

July 2, 1963

J. P. CALLAHAN
CLAMPING DEVICE

3,096,109

Filed Jan. 29, 1962

3 Sheets-Sheet 1

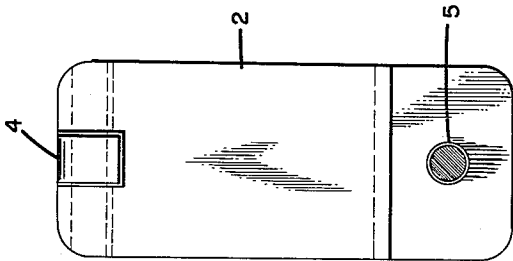
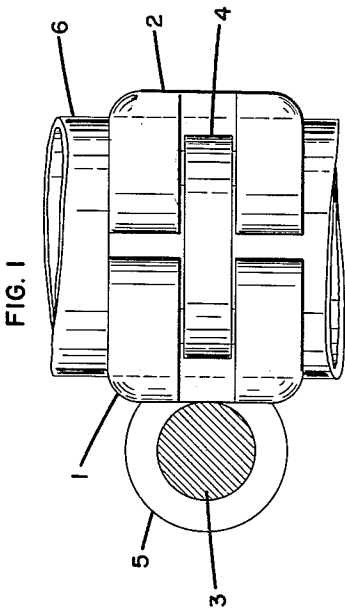


FIG. 4

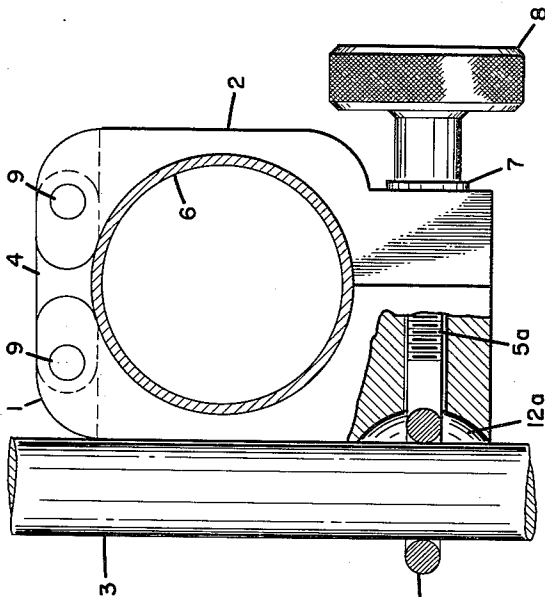


FIG. 3

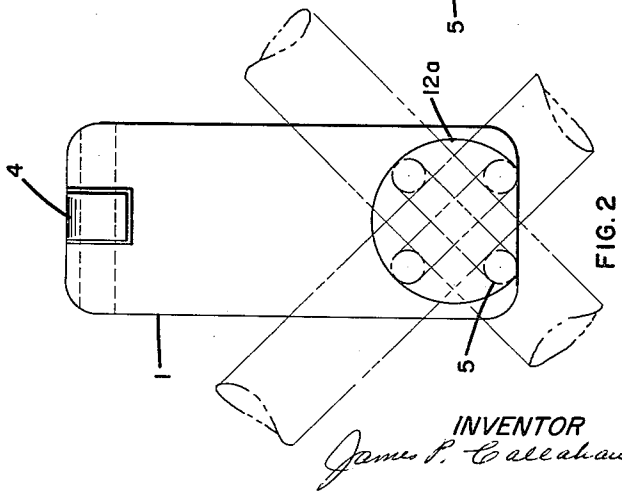


FIG. 2

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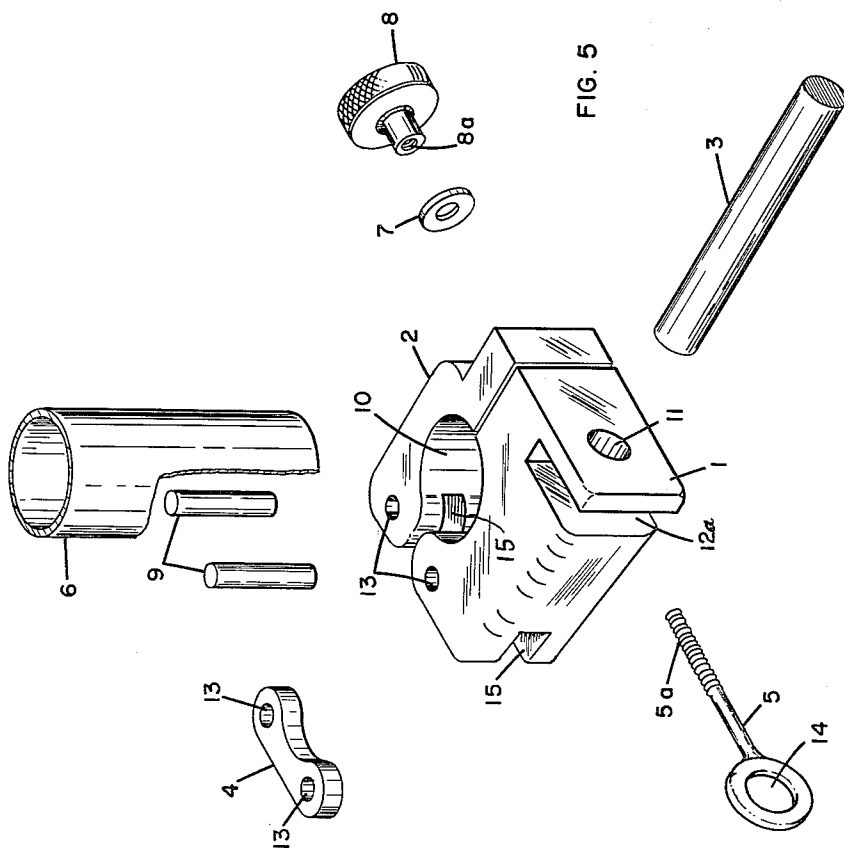
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FIG. 6

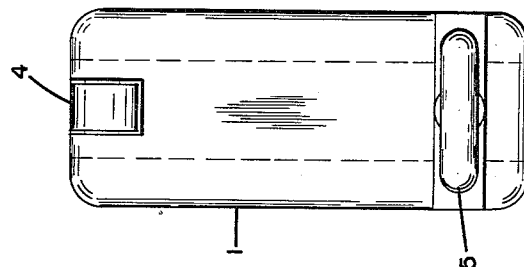
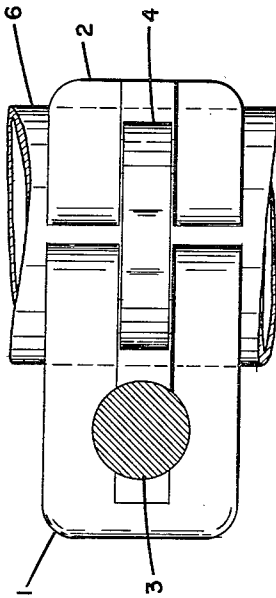


FIG. 7

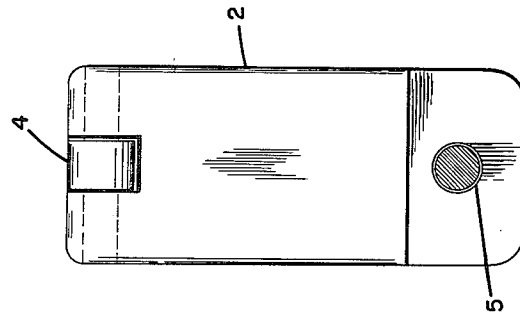


FIG. 9

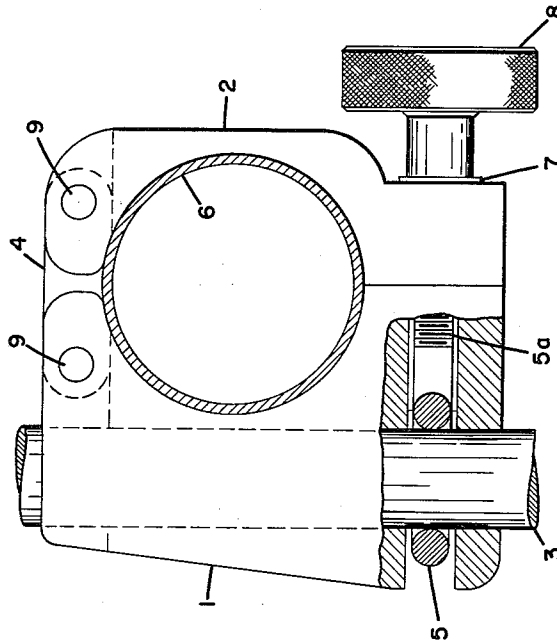


FIG. 8

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3,096,109

CLAMPING DEVICE

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1 Claim. (Cl. 287-54)

My invention relates to improvements in the construction of a clamping device for clamping one article, of known size and shape at any position disposed to another article of known size and shape.

My invention holds and secures temporarily and or permanently any two similar or dissimilar known size bars, rods, pipes, cables, ropes or tubes that are made triangular, round, square, octagon or any other shape.

The novel feature of my clamping device invention is that it is so constructed that the articles and or members to be held are secured by my device, when they are disposed at any position one to another, from zero degree to three hundred and sixty degrees, therefore offering increased utility and greater latitude of adjustments of the articles and or members to be clamped. My invention is so constructed that it allows for the positioning of one article independently of the positioning of the second article thus allowing for greater range and ease of adjustment of the articles to be positioned and clamped.

Heretofore clamping devices have been designed to temporarily hold two articles at right angles, one to another.

My clamping device invention consists of a block made into two sections; a hinge bar; two bearing pins; an eyebolt; a washer and a knob.

My clamping device is made of wood, plastic, any type metal, rubber, or any combination of said materials.

My clamping device is constructed with or without padding agents.

My clamping device block is made of sizes ranging from one fourth inch square block to an unlimited size square block, depending upon the known size and shape of the articles and or members to be held in said device.

My clamping device is adjusted to said articles at any desired position, quickly, easily, accurately, efficiently, and effectively. My invention is adjusted to any suitable apparatus which must often be changed in shape, such as: scaffolding, or any other structure requiring use of said clamp. My invention is used for any suitable apparatus which must be assembled quickly, easily, accurately, efficiently and effectively and disassembled under the same conditions.

My invention will be understood from the following complete description and with reference to the accompanying drawings:

FIG. 1 is a top view showing the position of the hinge bar 4; the article 6 held; section 1 and 2; the eyebolt 5 with a sectional view of the article 3 held in said eyebolt 5. FIG. 2 is a side view showing the three hundred sixty degree pivoting action of the article 3 held by the eyebolt 5. FIG. 3 is a sectional view with the clamping device in a closed position. FIG. 4 is a side view opposite that of FIG. 2. FIG. 5 is an exploded, unassembled condition of the clamping device. This view also shows the modified construction of section 1. FIG. 6 is a top view of the modified construction. FIG. 7 is a side view of the modified construction. FIG. 8 is a modified construction sectional view of the clamping device in a closed condition. FIG. 9 is a side view opposite that of FIG. 7.

Referring to FIGS. 1, 2, 3, 4, 5, 6, 7, 8, 9 of the drawings it can be clearly seen that my clamping device invention consists of a two-part block that is made into two sections; section 1 and section 2; an aligned longitudinal slot 15 on section 1 and an aligned slot on section 2; a

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hinge bar 4 placed in said slot 15; two holes 13 made in the hinge bar 4; one hole 13 made transversely in section 1 and one hole 13 made transversely in section 2; the bearing pins 9 are placed in the holes 13 of section 1 and 2; the bearing pins 9 are also placed in holes 13 of the hinge bar 4; the bearing pins 9 are used to secure said hinge bar 4 to section 1 and section 2 as well as to provide a hinging action upon sections 1 and 2; a recess 10 of known size and shape is made in the inner wall of section 1; a recess 10 of known size and shape is made in the inner wall of section 2; said recesses 10 are made to conform to the contour of the article 6 held and clamped in said clamping device; a slot 12a of known size is made on an outer side of section 1 for the seating of the head of the eyebolt 5 and of said eyebolt 5; a hole, starting at the center of said recess 12a, of known size is made longitudinally through section 1 and section 2 for carrying eyebolt 5; the opening 14 of the eyebolt 5 is made to conform to the contour and size of the article 3 to be held in said eyebolt 5; a washer 7 is placed on the threaded end of 5a of the eyebolt 5; a threaded knob 8 is screwed onto said threaded 5a eyebolt 5; in the modified construction of section 1 of the clamping device hole 11 of known size and shape is made vertically in section 1 to carry the article 3; in the modified construction of section 1 of the clamping device a slot 12 of known size is made to carry the eyebolt 5.

Therefore it can readily be seen that the clamping action upon the two articles held in the device is achieved by screwing the knob 8 against the washer 7 which in turn applies pressure against the outer side of section 2, which in turn again creates a pulling action upon the eyebolt 5 thus producing a clamping action upon the article 3 that is held in the opening 14 of the eyebolt 5; the screw-action of the knob 8, at the same time, moves the article 3 that is held in the opening 14 of the eyebolt against the outer side of section 1; the continued tightening action applied to the knob 8 onto the threaded end 5a of the eyebolt 5 also causes the block sections 1 and 2 to move toward each other thus producing a clamping action by section 1 and section 2 upon the article 6 that is held in the recess 10 bearing surface of the inner wall of said sections 1 and 2.

The attached drawings illustrate clearly two dissimilar size cylindrical articles held in the clamping device—one a rod 3 and the other a tube 6. The recess 10 made in sections 1 and 2, and the opening 14 in the eyebolt 5 are contoured to conform to the various shaped articles held in said clamp, such as; octagon, triangular, square, cylindrical and any other shapes. The hole 11 made in the modified construction of section 1 also conforms to the shape of the articles 3 held in said clamping device.

What I do claim as my invention and desire to obtain by Letters Patent is:

A clamping device for securing in a selected angular relation two elongated articles; said device being comprised of a block assembly having two sections, said sections being disposed in side by side relation and formed at one end with registering slots in aligned end faces of the sections, a hinge bar fitted into said slots, pins fitted into aligned holes in the hinge bar and in the sections for hingedly connecting said sections, a further slot adjacent the other end and formed in an outer side of one of said sections, an eyebolt having a shank extending through aligned openings in both sections and with its head received in said further slot, a further opening in said one of said sections transversely to said further slot, a first article to be clamped extending through said further opening and having one end received in the eye of said eyebolt, the inner facing walls of said sections having concave portions jointly defining a recess intermediate and

transverse of the facing walls of said sections for receiving a second article in angular relation to said first article, a washer and a threaded knob screwed onto the free end of said eyebolt shank for drawing together the two block sections in embracing and clamping relation to the two said articles. 5

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