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ADJUSTABLE CONNECTER

Original Filed April 7, 1926

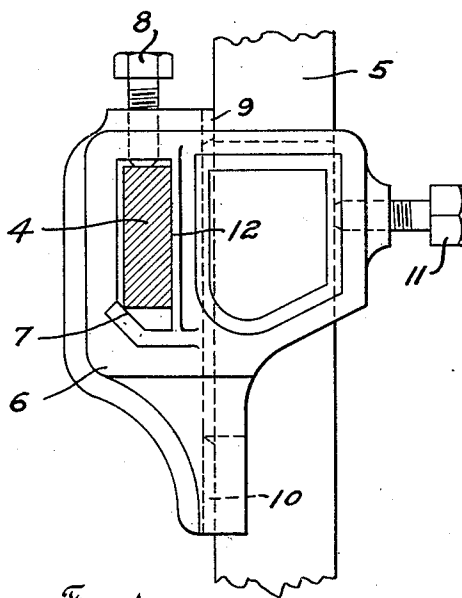


Fig. 1

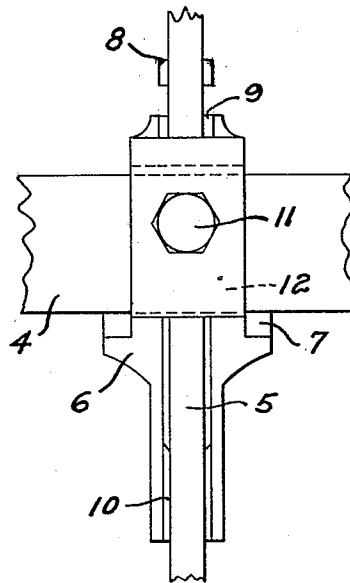


Fig. 2

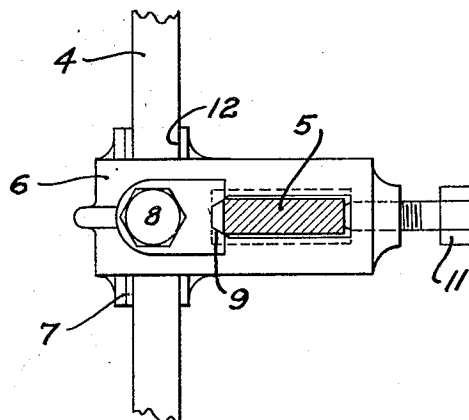


Fig. 3

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ADJUSTABLE CONNECTER

Original application filed April 7, 1926, Serial No. 100,264. Divided and this application filed May 23, 1930. Serial No. 455,037.

The present invention relates in general to improvements in the art of adjustably connecting several elements together, and relates more specifically to improvements in the construction of adjustable connectors for uniting two elongated elements or bars in a manner permitting longitudinal adjustment of one transversely of the other.

rectangular implement supporting bars for a tractor or the like, it is not the intention to limit the scope of the invention by such specific disclosure, and the novel features are obviously more generally applicable for other uses and purposes.

An object of the invention is to provide an improved adjustable connector which is simple and compact in construction, and which is adapted to rigidly unite several elements in various positions of adjustment.

Another object of the invention is to provide an improved adjustable connector which is especially adapted to interconnect a pair of transversely disposed elongated bars of polygonal cross-section, and which is conveniently manipulable.

A further object of the invention is to provide an improved adjustable connector which is rigid and durable in construction, and which may be manufactured at minimum cost.

These and other objects of the present invention will be apparent from the following detailed description.

The present application is a division of application Serial Number 100,264, filed April 7, 1926, now Patent No. 1,768,673, granted July 1, 1930, relating to improvements in garden tractor construction.

A clear conception of one embodiment of the invention and of the mode of constructing and of manipulating devices built in accordance therewith, may be had by referring to the drawing accompanying and forming a part of this specification wherein like reference characters designate the same or similar parts in the several views.

Fig. 1 is a side elevation of one of the improved adjustable connectors applied to transversely disposed rectangular bars.

Fig. 2 is a rear view of the adjustable connector shown in Fig. 1.

Fig. 3 is a top view of the adjustable connector disclosed in Figs. 1 and 2.

While the improvement has been illustrated herein as being specifically applied to a device for adjustably connecting a pair of

By referring to the drawing, it will be noted that the improved adjustable connector comprises a one-piece bracket 6 having a pair of transverse substantially rectangular openings therethrough, and a set screw 8, 11 adjustably associated with the bracket 6 adjacent an end portion of each of the openings. The bracket 6 is slidable, during adjustment, along the rectangular horizontal bar 4 which passes through the opening in the bracket 6 adjacent to the set screw 8; and the vertical rectangular bar 5 which passes through the other opening adjacent to the set screw 11 is likewise slidable, during adjustment, relative to the bracket 6 and transversely of the bar 4. The lower outer end portions of the opening through the bracket 6 adjoining the upper end of which the set screw 8 is located, are provided with inclined wedging surfaces 7 against which the set screw 8 is adapted to force one corner of the bar 4 to thereby cause the surfaces 7 to urge the opposite side of the bar into firm engagement with the side surfaces 12 of the horizontal bracket opening. The inner portion of the opening through the bracket 6 adjoining the outer end portion of which the set screw 11 is located, is provided with oppositely inclined and disposed upper and lower wedging surfaces 9, 10 located respectively above and below the set screw 11, against which the set screw 11 is adapted to firmly press the vertical bar 5 to lock the latter in adjusted position.

During normal use of the improved adjustable connector, the bracket 6 may be readily positioned at any point along the horizontal bar 4 by merely releasing the set screw 8, sliding the bracket 6 along the bar 4 to the desired location, and subsequently manipulating the set screw 8 to urge the bar 4 against the inclined surfaces 7 and into locking engagement with the surfaces 12.

The vertical bar 5 may be readily longitudinally adjusted within the vertical opening in the bracket 6 by merely releasing the set screw 11, sliding the bar 5 vertically to the desired location, and subsequently manipulating the set screw 11 to force the inner edges of the bar 5 into wedging and locking engagement with the inclined surfaces 9, 10.

It will be apparent from the foregoing description, that the wedge surfaces 7, 9, 10 and the set screws 8, 11 cooperating therewith, provide simple and effective means for locking the bracket 6 in any desired position of adjustment relative to the bars 4, 5. By merely finishing these local wedging surfaces 7, 9, 10, necessity of machining the other surfaces of the openings in the bracket 6, is avoided, thereby reducing the cost of machining to a minimum. The bracket 6 may be formed of a single casting, and the disposition of the wedge surfaces on opposite sides of the plane of coaction of the locking set screws with the adjacent bars, insures maximum rigidity of connection. The improved device may be manipulated with an ordinary wrench or a pair of pliers, and has gone into extensive successful commercial use.

It should be understood that it is not desired to limit the invention to the exact details of construction and to the precise mode of operation, herein shown and described, for various modifications within the scope of the claims may occur to persons skilled in the art.

It is claimed and desired to secure by Letters Patent:—

1. In combination, a bracket having a pair of openings extending therethrough at an angle relative to each other, each of said openings being provided with endwise separated alined similarly inclined wedging surfaces, a bar extending through each of said openings, and a set screw associated with said bracket adjacent to each of said openings and coacting with the adjacent bar between the separated ends of the corresponding wedging surfaces to urge said bar into locking engagement with said corresponding set of inclined surfaces.

2. In combination, a one-piece bracket having openings therethrough at right angles to each other, each of said openings being provided with a pair of endwise separated alined inclined end surfaces, a bar slidably associated with each of said openings, and a set screw associated with said bracket between the separated adjacent ends of each set of said surfaces for urging the adjacent bar into locking engagement with the inclined surfaces of said set.

3. In combination, a bracket having a pair of openings extending at an angle to each other, each of said openings having a set of endwise separated wedging surfaces, a bar

movable along each of said openings, and a screw associated with said bracket at each of said openings and coacting with the adjacent bar between the spaced ends of the corresponding wedging surfaces to urge said bar into locking engagement with said corresponding set of wedging surfaces.

In testimony whereof, the signature of the inventor is affixed hereto.

FORREST V. DONALD.