Aug. 3, 1926. 1,594,759

M. C. SCHWEINERT

VALVE BOX

Original Filed May 20, 1922

Fig. 1.

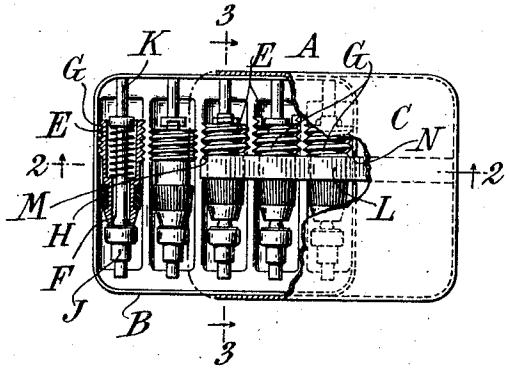


Fig. 2.

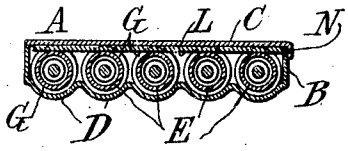


Fig. 3.

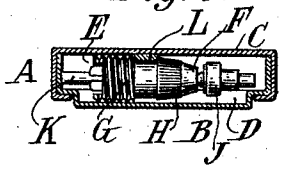


Fig. 6.

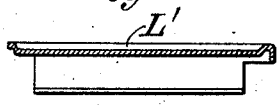


Fig. 7.

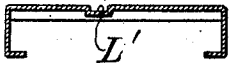


Fig. 4.

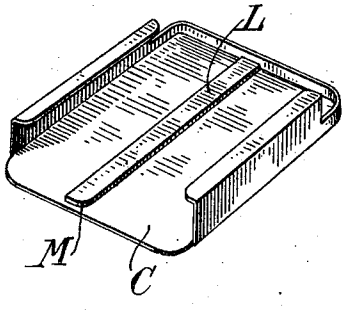


Fig. 5

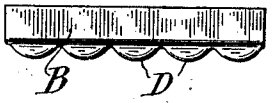
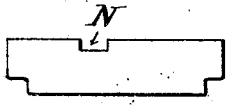


Fig. 5a



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UNITED STATES PATENT OFFICE.

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VALVE BOX.

Application filed May 20, 1922, Serial No. 562,504. Renewed March 18, 1925.

This invention relates to a box for containing valve insides and aims to provide certain improvements therein.

Certain types of valve insides, as now constructed, comprise a shell formed at its lower end with a valve seat and having a screw-threaded portion at the top with an intermediate packing washer for making a tight joint with the valve casing. The valve proper is connected with a pin which passes through the shell, and a spring is provided within the shell for normally maintaining the valve proper in a position where it engages the seat. In this type of valve, the constant pressure of the valve proper against its seat injures the rubber gasket with which the valve proper is provided, so that when the valve inside is placed in position in the valve casing it is very apt to leak.

According to the present invention I provide a box or container for such valve insides which will maintain the valve proper away from its seat during the period prior to the actual insertion of the inside in the tire valve. The invention also comprises certain other features of improvement which will be hereinafter more fully described.

In the drawings wherein I have shown one embodiment of the present invention:

Figure 1 is a plan view of a box or container provided by the present invention, and showing a group of valve insides contained therein, a portion of the cover of the box being broken away.

Fig. 2 is a section on the line 2—2 in Figure 1.

Fig. 3 is a section on the line 3—3 in Figure 1.

Fig. 4 is an underside view of the box cover.

Fig. 5 is a side view of the box.

Fig. 5ª is an end view of the box.

Fig. 6 is a sectional view of a modified form of cover.

Fig. 7 is a similar view taken at right angles to Fig. 6.

Referring to the drawings, let A indicate the box as a whole, which is shown as comprising a body B and a cover C. Preferably the bottom of the box is corrugated as shown at D so as to form recesses or sockets for receiving the various valves insides E, E. In the illustration given, the corrugations run across the box so that the valve insides occupy positions which are transverse to the box, or, in other words, transverse to the direction of movement of the cover C.

Each of the valve insides illustrated comprises a valve seat member or shell which includes a seat F, a screw-threaded portion G, and a packing H. Between the packing and the screw-threaded portion the diameter of the shell of the valve inside is necessarily reduced so as to leave a part of less diameter below the threaded portion. J is the valve proper which is mounted upon a pin K, the latter having a collar beneath which is arranged a spring which normally holds the valve proper against the seat F, the seat actually contacting with a rubber gasket mounted on the seating face of the valve proper J. According to the present invention, means are provided for holding one or more of such valve insides (or others in which similar conditions are present) with the valve proper away from the seat and the seating face of the valve check member free from engagement with any other part so that the seat will make no indentations or grooves in the rubber gasket during the period in which such valves are in stock or in the possession of the consumer.

To this end I provide means to produce a relative movement between the shells of the valve insides and the pins K (and, hence, the valves proper J). In the specific construction shown I provide the cover C with a member or abutment L which is adapted to engage the lower side of the threaded portion G, and force the latter toward that side of the box, which is adjacent to the ends of the pins K. The pins K contact with the side of the box which constitutes a second abutment for the valves so that they are prevented from further movement while the shells are moved laterally until the valves proper separate from their seats. The part L is shown in Figures 1–4 as being a separate strip soldered to the under side of the cover and having a rounded end M which contacts with the lower sides of the screw-threaded portions G and successively moves the latter into the required position. This is easily accomplished because the insides are held against movement either lengthwise of the box or downwardly away from the cover.

In Figs. 6 and 7 the member L is formed by depressing the box cover longitudinally as shown at L'.

Preferably the box at one end is cut away

as shown at N in Fig. 5ª so as to permit the member L to slide therethrough. The opposite end is preferably uncut so that it is not possible to apply the cover from the other end of the box.

While I have shown and described one form of the invention, it will be understood that I do not wish to be limited thereto since various changes may be made therein without departing from the spirit of the invention. It is not necessary that the cover should slide transversely of the valve members, nor is it necessary that the pins should be held stationary and the seats moved, since these may be changed without departing from the invention.

What I claim is:

1. A box adapted to contain one or more valve insides comprising a receptacle having means for engaging parts of said insides to separate the valve proper of each inside from its seat, said means including means carried by the box cover.

2. A box adapted to contain one or more valve insides comprising a receptacle having means for engaging parts of said insides to separate the valve proper of each inside from its seat, said means including a part of the cover adapted to move one part of the valve inside and thereby to cause such separation.

3. A box adapted to contain valve insides comprising a receptacle having means for contacting with the pins of the valve inside and with the seat members thereof, one of said means being adapted to move relatively to the other and thereby produce a longitudinal movement of said pins and seat members.

4. A box adapted to contain valve insides having recesses for receiving the valve insides arranged transversely of the box, and a cover having means for successively moving the seats away from the valves proper.

5. A box adapted to contain valve insides having recesses for receiving the valve insides arranged transversely of the box, and a cover having means for successively moving the seats away from the valves proper, said means comprising a longitudinally arranged member designed to contact with the under side of the sides of the threaded portions of said valve insides.

6. A box adapted to contain valve insides having recesses for receiving the valve insides arranged transversely of the box, and a cover having means for successively moving the seats away from the valves proper, said means comprising a longitudinally arranged member designed to contact with the under side of the sides of the threaded portions of said valve insides, said means comprising a strip of metal carried on the under side of the cover and having a wedging end adapted to contact with the under sides of the screw-threaded portions of the valve insides and move the seats away from the valves proper.

7. A box adapted to contain valve insides having recesses for receiving the valve insides arranged transversely of the box, and a cover having means for successively moving the seats away from the valves proper, said means comprising a longitudinally arranged member designed to contact with the under side of the sides of the threaded portions of said valve insides, said means comprising a strip of metal carried on the under side of the cover and having a wedging end adapted to contact with the under sides of the screw-threaded portions of the valve insides and move the seats away from the valves proper, and said box having a cut-away portion through which said strip upon the cover passes in opening and closing the box.

8. A box having a bottom and sides adapted to contain a series of valve insides, one side of said box cooperating with a part on each of said insides to hold the valve proper and valve seat of each inside in spaced relation.

9. A box having a bottom and sides adapted to contain a series of valve insides each comprising a valve stem upon which is mounted a valve proper and a valve seat, the valve stems cooperating with one side of the box to hold the valve proper and valve seat of each valve inside in spaced relation.

10. A box for valve insides, comprising a receptacle having means for contacting with one end of the pins of the valve insides and with the seat members thereof to hold the valves proper away from the seats.

11. A box for valve insides, having means for engaging the valve seats thereof and holding the valve insides with their pins in contact with a side of the box, whereby to press the pins inwardly and separate the valves proper from their seats.

12. A box for valve insides, having means for engaging the valve seats thereof and holding the valve insides with their pins in contact with a side of the box, whereby to press the pins inwardly and separate the valves proper from their seats, and said box having also grooves for the individual valve insides.

13. A box or the like adapted to contain valve insides, comprising a receptacle having means for holding the valves proper spaced from their seats, a part of said means pressing against the valve pins in the direction of the longitudinal axis of the valves.

14. A box or the like, adapted to contain valve insides having a spring normally holding the valve proper against its seat, said box having means for holding one of the said valve inside parts stationary while the other part is moved against the action of the spring to space the valve proper from its seat.

15. In combination, a container, a valve comprising a tubular valve body, a valve stem projecting from the body at one end and provided with a head at its other end, and a spring upon said stem permitting lifting of the head and normally retaining the head seated upon the body, and abutment means within the container adapted to engage the valve body, whereby the stem engages the wall of the container to retain the valve in the container under spring pressure and to unseat the head.

16. In combination, a container, a valve or the like comprising two relatively movable parts, one of which is the valve check member having a seating face susceptible to injury when not in use if permitted to remain in contact with another part, and means for holding said valve in said container with the valve parts separated and the seating face of the valve check member free from engagement with any other part, said means comprising spaced abutments which are permanently free from said seating face engaging the relatively movable valve parts.

17. A container adapted to hold a series of valves each having two relatively movable parts, one of which is the valve check member having a seating face susceptible to injury when not in use if permitted to remain in contact with another part, and means for holding said valves in the container with the valve parts separated, and the seating face of each valve check member free from engagement with any other part, said means being permanently free from said seating faces.

18. In combination, a container, a valve or the like comprising two relatively movable parts, one of which is the valve check member having a seating face susceptible to injury when not in use if permitted to remain in contact with another part, a spring acting to press the seating face of the valve check member against the second part, and means cooperating with each of the relatively movable parts and permanently free from said seating face for holding said valve in said container with said valve parts separated, and the spring under compression.

In witness whereof, I have hereunto signed my name.

MAXIMILIAN CHARLES SCHWEINERT.