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# European patents and the grant procedure





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## Patents



## What is a patent?

Patents protect technical inventions. They are valid in individual countries, for a specified period. Patents confer the right to prevent third parties from commercially exploiting the invention.

In return for this period of protection, applicants must fully disclose their invention. Patent applications and granted patents are published, which makes them a prime source of technical information.

## What is an invention?

An invention can be, for example, a product, a process or an apparatus. To be patentable, it must be new, industrially applicable and involve an inventive step.

## How can I get patent protection?

Patent protection is not automatic. You have to file an application describing the invention in technical terms and in a form that meets certain requirements. The first step is usually to file your application with a national patent office.

Under the 1883 Paris Convention, someone who files an application in one country can then claim the "priority" of the filing date of that application for later applications in other countries, provided that they relate to the same invention and are filed within twelve months of the first one.

### Patents and other intellectual property rights

**Original ideas** and creative work are assets which may be of commercial value in the same way as material goods. Establishing and protecting the ownership of ideas and their representation or application is the function of intellectual property rights such as patents, utility models, copyright, trade marks or designs and models. The protective right may depend on some kind of registration procedure, as for trade marks and as is usually the case for design rights.

**Patents** are concerned with technical and functional aspects of inventions.

**Utility models** protect technical innovations which might not qualify for a patent, and can be protected in some countries through registration.

**Copyright** protects creations such as literary text, musical compositions and works of art, broadcasts and computer software against unauthorised copying and certain other uses.

**Trade marks** allow brands of products or services to be distinguished. They may be made up of two- or three-dimensional signs such as letters, numbers, words, shapes, logos or pictures, or even sounds.

**Designs and models** protect the visual appearance of industrial products, i.e. the shape and colour.

## What is the purpose of patents?

The wide-ranging economic significance of patents derives from the fact that patentees can prevent third parties from commercially exploiting their inventions for up to 20 years from the date of application filing. This enables them to recoup their development costs and gives them time to reap the rewards of their investment.

Effective patent protection encourages further investment in R&D, and is a key requirement for raising venture capital. It fosters technical innovation, which is crucial to competitiveness and overall economic growth.

The applicant's obligation to publish a full technical description of the invention contributes greatly to the dissemination of new technical knowledge. Over 80% of the world's technical knowledge can now be found in patent documents. This inspires further inventions and at the same time prevents the duplication of R&D work.

### Patents and their exploitation

The owner of a patent can exploit the invention himself, or permit someone else to do so. Individual inventors and small and medium-sized companies often lack the technical and financial means to bring their ideas to market. Nevertheless, they too can derive great benefit from patents. For example, a patent can strengthen an inventor's negotiating position, as it gives the option of granting licences or selling the protective rights altogether.

In granting a licence, the patent holder allows the licensee to use the invention in return for some form of financial reward. This may be a one-off payment or a royalty on sales of the product incorporating the patented technology.

### What patents do not do

A patent does not confer a right to make use of or exploit an invention. It is a right to prevent others from deriving economic gain from the technology without the owner's permission. The use and exploitation of technology remain subject to national laws and regulations.

A patent does not provide a guarantee of commercial success. All it shows is that the idea in question is new, industrially applicable and inventive. It is up to the owner to develop the business side.

The purpose of patents is not to establish long-term monopolies. They are granted for a limited period, which can only be extended in the case of medicines and pesticides which have to undergo lengthy clinical trials for safety reasons.

## The European patent



## What are the advantages of a European patent?

The European Patent Convention makes it possible to obtain patent protection in nearly 40 European countries on the basis of a single application. The applicant selects the countries in which he wants protection.

European patents are granted by the European Patent Office in a centralised and thus cost-effective and time-saving procedure conducted in either English, French or German, its three official languages.

They have the same legal effects as national patents in each country for which they are granted. Every European patent undergoes substantive examination and can be obtained for countries which otherwise have "registration-only" systems, thus providing strong protection.

The term, scope of protection, binding text and grounds for revocation of European patents are the same for all contracting states to the European Patent Convention.

## When is it worth filing a European patent application?

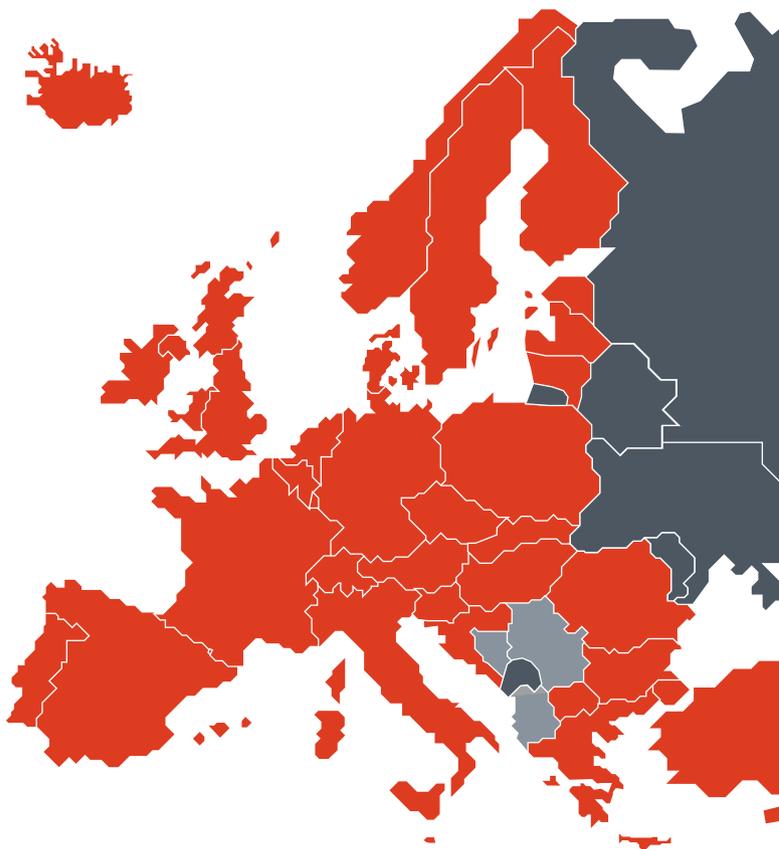
Patenting can be an expensive business. As with any investment, the risks and benefits need to be weighed up carefully. However, patenting is advisable in any country where an invention can be expected to yield significant economic benefits. It makes sense to file a European patent application rather than national applications when protection is sought in at least four European countries.

## How do you get a European patent?

All the contracting states to the European Patent Convention offer the possibility, as a first step, of applying for a national patent. Filing an application with a national patent office has the advantage that entry to the procedure is relatively cheap and that applicants can deal with a patent authority in their own language. If they decide that they also need protection in other countries, they have twelve months from the date of first filing to file applications for the same invention elsewhere. They can claim the priority of the date of first filing for such subsequent applications. A European patent application can claim the priority of a national application or, as is less commonly the case, may itself be a first filing.

A European application can also be derived from an international application filed under the Patent Cooperation Treaty (PCT). This treaty offers a simplified patent application procedure for over 140 countries worldwide. It enables inventors to file a single international application designating many countries, instead of having to apply separately for national or regional patents. In this international phase, an international search and – on request – international preliminary examination are performed. In the national or regional phase, the patent granting procedure is then carried out by the relevant national or regional patent offices, for example the European Patent Office.

## Contracting states to the European Patent Convention



■ Contracting state  
■ Extension state

<i>Contracting state</i>	<i>since</i>
<b>AT</b> Austria	01.05.1979
<b>BE</b> Belgium	07.10.1977
<b>BG</b> Bulgaria	01.07.2002
<b>CH</b> Switzerland	07.10.1977
<b>CY</b> Cyprus	01.04.1998
<b>CZ</b> Czech Republic	01.07.2002
<b>DE</b> Germany	07.10.1977
<b>DK</b> Denmark	01.01.1990
<b>EE</b> Estonia	01.07.2002
<b>ES</b> Spain	01.10.1986
<b>FI</b> Finland	01.03.1996
<b>FR</b> France	07.10.1977
<b>GB</b> United Kingdom	07.10.1977
<b>GR</b> Greece	01.10.1986
<b>HR</b> Croatia	01.01.2008
<b>HU</b> Hungary	01.01.2003
<b>IE</b> Ireland	01.08.1992
<b>IS</b> Iceland	01.11.2004
<b>IT</b> Italy	01.12.1978
<b>LI</b> Liechtenstein	01.04.1980
<b>LT</b> Lithuania	01.12.2004
<b>LU</b> Luxembourg	07.10.1977
<b>LV</b> Latvia	01.07.2005
<b>MC</b> Monaco	01.12.1991
<b>MK</b> Former Yugoslav Republic of Macedonia	01.01.2009
<b>MT</b> Malta	01.03.2007
<b>NL</b> Netherlands	07.10.1977
<b>NO</b> Norway	01.01.2008
<b>PL</b> Poland	01.03.2004
<b>PT</b> Portugal	01.01.1992
<b>RO</b> Romania	01.03.2003
<b>SE</b> Sweden	01.05.1978
<b>SI</b> Slovenia	01.12.2002
<b>SK</b> Slovakia	01.07.2002
<b>SM</b> San Marino	01.07.2009
<b>TR</b> Turkey	01.11.2000

*European patent applications and patents can also be extended at the applicant's request to the following states:*

<b>AL</b> Albania	01.02.1996
<b>BA</b> Bosnia-Herzegovina	01.12.2004
<b>RS</b> Serbia	01.11.2004

*Contracting states to the European Patent Convention are automatically member states of the European Patent Organisation.*

## What can you patent in Europe?

Under the law of the European Patent Convention, patents are only granted for inventions that are new, that involve an inventive step and that are industrially applicable. An invention meets these requirements if it was not known to the public in any form prior to the date of filing or to the priority date, was not obvious to a skilled person and can be manufactured or used industrially.

Discoveries, mathematical methods, computer programs and business methods as such are not regarded as inventions. Surgical and therapeutic procedures along with diagnostic methods practised on the human or animal body are excluded from patentability. New plant or animal varieties are completely excluded from patentability. The European Patent Convention does not, of course, recognise inventions whose commercial exploitation would be contrary to "ordre public" or ethical principles, such as means of cloning human life or the use of human embryos for commercial and industrial purposes.

## Things to bear in mind before making a European patent application

If an idea is made public before a patent application is filed, then it can no longer be considered new. If, for example, filing is preceded by negotiations between the inventor and a company interested in using the invention, then it is advisable to conclude a confidentiality agreement. It is better still to file first and negotiate afterwards.

The fact that an invention is not commercially available does not always mean that it is new. It can be useful in the first instance to look at catalogues and trade journals to see what is already on the market. The many published patent documents describing the relevant state of the art are, however, a much more important source of information.

The best way to consult them is by using *esp@cenet*, through which the European Patent Office provides free access to 60 million patent documents. Although a search of patent literature will not tell the inventor everything he needs to know, it will at least give him an indication of whether his invention is new before committing himself to the costs associated with a patent application.

After consulting these sources of information, inventors would still be well advised to establish whether there is a market for their invention. Information from patents can also be very useful in identifying business partners and sources of capital.

## What does a European patent cost?

The cost of a European patent depends very much on the number of designated states and the planned term of the patent. Fees are charged for filing, search, designation, examination, grant and printing, along with the renewal fees payable for the third year after the date of filing and the years thereafter.

The filing and search fees due at the beginning of the procedure amount to about EUR 1200. The remaining fees are payable later. This means that applicants can decide at each stage of the procedure whether or not to pursue the application. To give you a rough idea: it costs about EUR 4800 to take a European patent application to the grant stage (status: July 2009).

The renewal fees payable to the national patent offices of the designated states after grant in order to maintain the patent depend on the rates charged in each state.

At the post-grant stage, competence is transferred to the contracting states designated in the European patent. Many of these countries require a translation of the patent specification if the patent has not been granted in one of their official languages. If the patent owner fails to submit the translation by the appointed deadline, the patent is no longer effective in that country.

Since translation costs can be considerable, applicants should use market analyses to pinpoint the countries for which they really need protection.

The overall cost of obtaining a European patent will generally include fees for the services of a patent attorney. Further details of these costs can be obtained from any patent attorney authorised to act as a professional representative before the EPO.

## The grant procedure



## Filing a European patent application

European patent applications can be filed in writing at the European Patent Office in Munich, The Hague or Berlin or at the central industrial property office of any contracting state. They may be filed by post, by fax or online, or delivered in person.

## The language of a patent application

A European patent application may be filed in any language, but it will be processed in one of the three official languages, English, French and German. Therefore if it was filed in any other language, a translation in English, French or German needs to be filed within two months.

## Components of a European patent application

European patent applications consist of four or five parts: a request for grant; a description of the invention; one or more claims; any drawings referred to in the description or the claims; and an abstract. After filing, the subject-matter of a European patent application cannot be extended beyond the content of the application as filed.

### Request for grant

Requests should be made using the official "Request for grant" form, which is obtainable free of charge, accompanied by explanatory notes, from the European Patent Office and the patent offices of the contracting states. The form can also be downloaded at: [www.epo.org/forms](http://www.epo.org/forms)

### Description of the invention

The description must describe the invention clearly and completely enough for a person skilled in the art to be able to carry it out. The description forms the basis for the claims.

### Claims

The claims must define the subject-matter for which patent protection is sought in terms of its technical features. They must be clear and concise and be supported by the description.

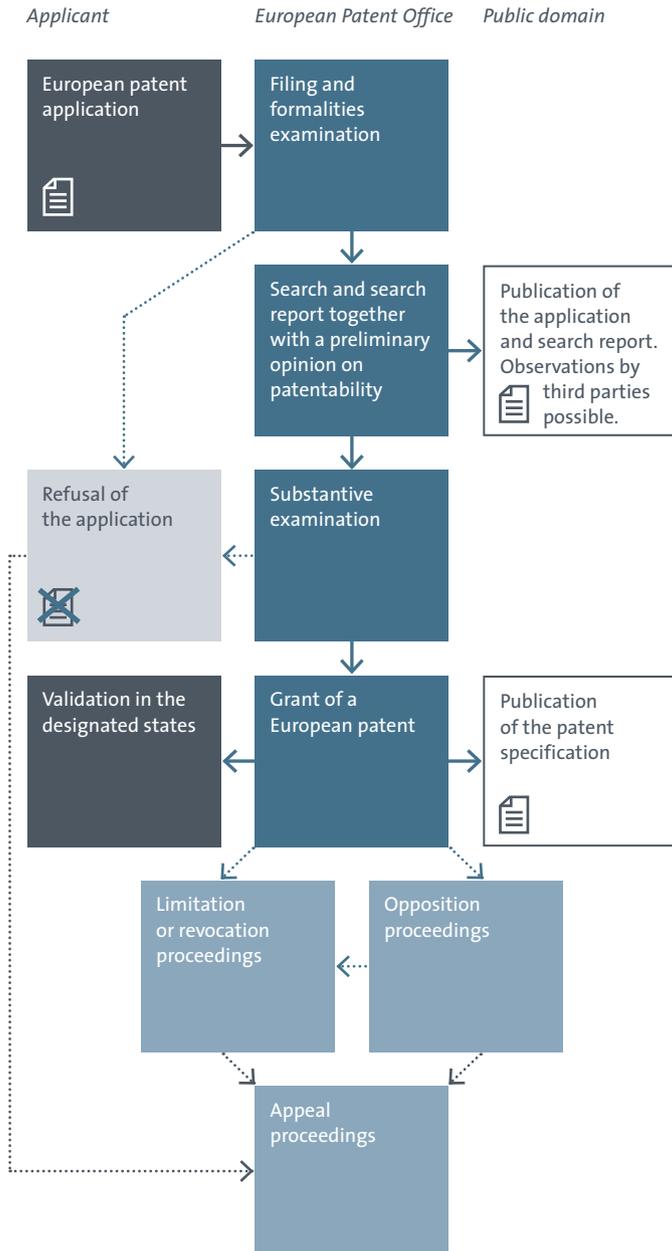
### Drawings

The application may also contain drawings. These form a useful addition to the description when they illustrate the features of the invention.

### Abstract

The abstract is purely for technical information and is not used to assess the patentability of the invention.

## The grant procedure at a glance



## Filing and formalities examination

The first step in the European patent grant procedure is the examination on filing. This involves checking whether all the necessary information and documentation has been provided so that the application can be accorded a filing date. The following are required: an indication that a European patent is sought, particulars identifying the applicant and a description or a reference to a previously filed application. If no claims are filed, they need to be filed within two months.

This is followed by a "formalities" examination relating to certain formal aspects of the application, including the form and content of the patent application, the translation, the designation of the inventor, the appointment of a professional representative and the payment of fees due.

## Search

In parallel with the formalities examination, a European search report is drawn up, listing all the documents available to the Office that are considered relevant for assessing novelty and inventive step. The search report is based on the patent claims but also takes into account the description and any drawings. Immediately after it has been drawn up, the search report is sent to the applicant, together with a copy of any cited documents and an initial opinion on whether the claimed invention and the application meet the requirements of the European Patent Convention.

## Publication of the application

The application is published – normally together with the search report – 18 months after the date of filing or the priority date. Applicants then have six months from the date of mention of publication of the search report to decide whether or not to pursue their application by requesting substantive examination. Alternatively, an applicant who has requested examination already will be invited to confirm whether the application should proceed, unless he has waived this invitation.

From the date of publication, a European patent application confers provisional protection of the invention in the states designated in the application as published. However, it may be necessary under national law to file a translation of the claims with the patent office in question, and to have this translation published.

## Substantive examination

After the request for examination has been made, the European Patent Office examines, in the light of the search report, whether the European patent application and the invention to which it relates meet the requirements of the European Patent Convention, and in particular whether the invention is patentable. The grant will, however, not be issued before translations of the claims into the other two official languages have been filed and certain fees paid.

An examining division consists of three examiners, one of whom deals with the application up to the point at which a decision is made to grant a patent or to refuse the application. This examiner maintains contact with the applicant or representative and issues the necessary communications on behalf of the division. The final decision on the application is taken by the examining division as a whole. This ensures maximum objectivity for the applicant.

## The grant of a patent

The granted European patent is a "bundle" of individual national patents. In many contracting states, for the patent to retain its protective effect and be enforceable against infringers, it must be validated. That means that where necessary, the patent owner has to file a translation of the specification into an official language of that state with the national patent office. Fees may also be payable by a certain date. These matters are governed by national law.

## Opposition

After the European patent has been granted, it may be opposed by third parties – who will usually be the applicant's competitors – if they believe that it should not have been granted (for example, because the invention lacks novelty or does not involve an inventive step).

Notice of opposition must be filed within nine months of grant being mentioned in the European Patent Bulletin. The examination of oppositions is handled by the European Patent Office's opposition divisions, which are usually also made up of three examiners.

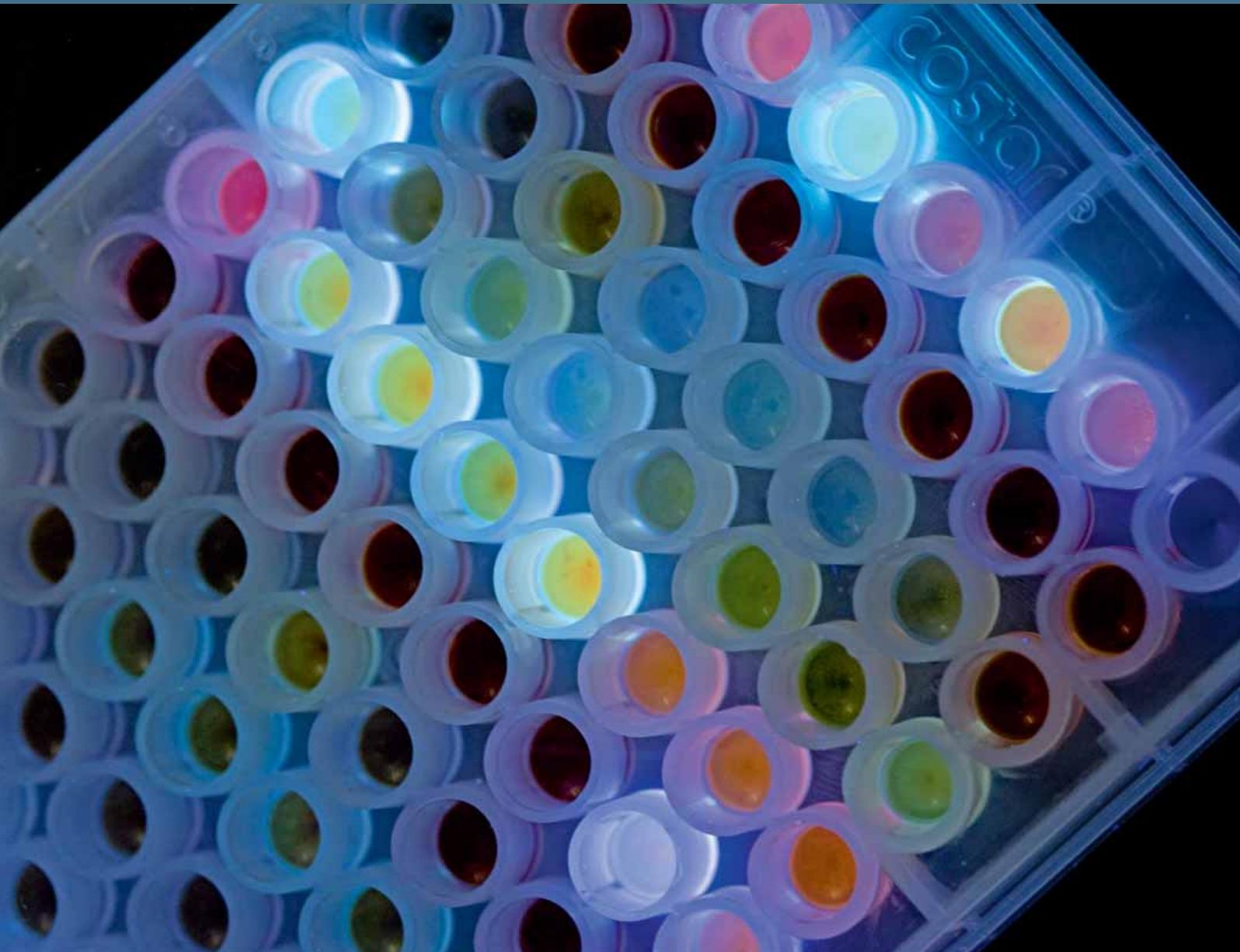
## Revocation or limitation

The patent proprietor may request limitation or revocation of the patent at any time after it has been granted.

## Appeal

Decisions of the European Patent Office concerning issues such as the refusal of an application or opposition matters are open to appeal. Decisions on appeals are taken by the EPO's independent boards of appeal.

## Tips for applicants



If your residence or principal place of business is in a contracting state to the European Patent Convention, you may conduct proceedings before the European Patent Office yourself. Please bear in mind, however, that the value of a patent often depends as much on how it is drafted as on the invention itself.

If your residence or principal place of business is not in a contracting state, you must have representation in proceedings before the Office, and are only allowed to file the patent application and pay the fees yourself. You can engage a professional representative before the European Patent Office or a legal practitioner who is authorised to represent applicants before the Office.

The staff of the European Patent Office's Information Office are at your disposal if you have questions. They would be happy to send you information on procedures and fees. The Office also publishes a "Guide for applicants" containing more detailed information about the European grant procedure.

**Customer Services:**

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**Guide for applicants:**

[www.epo.org/guide-for-applicants](http://www.epo.org/guide-for-applicants)

**Schedule of fees:**

[www.epo.org/fees](http://www.epo.org/fees)

**Online filing:**

[www.epoline.org](http://www.epoline.org)

**European patent attorneys:**

[www.epo.org/representatives](http://www.epo.org/representatives)

You can get patent documents from the European Patent Office, the patent offices of the contracting states to the European Patent Convention and the patent libraries throughout Europe. These bodies can also help you to perform searches, if necessary.

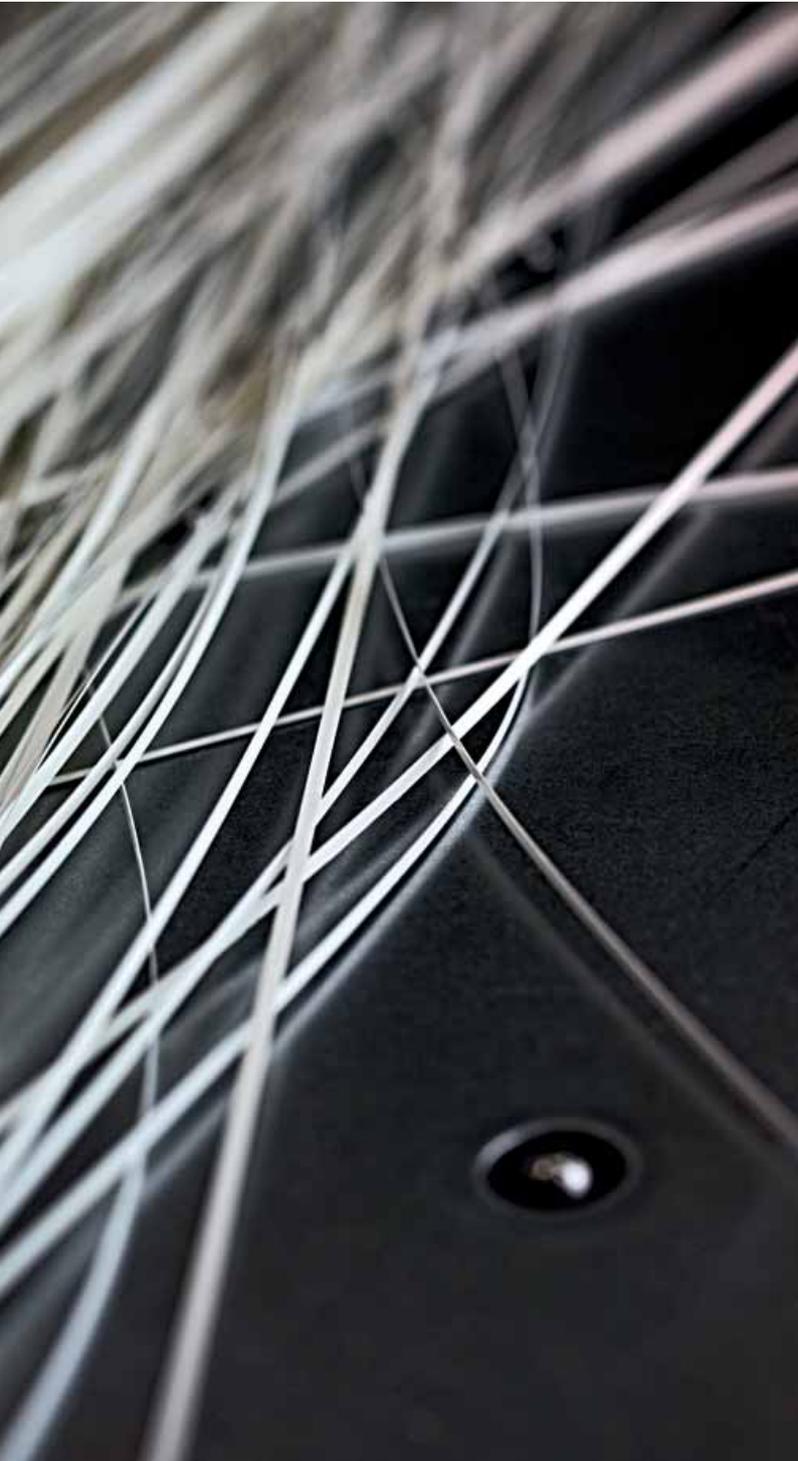
**Searching patent documents**

[www.espacenet.com](http://www.espacenet.com)

**Patent information centres:**

[www.epo.org/patlib-centres](http://www.epo.org/patlib-centres)

Various bodies in the contracting states provide advice and information on patent protection, patent utilisation and licensing, as well as details of any financial support available. National and European measures are in place for the promotion of innovation and the financing of patent costs. As these measures vary from country to country, you should contact your national patent office or other patent centre for more information. For details of any tax concessions on patents and their exploitation, contact your tax consultant or local tax office.



**Published and edited by**  
European Patent Office  
Munich  
Germany  
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