March 8, 1927. 1,620,469

S. R. KIRKHOFF

CLAMP

Filed Sept. 12, 1925

Fig. 1.

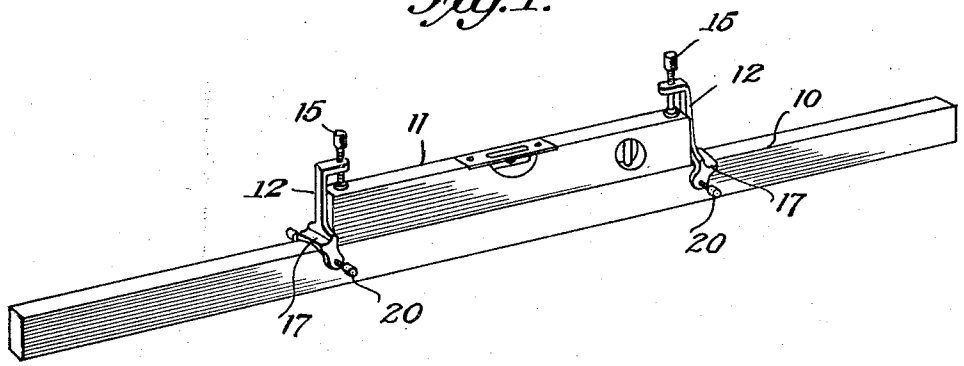


Fig. 2.

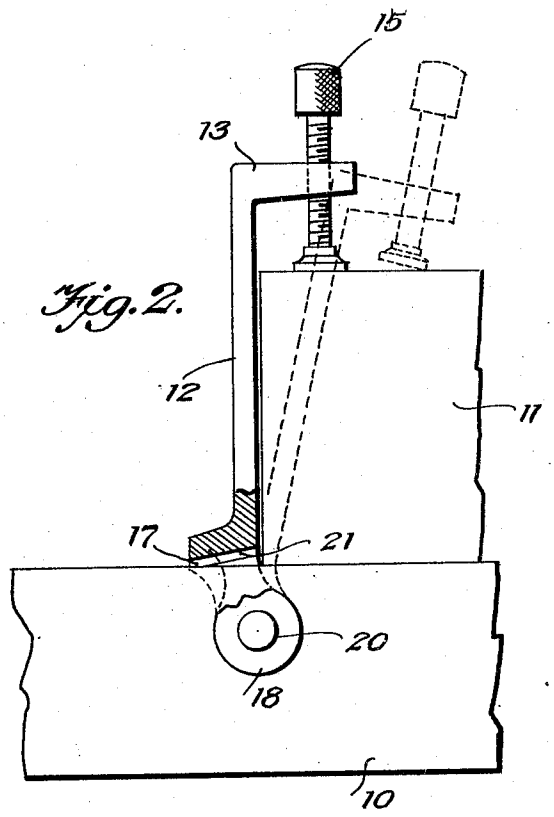
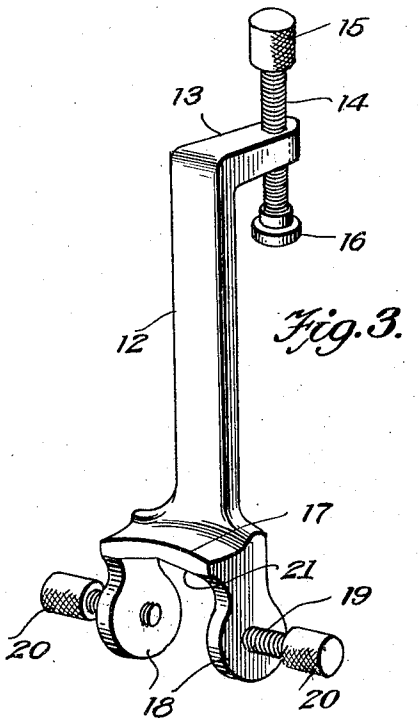


Fig. 3.



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UNITED STATES PATENT OFFICE.

SAMUEL R. KIRKHOFF, OF STOWE, PENNSYLVANIA.

CLAMP.

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This invention relates to improvements in clamps, the general object being the application thereof upon straight edges in holding levels and like measuring instruments rigidly upon and to the upper side of the straight edge and in using the same with greater accuracy than obtained from the use of the conventional form of plumb in so far as the latter is in no way accurate owing to atmospheric conditions interfering with the centering thereof.

Another object of my invention resides in the novel construction of the clamp per se, the latter not only having adaptability and application upon the straight edge but also upon the spirit level and mounted for swinging movement upon the straight edge in fixing the spirit level at desired inclination upon the upper edge or side of the straight edge.

With the above and other objects in view, the invention further includes the following novel features and details of construction, to be hereinafter more fully described, illustrated in the accompanying drawing and pointed out in the appended claim.

In the drawing:—

Figure 1 is a perspective of a straight edge and spirit level and illustrating the manner in which my present invention is applied and used in conjunction therewith.

Figure 2 is a fragmentary elevation of a straight edge and spirit level and illustrating the manner in which my invention, the clamp, is mounted for swinging movement upon the straight edge.

Figure 3 is a perspective of the clamp per se.

Referring to the drawing in detail, wherein like characters of reference denote corresponding parts, the reference character 10 indicates a straight edge, and 11 a spirit level, all of the above being of the usual and conventional form and forming no part of the present application for Letters-Patent but being merely shown for purposes of illustration in bringing forward the novel advantages of the above entitled invention.

The invention residing in the provision of a clamp constituting a relatively flat bar 12, its upper free end being substantially offset as indicated at 13 and having a vertically disposed adjusting bolt 14 threaded within the offset end thereof and having a knurled portion 15 provided upon its upper end and a swiveled disk 16 provided upon its lower end, the purpose and utility thereof will be presently apparent.

Formed upon the lower end of the bar 12 is a substantially enlarged bifurcated end portion 17 providing a pair of companion apertured ears 18, each of which having transversely disposed adjusting screws 19 threaded within the apertured portions thereof by their opposite and outer end portions having relatively enlarged knurled heads 20. The lower substantially enlarged bifurcated end portion 17 of the bar 12 forms a substantially inverted V-shaped forwardly and upwardly inclined portion 21, the purpose of which will be presently apparent.

In carrying out my invention and setting forth the mode of operation thereof, it is clearly apparent and manifest that when the bifurcated portion 17 is placed upon the upper surface of the straight edge 10 that the apertured ears 18 formed thereon will straddle the straight edge and the transversely disposed screws 19 are then grasped upon the knurled heads 20 by the thumb and index fingers of the operator in throwing the screws 19 into engagement with the adjacent side of the straight edge 10 in positioning the bar 12 as clearly illustrated in the dotted line position in Figure 2 of the drawing. After which the bar 12 is thrown into the other position as clearly illustrated in Figure 2 of the drawing in order that the rear edges of the substantially inverted V-shaped and forwardly inclined portion 21 will engage the upper and adjacent corners forming the upper surface upon the straight edge 10 in limiting the rearward sliding movement of the bar 12 and holding the same rigidly in the position as clearly illustrated. After the two bars, if two are used, and in this instance in the use of a spirit level or plumb and level, as it may be called, the two bars 12 are arranged at appropriate points in the length of the straight edge 10 and the spirit level 11 is then positioned upon the upper surface of the straight edge 10 after which the bolts 14 are screwed downwardly within the offset ends 13 of the bars 12 in order that the swiveled disk 16 carried upon the lower ends thereof will engage the upper surfaces and the adjacent end portion of the spirit level 11 in securely holding the latter to the upper surface of the straight edge 10.

It will thus be noted that the use of these bars 12 when used in conjunction with a straight edge 10 and spirit level 11 may be used in such places as would be impossible in the employment of a plumb.

The invention is susceptible of various changes in its form, proportions and minor details of construction, and the right is herein reserved to make such changes as properly fall within the scope of the appended claim.

Having described my invention what is claimed is:—

A clamp for use in associating straight edges and spirit levels comprising a relatively flat bar having its upper free end substantially offset and a vertically disposed adjusting screw provided within the free end thereof, the lower end of the bar being substantially enlarged and bifurcated for straddling the upper surface of the straight edge, fastening elements in the form of adjusting screws arranged within the opposite sides of the bifurcated portion for engagement with the corresponding side of the straight edge, the under side of the bifurcated portion being substantially inverted V-shaped and forwardly and upwardly converged providing knife edges for engagement with the upper surface and edges of the straight edge, and a swiveled disk mounted upon the lower free end of the first mentioned adjusting screw for engagement with the spirit level for rigidly holding the latter upon the upper surface of the straight edge.

In testimony whereof I affix my signature.

SAMUEL R. KIRKHOFF.