Aug. 30, 1932. G. L. MITCHELL 1,874,571

INTERIOR INSPECTION DEVICE

Filed Oct. 30, 1930

Fig. 1.

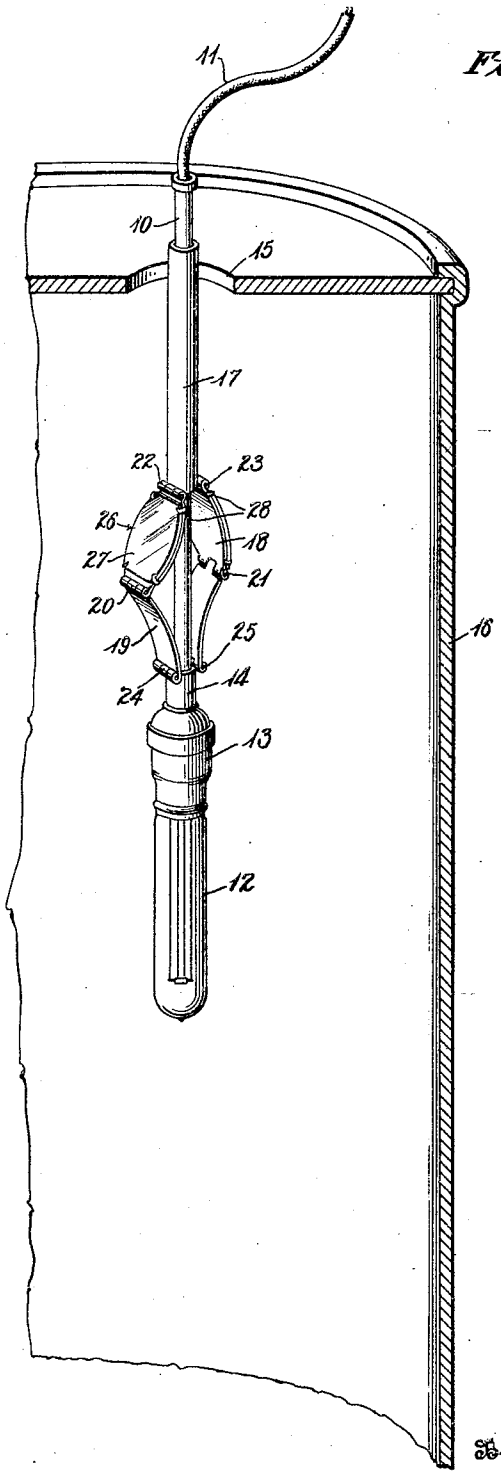


Fig. 2.

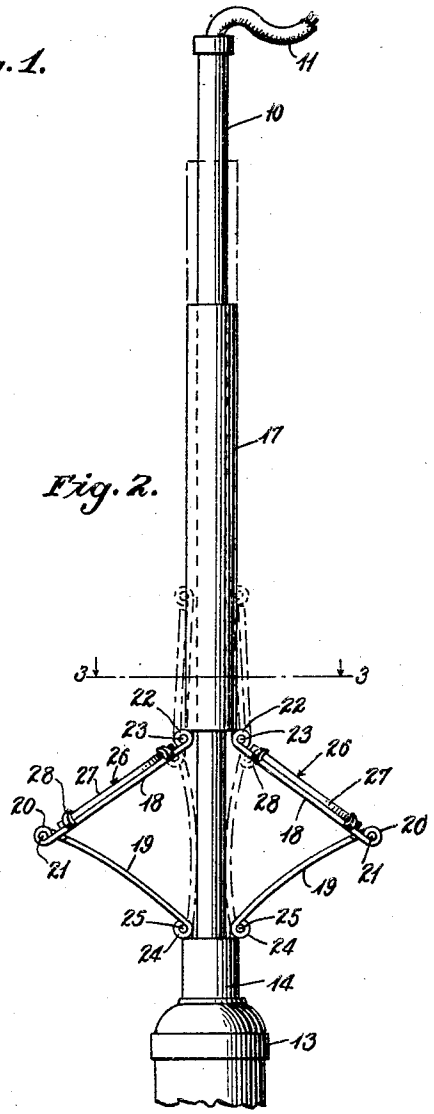
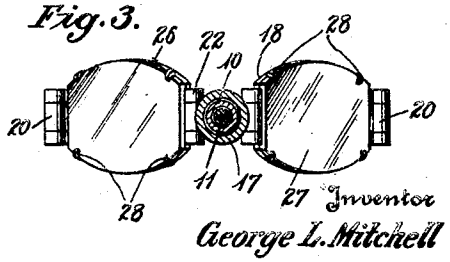


Fig. 3.



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UNITED STATES PATENT OFFICE

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INTERIOR INSPECTION DEVICE

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This invention relates to a means for inspecting the interior of barrels, casks, and the like where the only means for insertion of the tube and observation thereof consists of a single bung hole, opening or the equivalent.

It is particularly aimed to provide an exceedingly simple, durable and inexpensive construction which has an attenuated form and which will both illuminate the interior of the barrel or other object and reflect the image of the interior of the barrel adjacent the bung or hole.

Another object is to provide a novel construction wherein the reflecting means is movable both to facilitate insertion into the barrel and also to dispose the same at various angles, facilitating inspection.

Another object is to provide a novel form of device of this character in which a rod or tube suspends a lamp and a tube is slidably mounted on the first mentioned rod or tube, with the reflecting means connected to the lamp socket or equivalent, and to the second mentioned tube, permitting either tube to be grasped and operated as a handle according to whether the reflecting means is to be extended or have compact disposition relatively to the tube.

The more specific objects and advantages will become apparent from a consideration of the description following taken in connection with the accompanying drawing illustrating an operative embodiment.

In said drawing—

Fig. 1 is a view illustrating the invention in operative position, in perspective, and in connection with a fragmentarily shown barrel.

Fig. 2 is a side elevation of the device on a larger scale, the extended position of the reflecting means being shown in full lines and their compact position being shown in dotted lines, and

Fig. 3 is a view taken on the line 3—3 of Fig. 2.

Referring specifically to the drawing, 10 designates a metallic rod which is preferably tubular so as to form a conduit for suitably insulated electric conductors 11 leading to a lamp 12 supported by a socket 13, in turn supported on the lower end of rod 10, as by means of a collar 14, soldered or otherwise fastened to the rod.

The lamp 12 may be of any desired construction, for instance pear shape as shown, tubular, or otherwise, according to the size of the bung hole such as that shown at 15 in barrel 16, through which the device is adapted to be passed to enable inspection of the interior of the barrel.

Freely slidable longitudinally of the rod 10 is a tube 17, of such length as to extend outside of the barrel, when in use, so that either the upper end of the rod 10 or tube 17 may be grasped as the handle.

Intermediate the tube 17 and collar 14, pairs of links or plates 18—19 are provided, the same having interfitting ears 20 in which hinge pintles 21 are disposed so as to pivotally connect them together. The plates 18 and lower end of the tube 17 have interfitting ears 22, in which hinge pintles 23 are disposed and the collar 14 and links 19 have interfitting ears 24 in which a pintle 25 is disposed. Each of the pintles 21, 23 and 25 is horizontally disposed, to enable the links 18 and 19 to be moved into and out of the extended position shown in the drawing in full lines, the same being limited to the position shown in such full lines, by the abutting engagement of the links adjacent their pivots 21 and ears 20.

The upper surfaces of the plates or links 18 are of a reflecting nature as at 26. To this end, the upper surfaces of such plates or links 18 may be silvered or polished to constitute such reflectors, or they may have reflector elements 27 applied thereto, the same being of metal or glass as preferred, and secured in place by lugs 28, formed integral on the metallic plates 18 and upset or clinched against the reflector plates as shown.

In the use of the device, when extending the same into a barrel, tube 17 is grasped at the upper end. Due to the weight of the lamp 12 the socket 13, and rod 10 which parts will slide downwardly by gravity relative to the tube 17 and assume the attenuated dotted line position of Fig. 2, in which the plates 18 and 19 are disposed compactly against the

rod 10. In this condition, the device is lowered into the bung hole 15. When the plates 18 are interiorly of the barrel, the operator releases his grasp on the tube 17 and manually engages the upper end of the rod 10. The tube 17 thus being released, due to its weight, causes the links 18 and 19 to move to projected position as shown in full lines in the drawing. The device is then in operative position and may be operated to any desired position, enabling the inner surface of the barrel to be reflected into the reflecting or mirror surfaces 26, and particularly that surface of the barrel or other article adjacent the bung hole 15. Also when the device is thus suspended in one hand the tube 17 may be moved by the other hand to dispose the plates 18 at various angles, to facilitate the reflection and inspection of the surfaces mentioned.

In removing the device from the barrel, the tube 17 is grasped at the top which causes movement of the parts to the dotted line position of Fig. 2. In this attenuated position, the device is lifted through the bung hole.

Various changes may be resorted to within the spirit and scope of the invention, and it is obvious that the device may be used for inspecting inaccessible interiors generally since the reference to a barrel as one field of use is to be taken as but one example.

I claim as my invention:

1. An inspection device of the class described comprising a rod, a lamp socket suspended thereby, a sleeve slidable on the rod, plates pivoted together externally of the sleeve and laterally of the rod and one pivoted to the socket and one to the sleeve, the last mentioned plate having a reflecting surface.

2. An inspection device of the class described comprising a rod, a lamp suspended thereby, a sleeve slidable on the rod, plates pivoted together and one pivoted to the lamp and one to the sleeve, the last mentioned plate having a reflecting surface, the plates adjacent the first mentioned pivotal means being adapted to contact to limit their projection.

GEORGE L. MITCHELL.