

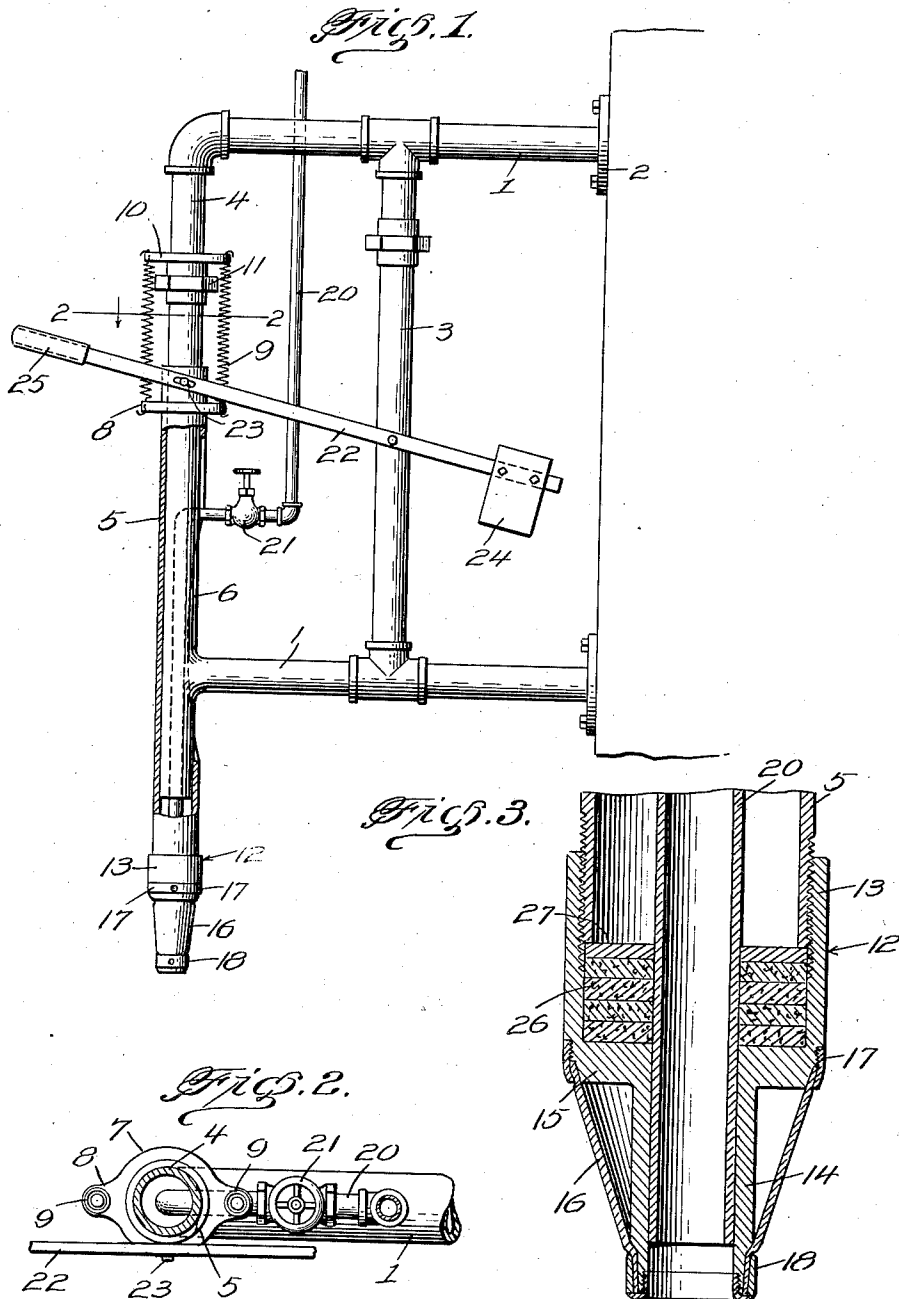
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TESTING DEVICE

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TESTING DEVICE

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This invention relates to testing devices, and its general object is to provide a device that is primarily designed for and capable of testing containers, such as drums, cans, barrels, kegs, and the like, for tightness and leaks, in an easy and expeditious manner, as well as with minimum effort on the part of the operator.

A further object is to provide a testing device for the purpose set forth, that is simple in construction, inexpensive to manufacture, and extremely efficient in operation, use and service.

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 drawing and specifically pointed out in the appended claims.

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

Figure 1 is a side elevation of the testing device which forms the subject matter of the present invention, with parts broken away and in section.

Figure 2 is a sectional view taken approximately on line 2—2 of Figure 1, looking in the direction of the arrow.

Figure 3 is an enlarged vertical sectional view taken through the head of the device, which is mounted in the bung hole or container opening to provide a leak proof connection therewith and to introduce steam under pressure or compressed air within the container.

Referring to the drawing in detail, it will be noted that my testing device includes a frame in the form of a bracket which as shown is made up of pipe sections and couplings, but in any event, preferably includes a pair of superimposed horizontally arranged bracket members 1 which are fixed accordingly to suitable supporting means such as a wall as shown, by securing means extending through the flanged ends 2 thereof.

The horizontal bracket members have extending between the same and fixed thereto intermediate their ends a vertical bracket member 3 which not only acts as a bracing means, but for another purpose which will be later described. Secured to the outer ends of the bracket members 1 and extending between the same as well as below the lower member 1 is an upright member 4 which is preferably hollow, as shown.

Mounted for slidable movement on the upright

member 4 is a sleeve 5 which is slotted longitudinally as at 6 to accommodate the connection of the lower bracket member 1 with the upright, as will be apparent upon inspection of Figure 1, and secured to the sleeve adjacent to the upper end thereof is a flange member 7 including ears 8 for the purpose of receiving one of the ends of coil springs 9 that have their opposite ends secured to the ears of a like flange member 10 which is fixed to the upright member 4 above the line of travel of the sleeve 5 and is preferably mounted upon a collar member 11 that is shown as being a pipe coupling. It will be obvious that the coil springs 9 tend to urge and normally hold the sleeve in the position of Figure 1.

The sleeve is of a length to extend below the lower end of the upright member 4, and has threadedly secured to its lower end the head 12 of my testing device which includes a threaded collar portion 13 for that purpose, and a reduced portion providing a nipple 14 that is formed on and depends from a shouldered portion 15, from which rises the collar portion 13, as clearly shown in Figure 3. The shouldered portion is preferably provided with an annular groove about the periphery thereof for the purpose of receiving the upper end of a sleeve gasket 16 and which is held accordingly by a clamping ring 17. The sleeve gasket surrounds the nipple 14 and is of substantially conical formation so that the lower end thereof is disposed in fitting association with the lower end of the nipple 14, and is fixed within an annular groove therein by a clamping cap 18 threadedly secured within the lower end of the nipple. The sleeve gasket is of course made from rubber, or suitable composition for the purpose intended, and is stretched between the outer edge of the shouldered portion and the lower edge of the nipple, and due to the tapered or conical formation thereof, it will be obvious that it is capable of fitting bung holes or container openings of various diameters.

Extending through the upright member 4 and arranged for slidably receiving the nipple 14, is a pipe 20 which is disposed in communication with a suitable source of steam under pressure or compressed air and has arranged therein a valve 21 in convenient reach of the operator of the device, for controlling the passage of steam or compressed air to the head, as will be apparent.

Pivotally mounted to the bracket member 3 is a lever 22 that is likewise pivotally mounted to the upper end of the sleeve 5, by a pin and slot connection 23, and the lever has a weight 24

preferably secured for adjustment on one end portion thereof for cooperation with the coil springs 9 while a gripping member 25 providing a handle for the lever is secured to the opposite end portion thereof.

In order to provide a leak proof connection at the juncture of the section of the pipe 20 with the head, I employ packing gaskets 26 surrounding the pipe section, and which are held accordingly within the collared portion 13 by a washer 27 that has the lower end of the sleeve 5 bearing against the same, as clearly shown in Figure 3.

From the above description and disclosure of the drawing, it will be obvious that in the operation of my testing device, the lower end of the head is inserted within the bung hole or opening of a container, in a manner so that the gasket 16 will provide a leak proof connection therewith, and such is accomplished by moving the sleeve downwardly, through the medium of the lever 22. The valve is then opened for admitting steam or compressed air within the container, for the purpose of detecting leaks therein, which of course can be instantly ascertained, if such exist, as well as corrected in some instances without removing the head from the opening.

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

It is to be understood that changes may be made in the construction and in the combination and arrangement of the several parts, provided that such changes fall within the scope of the appended claims.

What I claim is:

1. A testing device for containers, comprising a supporting frame including an upright, a sleeve mounted for slidable movement on the upright,

spring means for urging the sleeve upwardly, a head detachably secured to the lower end of the sleeve and having a reduced outer end providing a shouldered portion and a nipple depending therefrom, a compressible sleeve gasket surrounding the nipple and secured to the lower end thereof and the shouldered portion respectively for arrangement in spaced relation with respect to the nipple and in substantially conical formation to be receivable in an opening in a container to provide a leak proof connection therewith, means extending into the nipple with the latter slidably mounted thereon and being in communication with a source of fluid under pressure for introducing the fluid within the container, and a lever pivotally mounted to the supporting frame and sleeve respectively for actuating the latter against the action of the spring means.

2. A testing device for containers comprising a supporting frame, a sleeve mounted for vertical movement on the frame, a head detachably secured to the lower end of the sleeve and having a reduced outer end providing a shouldered portion and a nipple depending therefrom, compressible means surrounding and spaced from the nipple and secured to the latter and the shouldered portion respectively for disposal in substantially conical formation, said compressible means receivable in an opening in a container to provide a leak proof connection therewith, a pipe mounted in the sleeve and within the nipple for the passage of fluid under pressure therethrough for disposal within the container, packing surrounding the pipe to provide a leak proof connection between the latter and the nipple, and means for moving the sleeve.

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