Aug. 16, 1938. S. KOLLER 2,126,896

ANGLE PLATE

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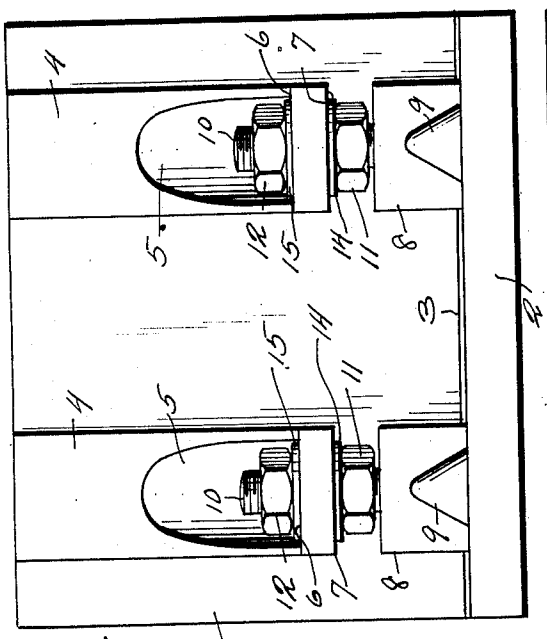


Fig. 2.

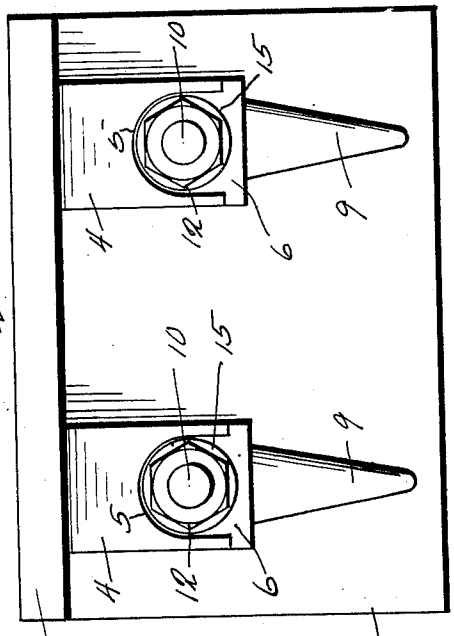


Fig. 3.

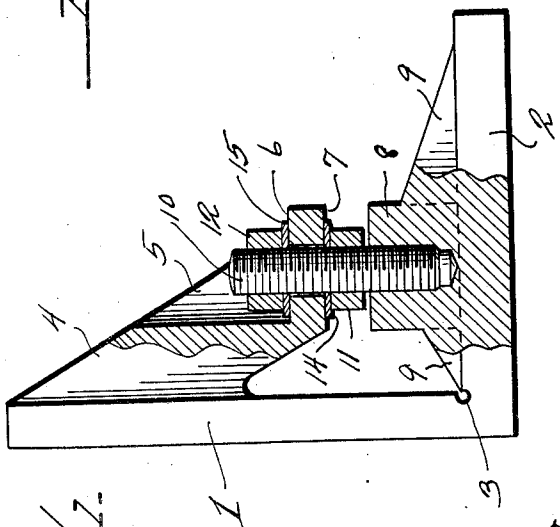


Fig. 1.

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ANGLE PLATE

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4 Claims. (Cl. 33—112)

This invention relates to an angle plate.

In machine and tool shops an angle plate is commonly used to make sure that the particular work is at a perfect angle as is required in connection with grinding, milling, boring or planing. Frequently the angle plates now generally in use are not true due to many causes, such as insufficient seasoning, careless handling, improper casting, or warping.

It is primarily an object of the invention to provide an angle plate which will with proper use always produce a perfect right angle or such angle can be adjusted either way up to .005 of an inch.

A more particular object of the invention is to provide an angle plate wherein the flanges of the plate have associated therewith means for adjusting said flanges one with respect to the other and for maintaining the same in desired adjusted relation.

The invention consists in the details of construction and in the combination and arrangement of the several parts of my improved angle plate whereby certain important advantages are attained and the device rendered simpler, less expensive and otherwise more convenient and advantageous for use, as will be hereinafter more fully set forth.

The novel features of my invention will hereinafter be definitely claimed.

In order that my invention may be the better understood, I will now proceed to describe the same with reference to the accompanying drawing, wherein:—

Figure 1 is a view partly in end elevation and partly in section of an angle plate constructed in accordance with an embodiment of my invention;

Figure 2 is a view in rear elevation of the plate as herein disclosed;

Figure 3 is a view in top plan.

My improved angle plate as disclosed in the accompanying drawing comprises two flanges 1 and 2 initially formed at substantially right angles one to the other with the adjacent or inner marginal portions of the flanges 1 and 2 integral. The angle plate at the junction of the flanges 1 and 2 is provided with a groove 3 extending from one end to the other whereby the flanges 1 and 2 may have relative flexure along such junction portion.

The rear face of one of the flanges, as 1, adjacent to its opposite ends is provided with the rearwardly and downwardly disposed rigid arms 4 and the lower or free portion of each of the arms 4 is provided in its upper portion with a pocket 5 having a flat bottom 6 occupying a plane substantially at right angles to the flange 1.

The lower end face 7 of each of the arms 4 is also flat and in a plane substantially parallel to the plane of the bottom 6 of the pocket 5.

The second flange 2 of the angle plate below the lower or free end of the arm 4 has formed therewith or otherwise fixedly mounted thereon, an upstanding block 8 and said flange 2 fore and aft of the block 8 is also provided with the reinforcing or strengthening ribs 9. Extending outwardly from each of the blocks 8 is a threaded post 10 of desired length and which freely extends through the free end portion of the adjacent arm 4 and up into the pocket 5 thereof. Threaded upon this post 10 are the nuts 11 and 12. The nut 11 coacts with the end face 7 of the arm 4 while the nut 12 coacts with the base 6 of the pocket 5. Interposed between the nut 11 and the end face 7 is a washer 14 and a second washer 15 is interposed between the base 6 of the pocket 5 and the nut 12. The post 10 may be held to its block 8 in any desired manner but, as herein disclosed, an end portion of said post 10 threads into the block.

If the flanges 1 and 2 of the angle plate should be out .010 it can be pulled into accuracy by proper manipulation of the nut 12 which will pull the flange or side 1 inwardly, and when the proper adjustment has been effected the second or under nut 11 will serve as a lock nut to maintain such adjustment. It is to be understood, of course, that previous to adjusting the nut 12 to pull the flange or side 1 inwardly, the other nut 11 will have been turned away from the end face 7.

Should the flanges or sides 1 and 2 of the angle plate be less than ninety degrees, the nut 11 is used to push upon the arm 4 until the desired accuracy is obtained whereupon the nut 12 is adjusted to provide the required lock.

From the foregoing description it is thought to be obvious that an angle plate constructed in accordance with my invention is particularly well adapted for use by reason of the convenience and facility with which it may be assembled and used, and it will also be obvious that my invention is susceptible of some change and modification without departing from the principles and spirit thereof and for this reason I do not wish to be understood as limiting myself to the precise arrangement and formation of the several parts herein shown in carrying out my invention in practice except as hereinafter claimed.

I claim:—

1. As a new article of manufacture, an angle plate comprising two angularly related integrally connected and flexible flanges one with respect to the other, and coacting means carried by both of the flanges for spreading or retracting one of the flanges with respect to the other.

2. As a new article of manufacture, an angle plate comprising two angularly related connected flanges, and coacting means carried by both of the flanges for spreading or retracting one of the flanges with respect to the other, said angle plate being provided in the joining portions of the flanges with a groove to facilitate the flexing of one flange with respect to the other.

3. As a new article of manufacture, an angle plate comprising two angularly related connected flanges, an arm carried by one of the flanges and disposed at the same side thereof as the second flange, an elongated member carried by the second flange and extending through the free end portion of the arm, a nut threaded upon the elongated member to engage the arm to spread the flanges, and a second nut threaded upon the elongated member outwardly of the arm to retract the flanges.

4. As a new article of manufacture, an angle plate comprising two angularly related connected flanges, an arm carried by one of the flanges and disposed at the same side thereof as the second flange, an elongated member carried by the second flange and extending through the free end portion of the arm, a nut threaded upon the elongated member to engage the arm to spread the flanges, and a second nut threaded upon the elongated member outwardly of the arm to retract the flanges, one of said nuts serving as a lock to hold the flanges in the adjustment made by the second nut.

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