

H. STAMPS.
LEVELING INSTRUMENT.
APPLICATION FILED OCT. 13, 1909.

1,012,740.

Patented Dec. 26, 1911.

Fig. 1.

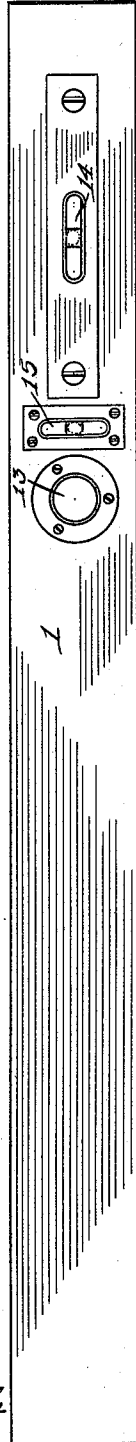


Fig. 2.

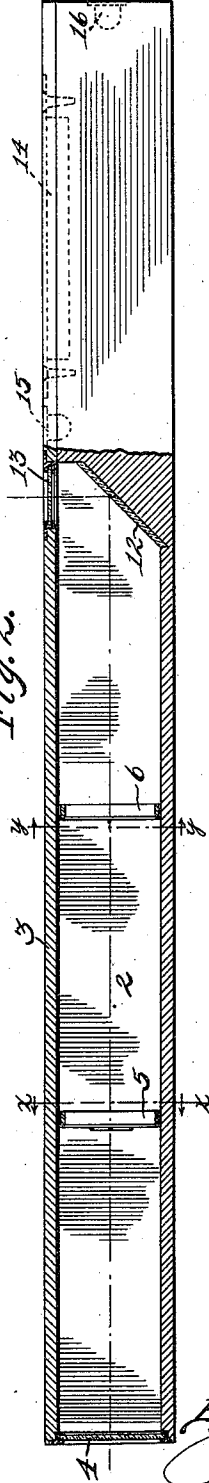


Fig. 4.

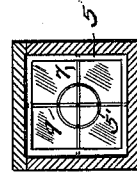


Fig. 5.

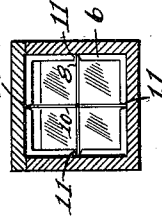
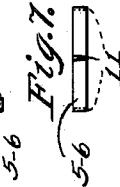
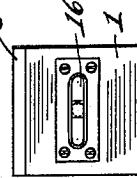


Fig. 3.



Witnesses:
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UNITED STATES PATENT OFFICE.

HENRY STAMPS, OF CHICAGO, ILLINOIS.

LEVELING INSTRUMENT:

1,012,740.

Specification of Letters Patent.

Patented Dec. 26, 1911.

Application filed October 13, 1909. Serial No. 522,472.

To all whom it may concern:

Be it known that I, HENRY STAMPS, a citizen of the United States, residing at Chicago, county of Cook, and State of Illinois, have invented certain new and useful Improvements in Leveling Instruments, of which the following is a specification.

My invention relates to improvements in leveling instruments and has for its object the production of a leveling instrument of improved construction and operation.

My invention consists in the combination and arrangement of parts hereinafter described and claimed.

My invention will be best understood by reference to the accompanying drawings forming a part of this specification, and in which,

Figure 1 is a top plan view of a leveling instrument embodying my invention, Fig. 2, a vertical section of the same, partially in elevation, Fig. 3, an end view of the instrument, Fig. 4, a section on line $x-x$ of Fig. 2, Fig. 5, a section on line $y-y$ of Fig. 2, Fig. 6, a side elevation of the cross hair frame, and Fig. 7, a top plan view of the cross hair frame.

As illustrated in the drawings the preferred form of construction comprises a rectangular body member 1 provided with an interior rectangular sighting channel 2. The channel 2 is closed by a cover 3 and an end glass 4. Within said channel are mounted cross hair frames 5 and 6, carrying horizontal cross hairs 7 and 8 and vertical cross hairs 9 and 10 respectively. These frames are preferably formed of metal and are provided at their sides, tops and bottoms with V-shaped notches 11 in which the cross hairs are secured by gluing. Frame 5 is preferably provided with a circular hair 5' surrounding the intersection of cross hairs 7 and 9 and serving to facilitate the finding of said intersection in sighting. At the inner end of channel 2 is placed a sighting mirror or other reflector 12 at an inclination of forty-five degrees to the general direction of said channel, and a sighting glass 13 is placed in the cover 3 opposite said mirror. Body member 1 carries leveling tubes 14 and 15 in its upper face and a leveling tube 16 in its end.

It will be observed that the above instrument may be employed as a spirit level or plumb and in addition thereto as a leveling

instrument for objects at some distance. This latter function is obtained by placing the instrument in a level position, which may be determined by means of tubes 14 and 15, and then by sighting through glass 13. Through the action of mirror 12 this will render objects in the range of channel 2 visible in conjunction with cross hairs 7 and 8. A line alining with said cross hairs is obviously on the same level therewith.

The instrument may also be employed for locating lines in the same vertical plane, by leveling the same transversely through glass 13 at different inclinations of channel 2.

While I have illustrated and described the preferred form of construction for carrying my invention into effect this is capable of variation or modification without departing from the spirit of my invention. I, therefore, do not wish to be limited to the exact details of construction set forth, but desire to avail myself of such variations and modifications as come within the scope of the appended claims.

Having described my invention what I claim as new and desire to secure by Letters Patent is:

1. In a device of the class described, a frame, a pair of intersecting cross-hairs fixed to said frame, and a circular hair surrounding the point of intersection of the cross-hairs and at a distance therefrom, and the cross hairs extending radially beyond said circular hair substantially as described.

2. In a device of the class described, the combination of a member provided with a longitudinal rectangular channel open at one side; a cover plate for said channel, a pair of frames secured to said cover, alining vertical and horizontal cross hairs in each of said frames; a sighting reflector set at the inner end of and at an angle to the general direction of said channel; a cover glass set in the cover plate of said channel opposite said reflector; and longitudinal and transverse leveling tubes fixed in said cover plate, substantially as described.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

HENRY STAMPS.

Witnesses:

HELEN F. LILLIS,

JOSHUA R. H. POTTS.