(12) UK Patent Application (19) GB (11) 2 257 208 (13) A

(43) Date of A publication 06.01.1993

(21) Application No 9114230.7

(22) Date of filing 02.07.1991

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(51) INT CL[5]
F16J 15/10

(52) UK CL (Edition L)
F2B B1B B1G

(56) Documents cited
GB 1440665 A GB 1243547 A

(58) Field of search
UK CL (Edition K) F2B
INT CL[5] F16J

(54) Mud-resisting cover for over-speed bearing of bicycle

(57) A mud-resisting cover is mountable on a rear sprocket assembly of a bicycle for protecting a fly wheel from mud. The mud-resisting cover includes a base 10 defining a hole 20, an inner periphery 30 extending around the hole, an outer periphery 40 extending outside and around the inner periphery to an inside of a rim of the base, and a plurality of ribs 50 formed on an outer surface of the outer periphery.

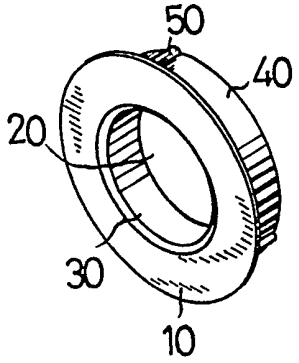

FIG. 1

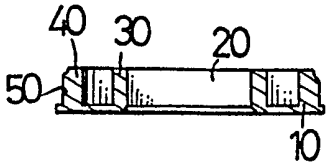

FIG. 2

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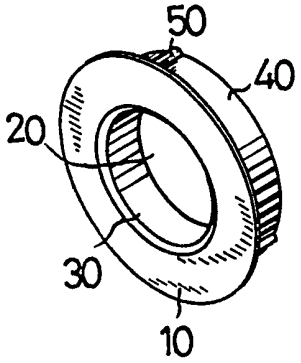

FIG. 1

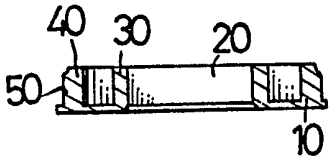

FIG. 2

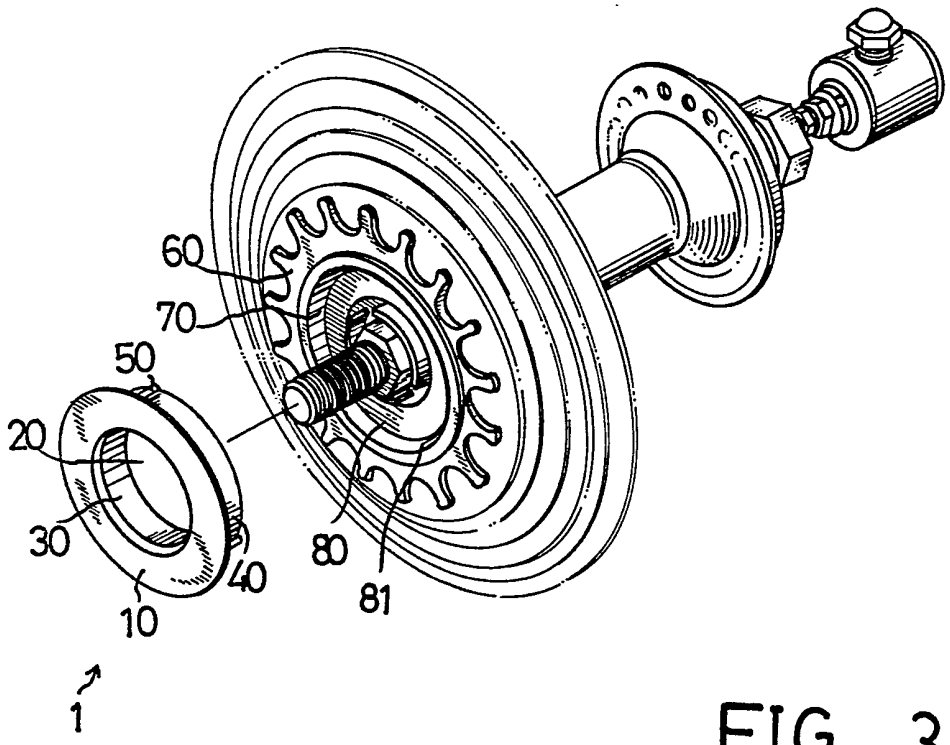

FIG. 3

TITLE: MUD-RESISTING COVER FOR OVER-SPEED BEARING OF BICYCLE

BACKGROUND OF THE INVENTION

The present invention relates to a mud-resisting cover for an over-speed bearing of a bicycle.

Referring to FIG. 3, an axle 90 is securely mounted on a bicycle (not shown). A fly wheel, to which a wheel (not shown) of a bicycle is fixed, is rotatably mounted on the axle 90 through a first bearing (not shown). An over-speed bearing 80 is fixed to the fly wheel. A rear sprocket collar 70 is mounted on the over-speed bearing 80, thus defining a clearance 81 therebetween. The over-speed bearing 80 does not rotate counter-clockwise relative to the sprocket collar 70, yet rotates counter-clockwise relative to the rear sprocket collar 70. A rear sprocket cluster 60 is fixed to the sprocket collar 70.

While pedaling, a rider actuates a front sprocket cluster (not shown), thereby rotating the rear sprocket cluster 60 through a chain (not shown). Therefore, the rear sprocket cluster 60, through the sprocket collar 70, rotates the fly wheel, thereby actuating the wheel.

While coasting, the rider stops the front sprocket cluster, thereby stopping the rear sprocket 60 from rotating through the chain. The fly wheel, because of inertia, rotates relative to the rear sprocket cluster 60, thereby causing the wheel to keep on rotating.

It is found that mud likely enters into the over-speed bearing 80 through the clearance 81. As a result, friction between the sprocket collar and the over-speed bearing rises,

thereby reducing activity of the fly wheel. Therefore, the above-referenced problem has to be overcome.

SUMMARY OF THE INVENTION

It is an object of the present invention to provide a cover to protect a over-speed bearing from mud.

This and additional objects, if not set forth specifically herein, will be readily apparent to those skilled in the art from the detailed description of embodiments below, with reference of the accompanying drawings.

In the drawings:

FIG. 1 is a perspective view of a mud-resisting cover in accordance with the present invention;

FIG. 2 is a cross-sectional view of a mud-resisting cover in accordance with the present invention; and

FIG. 3 is a perspective view, showing a mud-resisting cover before being assembled to a rear sprocket assembly in accordance with the present invention.

DESCRIPTION OF THE PREFERRED EMBODIMENT

Referring to FIGS. 1 and 2, a mud-resisting cover 1 includes a base 10 defining a hole 20, an inner periphery 30 extending around the hole 20, an outer periphery 40 extending around the inner periphery 30 slightly inside a rim of the base 10, and a plurality of ribs 50 formed on an outer surface of the outer periphery 40.

Referring to FIG. 3, an axle 90 is insertable through the hole 20. The outer periphery 40 is receivable within the rear sprocket collar 70, with the ribs 50 abutting the rear

sprocket collar 70 and a rim of the inner periphery abutting the over-speed bearing 80. Therefore, the base 10 covers a rim of the rear sprocket collar, thereby preventing the mud from entering the clearance 81. As a result, the over-speed bearing is protected from mud.

While the present invention has been explained in relation to its preferred embodiment, it is to be understood that various variations thereof will be apparent to those skilled in the art upon reading this specification. Therefore, the invention disclosed herein is intended to cover all such variations as shall fall within the scope of the appended claims.

CLAIMS

1. A mud-resisting cover for a fly wheel of a bicycle, comprising:

a base;

a hole formed within said base, through which an axle of a rear wheel of a bicycle is insertable;

an inner periphery extending around said hole;

an outer periphery extending outside and around said inner periphery to an inside of a rim of the base; and

a plurality of ribs formed on an outer surface of said outer periphery.

2. A mud-resisting cover for a fly wheel of a bicycle, substantially as hereinbefore described with reference to and as shown in the accompanying drawings.

P· ents Act 1977
Examiner's report to the Comptroller under Section 17 (The Search Report)

Application number 9114230.7

Relevant Technical fields

(i) UK Cl (Edition K) F2B

(ii) Int Cl (Edition 5) F16J

Search Examiner

R L WILLIAMS

Databases (see over)

(i) UK Patent Office

(ii)

Date of Search

12.09.91

Documents considered relevant following a search in respect of claims 1 and 2

Category (see over)	Identity of document and relevant passages	Relevant to claim(s)
X,Y	GB 1440665 A GRETZEWERKE FRIEDRICH GOETZE AG	1
Y	GB 1243547 A NATIONAL PLANT HIRE	1

SF2(p)

1MSAAP

Category	Identity of document and relevant passages	Relevant to claim(s)

Categories of documents

X: Document indicating lack of novelty or of inventive step.

Y: Document indicating lack of inventive step if combined with one or more other documents of the same category.

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P: Document published on or after the declared priority date but before the filing date of the present application.

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