

Sept. 14, 1926.

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O. O. HUMPHREY
COIL VIBRATOR ADJUSTER
Filed Feb. 3, 1923

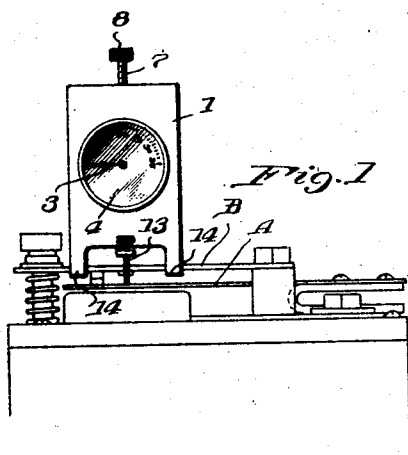
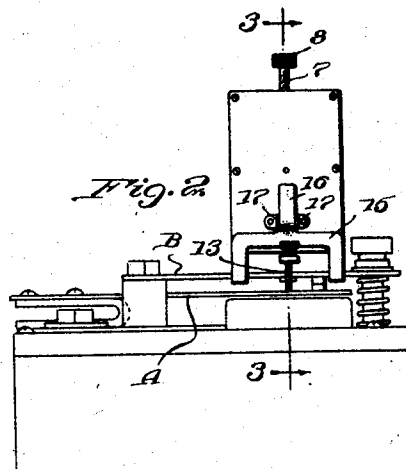


Fig. 3.

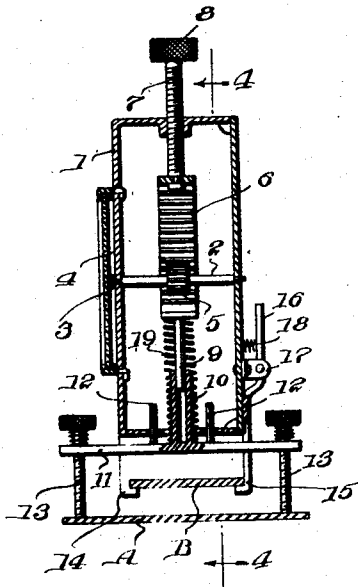
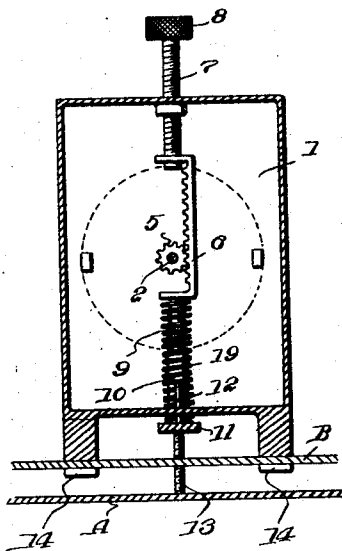


Fig. 4.



A. M. Crane

WITNESS:

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UNITED STATES PATENT OFFICE.

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COIL-VIBRATOR ADJUSTER.

Application filed February 3, 1923. Serial No. 616,870.

The principal object of this invention is to provide means for permitting the vibrator springs of the coils of an internal combustion engine to be accurately adjusted to have the same stress to insure uniformity of action and thus increase the efficiency of the motor.

Another object of the invention is to provide means for readily connecting the device with a part of the coil and to adjust the same to the vibrator spring even though the spring is bent or twisted.

A further object of the invention is to make the device so that it can be manufactured to sell at low cost, thus enabling a car owner to buy them and rendering it unnecessary for him to go to a garage to have his coils adjusted with one of the more expensive devices now on the market.

This invention also consists in certain other features of construction and in the combination and arrangement of the several parts, to be hereinafter fully described, illustrated in the accompanying drawings and specifically pointed out in the appended claim.

In describing my invention in detail, reference will be had to the accompanying drawings wherein like characters denote like or corresponding parts throughout the several views, and in which:—

Figure 1 is an elevation showing the invention in use.

Figure 2 is a rear view of Figure 1.

Figure 3 is a section on line 3—3 of Figure 2.

Figure 4 is a section on line 4—4 of Figure 3.

In these views 1 indicates a casing in which is rotatably mounted a shaft 2 which has a finger 3 on its projecting end which cooperates with a dial 4 on the face of the casing. A pinion 5 is secured to the shaft and this pinion engages a rack bar 6 which has its upper end swiveled to a set screw 7 which passes through the upper end of the casing and has a knurled head 8 for facilitating its turning. The lower end of the rack bar carries a pin 9 which engages a tubular stem 10 on a cross bar 11 which is located below the bottom of the casing and which has guiding pins 12 thereon which engage holes in the said bottom. The ends of the cross bar carry the set screws 13 which are adapted to engage the vibrator spring A. Stationary jaws 14 are arranged

at one side of the casing for engaging one edge of the vibrator plate B and movable jaws 15 are arranged at the other side of the casing for engaging the other edge of the plate, these movable jaws being connected with a handle 16 which is pivoted to the brackets 17 on the casing and which is engaged by a spring 18 which tends to hold the jaws in gripping position. A spring 19 encircles the pin 9 and stem 10 and bears upon the cross piece 11 and the lower end of the rack bar.

The device is connected with the vibrator plate B of the first coil by means of its jaws and the set screws 13 are adjusted until they just touch the enlarged end of the vibrator spring A, the rack bar being moved by the set screw 7 to place the finger at zero on the dial. By using two of the set screws 13 the device can be adjusted to properly engage vibrator springs that have become bent or twisted. The device is placed in position upon the coil after the spring thereof has been given its proper stress. The set screw 7 is then turned to move the rack bar 6 downwardly to compress the spring 19 until the strength thereof is sufficient to move the spring A downwardly to separate the contacts on the spring and plate. The amount of movement of the rack bar to cause this separation of the contacts will be registered on the dial by the finger 3 and the parts will remain in this position after the device has been removed from the first coil as the set screw 7 will hold the rack bar and the shaft and finger against movement. The device is then placed on the next coil so that the spring thereof can be adjusted to the same stress as that of the first spring.

By this device the springs of all the coils can be given the same stress.

It is thought from the foregoing description that the advantages and novel features of my invention will be readily apparent.

I desire it to be understood that I may make changes in the construction and in the combination and arrangement of the several parts, provided that such changes fall within the scope of the appended claim.

What I claim is:—

A device of the class described comprising a casing, a dial thereon, a shaft journaled in the casing, a finger thereon arranged to pass over the dial, a rack bar in the casing, a pinion on the shaft engaging the rack bar, a set screw passing through

the top of the casing and having its end pivoted to the rack bar, a pin on the lower end of the rack bar, a cross piece below the casing, a tubular stem thereon passing through the bottom of the casing and receiving the pin, a coil spring encircling the tubular stem and pin and having one end engaging the rack bar and its other end the cross piece, set screws at the ends of the cross piece, a pair of stationary jaws arranged at one side of the casing, movable jaws pivoted to the other side of the casing and having a handle portion, and a spring member disposed between said handle and the casing whereby to normally retain said movable jaws in operative position.

In testimony whereof I affix my signature.

ORLANDO O. HUMPHREY.