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G. B. STILLWAGON, JR

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PINNING CONSTRUCTION FOR UNIVERSAL JOINT

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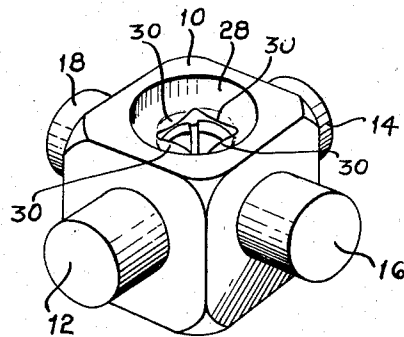
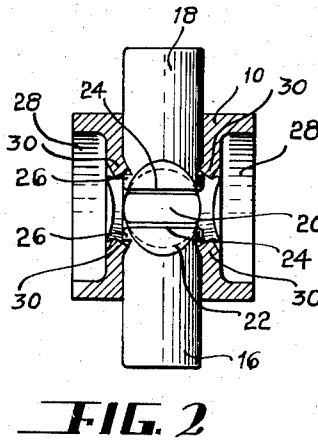
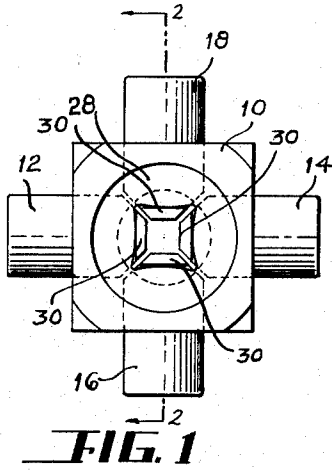


FIG. 3

INVENTOR.

GEORGE B. STILLWAGON JR.

BY

George B. Stillwagon Jr.

HIS ATTORNEYS

1

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George B. Stillwagon, Jr., Dayton, Ohio, assignor of one-half to Kenneth G. Fraser, Dayton, Ohio

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5 Claims. (Cl. 64—17)

This invention relates to pinning construction for universal joints, and more particularly to an improved central block and arm construction.

In the construction of universal joints, great difficulty is often experienced in obtaining central block and arm construction which is permanent and durable, and which can withstand the conditions of constant and heavy use.

An object of the present invention is to provide a pinning construction which is durable, and at the same time is simple and easy to construct, which is composed of a minimum number of parts, and one which will provide positive and permanent connection between the central block and the attached arms.

A further object of the invention is the provision of a spring detent attachment between the central block of a universal joint and the arms radiating therefrom, the action of which cannot be reversed, that is, the attachment becomes permanent without further machining.

A further object of the invention is the provision of a pinning construction that is easily assembled in a block by snapping the arms into place.

In the use of the pinning construction of this invention, it is to be understood that the device is adapted for use in any position deemed desirable, but for purposes of clarity, and for understanding the figures of the drawing as they relate to one another, one particular portion of the device will be referred to as "the top," and the remaining portions of the description will be described in this relation.

Other objects and advantages reside in the construction of parts, the combination thereof and the mode of operation, as will become more apparent from the following description.

In the drawing, Figure 1 is a top plan view of the pinning construction.

Figure 2 is a vertical section taken on the line 2—2 of Figure 1.

Figure 3 is a perspective view.

Referring more in detail to the drawing, a central block 10 is provided upon each of the four of its lateral faces with an outwardly extending arm. These arms are designated 12, 14, 16 and 18. The inner ends of these arms are beveled inwardly at diametrically opposed positions, as shown at 22 in Figure 2, to form substantially rectangular sections. The edges of these sections are shown at 24 on the arms 16 and 18, and the end of the arm 12 is shown at 20 in Figure 2. The ends of the rectangular sections 20 and 24 are provided with undercut notches which provide pairs of ears or detents 26 on each of the members 12, 14, 16 and 18.

The block member 10 is provided with right angular intersecting borings terminating at the midportion of each of its four lateral faces, and an annular recessed portion 28 on its top and bottom portions. As clearly shown in the drawing, a rectangular aperture is punched, or otherwise cut, in the base of each recessed portion 28, the rectangular apertures providing an opening from each

2

recessed portion 28 to the intersecting borings. The margins of the base adjacent the aperture therein provide lips 30 which are swaged, or otherwise depressed, into the borings. Two pairs of lips 30, there being two lips projecting into each boring, are created in the base of each recessed portion 28 in this manner. The lips 30 are adapted to engage within the notches in the members 12, 14, 16 and 18, and behind the ears 26. Thus, the arms 12, 14, 16 and 18 are retained in place so that they cannot become disengaged from the borings. The connection thus formed is permanent.

The head 10 may be tempered, and the lips 30 may thus be tempered springs, ready for a spring engagement behind the ears or detents 26, or the lips 30 can be swaged into the several notches after the notched arm members 12, 14, 16 and 18 have been inserted in place.

Although the preferred embodiment of the device has been described, it will be understood that within the purview of this invention various changes may be made in the form, details, proportion and arrangement of parts, the combination thereof and mode of operation, which generally stated consist in a device capable of carrying out the objects set forth, as disclosed and defined in the appended claims.

Having thus described my invention, I claim:

1. A pinning construction for a universal joint comprising a central block provided with two right angularly disposed intersecting borings, said block being provided at its top and bottom surfaces with recesses having apertured bases, the apertures in said bases communicating with said intersecting borings, the marginal portions of each said base adjacent the aperture therein being depressed inwardly to provide lips projecting into said borings, there being one pair of lips disposed in the base of each said recess projecting into each said boring, and a plurality of arms, there being one arm journaled in each of the opposite ends of each said boring and having a portion projecting from said block, each said arm having notched portions adjacent the inward ends thereof for engaging a pair of said lips, said notched portions and said lips cooperating to retain said arms in said block.

2. A pinning construction for universal joints comprising a central block having two right angularly disposed intersecting borings therein, means providing an aperture in said block communicating with said borings, said block having swaged portions adjacent said aperture providing lips projecting into said borings, there being at least two lips projecting into each said boring, a plurality of arms, there being one arm journaled in each of the opposite ends of each said boring, each said arm having a notched portion adjacent the inward end thereof for engaging one of said lips, said lips and said notched portions cooperating to retain said arms in said block.

3. A pinning construction for universal joints comprising a block having a boring therein, means providing an aperture in said block communicating with said boring, said block having a swaged portion adjacent said aperture providing a lip projecting into said boring, an arm projecting into said boring, said arm having a notched portion disposed within said boring in engagement with said lip, said notched portion and said lip cooperating to retain said arm within said block.

4. A pinning construction for universal joints comprising a block provided with a plurality of borings, a plurality of arms, there being one arm journaled in the block in each said boring, said arms projecting normally from the lateral faces of said block, means providing an aperture in said block communicating with said borings, said block having swaged portions adjacent said aperture forming lips projecting into said borings, there being

3

one lip projecting into each said boring, each said arm having a notched portion disposed within said block in engagement with one of said lips, said engaged notched portions and lips cooperating to retain said arms within said block.

5. A pinning construction for universal joints comprising a block provided with a plurality of borings, arms disposed in said borings and protruding from said block, said block having swaged portions projecting into said

4

borings, and detent means integral with said arm engaging the swaged portions of said block for securing said arms in said block.

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