

(12) STANDARD PATENT APPLICATION (11) Application No. **AU 2005201748 A1**
(19) AUSTRALIAN PATENT OFFICE

(54) Title
Wheel rim with tire anti-breaking anti-knocking protection

(51)⁷ International Patent Classification(s)
B60C 017/06

(21) Application No: **2005201748** (22) Date of Filing: **2005.04.27**

(30) Priority Data

(31)	Number 10/834,910	(32)	Date 2004.04.30	(33)	Country US
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(43) Publication Date: 2005.11.17
(43) Publication Journal Date: 2005.11.17

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WHEEL RIM WITH TIRE ANTI-BREAKING ANTI-KNOCKING PROTECTION

5 ABSTRACT OF THE DISCLOSURE

A wheel rim is constructed to include a wheel rim body holding a tire, and a supplementary tire support mounted on a flange around the periphery of the wheel rim body for supporting the tire for enabling the car to run to a repair shop in case the tire is broken during running.

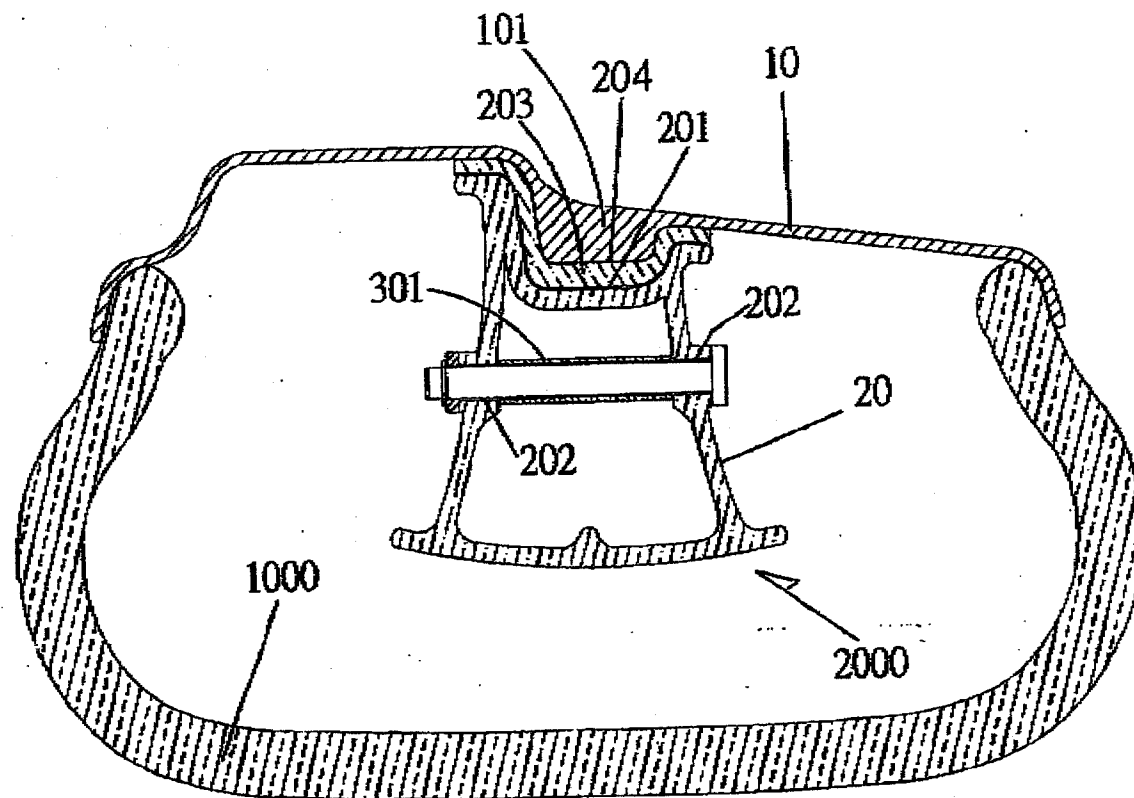


FIG.1

AUSTRALIA

Patents Act 1990

COMPLETE SPECIFICATION

STANDARD PATENT

APPLICANT: **YUEH NU CHEN**

Invention Title: **WHEEL RIM WITH TIRE ANTI-BREAKING
ANTI-KNOCKING PROTECTION**

The following statement is a full description of this invention, including the best method of performing it known to me:

WHEEL RIM WITH TIRE ANTI- BREAKING ANTI - KNOCKING PROTECTION

BACKGROUND OF THE INVENTION

5 1. Field of the Invention

The present invention relates generally to a wheel rim and more particularly, to a wheel rim with tire anti-breaking anti-knocking protection.

2. Description of the Related Art

When the tire of a vehicle wheel is inflated, high-pressure air supports
10 the tire in shape for running on the road. If a pointed body pierced the tire, the broken tire becomes unable to support the vehicle wheel for normal running on the road, and the broken tire must be repaired immediately. However, it is dangerous if one of the wheels of a vehicle is broken during a high speed running.

15 SUMMARY OF THE INVENTION

The present invention has been accomplished under the circumstances in view. It is the main object of the present invention to provide a wheel rim for vehicle tire, which supports the tire in shape for enabling the car to run to a repair shop in case the tire is broken during running. To achieve this and other objects of the present
20 invention, the wheel rim comprises a wheel rim body holding a tire, the wheel rim body having a flange extended around the periphery thereof on the middle, and a supplementary tire support mounted on the flange of the wheel rim body and adapted to support the tire in shape in case the tire is broken during running. The supplementary tire support is comprised of a plurality of joint blocks, a
25 plurality of links that connect the joint blocks in series, and two end connecting

members that join the ends of the series of joint blocks:

BRIEF DESCRIPTION OF THE DRAWINGS

FIG. 1 is a cross sectional view of the preferred embodiment of the present invention.

5 FIG. 1A is an exploded view of a joint block according to the present invention.

FIG. 2 is an exploded view of a part of a supplementary tire support according to the present invention.

10 FIG. 3 is an exploded view of another part of the supplementary tire support according to the present invention.

FIG. 4 is a cross sectional view of a vehicle wheel constructed according to the present invention.

15 FIG. 5 is a schematic drawing showing the broken tire supported on the supplementary tire support around the wheel rim according to the present invention.

DETAILED DESCRIPTION OF THE INVENTION

Referring to FIGS. 1~4, a wheel rim with tire anti-knocking anti-breaking protection in accordance with the present invention is shown comprised of a wheel rim body **10**, and a supplementary tire support **200** mounted around the periphery of the wheel rim body **10**. The supplementary tire support **200** is comprised of a plurality of joint blocks **20**, a plurality of links **30**, a first end connecting member **40**, a second end connecting member **40a**, and a screw bolt **50**.

25 The wheel rim body **10** comprises a flange **101** extended around the periphery on the middle (see FIG. 1). The cross section of the flange **101** can be

made having any of a variety of shapes.

The joint blocks **20** are hollow block members (see FIGS. 1A and 2), each having a top recess **201** fixedly mounted with a packing pad **203**, and two pairs of through holes **202** axially aligned at two opposite lateral sides. The
5 packing pad **203** has a recessed portion **204** fitting the flange **101** of the wheel rim body **10**.

The links **30** connect the joint blocks **20** in series, each comprising two barrels **301** transversely disposed at two ends (see FIG. 2).

The first end connecting member **40** and the second end connecting
10 member **40a** are connected together to join the ends of the series of joint blocks **20** (see FIG. 4). The first end connecting member **40** comprises a U-shaped base frame **402**, a transverse barrel **401** connected to the ends of the U-shaped base frame **402**, and a screw hole **403** extended through a middle part of the U-shaped base frame **402** (see FIG. 3). The second end connecting member **40a**
15 comprises a U-shaped base frame **402**, two barrels **401** respectively connected to the ends of the U-shaped base frame **402**, and a through hole **403a** extended through a middle part of the U-shaped base frame **402** (see FIG. 3).

The screw bolt **50** is inserted through the through hole **403a** of the second end connecting member **40a** and threaded into the screw hole **403** of the
20 first end connecting member **40** to secure the first end connecting member **40** and the second end connecting member **40a** together, having a polygonal shoulder **501** for the grasping of a wrench or the like that is used to drive the screw bolt **50** into the screw hole **403** of the first end connecting member **40** (see FIG. 3).

25 Referring to FIGS. 1~4 again, by means of connecting the barrels

301 of the links 30 and the barrels 401 of the end connecting members 40; 40a to the through holes 202 of the joint blocks 20 with screw bolts, the rim support 200 and the joint blocks 20 with the links 30 and the end connecting members 40; 40a are fastened together, thereby forming the desired supplementary tire support 2000 around the periphery of the wheel rim body 10 within the tire 1000.

Referring to FIG. 5, when the tire 1000 is broken, the supplementary tire support 2000 supports the broken tire 1000, enabling the driver to drive the car to a vehicle repair shop for repair.

10 Although a particular embodiment of the invention has been described in detail for purposes of illustration, various modifications and enhancements may be made without departing from the spirit and scope of the invention. Accordingly, the invention is not to be limited except as by the appended claims.

Throughout this specification and the claims which follow, unless the
15 context requires otherwise, the word "comprise", and variations such as "comprises" and "comprising", will be understood to imply the inclusion of a stated integer or step or group of integers or steps but not the exclusion of any other integer or step or group of integers or steps.

The reference to any prior art in this specification is not, and should
20 not be taken as, an acknowledgement or any form of suggestion that the prior art forms part of the common general knowledge in Australia.

WHAT IS CLAIMED IS:

1. A wheel rim comprising a wheel rim body holding a tire, said wheel rim body comprising a flange extended around the periphery thereof, and a supplementary tire support mounted on said flange of said wheel rim body and
5 adapted to support said tire in shape in case said tire is broken during running, said supplementary tire support comprising:

a plurality of joint blocks, said joint blocks each having a top recess fixedly mounted with a packing pad that fits over said flange of said wheel rim body, and two pairs of through holes axially aligned at two opposite lateral sides
10 thereof;

a plurality of links adapted to connect said joint blocks into a series of joint blocks, said links each having two barrels transversely disposed at two ends thereof and connectable to the through holes of said joint blocks with screw bolts;

15 a first end connecting member and a second end connecting member adapted to join the ends of said series of joint blocks, said first end connecting member and said second end connecting members each comprising a U-shaped base frame and at least one transverse barrel connected to two distal ends of said U-shaped base frame and connectable to the through holes of said joint blocks
20 with screw bolts, said U-shaped base frame having a mounting hole in the middle, the mounting hole of the U-shaped base frame of said first end connecting member being connected to the mounting hole of the U-shaped base frame of said second end connecting member with a screw bolt.

25 2. A wheel rim substantially as herein described.

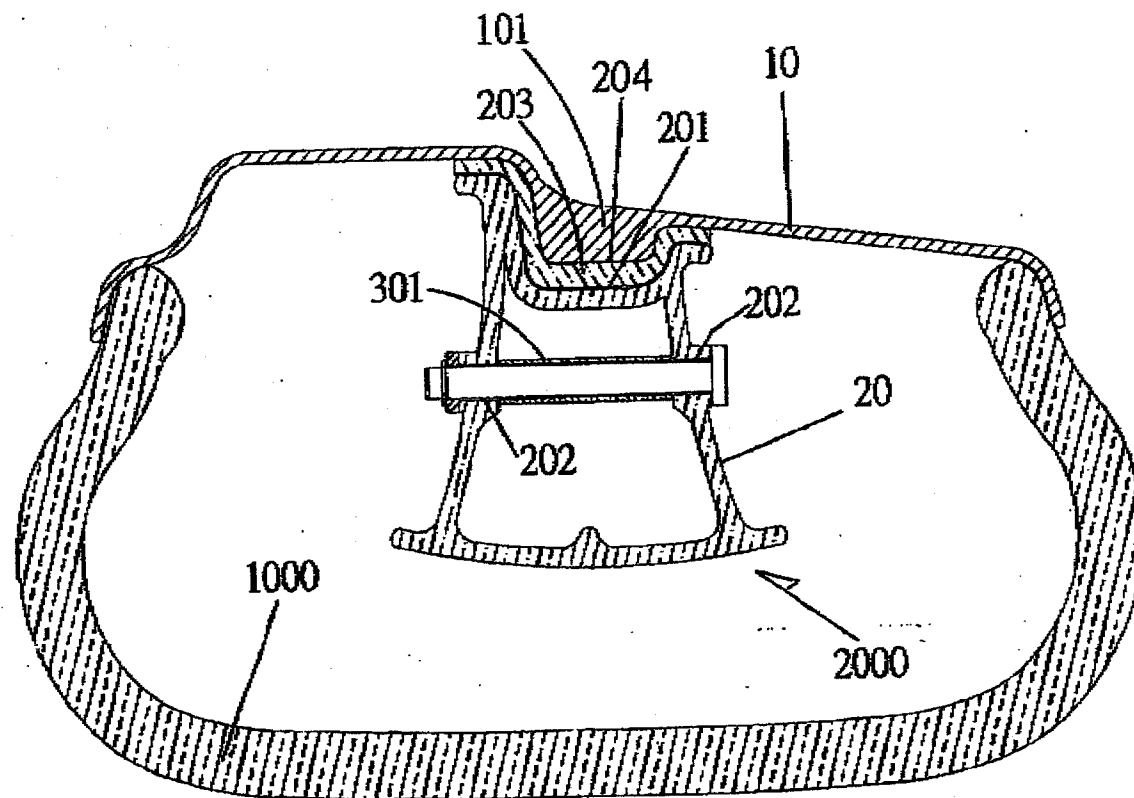


FIG.1

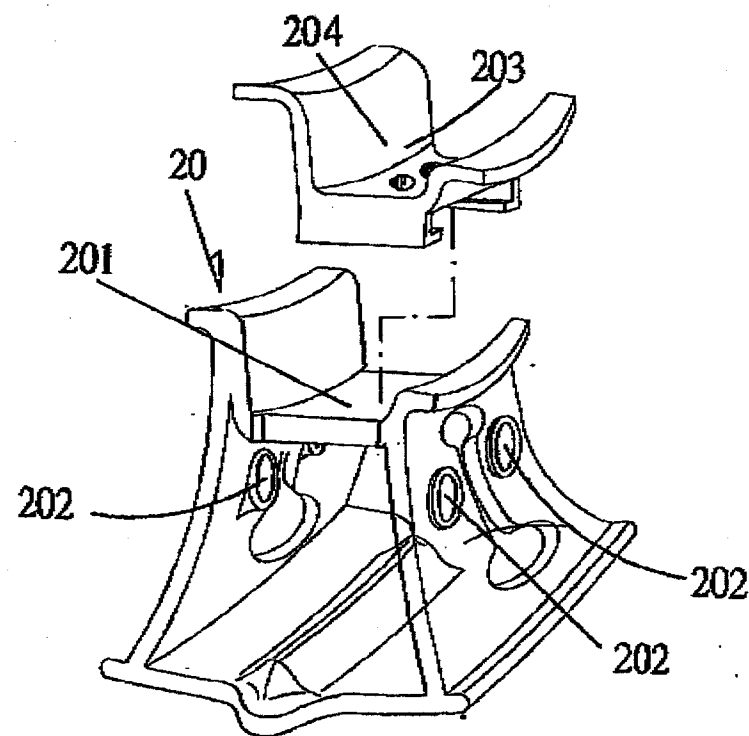


FIG.1A

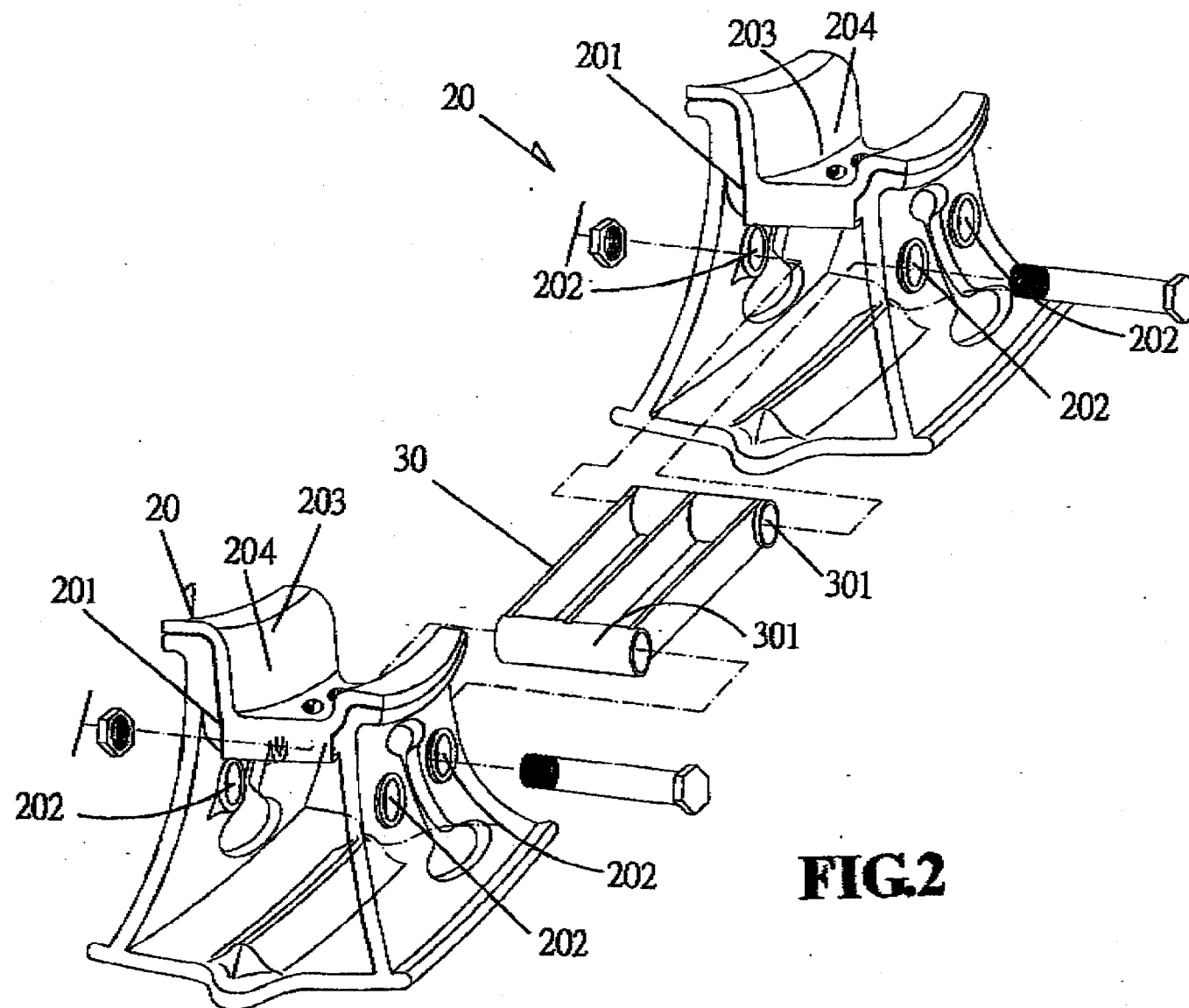


FIG.2

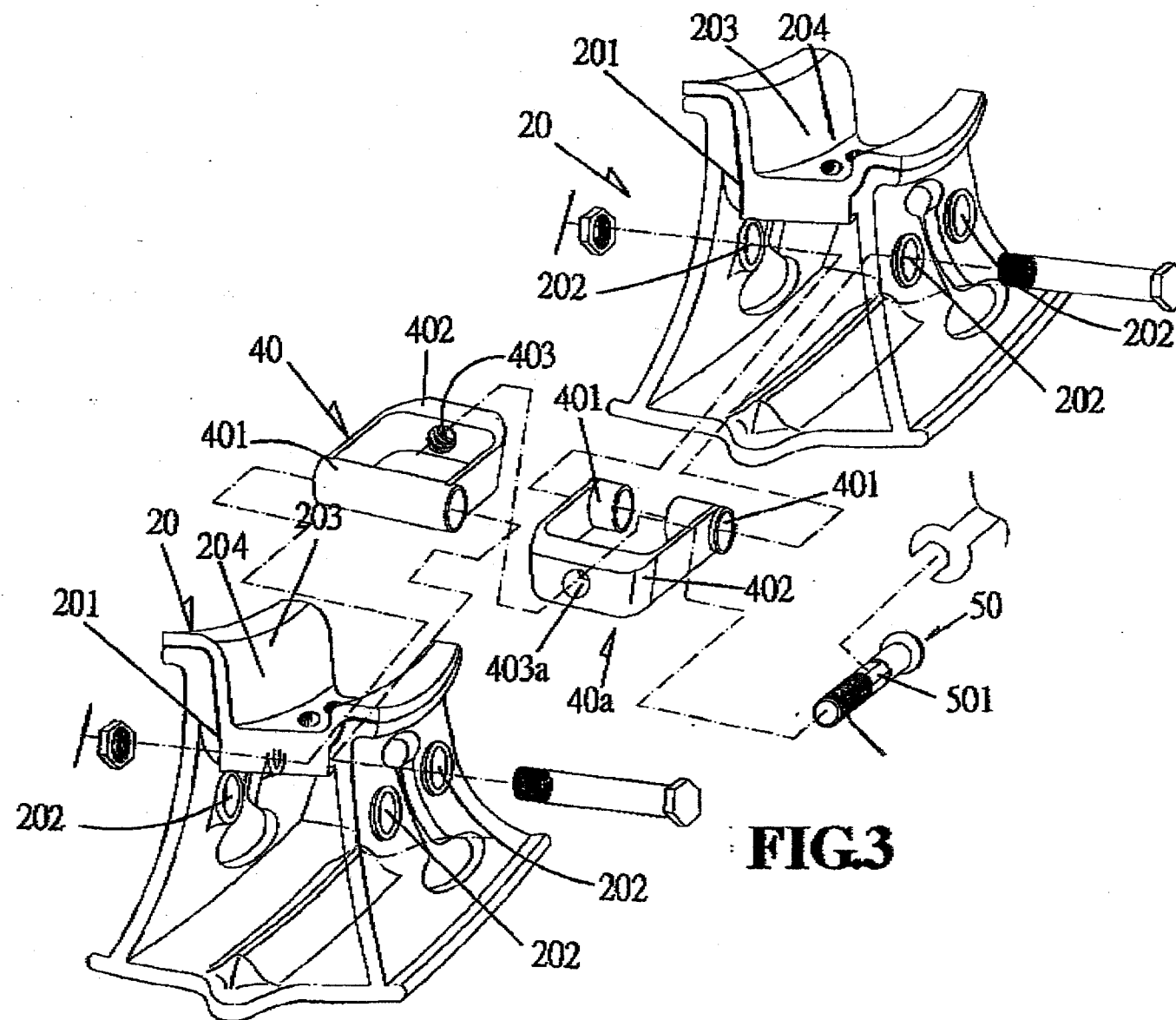


FIG.3

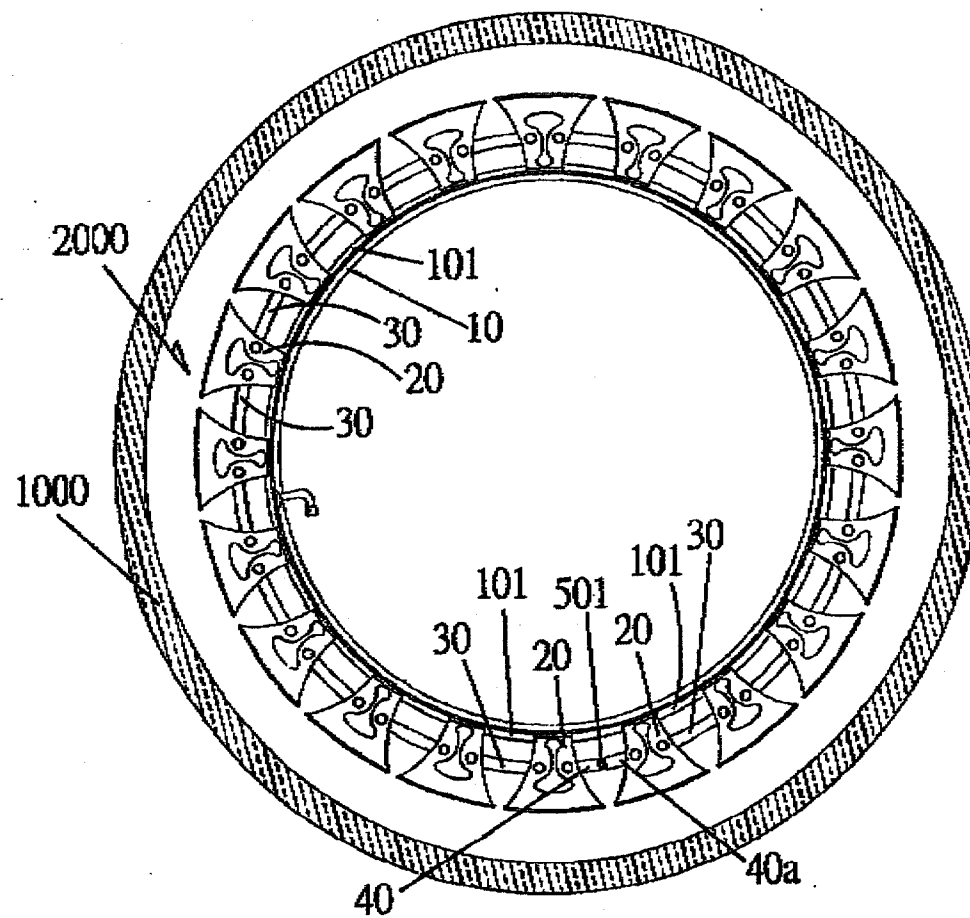


FIG. 4

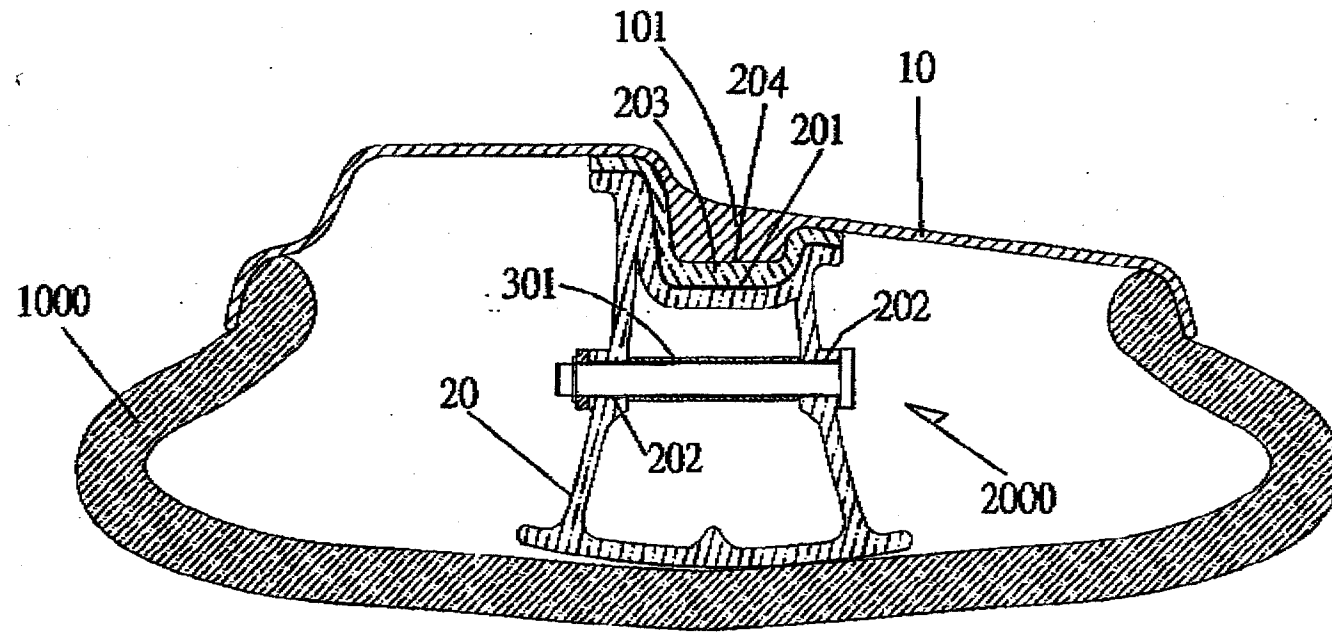


FIG.5