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PRIOR ART SEARCH TIPS

Novelty : FTOs : Landscape : Invalidity | **iCUERIOUS**

iCUERIOUS Research Services LLP is a patent research and analysis company having expertise in conducting prior art searches. Our team has collective experience of 25 years, and worked on more than 4000 prior art searches from different technology domains. We provide our services mainly to Inventors, IP contractors, Law firms, and Corporate based in US, Canada, New Zealand, Australia, South Korea, and Japan.
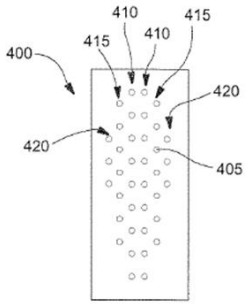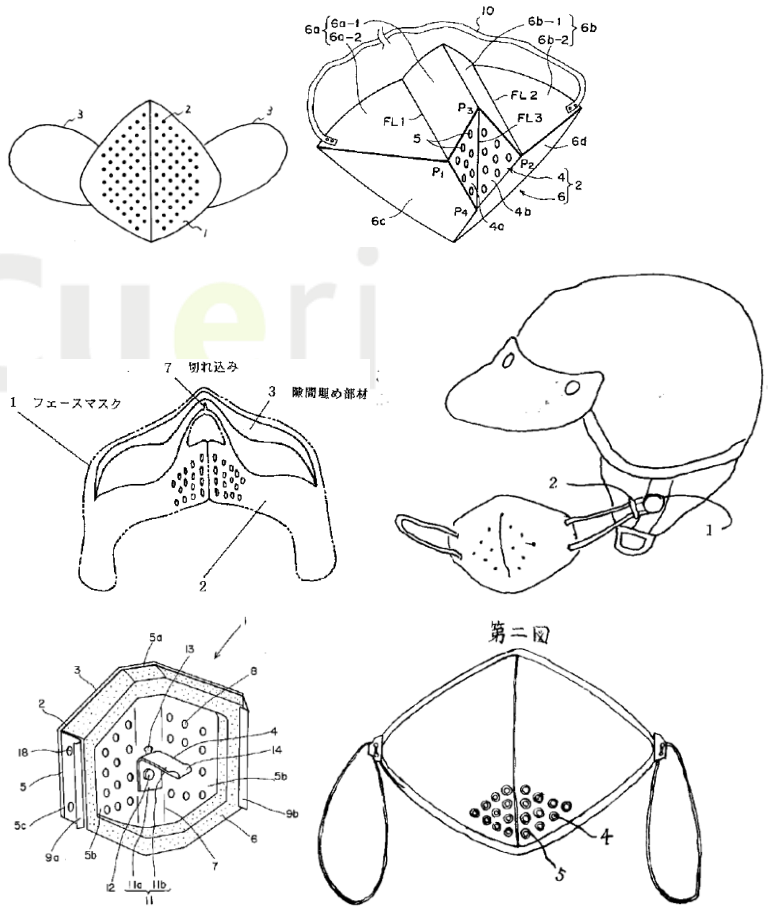
Following are some of the prior art search tips suggested and extensively used by our expert patent search analysts for conducting patent searches such as Novelty, State of Art, FTOs (Freedom to Operate), Invalidity/Validity, and knockout prior art searches.
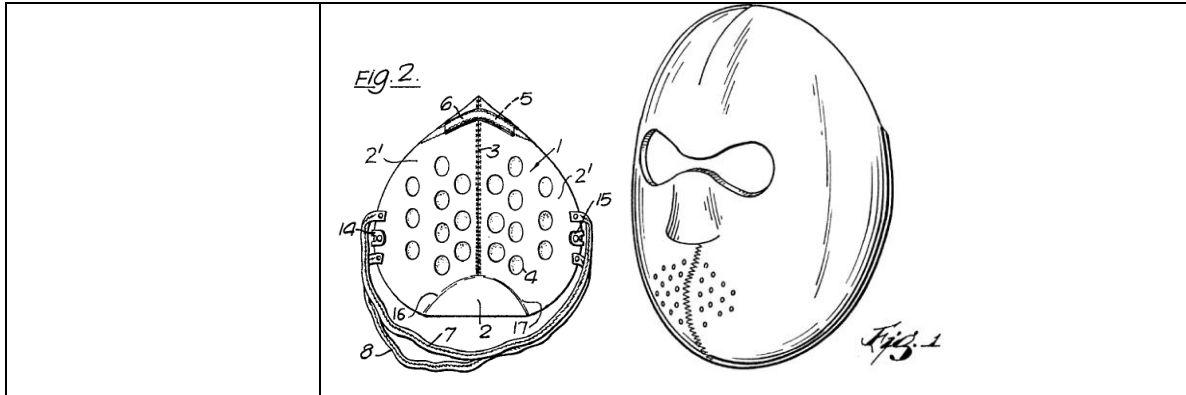
1. Divide requirement of the invention/patent to constituent features and appreciate each of the constituent features completely.

2. First go for the detailed analysis of the invention before starting the searching. Once the core concept of the invention is clear, it is easy to search and analyze the prior art references.

3. Decide the research range (scope of search in terms of relevant technical fields), so that a researcher may avoid noise and less important documents.

4. **Believe there is prior art:** Probably, this is the most important thing that a researcher should keep in mind while searching. Usually, an inexperienced researcher calls off the search if he couldn't get a prior art based on using some narrow search strings or limited search strategies, and may easily conclude that nothing similar exists in prior art. But, as per our experience, there is not a single patent/invention that cannot be proved invalid based on USC 103 if not USC 102. A positive frame of mind is mandatory for conducting a prior art search.

5. Read and understand the description of the patent: Description holds the meaning of Claim terms, so it is always important to thoroughly read the description for establishing complete understanding of claims.

6. Read and understand the patent claims: Claims should always be read in view of description and image file wrapper (if available on USPTO PAIR).

7. **Focus on the Image file wrapper to clearly understand the grounds on which the patent is granted. Read the applicant and examiner arguments carefully.**

8. It's useful to focus on the logic and concepts behind the patent [as opposed to] the details when conducting research: It is important to understand the "NEED" of the invention and what all problems the invention is solving. Many a times, a searcher may not get prior art references by using keywords directed towards claims or inventive features of the invention, but by using **keywords that are directed towards problems of prior art or advantages of the invention**.

9. Walk along the "citation tree" (citing, cited patents, cited of citing patents, citing of cited patents).

10. Do not skip over research document(s) that is past the prior art date; it often cites earlier, relevant art.

11. Think of synonyms which can be used for keywords in the patent. The same technology is often described differently.

12. We have noted that "critical thinking, attention to details, focus on the essence, and [a] broad technological knowledge base" are essential elements to a successful search.

13. Successful evaluation of prior art requires a special state of mind, a broader perspective at the subject matter; preferably free from a formal technical terminology that is often used in a search. Apparently, the one skilled in the art (the same one always mentioned in patents) can use the fact that Inventions tend to repeat themselves in different forms, shapes, wavelengths, scales, and cultures.

14. **Think of concepts, not words**.

15. Get frequent breaks while searching and think, often great searching ideas come when we're taking a break.

16. Create a relevant prior art repository with rough keyword based search in the start; find cues from the preliminary prior art repository, such as relevant assignee, inventors, classes and subclasses, etc. and construct a search strategy accordingly; and keep modifying the search strategy according to the cues of search results.

17. If a search is highly technical, it is always advisable to assign a search as per researcher's technical area of expertise.

18. We're not just looking for the right keywords. For a reference to be relevant, it needs to represent the unique elements of the technology. This requires that you understand the technology, rather than just searching for the keywords.

19. Non-Patent Literature is the most valuable type of literature, and Non-US Patents are second best. We have experienced it several times, so we never rely solely on US Patents, and thoroughly scrutinize in JP, KR, CN, EP, DE, FR, and other jurisdictions. Moreover, NPLs and foreign prior arts are the most interesting to our Clients, at least for invalidity searches.

20. Creative, unique references are the most likely to surprise and delight our clients. Therefore, they are the most likely to win. Non-Digitized, non-English, product manuals, PhD Theses, and other creative types of literature can help us to stand out from the crowd.

21. Search along the technology progress, citations, keywords, key inventors/researchers, and key assignees. Although it's valid search strategy for all kind of searches, but we extensively use it for conducting Freedom to Operate Search.

22. While working on a search project, it is highly recommended to have a highlighting tool/app installed on your browser. We use "Phrase Highlighter" for highlighting multiple keywords.

23. **Combine** research phrases, keywords, and classifications like CPC and IPC to improve the scope of our research.

24. If necessary, add words related to backgrounds, purposes, and effects of the technologies involved in a Search to improve search strings.

25. Switch off the distractions i.e. telephone, whatsapp, Facebook etc.

26. Use Google as an additional free search tool. Recently, Google launched https://patents.google.com/, which includes some interesting tools that may make the search and analysis simpler. For instance, Google added the following new features:

- Option of searching both patent and non patent literature simultaneously

- While searching patents one can now also specify: Every keyword with its synonym and "Priority date"

- After forming a query, the search results will be **grouped by CPC classification**. One can also view **ungrouped results.**

- One can also add **new search terms** in a particular result.

- Selecting a particular word/phrase in the claims section will provide specification support for that particular word/phrase in the description section.

    Click here for a short presentation on new Google Search Functionalities.

27. Perfect your keywords and phrase skills.

28. Have patience and perseverance because without these, we tend to give up easily on a search when we aren't finding anything right away. Stick with it and we're bound to find at least one piece of good prior art.

29. **Try to make one master concept-centric query and keep broadening and narrowing down its scope rather than making too many search queries.**

30. NPL Databases: CiteseerX, IEEE digital library, Google Scholar, Ekaswa, Bigpatents

31. For time efficiency, read the requirements and claims several times and delineate the key words and concepts. **It is advisable to read the search requirements again and again so that we may not deviate from the concept.**

32. Try to envision other industrial or scientific groups that would be involved with – or have an interest in – the products or concepts that are patent-protected.

33. The ability to express a concept in several different ways. Inventors get to be their own lexicographers and don't always use the same jargon when they describe their inventions.

34. Consider applications of the technology in question in different but related fields. Many times a "new" invention is not really new at all, it was simply copied from some other related field and lots of prior arts exist in the related field. For example, we conducted a search where we needed to find a specific holes pattern in a breathing mask or a CPAP mask. We kept our search very broad but limit it to any kind of mask (related field) having required pattern. We couldn't find anything in CPAP specifically, but we found about 10 odd relevant references in other masks that had exactly similar holes pattern. Client had all praises for our work.

Requirement:	What we got for Client (most of these references were hidden and can never be located based on keyword searching or limiting the search to CPAP masks):
	Prior Arts:

Fig. 2. Fig. 1.

35. Patents are boring at first. However, if we read between the lines, we gain access to worlds of experiences and history. What once was a bland black and white document can turn into a world of vivid colors and characters; heroes and villains abound within. There's a whole universe packed into that patent if we can see it.

36. Maintain a feeling of excitement and curiosity. If we're not having fun, we're going to give up.

37. Often times articles, theses, and patents will provide us with the history of the invention and the problem at hand. Take the time to read this information, if for no other reason but to educate ourselves about a topic if we are not already familiar with it.

38. **Now when we are having a set of relevant and related results, then comes a most important step of presentation of the results. The results should be presented to the client in a way that he needs not to refer PDF or original source for complete understanding.**

39. Books: Information sources in patents, By Stephen R. Adams | Patent searching: tools & techniques, By David Hunt, Long Nguyen, Matthew Rodgers.

We disclosed some of the very basic search tips that we use for prior art search, and apart from aforementioned, there are hundreds of other search tips that are confidential and we developed over the span of last 10 years.

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