

- [54] **FLAVOR GENERATING ARTICLE**
- [75] Inventors: **Mary E. Counts; Bernard C. LaRoy; D. Bruce Losee, Jr.,** all of Richmond; **Constance H. Morgan; Ulysses Smith,** both of Midlothian; **F. Murphy Sprinkel, Jr., Glen Allen; Francis V. Utsch,** Midlothian, all of Va.
- [73] Assignee: **Philip Morris Incorporated,** New York, N.Y.
- [21] Appl. No.: **444,746**
- [22] Filed: **Dec. 1, 1989**
- [51] Int. Cl.⁵ **A24K 47/00**
- [52] U.S. Cl. **131/329; 131/273; 128/202.21; 128/203.17; 128/203.27**
- [58] Field of Search **131/270, 273, 194-197, 131/359, 369; 128/202, 202.21, 203.17, 203.27**
- [56] **References Cited**

U.S. PATENT DOCUMENTS

- 1,771,366 7/1930 Wyss et al. .
- 1,968,509 7/1934 Tiffany .
- 2,057,353 10/1936 Whittemore, Jr. .
- 2,104,266 1/1938 McCormick 131/273
- 2,442,004 5/1948 Hayward-Butt .
- 2,974,669 3/1961 Ellis .
- 3,280,819 8/1965 Gilbert .
- 3,363,633 1/1968 Weber .
- 3,402,723 9/1968 Hu .
- 3,482,580 12/1969 Hollabaugh .
- 3,804,100 4/1974 Fariello .
- 3,889,690 6/1975 Guarnieri .
- 4,016,061 4/1977 Wasa et al. .
- 4,068,672 1/1978 Guerra .
- 4,077,784 3/1978 Vayrynen .
- 4,131,119 12/1978 Blasutti .
- 4,141,369 2/1979 Burruss .
- 4,164,230 8/1979 Pearlman .
- 4,193,411 3/1980 Faris et al. .
- 4,215,708 8/1980 Bron .
- 4,219,032 8/1980 Tabatznik et al. .
- 4,246,913 1/1981 Ogden et al. .
- 4,256,945 3/1981 Carter et al. .
- 4,259,970 4/1981 Green, Jr. .
- 4,303,083 12/1981 Burruss, Jr. .
- 4,393,884 7/1983 Jacobs .
- 4,431,903 2/1984 Riccio .
- 4,436,100 3/1984 Green, Jr. .
- 4,463,247 7/1984 Lawrence et al. .
- 4,562,337 12/1985 Lawrence .

- 4,570,646 2/1986 Herron .
- 4,580,583 4/1986 Green, Jr. .
- 4,621,649 11/1986 Osterrath .
- 4,623,401 11/1986 Derbyshire et al. .
- 4,637,407 1/1987 Bonanno et al. .
- 4,659,912 4/1987 Derbyshire .
- 4,735,217 4/1988 Gerth et al. 131/273
- 4,771,796 9/1988 Myer .
- 4,776,353 10/1988 Lilja et al. .
- 4,837,421 6/1989 Luthy .
- 4,846,199 7/1989 Rose .
- 4,848,376 7/1989 Lilja et al. .
- 4,874,924 10/1989 Yamamoto et al. .
- 4,877,989 10/1989 Drews et al. .
- 4,922,901 5/1990 Brooks et al. .
- 4,945,931 8/1990 Gori .
- 4,947,874 8/1990 Brooks et al. .
- 4,947,875 8/1990 Brooks et al. .

FOREIGN PATENT DOCUMENTS

- 1202378 3/1986 Canada .
- 87/104459 2/1988 China .
- 0295122 12/1988 European Pat. Off. .
- 0358002 3/1990 European Pat. Off. .
- 0358114 3/1990 European Pat. Off. .
- 3640917A1 8/1988 Fed. Rep. of Germany .
- 3735704A1 5/1989 Fed. Rep. of Germany .
- 61-68061 4/1986 Japan .
- WO86/02528 4/1986 PCT Int'l Appl. .
- 2132539 7/1984 United Kingdom .
- 2148079 5/1985 United Kingdom .
- 2148676 5/1985 United Kingdom .

OTHER PUBLICATIONS

"Excerpt from 'NASA Tech Briefs,'" Jul./Aug. 1988, p. 31.
 "PTC Thermistors," Keystone Carbon Company product literature.

Primary Examiner—V. Millin
 Attorney, Agent, or Firm—Jeffrey H. Ingerman

[57] ABSTRACT

An article is provided in which a flavor generating medium is electrically heated to evolve inhalable flavors or other components in vapor or aerosol form. The article has a plurality of charges of the flavor generating medium which are heated sequentially to provide individual puffs.

84 Claims, 10 Drawing Sheets

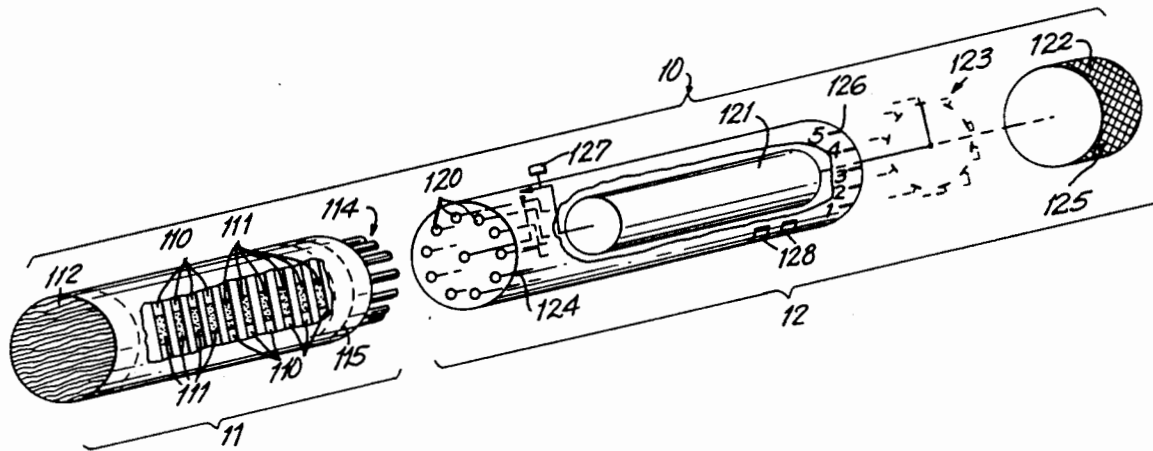


FIG. 1

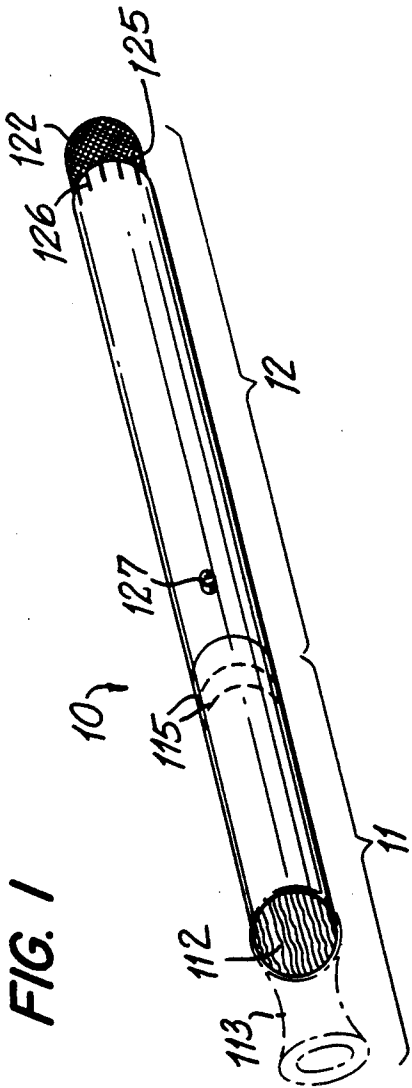


FIG. 2

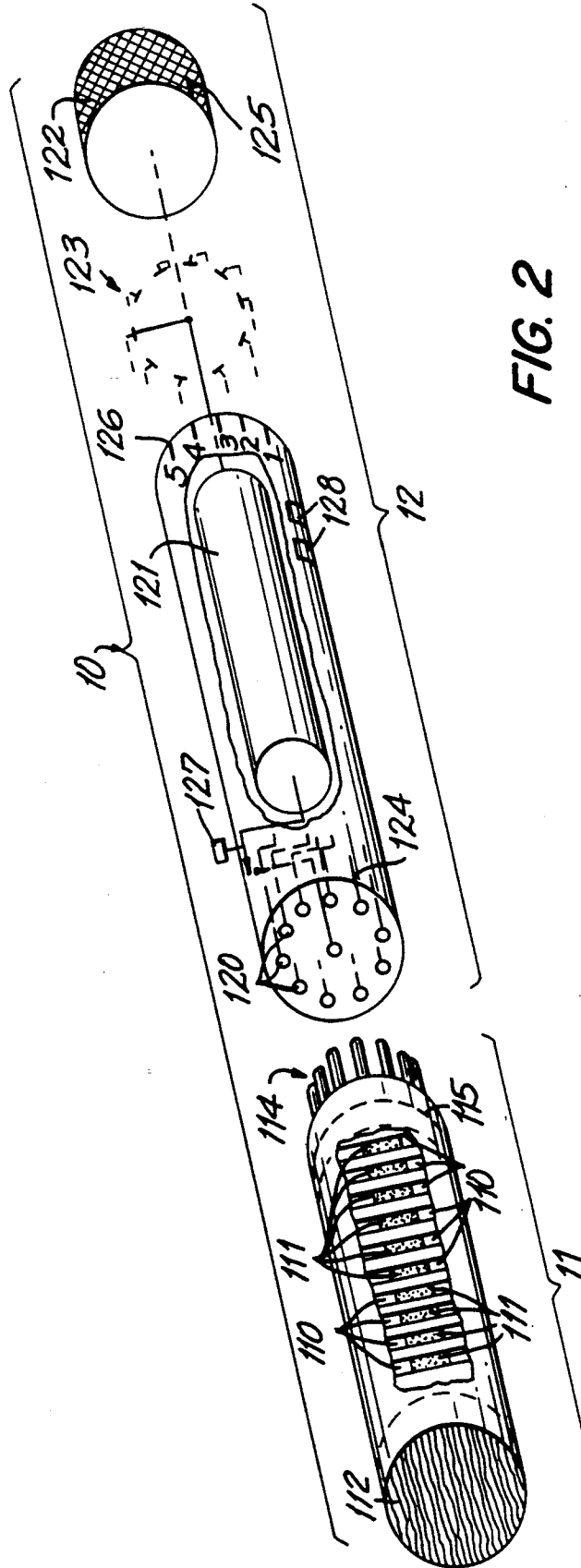


FIG. 3

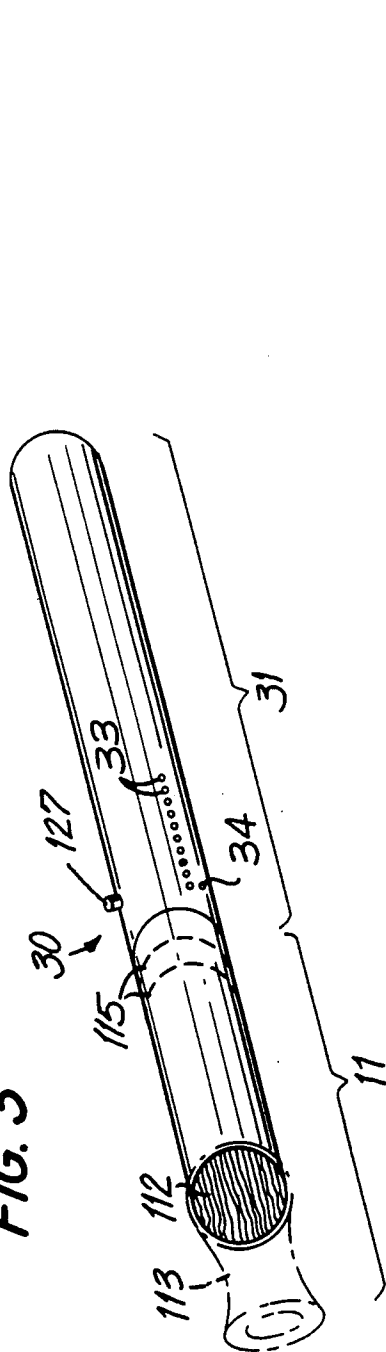
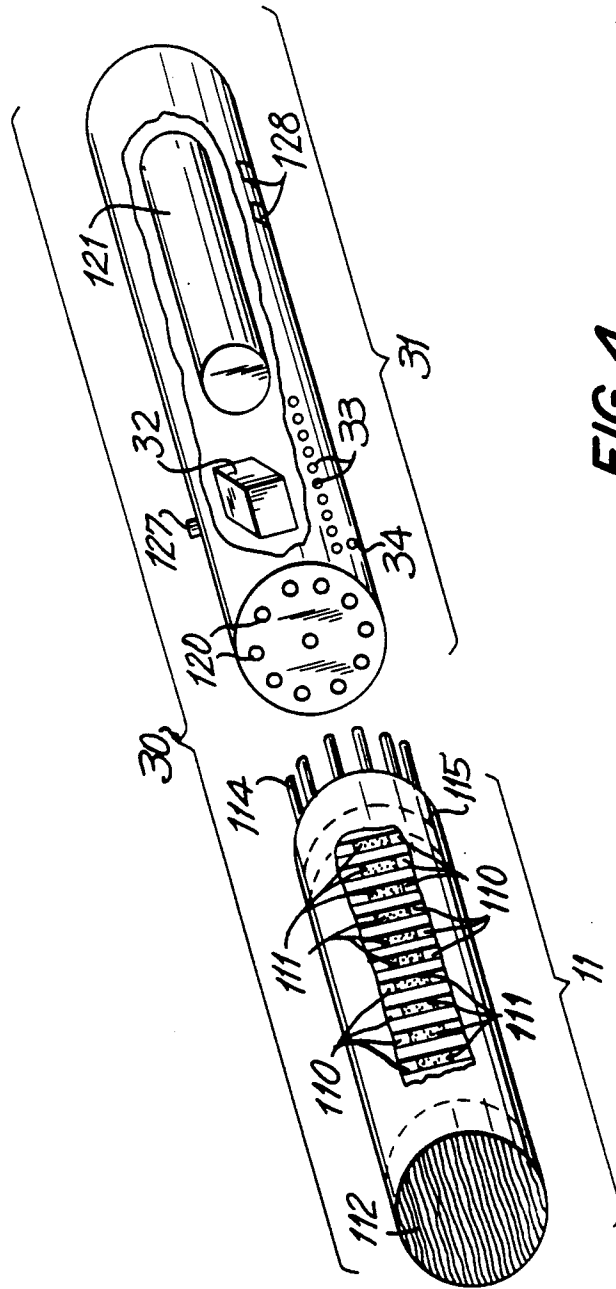


FIG. 4



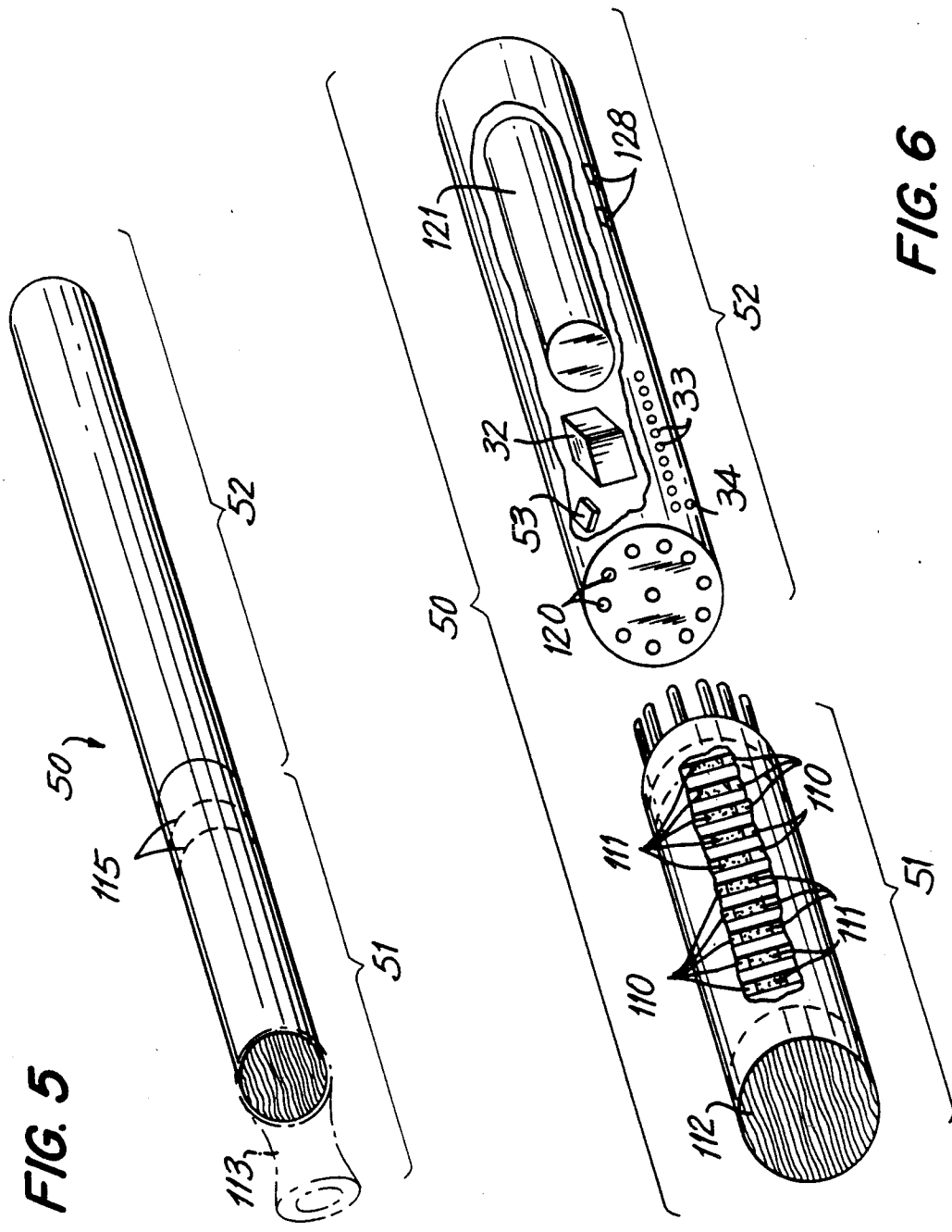


FIG. 5

FIG. 6

FIG. 7A

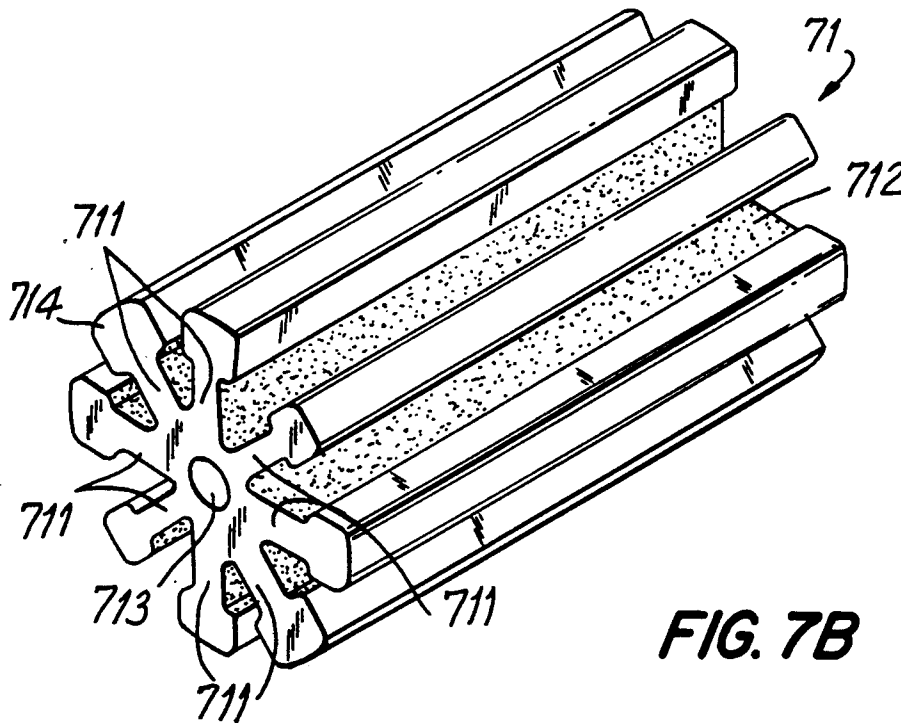
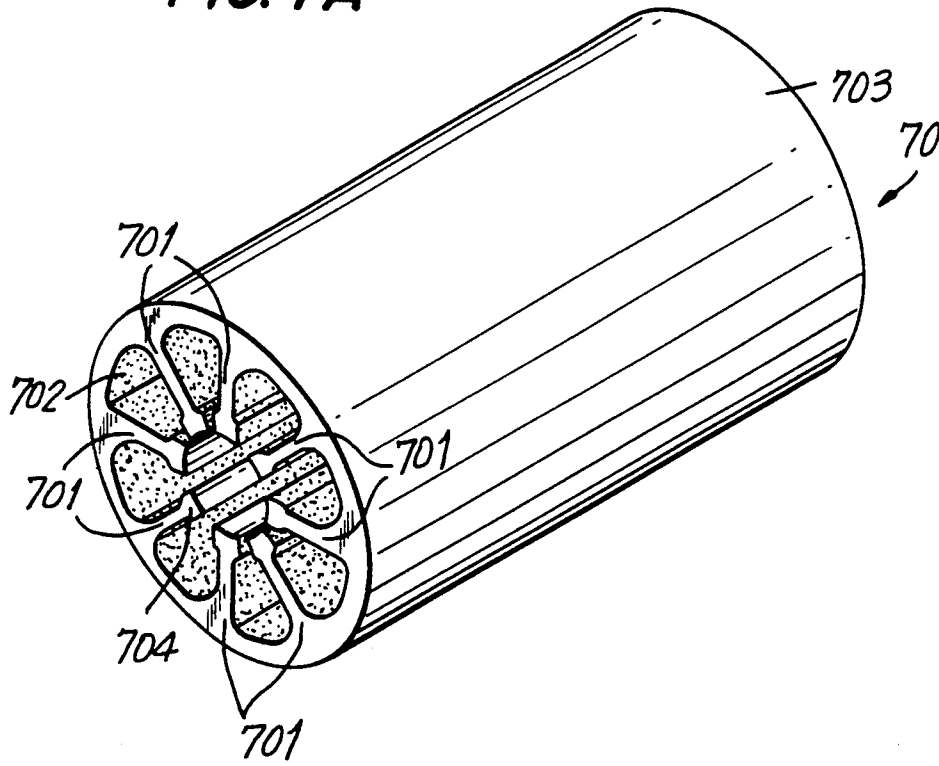


FIG. 7B

Explore Litigation Insights

Docket Alarm provides insights to develop a more informed litigation strategy and the peace of mind of knowing you're on top of things.

Real-Time Litigation Alerts



Keep your litigation team up-to-date with **real-time alerts** and advanced team management tools built for the enterprise, all while greatly reducing PACER spend.

Our comprehensive service means we can handle Federal, State, and Administrative courts across the country.

Advanced Docket Research



With over 230 million records, Docket Alarm's cloud-native docket research platform finds what other services can't. Coverage includes Federal, State, plus PTAB, TTAB, ITC and NLRB decisions, all in one place.

Identify arguments that have been successful in the past with full text, pinpoint searching. Link to case law cited within any court document via Fastcase.

Analytics At Your Fingertips



Learn what happened the last time a particular judge, opposing counsel or company faced cases similar to yours.

Advanced out-of-the-box PTAB and TTAB analytics are always at your fingertips.

API

Docket Alarm offers a powerful API (application programming interface) to developers that want to integrate case filings into their apps.

LAW FIRMS

Build custom dashboards for your attorneys and clients with live data direct from the court.

Automate many repetitive legal tasks like conflict checks, document management, and marketing.

FINANCIAL INSTITUTIONS

Litigation and bankruptcy checks for companies and debtors.

E-DISCOVERY AND LEGAL VENDORS

Sync your system to PACER to automate legal marketing.