Aug. 30, 1927. 1,640,911

H. E. SKOOG

CAN TESTER

Original Filed Aug. 20, 1924

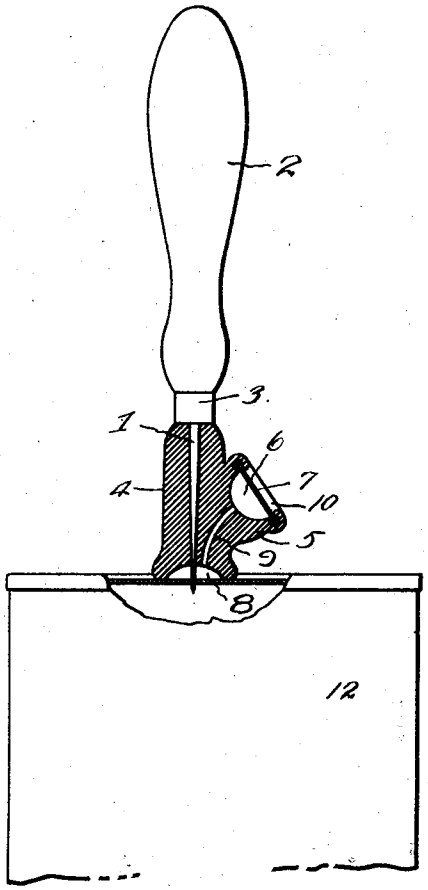
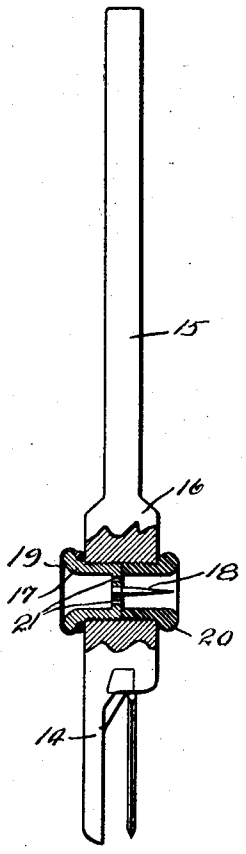


Fig. 1

Fig. 2



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CAN TESTER.

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This invention relates to an implement for testing the condition of canned goods; and its general objects are to provide a very simple and inexpensive device for this purpose which is thoroughly reliable, sanitary, and particularly convenient of use.

Another object is to combine my improved can tester with a can opener so that when preparing to open a can the tester will be at hand to encourage its use and thus guard against possible poisoning.

These objects, with other and more specific ones, are attained in the embodiments of my invention illustrated in the accompanying drawing wherein Fig. 1 is a sectional side elevation of my can tester showing the manner in which it is used; and Fig. 2 is a similar view of a can opener equipped with another form of my invention.

The embodiment illustrated in Fig. 1 has as its nucleus an awl 1 that is provided with a handle 2 which is equipped with a ferrule 3. Slipped over the awl and held thereto, preferably by friction, is an integral rubber head 4 having an enlargement 5 at one side containing a chamber 6, and across the open side of said member is stretched a rubber diaphragm 7. The outer end of the head is formed with a cavity 8 which communicates with the chamber 6 through a passageway 9.

According to the present embodiment, the diaphragm 7 is formed of suitable rubber and has a wire ring embedded in its thickened peripheral portion; and the enlargement 5 is formed with a groove about the open side of the chamber 6 within which the stiffened edge portion of the diaphragm 7 may be engaged by stretching the lip 10 of the groove sufficiently to receive it.

In using the form of the invention illustrated in Fig. 1, the point of the awl 1 is stuck through the end of a can 12 and the adjacent end of the head 4 is compressed by contact with the can. The awl is then retracted slightly so as to unplug the hole which the point of the awl has made but not enough to break the seal between the end of the head 4 and the can. Having slightly retracted the awl, as described, communication is established between the interior of the can and the chamber 6 through the passageway 9. If the contents of the can is in a state of decomposition, the gas thus generated will distend the diaphragm 7 and indicate immediately to the user that the contents of the can is spoiled. Reversely, if the contents of the can is in good condition, a partial vacuum exists within the can which will exhaust the chamber 6 and suck the diaphragm 7 inwardly indicating to the user that the can is in good condition. If the diaphragm remains unaffected, it shows that the can is either leaky or that putrefaction has just set in.

In Fig. 2 I have illustrated my improvements incorporated in, or combined with, a can opener 14 which may be of any approved type. A threaded hole is made through an enlargement 16 of the handle 15. A metallic thimble 17 is screwed into one end of the hole and a point 18, which is carried by the end wall of the thimble, extends through the remaining portion of the hole and protrudes a material distance beyond the adjacent side of the enlargement 16. The outer end of the thimble 17 is flared, and a rubber diaphragm 19 is stretched over it. A sleeve 20 of rubber or other pliable material is screwed into the end of the hole of the enlargement 16 opposite that occupied by the thimble 17 and surrounds the point 18. Preferably, when the sleeve 20 is in normal condition its outer end extends beyond the point 18 to protect the user against being accidentally stuck by the point. Communication is established between the interior of the sleeve 20 and the interior of the thimble 17 through holes 21 that are formed in the end wall of the thimble. In using this form of the invention, the end of the thimble 20 is engaged with the wall of the can and sufficient pressure is brought to bear upon the can opener, as by pressing downwardly upon the handle and the end to which the numeral 14 is applied, to cause the point 18 to penetrate the wall of the can, the lip of the sleeve 20 being materially compressed in the meantime. Now, upon a slight retraction of the point 18, the diaphragm 19 is subjected to the positive or negative pressure within the can and accordingly distended or retracted to indicate the condition of the contents of the can.

Having thus described my invention, what I claim is:

1. A can tester comprising a body, a penetrating device carried thereby, the body having a passageway within one end of which said device is situated, the body surrounding said end of the passageway being

of pliable material so that when the penetrating device is inserted through the wall of a can the passageway is sealed thereabout and communication is established between the interior of the can and the passageway, and a diaphragm extending across the other end of said passageway.

2. A can tester comprising a body, a penetrating device carried thereby, the body having a cavity within which said device is situated, the body surrounding said cavity being of pliable material, the body also having a chamber and a passageway through which the chamber communicates with the cavity, and a diaphragm extending across the open side of the chamber.

3. A can tester comprising a body of pliable material, a penetrating device carried by said body, the body having a passageway within one end of which said device is situated, and a diaphragm extending across the other end of said passageway.

4. A can tester comprising a body having a cavity at one end and a chamber spaced therefrom longitudinally of the body, the body having also a passageway through which the cavity and chamber communicate, a penetrating device situated within the cavity, and a diaphragm closing the open side of the chamber.

5. A can tester comprising a body having a cavity at one end, the body being provided with a lateral enlargement containing a chamber and having a passageway through which communication is established between chamber and cavity, a diaphragm closing the open side of the chamber, the body surrounding the cavity being of pliable material, and an awl having a handle, the awl extending longitudinally through the body and projecting within the cavity.

6. A can tester comprising a body of pliable material formed with a cavity at one end and with a chamber that opens through one side of the body, the chamber and cavity communicating through a passageway, a diaphragm closing the open side of the chamber, and an awl equipped with a handle, said awl extending longitudinally through the body and protruding within said cavity.

7. A can tester comprising a body of pliable material having a cavity at one end and a chamber opening through one side of the body, the open side of the chamber being surrounded by an inwardly opening groove, a diaphragm having its edge portion confined within said groove, the cavity and chamber communicating through a passageway, and an awl extending longitudinally through the body and protruding within the cavity.

8. In an implement of the character set forth, the combination of a structure having a passageway, a diaphragm having a substantially air tight connection with the structure about one end of the passageway, a sealing element surrounding the other end of the passageway and adapted to be engaged with a can to be tested, and a penetrating device projecting from the structure within the boundaries of the sealing element and arranged to puncture the can thereby to establish communication between the interior of the can and the passageway and subject the diaphragm to the action of positive or negative pressure within the can.

9. In an implement of the character set forth, the combination of a device for penetrating the wall of a can, a compressible element surrounding said device and arranged to engage the can wall and form an air-tight seal therewith, and a diaphragm associated with said device which is subjected to the action of positive or negative pressure within the can when the wall of the can is penetrated by said device.

In testimony whereof, I hereunto affix my signature.

HARRY E. SKOOG.