

## APPENDIX: HOW TO FIND A PATENT

According to the *University of Chicago Manual of Style*, the proper bibliographic citation for a patent includes the inventor(s), the patent's title and document number, and the dates on which the patent was filed and issued. When a patent is issued (always on a Tuesday), it is assigned a unique document number, which is the most reliable way to find (and download) a patent document, find additional information that is not in the patent document, or retrieve the case file at the National Archives. By contrast, patent titles are not unique and are often uninformative; for example, the title of John Byron Plato's patent for a clever rural address system is merely "Map or Chart." Be wary that for older patents, the inventor's name noted on the first page of the patent might be less complete than the inventor's name printed at the beginning of the specification. In Plato's case, he is identified as "J. B. Plato" at the top of the first drawing page, as "John Bryon Plato" at the top of the first text page, and as "John B. Plato" at the beginning of his personal statement, copied directly from the application. The patent document also identifies the inventor's place of residence, which can be helpful when using Big Microdata tools like Ancestry.com to explore the inventor's occupation, education, training, and dates of birth and death, which are especially useful if two people different in age share the same first and last names.

If the patent number is known, the complete patent document is readily downloaded from the Google Patents database. Just type the patent

number into the search box at [patents.google.com](http://patents.google.com), wait for the search result, and request a PDF download. The search result lists earlier patents cited by the examiner and provides links to “similar documents”—journal articles as well as patents—for which the selection criteria are not readily apparent. The US Patent and Trademark Office (USPTO) also delivers complete patent documents at its online Patent Full-Text and Image Database (<http://patft.uspto.gov/netahtml/PTO/srchnum.htm>), but the process is less straightforward.

Google Patents also provides an advanced search ([https://www.google.com/advanced\\_patent\\_search](https://www.google.com/advanced_patent_search)) based on keywords, patent number, title, inventor, original assignee, classification (current US, international, or “cooperative”), and date (filing date or issue date). Results can be restricted to a time period specified by start date, end date, or both. Keyword searching, which the USPTO also supports, is thwarted by uninformative titles and a proliferation of synonyms, which add tedium and uncertainty.

Unless you seek patents issued to a particular inventor, classification search is usually more reliable than keyword search, provided you explore the classification sufficiently thoroughly to find all relevant categories. An added complication is the dynamics of patent classifications, which must reflect changing technology and are used mostly by patent examiners. As noted in Chap. 1, the US Patent Classification (USPC), which I used for this book, has been revised on several occasions. Updating stopped in 2015, when the USPTO officially adopted the Cooperative Patent Classification (CPC), a joint venture of the USPTO and the European Patent Office. The CPC incorporates the more reliable aspects of the USPC and the European Classification System, a refinement of the International Patent Classification (IPC) system, initiated in 1971. Although the USPC was mothballed, it is still available at the USPTO website and remains eminently useful for historical research.

Because most inventions are assigned to multiple categories, a suitably robust set of representative inventions can be a useful starting point for trial-and-error exploration of a classification’s structure and definitions. Plato’s rural directories are a useful example insofar as they included the patent number (1147749), which I typed into the query box at the aforementioned USPTO Patent Full-Text and Image Database, which revealed the patent’s sole “Current U.S. Class” as 283/34. I then pulled up the USPTO’s Patent Classification homepage (<http://www.uspto.gov/web/patents/classification/>), selected USPC as the classification sys-

tem, entered 283 and 34 as the two-part “classification symbol,” chose “Definitions” as the desired content, and clicked Submit. The result identified the category as Printed matter/Maps, defined the subclass Maps by saying “The indicia delineate geographical features,” and defined the class Printed matter with a suitably border and more cumbersome explanation that does not warrant repeating.

Just below Printed matter/Maps, the search result shows the indented category Printed matter/Indexed maps, coded 283/35, with the subcategory defined by “the indicia involving means which facilitate finding some of the geographical features.” Oddly, this is not a cross-reference category for Plato’s rural address.

To retrieve a list of all patents assigned to a particular category, I recommend the USPTO Patent Full-Text and Image Database (PatFT), online at <http://patft.uspto.gov/>. Full-text information is provided for patents issued since 1975, but for earlier patents only the patent’s number, classification, and issue date are available. To find all patents in either the 283/34 or 283/35, I clicked on Advanced Search; typed “CCL/283/34 or CCL/283/35” into the Query box; set Select Years to “1790 to present”; and clicked Submit. (CCL, the “field code” for the “Current US Classification,” still refers to the USPC. The other Select Years option is “1976 to present,” which searches only patents for which full-text documents are available.) The result was the first 50 of 304 patents, sorted from newest to oldest and identified by number and title.

Although each item in the result is a hyperlink to information about the patent, I prefer to use the insertion bar and Shift key to copy-paste all 50 lines into an Excel workbook, use the same technique to capture information for the other 254 patents (in 6 groups: 51–100, 101–150, 151–200, 201–250, 251–300, and 301–304), remove all the hyperlinks, and copy-paste patent numbers individually into Google Patents. Although the USPTO lists do not provide titles for the older patents, the hyperlinks lead to classification for all three systems (USPC, CPC, and IPC). As noted in Chap. 1, patents are often assigned to more than one category. Indeed, 26 of the 304 patents in the found set were assigned to both 283/34 and 283/35.

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