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ADJUSTABLE WORK STAND

Filed June 3, 1959

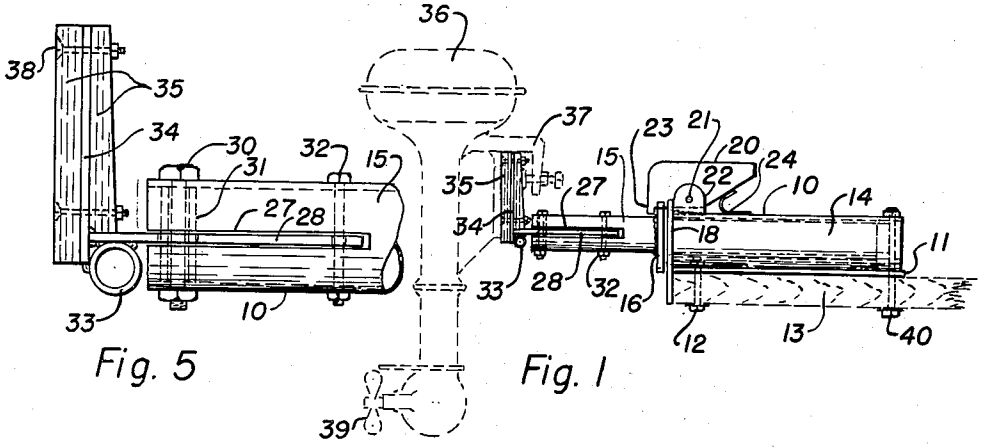


Fig. 5

Fig. 1

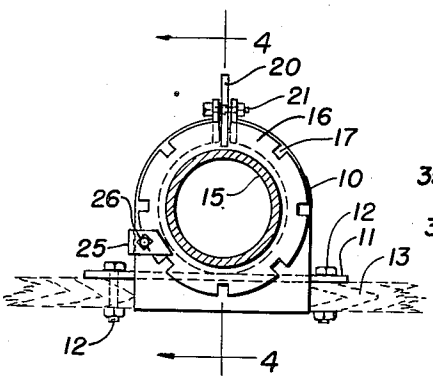


Fig. 3.

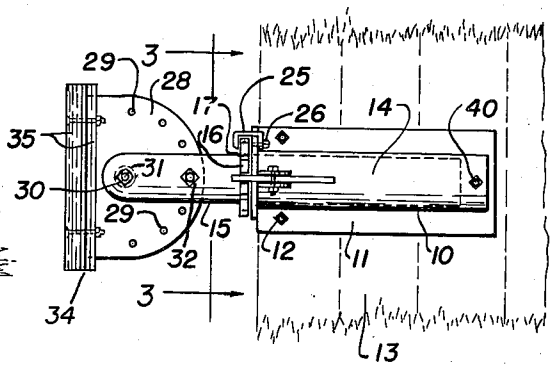


Fig. 2.

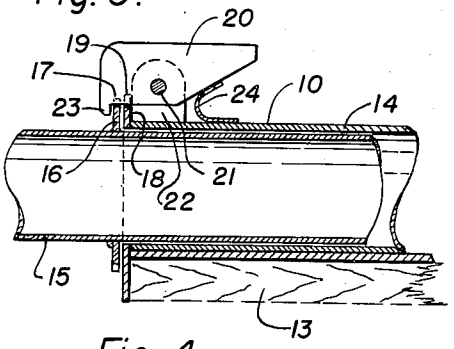


Fig. 4.

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ADJUSTABLE WORK STAND

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2 Claims. (Cl. 269—191)

This invention relates to a work stand, and more particularly to an adjustable work stand for supporting an object such as an outboard motor or engine.

The object of the invention is to provide a work stand which is adapted to be used for supporting an engine such as an outboard engine which is being worked on, and whereby with the present invention the outboard engine can be readily tilted or moved to different angular positions so that various parts of the engine can be conveniently worked on or repaired.

Another object of the invention is to provide an adjustable work stand which includes a means for moving the work supporting member to different positions, and wherein there is also provided a means for clamping or maintaining the movable members immobile in their adjusted positions.

A further object of the invention is to provide an adjustable work stand which is extremely simple and inexpensive to manufacture.

Other objects and advantages will be apparent during the course of the following description.

In the accompanying drawings, forming a part of this application, and in which like numerals are used to designate like parts throughout the same—

Fig. 1 is a side elevational view illustrating the adjustable work stand of the present invention, and showing in dotted lines an outboard engine supported theeron, as for example when the outboard engine is to be repaired or otherwise worked on.

Fig. 2 is a top plan view of the present invention.

Fig. 3 is a sectional view taken on the line 3—3 of Fig. 2.

Fig. 4 is a sectional view taken on the line 4—4 of Fig. 3.

Fig. 5 is a fragmentary elevational view illustrating certain constructional details of the present invention.

Referring in detail to the drawings, the numeral 10 indicates the adjustable work stand of the present invention which is shown to comprise a horizontally disposed base 11 that is adapted to be secured to a suitable supporting structure 13 as for example by means of securing elements 12. A hollow tubular support member 14 is suitably affixed to the base 11 as for example by welding, and the numeral 15 indicates a hollow tube which is adjustably mounted in the support member 14. The tube 15 has a circular flange 16 affixed thereto, as for example by welding, and the flange 16 is provided with a plurality of spaced apart notches 17 therein. The numeral 18 indicates an arcuate flange which is secured to an end of the support member 14, and the member 18 is provided with spaced apart notches or cut-outs 19 therein.

The numeral 20 indicates a latch which is pivotally connected to lugs 22 by means of a pivot pin 21, and the lugs 22 are suitably affixed to the support member 14. The latch 20 is provided with a finger 23 which is adapted to engage the flange 16, and the notches 17 and 19 are adapted to receive or have project therethrough a portion of the latch 20. The numeral 24 indicates a spring member which is arranged in engagement with the latch 20.

There is further provided a safety clamp which is indicated by the numeral 25, and the clamp 25 is secured to the brace 18 as for example by means of a securing element 26, the clamp 25 having a portion engaging the flange 16, as for example as shown in Fig. 2.

The outer portion of the tube 15 is provided with a slot or cut-out 27, and the numeral 28 indicates a quadrant-shaped plate which projects through the slot 27. The plate 28 is provided with a plurality of spaced apart apertures 29 therein, Fig. 2. The numeral 30 indicates a pivot pin which extends through the outer end of the tube 15 and through the plate 28, and a bushing 31 is mounted on the pin 30. A suitable securing element or pin 32 also extends through the tube 15, and the securing element 32 is adapted to engage one of the apertures 29 in the plate 28 so as to provide a means for maintaining the plate 28 immobile in its adjusted positions. The pin 32 can be removed, as for example when the position of the plate 28 is to be shifted or adjusted.

There is further provided a hollow tubular sleeve or pipe 33 which is affixed as by welding below the plate 28, and the numeral 34 indicates a mounting member which is arranged at right angles to the plate 28 and which is secured thereto. Body pieces 35 which may be made of wood or other suitable material are arranged on opposite sides of the mounting member 34, and the body pieces 35 may be secured to the mounting member 34 as for example by means of securing elements 38. The numeral 36 indicates a conventional outboard engine which may be fastened to the body pieces 35 and mounting member 34, as for example by means of the usual clamp 37 of the outboard engine 36. The outboard engine 36 is provided with the usual propeller 39.

From the foregoing, it is apparent that there has been provided an adjustable work stand which is especially suitable for use in supporting an engine such as the outboard engine 36, as for example when the engine 36 is being repaired or worked on. In use, the base 11 is adapted to be secured to a suitable supporting structure such as a table or bench 13, as for example by means of securing elements 12. The support member 14 is affixed to the base 11, and the tube 15 has its inner end projecting into the support member 14. It is to be noted that flange 16 is provided with slots or notches 17 which are mounted for movement into and out of registry with the notches 19 in the arcuate brace 18. The spring 24 has a tendency to urge the latch 20 into engagement with the registering notches 17 and 19. Thus, when the tube 15 is to be rotated to its desired position, manual pressure is applied or placed on the latch 20 so as to compress the spring member 24 and this will cause the latch 20 to pivot on the pin 21 so as to provide sufficient clearance for the flange 16 to rotate. After the tube 15 has been moved to its desired location, pressure on the latch 20 can be released so that the spring member 24 will pivot the latch 20 to a locking position whereby the latch 20 will extend through certain of the registering apertures 17 and 19 so as to prevent accidental shifting or rotation of the tube 15 with respect to the support member 14. It is to be noted that the U-shaped clamp 25 is affixed to the brace 18, and the clamp 25 engages a portion of the flange 16 so as to prevent accidental separation of the tube 15 from the support member 14, as for example when the latch 20 is in released position. Thus, the clamp 25 acts as a safety device.

The outboard engine 36 which is being worked on is adapted to have its usual clamp 37 connected to the

base pieces 35 on the mounting member 34, Fig. 1. Then, it will be seen that by removing the pin or bolt 32 the plate 28 can be pivoted on the pin 30 and after the plate 28 has been moved to its desired location, the pin 32 is again inserted through the tube 15 and through one of the apertures 29 so as to maintain the plate 28 stationary. The hollow sleeve 33 provides a convenient receptacle whereby a suitable rod, handle or the like can be extended into engagement with the sleeve 33 for use in tilting or moving the member such as the plate 28 to the desired position.

It will be seen that with an engine such as the engine 36 connected to the present invention, the plurality of different adjustments permit the engine 36 to be moved to any desired angular position, or if desired the engine can be turned upside down and this arrangement permits all of the various parts of the engine to be conveniently worked on in a highly convenient and efficient manner.

The parts can be made of any suitable material and in different shapes or sizes.

The safety clamp 25 is especially suitable or useful, as for example when a large motor or engine is being handled and the clamp 25 will insure that the tube 15 will not accidentally work loose from the support member 14. The provision of the sleeve or tube 33 permits a bar to be inserted therein so as to facilitate the handling or movement of large motors. The entire assembly may be mounted on any suitable supporting structure such as a bench, an upright post or other structure. The numeral 40 indicates a securing element or bolt which may extend through the end of the support member 14 and through the structure 13.

Minor changes in shape, size and rearrangement of details coming within the field of invention claimed may be resorted to in actual practice, if desired.

What is claimed is:

1. In an adjustable work stand, a horizontally disposed rectangular shaped base, a horizontally disposed tubular support member secured to said base and extending longitudinally thereof, a horizontally disposed tube movably mounted in said support member, a spring pressed latch connected to said support member, a vertically disposed circular flange secured to said tube and provided with a plurality of spaced apart notches for coaction with said latch, a brace affixed to an end of said support member in parallel relation to the flange on said tube and provided with a plurality of spaced apart notches for coaction with the notches in said flange and said latch, a clamp connected to said brace and engaging said flange, the outer end of said tube being provided with a slot, a plate projecting through said slot and provided with a plurality of spaced apart apertures, a pivot pin extending through said tube and plate, a removable securing element extending through said tube for engagement with said apertures, a sleeve secured below said plate, a mounting member arranged at right angles with respect to said plate and secured thereto, and body pieces arranged on opposite sides of said mounting member.

2. In an adjustable work stand, a horizontally disposed rectangular shaped base, a horizontally disposed tubular support member secured to said base and extending longitudinally thereof, a horizontally disposed tube movably mounted in said support member, a spring pressed latch connected to said support member, a vertically disposed circular flange secured to said tube and provided with a plurality of spaced apart notches for coaction with said latch, a brace affixed to an end of said support member in parallel relation to the flange on said tube and provided with a plurality of spaced apart notches for coaction with the notches in said flange and said latch, a clamp connected to said brace and engaging said flange, the outer end of said tube being provided with a slot, a plate projecting through said slot and provided with a plurality of spaced apart apertures, a pivot pin extending through said tube and plate, a removable securing element extending through said tube for engagement with said apertures, a sleeve secured below said plate, a mounting member arranged at right angles with respect to said plate and secured thereto, and body pieces arranged on opposite sides of said mounting member, said mounting member adapted to have an outboard engine connected thereto.

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