

PRACTICAL LEGAL PROBLEMS WITH RESPECT TO PATENTS

EXAMINATION : 2010

EXAMINERS : H.MOUBRAY

L PARKER

MODERATOR: C PUCKRIN SC

SECOND PAPER L PARKER

DURATION 3 hours

MARKS 90

NOTES TO CANDIDATES:

1. This paper (pages 1-4) has a general question section plus copies of the following documents:
 - (i) An instruction letter from a foreign patent attorney ("A") (pages 5-7);
 - (ii) A complete patent specification, claims, abstract and drawings ("B") (pages 8-12); and
 - (iii) Further aspects of the invention of "A" ("C") (pages 13-14).
2. Wherever appropriate, reference should be made to case law.
3. Minimal marks are awarded for drafting style but any pleadings should be drafted as completely as possible and need not include case headings unless otherwise advised.

QUESTION 1

Your firm, on 1 July 2010, is, by way of a letter, a copy of which is attached marked "A", instructed to file a South African national phase patent application under the Patent Cooperation Treaty claiming priority from WO 2008/098714 which was filed on 1 November 2008 and which claimed priority from a United States application filed twelve months earlier (1 November 2007). A copy of the complete specification, claims and abstract as received from your United States correspondent for filing in South Africa are attached to this paper marked "B" and a document with a description and drawings of a further aspect of the invention is attached to this paper marked "C".

The instructing letter also poses a number of questions in the numbered paragraphs. You are required to provide full answers to the questions posed identifying each by its paragraph number and sub-paragraph letter.

(34 marks)

QUESTION 2

For this question assume that the PCT national phase application was filed as it is in Attachment "A" in South Africa on 25 May 2010 and that the application was accepted on 25 June 2010.

1. Considering only the questions (in paragraph 5 of the correspondent's letter – Attachment A) relating to the further aspect of the invention (Attachment "C"), is it at all possible to obtain patent protection for the further aspect of the invention in the specification and, if it is, how?
2. Would your advice with regard to Question 2(1) above differ if acceptance had already been published.

(26 marks)

QUESTION 3

It is 25 June 2010. Your firm filed a South African patent application in 2002 which proceeded to grant in 2003. The renewal fees for 14 February 2005 and 14 February 2006 were paid on instructions from the corresponding attorney after your firm sent out renewal reminders. No instructions to renew the patent were received for the renewal due on 14 February 2007 or 14 August 2007. It transpires that your foreign attorney changed his office address late in 2006 and your firm never received notification of the change so your reminders for the 2007 renewal went astray. The applicant found out about the failure to pay on 5 June 2010 and addressed a letter to you asking whether anything can be done to save the patent.

Draft a comprehensive letter to the client advising on how the patent can be saved if indeed it can.

(Total 15 marks)

QUESTION 4

Draft a letter to a client, a company manufacturing bicycles having wheels which have rubber bands instead of spokes, advising fully on the following together with proposing any changes you may deem necessary to give effect to the company's wishes:

(a) The effect of including the following clause in its employment contracts:

“The Employee undertakes to assign, to the Company, all the Employee's right, title and interest in and to any inventions made by the Employee while employed by the Company and the provisions of this clause shall, on

submission to any relevant patent office, be sufficient proof of said assignment.”

- (b) Assuming that the company only has a patent in South Africa, the effect of the following provision in a distributorship contract for bicycles between the Company, the manufacturer, and the Distributor, another company:

“The Distributor agrees that the bicycles forming the subject of this agreement shall be distributed, for an initial period of twenty (20) years which period shall be renewable for additional five (5) year periods, within the territory which shall include only Botswana, Lesotho, Mozambique, Namibia, South Africa, Swaziland and Zimbabwe.”

(Total 12 marks)

QUESTION 5

May a joint patentee institute patent infringement proceedings in his own name and, if he may, under what conditions?

(Total 3 Marks)

(Total for paper 90 marks)

ATTACHMENT "A"

LETTER FROM CORRESPONDENTS INSTRUCTING FIRM TO FILE A PCT NATIONAL PHASE APPLICATION IN SOUTH AFRICA

Dear Sirs

SOUTH AFRICA PCT NATIONAL PHASE PATENT APPLICATION: NEW INSTRUCTION TO FILE APPLICATION CORRESPONDING TO INTERNATIONAL PHASE APPLICATION NO. WO 2008/098714 entitled "WHEEL" filed 1 NOVEMBER 2008

We write to request you to please file a South African national phase application for the attached PCT international application no WO 2008/098714 (ATTACHMENT "B"). Please also have regard to the questions posed in this letter and report to us so that we may obtain client's instructions before any costs are incurred unless a failure to take any step would result in the application becoming abandoned.

1. The international application, WO2008/098714 was filed on 1 November 2008 and it claimed priority from a United States application filed twelve months earlier. Unfortunately, because of a miscommunication between ourselves and our client, we were not able to instruct you to file a South African national phase application by 1 June 2010 (31 months after the priority date) and enquire whether, like certain other countries, it is possible to file after the 31 month period in South Africa. Please advise fully in this regard and, if it is possible then please enter the South African national phase.
2. In the event that it is possible to still enter the national phase in South Africa we understand that there are certain country specific requirements,

particularly to the claims, of a patent specification. Please advise us if there are any such requirements in South Africa and, if there are, please let us have a draft of any such claims for review.

3. When reviewing the specification prior to instructing various correspondents to file national phase applications we noticed that the claims refer to the shock absorbers being filled with a semi-compressible or an incompressible liquid. This is a problem because liquids are, generally, incompressible. We have consulted with our client and have been advised that the term fluid should have been used instead of liquid. Apparently the patent agent who prepared the initial specification was not aware that liquids would not function. Is it possible to replace the term "liquid" with "fluid" wherever it occurs in the specification?
4. We also noticed that the wheel claimed in claim 1 of the specification is not capable of industrial application because it covers wheels having only one or two spokes. Neither of these will work. In the United States an invention which is not industrially applicable is not patentable. Do you have a similar provision in South Africa and is it possible to amend the claims to specify that at least three spokes are required? If it is please provide an example of any new claim you recommend.
5. Finally, we have received the attached (ATTACHMENT "C") document from client with details and a drawing of a further aspect to this invention. Our client is of the view that this further aspect of the invention is at least as important if not more so than the original invention given the popularity of mountain biking and the relative costs of bicycles *versus* motor vehicles. This has not been made public in any way as yet
 - (a) Our questions are, firstly, whether this further aspect of the invention namely replacing the shock absorber spokes of the wheel

with spokes made of India rubber or a synthetic analogue thereof, can be included in the original patent specification and, if so, how this can be achieved.

- (b) Secondly, we thought that the further aspect could be added and then a divisional patent application filed at the appropriate time. However, I examined an online copy of the South African Patents Act and the term divisional patent is not mentioned at all. Is it possible to file something akin to a divisional patent in South Africa and, if it is, can this be done as we suggest.
- (c) Alternatively, we thought that we could file another application for a patent to protect this further aspect of the invention if we could not include it now. Please advise whether this is at all possible even if we can include the further aspect in the originally filed application and whether this would, in any event, be preferable with regard to patent revocation or nullity proceedings being instituted in the future.

Yours faithfully

ATTACHMENT "B"

**COPY OF COMPLETE PATENT SPECIFICATION, CLAIMS, ABSTRACT AND
DRAWINGS TO BE FILED**

WHEEL

ABSTRACT

This invention relates to a wheel for a vehicle and, more particularly, to a spoked wheel having shock absorbing means incorporated into the spokes thus providing a suspension for the vehicle.

FIELD OF THE INVENTION

This invention relates to a wheel and, more particularly, to a wheel for offroad vehicles.

BACKGROUND TO THE INVENTION

Most modern vehicles have a suspended chassis where the wheels of the vehicle are sprung relative to the chassis. This increases the comfort of "the ride" of the vehicle over rough terrain.

Where vehicles are used regularly for off-road and rough terrain applications conventional suspensions which, in their simplest form, consist of a coil or leaf spring mounted onto the chassis and the axle of a wheel. When the wheel traverses a bump or a dip in a road the shock is, to some extent, absorbed by the spring and is not transmitted to the chassis and, thence, to the driver of the vehicle.

More often than not a shock absorber is installed to act with the spring to further dampen shocks. Shock absorbers are usually in the form of telescopic cylinders having a partially compressible fluid or mixture of fluids in the cylinder. One end

of the shock absorber is connected to the vehicle chassis and the opposite end is connected to the axle. When the wheel is subjected to a sudden compressive load like when it traverses a bump the shock absorber telescopes and compresses the fluid which, the more it is compressed, the more it resists further compression and thus the effects of bump in a road are dampened. Often the shock absorber may incorporate a coil spring within the cylinder to assist in the dampening effect.

One disadvantage of the above-described suspension systems is that they are all located inboard of the wheel (between the wheel and chassis) which requires a partial disassembly of the systems to check and repair faults, particularly in competition off-road vehicles and earthmoving vehicles.

OBJECT OF THE INVENTION

It is an object of this invention to provide a wheel which, at least partly, alleviates the above-mentioned disadvantage.

SUMMARY OF THE INVENTION

In accordance with this invention there is provided a wheel comprising a central hub which is rotatable about an axle and a concentric rim to which a tyre is fittable, the hub and rim being spaced apart by at least one elongate spoke, the spoke incorporating an integral shock absorber which, in use, dampens the effects of roadway irregularities.

There is also provided for the hub and rim to be spaced apart by at least three spokes each incorporating an integral shock absorber, for the shock absorber to be filled with a semi compressible, alternatively incompressible liquid, preferably oil, alternatively a mixture of oil and air.

There is also provided for the shock absorber to include a coil spring.

BRIEF DESCRIPTION OF THE DRAWINGS

The above and additional features of the invention will be illustrated with reference to the accompanying drawings in which:

Figure 1 is a side view of one embodiment of a wheel according to the invention; and

Figure 2 is a sectional side view of one embodiment of a spoke for use with a wheel according to the invention.

DETAILED DESCRIPTION OF THE DRAWINGS

Referring to the drawings, one embodiment of a wheel (1) according to the invention comprises a central hub (2) which is rotatable about an axle (not shown) and a concentric rim (3) to which a tyre (not shown) is fittable. The hub (2) and rim (3) are spaced apart by four elongate spokes (4). Each spoke (4) is telescopic and has a hub mountable, hollow, cylindrical piston (5) having an open end (6) and a closed end (7) which terminates in a lug (8) which is bolted to the hub (2). The open end (6) of the hub mountable piston (5) fits into an open end (9) of a rim mountable cylinder (10) which also has a closed end (11) terminating in a lug (12) which is bolted to the rim (3).

In the embodiment illustrated a coil spring (13) is located within the cylinder (14) of the rim mountable cylinder (10) and bears against the closed end of the cylinder and the open end walls of the piston (5) as illustrated.

In use, a wheel is fitted towards each of the major sides of a chassis of an off-road vehicle either instead of or in addition to the standard chassis suspension. When the wheel goes over a bump the spoke or spokes closest the bump compress and meet with resistance from their coil springs as well as from increased pressure within the cylinders. The resistance is transmitted to the hub of the wheel and then to the opposite spokes which compress and also resist compression in the same way as those closest the bump do. In this way the effect of hitting a bump are dampened in much the same way as a conventional suspension does but, because the suspension is incorporated into the vehicle

wheels, it can be inspected with relative ease. In addition, repairing a damaged suspension should, it is envisaged, be a simple matter of changing the wheel.

CLAIMS

1. A wheel comprising a central hub which is rotatable about an axle and a concentric rim to which a tyre is fittable, the hub and rim are spaced apart by at least one elongate spoke, the spoke incorporates an integral shock absorber which, in use, dampens the effects of roadway irregularities.
2. A wheel as claimed in claim 1 in which the hub and rim are spaced apart by at least three spokes each incorporating an integral shock absorber.
3. A wheel as claimed in claim 1 or in claim 2 in which the shock absorber is filled with a semi compressible liquid.
4. A wheel as claimed in claim 1 or in claim 2 in which the shock absorber is filled with an incompressible liquid.
5. A wheel as claimed in claim 4 in which the incompressible liquid is oil.
6. A wheel as claimed in claim 3 in which the semi compressible liquid is a mixture of oil and air.
7. A wheel as claimed in any one of the preceding claims in which the shock absorber includes a coil spring.

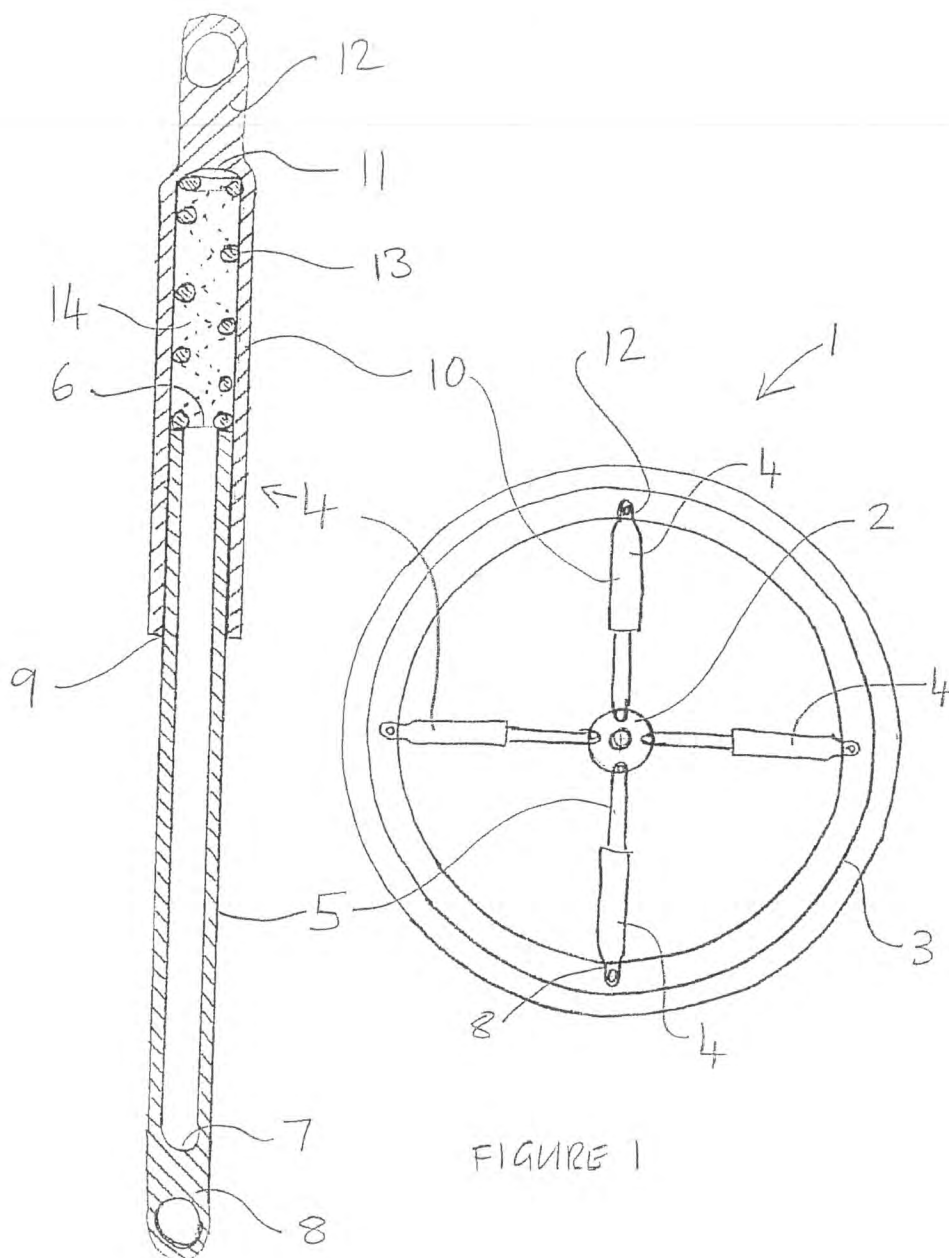


FIGURE 1

FIGURE 2

ATTACHMENT "C"**FURTHER ASPECT OF THE INVENTION****INTRODUCTION**

The original draft related to a spoked wheel with each spoke including a "shock absorber" which acted as the suspension of a vehicle to which the wheels were fitted. This worked quite well for off-road vehicles and led to investigations as to whether the concept could be applied to other vehicles as well.

One possible application was for off-road bicycles ("mountain bikes") but the shock absorber spoke was simply too heavy given the number of spokes in a bicycle wheel. The size of the spokes could not be reduced to save weight because this compromised the strength of the spoke and, consequently, of the wheel.

This problem was solved by replacing the shock absorber spokes as described in the patent specification with a spoke formed from a length of India rubber with a steel cap at each end. The caps are secured to the wheel rim and hub so that the rubber stretches. The rubber screws into the caps to adjust the tension of the rubber so that all of the spokes have equal tension and the hub is centred relative to the rim. A drawing of the wheel and of a spoke is attached.

In use, the wheel functions very much like the wheel of the original invention except that where the original relies on compression as the vehicle traverses undulations in a road the bicycle wheel uses tension where the rubber is pulled and resists being pulled.

This bicycle wheel spoke works very well although there were two rather unfortunate accidents during testing; the first when the rider traversed some particularly pronounced bumps and encountered ever increasing oscillations which were only stopped by contact with the ground (this was related to improper tensioning of the spokes) and the second when exposure to ultra violet radiation perished the rubber and the rider vaulted onto the bicycle (this was cured by treating the rubber components of the spokes with Factor 40 Sunscreen).

