

(No Model.)

J. DOBELMAN.
SPIRIT LEVEL.

No. 478,848.

Patented July 12, 1892.

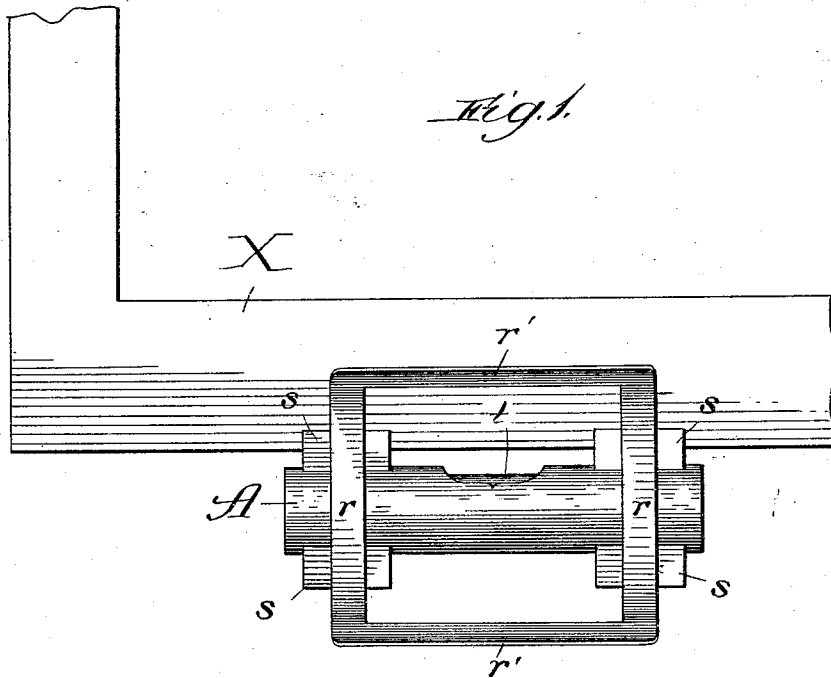


Fig. 2.

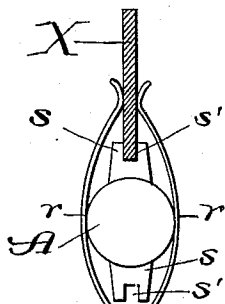


Fig. 3.

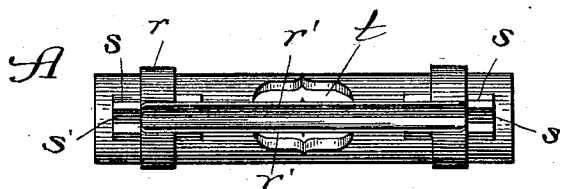
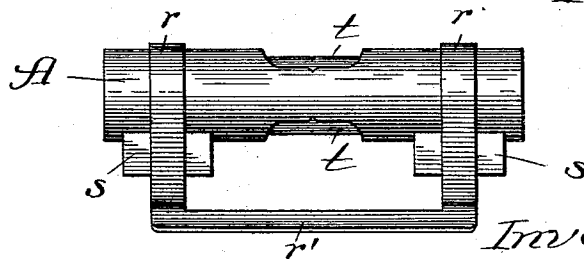


Fig. 4.



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UNITED STATES PATENT OFFICE.

JOHN DOBELMAN, OF CHICAGO LAWN, ILLINOIS.

SPIRIT-LEVEL.

SPECIFICATION forming part of Letters Patent No. 478,848, dated July 12, 1892.

Application filed March 12, 1892. Serial No. 424,618. (No model.)

To all whom it may concern:

Be it known that I, JOHN DOBELMAN, a citizen of the United States, residing at Chicago Lawn, in the county of Cook and State of Illinois, have invented a new and useful Improvement in Spirit-Levels, of which the following is a specification.

My invention relates to an improvement in spirit-levels adapted to be attached to squares, rulers, or the like, to be used with the latter in ascertaining or determining the angles of planes. My object is to provide such a device of an improved construction, whereby it may be readily attached to or detached from either the upper or lower edge of the square or other tool or implement with which it is to be employed and in either case cause the spirit-level to extend in operative position.

In the drawings, Figure 1 is a view in elevation of my improved spirit-level attached to an edge of one of the arms of a square, which is shown in broken elevation; Fig. 2, a view showing the square in section and the spirit-level in end elevation; Fig. 3, a top plan view of the spirit-level; Fig. 4, a modified form of the device in side elevation, and Fig. 5 an end elevation of the construction shown in Fig. 4.

In the construction shown in Figs. 1, 2, and 3 the casing A of the spirit-level has but one inspection-opening *t*. In longitudinal line with the said opening, at opposite sides thereof, are lugs *s*, provided with gage-recesses *s'*. The recesses or gages *s'* are adapted to receive the edge of the square X or other straight-edged implement with which the level is to be employed, and when in position the gages cause the level and edge to extend in planes that are exactly parallel. Extending from opposite sides of the case A are spring clamping-frames *r r*, which meet in the plane of a line drawn from the longitudinal center of the spirit-level through the centers of the gages *s'*.

In the construction shown in Figs. 1, 2, and 3 the frames *r* afford two clamps, so that the

device may be attached to a straight edge at either its side having the inspection-opening *t* or its opposite side.

My improved spirit-level is more especially designed for the use of builders and plasterers. To determine the angle of an upright plane, the spirit-level may be attached to the square at either the upper or lower edge of the horizontal arm of the latter, as most convenient to the operator. In determining the angle of ceilings or overhead planes generally the spirit-level may be clamped to the lower edge of the straight-edged implement with which it is employed.

In the construction shown in Figs. 4 and 5 the casing A is provided with two inspection-openings *t* at diametrically-opposite sides. Lugs *s*, having recesses or gages *s'*, are provided at opposite sides of but one of said openings, and the spring clamping-frames *r* extend only in one direction, as shown. This construction may be attached to either the upper or lower edge of the implement with which it is to be employed, and one or the other of the two inspection-openings *t* will be uppermost and expose the position of the bubble.

Although I prefer to provide gages *s'* for the purpose described in the form of recesses, as shown, any other form of gage which would insure parallelism between the spirit-level and the edge to which it is attached would be the equivalent of the recesses.

The clamping-frames *r* are by preference formed with straight edges *r'* parallel to the spirit-tube casing, whereby the device may be employed for leveling, when desired, without attachment to a straight-edged implement.

What I claim as new, and desire to secure by Letters Patent, is—

1. In a spirit-level, the combination of a casing A, provided with an inspection-opening, gages *s'* at opposite end portions and at diametrically-opposite sides of the casing, and clamps at diametrically-opposite sides of the casing, the gages and clamps extending

in the plane of a line drawn from the longitudinal center of the casing through the inspection-opening, substantially as described.

2. In a spirit-level, the combination of a
5 casing A, provided with an inspection-opening, gages s' at opposite end portions of the casing, and a clamp on the casing, comprising two spring-frames r , provided with straight edges r' parallel to the plane of the

gages, the gages and clamp extending in the 10 plane of a line drawn from the longitudinal center of the casing through the inspection-opening, substantially as described.

JOHN DOBELMAN.

In presence of—

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W. N. WILLIAMS.