

INTERNATIONAL JOURNAL FOR LEGAL RESEARCH AND ANALYSIS



Open Access, Refereed Journal Multi-Disciplinary
Peer Reviewed

www.ijlra.com

DISCLAIMER

No part of this publication may be reproduced or copied in any form by any means without prior written permission of Managing Editor of IJLRA. The views expressed in this publication are purely personal opinions of the authors and do not reflect the views of the Editorial Team of IJLRA.

Though every effort has been made to ensure that the information in Volume II Issue 7 is accurate and appropriately cited/referenced, neither the Editorial Board nor IJLRA shall be held liable or responsible in any manner whatsoever for any consequences for any action taken by anyone on the basis of information in the Journal.

Copyright © International Journal for Legal Research & Analysis

EDITORIAL TEAM

EDITORS

Dr. Samrat Datta

Dr. Samrat Datta Seedling School of Law and Governance, Jaipur National University, Jaipur. Dr. Samrat Datta is currently associated with Seedling School of Law and Governance, Jaipur National University, Jaipur. Dr. Datta has completed his graduation i.e., B.A.LL.B. from Law College Dehradun, Hemvati Nandan Bahuguna Garhwal University, Srinagar, Uttarakhand. He is an alumnus of KIIT University, Bhubaneswar where he pursued his post-graduation (LL.M.) in Criminal Law and subsequently completed his Ph.D. in Police Law and Information Technology from the Pacific Academy of Higher Education and Research University, Udaipur in 2020. His area of interest and research is Criminal and Police Law. Dr. Datta has a teaching experience of 7 years in various law schools across North India and has held administrative positions like Academic Coordinator, Centre Superintendent for Examinations, Deputy Controller of Examinations, Member of the Proctorial Board



Dr. Namita Jain

Head & Associate Professor

School of Law, JECRC University, Jaipur Ph.D. (Commercial Law) LL.M., UGC -NET Post Graduation Diploma in Taxation law and Practice, Bachelor of Commerce.

Teaching Experience: 12 years, AWARDS AND RECOGNITION of Dr. Namita Jain are - ICF Global Excellence Award 2020 in the category of educationalist by I Can Foundation, India. India Women Empowerment Award in the category of "Emerging Excellence in Academics by Prime Time & Utkrisht Bharat Foundation, New Delhi. (2020). Conferred in FL Book of Top 21 Record Holders in the category of education by Fashion Lifestyle Magazine, New Delhi. (2020). Certificate of Appreciation for organizing and managing the Professional Development Training Program on IPR in Collaboration with Trade Innovations Services, Jaipur on March 14th, 2019



Mrs.S.Kalpana

Assistant professor of Law

Mrs.S.Kalpana, presently Assistant professor of Law, VelTech Rangarajan Dr.Sagunthala R & D Institute of Science and Technology, Avadi. Formerly Assistant professor of Law, Vels University in the year 2019 to 2020, Worked as Guest Faculty, Chennai Dr.Ambedkar Law College, Pudupakkam. Published one book. Published 8Articles in various reputed Law Journals. Conducted 1Moot court competition and participated in nearly 80 National and International seminars and webinars conducted on various subjects of Law. Did ML in Criminal Law and Criminal Justice Administration. 10 paper presentations in various National and International seminars. Attended more than 10 FDP programs. Ph.D. in Law pursuing.



Avinash Kumar



Avinash Kumar has completed his Ph.D. in International Investment Law from the Dept. of Law & Governance, Central University of South Bihar. His research work is on "International Investment Agreement and State's right to regulate Foreign Investment." He qualified UGC-NET and has been selected for the prestigious ICSSR Doctoral Fellowship. He is an alumnus of the Faculty of Law, University of Delhi. Formerly he has been elected as Students Union President of Law Centre-1, University of Delhi. Moreover, he completed his LL.M. from the University of Delhi (2014-16), dissertation on "Cross-border Merger & Acquisition"; LL.B. from the University of Delhi (2011-14), and B.A. (Hons.) from Maharaja Agrasen College, University of Delhi. He has also obtained P.G. Diploma in IPR from the Indian Society of International Law, New Delhi. He has qualified UGC – NET examination and has been awarded ICSSR – Doctoral Fellowship. He has published six-plus articles and presented 9 plus papers in national and international seminars/conferences. He participated in several workshops on research methodology and teaching and learning.

ABOUT US

INTERNATIONAL JOURNAL FOR LEGAL RESEARCH & ANALYSIS
ISSN

2582-6433 is an Online Journal is Monthly, Peer Review, Academic Journal, Published online, that seeks to provide an interactive platform for the publication of Short Articles, Long Articles, Book Review, Case Comments, Research Papers, Essay in the field of Law & Multidisciplinary issue. Our aim is to upgrade the level of interaction and discourse about contemporary issues of law. We are eager to become a highly cited academic publication, through quality contributions from students, academics, professionals from the industry, the bar and the bench. INTERNATIONAL JOURNAL FOR LEGAL RESEARCH & ANALYSIS ISSN 2582-6433 welcomes contributions from all legal branches, as long as the work is original, unpublished and is in consonance with the submission guidelines.

ANALYSING THE BASICS OF PATENT DRAFTING

AUTHORED BY - ISHAN ANAND

CHAPTER-1

ABSTRACT:

The paper aims to provide an in-depth understanding of patent applications and their drafting processes, shedding light on their origins and legal frameworks. It hypothesizes that the significance of quality, clarity, specification, and novelty of language used in patent applications for Patent grant.

The study addresses several research questions, including the essential ingredients of a patent application, guidelines related to patent applications.

The statement of the problem highlights the challenges faced by inventors in navigating and drafting the complex process of patent.

The mode of citation follows the uniform Bluebook 20th Ed. Citation format for footnotes and bibliography.

The literature review section includes valuable insights from various sources, such as G. Krishna Tulasi and B. Subba Rao's study on the origins of the patent system, the history of the patent system in India by the Ministry of Commerce and Industry, and the Indian Patents Act, 1970.

The origin of patents, patentable subject matter and eligibility, the timeline of patent applications, the anatomy of patent applications and prior art findings provide comprehensive overview of the patent application process and its various aspects.

This research paper delves into the fundamental aspects of patent drafting, which constitutes a crucial phase in the patent application process. By examining various components such as provisional and complete specifications, the significance of detailed descriptions, and the

intricacies of patent law, the study aims to provide a comprehensive understanding of patent drafting practices. Through an analysis of legal provisions and practical implications, the paper sheds light on the essential elements and best practices involved in crafting successful patent applications.

1. Introduction:

The destiny of an invention is decided by a patent application. Patent Rights stand as the cornerstone of innovation which offers protection and incentives to their respective creators for their groundbreaking ideas. Patent is an exclusive right given by the Government to the Patent right owners for use and exploitation. So, Drafting of Patent application plays a vital role in the success of an invention during its prosecution, management and maintenance and legal protection during its tenure and turning it into cash.

Drafting a patent application is one of the most important and most difficult process. A written specification, method of representation and the steps involved in creating and using it is long with the claims, illustrations, and a general description of the invention make up a patent specification application. It begins with the inventor drafting a detailed description of their invention, including any drawings or diagrams necessary to illustrate its functionality. Once the application is complete, it is submitted to the patent office for examination. During this phase, patent examiners review the application to ensure that the invention meets the criteria for patentability, including novelty, non-obviousness, and usefulness. If the patent office determines that the invention is eligible for a patent according to the statute, the inventor is granted exclusive rights to their invention for a specified period for 20 years from the date of filing. During this period of 20 years the inventor has the right to prevent others from making, using or selling their invention without permission.

1.2 Research Objective:

To give a in depth details to the readers about patent application and its drafting while giving overview to the origin of patent with introduction and other subject matters incidental thereto.

1.3 Hypothesis:

A comprehensive analysis of patent drafting practice that may give clarity, specification and novelty of language used in patent applications significantly impact the quality and enforceability of granted patents.

1.4 Research Methodology:

The Research Paper is doctrinal in nature based on intensive research from internet and book based resources. Accumulation of the information on the topic includes wide use of primary sources such as cases as well as secondary sources like books, e-articles etc. The matter from these sources have been compiled and analyzed to understand the concept and reproduced it afresh in this project. Websites, dictionary and articles have also been referred.

The study is based qualitative research where in both primary as well as secondary data is used. The primary data would be collected from semi- structured close ended questionnaire via homogeneous purposive sampling and secondary data would be library based, collected from the various research, journals, articles, books and publications.

1.5 Research Questions:

1. What are essential ingredients of a patent application?
2. What are the guidelines related to patent application?

1.6 Statement of Problem:

Despite the vital role of patents in protecting innovation and rights of the inventor many inventors struggle to navigate the complex process of patent applications and draft it effectively. This difficulty may stem from a lack of understanding of patents law and the detailed anatomical procedures involved in the patent application process. As a result, inventors face challenges in securing the necessary legal protection for their inventions.

1.7 Mode of Citation:

This project follows a uniform bluebook 20th Ed. Citation format for footnotes and bibliography.

1.8. Literature Review

1.8.1 G. Krishna Tulasi and B. Subba Rao, in “A Detailed Study of Patent System for Protection of Inventions¹” have concisely explained the origins of patent system. Both trace patent development from ancient civilizations like Greece and Rome to its formal establishment in the 15th century Venetian Republic. The authors emphasize the system's purpose of

¹ National Library of Medicine, G. Krishna Tulasi and B. Subba Rao, A Detailed Study of Patent System for Protection of Inventions, available at <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3038276> (last visited on 28th April,2024)

incentivizing innovation by granting inventors the temporary monopolies. Furthermore, they discuss the significant impact of the United States Congress with the enactment of the Patent Act of 1790, which laid the groundwork for modern patent laws. Through their analysis, Tulasi and Rao provide valuable insights into the historical context that shapes the protection of inventions.

1.8.2 History of Patent System, India: Intellectual Property India², Ministry of Commerce and Industry is authentic source of information by the Government of India.

1.8.3 The Indian Patents Act, 1970³ gives statutory framework details which is applicable in India. It is the gist for securing patent rights. The Act describes the criteria for patentability, including novelty, inventive step and industrial applicability. It also sets provisions regarding the filing and examination of patent applications, as well as the duration and scope of patent protection. It addresses various aspects of patent infringement, enforcement, and licensing. It establishes mechanisms for resolving disputes related to patents and outlines the penalties for infringement.

1.8.4 For in depth knowledge about international frameworks <https://www.wipo.int/patents/en/>

1.8.5 Srividhya R. on “Patents Amendments in India in the Wake of TRIPS” gives brief information about amendments in India to align with TRIPS guidelines. In response to TRIPS guidelines, India amended its patent laws to broaden the scope of patentable subject matter, enhance examination procedures, and introduce provisions for exclusive marketing rights (EMRs) for pharmaceutical products. These changes aimed to align India's patent system with international standards.

CHAPTER- 2

BASICS CONCEPT OF PATENT LAW

2.1 Origin of Patent Law⁴:

2.1.1 Worldwide

The origins of patent law can be traced back to ancient civilizations where the rulers and monarchs granted exclusive rights to individuals for their inventions or innovations. However, the formalization and codification of patent laws into legal systems as follows:

² History of Patent System, India: Intellectual Property India, Ministry of Commerce and Industry; (Available at: <http://www.patentoffice.nic.in/ipr/patent/history.htm> (last visited on 28th April,2024).

³ THE PATENTS ACT, 1970 (Act no.39 of 1970, Government of India)

⁴ <https://en.wikipedia.org/wiki/Patent> (last visited on 24th May,2024)

1. In Venice (1474): Venice is credited with establishing one of the earliest known patent systems. In 1474, the Venetian Republic enacted a law granting exclusive rights to inventors for their inventions for a fixed period. This was aimed at encouraging innovation and economic growth.
2. In England (1624): The English Parliament enacted the Statute of Monopolies in 1624, which marked a significant step in the development of patent law. This statute was aimed to regulate monopolies granted by the crown and also limited the types of inventions that could be patented. It established a system for granting patents for new inventions and innovations.
3. In United States (1790): The United States passed its first patent law in 1790, only one year after adopting its constitution. U.S Patent Act of 1790 was modeled after the English system and granted inventors the exclusive right to their inventions for a term of 14 years.
4. In France (1791): France adopted its first patent law in 1791 during the French Revolution. It was aimed to encourage innovation and economic development by granting inventors exclusive rights to their inventions for a fixed period. These early patent laws laid the groundwork for the development of patent systems in other countries around the world.

Over the time patent laws have evolved and covers a wide range of inventions and innovations hence, playing a crucial role in promoting technological progress, economic growth and protecting Inventor's rights globally.

2.1.2 In India⁵

1856: Act VI of 1856 established protection of inventions based on the British Patent Law of 1852 granted exclusive privileges to inventors of new manufacturers for a period of 14 years.

1859: Amendment Act XV extended patent monopolies for 14 years from the date of filing specification, making, selling and using inventions in India.

1872: Introduction of the Patterns & Designs Protection Act. 1883: Enactment of the Protection of Inventions Act.

1888: Consolidation into the Inventions & Designs Act. 1911: Establishment of the Indian Patents & Designs Act.

1999: The Patents (Amendment) Act, 1999 came into force on March 26, 1999 with retroactive effect from January 1, 1995.

⁵ <https://ipindia.gov.in/history-of-indian-patent-system.htm> (last visited on 24th May,2024)=

2002: Implementation of the Patents (Amendment) Act 2002 from May 20, 2003.

2005: The Patents (Amendment) Act, 2005 effective from January 1, 2005,

** In India, Patent is granted for 20 years.

2.2 Eligibility

According to Section 6 of The Patent Act, 1970 :

(1) Subject to the rules in section 134, any of the following individuals may submit an application for a patent:

(a) anyone claiming to be the true and first inventor of the invention;

b) anyone acting as the assignee of the person claiming to be the true and first inventor with regard to the right to make such an application; and

(c) the legal representative of any deceased person who was entitled to file such an application prior to his death.

(2) Any of the individuals mentioned therein may apply under sub-section (1), either individually or in conjunction with another individual.

2.3 Non-Patentable Subject Matters

Section 3 and 4 of Patent Act, 1970 outlines non-patentable subject matter, it includes:

- (i) Frivolous inventions or those claiming something contrary to established natural laws.
- (ii) Inventions whose primary use or commercial exploitation could go against public order, morality, or cause serious harm to life, health, or the environment.
- (iii) Mere discoveries of scientific principles, abstract theories, living things, or non-living substances occurring naturally.
- (iv) Discovery of new forms of known substances without enhancing their efficacy or discovering new properties or uses.
- (v) Substances obtained through mere admixture without altering their properties significantly.
- (vi) Mere arrangement, re-arrangement, or duplication of known devices functioning independently.
- (vii) Methods of agriculture or horticulture.
- (viii) Processes for medical, surgical, curative, or therapeutic treatments of humans or animals.
- (ix) Exclusion of plants and animals, excluding microorganisms, including seeds, varieties, species, and biological processes for their production or propagation.

- (x) Mathematical or business methods, computer programs, or algorithms.
- (xi) Literary, dramatic, musical, or artistic works, including cinematographic works and television productions.
- (xii) Mere schemes, rules, or methods for mental acts or playing games.
- (xiii) Presentation of information.
- (xiv) Topography of integrated circuits.
- (xv) Inventions considered traditional knowledge or aggregation/duplication of known properties without innovation.
- (xvi) An invention relating to atomic energy falling within sub section (1) of section 20 of the Atomic Energy Act⁶.

CHAPTER-3

SPECIFICATION WRITING AND ANATOMY OF PATENT

APPLICATION

3.1 Specification Writing According to Indian Patent Act

According to Section 10, Contents of specifications.—

- (1) All specifications, whether provisional or complete, must contain a description of the invention and start with a title that accurately describes the topic of the invention.
- (2) Drawings may be supplied for the purposes of any specification, whether complete or provisional, subject to any rules that may be made in this regard under this Act. If the Controller so directs, any drawings so supplied shall be deemed to form part of the specification, and references to a specification in this Act shall be construed accordingly.
- (3) In the event that the Controller determines, in a given instance, that an application needs to be further supported by a model or sample of anything that illustrates the invention or is purported to be an invention, the model or sample, as required by him, must be provided before the application is determined to be in compliance for the granting of a patent; however, the model or sample will not be considered to be a part of the specification.
- (4) (i) Fully Describe the Invention: The specification must fully and particularly describe the invention, its operation or use, and the method by which it is performed. This means providing detailed information about the invention so that someone skilled in the field could understand and replicate it.
(ii) Disclosure of the Best Method: The applicant must disclose the best method of performing

⁶ Act no. 33 of 1962 in Parliament of India

the invention known to them, for which they seek protection. This ensures that the inventor does not hold back crucial information that could benefit the public.

(iii) End with Claims: The specification must end with a claim or claims that define the scope of the invention for which protection is sought. These claims delineate the boundaries of the patent protection, specifying what aspects of the invention are exclusive to the patent holder.

(iv) Accompanied by an Abstract: An abstract is required to provide technical information about the invention. This summary helps third parties understand the nature and significance of the invention. The Controller has the authority to amend the abstract for better clarity.

(v) Special Provision for Biological Material: If the specification mentions biological material which cannot be fully described in text, the applicant must deposit the material to an international depository authority under the Budapest Treaty. The conditions for such deposit include timely submission, inclusion of all necessary characteristics for identification, restricted access until after the patent application date, and disclosure of the material's source and geographical origin in the specification.

(vi) International Applications: For international applications designating India, the title, description, drawings, abstract, and claims submitted with the application serve as the complete specification for the Indian patent law's purposes. This simplifies the process for international applicants seeking patent protection in India.

(5) The claim or claims of a comprehensive specification must be fair, concise, and fairly based on the information provided in the specification. They must also pertain to a single invention or to a collection of innovations connected to form a single inventive concept.

(6) In the circumstances that may be specified, a declaration on the inventorship of the invention must be provided in the prescribed manner along with the entire specification or within the specified time frame following the filing of that specification.

(7) Notwithstanding the aforementioned provisions of this section, a complete specification filed following the filing of a provisional specification may contain claims regarding advancements or additions to the invention that were detailed in the provisional specification; these advancements or additions may give rise, under the terms of section 6, to a separate patent application from the applicant.

3.2 Anatomy of the Patent Application

(i) Title: In not more than 15 words for identification of invention.

(ii) Field of Invention

(iii) An explanation of the previous "state of the art", if any invention is there in that field prior

to the present invention. It is to show how the new invention is unique and state of art than the prior invention.

(iv) Objective of the Invention: This indicates that the invention aims to resolve the issue or mitigate issues with the prior art.

(v) Statement of Invention: List the invention's salient characteristics. This is optional.. A few sentences will describe the variety of changes and adjustments that can be made.

(v) Claims regarding Invention: State the claims which are to be achieved by the novel invention.

(vi) If possible show functions by drawing.

(vii) Best use and Sequence of Function: State how it can be best used and output should result in best. Also state the sequence in which it shall be used.

For example, a bike company claims that the engine used in its bike is novel and it can achieve mileage of 100 km per litre of petrol, but some user may achieve only 90 km per litre and some may achieve 100 km per litre. So, The company shall state that in which manner it can be achieved 100 kmpl as claimed in patent application.

(viii) An abstract.

Conclusion: This paper provides a comprehensive examination of the basics of patent drafting, highlighting its importance in securing intellectual property rights and fostering innovation. By elucidating key concepts and strategic considerations, the study equips readers with the knowledge and insights necessary to navigate the complexities of patent drafting successfully. Patent grant enable its inventor to secure and use their rights effectively.

Annexure-A is a Patent Application for perusal

TITLE:

VEHICULAR ACCIDENT AVOIDING MECHANISM FOR FOGGY WEATHER

FIELD OF INVENTION:

The present invention relates to automotive lighting and external directional/warning lights arrangements. The present invention in particular relates to a system for avoiding multi-vehicle accidents especially during foggy' weather by automatically switching OFF the parking lights when turning lights are switched ON without driver's interference and the moment turning process is over, turning lights are switched OFF and parking lights switched ON.

DESCRIPTION OF THE RELATED ART:

Four wheeler driving is not new to mankind, but when it comes to driving in extreme fog, things are quite different. To overcome any kind of accident scenario under the state of extreme fog, drivers normally use head lamp, fog lamp, horn, slowdown speed and most important parking lights. As parking light blinks, resulting into better chances of getting noticed compared to any other constant. light source like head lamp. Parking lights also serves purpose very well during heavy rainfall. US Publication No. 20140029277 describes a method of controlling lighting functions in a vehicle. The vehicle includes an operating device for controlling lighting functions in the vehicle, the operating device being configured for switching between the lighting functions, wherein activation of another one of the lighting functions is dependent on an actual speed of the vehicle, when manually switching from a currently activated one of the lighting functions to the other one of the lighting functions. Publication No. WO2005042303 describes a module/system for generating high intensity daytime running lights on a vehicle utilizing existing warning/turn signal lamps, yet still retaining the vehicle's internal turn signal 'bulb-out' detection system. This same vehicular collision avoidance system may further become a fog/inclement weather lighting system such that also uses a vehicle's built-in factory directional lamps, ^^ switched ON they will work continuously. At locations of turn these parking lamps are ON and there is no way for others on road to differentiate between the vehicle using parking lamps for better driving in fog or will take a turn. When a driver switches ON left or right turn indicator and parking lights are already ON, no new information is there for vehicle following this vehicle under consideration. The moment this first vehicle under consideration takes a turn with parking lights and turning indicator ON, the second vehicle (not knowing significance of lights in action) following this vehicle is bound to hit the first vehicle. This is a common phenomenon of accidents wherein the rear vehicle hits one in front vehicle onside, when the same was taking a turn on foggy or rainy day. Therefore to avoid the above mentioned problems and to make the driving in foggy or rainy weather comfortable as far as accident due to parking lights is concerned, the present invention provides a system for automatically switching OFF parking lights when turning lights are switched ON without driver's interference and the moment turning process is over, turning lights are switched OFF and parking lights were never switched OFF manually, so it's still ON only.

OBJECTS OF THE INVENTION:

The principal object of the present invention is to provide a system for avoiding multi- vehicle accidents during foggy or rainy weather by automatically switching OFF parking lights when

turning lights are switched ON without driver's interference and switching the turning lights OFF and parking lights ON again once the turn is complete. Another object of the present invention is to provide a system for regulating the parking lights and turning lights which avoids multi-vehicle accidents make driving comfortable in foggy or rainy weather. Yet another object of the present invention is to provide a system for regulating the parking lights and turning lights which can be used with mechanized vehicle with no electronic control; digitally controlled vehicle and mixed controlled vehicle (possesses both mechanical and electronic control).

SUMMARY OF THE INVENTION:

The present invention provides a system for avoiding multi-vehicle accidents and making the driving in foggy or rainy weather as far as accident due to parking lights is concerned. The invention provides a system for automatically switching OFF parking * lights when turning lights are switched ON without driver's interference and the moment turning process is over, turning lights are switched OFF and as parking lights were never switched OFF manually, so it's still ON only. In an embodiment of the present invention, the present system is effectively implemented with mechanized vehicle with no electronic control; digitally controlled vehicle and mixed controlled vehicle (possesses both mechanical as well as electronic control). In yet another embodiment of the present invention, if a vehicle has got only electric switch and no electronic control (as in the case of mechanized vehicle with no electronic control) to regulate supply of electricity then a new mechanical/electro-mechanical switch is placed at turning switch. The moment turn indicator is moved from its normal OFF position; power supply to parking lamp switch goes OFF. Once the turning process is over, the turning indicator switch comes back to its normal OFF position (already existing feature) and completes the circuit of parking light and hence power supply of parking lights switch is ON. In still another embodiment of the present invention, in the case of digitally controlled vehicles most of the functions are controlled through Electronic Control Unit (ECU). A modification in already existing programming of ECU automatically switches OFF parking lights when turning indicator is not at its normal OFF position. In another embodiment of the present invention, for a vehicle possessing mixed control, one needs to check separately which type is used for parking and-5-can be reprogrammed or mechanical switch can be placed in series with wiring of parking lights, as already discussed in previous two cases.

BRIEF DESCRIPTION OF THE DRAWINGS:

It is to be noted, however, that the appended drawings illustrate only typical embodiments of this invention and are therefore not to be considered for limiting of its scope, for the invention may admit to other equally effective embodiments.

Fig. 1 illustrates the switch in series with parking lights circuit controlled by turning indicator lever in case of mechanized vehicles;

Fig. 2 illustrates the block diagram of programming logic for ECU.

Figure 3: Modified standard turn lever with limit switch regulating power to parking lamp relay.

DESCRIPTION OF THE PREFERRED EMBODIMENTS:

Accordingly, the present invention provides a system for avoiding multi-vehicle accidents and making the driving in foggy or rainy weather by automatically switching OFF parking lights when turning lights are switched ON without driver's interference and the moment turning process is over, turning lights are switched OFF and as parking lights were never switched OFF manually, so it's still ON only. The present invention is effectively implemented with mechanized vehicle with - electronic control; digitally controlled vehicle and mixed controlled vehicle (possesses both mechanical as well as electronic control) .Mechanized vehicle with NO electronic control: If a vehicle has got only electric switch (Item 3 Fig. 1) to regulate supply of UJ electricity then the solution is to place a new mechanical/electro-mechanical switch (Item 2 Fig.1) at turning switch. The moment turn indicator (Item 4 Fig. 1) is moved from its normal OFF position; power supply to parking lamp switch goes OFF. As a result the moment turn indicator is switched ON parking lamps go OFF. Once the turning process is over, the turning indicator switch comes back to its normal OFF position (already existing feature) and completes the circuit of parking light and hence power supply of parking lights switch ON. Digitally controlled vehicle: In case of present date modern vehicle, most of the functions are controlled through Electronic Control Unit (ECU). In these vehicles, all switches and engine functions are controlled thorough this ECU which contains a computer to regulate the entire vehicle functions. A modification in already existing programming of ECU is required to automatically switch OFF parking lights when turning indicator is not at its normal OFF position. The work flow is shown in Fig. 2.The ECU continuously reads all the switches and the moment both parking and turning lights are switched ON by driver, the ECU takes a decision to disconnect power supply to parking lights and turning indicator functions as usual and the moment turning indicator goes OFF, ECU once again powers parking light circuit. Mixed controlled vehicle (possesses both mechanical as well as electronic control): For a vehicle possessing mixed

control, one needs to check separately which type is used for parking and which one for indicator. Based on type of switching of parking lights either ECU can be reprogrammed or mechanical switch can be placed in series with wiring of parking lights, as already discussed in previous two 'a' cases. The present invention comprises an extra limit switch having rating equal to the one provided for parking lamps (typically 5 Amp., 12 V) as presented in Figure 3. In a standard turn lever there is a mechanism to power up the lamps of one side only. The task is accomplished by pushing the lever to left or right. Accordingly electrical contact of respective indicator bulbs is completed. In the modified version of existing turn indicator mechanism, a limit switch as compression spring to keep the electrical contact switch in outward position. The power to relay of parking lamps is re-routed through this limit switch. The power being fed to relay of parking lamp is connected to Common (Com) pin of limit switch and the power received from battery/ECU is fed to Normally Connected (NC) pin of limit switch. Therefore, in general power is available to parking lamp relay. When driver operates turn indicator, the compression spring is pressed and ball ended member goes inside the body to press the lever on limit switch. The moment lever on limit switch is pressed, the connection between Command NC is opened and Com is connected to Normally Open (NO)' pin. Thus, no power from battery is fed to relay meant for powering-up the parking lamps. When the turning processes is over and lever comes to its mean position, the Com pin is once again connected to NC pin. Hence, the desired task of breaking the parking lamps circuit while turning is accomplished. In the case of digitally controlled vehicles most of the functions are controlled through Electronic Control Unit (ECU). A present invention automatically switches OFF parking lights when turning indicator is not at its normal OFF position. As presented in flow diagram (Figure 2), if all functions are working, then information in form of voltage signal from standard turn-indicator housing is collected using voltage on output pin of housing. Whenever the driver triggers turn indicator a power goes to respective (left or right side indicator lights) direction indicators. This power will be fed in form of feedback signal to ECU. The power available with turn indicator is large for ECU, therefore, it will be brought down using standard electrical resistance to bring to analog voltage range of 2-3 volts. In general, when turn indicator is at home position no feedback signal is received and the moment turn indicator is triggered, a voltage signal is fed to ECU in form of feedback. Irrespective of direction of operation (left or right) the moment ECU receives voltage pulse on feedback pin, it will instantly stop the power to parking lamp relay. Hence, parking lamps are switched OFF. The moment the turn process is over and lever comes to its normal position, the feedback voltage vanishes. A zero volt feedback signal will trigger ECU to putback the power to parking lamps relay. Hence, at a time only one event will be

operative either turn indicator or parking lamps. For a vehicle possessing mixed control, one needs to check separately which type is used for parking and which one for indicator. Based on type of switching of parking lights either ECU can be reprogrammed or mechanical switch can be placed in series with wiring of parking lights, as already discussed in previous two cases. If case ECU is not left with any port for expansion i.e. receiving feedback as an input, then the system designed for mechanized vehicles can be used. The system comprises of speed limit indication using parking lamps. Generally an experienced driver puts parking lamps ON when in extreme hurry (for instance, using personal vehicle as ambulance in emergency). There is a need to access the speed of vehicle by others on road. Since a number of accidents occurs due to wrong judgement of speed of a vehicle by others on road (eg. footpath crossing human, vehicle on turns, overtaking vehicles). In an ECU controlled vehicle, knowing the present speed of vehicle and based on legal speed limits a flag will raised by the engine ECU or speedometer. Whenever the flag goes high due to exceeding speed limit, the parking lights will be put ON by the ECU (without driver's intervention). This will attract driver's attention. Hence, in case driver was unnecessary speeding, will try to limit the vehicle speed, moreover others on road will under understand that the vehicle is in some trouble/hurry. Therefore, others on rod will try to be at a safe distance from such vehicle. Hence chances of occurrence of accidents will lower. If in future any newer type of control comes into existence for control of lightening systems of vehicle, then similar approach may be adopted and accidents due to above mentioned problem and clarity between statuses of parking lights versus turning lights can be made certain and accidents may be avoided. Numerous modifications and adaptations of the system of the present invention will be apparent to those skilled in the art, and thus it is intended by the appended claims to cover all such modifications and adaptations which fall within the true spirit and scope of this invention.

CLAIMS:

1. A system for controlling parking lights and turning lights particularly during foggy and rainy season comprises control unit with feedback circuit and speed limit indication using parking lamps with relays for automatically switching OFF parking lights when turning lights are switched ON without driver's interference and switching the turning lights OFF again to regain the ON status of the lights.
2. The system for controlling parking lights and turning lights particularly during foggy and rainy season as claimed in claim 1, wherein the system knowing the present speed of vehicle and based on legal speed limits a flag will raised by the engine ECU or

- speedometer.
3. The system for controlling parking lights and turning lights particularly during foggy and rainy season as claimed in claim 1, wherein whenever the flag goes high due to exceeding speed limit, the parking lights will be put ON by the control unit.
 4. The system for controlling parking lights and turning lights particularly during foggy and rainy season as claimed in claim 1, wherein system is effectively implemented with mechanized vehicle with no electronic control; digitally controlled vehicle and mixed controlled vehicle (possesses both mechanical as well as electronic control).
 5. The system for controlling parking lights and turning lights particularly during foggy and rainy season as claimed in claim 1, wherein a new mechanical/electro-mechanical switch is placed at turning switch to control the switching of parking and turning lights in case of mechanized vehicle with no electronic control.
 6. The system for controlling parking lights and turning lights particularly during foggy and rainy season as claimed in claim 1, wherein in case of digitally controlled vehicle a modification in already existing programming of ECU automatically switches OFF parking lights when turning indicator is not at its normal OFF position.
 7. The system for controlling parking lights and turning lights particularly during foggy and rainy season as claimed in claim 1, wherein for a vehicle possessing mixed control the ECU can be reprogrammed, mechanical switch of c^a be placed in series with wiring of parking lights.
 8. The system for controlling parking lights and turning lights particularly during foggy and rainy season as claimed in claim 1, wherein whenever the driver triggers turn indicator a power goes to respective (left or right side indicator lights) direction indicators, power will be fed in form of feedback signal to control unit which is brought down using standard electrical resistance.
 9. The system for controlling parking lights and turning lights particularly during foggy and rainy season as claimed in claim 1, wherein when the turn indicator is at home position no feedback signal is received and the moment turn indicator is triggered, a voltage signal is fed to control unit inform of feedback, the moment control unit receives voltage pulse on feedback pin, it will instantly stop the power to parking lamp relay and parking lamps are switched OFF.
 10. The system for controlling parking lights and turning lights particularly during foggy and rainy season as claimed in claim 9, wherein the moment the turn process is over and lever comes to its normal position, the feedback voltage vanishes, a zero volt feedback

signal triggers control unit to put back the power to parking lamps relay.

ABSTRACT:

The present invention relates to a system for automatically switching OFF parking lights when turning lights are switched ON without driver's interference and the moment turning process is over, turning lights are switched OFF and parking lights were never switched OFF manually, so it's still ON only.

The system avoids the multi-vehicle accidents and makes the driving comfortable in foggy or rainy weather. The present system can effectively be implemented with mechanized vehicle with no electronic control; digitally controlled vehicle and mixed controlled vehicle.

