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**United States Patent** [19]

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**Jones**

[45] **Date of Patent:** **Feb. 1, 2000**

541 HEAT TREATING FURNACE SYSTEMS 4,608,698 8/1986 Moller et al. 373/130

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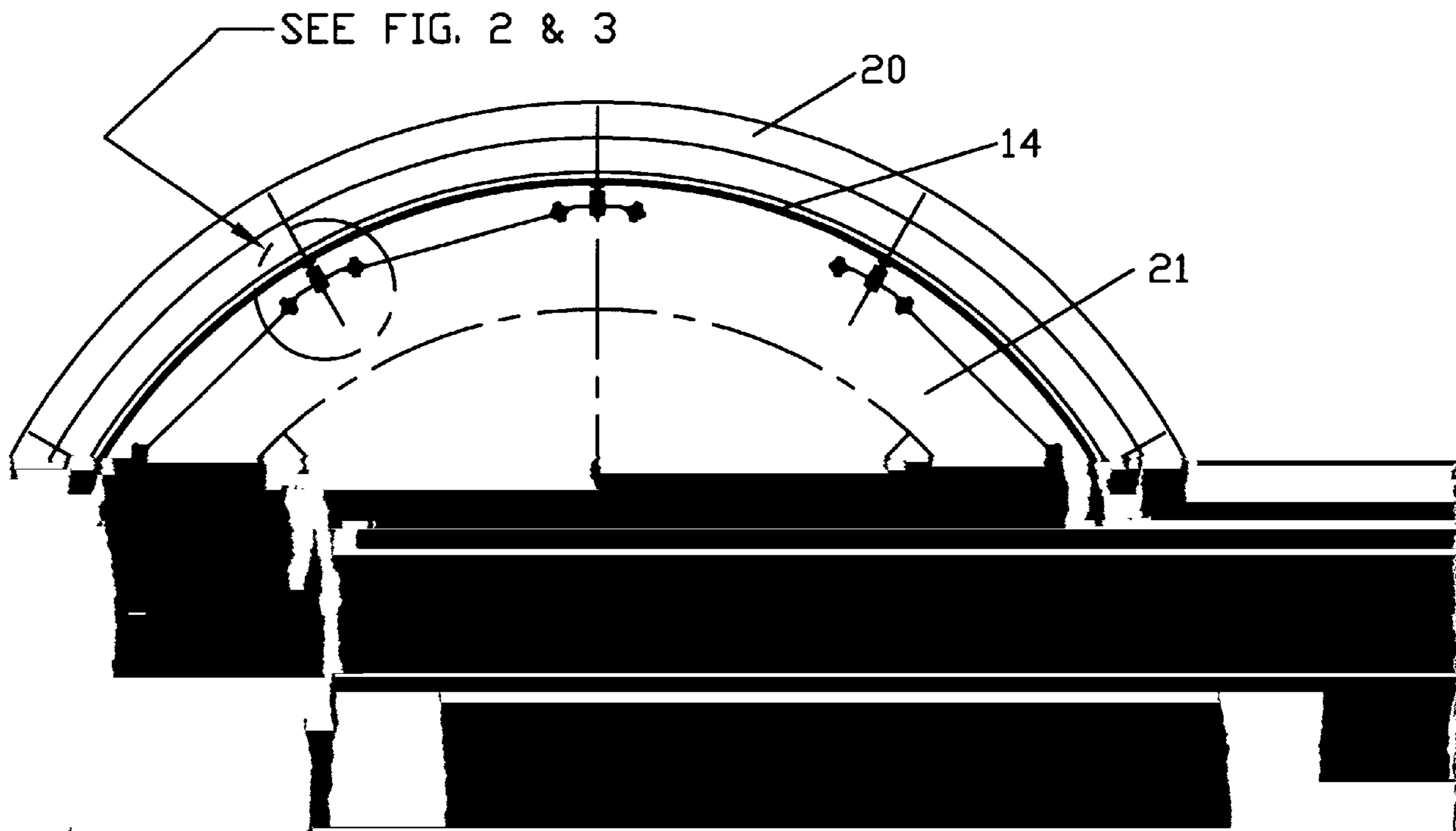
4,608,698 8/1986 Moller et al. .... 373/130  
4,612,651 9/1986 Moller et al. .... 373/130  
5,497,394 3/1996 Jhawar et al. .... 373/130

[21] Appl. No.: **09/306,217**

*Primary Examiner*—Tu Ba Hoang

[57]

**ABSTRACT**



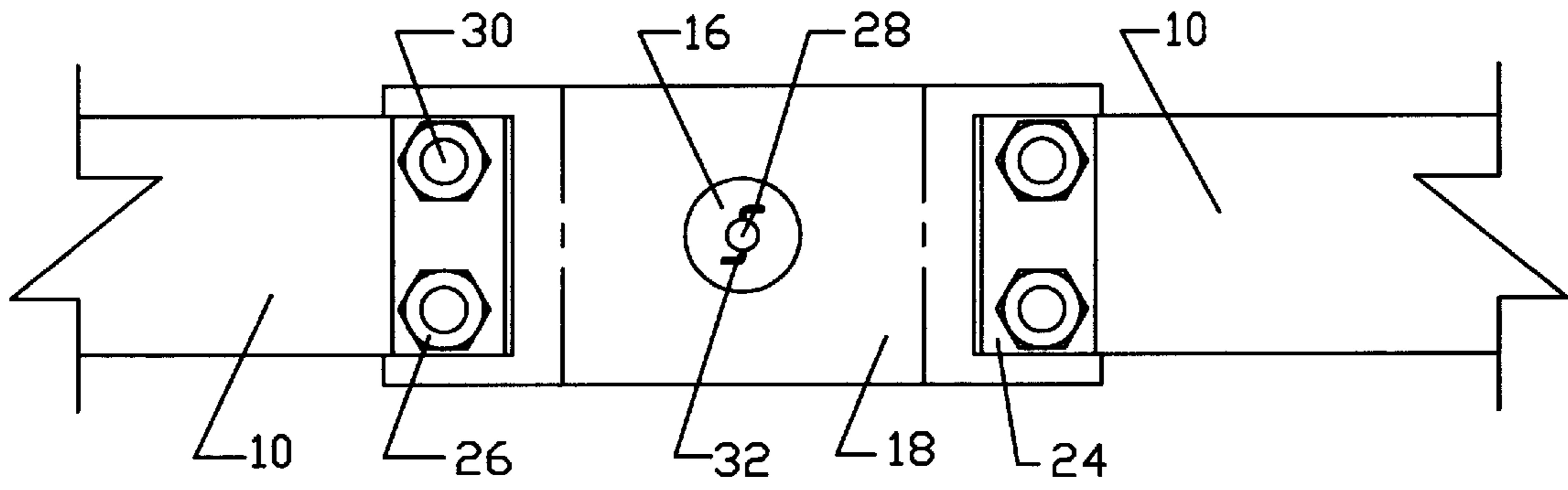


FIG. 2

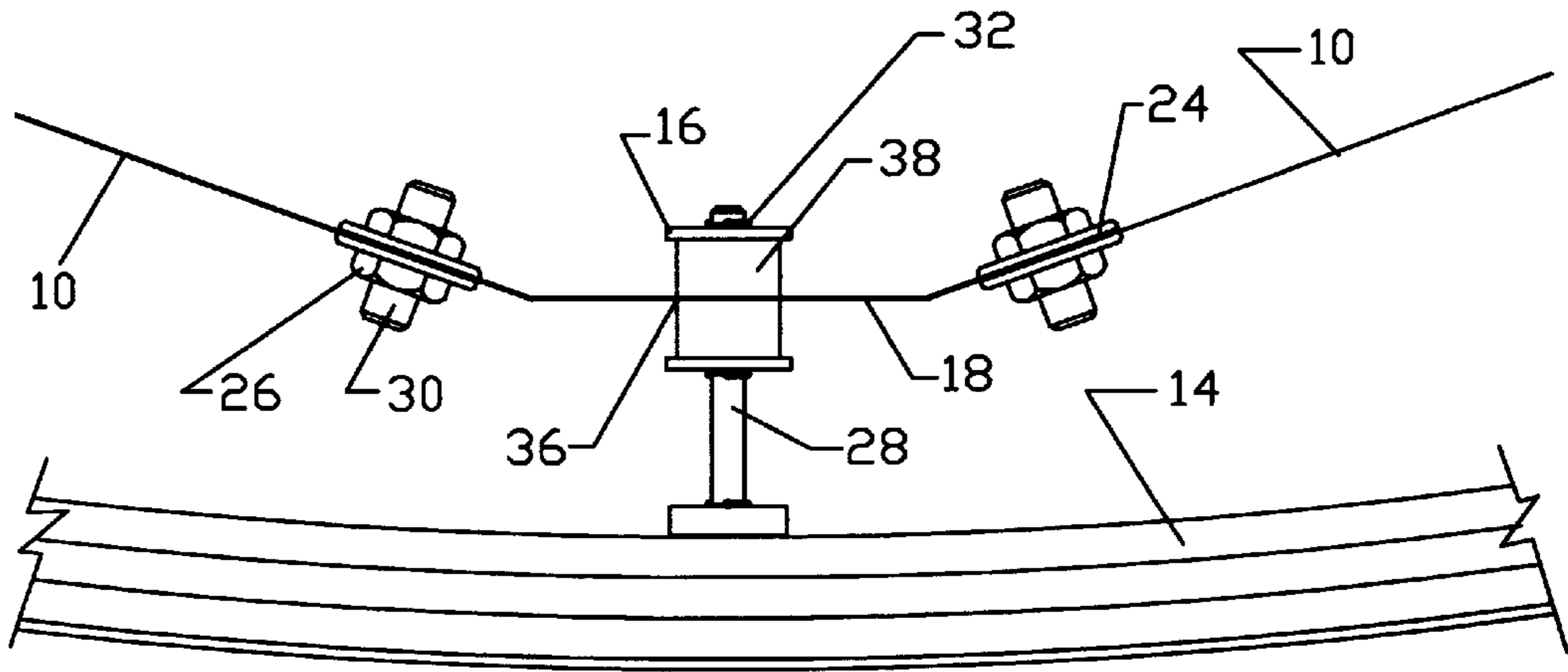


FIG. 3

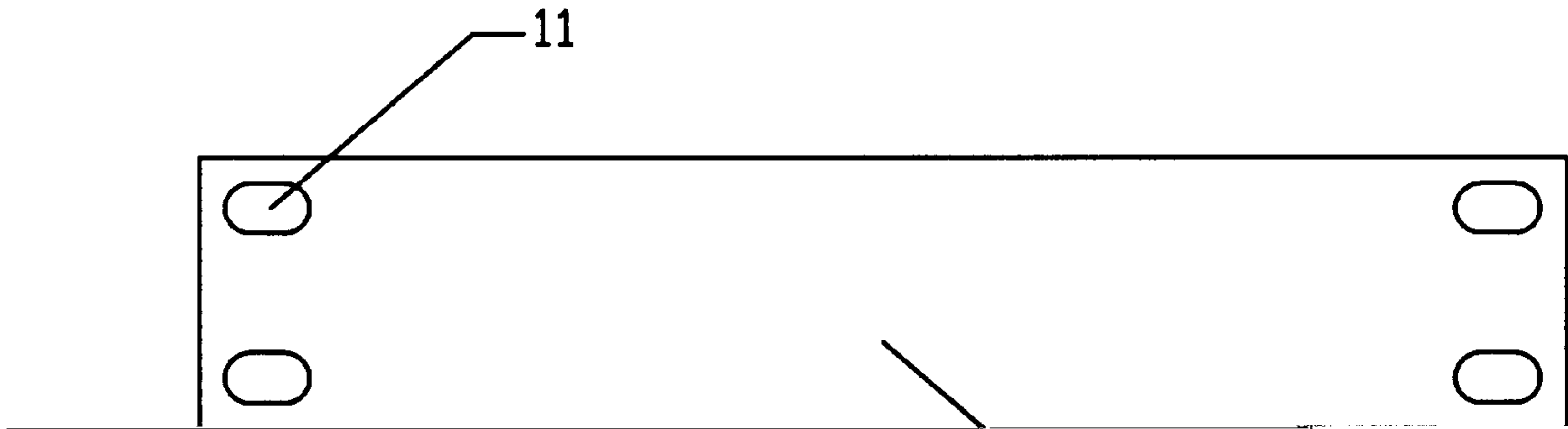


FIG. 4A

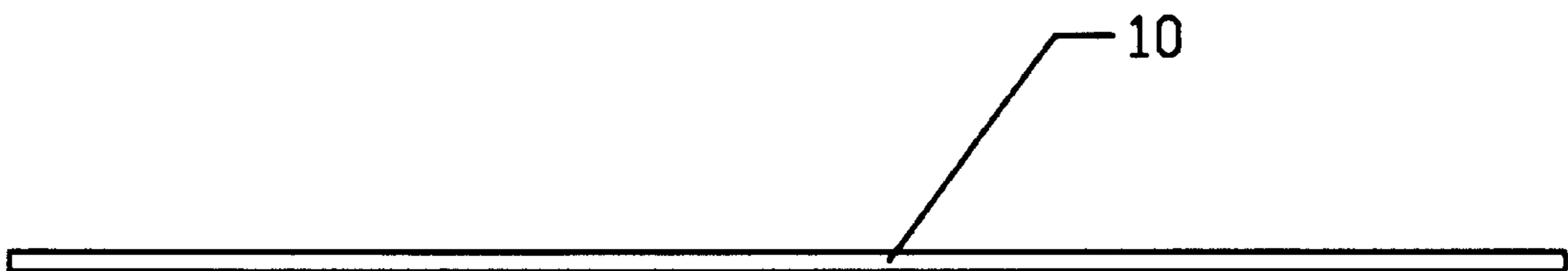


FIG. 4B

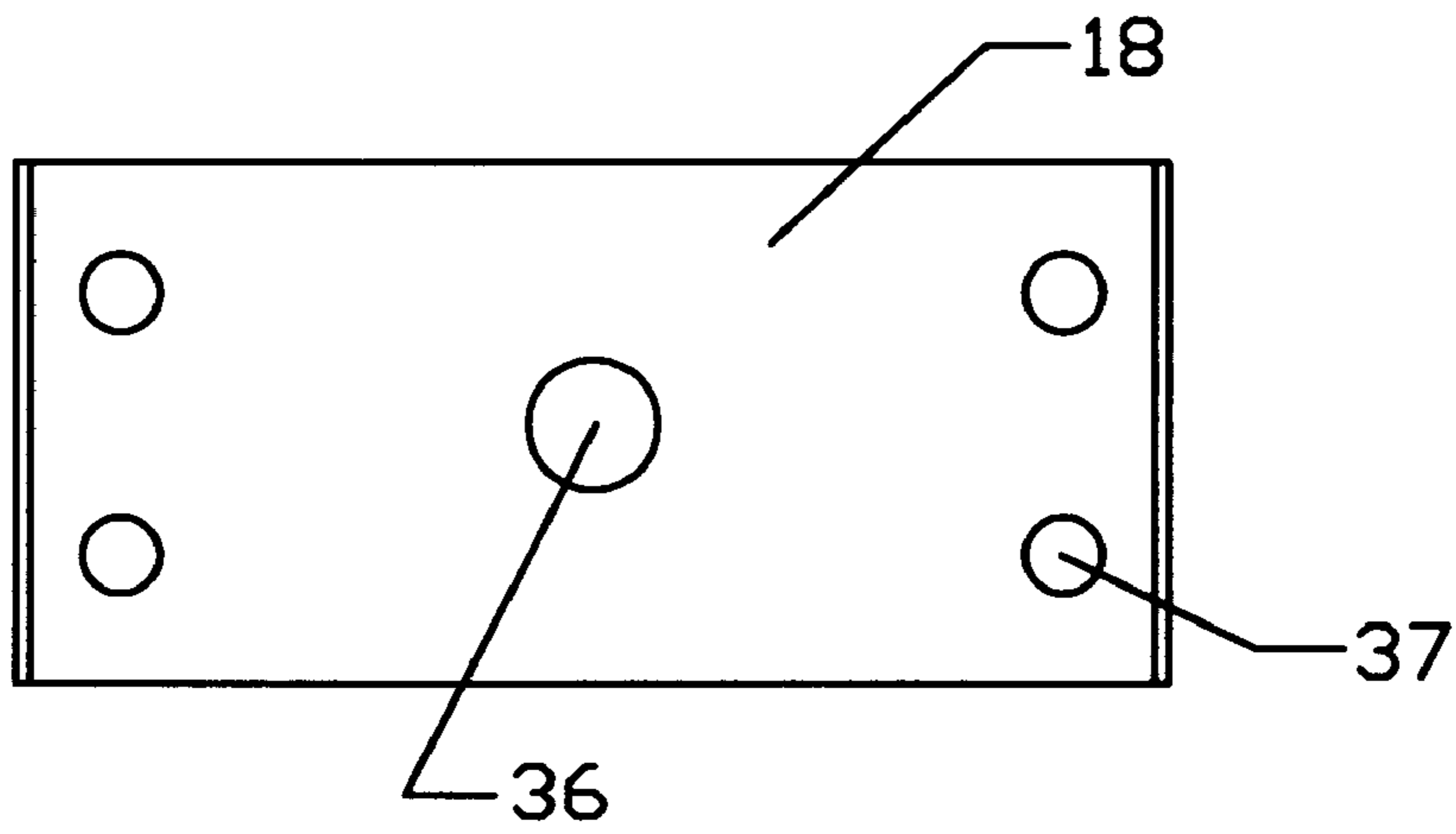


FIG. 5A

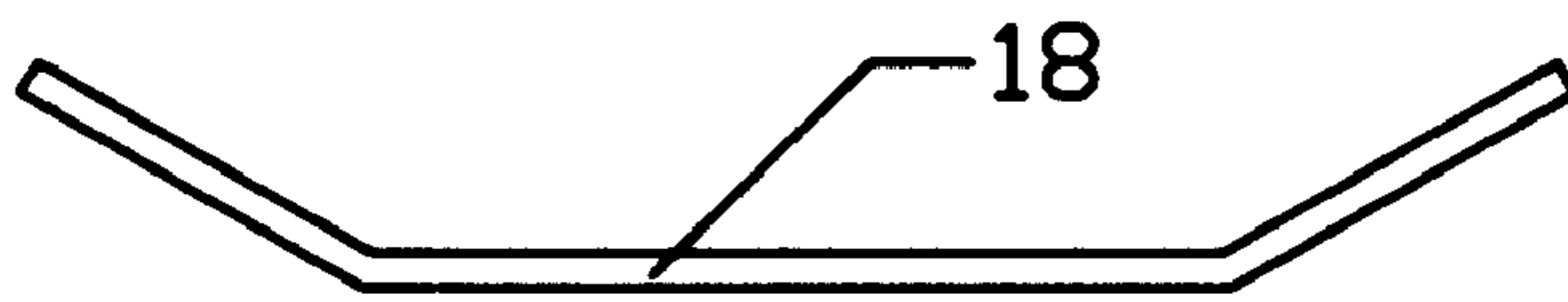


FIG. 5B

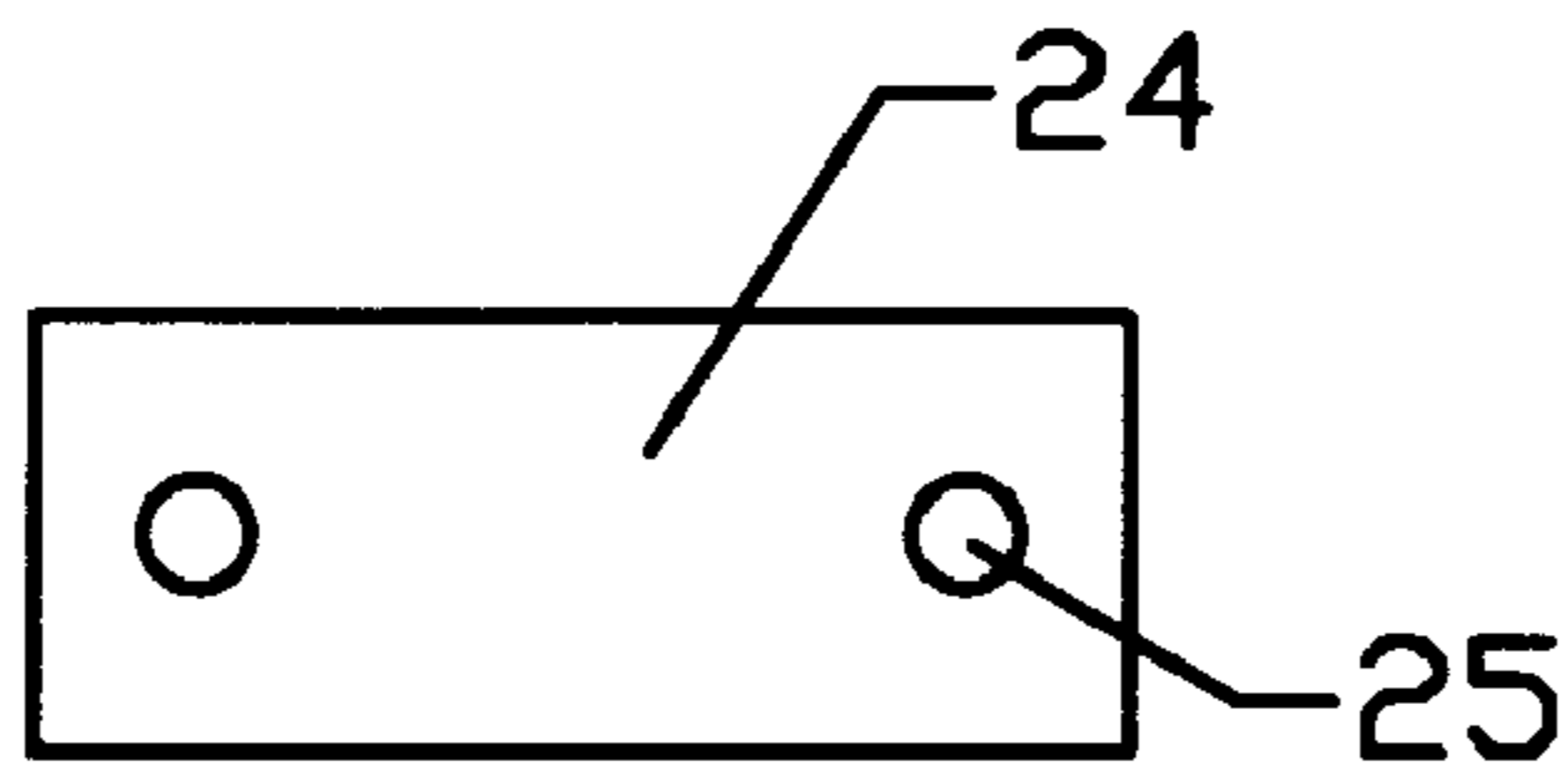


FIG. 6A



FIG. 6B

REF. TO DRAWING FIG. 1 OF DRAWING

FIG. 1 OF DRAWING

**IMPROVED HOT ZONE**

This invention is a continuation in part of U.S. Pat. No. 3,111,111, filed Dec. 15, 1964, and is hereby incorporated by reference.

contoured to provide a shape to the polygon, for example an octagon or pentagon. The polygons are connected to the inner wall of the hot zone chamber by a plurality of support

**10** to the preferred compensator bar **18** and stabilizer bars **24** through their own mounting holes **37** and **25** respectively as

disposed or approach the vertical. The advantages of using this (high width to thickness aspect ratio) elements had

compensator bars arranged to shape said polygons, a sub-

than about 53 and greater than about 15.