



Проведение патентного поиска с помощью БД ЕПВ Espacenet



н.с. Ольга Тихомирова

*Отдел развития информационных ресурсов,
классификационных систем и стандартов в
области интеллектуальной собственности*

БД Espacenet

- **Общие сведения**
- **Доступ**
- **Виды и возможности поиска**
- **Результаты поиска**
- **Просмотр документов**
- **Справка**

БД Espacenet - общие сведения

Общедоступная патентная база данных Европейского патентного ведомства (<http://www.epo.org>)

Создана в 1998г

The screenshot shows the homepage of the European Patent Office (EPO) website. The URL in the browser address bar is <https://www.epo.org/index.html>. The page features a navigation menu with options like Home, Searching for patents, Applying for a patent, Law & practice, News & issues, Learning & events, and About us. A search bar is located at the top right. The main content area includes a sidebar with a list of services: Searching for patents, European Patent Register, European Publication Office, Espacenet - patent search (highlighted with a red circle), and Patent Translate. Other sections include a featured article about Adnane Remmal, a 'Meet the inventor' button, and various news items like 'European Inventor Award', 'Annual Report 2016', and 'Examiner Jobs'.

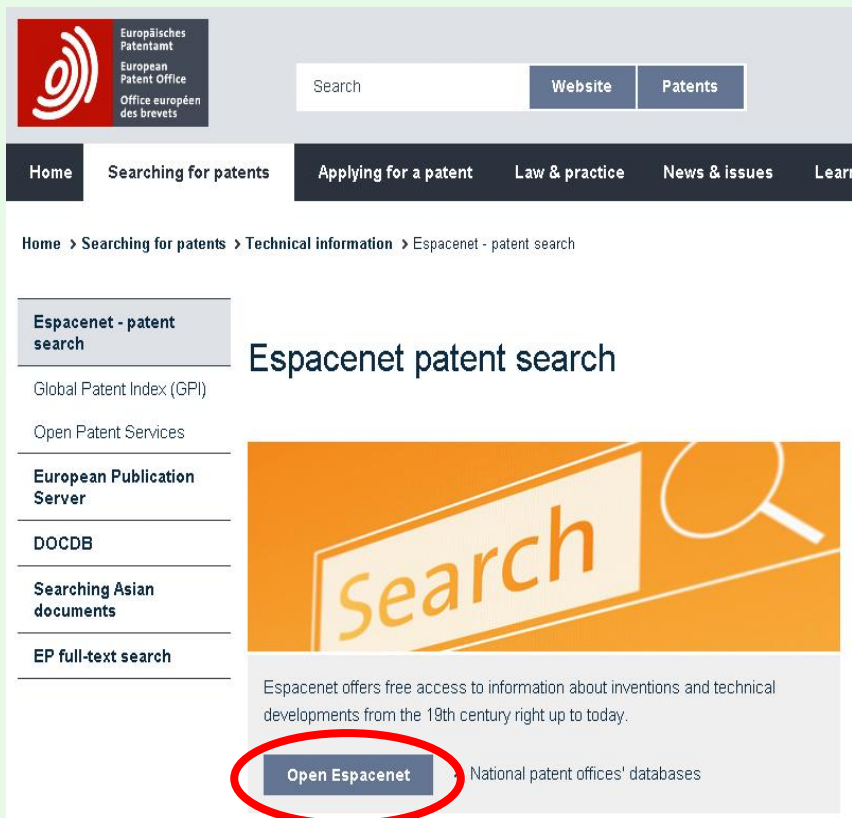
Переход в Espacenet

- <http://www.epo.org> → Espacenet – patent search → Open Espacenet
- www.fips.ru/ → Ссылки → Зарубежные БД → Espacenet

Переход в Espacenet

<http://www.epo.org>

www.fips.ru/



Home Searching for patents Applying for a patent Law & practice News & issues Learn

Home > Searching for patents > Technical information > Espacenet - patent search

Espacenet - patent search

Global Patent Index (GPI)

Open Patent Services

European Publication Server

DOCDB

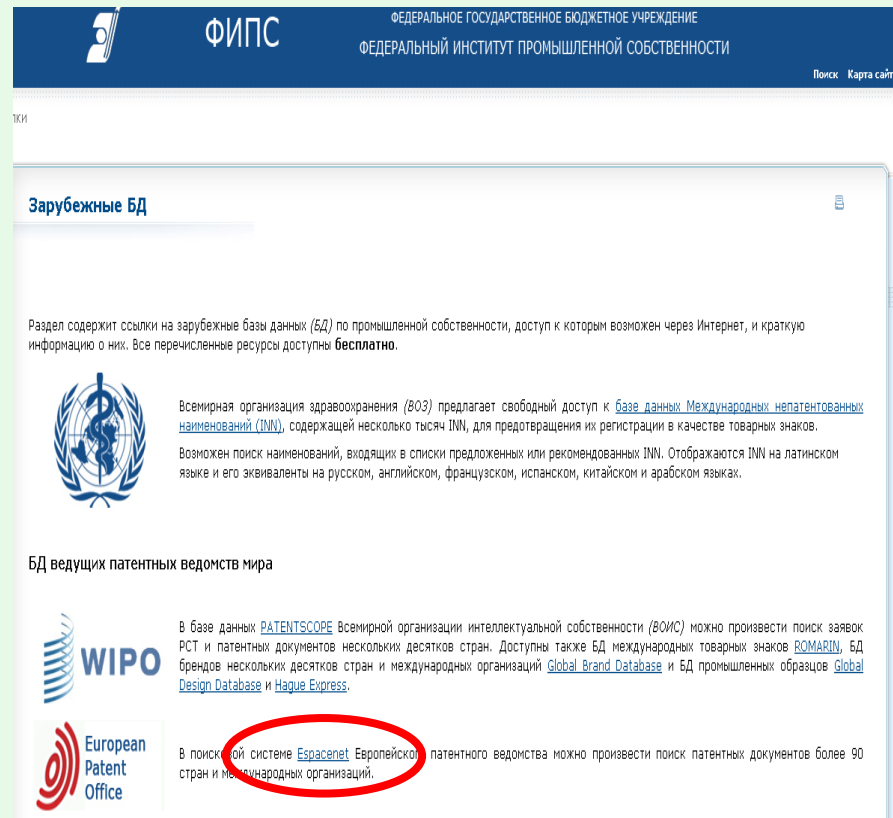
Searching Asian documents

EP full-text search

Espacenet patent search

Espacenet offers free access to information about inventions and technical developments from the 19th century right up to today.

Open Espacenet National patent offices' databases




ФИПС
 ФЕДЕРАЛЬНОЕ ГОСУДАРСТВЕННОЕ БЮДЖЕТНОЕ УЧРЕЖДЕНИЕ
 ФЕДЕРАЛЬНЫЙ ИНСТИТУТ ПРОМЫШЛЕННОЙ СОБСТВЕННОСТИ


Поиск Карта сайта


Зарубежные БД

Раздел содержит ссылки на зарубежные базы данных (БД) по промышленной собственности, доступ к которым возможен через Интернет, и краткую информацию о них. Все перечисленные ресурсы доступны **бесплатно**.


 Всемирная организация здравоохранения (ВОЗ) предлагает свободный доступ к [базе данных Международных непатентованных наименований \(INN\)](#), содержащей несколько тысяч INN, для предотвращения их регистрации в качестве товарных знаков. Возможен поиск наименований, входящих в списки предложенных или рекомендованных INN. Отображаются INN на латинском языке и его эквиваленты на русском, английском, французском, испанском, китайском и арабском языках.

БД ведущих патентных ведомств мира


 В базе данных [PATENTSCOPE](#) Всемирной организации интеллектуальной собственности (ВОИС) можно произвести поиск заявок РСТ и патентных документов нескольких десятков стран. Доступны также БД международных товарных знаков [ROMARIN](#), БД брендов нескольких десятков стран и международных организаций [Global Brand Database](#) и БД промышленных образцов [Global Design Database](#) и [Hague Express](#).


 В поисковой системе [Espacenet](#) Европейского патентного ведомства можно произвести поиск патентных документов более 90 стран и международных организаций.

Стартовая страница БД Espacenet

The screenshot shows the Espacenet homepage with several red circles highlighting key features:

- Language Selection:** A dropdown menu is open, showing a list of countries including Albania, Belgium, China, Croatia, Denmark, EAPO, Greece, Iceland, Italy, Korea, Latvia, Luxembourg, Norway, **Russia** (circled), Serbia, Slovenia, and Sweden. A "Change country" button is also circled.
- Navigation Bar:** Buttons for "Search", "Result list", "My patents list (1)", "Query history", "Settings", and "Help" are circled.
- Smart Search:** The "Smart search" section is circled, showing options for "Advanced search" and "Classification search".
- Related Links:** The "Related links" section is circled, listing various resources such as "Release notes", "Information on EPO data", "Some basic things you should know about Espacenet", "Some basic things you should know about searching", "Espacenet Assistant", "Latest bibliographic coverage", "Latest full-text coverage", "Fair use charter for the EPO's online patent information products", "The Patent Information Tour", "Recommended standard on two-letter codes", "Espacenetユーザーの皆様", "Espacenet中文用戶界面", and "Espacenet 한국어 사용자 인터페이스".

Access to Global Dossier and links to the European Patent Office

The Espacenet interface displays Global Dossier icons and links to register information, respectively. In order to avoid any ambiguity, access to a Global Dossier icon, the behaviour is the same as in the national (or EP) register window where links/pages are available will be displayed. The Global Dossier link, when available, is displayed in the content area of the bibliographic view and in the INPADOC family view.

The Global Dossier service has now been extended to encompass further authorities participating in the WIPO CASE initiative. In addition to patent application dossiers, ("file wrappers") from the world's five largest patent offices, it now also includes public dossiers from the **Canadian Patent Office** as well as **PCT applications**. The bibliographic and full text-coverage tables have been improved to indicate changes in coverage. Result list sorting by publication date is now available.

For more details, please see the [release notes](#)

Online products – need some answers?

Use the [discussion forum](#) and get all the latest news and views about our online products. Read the regular postings from the forum team, post your questions – and answer those of other users.

Espacenet: Intro

Наполнение Espacenet

- Более 95 млн. документов из более чем 90 стран и международных организаций
- Основа – минимум РСТ
- [Help](#) → [The worldwide patent database](#)

Availability of the PCT minimum documentation in the worldwide database

Country	Facsimiles from	Abstracts from	Cooperative Patent Classification (CPC)
CH	1888, from CH1 onwards	1970	1888
DE	1877, from DE1 onwards	1970	1877, from DE1 onwards
EP	1978, from EP1 onwards	1978	1978
FR	1900	1970	1902
GB	1859	1893	1859
US	1836, from US1 onwards	1970	1836, from US1 onwards
WO	1978	1978	1978

Latest updates to the database

You will find up-to-date information on the EPO website under [Latest Bibliographic coverage](#) and [Latest full-text coverage](#). Both lists are updated daily.

Наполнение Espacenet (продолжение)

- Документы, не входящие в «минимум РСТ», часто не имеют ни реферата, ни даже полной библиографии
- В Espacenet включена и непатентная литература (НПЛ или NPL). Ссылкам на НПЛ присвоены номера с двубуквенным кодом ХР, например: ХР1 или ХР000123456
- Поиск документов ХР по автору и словам невозможен
- ХР могут быть найдены только по СРС или номеру
- Нельзя ограничить поиск только НПЛ (т.е. по коду ХР)

Поисковые массивы

- **Worldwide** - вся вышеупомянутая коллекция патентных документов разных стран мира (в очень разных объемах представления информации).
- **Worldwide EN** – коллекция патентных документов, опубликованных на английском языке, предоставляющая возможность полнотекстового поиска на английском языке. Коллекция отобрана из документов БД Worldwide, имеющих тексты на английском языке.
- **Worldwide FR** - коллекция патентных документов, опубликованных на французском языке, предоставляющая возможность полнотекстового поиска на французском языке. Коллекция отобрана из документов БД Worldwide, имеющих тексты на французском языке.
- **Worldwide DE** - коллекция патентных документов, опубликованных на немецком языке, предоставляющая возможность полнотекстового поиска на немецком языке. Коллекция отобрана из документов БД Worldwide, имеющих тексты на немецком языке.

Виды поиска

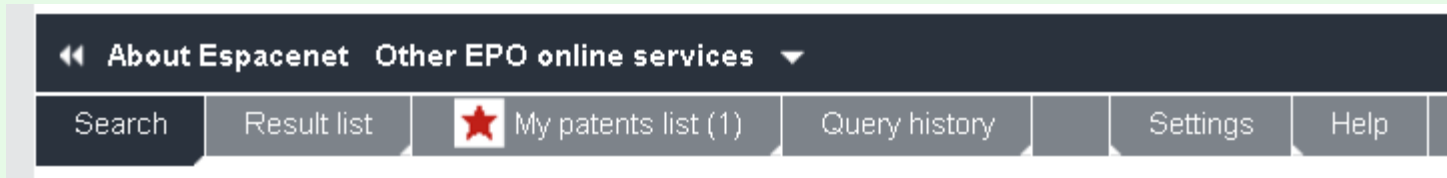
- **Smart search** - «Умный поиск», совпадает со стартовой страницей, поиск с возможностью использования кодов полей
- **Advanced search** - «Расширенный поиск», форма для ввода поисковых терминов содержит 10 полей, с 2016г в трех массивах позволяет проводить полнотекстовый поиск
- **Classification search** - просмотр или поиск в классификационной системе «СРС» - Совместной патентной классификации ЕПВ и США, в несколько раз более дробной, чем МПК

Smart search

Advanced search

Classification search

Постоянное горизонтальное МЕНЮ



- **Search** - Возврат в пустую поисковую форму
- **Result list** - Открытие списка документов найденных в результате последнего поиска
- **My patents list** - Из списка результатов можно отобразить документы (до 100 документов) и хранить их в «Моем списке»
- **Query history** - «История запросов», в которой хранятся последние 10, 25 или 50 (по выбору) запросов, если включена соответствующая установка (**Settings**)
- **Settings** – Позволяет включить/выключить возможность сохранения истории запросов, всплывающие определения рубрик классификации и подсветку поисковых терминов в найденных документах
- **Help** - Справка

Advanced search (Расширенный поиск)

Smart search

Advanced search

Classification search

Quick help

- [How many search terms can I enter per field?](#)
- [How do I enter words from the title or abstract?](#)
- [How do I enter words from the description or claims?](#)
- [Can I use truncation/wildcards?](#)
- [How do I enter publication, application, priority and NPL reference numbers?](#)
- [How do I enter the names of persons and organisations?](#)
- [What is the difference between the IPC and the CPC?](#)
- [What formats can I use for the publication date?](#)
- [How do I enter a date range for a publication date search?](#)
- [Can I save my query?](#)

Related links

Select the collection you want to search in

Enter your search terms - CTRL-ENTER expands the field you are in

Enter keywords in English

Title:

Title or abstract:

Enter numbers with or without country code

Publication number:

Application number:

Priority number:

Enter one or more dates or date ranges

Publication date:

Enter name of one or more persons/organisations

Applicant(s):

Inventor(s):

Enter one or more classification symbols

CPC

IPC

Advanced search (Расширенный поиск)

10 поисковых полей:

- **ключевые слова из названия («Keyword(s) in title»);**
- **ключевые слова из названия и/или реферата («Keyword(s) in title or abstract»);**
- **номер публикации («Publication number»);**
- **регистрационный номер заявки («Application number»);**
- **номер приоритетной заявки («Priority number»);**
- **дата публикации («Publication date»);**
- **заявитель («Applicant(s)»);**
- **изобретатель («Inventor(s)»);**
- **Совместная патентная классификация («CPC Cooperation Patent Classification» с 1 января 2013 года);**
- **Международная патентная классификация («International Patent Classification (IPC)»).**

Логические операторы

- Три логических оператора – **AND** (И), **OR** (ИЛИ) и **NOT** (НЕ) (кроме Smart search, где добавлены операторы близости и сравнения)
- Оператором по умолчанию в текстовых полях является оператор **AND**
- Все номера (подачи заявки, приоритета и публикации) и даты публикации – по умолчанию объединяются оператором **OR** (ИЛИ)

Поисковые возможности и ограничения Espacenet

- В одно поисковое поле может быть введено не более 10 терминов
- В расширенном виде поиска (Advanced search) на все 10 поисковых полей для составления запроса может быть использовано не более 20 поисковых терминов с 19 логическими операторами.
- Ключевые слова, вводимые для поиска в поле реферат, должны быть только на английском языке
- Нельзя использовать термины, определенные, как «стоп - слова» (**FOR, WITH, THE, BUT, AND, OF, ANY** и т.п.)
- Регистр букв (строчные или заглавные) может быть любым, при этом будут найдены эти слова, записанные как строчными, так и заглавными буквами
- При заключении группы слов в кавычки производится поиск «как задано», т.е. заданных слов рядом в заданном порядке (в виде «фразы»);

Advanced search (Расширенный поиск)

Advanced search

Select the collection you want to search in [i](#)
Worldwide - collection of published applications from 90+ countries

Enter your search terms - CTRL-ENTER expands the field you are in

Enter keywords

Title: [i](#) plastic and bicycle

Title or abstract: [i](#) hair
bicycle frame motor

Enter numbers with or without country code

Publication number: [i](#) WO2008014520

Application number: [i](#) DE201310112935

Priority number: [i](#) WO1995US15925

Enter one or more dates or date ranges

Publication date: [i](#) 2014-12-31 or 20141231
2015

Enter name of one or more persons/organisations

Applicant(s): [i](#) Institut Pasteur

Inventor(s): [i](#) Smith

Enter one or more classification symbols

CPC [i](#) F03G7/10

IPC [i](#) H03M1/12

[Clear](#) [Search](#)

Усечения и подстановки

- Только в текстовых полях в конце слов
- Подстановки «?» и «#»
(не менее 2-х букв в начале слова)
- Усечение *
(не менее 3-х букв в начале слова)

Усечения и подстановки

?

1 или 0 символов **ozon?** ozon ozone

#

1 символ **ozon#** ozone

*

любое количество символов **ozon*** ozone
ozonation ozonide ozonize ozonized
ozonometer

Форматы записи номеров и дат

- Формат записи регистрационных номеров заявок (в том числе приоритетных) - **ССГГГГnnnnnnnn**, где **СС** - двубуквенный код страны, **ГГГГ** - год, **nnnnnnnn** – шестизначный или семизначный регистрационный номер заявки (если знаков в номере заявки меньше семи, то лучше дополнять его предшествующими нулями до 7). Номер записывается без пробелов. Например, GB1995**000**8026.
- Формат ввода номера публикации: **ССnnnnnnnnnn**, где **СС** - двубуквенный код страны, **nnnnnnnnnn** - номер, состоящий из различного (от 1 до 10) количества знаков. Не следует делать пробел между двубуквенным кодом и цифрами.
Пример: **FR4231348, CH218103.**
- Формат ввода дат: **ГГГГ** или **ГГГГММ** или **ГГГГММДД**. Допускается **ДД/ММ/ГГГГ**.

Задание диапазона дат

- Поиск документов внутри задаваемого диапазона дат осуществляется указанием начальной и конечной дат интервала. Задать интервал дат можно несколькими способами:
 - даты, разделенные пробелом, например "**2000 2001**", как в кавычках, так и без них;
 - даты, разделенные двоеточием, например: **2000:2001** (только в Advanced search);
 - даты, разделенные запятой, например **2000,2001**;
- Во всех этих случаях система будет искать публикации, осуществленные между **01.01.2000** и **31.12.2001**, включая эти даты.

Формат записи рубрик классификаций

- **A01C7/08** - без пробелов
- «Авто-усечение» (**нельзя** ставить*) на любом уровне МПК: *H, B62, B62J, A47D15, B60N2/28, A47D15/00 AND B60N2/28*
- Но в **СРС** при поиске по более дробным рубрикам, чем подгруппа МПК, для усечения ставится знак усечения: *A47D15/00** или используется оператор */low*

Формат имен и названий

- Стандартный формат: сначала фамилия (Surname или Last name), а затем имя (First name).
- Если неясно, изобретателю или заявителю принадлежит это имя, используйте для поиска **Smart search**.
- Очень трудно искать по фирмам, т.к. их названия не стандартизированы. Пробуйте все возможные варианты написания названий, их частей, транслитерации, аббревиатур и т.п.

Smart search (УМНЫЙ ПОИСК)

- Ввод запроса осуществляется в одну поисковую строку
- Запросы могут вводиться как с кодами (идентификаторами) полей, так и без них.
- Основные типы полей:
 - pd (дата публикации),
 - cl (классификация),
 - num (номер),
 - ia (изобретатель и заявитель),
 - txt (код по умолчанию)
- Поисковые поля можно соединять оператором OR (но по умолчанию, т.е. без его ввода, используется AND)
- Каждый тип поля (кроме даты публикации) подразделяется ещё на несколько более конкретных полей.

Поля в Smart search

Код поля	Описание	Примеры
in	изобретатель	in=smith
pa	заявитель	pa=siemens
ti	название	ti="mouse trap"
ab	реферат	ab="mouse trap"
pr	номер приоритетной заявки	pr=ep20050104792
pn	номер публикации	pn=ep1000000
ap	номер заявки	ap=jp19890234567
pd	дата публикации	pd=20080107 или pd="07/01/2008 или pd=07/01/2008
ct	цитата/ цитируемый документ	ct=ep1000000
cpc	СПК	cpc="A61K31/13"
ftxt, desc, claims	полный текст, описание, формула	ftxt=microscope, desc=lens, claims=laser
ia	изобретатель и заявитель	ia=Apple или ia="Ries Klaus"
ta	название и реферат	ta="laser printer"
txt	название, реферат, изобретатель и заявитель	txt=microscope lens
num	номер публикации, заявки или приоритетной заявки	num=ep1000000
ipc	МПК	ipc=A63B49/08
cl	МПК и СПК	cl=C10J3

Дополнительные операторы в Smart search

Операторы сравнения

! Если внутри какого-либо поля в Smart search нужно найти несколько терминов, они должны быть заключены в кавычки

- = (равно); Будет найдено точное соответствие
например: **pa=Siemens** или **ti="optical fiber"**
- **all** (все); Все введенные термины (несколько терминов – обязательно в кавычках) будут найдены в заданном поле, но их порядок в документе может не соответствовать порядку их записи в запросе:
ti all "paint brush hair"
- **any** (любой); Будут найдены документы, содержащие по меньшей мере один из терминов, введенных в кавычках в заданном поле.
Пример: **ti any "motor engine"**

Дополнительные операторы в Smart search

Операторы близости (proximity – близость)

- **T1 prox/distance<n T2** Пример: **mouse prox/distance<3 trap**
(**мышь prox/distance<3 ловушка**)
Будут найдены патенты, где слова **mouse** и **trap** находятся в текстовых полях (код поля txt) на расстоянии не более 3 (трёх) слов между ними в заданном порядке (в порядке написания).
- **T1 prox/unit=sentence T2** Пример: **mouse prox/unit=sentence trap**
Будут найдены патенты, где слова **mouse** и **trap** встречаются в одном и том же предложении в текстовых полях.
- **T1 prox/unit=paragraph T2** Пример: **mouse prox/unit=paragraph trap**
Будут найдены патенты, где слова **mouse** и **trap** встречаются в одном и том же параграфе (абзаце) в текстовых полях.
- **T1 prox/ordered T2** Пример: **ia=Apple prox/ordered ia=Corp**
Будут найдены документы, содержащие в указанном порядке (в заданном поле) Apple Corp, а не Corp Apple.

Работа с результатами поиска

[About Espacenet](#) [Other EPO online services](#)

[Search](#) [Result list](#) [★ My patents list \(1\)](#) [Query history](#) [Settings](#) [Help](#)

[Refine search](#) → Results page 1

Smart search
 Advanced search
 Classification search

Result list

Select all (1/25)
 Compact
 [Export \(CSV|XLS\)](#)
 [Download covers](#)
 [Print](#)

Approximately **240** results found in the Worldwide database for:
bicycle frame motor in the title or abstract AND **2015** as the publication date

Sort by:
 Sort order:
 [Sort](#)

1. **AUTONOMOUS PERSONAL SERVICE MOBILE ROBOT**

Inventor:	Applicant:	CPC:	IPC:	Publication info:	Priority date:
★ SHIVAROV NAYDEN [BG]	SHIVAROV NAYDEN [BG]			BG2056 (U1) 2015-05-29	2014-01-17

2. **GEAR MOTOR SYSTEM FOR VEHICLES WITH TWO OR THREE WHEELS, INSTALLABLE COAXIALLY WITH THE BOTTOM BRACKET OF THE VEHICLE AND VEHICLE COMPRISING SAID SYSTEM**

Inventor:	Applicant:	CPC:	IPC:	Publication info:	Priority date:
★ SPAGGIARI MATTEO [IT]	MS REI S R L [IT]	B62M11/145 B62M6/55 H02K7/116	B60K1/00 B62M11/14 B62M6/55 (+1)	CA2933783 (A1) 2015-06-25	2013-12-18

3. **MOUNTING SYSTEM FOR ATTACHING AN ELECTRIC DRIVE SYSTEM TO BICYCLE S**

Inventor:	Applicant:	CPC:	IPC:	Publication info:	Priority date:
★ PREINING MARIO [AT] PREINING DANIEL [AT]	EGO SPORTS GMBH [AT]	B62K13/00 B62K19/30 B62M6/40 (+3)	B62K13/00 B62M6/40 B62M6/55	CA2920000 (A1) 2015-02-05	2013-08-02

4. **Front chain -picking device of bicycle**

Inventor:	Applicant:	CPC:	IPC:	Publication info:	Priority date:
★ YANG YAOMING LIN YINFAN	J D COMPONENTS CO LTD		B62M9/31	CN204916040 (U) 2015-12-30	2015-04-27


5. **Electric bicycle frame**





Inventor:	Applicant:	CPC:	IPC:	Publication info:	Priority date:
★ YANG MAOXIU	TIANJIN JINLUN TIANDA NUMERICAL		B62K19/30	CN204916004 (U) 2015-09-01	2015-09-01

[Can I subscribe to an RSS feed of the result list?](#)
[What does the RSS reader do with the result list?](#)
[Can I export my result list?](#)
[What happens if I click on "Download covers"?](#)
[Why is the number of results sometimes only approximate?](#)
[Why is the list limited to 500 results?](#)
[Can I deactivate the highlighting?](#)
[Why is it that certain documents are sometimes not displayed in the result list?](#)
[Can I sort the result list?](#)
[What happens if I click on the star icon?](#)
[What are XP documents?](#)
[Can I save my query?](#)

[Related links](#)

Использование опции «Download covers»

Result list 

Select all (25/25)
  Compact
  Export (CSV | XLS)
  Download covers
  Print

Approximately **240** results found in the Worldwide database for: **bicycle frame motor** in the title or abstract AND **2015** as the publication date 1 ▶

Sort by

1. AUTON...

★ Inventor: SHIVAR NAYDE...

2. GEAR ... OF THE VEHIK...

★ Inventor: SPAGG MATTE...

3. MOUNT...

★ Inventor: PREINI MARIO PREINI DANIEL [AT] (+3)

4. Front chain -picking device of **bicycle**

★ Inventor: YANG YAOMING LIN YINFAN Applicant: J D COMPONENTS CO LTD

Publication info: BG2056 (U1) **2015-05-29** **Priority date:** 2014-01-17

Publication info: CA2933783 (A1) **2015-06-25** **Priority date:** 2013-12-18

Publication info: CA2920000 (A1) **2015-02-05** **Priority date:** 2013-08-02

Publication info: CN204916040 (U) **2015-12-30** **Priority date:** 2015-04-27

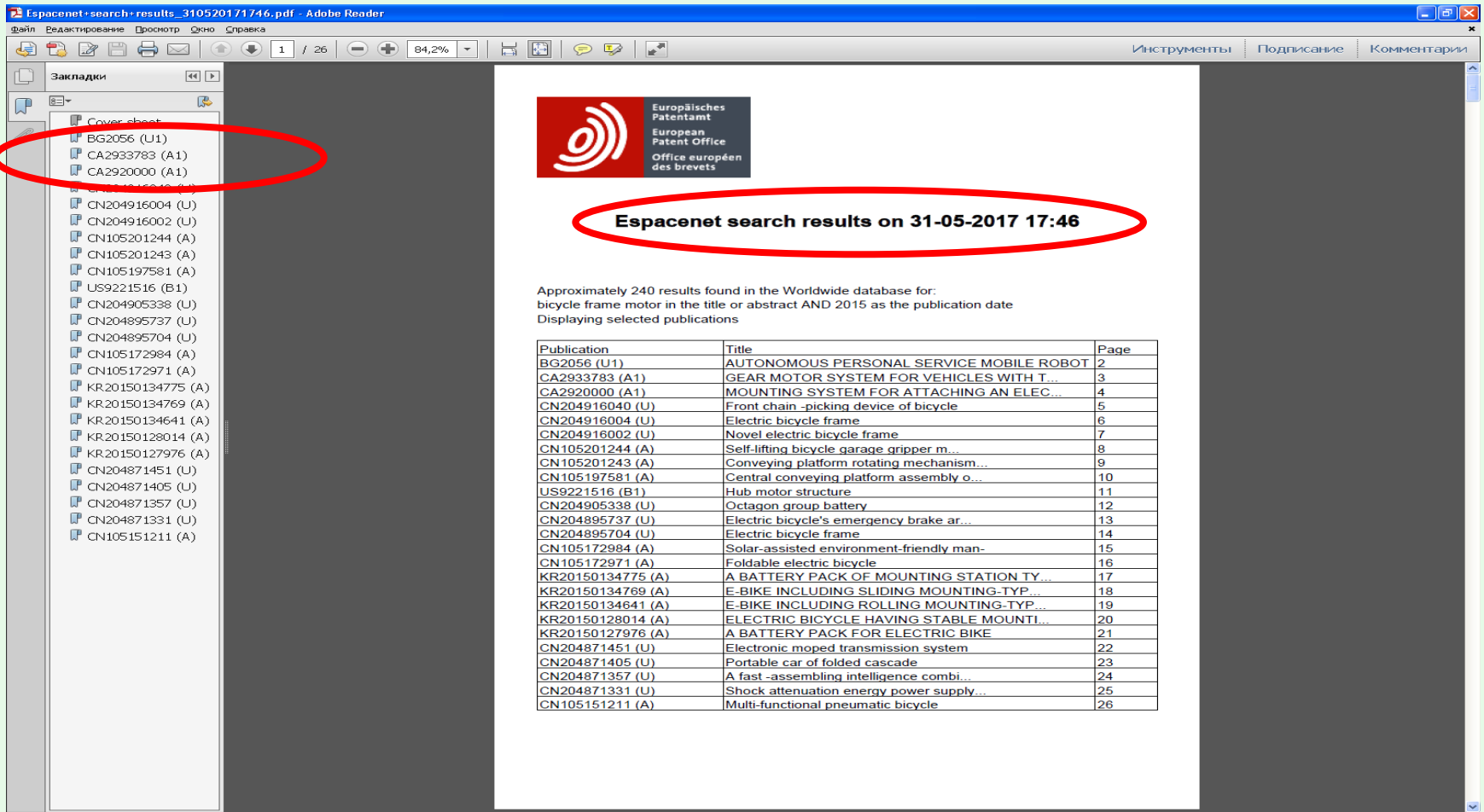
Espacenet verification

Please enter the digits that can be read in the image below:

868 14

[Close this window](#)

Загруженный файл первых страниц списка



Espacenet search results on 31-05-2017 17:46

Approximately 240 results found in the Worldwide database for:
bicycle frame motor in the title or abstract AND 2015 as the publication date
Displaying selected publications

Publication	Title	Page
BG2056 (U1)	AUTONOMOUS PERSONAL SERVICE MOBILE ROBOT	2
CA2933783 (A1)	GEAR MOTOR SYSTEM FOR VEHICLES WITH T...	3
CA2920000 (A1)	MOUNTING SYSTEM FOR ATTACHING AN ELEC...	4
CN204916040 (U)	Front chain -picking device of bicycle	5
CN204916004 (U)	Electric bicycle frame	6
CN204916002 (U)	Novel electric bicycle frame	7
CN105201244 (A)	Self-lifting bicycle garage gripper m...	8
CN105201243 (A)	Conveying platform rotating mechanism...	9
CN105197581 (A)	Central conveying platform assembly o...	10
US9221516 (B1)	Hub motor structure	11
CN204905338 (U)	Octagon group battery	12
CN204895737 (U)	Electric bicycle's emergency brake ar...	13
CN204895704 (U)	Electric bicycle frame	14
CN105172984 (A)	Solar-assisted environment-friendly man-	15
CN105172971 (A)	Foldable electric bicycle	16
KR20150134775 (A)	A BATTERY PACK OF MOUNTING STATION TY...	17
KR20150134769 (A)	E-BIKE INCLUDING SLIDING MOUNTING-TYP...	18
KR20150134641 (A)	E-BIKE INCLUDING ROLLING MOUNTING-TYP...	19
KR20150128014 (A)	ELECTRIC BICYCLE HAVING STABLE MOUNTI...	20
KR20150127976 (A)	A BATTERY PACK FOR ELECTRIC BIKE	21
CN204871451 (U)	Electronic moped transmission system	22
CN204871405 (U)	Portable car of folded cascade	23
CN204871357 (U)	A fast -assembling intelligence combi...	24
CN204871331 (U)	Shock attenuation energy power supply...	25
CN105151211 (A)	Multi-functional pneumatic bicycle	26

Работа с документом

US9221516 (B1)

Bibliographic data

Description

Claims

Mosaics

Original document

Cited documents

Citing documents

INPADOC legal status

INPADOC patent family

Bibliographic data: US9221516 (B1) — 2015-12-29

★ In my patents list
Previous ◀ 10 / 240 ▶ Next
Report data error
Print

Hub **motor** structure

Page bookmark: [US9221516 \(B1\) - Hub motor structure](#)

Inventor(s): SONG JOON-KYU [KR] ±

Applicant(s): MANDO CORP [KR] ±

Classification:

- international: [B62M6/45](#); [B62M6/50](#); [B62M6/60](#); [F16H3/72](#); [F16H9/26](#)
- cooperative: [B62M11/16](#); [B62M6/45](#); [B62M6/50](#); [B62M6/60](#); [F16H9/26](#)

Application number: [US201514591935](#) [2015010](#) Global Dossier

Priority number(s): [KR20140182938](#) [20141218](#)

Also published as: [CN105836035 \(A\)](#) [EP3034387 \(A1\)](#) [KR20160074765 \(A\)](#)

Abstract of US9221516 (B1)

Translate this text into i

Select language

 patenttranslate

powered by EPO and Google

Disclosed is hub **motor** structure installed on a **bicycle**, the hub **motor** structure including a hollow shaft installed on a **frame** of the **bicycle**, a housing rotatably installed on the hollow shaft, and connected to a wheel at an outer circumferential surface thereof through spokes, a cover rotatably installed on the hollow shaft while installed on the housing, and on which a driven sprocket connected to a chain is provided to receive a pedaling force, a **motor** disposed in the housing and generating a rotary force to drive the wheel, a continuous variable transmission (CVT) disposed in the housing to selectively shift power supplied from the **motor**, a power transmission unit configured to transmit a rotary force of the **motor** to the CVT, and a gear unit configured to transmit a rotary force output from the CVT to the housing.



Quick help

- [What is meant by high quality text as facsimile?](#)
- [What does A1, A2, A3 and B stand for after a European publication number?](#)
- [What happens if I click on "In my patents list"?](#)
- [What happens if I click on the "Register" button?](#)
- [Why are some sidebar options deactivated for certain documents?](#)
- [How can I bookmark this page?](#)
- [Why does a list of documents with the heading "Also published as" sometimes appear, and what are these documents?](#)
- [Why do I sometimes find the abstract of a corresponding document?](#)
- [What happens if I click on the red "patent translate" button?](#)
- [What is Global Dossier?](#)

Работа с документом

- Отбор в «[Мой список патентов](#)»
- Навигация по списку, не выходя в него. Следующий/ предыдущий документ открывается на той же закладке, что и данный (например, на его рисунках или формуле)
- Для реферата, описания и формулы (если они есть) доступен перевод - нажать «**patenttranslate**»
- Печать документа
- Просмотр переписки по заявкам и сведений о делопроизводстве

Библиографические данные

US9221516 (B1)

Bibliographic data

Description

Claims

Mosaics

Original document

Cited documents

Citing documents

INPADOC legal status

INPADOC patent family

Quick help

- [What is meant by high quality text as facsimile?](#)
- [What does A1, A2, A3 and B stand for after a European publication number?](#)
- [What happens if I click on "In my patents list"?](#)
- [What happens if I click on the "Register" button?](#)
- [Why are some sidebar options deactivated for certain documents?](#)
- [How can I bookmark this page?](#)
- [Why does a list of documents with the heading "Also published as" sometimes appear, and what are these documents?](#)
- [Why do I sometimes find the abstract of a corresponding document?](#)
- [What happens if I click on the red "patent translate" button?](#)
- [What is Global Dossier?](#)

Bibliographic data: US9221516 (B1) — 2015-12-29

★ In my patents list Previous ◀ 10 / 240 ▶ Next Report data error Print

Hub motor structure

Page bookmark [US9221516 \(B1\) - Hub motor structure](#)

Inventor(s): SONG JOON-KYU [KR] ±

Applicant(s): MANDO CORP [KR] ±

Classification:

- international: [B62M6/45](#); [B62M6/50](#); [B62M6/60](#); [F16H3/72](#); [F16H9/26](#)

- cooperative: [B62M11/16](#); [B62M6/45](#); [B62M6/50](#); [B62M6/60](#); [F16H9/26](#)

Application number: [US201514591935](#) [2015010](#) [Global Dossier](#)

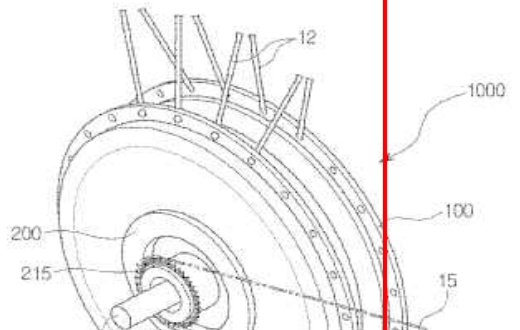
Priority number(s): [KR20140182938](#) [20141218](#)

Also published as: [CN105836035 \(A\)](#) [EP3034387 \(A1\)](#) [KR20160074765 \(A\)](#)

Abstract of US9221516 (B1)

Translate this text into **patenttranslate** powered by EPO and Google

Disclosed is hub **motor** structure installed on a **bicycle**, the hub **motor** structure including a hollow shaft installed on a **frame** of the **bicycle**, a housing rotatably installed on the hollow shaft, and connected to a wheel at an outer circumferential surface thereof through spokes, a cover rotatably installed on the hollow shaft while installed on the housing, and on which a driven sprocket connected to a chain is provided to receive a pedaling force, a **motor** disposed in the housing and generating a rotary force to drive the wheel, a continuous variable transmission (CVT) disposed in the housing to selectively shift power supplied from the **motor**, a power transmission unit configured to transmit a rotary force of the **motor** to the CVT, and a gear unit configured to transmit a rotary force output from the CVT to the housing.



Описание (Description)

US9221516 (B1)

- ▶ Bibliographic data
- Description**
- ▶ Claims
- ▶ Mosaics
- ▶ Original document
- ▶ Cited documents
- ▶ Citing documents
- ▶ INPADOC legal status
- ▶ INPADOC patent family

Quick help

- [What is meant by high quality text as facsimile?](#)
- [What happens if I click on "In my patents list"?](#)
- [What happens if I click on the "Register" button?](#)
- [What happens if I click on the red "patent translate" button?](#)
- [Why is the description sometimes in French or German or another language altogether?](#)
- [How can I search in the text of the description?](#)
- [How can I view chemical structures in the full text?](#)
- [What is Global Dossier?](#)

Description: US9221516 (B1) — 2015-12-29

★ In my patents list Previous ◀ 10 / 240 ▶ Next Report data error Print

Hub **motor** structure


Description of US9221516 (B1)

A high quality text as facsimile in your desired language may be available amongst the following family members:

[CN105836035 \(A\)](#) [EP3034387 \(A1\)](#)

Translate this text into:

Select language


 powered by EPO and Google

I accept the EPO's disclaimer of liability for the accuracy of data and information originating from other authorities than the EPO; in particular, I do not accept any guarantee that they are complete, up-to-date or fit for specific purposes.

RELATED APPLICATION

This application is a benefit of Korean Patent Application No. 10-2014-0182938 filed on Dec. 18, 2014, with the Korean Intellectual Property Office of which is incorporated in its entirety herein by reference.

The present disclosure relate to a hub motor structure, and more particularly, to a hub motor structure of providing a thrust of a motor.

Art

The present disclosure relates to a vehicle having two wheels that are impelled by a stepping force of a rider, in which wheels (a front wheel and a rear wheel) are connected to each other by a pipe, and through the connecting of a chain, a pedal and a chain sprocket, the pedaling of a rider is transferred to the rear wheel, and thus a thrust of the bicycle is generated.

In addition, the bicycle is provided with a transmission having a plurality of sprockets configured to selectively change connection with respect to a chain such that speed change is performed.

Such a general bicycle achieves travelling by obtaining a thrust only from a user's stepping force, requiring a great amount of power of a user in riding a long distance or ascending an upward slope. Accordingly, in the recent years, there is increasing development of an electric

Формула (Claims)

US9221516 (B1)

- Bibliographic data
- Description
- Claims
- Mosaics
- Original document
- Cited documents
- Citing documents
- INPADOC legal status
- INPADOC patent family

Quick help -

- [What is meant by high quality text as facsimile?](#)
- [What happens if I click on "In my patents list"?](#)
- [What happens if I click on the "Register" button?](#)
- [What happens if I click on the red "patent translate" button?](#)
- [How can I view the claim structure?](#)
- [Why are the claims sometimes in French or German or another language altogether?](#)
- [How can I search in the text of the claims?](#)
- [How can I view chemical structures in the full text?](#)
- [What is Global Dossier?](#)

Claims: US9221516 (B1) — 2015-12-29

★ In my patents list Previous ◀ 10 / 240 ▶ Next Report data error Print

Hub motor structure

Claims of US9221516 (B1)

A high quality text as facsimile in your desired language may be available amongst the following family members:

CN105836035 (A) EP3034387 (A1)

Translate this text into

Select language ▼

patenttranslate

powered by EPO and Google

Original claims
Claims tree

The EPO does not accept any responsibility for the accuracy of data and information originating from other authorities than the EPO; in particular, the EPO does not guarantee that they are complete, up-to-date or fit for specific purposes.

1. What is claimed is: 1. A hub motor structure installed on a bicycle, the hub motor structure comprising:
 a hollow shaft installed on a frame of the bicycle;
 a housing rotatably installed on the hollow shaft, and connected to a wheel at an outer circumferential surface thereof through spokes;
 a cover rotatably installed on the hollow shaft while installed on the housing, and on which a driven sprocket connected to a chain is provided to receive a pedaling force;
 a motor disposed in the housing and generating a rotary force to drive the wheel;
 a continuous variable transmission (CVT) disposed in the housing to selectively shift power supplied from the motor;
 a power transmission unit configured to transmit a rotary force of the motor to the CVT; and
 a gear unit configured to transmit a rotary force output from the CVT to the housing.

2. The hub motor structure of claim 1, wherein:
 the CVT has a speed-changing lever to adjust a gear ratio; and
 the speed-changing lever is disposed in the hollow shaft while inserted into an elongation hole formed lengthwise along the hollow shaft so as to be movable in a lengthwise direction of the elongation hole.

3. The hub motor structure of claim 2, wherein the speed-changing lever has one end connected to an operating wire configured to move the speed-changing lever, and the other end connected to an elastic member providing the speed-changing lever with an elastic force.

4. The hub motor structure of claim 1, wherein the power transmission unit comprises:

Формула (Claims) в виде схемы независимых и зависимых пунктов

US9221516 (B1)

- Bibliographic data
- Description
- Claims**
- Mosaics
- Original document
- Cited documents
- Citing documents
- INPADOC legal status
- INPADOC patent family

Quick help —

- [What is meant by high quality text as facsimile?](#)
- [What happens if I click on "In my patents list"?](#)
- [What happens if I click on the "Register" button?](#)
- [What happens if I click on the red "patent translate" button?](#)
- [How can I view the claim structure?](#)
- [Why are the claims sometimes in French or German or another language altogether?](#)
- [How can I search in the text of the claims?](#)
- [How can I view chemical structures in the full text?](#)
- [What is Global Dossier?](#)

Claims: US9221516 (B1) — 2015-12-29

★ In my patents list Previous ◀ 10 / 240 ▶ Next 🖨 Report data error 🖨 Print

Hub **motor** structure

Claims of US9221516 (B1)

A high quality text as facsimile in your desired language may be available amongst the following family members:

📄 CN105836035 (A) 📄 EP3034387 (A1)

Translate this text into ⓘ

Select language ▼  powered by EPO and Google

Original claims
Claims tree

The EPO does not accept any responsibility for the accuracy of data and information originating from other authorities than the EPO; in particular, the EPO does not guarantee that they are complete, up-to-date or fit for specific purposes.

1. What is claimed is: 1. A hub motor structure installed on a bicycle, the hub motor structure comprising:
 a hollow shaft installed on a frame of the bicycle;
 a housing rotatably installed on the hollow shaft, and connected to a wheel at an outer circumferential surface thereof through spokes;
 a cover rotatably installed on the hollow shaft while installed on the housing, and on which a driven sprocket connected to a chain is provided to receive a pedaling force;
 a motor disposed in the housing and generating a rotary force to drive the wheel;
 a continuous variable transmission (CVT) disposed in the housing to selectively shift power supplied from the motor;
 a power transmission unit configured to transmit a rotary force of the motor to the CVT; and
 a gear unit configured to transmit a rotary force output from the CVT to the housing.



```

    graph TD
      1((1)) --- 2((2))
      1 --- 4((4))
      1 --- 6((6))
      1 --- 7((7))
      1 --- 8((8))
      1 --- 9((9))
      1 --- 10((10))
      2 --- 3((3))
      4 --- 5((5))
      10 --- 11((11))
      10 --- 12((12))
    
```

Рисунки (Mosaics)

US9221516 (B1)

Bibliographic data
Description
Claims
Mosaics
Original document
Cited documents
Citing documents
INPADOC legal status
INPADOC patent family

Quick help
→ [What happens if I click on "In my patents list"?](#)
→ [What happens if I click on the "Register" button?](#)
→ [What is a mosaic?](#)
→ [What is Global Dossier?](#)

Mosaics: US9221516 (B1) — 2015-12-29

★ In my patents list Previous 10 / 240 Next Report data error

Hub **motor** structure

Page 1 / 1 Drawings Download

U.S. Patent No. 9,221,516 B1 FIG. 1

U.S. Patent No. 9,221,516 B1 FIG. 2

U.S. Patent No. 9,221,516 B1 FIG. 3

U.S. Patent No. 9,221,516 B1 FIG. 4

U.S. Patent No. 9,221,516 B1 FIG. 5

U.S. Patent No. 9,221,516 B1 FIG. 6

Drawing pages of US9221516 B1

Original document «Максимизация», выгрузка или печать оригинального документа

US9221516 (B1)

- Bibliographic data
- Description
- Claims
- Mosaics
- Original document**
- Citing documents
- INPADOC legal status
- INPADOC patent family

Quick help


- [What happens if I click on "In my patents list"?](#)
- [What happens if I click on the "Register" button?](#)
- [How can I maximise the page view?](#)
- [How can I download documents?](#)
- [Why is the Original document not available for certain documents?](#)
- [What is Global Dossier?](#)

Original document: US9221516 (B1) — 2015-12-29

★ In my patents list Previous ◀ 10 / 240 ▶ Next Report data error **Print**

Hub motor structure

◀ Page 1/11 Abstract Bibliography ▶▶ **Maximise** **Download**


 US009221516B1

(12) **United States Patent**
Song

(10) **Patent No.: US 9,221,516 B1**
(45) **Date of Patent: Dec. 29, 2015**

(54) HUB MOTOR STRUCTURE	8,419,580 B2* 4/2013 Lo	A61G 5/04 180.65.51
(71) Applicant: MANDO CORPORATION, Pyeongtaek-si (KR)	8,795,120 B2* 8/2014 Kim	F16H 1/28 180.65.51
(72) Inventor: Joon-Kyu Song, Seongnam-si (KR)	9,114,851 B2* 8/2015 Schneider	B62M 6/60
(73) Assignee: MANDO CORPORATION, Gyeonggi-Do (KR)	9,139,253 B2* 9/2015 Song	B62M 6/65
(*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 0 days.	2005/0176542 A1* 8/2005 Lo	B62M 7/12 475.5
(21) Appl. No.: 14/591,935	2005/0264112 A1* 12/2005 Tanaka	B60B 27/02 310/75 C
(22) Filed: Jan. 8, 2015	2007/0187952 A1* 8/2007 Perlo	B60L 8/00 290.1 R
(30) Foreign Application Priority Data	2011/0168511 A1* 7/2011 Yamamoto	B62M 6/45 192.45.006
Dec. 18, 2014 (KR) 10-2014-0182938	2011/0259658 A1* 10/2011 Huang	B60K 1/04 180.65.51
(51) Int. Cl.	2012/0083375 A1* 4/2012 Lo	B60K 1/04 475.149
<i>F16H 3/72</i> (2006.01)	2015/0191215 A1* 7/2015 Kawakami	B62M 6/55 477.4
<i>B62M 6/60</i> (2010.01)	* cited by examiner	
<i>B62M 6/45</i> (2010.01)	<i>Primary Examiner</i> — David J Hlavka	
<i>B62M 6/50</i> (2010.01)	(74) <i>Attorney, Agent, or Firm</i> — Ladass & Parry, LLP	
<i>F16H 9/26</i> (2006.01)	(57) ABSTRACT	
(52) U.S. Cl.	Disclosed is hub motor structure installed on a bicycle, the hub motor structure including a hollow shaft installed on a frame of the bicycle, a housing rotatably installed on the hollow shaft, and connected to a wheel at an outer circumferential surface thereof through spokes, a cover rotatably installed on the hollow shaft while installed on the housing, and on which a driven sprocket connected to a chain is provided to receive a pedaling force, a motor disposed in the housing and generating a rotary force to drive the wheel, a continuous variable transmission (CVT) disposed in the	
CPC . <i>B62M 6/60</i> (2013.01); <i>B62M 6/45</i> (2013.01); <i>B62M 6/50</i> (2013.01); <i>F16H 9/26</i> (2013.01)	See application file for complete search history.	
(58) Field of Classification Search		
CPC B62M 6/60; B62M 6/50; B62M 6/45; B62M 6/65; F16H 9/26		

Cited documents

Документы, процитированные в данной публикации

US9221516 (B1)

- Bibliographic data
- Description
- Claims
- Mosaics
- Original document
- Cited documents**
- Citing documents
- INPADOC legal status
- INPADOC patent family

Quick help -

- [What are cited documents?](#)
- [Can I export this list?](#)
- [What happens if I click on "Download covers"?](#)
- [What happens if I click on the star icon?](#)

Cited documents: US9221516 (B1) — 2015-12-29

Select all (0/13)
 Compact
 Export (CSV|XLS)
 Download covers
 CCD

13 documents cited in relation to **US9221516 (B1)**

Sort by Sort order

Patents cited in the search report

1. **Apparatus and method for sensing power in a bicycle**

★ Inventor:	Applicant:	CPC:	IPC:	Publication info:	Priority date:
AMBROSINA JESSE [US]	GRABER PRODUCTS INC [US]	B62M6/40	B62M6/40	US6418797 (B1)	1998-03-04
PAWELKA GERHARD [US]		B62M6/45	B62M6/45	2002-07-16	
		B62M6/50 (+3)	B62M6/50 (+4)		

2. **HUB MOTOR FOR ELECTRIC VEHICLES**

★ Inventor:	Applicant:	CPC:	IPC:	Publication info:	Priority date:
LO CHIU-HSIANG [TW]	LO CHIU-HSIANG [TW]	B60K1/04	F16H57/08	US2012083376 (A1)	2010-10-01
		B60K1/7/046		2012-04-05	
		B60K2001/045 (+6)		US8348798 (B2)	
				2013-01-08	

3. **ELECTRIC WHEEL FOR ELECTRIC VEHICLES**

★ Inventor:	Applicant:	CPC:	IPC:	Publication info:	Priority date:
LO CHIU-HSIANG [TW]	LO CHIU-HSIANG [TW]	A61G5/04	B60K1/00	US2012080934 (A1)	2010-10-01
		B60K1/04	B60K7/00	2012-04-05	
		B60K1/7/046 (+8)		US8419580 (B2)	
				2013-04-16	

4. **DRIVE UNIT FOR ELECTRIC BICYCLE**

★ Inventor:	Applicant:	CPC:	IPC:	Publication info:	Priority date:
KIM IL YONG [KR]	MANDO CORP [KR]	B62K15/006	F16H1/00	US2014080651 (A1)	2012-09-19
		B62M11/116	F16H1/28	2014-03-20	
		B62M6/65 (+3)		US8795120 (B2)	
				2014-08-05	

5. **DRIVE FOR A PEDAL VEHICLE, PARTICULARLY FOR CHILDREN**

★ Inventor:	Applicant:	CPC:	IPC:	Publication info:	Priority date:
SCHNEIDER FRANK [DE]	SCHNEIDER GMBH & CO KG	B62K9/00	B62M6/60	US2013263696 (A1)	2012-04-07
	FRANZ [DE]	B62K9/02		2013-10-10	
	SCHNEIDER GMBH & CO KG	B62M6/60		US9114851 (B2)	

Citing documents

Список документов цитирующих данную публикацию

US9221516 (B1)

- Bibliographic data
- Description
- Claims
- Mosaics
- Original document
- Cited documents
- Citing documents**
- INPADOC legal status
- INPADOC patent family

Quick help -

- [Can I export this list?](#)
- [What happens if I click on "Download covers"?](#)
- [What are citing documents?](#)
- [Why do some documents not have any citing documents?](#)
- [What happens if I click on the star icon?](#)

Citing documents: US9221516 (B1) — 2015-12-29

Select all (0/2)
 Compact
 Export (CSV | XLS)
 Download covers
 Print

2 documents citing **US9221516 (B1)**

Sort by Sort order

1. TORQUE SENSOR AND ELECTRIC BICYCLE USING SAME

★ Inventor:	Applicant:	CPC:	IPC:	Publication info:	Priority date:
CHEN YEN-CHI [TW] SHIH CHANG-YUAN [TW] (+1)	HON HAI PREC IND CO LTD [TW]	B62M6/50 G01B21/16 G01L3/108 (+2)	B62M6/50 G01L3/10	US2016280322 (A1) 2016-09-29 US9511818 (B2) 2016-12-06	2015-03-26

2. VEHICLE OPERABLE BY MOTOR POWER AND BY MUSCULAR POWER

★ Inventor:	Applicant:	CPC:	IPC:	Publication info:	Priority date:
DOMMSCH HANS-PETER [DE]	BOSCH GMBH ROBERT [DE]	B62M6/45 B62M6/55 B62M6/70 (+1)	B62M6/45 B62M6/70 B62M9/06	US2016052595 (A1) 2016-02-25	2013-04-15

INPADOC legal status

Правовой статус документа

US9221516 (B1)	INPADOC legal status: US9221516 (B1) — 2015-12-29																						
Bibliographic data	★ In my patents list	Previous 1 / 240																					
Description		Report data error																					
Claims		Print																					
Mosaics	Hub motor structure																						
Original document	The EPO does not accept any responsibility for the accuracy of data and information originating from other authorities than the EPO; in particular, the EPO does not guarantee that they are complete, up-to-date or fit for specific purposes.																						
Cited documents	Legal status of US9221516 (B1) 2015-12-29:																						
Citing documents	<table border="1"> <tr> <td>US</td> <td>F</td> <td>201514591935 A (Patent of invention)</td> </tr> <tr> <td>Event date :</td> <td colspan="2">2015/01/08</td> </tr> <tr> <td>Event code :</td> <td colspan="2">AS</td> </tr> <tr> <td>Code Expl.:</td> <td colspan="2">ASSIGNMENT</td> </tr> <tr> <td>NEW OWNER :</td> <td colspan="2">MANDO CORPORATION, KOREA, REPUBLIC OF</td> </tr> <tr> <td>EFFECTIVE DATE :</td> <td colspan="2">20141224</td> </tr> <tr> <td>FURTHER INFORMATION :</td> <td colspan="2">ASSIGNMENT OF ASSIGNORS INTEREST;ASSIGNOR:SONG, JOON-KYU;REEL/FRAME:034664/0196</td> </tr> </table>		US	F	201514591935 A (Patent of invention)	Event date :	2015/01/08		Event code :	AS		Code Expl.:	ASSIGNMENT		NEW OWNER :	MANDO CORPORATION, KOREA, REPUBLIC OF		EFFECTIVE DATE :	20141224		FURTHER INFORMATION :	ASSIGNMENT OF ASSIGNORS INTEREST;ASSIGNOR:SONG, JOON-KYU;REEL/FRAME:034664/0196	
US	F	201514591935 A (Patent of invention)																					
Event date :	2015/01/08																						
Event code :	AS																						
Code Expl.:	ASSIGNMENT																						
NEW OWNER :	MANDO CORPORATION, KOREA, REPUBLIC OF																						
EFFECTIVE DATE :	20141224																						
FURTHER INFORMATION :	ASSIGNMENT OF ASSIGNORS INTEREST;ASSIGNOR:SONG, JOON-KYU;REEL/FRAME:034664/0196																						
INPADOC legal status																							
INPADOC patent family																							
Quick help	<ul style="list-style-type: none"> → What happens if I click on "In my patents list"? → What happens if I click on the "Register" button? → What does "legal status" mean? → Why is the legal status not always available? → How might this information be useful to me? → How reliable is this data? → What is Global Dossier? 																						

INPADOC patent family Патентное семейство

US9221516 (B1)

- Bibliographic data
- Description
- Claims
- Mosaics
- Original document
- Cited documents
- Citing documents
- INPADOC legal status
- INPADOC patent family**

Quick help -

- [Can I export this list?](#)
- [What happens if I click on "Download covers"?](#)
- [Can I sort the list?](#)
- [What happens if I click on the star icon?](#)
- [What is a patent family?](#)
- [What happens if I tick the "show citations" box?](#)
- [What is an INPADOC patent family?](#)
- [Are all the documents in an INPADOC family equivalents?](#)
- [Why is the same document published several times in the same country?](#)

Family list: US9221516 (B1) — 2015-12-29

Select all (0/4)
 Compact
 Export (CSV | XLS)
 Download covers
 CCD
 Print

4 application(s) for: **US9221516 (B1)**

Sort by
 Sort order

 show citations

1. **Hub motor structure**

	Inventor:	Applicant:	CPC:	IPC:	Publication info:	Priority date:
★	SONG JOON-KYU [KR]	MANDO CORP [KR]	B62M11/16 B62M6/45 B62M6/50 (+2)	B62M6/45 B62M6/50 B62M6/60 (+2)	US9221516 (B1) 2015-12-29 i Global Dossier	2014-12-18

2. **Hub motor structure**

	Inventor:	Applicant:	CPC:	IPC:	Publication info:	Priority date:
★	SONG JOON-KYU	MANDO CORP	B62M11/16 B62M6/45 B62M6/50 (+2)	B62M7/12	CN105836035 (A) 2016-08-10 i Global Dossier	2014-12-18

3. **Hub motor structure**

	Inventor:	Applicant:	CPC:	IPC:	Publication info:	Priority date:
★	SONG JOON-KYU [KR]	MANDO CORP [KR]	B62M11/16 B62M6/45 B62M6/50 (+2)	B62M11/16 B62M6/65 B62M7/12	EP3034387 (A1) 2016-06-22 i Global Dossier	2014-12-18

4. **HUB MOTOR STRUCTURE**

	Inventor:	Applicant:	CPC:	IPC:	Publication info:	Priority date:
★	SONG JOON KYU [KR]	MANDO CORP [KR]	B62M11/16 B62M25/02 B62M6/40 (+8)	B62M25/02 B62M6/40 B62M6/50 (+2)	KR20160074765 (A) 2016-06-29 i Global Dossier	2014-12-18

EPO Global Dossier

Просмотр переписки по заявкам и сведений о делопроизводстве


 Patentamt
 European Patent Office
 Office européen des brevets


Deutsch English Français
[Contact](#)

European Patent Register

[About European Patent Register](#)
[Other EPO online services](#)
[Register Alert login](#)

[Smart search](#)
[Advanced search](#)
[Help](#)

EPO Global Dossier US201514591935


 Dossier provided courtesy of USPTO

Date	Description	Pages
09.12.2015	Issue Notification	1
24.11.2015	EFS Acknowledgment Receipt	2
24.11.2015	Fee Worksheet (SB06)	2
24.11.2015	Issue Fee Payment (PTO-85B)	1
23.10.2015	Examiner's search strategy and results	3
23.10.2015	List of references cited by examiner	1

EPO Register Plus PDF viewer - Google Chrome
<https://register.epo.org/documentView?number=US.201514591935.A&documentId=11-3-US++14591935>

File: US201514591935 **Examiner's search strategy and results**

EAST Search History

EAST Search History (Prior Art)

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
S1	947	B62M6/60.cpc.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2015/10/16 10:28
S2	247	S1 and hub\$3	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2015/10/16 10:28
S3	2	S2 and (CVT\$3 (continuous\$3 near1 variabl\$3 near1 transmission\$3))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2015/10/16 10:33

С 2016г отсылка к Глобальному досье заявки (Global dossier), в котором содержатся все документы, относящиеся к ходу рассмотрения заявки

EPO Global Dossier

 File wrapper data provided courtesy of KIPO, for family member with application no. KR20160122132

<u>Date</u>	<u>Description</u>	<u>Pages</u>
14.12.2016	<u>Written Decision on Registration (ORIGINAL)</u>	-
14.12.2016	<u>Written Decision on Registration (TRANSLATED)</u>	-
24.11.2016	<u>Written Decision on Preferential Examination (TRANSLATED)</u>	-
24.11.2016	<u>Written Decision on Preferential Examination (ORIGINAL)</u>	-
16.11.2016	<u>Notification of Change of Information of Applicant (TRANSLATED)</u>	-
16.11.2016	Notification of Change of Information of Applicant (ORIGINAL)	-
16.11.2016	<u>Request for Accelerated Examination of Patent (TRANSLATED)</u>	-
16.11.2016	<u>Request for Accelerated Examination of Patent (ORIGINAL)</u>	-
23.09.2016	<u>[Patent Application] Patent Application (ORIGINAL)</u>	-
23.09.2016	<u>[Patent Application] Patent Application (TRANSLATED)</u>	-

The EPO does not accept any responsibility for the accuracy of data and information originating from authorities other than the EPO; in particular, it does not guarantee that such data and information are complete, up to date or fit for specific purposes.

EP Register

Европейский патентный реестр

Bibliographic data: EP3100937 (A1) — 2016-12-07

★ In my patents list [EP Register](#) [Report data error](#)

[Print](#)

BICYCLE ILLUMINATION SYSTEM

Page bookmark [EP3100937 \(A1\) - BICYCLE ILLUMINATION SYSTEM](#)

Inventor(s): PETERSON MICHAEL [US]; PETERSON BRIAN [US]; PETERSON SEAN [US] ±

Applicant(s): PETERSON MICHAEL [US]; PETERSON BRIAN [US]; PETERSON SEAN [US] ±

Classification:
- **international:** *B62J6/00*
- **cooperative:** *B62J6/00; B62J6/003; B62K19/40*

Application number: EP20160020216 2016060 [Global Dossier](#)

Priority number(s): [US201514729875](#) [20150603](#)

Also published as: [US2016355227 \(A1\)](#) [US9610994 \(B2\)](#)

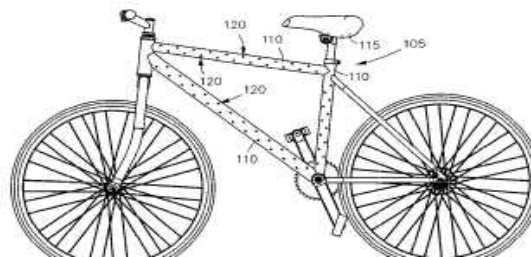
Abstract of EP3100937 (A1)

Translate this text into [i](#)

Select language ▼

[patenttranslate](#) powered by EPO and Google

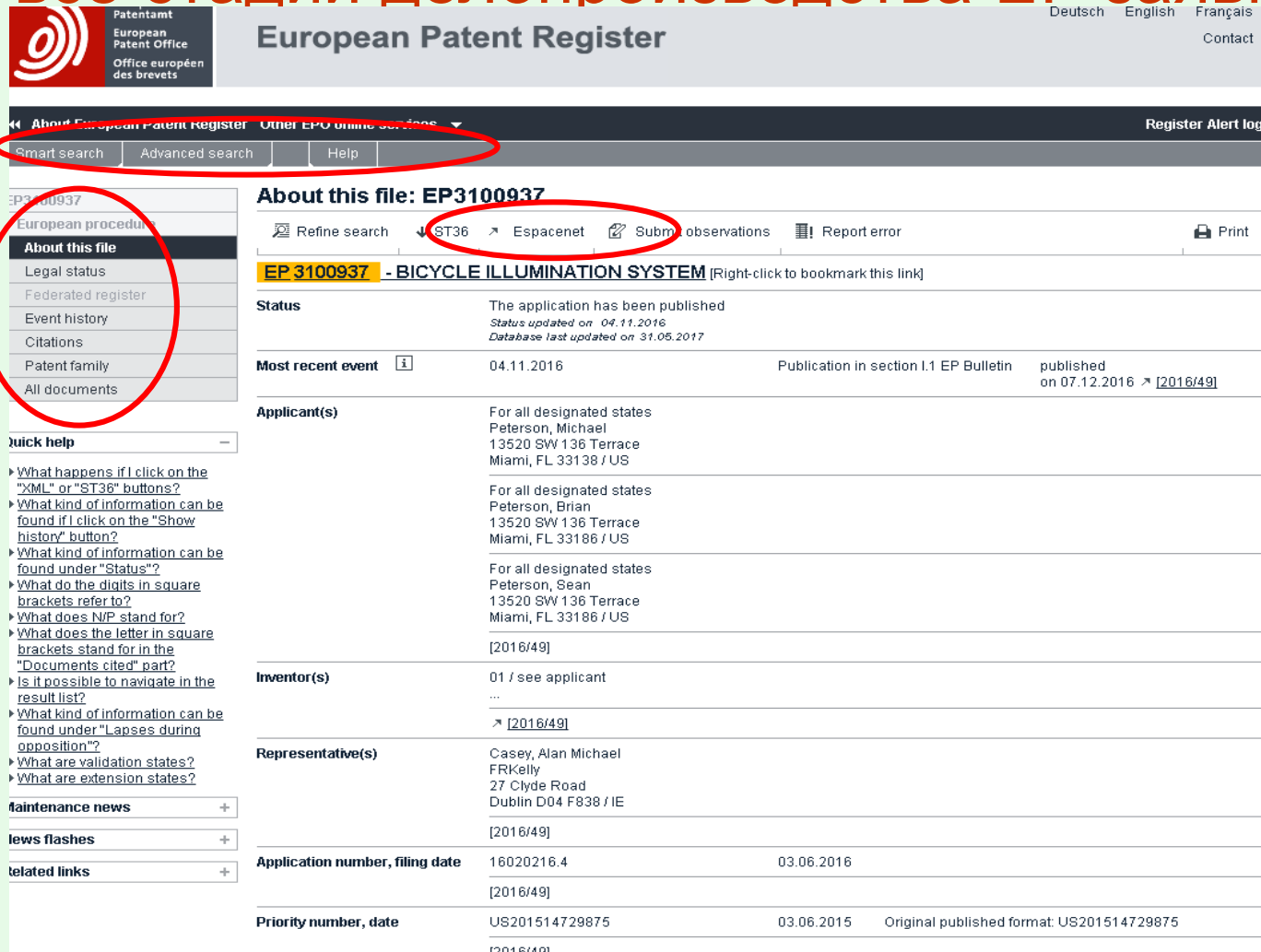
A system for illuminating a bicycle having a frame comprising a plurality of tubular frame members (110) wherein each frame member has a plurality of orifices (120). The orifices (120) allow light rays to pass from inside each tubular frame member (110) to outside each tubular frame member (110). Bulbs (215) for emitting light are adapted to fit inside the tubular frame members (110) and are conductively coupled to a power source (225). The power source (225) is sized such that the power source (225) fits inside a vertically situated tubular frame member (110) to outside each tubular frame member (110). A planar platform (230), having a length in one direction that is less than the inside cross sectional diameter of the vertically aligned tubular frame member (205), is sized so that the platform fits inside the vertical tubular frame member (205). The platform (230) supports the power source (225) and is positioned such that the power source (225) can be installed and



EP Register

Европейский патентный реестр

все стадии делопроизводства EP заявки



The screenshot shows the European Patent Register interface. At the top, there are navigation links for 'Deutsch', 'English', and 'Français', along with a 'Contact' link. Below this is a search bar with options for 'Smart search', 'Advanced search', and 'Help'. The main content area displays details for the patent file EP 3100937, titled 'BICYCLE ILLUMINATION SYSTEM'. The 'About this file' section includes a table with columns for 'Applicant(s)', 'Inventor(s)', and 'Representative(s)', each listing names and addresses. The 'Application number, filing date' and 'Priority number, date' are also listed. A sidebar on the left contains a 'Quick help' section with various questions and answers, and a 'Maintenance news' section.

European Patent Register (Deutsch English Français Contact)

[Smart search](#) | [Advanced search](#) | [Help](#)

[About this file](#) | [Refine search](#) | [ST36](#) | [Espacenet](#) | [Submit observations](#) | [Report error](#) | [Print](#)

EP 3100937 - BICYCLE ILLUMINATION SYSTEM [Right-click to bookmark this link]

Status The application has been published
 Status updated on 04.11.2016
 Database last updated on 31.05.2017

Most recent event [i] 04.11.2016 Publication in section I.1 EP Bulletin published on 07.12.2016 [2016/49]

Applicant(s)

For all designated states Peterson, Michael 13520 SW 136 Terrace Miami, FL 33138 / US
For all designated states Peterson, Brian 13520 SW 136 Terrace Miami, FL 33186 / US
For all designated states Peterson, Sean 13520 SW 136 Terrace Miami, FL 33186 / US

[2016/49]

Inventor(s) 01 / see applicant
 ...
 [2016/49]

Representative(s) Casey, Alan Michael
 FRKelly
 27 Clyde Road
 Dublin D04 F838 / IE
 [2016/49]

Application number, filing date 16020216.4 03.06.2016
 [2016/49]

Priority number, date US201514729875 03.06.2015 Original published format: US201514729875
 [2016/49]

Quick help

- What happens if I click on the "XML" or "ST36" buttons?
- What kind of information can be found if I click on the "Show history" button?
- What kind of information can be found under "Status"?
- What do the digits in square brackets refer to?
- What does N/P stand for?
- What does the letter in square brackets stand for in the "Documents cited" part?
- Is it possible to navigate in the result list?
- What kind of information can be found under "Lapses during opposition"?
- What are validation states?
- What are extension states?


Maintenance news +

News flashes +

Related links +

Global Dossier

Просмотр переписки по заявке и сведений о делопроизводстве



European Patent Register

Deutsch English Français
Contact

[About European Patent Register](#)
[Other EPO online services](#)
[Register](#) [Alert](#) [login](#)

P3100937

- European procedure
- About this file
- Legal status
- Federated register
- Event history
- Citations
- Patent family
- All documents

quick help -

[Is it possible to download documents?](#)

[Is it possible to print a list of all the documents?](#)

[Can I sort the list of documents?](#)

[Is it possible to open one of the documents?](#)


[Can I open multiple documents in separate windows?](#)

[Is it possible to print a document?](#)

maintenance news +

news flashes +

related links +

All documents: EP3100937  RSS: dossier

[Refine search](#)
[Selected documents](#)
[Zip Archive](#)
[Espacenet](#)
[Submit observations](#)
[Report error](#)
[Print](#)

All documents(17)

- All documents(17)
- Search / examination(17)
- Received by EPO(8)
- Sent by EPO(8)
- Internal(1)

		Procedure	Number of pages
<input type="checkbox"/>	of receipt of (electronically) transmitted priority document	Search / examination	1
<input type="checkbox"/>	12.12.2016 Reminder period for payment of examination fee/designation fee and correction of deficiencies in Written Opinion/amendment	Search / examination	2
<input type="checkbox"/>	08.12.2016 Priority document (electronically transmitted)	Search / examination	39
<input type="checkbox"/>	09.11.2016 Notification of forthcoming publication	Search / examination	2
<input type="checkbox"/>	10.10.2016 Communication regarding the transmission of the European search report	Search / examination	1
<input type="checkbox"/>	10.10.2016 European search opinion	Search / examination	1
<input type="checkbox"/>	10.10.2016 European search report	Search / examination	2
<input type="checkbox"/>	10.10.2016 Information on Search Strategy	Search / examination	1
<input type="checkbox"/>	30.09.2016 Modified abstract	Search / examination	1
<input type="checkbox"/>	16.06.2016 (Electronic) Receipt	Search / examination	1
<input type="checkbox"/>	16.06.2016 Letter accompanying subsequently filed items	Search / examination	2
<input type="checkbox"/>	03.06.2016 Abstract	Search / examination	1
<input type="checkbox"/>	03.06.2016 Claims	Search / examination	3
<input type="checkbox"/>	03.06.2016 Description	Search / examination	10
<input type="checkbox"/>	03.06.2016 Drawings	Search / examination	3
<input type="checkbox"/>	03.06.2016 Request for grant of a European patent	Search / examination	1

Classification Search

(Поиск в СПК)

- CPC базируется на ECLA и US Class, но в ней – вдвое больше рубрик;
- По CPC в Espasenet классифицированы около трети документов

Smart search

Advanced search

Classification search

Quick help

- [What is the Cooperative Patent Classification system?](#)
- [How do I enter classification symbols?](#)
- [What do the different buttons mean?](#)
- [Can I retrieve a classification using keywords?](#)
- [Can I start a new search using the classifications listed?](#)
- [Where can I view the description of a particular CPC class?](#)
- [What is the meaning of the stars in front of the classifications found?](#)
- [What does the text in brackets mean?](#)

Cooperative Patent Classification

Search for Search

View section **Index** | A | B | C | D | E | F | G | H | Y


A »

Symbol	Classification and description		
<input type="checkbox"/> A	HUMAN NECESSITIES	<input type="button" value="s"/>	
<input type="checkbox"/> B	PERFORMING OPERATIONS; TRANSPORTING	<input type="button" value="s"/>	<input type="button" value="i"/>
<input type="checkbox"/> C	CHEMISTRY; METALLURGY	<input type="button" value="s"/>	<input type="button" value="i"/>
<input type="checkbox"/> D	TEXTILES; PAPER	<input type="button" value="s"/>	
<input type="checkbox"/> E	FIXED CONSTRUCTIONS	<input type="button" value="s"/>	
<input type="checkbox"/> F	MECHANICAL ENGINEERING; LIGHTING; HEATING; WEAPONS; BLASTING ENGINES OR PUMPS	<input type="button" value="s"/>	<input type="button" value="i"/>
<input type="checkbox"/> G	PHYSICS	<input type="button" value="s"/>	<input type="button" value="i"/>
<input type="checkbox"/> H	ELECTRICITY	<input type="button" value="s"/>	<input type="button" value="i"/>
<input type="checkbox"/> Y	GENERAL TAGGING OF NEW TECHNOLOGICAL DEVELOPMENTS; GENERAL TAGGING OF CROSS-SECTIONAL TECHNOLOGIES SPANNING OVER SEVERAL SECTIONS OF THE IPC; TECHNICAL SUBJECTS COVERED BY FORMER USPC CROSS-REFERENCE ART COLLECTIONS [XRACs] AND DIGESTS	<input type="button" value="s"/>	<input type="button" value="i"/>

Selected classifications

nothing selected

Вид CPC в Espacenet



Europäisches Patentamt
 European Patent Office
 Office européen des brevets

Espacenet

Patent search

Deutsch English Français
 Contact
 Change country ▾

◀ About Espacenet Other EPO online services ▾

Search Result list ★ My patents list (1) Query history Settings Help

Smart search

Advanced search

Classification search

Cooperative Patent Classification

Search for View section | [Index](#) | [A](#) | [B](#) | [C](#) | [D](#) | [E](#) | **[F](#)** | [G](#) | [H](#) | [Y](#)

Quick help

- [What is the Cooperative Patent Classification system?](#)
- [How do I enter classification symbols?](#)
- [What do the different buttons mean?](#)
- [Can I retrieve a classification using keywords?](#)
- [Can I start a new search using the classifications listed?](#)
- [Where can I view the description of a particular CPC class?](#)
- [What is the meaning of the stars in front of the classifications found?](#)
- [What does the text in brackets mean?](#)

⏪ ⏩ 🔍 📄 ⏴ ⏵ ⏶ ⏷ ⏸ ⏹ ⏺ ⏻ ⏼ ⏽ ⏾ ⏿

CPC

⏶ ⏷ ⏸ ⏹ ⏺ ⏻ ⏼ ⏽ ⏾ ⏿

◀ F01B F01B3/00 ▶

Symbol	Classification and description	
<input type="checkbox"/> F	MECHANICAL ENGINEERING; LIGHTING; HEATING; WEAPONS; BLASTING	S i
ENGINES OR PUMPS		
<input type="checkbox"/> F01	MACHINES OR ENGINES IN GENERAL (combustion engines F02 ; machines for liquids F03 , F04); ENGINE PLANTS IN GENERAL ; STEAM ENGINES	S D i
<input type="checkbox"/> F01B	MACHINES OR ENGINES, IN GENERAL OR OF POSITIVE-DISPLACEMENT TYPE, e.g. STEAM ENGINES (of rotaty-piston or oscillating-piston type F01C ; of non-positive-displacement type F01D ; internal-combustion aspects of reciprocating-piston engines F02B 57/00 , F02B 59/00 ; crankshafts, crossheads, connecting-rods F16C ; flywheels F16F ; gears for interconverting rotary motion and reciprocating motion in general F16H ; pistons, piston rods, cylinders, for engines in general F16J)	S D i
<input type="checkbox"/> F01B 1/00	Reciprocating-piston machines or engines characterised by number or relative disposition of cylinders or by being built-up from separate cylinder-crankcase elements (F01B 3/00 , F01B 5/00 take precedence)	D
<input type="checkbox"/> F01B 1/01	• with one single cylinder	
<input type="checkbox"/> F01B 1/02	• with cylinders all in one line	
<input type="checkbox"/> F01B 1/04	• with cylinders in V-arrangement	
<input type="checkbox"/> F01B 1/06	• with cylinders in star or fan arrangement	
<input type="checkbox"/> F01B 1/0603	•• (the connection of the pistons with an element being at the outer ends of the cylinders)	D
<input type="checkbox"/> F01B 1/0606	••• {with cam-actuated distribution member(s)}	
<input type="checkbox"/> F01B 1/061	••• {with two or more series radial piston-cylinder units}	
<input type="checkbox"/> F01B 1/0613	•••• {directly located side by side}	
<input type="checkbox"/> F01B 1/0617	•••• {coupling of several cylinders-barrels}	
<input type="checkbox"/> F01B 1/062	•• {the connection of the pistons with an actuating or actuated element being at the inner	D

Selected classifications

nothing selected

⏶ ⏷ ⏸ ⏹ ⏺ ⏻ ⏼ ⏽ ⏾ ⏿

Линейка форматирования представления схемы



расположение индексов рубрик слева или справа от их определений



иерархия «деревом» или точками



отображение предупреждений или примечаний



выделение отличий от МПК зеленым цветом



отображение даты введения рубрики



отображение отсылок к другим рубрикам (если есть)



выключение/включение отображения схемы индексации (если есть)

Включение отобранных рубрик в ПОИСК

The screenshot displays the EPO search interface. On the left, a panel titled "Selected classifications" contains a search box with "B62J1/00" entered, a "Clear" button, and two buttons: "Find patents" and "Copy to search form". On the right, a list of search results is shown, with the first entry "B62J 1/00" selected and circled in red. A red arrow points from this entry to the "Find patents" button. The search results list includes:

- B62J 1/00 Saddles or other seats for cycles; Arrangement thereof; Component parts (...) [2013-01-01]
- B62J 1/002 • Saddles having a seating area with a central cavity or depression [2013-01-01]
- B62J 1/005 • Saddles having a seating area with multiple separate weight bearing surfaces [2013-01-01]
- B62J 1/162 ••• Child seats specially adapted for motorcycles [2013-01-01]
- B62J 1/165 ••• Child seats attachable to handlebars [2013-01-01]
- B62J 1/167 ••• Child seats attachable in front of the driver saddle [2013-01-01]

Необходимо выбрать галочкой нужную рубрику, она появится в меню слева.

Затем выбрать:

- Найти патенты (Find patents)**
- Копировать в поисковую форму (Copy to search form)**

Справочная система

Espacenet - Advanced search - Windows Internet Explorer

http://worldwide.espacenet.com/advancedSearch?locale=en_EP

Файл Правка Вид Избранное Сервис Справка

Избранное E Esp... E E... x E Esp... E Esp... E Esp... http... E Esp...

About Espacenet Other EPO online services

Search Result list My patents list (0) Query history Settings **Help**

Smart search
Advanced search
Classification search

Quick help +
Espacenet Assistant

Advanced search

Select the collection you want to search in **i**
Worldwide - collection of published applications from 90+ countries

Select patent database
Select the database you want to search in from the drop-down list. For more information see our help files.

Enter your search terms - CTRL-ENTER expands search terms

Enter keywords in English

Title: **i** plastic and bicycle

Title or abstract: **i** hair

Enter numbers with or without country code

Publication number: **i** WO2008014520

Application number: **i** DE19971031696

Priority number: **i** WO1995US15925

Интернет 100%

Справочная система

- **Help** – на стартовой странице вверху справа
- При открытии каждого вида поиска – внизу под панелью навигации – **Quick Help**
- **Espacenet Assistant** – помощник по работе с БД Espacenet

Спасибо за внимание!