May 26, 1953 W. GARRISON 2,639,514

SPIRIT LEVEL WITH REFLECTING MEANS

Filed Dec. 26, 1951

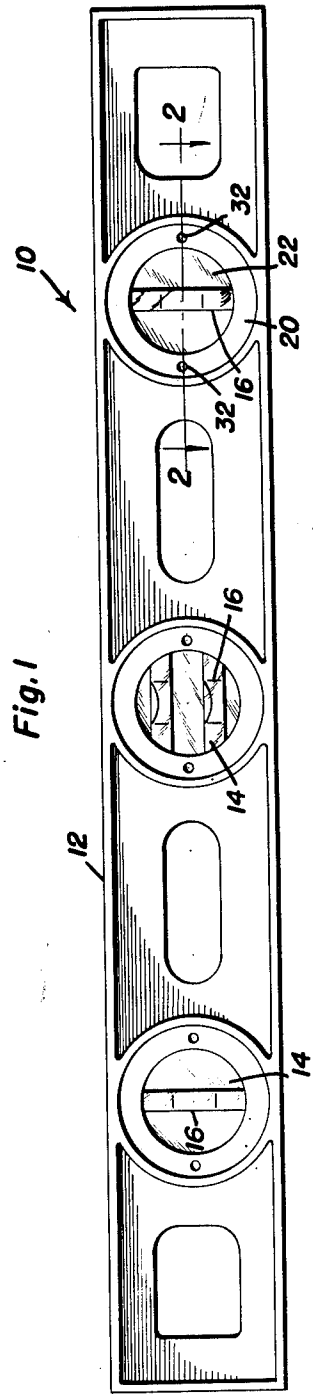


Fig. 1

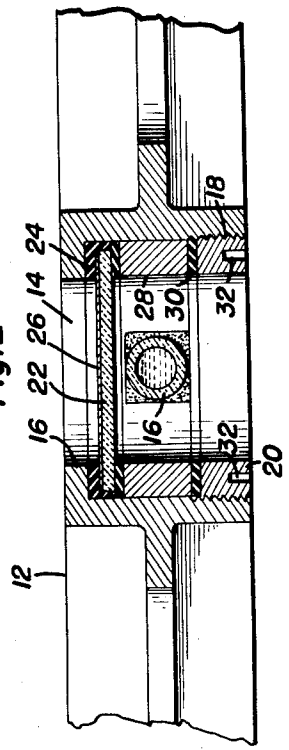


Fig. 2

Walling Garrison
INVENTOR.

BY Clarence A. O'Brien and Harvey B. Jacobson
Attorneys

Patented May 26, 1953

2,639,514

UNITED STATES PATENT OFFICE

2,639,514

SPIRIT LEVEL WITH REFLECTING MEANS

Walling Garrison, Washington, D. C.

Application December 26, 1951, Serial No. 263,186

1 Claim. (Cl. 33—211)

1

This invention relates to new and useful improvements and structural refinements in spirit levels, and the principal object of the invention is to facilitate convenient and expeditious observation of the spirit vial of the level, even in obscure or poorly illuminated locations.

The above object is achieved by the provision of a reflector or mirror in the vicinity of the spirit vial, and some of the important features of the invention reside in the provision of means for mounting the mirror and the vial in place in the frame of the level.

With the above more important objects and features in view and such other objects and features as may become apparent as this specification proceeds, the invention consists essentially of the arrangement and construction of parts as illustrated in the accompanying drawings, in which:

Figure 1 is an elevational view of the spirit level embodying the invention therein, and

Figure 2 is a fragmentary sectional detail, taken substantially in the plane of the line 2—2 of Figure 1.

Like characters of reference are employed to designate like parts in the specification and throughout the several views.

Referring now to the accompanying drawings in detail, the invention is embodied in a spirit level which is designated generally by the reference character 10 and consists of the usual elongated frame 12 having a plurality of circular recesses 14 therein to accommodate the usual spirit vials 16 in the conventional manner.

The vial arrangement in the several recesses is similar so that a description of one will suffice for all. Accordingly, referring to the accompanying Figure 2, it will be observed that the frame 12 is configurated so as to afford the circular recess 14 an inturned annular flange 16 at one end or side of the recess, while the other end or side of the recess is open, at which point the frame is internally screw-threaded as at 18 to accommodate an annular keeper member 20.

The essence of novelty in the invention resides in the provision of a circular reflector 22 which is seated in an annular gasket 24 positioned in the recess 14 in abutment with the flange 16, the reflective coating of this reflector or mirror being indicated at 26. The spirit vial 16 itself is mounted in an annulus 28 which is positioned in the recess 14 adjacent the reflector 22 and in

2

abutment with the gasket 24, while an annular gasket 30 is interposed between the annulus 28 and the keeper member 20, as shown.

In this manner the entire assembly is held in position in the recess 14 and the keeper member 20 may be provided with suitable apertures or bores 32 to receive an implement for turning the same when the parts of the level are to be replaced.

Since the spirit vial 16 is disposed between the open side of the recess 14 and the reflector 22, it may be quickly and accurately observed.

It is believed that the advantages and use of the invention will be readily understood from the foregoing disclosure and accordingly, further description thereof at this point is deemed unnecessary.

While in the foregoing there has been shown and described the preferred embodiment of this invention it is to be understood that minor changes in the details of construction, combination and arrangement of parts may be resorted to without departing from the spirit and scope of the invention as claimed.

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

In a spirit level, the combination of a body provided with a cylindrical recess, an inturned annular flange provided at one end of said recess and affording an annular shoulder, an annular gasket positioned in said recess in abutment with said shoulder and having a U-shaped cross-section affording an annular groove, a circular reflector mounted in said groove, a level supporting ring positioned in said recess in abutment with said gasket, a spirit vial mounted in and extending diametrically of said ring, a flat annular gasket positioned in the recess in abutment with said ring, the other end portion of said recess being internally screw-threaded, and an externally screw-threaded annular keeper member positioned in the screw-threaded portion of the recess and abutting said last mentioned gasket.

WALLING GARRISON.

References Cited in the file of this patent

UNITED STATES PATENTS

Number	Name	Date
594,692	Henneberg	Nov. 30, 1897
1,113,805	McNeil	Oct. 13, 1915