

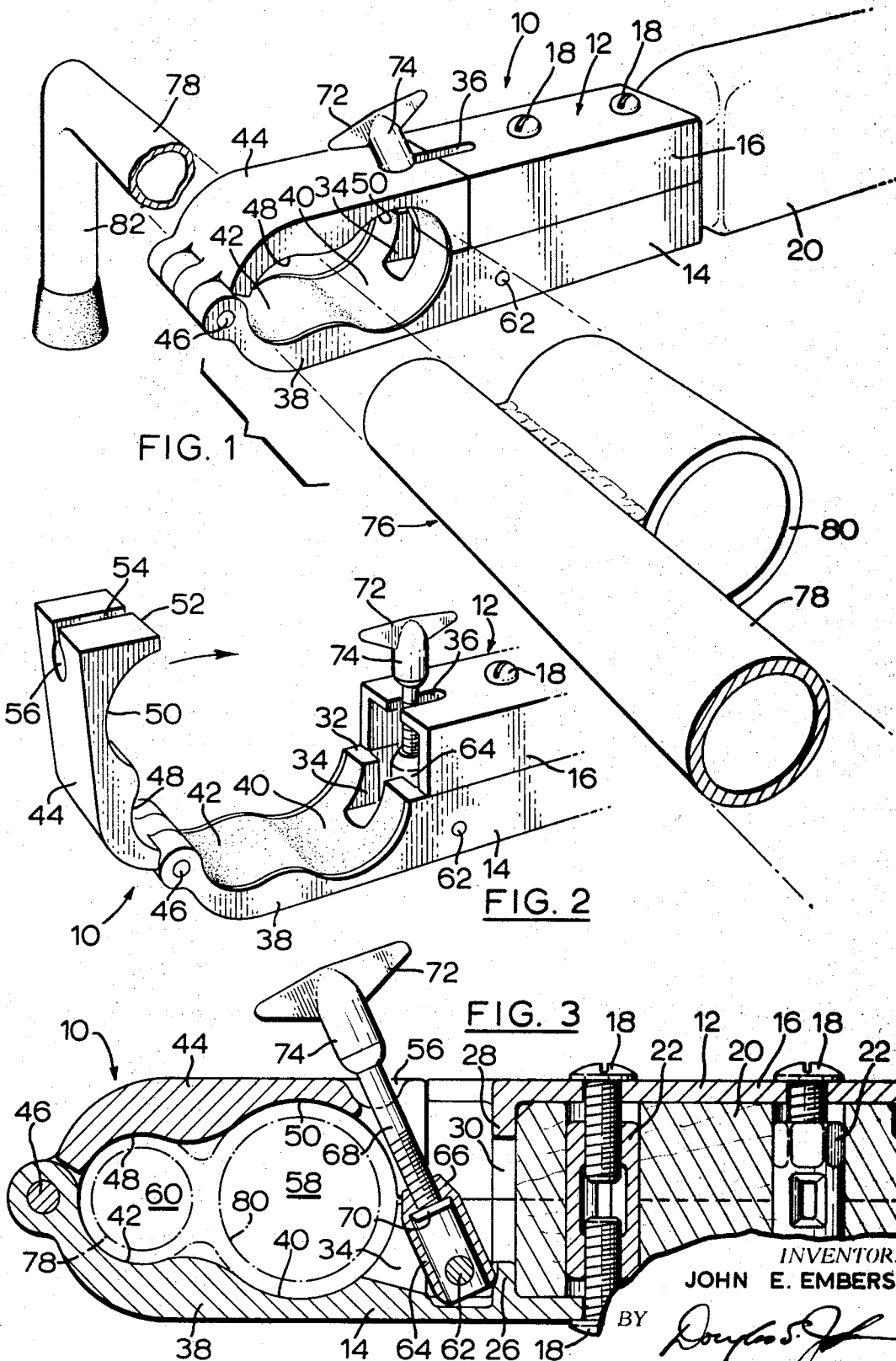
Nov. 3, 1970

J. E. EMBERSON

3,537,150

CLAMP

Filed June 6, 1968



INVENTOR.
JOHN E. EMBERSON

BY

Douglas J. [Signature]

Attorney

1

3,537,150
CLAMP

John Ernest Emberson, P.O. Box 40,
Unionville, Ontario, Canada
Filed June 6, 1968, Ser. No. 735,054
Int. Cl. A44b 21/00; E04g 7/22

U.S. Cl. 24-81

1 Claim

ABSTRACT OF THE DISCLOSURE

A clamp has a throat to receive the end of a beam secured in place by bolts. The clamp has a recessed extension with a pivotable portion which closes on to the extension around another beam located in the recess. The pivotable portion is held in place by a thumb screw.

FIELD OF THE INVENTION

This invention relates to clamps and has particular relation to clamps which are used to connect gymnastic beams, activity trestles and beam legs.

SUMMARY OF THE INVENTION

According to the invention, the clamp has a hollow body with means therethrough for securing a variety of beams. The hollow body has an extension, the inner surface of which is shaped to provide a portion of a cavity. The end of the extension opposed to the hollow clamp body has a hinge which carries a pivotable member, the inner surface of which is shaped to provide the remaining portion of the cavity when the pivotable member closes on the extension. Means are provided to keep the pivotable member in a closed position.

BRIEF DESCRIPTION OF THE DRAWINGS

The invention will now be described in relation to the accompanying drawings in which:

FIG. 1 is a perspective view of the clamp holding a beam in the hollow body with a beam leg aligned with the clamp extension in spaced relation thereto.

FIG. 2 shows the clamp extension in the open position.

FIG. 3 is a cross-sectional view through the clamp with the pivotable member in the closed position on the extension.

DESCRIPTION OF THE PREFERRED EMBODIMENTS

As illustrated in the drawings, the clamp generally denoted by the numeral 10, includes a hollow body portion 12 formed by a pair of mating channel sections 14 and 16. Two pairs of opposed threaded bolts 18 hold the channel sections 14 and 16 together to enclose a beam 20. The free ends of each pair of the opposed bolts 18 are located in an individual threaded sleeve 22 positioned inside the hollow body portion 12. The heads of the bolts 18 are rounded, the edges being flush with the outer surface of the channel sections 14 and 16, to prevent injury to the user of gymnastic equipment which incorporates the clamp 10.

The channel portions 14 and 16 each has an individual opposed transverse interior walls 26 and 28, each having an arcuate recess whereby on assembly of the channel sections 14 and 16 a central aperture 30 is formed. The channel portion 14 has another transverse wall 32 removed from the wall 26; the wall 32 has an open-ended slot 34.

As illustrated in FIGS. 1 and 2, the base of the channel portion 16 has an open-ended slot 36.

The channel portion 14 has an integral extension 38,

2

the inner surface of which is shaped to provide a pair of arcuate recesses 40 and 42, preferably coated with a resilient material such as rubber. The free end of extension 38 is bifurcated to receive the free end, also bifurcated, of a pivotable member 44 which is held to the extension 38 by a pin 46.

The pivotable member 44 has a pair of arcuate recesses 48 and 50 which correspond in shape with the arcuate recesses 40 and 42 on the inner surface of the extension 38. The arcuate recesses 48 and 50 are also preferably coated with a resilient material. The pivotable member terminates in a wall 52, having an open-ended slot 54, the inner end of which has a dish portion 56; the free end of the wall 52 bears onto the wall of 32 when the pivotable member 44 is moved in the direction of the arrow in FIG. 2 from the open to the closed position. When this is accomplished, the arcuate recesses 40 and 42 and the similar recesses 48 and 50 form respectively communicating recesses 58 and 60, preferably having different characters. In this position, the slot 54 is in line with the slot 36 of the channel portion 16.

Intermediate the wall 26 and the wall 32 in the channel portion 14 is a pin 62, see FIG. 3, which holds a pivotable sleeve 64, having a restricted head 66 with an interior thread. A threaded rod 68 engages with the head 66 of the sleeve 64; the rod 68 has a portion 70 which is enlarged with respect to the head 66 of the sleeve 64 to terminate the outward movement of the threaded rod 68 from the sleeve 64.

The rod 68 is movable between the slot 54 in the pivotable member 44 and the slot 36 in the channel portion 16. The rod 68 terminates in an integral thumb screw 72. The body portion 74 of the thumb screw 72 is shaped as shown so that its lower end fits into the dish portion 56 of the open-ended head 54 when the pivotable member 44 is secured to the extension 38.

The clamp 10 may be used to connect a variety of gymnastic equipment. Thus the end of beam 20, the body of which may be of various configurations, may be located in the hollow portion 12 and secured therein with the bolts 18. The beam 20 may then be securely connected, for instance, to an activity trestle at the cross bar level by enclosure of the latter in either of the apertures 58 or 60.

A particular advantage of the clamp 10, as illustrated in FIG. 1, is that the pivotable member 44 may be clamped on to a beam leg, generally denoted by the numeral 76, so that the beam 20 may be safely used at a low level. The beam leg 76 is formed of a pair of tubes, 78 and 80 welded together with one tube 78 turned down to provide legs 82. It will be appreciated that its insertion into the communicating pair of apertures 58 and 60 with subsequent securing of the pivotable member 44 will ensure that the beam leg 76 will not rotate and hence the beam 20 will remain in the desired position.

What I claim for my invention is:

1. A clamp to connect a first and second member, said clamp including a hollow body portion, means in said hollow portion for holding said first member, an integral extension to said hollow portion, said extension having an arcuate recess, a member pivotable on said extension, the free end closing on said hollow portion, said pivotable member having an arcuate recess which in the closed position forms an aperture with said recess of said extension, means securing said pivotable member to contain said second member in said aperture comprising a threaded sleeve secured to said hollow body portion, a threaded rod engageable with said threaded sleeve, there being a slot in said pivotable member, said rod being engageable in said slot.

(References on following page)

3

References Cited

UNITED STATES PATENTS

656,755	8/1900	Stewart.
911,411	2/1909	Lang.
1,653,763	12/1927	Gaffers.
2,066,148	12/1936	Heiber et al. ---- 24—248.2 XR
2,086,312	7/1937	Brandel.
2,222,965	11/1940	Voelkel ----- 16—158 XR
3,383,739	5/1968	Pitzel.

4

FOREIGN PATENTS

1,004,184 11/1951 France.

DONALD A GRIFFIN, Primary Examiner

U.S. Cl. X.R.

24—249; 287—53.5

5