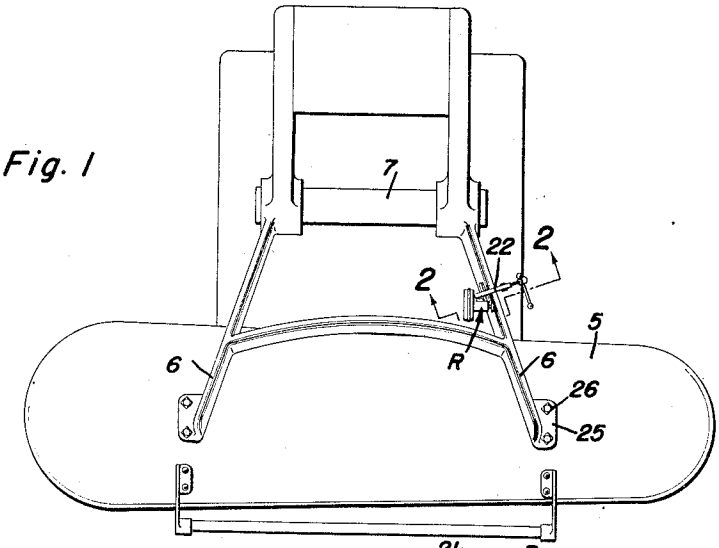
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REGISTERING DEVICE FOR COUNTING THE OPERATIONS OF OSCILLATORY MACHINE ELEMENTS

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Fig. 1



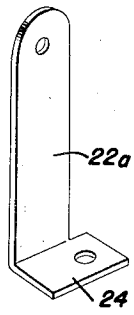


Fig. 8

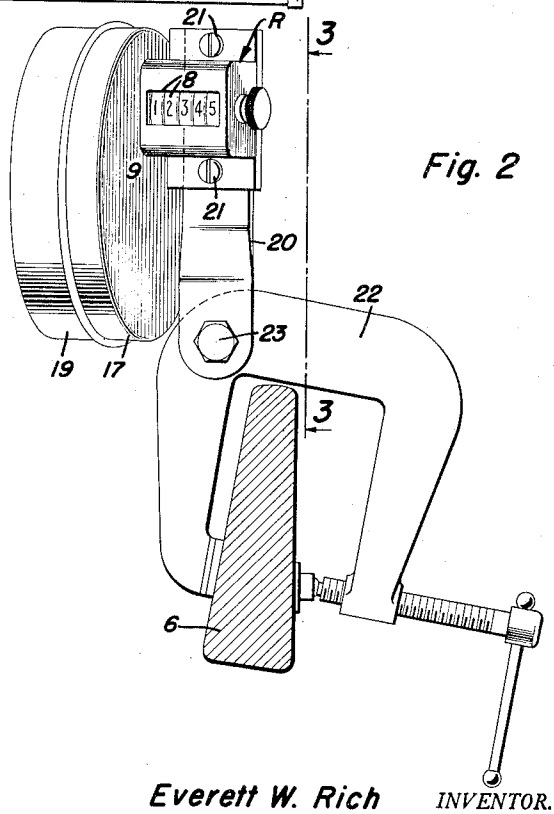


Fig. 2

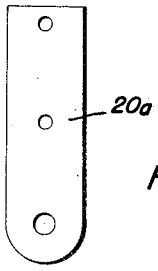


Fig. 7

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Fig. 4

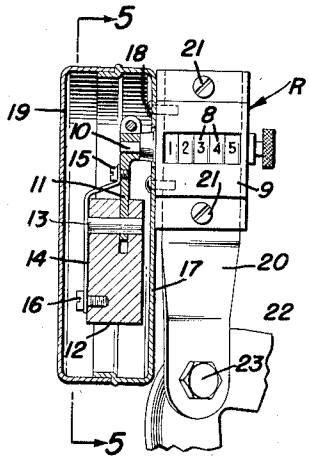
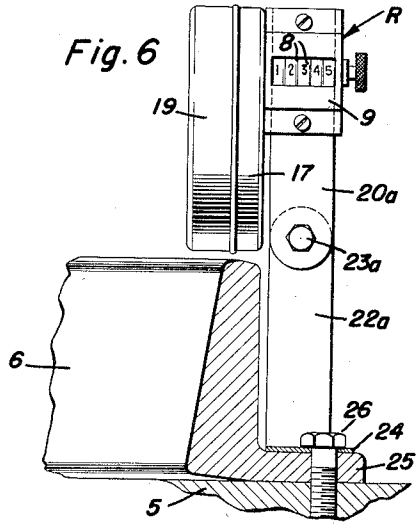


Fig. 6



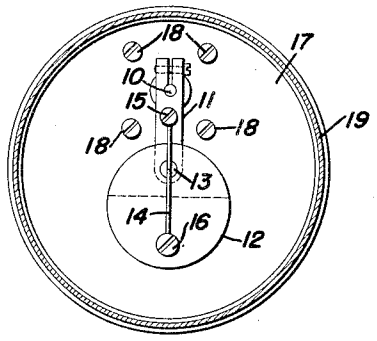


Fig. 5

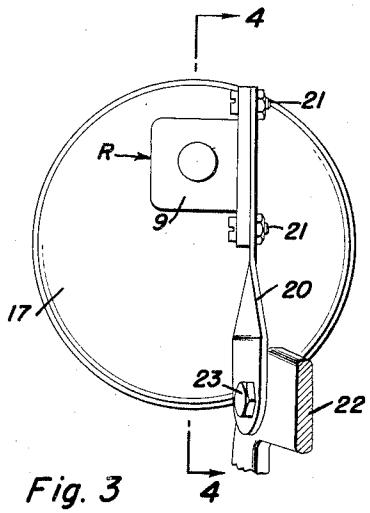


Fig. 3

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2,613,873

REGISTERING DEVICE FOR COUNTING THE OPERATIONS OF OSCILLATORY MACHINE ELEMENTS

Everett W. Rich, Stockton, Calif.

Application May 2, 1950, Serial No. 159,542

1 Claim. (Cl. 235—91)

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This invention relates to a registering device adapted to be rigidly mounted on an oscillatory machine element for counting the operations thereof.

More particularly, the present device is adapted for use in connection with machine elements which are oscillated in a vertical arcuate path, such as the pressing head of a garment pressing machine.

The primary object of the present invention is to provide a simple and compact device of the above kind which may be readily mounted on the machine element and adjusted relative thereto for most efficient operation.

Another object is to provide a device of the above kind including a counting register having a casing containing coaxial number wheels and operating means for said wheels including a rock shaft having an end projecting from one end of the casing, and an actuating pendulum carried by the projecting end of said rock shaft, said pendulum including an arm having its upper end secured on said rock shaft, a weight pivoted to the lower end of said arm, and a spring attached to the arm and the weight respectively above and below the pivot of the latter to absorb shocks incident to sudden stopping of the machine element at the ends of its path of oscillation.

Other objects and features of the invention will be apparent from the following description when considered with the accompanying drawings, in which:

Figure 1 is a top plan view of a garment pressing machine having a registering device embodying the present invention mounted on one of the levers which carry the pressing head of said machine;

Figure 2 is an enlarged vertical section taken on the line 2—2 of Figure 1, with parts of the machine omitted;

Figure 3 is a fragmentary vertical section taken on the line 3—3 of Figure 2;

Figure 4 is a view, partly in front elevation and partly in section on the line 4—4 of Figure 3;

Figure 5 is a section taken on line 5—5 of Figure 4;

Figure 6 is a view somewhat similar to Figure 2, showing the device differently mounted;

Figures 7 and 8 are respectively elevational and perspective views of members of the mounting means of Figure 6.

Referring in detail to the drawings, an embodiment of the present invention is shown mounted on an oscillatory machine element consisting of

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the movable pressing element of a garment pressing machine of the type shown in the U. S. patents to F. W. Lindemann, No. 1,562,837, November 24, 1925, and R. J. Randall, No. 2,306,566, December 29, 1942. In such machines, the movable pressing element includes a pressing head 5 movable forwardly and downwardly to and upwardly and rearwardly from a stationary pressing buck or head (not shown), said movable pressing head being fixed to the forward ends of rigidly connected weighted levers 6 which are pivoted on a horizontal shaft 7.

The present registering device includes a conventional counting register R which is of the type generally shown in the U. S. patent to H. A. Chase, No. 1,471,306, October 16, 1923, and which includes a plurality of coaxial number wheels 8 arranged within a casing 9 and operated by means including a rock shaft 10 operatively connected to one number wheel and having an end projecting from one end of said casing, means being provided for transmitting movement from each number wheel to the next in sequence so as to register a unit upon each relative turning movement of the register casing and shaft 10 in one direction. An actuating pendulum is provided on the projecting end of the rock shaft 10, said pendulum comprising an arm 11 having its upper end secured on the shaft 10, a weight 12 pivoted near the top at 13 to the lower end of said arm, and a wire spring 14 attached at its upper end to said arm as at 15 and at its lower end to said weight as at 16. The pendulum is disposed and movable within a circular protective housing including an inner section 17 secured at 18 to the register casing 9, and an outer section 19 removably fitted over the section 17.

A bracket is provided for rigidly mounting the register on the machine element. In the form of Figures 1 to 4 inclusive, this bracket includes an upper member 20 in the form of an elongated flexible strip of metal secured at its upper end to the back of the register casing 9 as at 21 and adjustably pivoted at its lower end to a screw clamp 22 by means of a clamping bolt 23. By twisting the member 20, the register may be set so that the rock shaft 10 is disposed parallel with the pivot shaft 7 of the oscillatory machine element, and by pivotally adjusting the member 20 relative to clamp 22, the register may be set so that the rock shaft 10 is disposed horizontally and the pendulum is disposed vertically, whereby most efficient operation of the device is had. The clamp 22 is shown engaged over one of the levers 6 which carry the pressing head 5 and which di-

verge forwardly. Obviously, the twisting of member **20** is not necessary if the device is applied to a lever portion disposed at a right angle to the pivot **7**, as is the case sometimes. Also, when the levers **6** diverge at different angles, the degree of twist given the member **20** will vary.

As shown in Figure 6, a shorter member **20a**, similar to member **20**, may be secured to the register casing, and the lower end of this member **20a** may be adjustably pivoted as at **23a** to the upper end of a lower bracket member **22a** having a base flange **24** bolted to the end flange **25** of lever **6** by one of the bolts **26** which secure the pressing head **5** to said lever.

As the device swings forwardly and downwardly with the machine element, the pendulum remains in a vertical position and the register casing is given a partial turn in one direction relative to shaft **10**, and as the device swings upwardly and rearwardly with the machine element the register casing is given a partial turn in the opposite direction relative to shaft **10**. Each turning of the register casing in one direction relative to shaft **10** results in registering one unit, but turning of the register casing in the other direction relative to shaft **10** has no effect on the registering or counting mechanism. Thus, a unit is registered for each complete vibration of the machine element.

From the foregoing description, the construction, operation and advantages of the invention will be apparent. Further structural changes and modifications may be made without departing from the spirit of the invention as claimed.

Having described the invention, what is claimed as new is:

A registering device comprising a counting register, said register including a casing, a plurality of coaxial number wheels within the casing, and operating means for said number wheels including means for transmitting movement from each number wheel to the next in sequence, and a rock shaft having an end projecting from one end of the casing and operatively connected to one number wheel so as to register one unit upon each relative turning movement of the casing and the rock shaft in one direction, a pendulum secured on the projecting end of said rock shaft, and mounting means to mount said register on an oscillatory machine element pivoted for movement in a vertical arcuate path, said pendulum including an arm secured at its upper end on the rock shaft, a weight pivoted at its top to the lower end of said arm, and a spring attached at its ends to the arm and the weight respectively above and below the pivot of the latter to absorb shocks incident to sudden stopping of the machine element at the ends of its arcuate path of movement.

EVERETT W. RICH.

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