Oct. 4, 1932. J. R. RICKETTS 1,881,389

OPERATION TIMING INDICATOR FOR TRIPLE VALVES

Filed Oct. 13, 1930

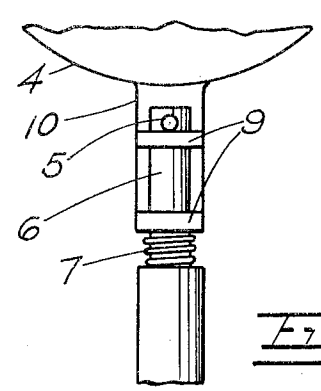


Fig. 4.

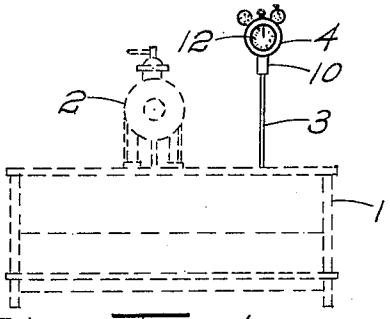


Fig. 1.

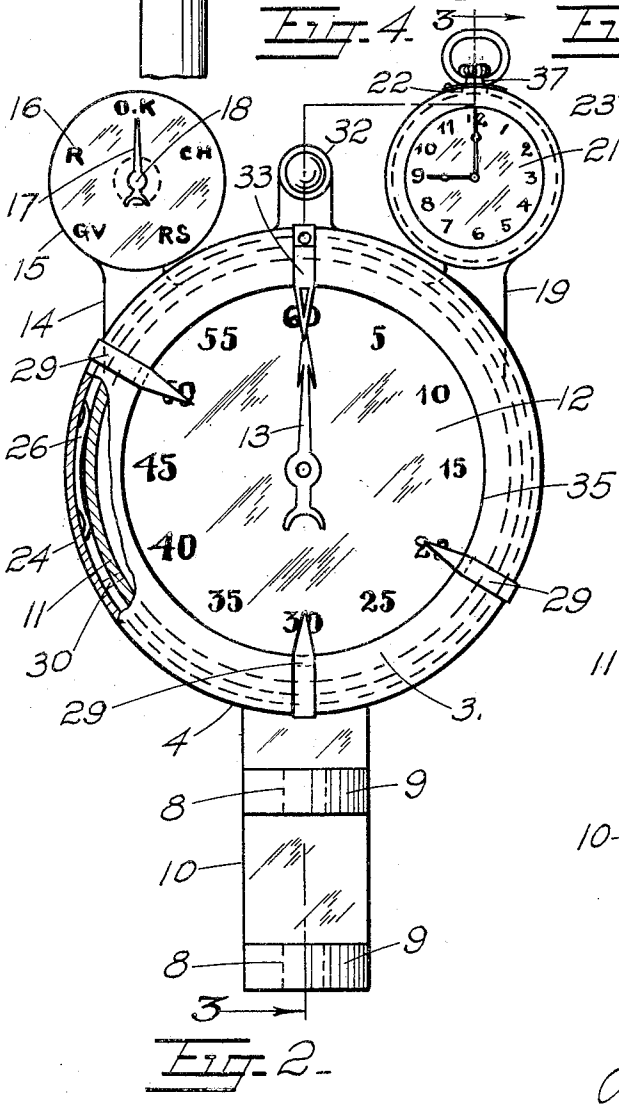


Fig. 2.

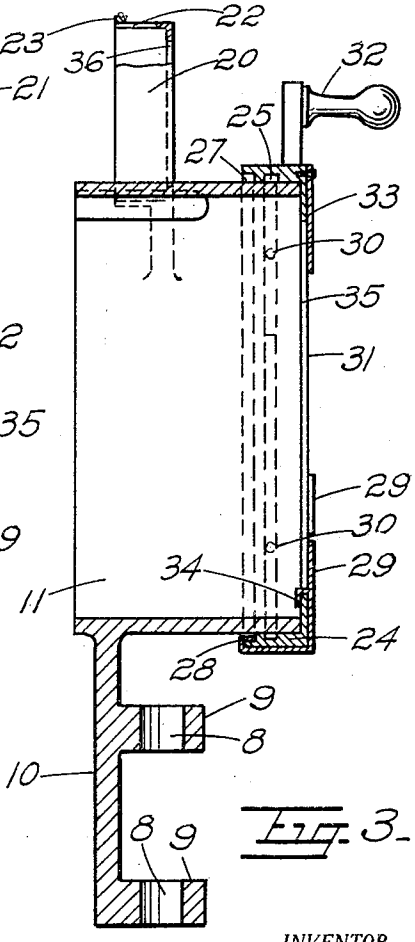


Fig. 3.

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UNITED STATES PATENT OFFICE

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OPERATION TIMING INDICATOR FOR TRIPLE VALVES

Application filed October 13, 1930. Serial No. 488,374.

The invention is for a timing indicator, for triple valve testing.

The object of the invention is to provide a timing indicator for the purpose of timing mechanical operations, particularly adapted to be used in conjunction with a Westinghouse No. 3T test rack.

Another object of the invention is to provide a convenient means for timing and recording operations so as to provide the test operator with information relative to the duration of test and as to tests completed on triple valves.

A still further object of the invention is to provide a combination device of the character indicated, which may be readily presented to full view of the operator, conveniently manipulated and in addition thereto, being of economical construction and conveniently installed.

Other objects of the invention will become apparent as the description is set forth, and from the appended claims.

In this specification, and the annexed drawing, the invention is presented in what is considered to be the most desirable form, but it will be understood that the invention is not limited to such specific form, as it is desired that in, and by the claims following the description, the invention may be made in any form or of any construction embodied therein.

Referring to the drawing in which similar reference characters designate similar parts throughout the several views:

Figure 1 is a front elevation of the invention as mounted on a triple valve test rack indicated in dotted lines;

Figure 2 is a front elevation of the invention showing a section broken away to illustrate the indicator dial, friction and retaining means;

Figure 3 is a sectional elevation taken on a line 3—3 of Fig. 2; and

Figure 4 is a fragmentary detail view of the mounting of the indicating device on its standard.

Reference numeral 1 indicates a test rack, with the triple valve stand 2 on which the triple valves are to be mounted for test. A standard 3 is attached to the rest rack by any of the well known methods, and has pivotally and frictionally mounted at its upper end the indicator 4; a pin 5 in the top reduced portion 6 of standard 3 providing means for retaining the indicator on its standard, and spring 7 providing sufficient friction to maintain the indicator face in the direction desired. Reduced portion 6 of standard 3 passes through apertures 8 in ears 9 which are integral with bracket 10, said bracket being integral with housing 11, said housing comprising a hollow cylinder of sufficient inside diameter and depth to admit and retain a clock of standard manufacture having graduations in seconds up to 60, and with but one indicator hand 13, so as to provide timing of one minute for one complete revolution of hand 13. Integral with housing 11, a bracket 14 is provided, having the indicator dial 15 superimposed thereon, said dial being provided with indicating marks 16 for the purpose of indicating the testing operations as performed. A hand 17, pivotally mounted at 18 and frictionally held is adapted to be manually operated as the various valve tests are carried out. On the opposite side of the housing 11, a similar bracket 19 is provided, integral with said housing, said bracket terminating in a cylindrical member 20 of sufficient diameter and depth to admit a watch 21, a slot 22 being provided at the top of cylinder 20 for reception of the stem of said watch, and a retainer 23 for the purpose of maintaining the watch 21 in cylindrical member 20, retainer 23 being indicated in the form of a pivotally mounted leaf spring which will be frictionally held in adjusted position.

The frictionally mounted ring 24 is provided with recess 25, having disposed therein

an elliptic, flat spring 26 for the purpose of frictionally retaining ring 24 in circumferential relation with housing 11. A counterbore 27 is provided in ring 24 for reception of lips 28 on pointers 29. Pins 30, attached to housing 11, are provided to maintain ring 24 on housing 11, said pins cooperating with recess 25 in ring 24. Ring 24 is provided with an inwardly extending flange 31 provided with an aperture of proper size so as to reveal the face of clock 12. A handle 32 integral with ring 24 is provided for the purpose of conveniently manipulating ring 24. Attached to ring 24, starting pointer 33 is provided. Pointers 29 are slidably and frictionally mounted on ring 24, and are provided with retaining lips 28 and 34, providing convenient means for setting up the device for a schedule of operations.

The operation of the device is as follows: A standard make of one minute clock 12 is mounted in housing 11, the face of which is visible through aperture 35 in ring flange 31. A watch 21 of standard make is suspended within the cylindrical member 20 with the face 21 visible through aperture 36, watch stem 37 being inserted in slot 22. Retainer 23 is adjusted in such position as to maintain watch 21 in said cylindrical member 20.

Indicator dial is provided with markings to signify various test operations conducted on the valves. Pointers 29 are adjusted and positioned relative to the duration of each test, the indicating hand 17 set to the first operation indicating mark, a triple valve to be tested is mounted on the triple valve stand 2, ring 24 is turned by means of handle 32, adjusting pointer 33 to indicating mark 60 on the dial of clock 12. As hand 13 becomes coincident with pointer 33 a test is started, and continued until hand 13 becomes coincident with one of pointers 29 which is adjusted to such position as to indicate the duration of the first test, when the test is immediately switched to the following operation, hand 17 being manually advanced to the following operation indicator mark, and test continuing until hand 13 is coincident with the second pointer, and so on through the complete cycle of tests. Should the operator be compelled to leave previous to the completion of tests on a valve, the indicator 17 will provide him with the information as to the last operation performed on the valve.

I claim:

1. A timing indicator comprising a cylindrical housing, a ring rotatably mounted on one end of said housing and having an inwardly extending flange, an annular groove formed interiorly of the ring, and, an arcuately formed leaf spring in said annular groove and cooperating with said housing.

2. A timing indicator comprising a cylindrical housing, a ring rotatably mounted on one end of said housing, and having an inwardly extending flange, an annular groove formed interiorly of the ring, an arcuately formed leaf spring in said annular groove and cooperating with said housing, an inwardly directed pointer fixed to said ring, and a plurality of inwardly directed pointers adjustably mounted on said ring.

In testimony whereof I have affixed my signature.

JAMES R. RICKETTS.