

# Patent Research and Analysis

## Google Patents

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### Overview and Coverage

Google Patents, a patent search engine created by Google, includes over 120 million patent publications from 100+ patent offices around the world, as well as many technical documents and books indexed in Google Scholar and Google Books.

It currently indexes full-text documents from the following major patent offices of interest for attorneys or agents in the United States: US, EP, WO, CN, JP, AU, AT, BR, CA, UK, DE, RU, FR, ES, BE, DK, FI, LU, NL, CH, and TW. Bibliographic information is available for over 100 countries included in DocDB, the EPO's master document database.

You can see the real-time number by going to the following link. <https://patents.google.com/coverage>. These totals include all patents and published applications in the index, but complete coverage cannot be guaranteed. Many documents have full-text description and claims available. The "Full-text since ..." dates for grants and applications show when full-text is available, but additional abstract-only documents are often available for earlier dates. New documents are added to Google Patents on a regular basis with a one to two week delay.

Optical character recognition (OCR) has been performed on the US patents back to 1790 to make them searchable, and Google Translate has been used on all non-English patents to make the English translations searchable using only English keywords. Searches may still be performed in the original language.

Key developments include:

- Expansion in number of full-text documents and machine translation of foreign documents
- Integration of Google Scholar documents machine-classified and clustering by Cooperative Patent Classification (CPC)
- Coverage of additional patent offices, support for Boolean search syntax, graphs and downloadable results
- Availability of bibliographic information for over 100 countries included in DocDB
- Addition of global litigation information to display a patent, or family member, that has litigation information anywhere in the world, with a link to Darts-ip patent cases database
- Addition of documents from PriorArtArchive.org
- Addition of legal events and expiration information
- Popup description patent drawing numbers

Our search example is 'portable solar usb charger'. Non-patent literature may be included by checking the box. For our example, we have chosen to only search patents and the search has been limited to US, EP and WO.

<https://patents.google.com/?q=portable&q=solar&q=usb+charger&country=US,EP,WO&sort=new> (See page 2)

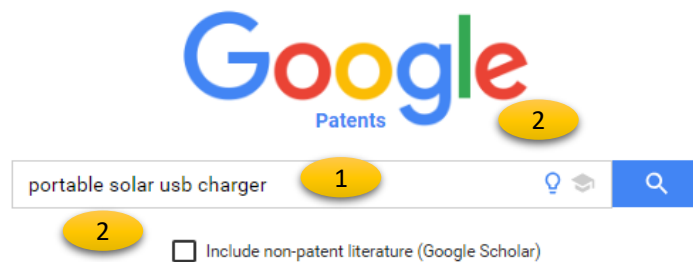
### Non-patent literature

To make prior art searching easier, Google Patents includes a copy of the technical documents and books indexed in Google Scholar and Google Books. These documents have been machine-classified using the Cooperative Patent Classification scheme commonly used in patent searching to make finding documents easier. You can click on the following link for the citation metrics for the top publications in [Google Scholar](#) to get the sources of papers included, and the Google Scholar help page gives [details on what papers are included](#).

### Searching

From the homepage, you can begin your search in a few ways:

- **Enter a patent publication or application number**, such as [US9014905B1], [9014905], or [US 14/166,502]. It is preferable to use the country code, no spaces and no slashes.
- **Enter freeform text**, such as [portable solar usb charger]
- If you are looking for prior art, check the "Include non-patent literature" box to include results from Google Scholar.
- In the Advanced Search you can even use a large block of text, such as a paragraph, in "Search Terms" to find related art.
- **Boolean syntax**: Google Patents includes Boolean syntax (USPTO or EPO format)
- **Proximity**: usb NEAR/3 charger
- **Searching in title, abstract, claims, CPC**: Use TI=(solar usb charger) to search in the title, AB= for the abstract and CL= for the claims. For CPCs, **CPC=H01M10/465** will match documents with exactly this CPC, **CPC=H01M10/low** matches documents with this CPC or a child classification of this CPC.
- **Wildcards, truncation**: See the "?" next to Search Terms for additional information



### Landing Page

1. Initial syntax search
2. Click to include non-patent literature

## Results List View – Example (list may have changed with time)

<https://patents.google.com/?q=portable&q=solar&q=usb+charger&country=US,EP,WO&sort=new>

1. New search, click on “Google Patents”
2. Search string corresponding to search terms on the left, terms or patent numbers may be added directly here
3. Search patent alone or with non-patent literature
4. Number of results
5. Narrow or broaden searches by adding terms in boxes. CPC codes may be proposed for words in the search terms box
6. Searches can be narrowed by dates, assignee, inventor
7. Searches may also be narrowed by patent office, language, status, citing patent and CPC (in this example the search is limited to US, EP and WO shown by the US +2 in the Patent Office box)
8. “Sort by” feature to order results by relevance, newest or oldest
9. “Grouped by” feature provides a drop-down menu that allows for sorting by “CPC Classification” or “None”
10. “Results/page” display feature provides a drop-down menu that allows for displaying “10”, “25”, “50”, or “100” results per page
11. Title with link to the document view
12. List of countries this simple family is filed in. Each result represents the best-scoring publication from the simple family. Bold means the simple family has at least one active (in-force) application in that country. Strikethrough means they're all
13. Priority date, filing date, publication date
14. One or more snippets of text from anywhere in the document containing your keywords
15. Drawings thumbnails, by clicking on an image a new view presents all of the patent drawings. Use the scroll wheel to zoom in and out, and hover over the thumbnail to change the focused region. Click on the arrow on the right side of the drawings to return to the list view
16. Graph of top assignees
17. Graph of top inventors and CPCs (click on tabs)
18. Hyperlink to assignee documents within the results list, the name of the company will appear in the “Assignee” box on the left
19. Click on “Expand” to view top 20 Assignees, Inventors or CPCs
20. Download first 1,000 results in a CSV file, or ~5,000 for similar document searches
21. Side by side view on a wide or extended screen

The screenshot shows the Google Patents search results page for the query "(portable) (solar) (usb charger) country:US,EP,WO". The page is annotated with yellow circles and numbers 1 through 21, corresponding to the list of features provided. Key elements include:

- Search Bar (1, 2):** Contains the search terms and filters for country (US, EP, WO).
- Search Terms (5):** Lists the search terms: portable, solar, and usb charger, each with a "Synonym" link.
- Search Fields (6, 7):** Includes filters for Date, Priority, Patent Office (US, +2), Language, and Status.
- Results Summary (3, 4):** Shows "About 18,380 results" and options for Download and Side-by-side view.
- Sorting and Grouping (8, 9, 10):** Options for Sort by (Newest), Grouped by (None), and Results per page (10).
- Result Snippets (11, 12):** Displays patent titles and abstracts, such as "Solar power generation apparatus" and "Unmanned vehicle control and operation in a marine environment".
- Drawings (13, 14):** Shows thumbnail images of patent drawings for the first two results.
- Top 1000 Results by Filing Date (16):** A bar chart showing the distribution of filings over time.
- Relative count of top 5 values (17):** A table showing the percentage of top 5 assignees, inventors, and CPCs.
- Assignees (18):** Lists the top 5 assignees: Samsung Electronics Co., Ltd. (2.1%), Stion Corporation (1.2%), Canon Kabushiki Kaisha (0.9%), シャープ株式会社 (0.9%), and Solaria Corporation (0.8%).
- Expand (19):** A button to view more details for the top 20 assignees, inventors, or CPCs.

## Patent document view- Example

<https://patents.google.com/patent/US8080975B2/en?q=solar&q=solar&q=usb+charger&country=US,EP,WO&sort=new>

By clicking on the title of the document in the document list view, a new view will open to review detailed information concerning the document. Clicking on any of the images below the abstract will open an image viewer either below the classifications box for a smaller screen or on the right side of a wide screen. When the image box is on the right, it will remain visible when scrolling down information in the two left-hand columns. In this example, the abstract, images, classifications and description are in the left-hand column, bibliographic information and claims are in the center column and images are located on the right

1. Click on Google Patents for a new search
2. Search string and button to include non-patent literature (Scholar), terms or publication numbers may be added
3. Arrows to view the next document in the list

4. Return to the results list view
5. Click on the pen to edit the search terms
6. Key words are highlighted in the text
7. CPC Classifications with definition, click on "View 3 more classifications" for additional information, classification are hyperlinked to documents in that classification code, click on the description to open the tree of parent classifications
8. PDF, Find Prior Art, Similar
9. Family Members for countries listed under coverage
10. Estimated legal status and expiration dates
11. Access to US litigation filing documents and international litigation indicators from Unified Patents and Darts-ip
12. Citations, Legal events, Similar documents, Related applications
13. Links to USPTO, USPTO Assignment, Espacenet, Global Dossier (WO documents link to Patentscope, not USPTO)
14. Highlighted numbers provide popup descriptions

You may need to adjust the zoom on your web browser, use a wide screen, or extended monitor to view patent drawings on the right side of the screen.

- A. Rotate image
- B. Next or previous image
- C. View enlarged image, open in a new tab. Pan is also possible by clicking on an image and dragging it to a new location. If you have a mouse with a scroll wheel, mouse over the image and use up or down wheel to enlarge or reduce the size of the image. The A and D keys will move forward and backward one figure, W and S will rotate the figure.
- D. Close
- E. Select an image from the group

Note: The numbers in the drawings are not searchable. You can, however, use Ctrl + F to open your browser's search box and search the text for the numbers.

## Bibliographic Information Box

1. Document number is one member of a simple family, see “Worldwide Applications” for other members
2. Download PDF link
3. Find Prior Art link (extracts 5 keywords from the full text and ANDs them together to find similar documents based on the priority date)
4. “Similar” uses a machine learning model on the full text to retrieve documents with similar topics
5. Inventor (link to other documents by the same inventor)
6. Assignee (link to other commonly owned documents, may be non-English)
7. Patent family members by county, crossed out countries are no longer active
8. Application number and legal events information.
9. In 2016 and 2017 Litigation links to information in Darts-ip
10. Expiration information (anticipated or adjusted for disclaimers or delays)
11. Patent Citations (backward searching references)
12. Non-patent citations include non-patent literature sited in prosecution
13. Cited by (forward searching references)
14. Legal events (useful for events like assignment information)
15. Similar documents (very useful to find other closely related documents)
16. External links (for additional information about status, prosecution history, family members, etc. “Discuss” was a Google Patents project to allow users to add comments to patent documents. This option is not widely used despite its goal to promote research)

## Results Manipulation Capabilities

The results list view includes graphs of the top five assignees, inventors and CPCs. Click on each tab for the related data and “Expand” to see the top 20 results. You can download a CSV file of bibliographic information for the top 1000 results.

## Privacy and Security – Cited From Google’s Web Page

**How does Google use information that is provided through patent search queries?**  
When Google Patents receives a search request, it is processed automatically by computers.

- Access to individual search queries and associated request metadata from Google Patents is limited to Google employees, contractors and agents who need to know that information, as described in the [Privacy Policy about Information Security](#).
- For example, for security reasons, they may inspect records when they see unusually large traffic spikes; if they start receiving a hundred patent search requests a second from a single source, that source is probably automated abuse of the system. They analyze those logs to protect Google Patents.
- But Google does not inspect Google Patents logs to inform its own patenting strategies.
- The [Google Privacy Policy](#) also describes the limited situations in which Google will share user information with third parties.

For more information, please visit the [Google Privacy homepage](#).

## IPO Search Committee Suggested Best Practices For Protecting Your Patent Search Information

When using free search tools on the Internet, consider the following tips:

1. Only search on encrypted (HTTPS) sites
2. Delete your browser history after you have finished, or search in an “incognito window”
3. Store your search notes on your computer’s encrypted hard drive, or in the Cloud

## Other Resources

- [About Google Patents](#)

These help files include additional information about searching using keywords, classifications, metadata, patent or application number.

- [Advanced Patent Search](#)

Easy tool for searching in fields for specific information.

- [Google Scholar](#)

Used to search non-patent literature but also includes patents and case law searching.

## How does Google protect my information?

Access to Google Patents is encrypted over HTTPS. For more information, please read about [Google's security](#) and [Frequently Asked Questions](#).