

Proposed Rule Changes Affecting Claims That Recite Alternatives

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Proposed Rule Changes Would Apply to All Alternative-Type Claims

- An Alternative-Type claim is any claim that recites a plurality of alternatively usable members.
- Alternatives are commonly listed as:
 - selected from the group consisting of A, B and C
 - wherein the fastener is a nail, a screw or an adhesive.

Original Intent of Markush Claims

- Markush claims take their name from *Ex parte Markush*, 1925 Dec. Comm'r Pat. 126, (1924).
- Markush claims originally defined organic chemical compounds by enumeration when applicant could not claim a true genus or there was no true generic language available to reference the genus
- “The Markush claim ... permits an applicant to claim a subgeneric group containing those materials which have been actually tested and known by applicant to be operable.”
 - Kelly et al., *Markush Claims*, 37 J. Pat. Off. Soc'y 164, 171, 1955.

Original Intent of Markush Claims

- The alternatives must “possess at least one property in common which is mainly responsible for their function in the claimed relationship.”
 - *In re Ruff*, 256 F.2d 590, 598, 118 USPQ 340, 348 (CCPA 1958)
- “In determining the propriety of a Markush or Genus grouping the compounds must be considered as wholes and not broken down into elements or other components.”
 - *In re Harnisch*, 206 USPQ 300, 307 (CCPA 1980), citing *In re Jones*, 74 USPQ 149 (CCPA 1947)
- Proper Markush claims recite species having a common feature “not repugnant to the principles of scientific classification” resulting in a “community of properties.” - *Harnisch* at 306

Current Markush Practice

- Currently there is no explicit guidance for restricting within a claim
- Markush practice permits the examiner to require a provisional election of species
- If the elected species is found allowable the examiner must extend the search and examination to the extent necessary to determine patentability, even if the species are directed to independent and distinct inventions (MPEP 803.02)

Three Species of Generic Computer



Fig.1 Laptop, First recited species

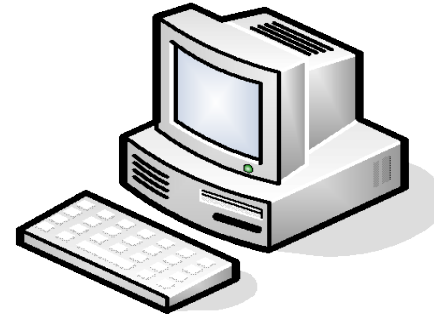


Fig. 2 PC, Second recited species



Fig. 3 PDA, Third recited species

...May Be Claimed Two Ways:

Claim 1. A computer selected from the group consisting of

**the Laptop of Figure 1,
the PC of Figure 2, and
the PDA of Figure 3.**

- Consider also the same subject matter as three independent claims

Discussion

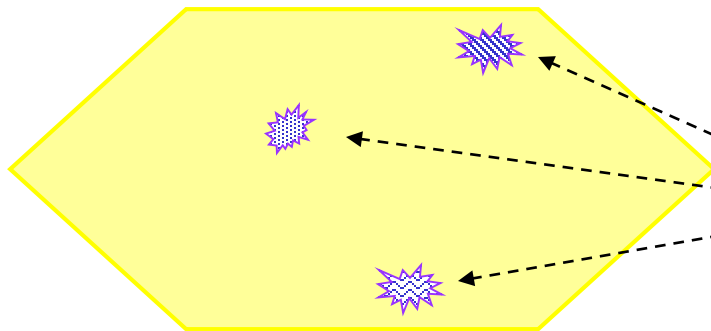
- Figures 1, 2, and 3 are all computers
- Why are there two different restriction/examination pathways depending on how applicants choose to draft their claims?
- The laptop, PC, and PDA are all different species of computing devices.
- There is no interaction between the different species, and the design, operation and effect of each MAY be different.
- Each device species may be patentable over each other
- Each device species may be a separate invention

Example 2

Markush
Group

Claim 1: A polymer blend comprising a natural rubber and a thermoplastic elastomer wherein said elastomer is selected from the group consisting of polyurethane rubber, poly(styrene-butadiene) rubber and polyolefin rubber.

In **Pictorial** representation, the area within the hexagon represents the polymer blend of a natural rubber and any thermoplastic elastomer.



*Distinct species
encompassed by claim 1:
polyurethane rubber,
poly(styrene-butadiene)
rubber and polyolefin rubber.*

Example 3

Claim 1. A compound having the formula

wherein

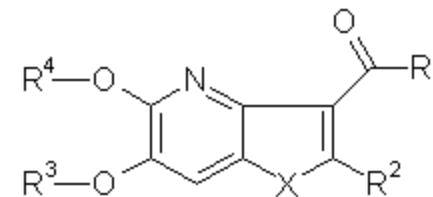
X is O, N, S, CH₂, CH₂CH₂, or CH=CH;

R¹ is hydrogen, alkyl, cycloalkyl, hydroxyl, amino, substituted amino, aryl or heteroaryl;

R² is halo, cyano or nitro;

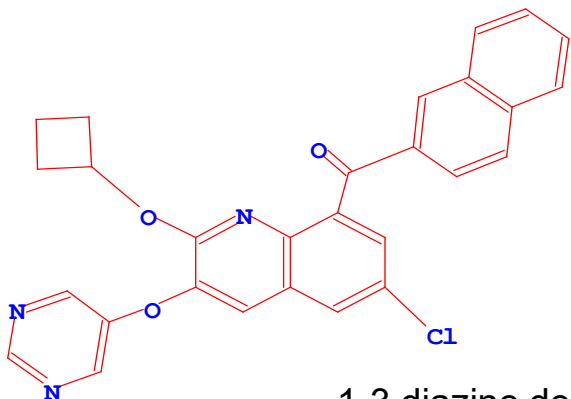
R³ is aryl or heteroaryl; and

R⁴ is hydrogen, lower alkyl, lower cycloalkyl, acyl, aroyl or heteroaroyl.

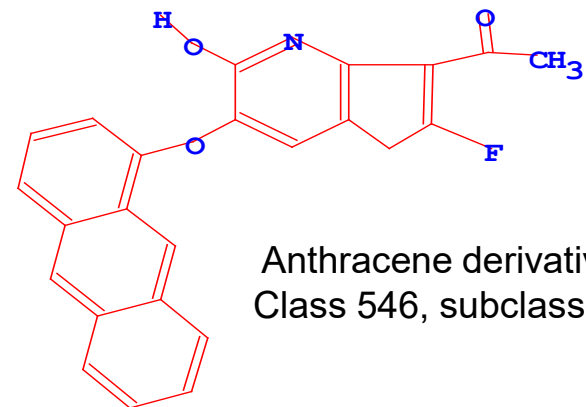


- This claim encompasses at least 2.63×10^{14} or 263,424,000,000,000 species

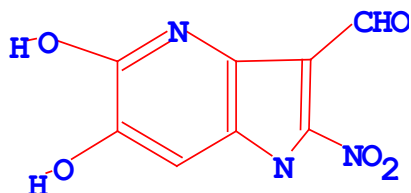
Variables Result in Structurally and Functionally Diverse Species



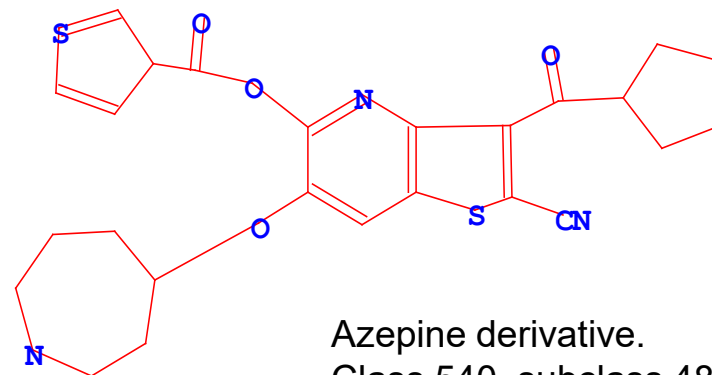
1-3 diazine derivative
Class 544, subclass 242



Anthracene derivative.
Class 546, subclass 183



Pyridyl-pyrrolo derivative
Class 546, subclass 113



Azepine derivative.
Class 540, subclass 484

Present Day Context

- Markush and other alternative-type claim formatting varies widely among applications filed
- Markush claims are routinely filed encompassing:
 - Millions, billions, or more species
 - Species with multiple core structures
 - Species with known, unknown, related and/or unrelated utilities
 - Species that can not be made or are non-functional
 - Species so diverse that class/subclass lines are crossed, stretching or exceeding search and examination capabilities of the Office

Present Day Context

- The search and examination of Markush and other alternative-type claims often consumes a disproportionate amount of Office resources as compared to other types of claims because a separate search and examination of each species may be required in order to fully address the entire scope of these claims.
- Commercial Database usage for the Corps in FY 2006 was budgeted at about \$20 million
 - >95% of that usage attributable to TC1600
 - Structure searching is the most expensive using STN

Present Day Context

- The filing of burdensome alternative-type claim formats encourages other filers to do the same, negatively impacting the patent system as a whole
- The trend is towards more complex Markush
- The need therefore exists to level the playing field for all

Some History: The More Things Change...

“The extent to which the patent profession had made use of the Markush formula indicated that its application had gone far afield of the original intent. ”

“It was like a fire which had spread beyond control. It became the medium through which totally unrelated substances could be assembled under the guise of a genus”

“If one member were found to be old or inoperative, that one was stricken from the group, and the diminished group reasserted with renewed vigor. In such a case the search required was for as many individual “species” as there were members recited in the group.”

Richard, *Claims Under the Markush Formula*, 17 J. Pat. Off. Soc’y 179, 190, (1935)

More History

“Restriction of the members which applicants are permitted to combine in the Markush group evolved from the administrative principle promulgated by the Patent Office that only a single invention can be claimed in a single application.”

“The reason for such a rule is based upon the very real necessity of avoiding multiple searches for a single fee.”

Kelly, 37 J. Pat. Off. Soc’y at 171-172

History, Background and Basis

- Several Office rejections for improper Markush claims were appealed to the CCPA; none to the Federal Circuit to date.
 - In re Weber, 198 USPQ 328 (CCPA 1978)
 - In re Haas, 198 USPQ 334 (CCPA 1978) (“Haas II”)
 - In re Harnisch, 206 USPQ 300 (CCPA 1980)
- In Weber, the CCPA held that the Office erred in rejecting a claim using Markush language under 35 U.S.C. § 121.
Weber, 198 USPQ at 331;
- In Haas II, the CCPA adhered to Weber that § 121 does not provide a basis for rejecting a claim employing Markush language. 198 USPQ at 336.

History, Background and Basis – More Harnisch

- In Harnisch, the CCPA reviewed the Weber and Haas II decisions and observed that the earlier panels “recognized the possibility of such a thing as an improper Markush grouping” in those cases. 206 USPQ at 305.
- The CCPA held that there is no “Markush doctrine or rule,” instead acknowledging that Markush practice was born from case law. *Id.*
- The CCPA also held that Markush practice really concerns the concept of a single invention or unity of invention. *Id.*

History, Background and Basis – More Harnisch

- Reaching the particular restriction at issue, the CCPA noted that “[i]n determining the propriety of a Markush grouping the compounds must be considered as wholes and not broken down into elements or other components.” *Id.* (citing *In re Jones*, 74 USPQ 147 (1947)).
- The CCPA then observed that the chemical compounds claimed in the Markush group were all coumarins and that all the compounds could be used as dyes. *Id.*
- The CCPA thus concluded that the claimed compounds were “part of a single invention so that there is unity of invention” and thereby a proper Markush grouping. *Id.*

Basis to Promulgate Office-Defined Restriction Rules

- Weber, 198 USPQ at 331
- “It is apparent that § 121 provides the Commissioner with the authority to promulgate rules designed to Restrict an Application to one of several claimed inventions when those inventions are found to be "independent and distinct.”
- “Even though the statute allows the applicant to claim his invention as he sees fit, it is recognized that the PTO must have some means for controlling such administrative matters as examiner caseloads and the amount of searching done per filing fee.”

Basis to Promulgate Office-Defined Restriction Rules

- “Having recognized the possibility of rejecting a Markush group type claim on the basis of independent and distinct inventions, the PTO may wish to anticipate and forestall procedural problems by exercising its rulemaking powers under 35 USC6(a), wherein the views of interested parties may be heard.” Harnisch, 206 USPQ at 306, n.6

Team Members

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The Proposal

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