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D. G. TAYLOR

ANTICHATTERING DEVICE

Filed July 8, 1926

FIG. 1.

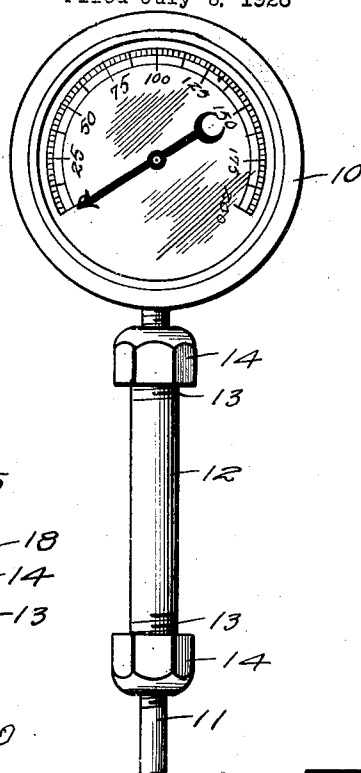


FIG. 2.

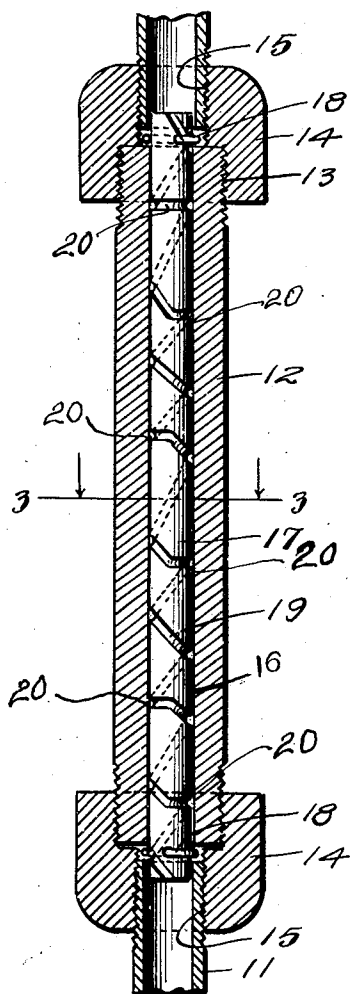
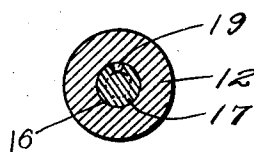


FIG. 3.



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ANTICHATTERING DEVICE.

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This invention relates to an anti-chattering device for use with pressure gauges and the like, and more particularly to a device of this character which may be readily inserted in the pressure line without resorting to any changes in the construction thereof.

A further and more specific object of the invention is to provide a member for insertion in the pressure line leading to a pressure gauge or regulator from a source of pressure having means for reducing the effective size of the bore of the line, so that sudden slight variations of pressure are relatively slowly transmitted to the gauge or regulator, whereby vibration or chattering of the hinge is prevented.

A still further object of the invention is to provide a device of this character wherein a relatively long reduced passage is provided for the purpose above described while employing a relatively short body for the anti-chattering device.

These and other objects I attain by the construction shown in the accompanying drawings, wherein for the purpose of illustration is shown a preferred embodiment of my invention and wherein:—

Figure 1 is a side elevation showing a pressure gauge, the pressure line of which includes an anti-chattering device constructed in accordance with my invention;

Figure 2 is an enlarged vertical sectional view through the anti-chattering device;

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

Referring now more particularly to the drawings, the numeral 10 generally designates the pressure gauge or regulator and 11 a conduit leading to the gauge from a source of pressure. In accordance with my invention, I insert in this conduit 11 a tubular body 12, the ends of which are exteriorly threaded, as at 13, for the reception of reducer caps 14 which in turn are provided with a reduced threaded bore 15 for the reception of the conduit. The caps provide a sealing connection between the tubular body and the adjacent ends of the sections of the conduit 11.

Disposed within the bore 16 of the tubular body is a rod or plunger 17 of slightly greater length than the tubular body, so that its ends project therebeyond. Suitable means, such as pins 18, are provided for holding

the rod in position with its ends projected beyond the ends of the tubular body. The periphery of this rod is formed with a spirally extending groove 19 extending from end to end of the rod. Through this groove pressure transmitted to the gauge must pass and accordingly since the groove reduces the effective size of the bore of the gauge conduit, the speed at which the gauge will respond to sudden variations of pressure is reduced. The groove may be constructed in accordance with the particular needs of the gauge with which it is to be employed. Where the fluid, the pressure of which is to be determined, is relatively heavy and slow moving and accordingly the shocks may be readily absorbed, the angle of the groove to the perpendicular may be very acute and the groove itself may be made considerably larger than where the fluid moves relatively rapidly. Where the fluid does move relatively rapidly, the spiral may be more closely formed and the groove reduced in size. In order to further increase the resistance to sudden impulses, the groove is preferably formed in sections, adjacent ends of the sections being circumferentially offset and connected by circumferentially extending grooves 20. The sudden change in direction thus provided effectually checks any tendency to sudden motion.

It will be obvious that a device of this character may be readily inserted in the gauge or regulator line without in any manner altering the line other than by removing therefrom a section of a length equal to the length of the device. In addition to being readily installed, the device may be readily cleaned as the rod or plunger may be removed at any time and any obstructing accumulation cleaned from the groove.

Since the construction hereinbefore set forth is capable of a certain range of change and modification without materially departing from the spirit of the invention, I do not limit myself to such specific structure except as hereinafter claimed.

I claim:—

In an anti-chattering device and in combination with a pressure responsive element, a line leading from a source of pressure thereto, a member adapted for insertion in said line increasing the effective length of the line a distance greater than its own

length and reducing the bore of the line comprising a tubular body adapted at its ends for connection with the pressure line and a rod fitting the body and having a
5 spiral groove in the periphery thereof, said rod being of greater length than the tubular body and having means coacting with the tubular body whereby it is held with its ends extended beyond opposite ends of the tubular body, said groove being extended to such 10 ends.

In testimony whereof I hereunto affix my signature.

DOC GILFORD TAYLOR.