was keyed to the failure to provide a secondary reference showing equivalency in the same type of compound. See H.A. Wegner, "Prima Facie Obviousness of Chemical Compounds", 6 APLA Quart. J. 271 at 310 (1978).

§ 246. AROMATIC VERSUS ALIPHATIC RING SYSTEMS

The Board has been reluctant to find obvious the substitution of one heterocyclic ring system for another in the published cases. In Ex parte Biele, 137 USPQ 315 (1962), certain compounds with a phenyl substituent were rejected over the corresponding cyclohexyl compounds, with the Board reversing the rejection on structural obviousness.

§ 247. HALO "HOMOLOGS" AND ANALOGS

Chlorine and bromine, as well as fluorine and iodine, are all part of a "homologous" series, but often a teaching of a fluoride should not render an iodide unpatentable.

Often, Examiners have found the chloro and bromo corresponding compounds sufficiently close to each other to render one prima facie obvious over the other, and a change in the number of halo groups also has been basis for prima facie obviousness rejections as in Ex parte Dole, 119 USPQ 260 (1957).

In In re Riden, 318 F.2d 161, 138 USPQ 112 (CCPA 1963), certain sulfone fungicides were found prima facie obvious a compound differing by homology and the presence of two chloro groups versus one with three.

But, in In re Taborsky, 502 F.2d 775, 183 USPQ 50 (CCPA 1974), a 5-nitro-4'-chlorosalicylanilide was found to be free from prima facie obviousness over the corresponding 5-nitro-3-fluorosalicylanilide.

§ 248. CHALKOGENS (OXY VERSUS SULFUR)

The difference between an oxy and thio group should not be considered obvious without a specific teaching to make the substitution or establishment that in a particular art area that this should be the case. In re Grabiak, 769 F.2d 729, 226 USPQ 870 (Fed. Cir. 1985) (substitution of chalkogens in a ring system was found not to be prima facie obvious). Earlier cases are reviewed in H.A. Wegner, "Prima Facie Obviousness of Chemical Compounds", 6 APLA Quart. J. 271 at 301-303 (1978).

PROVING A DIFFERENCE IN PROPERTIES

§ 250. INTRODUCTION

Garden variety chemical patent practice often includes a first action by the Examiner citing a "homolog" or other closely related structure. This is followed by the applicant submitting an affidavit or declaration under 37 CFR § 1.132 with a ream of test data comparing the two. The Examiner then allows the claims. As a garden variety approach, this is the wrong way to proceed.
§ 250. Proving a Difference in Properties

To routinely file comparative tests for the garden variety application that would mean inadequate time to verify data with the applicant, particularly to verify the completeness of the data, invites an invalidity ruling years later in litigation. See Merck & Co., Inc. v. Danbury Pharmacal, Inc., 873 F.2d 1418, 1421, 10 USPQ2d 1682 (Fed. Cir. 1989) (data submitted for regulatory approval of drug not given to Examiner).

Although filing affidavits or declarations may be wrong for simple cases, affidavits can and should be used on a selective basis where there is sufficient economic value to the application to warrant the time and expense necessary to do a first class job in preparing the affidavit.

"Structural obviousness" was born in late nineteenth century case law, but only since In re Papesch, 315 F.2d 391, 137 USPQ 43 (CCPA 1963), has affidavit practice emerged as the dominant feature of chemical patent practice. (The opinion in the Papesch case is found in § 501, supra.) An affidavit, not argument, is necessary where an unexpected result is basis for patentability, In re de Blauwe, 736 F.2d 699, 222 USPQ 1 (Fed. Cir. 1984).

The CCPA Case Law Evolution in the 1960’s

In the generation since Papesch, chemical patent practice has been turned around 180 degrees. At the time of Papesch little more than 20 years ago, chemical practitioners viewed patent law from the two dimensional perspective of a structural formula jigsaw puzzle, generally without giving weight to the presence of an unexpected property. The Papesch case was a specially tailored test case designed to break the logjam at the Patent Office, which consistently followed a "Division 6" policy to deny claims to a compound, per se, when the compound was "structurally obvious", despite the verified demonstration that the compound had an unexpected difference from the related prior art compound. (Division 6 of the Patent Office may have been the premiere "division" under the old organization of the Patent Office in terms of development of case law at the CCPA, as that division was responsible for examination of many of the heterocyclic new chemical entities that were important in medicinal chemistry. Division 6 later became Group Art Units 121 and 122 under a reorganization around the time of Papesch, with many of the later Patent Office leaders being Division 6 alumni.)

Papesch was not finally accepted by the Patent Office for about ten years, with a long string of test cases following in the 1960’s at the CCPA to confirm the validity of the Papesch ruling, perhaps the most important being In re Ruschig, 343 F.2d 965, 145 USPQ 274 (CCPA 1965), the second in the series where the Patent Office attempted to limit the doctrine. While most of the case law evolution at the CCPA was positive, some cases in the late 1960’s, without close reading, could be interpreted by Examiners as limiting Papesch. See, particularly, In re Montmollin, 344 F.2d 976, 145 USPQ 416 (CCPA 1965); In re Crouse, 363 F.2d 881, 150 USPQ 554 (CCPA 1966); and In re Mod, 408 F.2d 1055, 161 USPQ 281 (CCPA 1969). Cases such as In re Murch, 464 F.2d 1051, 15 USPQ 89 (CCPA 1972), balanced these cases.