviate slightly from the plane determined by sections A and B. This then would have the effect of causing the sections A and B to bind on the rods. By having one section supported on one rod only, however, such section is free to accommodate itself to any irregularity in the base proper of the motor and thus in effect the motor rests upon the stationary part of the base at three points only.

It will be seen that I have provided a motor base which while simple in construction has a number of important advantages, chief of which are: when once the proper belt tension has been determined this tension can at all times be maintained by the simple operation of resetting the spring in the manner described and the fact that the motor is secured to the stationary part of the base at three points only whereby binding of the motor carriage on the carrying rods is prevented. In prior constructions with which I am familiar it has been necessary to accommodate the carrying rods in order to allow for irregularities in the base proper of the motor, in which case it was necessary to provide suitable spring mechanism to prevent the base from rattling. In my improved construction, however, the holes in the motor carriage may be drilled to the exact size necessary to accommodate the carrying rod whereby such rattle is entirely eliminated.

What I claim is:

1. In combination, a driving pulley, a driven pulley, a belt connecting said pulleys, a base for one of said pulleys, a carriage slidably supported in said base, spring means for urging said carriage against the tension of the belt and means for varying the tension of said spring means, means for indicating when said spring means is under a predetermined tension whereby said spring means may be reset to said predetermined tension upon stretching of said belt.

2. In combination with a motor having a pulley, a base for said motor comprising a frame, a carriage slidably supported on said frame, means for securing said motor to said

carriage, spring means urging said motor against the tension of the pulley belt, means for varying the tension of said spring means, means for indicating when said spring means is under a predetermined tension whereby said spring means may be reset to said predetermined tension upon stretching of said belt.

3. In combination with a motor having a pulley, a base for said motor comprising a frame, a carriage slidably supported on said frame, means for securing said motor to said carriage, spring means urging said motor against the tension of the pulley belt, means for varying the tension of said spring means comprising a stop acting against said spring and screw means for adjusting the position of said stop, means for indicating when said belt is under a predetermined tension comprising a pointer connected with said stop and an index carried by said carriage.

4. In combination with a motor having a pulley, a base for said motor comprising a frame, carrying rods on said frame, a carriage adapted to be secured to the motor comprising two separate sections slidably secured to said rods, one of said sections engaging two of said rods, said other section engaging one rod only, means for moving said carriage along said rods against the tension of the pulley belt.

5. In combination with a motor having a pulley, a base for said motor comprising a frame, carrying rods on said frame, a carriage adapted to be secured to the motor comprising two separate sections slidably secured to said rods, one of said sections engaging two of said rods, said other section engaging one rod only, spring means for urging said carriage against the tension of the pulley belt and means for varying the tension of said spring means.

6. In a motor base, a frame, a carriage comprising two separate sections slidably supported on said frame and disposed transversely thereof, each of said sections being adapted to be secured to said motor and one of said sections being attached to said frame at one point only, said other section being attached to said frame at two points, a side of the triangle formed by said three points coinciding with one of said sections and means for moving said motor lengthwise of said frame against the tension of the pulley belt.

7. In a motor base, a frame, a carriage comprising two separate sections slidably supported on said frame, each of said sections being adapted to be secured to said motor and one of said sections being attached to said frame at one point only in a manner so as to provide for a rotational movement about an axis substantially transverse to said other section, said other section being attached to said frame at two points, said sections being

secured against rotation on any side of the triangle formed by the points of suspension and means for moving said motor against the tension of the pulley belt.

5 8. In a motor base, a frame, a carriage comprising two separate sections slidably supported on said frame disposed transversely thereof, each of said sections being adapted to be secured to said motor and one of said
10 sections being attached to said frame at one point only, said other section being attached to said frame at two points, a side of the triangle formed by said three points coinciding with one of said sections, said sections being
15 secured against rotation on any side of the triangle formed by the points of suspension and means for moving said motor lengthwise of said frame against the tension of the pulley belt.

20 9. A motor mounting including a base frame having a central partition therein, a pair of spaced rods mounted upon said frame on one side of said partition and a third rod mounted on said frame on the other side of
25 said partition, said third rod being centrally located relative to said pair of rods, a motor connection slidably mounted on said pair of rods, a second motor connection slidably and pivotally mounted on said third rod whereby
30 a motor may be supported upon said connections thereby connecting said connections together for movement in unison and means operative with said first connection for imparting sliding movement thereto.

35 10. In a device of the class described, a base frame, a pair of spaced rods on said frame, a third rod on said frame and positioned substantially midway between said pair of rods, a motor connection slidably
40 mounted upon said pair of rods, a second motor connection slidably and pivotally mounted on said third rod, said motor connections being independent of each other except when connected together by a motor and
45 means for imparting movement to said first connection.

11. In a device of the class described, a base frame, a pair of spaced rods on said frame, a third rod on said frame and positioned substantially midway between said pair of rods, a motor connection slidably
50 mounted upon said pair of rods, a second motor connection slidably and pivotally mounted on said third rod, said motor connections being independent of each other except when
55 connected together by a motor and having slots therein whereby a motor may be bolted thereon and means for imparting sliding movement to said connections when a motor
60 is fixed thereon.

12. In a device of the class described, a base frame, a pair of spaced rods on said frame, a third rod on said frame and positioned substantially midway between said pair of rods, a motor connection slidably

mounted upon said pair of rods, a second motor connection slidably and pivotally mounted on said third rod, said motor connections being independent of each other except when connected together by a motor and screw means for manually moving said first
70 connection relative to the frame, said means moving both of said connections when a motor is mounted thereon.

In testimony whereof I have affixed my signature to this specification. 75

ROLLIN L. BACHER.

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