

フィリップス事件大法廷判決

Phillips v. AWH Corp. (Fed. Cir., July 12, 2005) (en banc).

～ 日本との違いおよび被告日本企業の敗訴例との関係を考察する～

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1. 経緯など

USP 4,677,798: プレハブの刑務所建物のためのパネルの発明。86年、出願。87年、成立。

89年～90年、被告がライセンス契約に基づく実施。

91年初め、原告が同種品のパンフレットを見付ける。92年6月までに書簡の交換。

97年、訴え提起(コロラド連邦地裁)。トレードシークレット不正使用と特許侵害。

地裁は、前者は時効で排斥、後者は112条6項適用として次のようにクレーム解釈した:

The court therefore concluded that a "baffle," within the context of the '798 patent, has two required properties: first, baffles extend inward from the shell walls at oblique or acute angles; and second, baffles form an intermediate, interlocking barrier in the interior of the wall module. Id. at 25.

原告は、この解釈では非侵害と認めた。略式判決。

クレーム1と2は次の通り(2は侵害主張されていないが):

1. Building modules adapted to fit together for construction of fire, sound and impact resistant security barriers and rooms for use in securing records and persons, comprising in combination, an outer shell of substantially parallelepiped shall with two outer steel plate panel sections of greater surface area serving as inner and outer walls for a structure when a plurality of the modules are fitted together, sealant means spacing the two panel sections from steel to steel contact with each other by a thermal-acoustical barrier material, and further means disposed inside the shell for increasing its load bearing capacity comprising internal steel baffles extending inwardly from the steel shell walls.

2. Modules as defined in claim 1 wherein the steel baffles are oriented with the panel sections disposed at angles for deflecting projectiles such as bullets able to penetrate the steel plates.

2. 争点とCAFCの判断

争点はバツフル(baffle)。

・原告の主張: 辞書で言うバツフルでありさえすればよい。バツフルとは、a

means for obstructing, impeding, or checking the flow of something または something for deflecting, checking, or otherwise regulating flow.

・被告の主張: ここで言うバッフルは、90度以外の物に限られる。実施例ではいずれも90度以外で、それによって弾丸をそらすという効果が説明されている。ここで言うバッフルは、弾丸に対するバッフルであり、90度のものはその役目を果たさないから、バッフルに当たらない、との主張。

CAFCのパネル (Newman, Lourie, and Dyk、Dykは少数意見) は、地裁を支持。ただし112条6項非適用。

大法廷では、内部証拠を重要としつつも、差戻へ。

3. 大法廷の説示する解釈手法

内部証拠が重要。最初はクレーム自体、そして明細書全体、審査経過。外部証拠としての辞書や専門家証言も参考にはする、特に辞書は役に立つことがあるとするが、辞書の定義に該当しさえすればよいというものではない。

しかし、実際の事案に対しては...

審査過程で限定的に考えているように見えても、そこで先行技術が出てきていないと、claim differentiation を論じられるような場面では特に、狭くは解さない、という態度。

4. 禁反言との関係

客観的な解釈を前提とすると、わざわざ禁反言とかという説明をすることになる。また、その理由について考えることにもなる。

さらに、禁反言を論じながら、客観的に必要な限定だけを認めたりする (大阪地裁判決平成8年9月26日、青果物包装フィルム事件)。

米国でもそういう説明も現にあるが、その点をむしろ原則というか、基本としているように思える。内部証拠が基本、というのはそういう意味と見える。

5. 先行技術の位置づけ

包袋中で検討された先行技術は考慮する。そうでないものは無効理由。

端的な例: Rhine v. Casio, Inc., 183 F.3d 1342, 1345 (Fed Cir. July 6, 1999)

6. 112条6項との関係

この事案でも、112条6項該当性が争われた。高裁では違うとされた。

112条6項をめぐって、審査段階での解釈と侵害訴訟での解釈がどういう関係になるのか、という争点がある (あった)。In re Donaldson Co. Inc., 16 F.3d 1189, 29 USPQ2d 1845 (Fed.Cir. 1994)。

一緒、というのがかなり根深いことを感じる。

7. 日本での狭い解釈の例.....先行技術の存在

対比として、貸しロッカー事件 (東京地判昭和52年7月22日)。この件は、典型的な狭

く解釈した事例だが、実は、明示的な説示がないものの、先行技術がとても有力。120%無効。

判決文自体は、次のように言って、クレーム解釈の問題であるかのようにして請求を排斥した：

～ 本件考案の実用新案登録請求の範囲に記載されているところは、鍵の挿入又は抜取りにより、貸口ツカーの硬貨投入口を開閉する装置を構成する課題の提示のみであるというべきである。すなわち、すでに判示したとおり、本件考案においては、右課題の解決のために鍵の挿入又は抜取りという手段及び遮蔽板という手段を具体的に挙げているので、右課題の解決を示しているかのように見られるが、右各手段についての表現は、抽象的であり、右各手段が具体的にいかなる中間的機構を有すれば、鍵の挿入又は抜取りという動作と遮蔽板の作動という動作とを連動させることができるかについては、実用新案登録請求の範囲の記載のみによつては知ることができないから、右のような抽象的な記載をもつて、何ら右課題の解決を示したものであるということとはできない。

しかして、実用新案権の技術的範囲は、願書に添付した明細書の実用新案登録請求の範囲の記載に基づいて定めなければならない（実用新案法第二六条、特許法第七〇条）ところ、本件考案は、その明細書の右のような抽象的な実用新案登録請求の範囲の記載のみによつては、とうてい、その技術的範囲を定めることはできないものというべきである。そこで、本件考案の技術的範囲を定めるためには、右明細書の考案の詳細な説明の項及び図面の記載に従い、その記載のとおりの内容のものとして、限定して解さなければならない。したがって、本件考案の構成要件を具備した装置がすべて本件考案の技術的範囲内にあるものということとはできない。

8. 一致させても狭くならない

陪審裁判で負けるわけは...

この明細書においては狭い意味、ということがあるはず。効果が説明されていて、そのためには、クレーム要件の文字通りだけではダメという場合もある。それなら限定しよう。

でも、説明された効果のすべてが必須とは限らない、という議論が可能。それを始めると、ちっとも狭くならない。その実例が本件。claim differentiation ということでもある。

マークマン最判 (Markman v. Westview Instruments, Inc., 52 F.3d 967, 979-81 (Fed. Cir. 1995) (en banc), aff'd, 517 U.S. 370 (1996)) の影響。ヒアリングして解釈を決める。抽象的になる。

それで無効になればよいが、有効性推定の受け止めようによる。

9. セガadvコイルの例（1992年ロサンジェルス）

・ コイル氏のUSP3,900,886の発明の要旨は、“音でテレビ画面の音を変える”ということ。空气中を伝わって耳に聞こえる「音」との関連を考えており、この「音」に合わせて画面が変化することによって、装飾的な目的に使用できることを効果としてうたって

いる。

・技術的には、米国および日本で使用されている NTSC 方式を前提として、音声信号による色副搬送波の変調を説明。それも、本来の NTSC 方式による変調ではない極めて簡略化した手法が提示されている。本来の NTSC 方式の場合には、二つの色差信号を、互いに位相を90度ずらした二つの色副搬送波を使って平衡変調して送るわけだが、コイル氏の特許のスペシフィケーションで示されているのは、色の変化を起こす事だけを満足する便法。色副搬送波を位相変調（または周波数変調；この両者は、変調信号についての周波数特性に違いがあるだけ）する。

・コイル特許のクレーム：

ソニック・カラー・システムにおいて、

- ・蛍光スクリーンを有するカラー受信手段と、
- ・そのスクリーンにカラー・パターンを産み出すための電子銃と、
- ・その電子銃のカソードとグリッドに接続された映像回路手段と色回路手段と、
- ・信号をピック・アップするための、上記の回路に接続されたアンテナ手段と、
- ・そのアンテナ手段に接続され、色信号発振器と高周波発振器を含むところのソニック・シグナル応答手段(sonic signal responsive means)、ただしこれらの発振器のうちの一つは、前記回路がスクリーンにカラー・パターンを生ぜしめるのをコントロールするようにソニック・シグナルに応じて変化する位相の信号を発生することが出来るべく可変のものとなっている、

の組合わせ。

・NTSC方式のカラー放送（2つの色差信号を、副搬送波を使って、平衡直角変調で送る）と、一つの副搬送波を位相変調することの等価性

... 陪審員に理解させることの困難さ

・1991年12月5日の決定

sonic signal の定義：

20ヘルツから20,000ヘルツの周波数分布を有するオーディオまたはサウンドのシグナルで、同じ範囲のビデオ・シグナルとオーバーラップしていないもの。(audio or sound signal with a frequency spectrum of 20 to 20,000 hertz which does not overlap with video signals of that same range.)

・33百万ドルの実損害と故意侵害の認定、約57億円の和解。

1996), and more recently in Innova/Pure Water, Inc. v. Safari Water Filtration Systems, Inc., 381 F.3d 1111 (Fed. Cir. 2004). What we said in those cases bears restating, for the basic principles of claim construction outlined there are still applicable, and we reaffirm them today. We have also previously considered the use of dictionaries in claim construction. What we have said in that regard requires clarification.

A

(権利はクレームで決まる。)

It is a “bedrock principle” of patent law that “the claims of a patent define the invention to which the patentee is entitled the right to exclude.” Innova, 381 F.3d at 1115; see also Vitronics, 90 F.3d at 1582 (“we look to the words of the claims themselves . . . to define the scope of the patented invention”); Markman, 52 F.3d at 980 (“The written description part of the specification itself does not delimit the right to exclude. That is the function and purpose of claims.”). That principle has been recognized since at least 1836, when Congress first required that the specification include a portion in which the inventor “shall particularly specify and point out the part, improvement, or combination, which he claims as his own invention or discovery.” Act of July 4, 1836, ch. 357, § 6, 5 Stat. 117, 119. In the following years, the Supreme Court made clear that the claims are “of primary importance, in the effort to ascertain precisely what it is that is patented.” Merrill v. Yeomans, 94 U.S. 568, 570 (1876). Because the patentee is required to “define precisely what his invention is,” the Court explained, it is “unjust to the public, as well as an evasion of the law, to construe it in a manner different from the plain import of its terms.” White v. Dunbar, 119 U.S. 47, 52 (1886); see also Cont’l Paper Bag Co. v. E. Paper Bag Co., 210 U.S. 405, 419 (1908) (“the claims measure the invention”); McCarty v. Lehigh Valley R.R. Co., 160 U.S. 110,

116 (1895) (“if we once begin to include elements not mentioned in the claim, in order to limit such claim . . . , we should never know where to stop”); Aro Mfg. Co. v. Convertible Top Replacement Co., 365 U.S. 336, 339 (1961) (“the claims made in the patent are the sole measure of the grant”).

(通常の意味ordinary meaning が基本。)

We have frequently stated that the words of a claim “are generally given their ordinary and customary meaning.” Vitronics, 90 F.3d at 1582; see also Toro Co. v. White Consol. Indus., Inc., 199 F.3d 1295, 1299 (Fed. Cir. 1999); Renishaw PLC v. Marposs Societa’ per Azioni, 158 F.3d 1243, 1249 (Fed. Cir. 1998). We have made clear, moreover, that the ordinary and customary meaning of a claim term is the meaning that the term would have to a person of ordinary skill in the art in question at the time of the invention, i.e., as of the effective filing date of the patent application. See Innova, 381 F.3d at 1116 (“A court construing a patent claim seeks to accord a claim the meaning it would have to a person of ordinary skill in the art at the time of the invention.”); Home Diagnostics, Inc. v. LifeScan, Inc., 381 F.3d 1352, 1358 (Fed. Cir. 2004) (“customary meaning” refers to the “customary meaning in [the] art field”); Ferguson Beauregard/Logic Controls v. Mega Sys., LLC, 350 F.3d 1327, 1338 (Fed. Cir. 2003) (claim terms “are examined through the viewing glass of a person skilled in the art”); see also PC Connector Solutions LLC v. SmartDisk Corp., 406 F.3d 1359, 1363 (Fed. Cir. 2005) (meaning of claim “must be interpreted as of [the] effective filing date” of the patent application); Schering Corp. v. Amgen Inc., 222 F.3d 1347, 1353 (Fed. Cir. 2000) (same).

The inquiry into how a person of ordinary skill in the art understands a claim term provides an objective baseline from which to begin claim interpretation. See Innova,

(その分野に習熟した人 skilled personを基準とする。)

381 F.3d at 1116. That starting point is based on the well-settled understanding that inventors are typically persons skilled in the field of the invention and that patents are addressed to and intended to be read by others of skill in the pertinent art. See Verve, LLC v. Crane Cams, Inc., 311 F.3d 1116, 1119 (Fed. Cir. 2002) (patent documents are meant to be “a concise statement for persons in the field”); In re Nelson, 280 F.2d 172, 181 (CCPA 1960) (“The descriptions in patents are not addressed to the public generally, to lawyers or to judges, but, as section 112 says, to those skilled in the art to which the invention pertains or with which it is most nearly connected.”).

(明細書全体で解釈する。)

Importantly, the person of ordinary skill in the art is deemed to read the claim term not only in the context of the particular claim in which the disputed term appears, but in the context of the entire patent, including the specification. This court explained that point well in Multiform Desiccants, Inc. v. Medzam, Ltd., 133 F.3d 1473, 1477 (Fed. Cir. 1998):

It is the person of ordinary skill in the field of the invention through whose eyes the claims are construed. Such person is deemed to read the words used in the patent documents with an understanding of their meaning in the field, and to have knowledge of any special meaning and usage in the field. The inventor’s words that are used to describe the invention—the inventor’s lexicography—must be understood and interpreted by the court as they would be understood and interpreted by a person in that field of technology. Thus the court starts the decisionmaking process by reviewing the same resources as would that person, *viz.*, the patent specification and the prosecution history.

See also Medrad, Inc. v. MRI Devices Corp., 401 F.3d 1313, 1319 (Fed. Cir. 2005) (“We cannot look at the ordinary meaning of the term . . . in a vacuum. Rather, we must look at the ordinary meaning in the context of the written description and the prosecution history.”); V-Formation, Inc. v. Benetton Group SpA, 401 F.3d 1307, 1310 (Fed. Cir. 2005) (intrinsic record “usually provides the technological and temporal context to

enable the court to ascertain the meaning of the claim to one of ordinary skill in the art at the time of the invention”); Unitherm Food Sys., Inc. v. Swift-Eckrich, Inc., 375 F.3d 1341, 1351 (Fed. Cir. 2004) (proper definition is the “definition that one of ordinary skill in the art could ascertain from the intrinsic evidence in the record”).

B

In some cases, the ordinary meaning of claim language as understood by a person of skill in the art may be readily apparent even to lay judges, and claim construction in such cases involves little more than the application of the widely accepted meaning of commonly understood words. See Brown v. 3M, 265 F.3d 1349, 1352 (Fed. Cir. 2001) (holding that the claims did “not require elaborate interpretation”). In such circumstances, general purpose dictionaries may be helpful. In many cases that give rise to litigation, however, determining the ordinary and customary meaning of the claim requires examination of terms that have a particular meaning in a field of art. Because the meaning of a claim term as understood by persons of skill in the art is often not immediately apparent, and because patentees frequently use terms idiosyncratically, the court looks to “those sources available to the public that show what a person of skill in the art would have understood disputed claim language to mean.” Innova, 381 F.3d at 1116. Those sources include “the words of the claims themselves, the remainder of the specification, the prosecution history, and extrinsic evidence concerning relevant scientific principles, the meaning of technical terms, and the state of the art.” *Id.*; see also Gemstar-TV Guide Int’l, Inc. v. Int’l Trade Comm’n, 383 F.3d 1352, 1364 (Fed. Cir. 2004); Vitronics, 90 F.3d at 1582-83; Markman, 52 F.3d at 979-80.

(難しい場合のガイドとして、
まずクレーム自体がある。)

1

Quite apart from the written description and the prosecution history, the claims themselves provide substantial guidance as to the meaning of particular claim terms. See Vitronics, 90 F.3d at 1582; see also ACTV, Inc. v. Walt Disney Co., 346 F.3d 1082, 1088 (Fed. Cir. 2003) (“the context of the surrounding words of the claim also must be considered in determining the ordinary and customary meaning of those terms”).

(ここで既に

differentiation
に言及。)

To begin with, the context in which a term is used in the asserted claim can be highly instructive. To take a simple example, the claim in this case refers to “steel baffles,” which strongly implies that the term “baffles” does not inherently mean objects made of steel. This court’s cases provide numerous similar examples in which the use of a term within the claim provides a firm basis for construing the term. See, e.g., Mars, Inc. v. H.J. Heinz Co., 377 F.3d 1369, 1374 (Fed. Cir. 2004) (claim term “ingredients” construed in light of the use of the term “mixture” in the same claim phrase); Process Control Corp. v. HydReclaim Corp., 190 F.3d 1350, 1356 (Fed. Cir. 1999) (claim term “discharge rate” construed in light of the use of the same term in another limitation of the same claim).

Other claims of the patent in question, both asserted and unasserted, can also be valuable sources of enlightenment as to the meaning of a claim term. Vitronics, 90 F.3d at 1582. Because claim terms are normally used consistently throughout the patent, the usage of a term in one claim can often illuminate the meaning of the same term in other claims. See Rexnord Corp. v. Laitram Corp., 274 F.3d 1336, 1342 (Fed. Cir. 2001); CVI/Beta Ventures, Inc. v. Tura LP, 112 F.3d 1146, 1159 (Fed. Cir. 1997). Differences among claims can also be a useful guide in understanding the meaning of

particular claim terms. See Laitram Corp. v. Rexnord, Inc., 939 F.2d 1533, 1538 (Fed. Cir. 1991). For example, the presence of a dependent claim that adds a particular limitation gives rise to a presumption that the limitation in question is not present in the independent claim. See Liebel-Flarsheim Co. v. Medrad, Inc., 358 F.3d 898, 910 (Fed. Cir. 2004).

2

(明細書の参照の必要。)

The claims, of course, do not stand alone. Rather, they are part of “a fully integrated written instrument,” Markman, 52 F.3d at 978, consisting principally of a specification that concludes with the claims. For that reason, claims “must be read in view of the specification, of which they are a part.” Id. at 979. As we stated in Vitronics, the specification “is always highly relevant to the claim construction analysis. Usually, it is dispositive; it is the single best guide to the meaning of a disputed term.” 90 F.3d at 1582.

This court and its predecessors have long emphasized the importance of the specification in claim construction. In Autogiro Co. of America v. United States, 384 F.2d 391, 397-98 (Ct. Cl. 1967), the Court of Claims characterized the specification as “a concordance for the claims,” based on the statutory requirement that the specification “describe the manner and process of making and using” the patented invention. The Court of Customs and Patent Appeals made a similar point. See In re Fout, 675 F.2d 297, 300 (CCPA 1982) (“Claims must always be read in light of the specification. Here, the specification makes plain what the appellants did and did not invent . . .”).

Shortly after the creation of this court, Judge Rich wrote that “[t]he descriptive part of the specification aids in ascertaining the scope and meaning of the claims

inasmuch as the words of the claims must be based on the description. The specification is, thus, the primary basis for construing the claims.” Standard Oil Co. v. Am. Cyanamid Co., 774 F.2d 448, 452 (Fed. Cir. 1985). On numerous occasions since then, we have reaffirmed that point, stating that “[t]he best source for understanding a technical term is the specification from which it arose, informed, as needed, by the prosecution history.” Multiform Dessicants, 133 F.3d at 1478; Metabolite Labs., Inc. v. Lab. Corp. of Am. Holdings, 370 F.3d 1354, 1360 (Fed. Cir. 2004) (“In most cases, the best source for discerning the proper context of claim terms is the patent specification wherein the patent applicant describes the invention.”); see also, e.g., Kinik Co. v. Int’l Trade Comm’n, 362 F.3d 1359, 1365 (Fed. Cir. 2004) (“The words of patent claims have the meaning and scope with which they are used in the specification and the prosecution history.”); Moba, B.V. v. Diamond Automation, Inc., 325 F.3d 1306, 1315 (Fed. Cir. 2003) (“[T]he best indicator of claim meaning is its usage in context as understood by one of skill in the art at the time of invention.”).

That principle has a long pedigree in Supreme Court decisions as well. See Hogg v. Emerson, 47 U.S. (6 How.) 437, 482 (1848) (the specification is a “component part of the patent” and “is as much to be considered with the [letters patent] in construing them, as any paper referred to in a deed or other contract”); Bates v. Coe, 98 U.S. 31, 38 (1878) (“in case of doubt or ambiguity it is proper in all cases to refer back to the descriptive portions of the specification to aid in solving the doubt or in ascertaining the true intent and meaning of the language employed in the claims”); White v. Dunbar, 119 U.S. 47, 51 (1886) (specification is appropriately resorted to “for the purpose of better understanding the meaning of the claim”); Schriber-Schroth Co. v.

Cleveland Trust Co., 311 U.S. 211, 217 (1940) (“The claims of a patent are always to be read or interpreted in light of its specifications.”); United States v. Adams, 383 U.S. 39, 49 (1966) (“[I]t is fundamental that claims are to be construed in the light of the specifications and both are to be read with a view to ascertaining the invention.”).

(明細書参照は、制定法上の根拠もある。)

The importance of the specification in claim construction derives from its statutory role. The close kinship between the written description and the claims is enforced by the statutory requirement that the specification describe the claimed invention in “full, clear, concise, and exact terms.” 35 U.S.C. § 112, para. 1; see Network, LLC v. Centraal Corp., 242 F.3d 1347, 1352 (Fed. Cir. 2001) (“The claims are directed to the invention that is described in the specification; they do not have meaning removed from the context from which they arose.”); see also Markman v. Westview Instruments, Inc., 517 U.S. 370, 389 (1996) (“[A claim] term can be defined only in a way that comports with the instrument as a whole.”). In light of the statutory directive that the inventor provide a “full” and “exact” description of the claimed invention, the specification necessarily informs the proper construction of the claims. See Merck & Co. v. Teva Pharms. USA, Inc., 347 F.3d 1367, 1371 (Fed. Cir. 2003) (“A fundamental rule of claim construction is that terms in a patent document are construed with the meaning with which they are presented in the patent document. Thus claims must be construed so as to be consistent with the specification, of which they are a part.”) (citations omitted). In Renishaw, this court summarized that point succinctly:

Ultimately, the interpretation to be given a term can only be determined and confirmed with a full understanding of what the inventors actually invented and intended to envelop with the claim. The construction that stays true to the claim language and most naturally aligns with the patent’s description of the invention will be, in the end, the correct construction.

158 F.3d at 1250 (citations omitted).

(明細書に従って、特殊な意味に解することもある。)

Consistent with that general principle, our cases recognize that the specification may reveal a special definition given to a claim term by the patentee that differs from the meaning it would otherwise possess. In such cases, the inventor's lexicography governs. See CCS Fitness, Inc. v. Brunswick Corp., 288 F.3d 1359, 1366 (Fed. Cir. 2002). In other cases, the specification may reveal an intentional disclaimer, or disavowal, of claim scope by the inventor. In that instance as well, the inventor has dictated the correct claim scope, and the inventor's intention, as expressed in the specification, is regarded as dispositive. See SciMed Life Sys., Inc. v. Advanced Cardiovascular Sys., Inc., 242 F.3d 1337, 1343-44 (Fed. Cir. 2001).

(PTOでの解釈手法だということ自体が正当性の根拠にされている。)

The pertinence of the specification to claim construction is reinforced by the manner in which a patent is issued. The Patent and Trademark Office ("PTO") determines the scope of claims in patent applications not solely on the basis of the claim language, but upon giving claims their broadest reasonable construction "in light of the specification as it would be interpreted by one of ordinary skill in the art." In re Am. Acad. of Sci. Tech. Ctr., 367 F.3d 1359, 1364 (Fed. Cir. 2004). Indeed, the rules of the PTO require that application claims must "conform to the invention as set forth in the remainder of the specification and the terms and phrases used in the claims must find clear support or antecedent basis in the description so that the meaning of the terms in the claims may be ascertainable by reference to the description." 37 C.F.R. § 1.75(d)(1). It is therefore entirely appropriate for a court, when conducting claim construction, to rely heavily on the written description for guidance as to the meaning of the claims.

In addition to consulting the specification, we have held that a court "should also consider the patent's prosecution history, if it is in evidence." Markman, 52 F.3d at 980; see also Graham v. John Deere Co., 383 U.S. 1, 33 (1966) ("[A]n invention is construed not only in the light of the claims, but also with reference to the file wrapper or prosecution history in the Patent Office."). The prosecution history, which we have designated as part of the "intrinsic evidence," consists of the complete record of the proceedings before the PTO and includes the prior art cited during the examination of the patent. Autogiro, 384 F.2d at 399. Like the specification, the prosecution history provides evidence of how the PTO and the inventor understood the patent. See Lemelson v. Gen. Mills, Inc., 968 F.2d 1202, 1206 (Fed. Cir. 1992). Furthermore, like the specification, the prosecution history was created by the patentee in attempting to explain and obtain the patent. Yet because the prosecution history represents an ongoing negotiation between the PTO and the applicant, rather than the final product of that negotiation, it often lacks the clarity of the specification and thus is less useful for claim construction purposes. See Inverness Med. Switz. GmbH v. Warner Lambert Co., 309 F.3d 1373, 1380-82 (Fed. Cir. 2002) (the ambiguity of the prosecution history made it less relevant to claim construction); Athletic Alternatives, Inc. v. Prince Mfg., Inc., 73 F.3d 1573, 1580 (Fed. Cir. 1996) (the ambiguity of the prosecution history made it "unhelpful as an interpretive resource" for claim construction). Nonetheless, the prosecution history can often inform the meaning of the claim language by demonstrating how the inventor understood the invention and whether the inventor limited the invention in the course of prosecution, making the claim scope narrower than

it would otherwise be. Vitronics, 90 F.3d at 1582-83; see also Chimie v. PPG Indus., Inc., 402 F.3d 1371, 1384 (Fed. Cir. 2005) (“The purpose of consulting the prosecution history in construing a claim is to ‘exclude any interpretation that was disclaimed during prosecution.’”), quoting ZMI Corp. v. Cardiac Resuscitator Corp., 844 F.2d 1576, 1580 (Fed. Cir. 1988); Southwall Techs., Inc. v. Cardinal IG Co., 54 F.3d 1570, 1576 (Fed. Cir. 1995).

C

(内部証拠の重要性を強調するが、外部証拠を見ても良い。)

Although we have emphasized the importance of intrinsic evidence in claim construction, we have also authorized district courts to rely on extrinsic evidence, which “consists of all evidence external to the patent and prosecution history, including expert and inventor testimony, dictionaries, and learned treatises.” Markman, 52 F.3d at 980, citing Seymour v. Osborne, 78 U.S. (11 Wall.) 516, 546 (1870); see also Vitronics, 90 F.3d at 1583. However, while extrinsic evidence “can shed useful light on the relevant art,” we have explained that it is “less significant than the intrinsic record in determining ‘the legally operative meaning of claim language.’” C.R. Bard, Inc. v. U.S. Surgical Corp., 388 F.3d 858, 862 (Fed. Cir. 2004), quoting Vanderlande Indus. Nederland BV v. Int’l Trade Comm’n, 366 F.3d 1311, 1318 (Fed. Cir. 2004); see also Astrazeneca AB v. Mutual Pharm. Co., 384 F.3d 1333, 1337 (Fed. Cir. 2004).

(外部証拠の中でも辞書などが役にたつ。)

Within the class of extrinsic evidence, the court has observed that dictionaries and treatises can be useful in claim construction. See Renishaw, 158 F.3d at 1250; Rexnord, 274 F.3d at 1344. We have especially noted the help that technical dictionaries may provide to a court “to better understand the underlying technology” and the way in which one of skill in the art might use the claim terms. Vitronics, 90 F.3d at

1584 n.6. Because dictionaries, and especially technical dictionaries, endeavor to collect the accepted meanings of terms used in various fields of science and technology, those resources have been properly recognized as among the many tools that can assist the court in determining the meaning of particular terminology to those of skill in the art of the invention. See Teleflex, Inc. v. Ficosa N. Am. Corp., 299 F.3d 1313, 1325 (Fed. Cir. 2002). Such evidence, we have held, may be considered if the court deems it helpful in determining “the true meaning of language used in the patent claims.” Markman, 52 F.3d at 980.

(専門家証言が役立つことも。)

We have also held that extrinsic evidence in the form of expert testimony can be useful to a court for a variety of purposes, such as to provide background on the technology at issue, to explain how an invention works, to ensure that the court’s understanding of the technical aspects of the patent is consistent with that of a person of skill in the art, or to establish that a particular term in the patent or the prior art has a particular meaning in the pertinent field. See Pitney Bowes, Inc. v. Hewlett-Packard Co., 182 F.3d 1298, 1308-09 (Fed. Cir. 1999); Key Pharms. v. Hercon Labs. Corp., 161 F.3d 709, 716 (Fed. Cir. 1998). However, conclusory, unsupported assertions by

(単なる結論的なのは駄目。)

experts as to the definition of a claim term are not useful to a court. Similarly, a court should discount any expert testimony “that is clearly at odds with the claim construction mandated by the claims themselves, the written description, and the prosecution history, in other words, with the written record of the patent.” Key Pharms., 161 F.3d at 716.

(外部証拠は一般に、less reliable。)

We have viewed extrinsic evidence in general as less reliable than the patent and its prosecution history in determining how to read claim terms, for several reasons.

(外部証拠の問題点。)

First, extrinsic evidence by definition is not part of the patent and does not have the specification's virtue of being created at the time of patent prosecution for the purpose of explaining the patent's scope and meaning. Second, while claims are construed as they would be understood by a hypothetical person of skill in the art, extrinsic publications may not be written by or for skilled artisans and therefore may not reflect the understanding of a skilled artisan in the field of the patent. Third, extrinsic evidence consisting of expert reports and testimony is generated at the time of and for the purpose of litigation and thus can suffer from bias that is not present in intrinsic evidence. The effect of that bias can be exacerbated if the expert is not one of skill in the relevant art or if the expert's opinion is offered in a form that is not subject to cross-examination. See Senmed, Inc. v. Richard-Allan Med. Indus., Inc., 888 F.2d 815, 819 n.8 (Fed. Cir. 1989). Fourth, there is a virtually unbounded universe of potential extrinsic evidence of some marginal relevance that could be brought to bear on any claim construction question. In the course of litigation, each party will naturally choose the pieces of extrinsic evidence most favorable to its cause, leaving the court with the considerable task of filtering the useful extrinsic evidence from the fluff. See Daubert v. Merrell Dow Pharms., Inc., 509 U.S. 579, 595 (1993) ("Expert evidence can be both powerful and quite misleading because of the difficulty in evaluating it."). Finally, undue reliance on extrinsic evidence poses the risk that it will be used to change the meaning of claims in derogation of the "indisputable public records consisting of the claims, the specification and the prosecution history," thereby undermining the public notice function of patents. Southwall Techs., 54 F.3d at 1578.

In sum, extrinsic evidence may be useful to the court, but it is unlikely to result in a reliable interpretation of patent claim scope unless considered in the context of the intrinsic evidence. Nonetheless, because extrinsic evidence can help educate the court regarding the field of the invention and can help the court determine what a person of ordinary skill in the art would understand claim terms to mean, it is permissible for the district court in its sound discretion to admit and use such evidence. In exercising that discretion, and in weighing all the evidence bearing on claim construction, the court should keep in mind the flaws inherent in each type of evidence and assess that evidence accordingly.

III

(辞書を重視した先例
の批判。)

Although the principles outlined above have been articulated on numerous occasions, some of this court's cases have suggested a somewhat different approach to claim construction, in which the court has given greater emphasis to dictionary definitions of claim terms and has assigned a less prominent role to the specification and the prosecution history. The leading case in this line is Texas Digital Systems, Inc. v. Telegenix, Inc., 308 F.3d 1193 (Fed. Cir. 2002).

A

In Texas Digital, the court noted that "dictionaries, encyclopedias and treatises are particularly useful resources to assist the court in determining the ordinary and customary meanings of claim terms." 308 F.3d at 1202. Those texts, the court explained, are "objective resources that serve as reliable sources of information on the established meanings that would have been attributed to the terms of the claims by those of skill in the art," and they "deserve no less fealty in the context of claim

construction” than in any other area of law. Id. at 1203. The court added that because words often have multiple dictionary meanings, the intrinsic record must be consulted to determine which of the different possible dictionary meanings is most consistent with the use of the term in question by the inventor. If more than one dictionary definition is consistent with the use of the words in the intrinsic record, the court stated, “the claim terms may be construed to encompass all such consistent meanings.” Id.

The Texas Digital court further explained that the patent’s specification and prosecution history must be consulted to determine if the patentee has used “the words [of the claim] in a manner clearly inconsistent with the ordinary meaning reflected, for example, in a dictionary definition.” 308 F.3d at 1204. The court identified two circumstances in which such an inconsistency may be found. First, the court stated, “the presumption in favor of a dictionary definition will be overcome where the patentee, acting as his or her own lexicographer, has clearly set forth an explicit definition of the term different from its ordinary meaning.” Id. Second, “the presumption also will be rebutted if the inventor has disavowed or disclaimed scope of coverage, by using words or expressions of manifest exclusion or restriction, representing a clear disavowal of claim scope.” Id.

The Texas Digital court explained that it advanced the methodology set forth in that opinion in an effort to combat what this court has termed “one of the cardinal sins of patent law—reading a limitation from the written description into the claims,” SciMed Life Sys., 242 F.3d at 1340. The court concluded that it is improper to consult “the written description and prosecution history as a threshold step in the claim construction process, before any effort is made to discern the ordinary and customary meanings

attributed to the words themselves.” Texas Digital, 308 F.3d at 1204. To do so, the court reasoned, “invites a violation of our precedent counseling against importing limitations into the claims.” Id. Summarizing its analysis, the Texas Digital court stated:

By examining relevant dictionaries, encyclopedias, and treatises to ascertain possible meanings that would have been attributed to the words of the claims by those skilled in the art, and by further utilizing the intrinsic record to select from those possible meanings the one or ones most consistent with the use of the words by the inventor, the full breadth of the limitations intended by the inventor will be more accurately determined and the improper importation of unintended limitations from the written description into the claims will be more easily avoided.

Id. at 1205.

B

Although the concern expressed by the court in Texas Digital was valid, the methodology it adopted placed too much reliance on extrinsic sources such as dictionaries, treatises, and encyclopedias and too little on intrinsic sources, in particular the specification and prosecution history. While the court noted that the specification must be consulted in every case, it suggested a methodology for claim interpretation in which the specification should be consulted only after a determination is made, whether based on a dictionary, treatise, or other source, as to the ordinary meaning or meanings of the claim term in dispute. Even then, recourse to the specification is limited to determining whether the specification excludes one of the meanings derived from the dictionary, whether the presumption in favor of the dictionary definition of the claim term has been overcome by “an explicit definition of the term different from its ordinary meaning,” or whether the inventor “has disavowed or disclaimed scope of coverage, by using words or expressions of manifest exclusion or restriction, representing a clear disavowal of claim scope.” 308 F.3d at 1204. In effect, the Texas Digital approach

limits the role of the specification in claim construction to serving as a check on the dictionary meaning of a claim term if the specification requires the court to conclude that fewer than all the dictionary definitions apply, or if the specification contains a sufficiently specific alternative definition or disavowal. See, e.g., Texas Digital, 308 F.3d at 1202 (“unless compelled otherwise, a court will give a claim term the full range of its ordinary meaning”); Nystrom v. TREX Co., 374 F.3d 1105, 1111-13 (Fed. Cir. 2004) (ascertaining the “full range” of the ordinary meaning of the term “board” through a collection of dictionary definitions, and stating that those candidate definitions should be removed from consideration only if they were “disclaimed” in the written description or prosecution history); Inverness Med. Switz., 309 F.3d at 1379 (claim should be construed to encompass multiple dictionary meanings unless “the specification or prosecution history clearly demonstrates that only one of the multiple meanings was intended”). That approach, in our view, improperly restricts the role of the specification in claim construction.

Assigning such a limited role to the specification, and in particular requiring that any definition of claim language in the specification be express, is inconsistent with our rulings that the specification is “the single best guide to the meaning of a disputed term,” and that the specification “acts as a dictionary when it expressly defines terms used in the claims or when it defines terms by implication.” Vitronics, 90 F.3d at 1582; Irdeto Access, Inc. v. Echostar Satellite Corp., 383 F.3d 1295, 1300 (Fed. Cir. 2004) (“Even when guidance is not provided in explicit definitional format, the specification may define claim terms by implication such that the meaning may be found in or ascertained by a reading of the patent documents.”) (citations omitted); Novartis Pharms. Corp. v. Abbott

Labs., 375 F.3d 1328, 1334-35 (Fed. Cir. 2004) (same); Bell Atl. Network Servs., Inc. v. Covad Communications Group, Inc., 262 F.3d 1258, 1268 (Fed. Cir. 2001) (“[A] claim term may be clearly redefined without an explicit statement of redefinition.”).

(辞書重視だと、文脈を無視して抽象的に考えることになる。)

The main problem with elevating the dictionary to such prominence is that it focuses the inquiry on the abstract meaning of words rather than on the meaning of claim terms within the context of the patent. Properly viewed, the “ordinary meaning” of a claim term is its meaning to the ordinary artisan after reading the entire patent. Yet heavy reliance on the dictionary divorced from the intrinsic evidence risks transforming the meaning of the claim term to the artisan into the meaning of the term in the abstract, out of its particular context, which is the specification. The patent system is based on the proposition that claims cover only the invented subject matter. As the Supreme Court has stated, “[i]t seems to us that nothing can be more just and fair, both to the patentee and the public, than that the former should understand, and correctly describe, just what he has invented, and for what he claims a patent.” Merrill v. Yeomans, 94 U.S. at 573-74. The use of a dictionary definition can conflict with that directive because the patent applicant did not create the dictionary to describe the invention. Thus, there may be a disconnect between the patentee’s responsibility to describe and claim his invention, and the dictionary editors’ objective of aggregating all possible definitions for particular words.

Although the Texas Digital line of cases permit the dictionary definition to be narrowed in some circumstances even when there is not an explicit disclaimer or redefinition in the specification, too often that line of cases has been improperly relied upon to condone the adoption of a dictionary definition entirely divorced from the

context of the written description. The problem is that if the district court starts with the broad dictionary definition in every case and fails to fully appreciate how the specification implicitly limits that definition, the error will systematically cause the construction of the claim to be unduly expansive. The risk of systematic overbreadth is greatly reduced if the court instead focuses at the outset on how the patentee used the claim term in the claims, specification, and prosecution history, rather than starting with a broad definition and whittling it down.

Dictionaries, by their nature, provide an expansive array of definitions. General dictionaries, in particular, strive to collect all uses of particular words, from the common to the obscure. By design, general dictionaries collect the definitions of a term as used not only in a particular art field, but in many different settings. In such circumstances, it is inevitable that the multiple dictionary definitions for a term will extend beyond the “construction of the patent [that] is confirmed by the avowed understanding of the patentee, expressed by him, or on his behalf, when his application for the original patent was pending.” Goodyear Dental Vulcanite Co. v. Davis, 102 U.S. 222, 227 (1880). Thus, the use of the dictionary may extend patent protection beyond what should properly be afforded by the inventor’s patent. See Smith v. Snow, 294 U.S. 1, 14 (1935) (“if the claim were fairly susceptible of two constructions, that should be adopted which will secure to the patentee his actual invention”) (emphasis added). For that reason, we have stated that “a general-usage dictionary cannot overcome art-specific evidence of the meaning” of a claim term. Vanderlande Indus. Nederland, 366 F.3d at 1321; see also Renishaw, 158 F.3d at 1250, quoting Liebscher v. Boothroyd, 258 F.2d 948, 951 (CCPA 1958) (“Indiscriminate reliance on definitions found in dictionaries can often

produce absurd results. . . . One need not arbitrarily pick and choose from the various accepted definitions of a word to decide which meaning was intended as the word is used in a given claim. The subject matter, the context, etc., will more often than not lead to the correct conclusion.”).

Even technical dictionaries or treatises, under certain circumstances, may suffer from some of these deficiencies. There is no guarantee that a term is used in the same way in a treatise as it would be by the patentee. In fact, discrepancies between the patent and treatises are apt to be common because the patent by its nature describes something novel. See Autogiro, 384 F.2d at 397 (“Often the invention is novel and words do not exist to describe it. The dictionary does not always keep abreast of the inventor. It cannot.”).

Moreover, different dictionaries may contain somewhat different sets of definitions for the same words. A claim should not rise or fall based upon the preferences of a particular dictionary editor, or the court’s independent decision, uninformed by the specification, to rely on one dictionary rather than another. Finally, the authors of dictionaries or treatises may simplify ideas to communicate them most effectively to the public and may thus choose a meaning that is not pertinent to the understanding of particular claim language. See generally Ellen P. Aprill, The Law of the Word: Dictionary Shopping in the Supreme Court, 30 Ariz. St. L.J. 275, 293-314 (1998). The resulting definitions therefore do not necessarily reflect the inventor’s goal of distinctly setting forth his invention as a person of ordinary skill in that particular art would understand it.

As we have noted above, however, we do not intend to preclude the appropriate use of dictionaries. Dictionaries or comparable sources are often useful to assist in understanding the commonly understood meaning of words and have been used both by our court and the Supreme Court in claim interpretation. See Exhibit Supply Co. v. Ace Patents Corp., 315 U.S. 126, 134 (1942) (relying on dictionaries to construe the claim term “embedded”); Weber Elec. Co. v. E.H. Freeman Elec. Co., 256 U.S. 668, 678 (1921) (approving circuit court’s use of dictionary definitions to define claim terms); Renishaw, 158 F.3d at 1247-53 (approving the use of dictionaries with proper respect for the role of intrinsic evidence). A dictionary definition has the value of being an unbiased source “accessible to the public in advance of litigation.” Vitronics, 90 F.3d at 1585. As we said in Vitronics, judges are free to consult dictionaries and technical treatises

at any time in order to better understand the underlying technology and may also rely on dictionary definitions when construing claim terms, so long as the dictionary definition does not contradict any definition found in or ascertained by a reading of the patent documents.

Id. at 1584 n.6.

(明細書の内容でクレームを限定するのは駄目。)

We also acknowledge that the purpose underlying the Texas Digital line of cases—to avoid the danger of reading limitations from the specification into the claim—is sound. Moreover, we recognize that the distinction between using the specification to interpret the meaning of a claim and importing limitations from the specification into the claim can be a difficult one to apply in practice. See Comark Communications, Inc. v. Harris Corp., 156 F.3d 1182, 1186-87 (Fed. Cir. 1998) (“there is sometimes a fine line between reading a claim in light of the specification, and reading a limitation into the claim from the specification”). However, the line between construing terms and

importing limitations can be discerned with reasonable certainty and predictability if the court’s focus remains on understanding how a person of ordinary skill in the art would understand the claim terms. For instance, although the specification often describes very specific embodiments of the invention, we have repeatedly warned against confining the claims to those embodiments. See, e.g., Nazomi Communications, Inc. v. ARM Holdings, PLC, 403 F.3d 1364, 1369 (Fed. Cir. 2005) (claims may embrace “different subject matter than is illustrated in the specific embodiments in the specification”); Liebel-Flarsheim, 358 F.3d at 906-08; Teleflex, 299 F.3d at 1327; SRI Int’l v. Matsushita Elec. Corp. of Am., 775 F.2d 1107, 1121 (Fed. Cir. 1985). In particular, we have expressly rejected the contention that if a patent describes only a single embodiment, the claims of the patent must be construed as being limited to that embodiment. Gemstar-TV Guide, 383 F.3d at 1366. That is not just because section 112 of the Patent Act requires that the claims themselves set forth the limits of the patent grant, but also because persons of ordinary skill in the art rarely would confine their definitions of terms to the exact representations depicted in the embodiments.

To avoid importing limitations from the specification into the claims, it is important to keep in mind that the purposes of the specification are to teach and enable those of skill in the art to make and use the invention and to provide a best mode for doing so. See Spectra-Physics, Inc. v. Coherent, Inc., 827 F.2d 1524, 1533 (Fed. Cir. 1987). One of the best ways to teach a person of ordinary skill in the art how to make and use the invention is to provide an example of how to practice the invention in a particular case. Much of the time, upon reading the specification in that context, it will become clear whether the patentee is setting out specific examples of the invention to accomplish

those goals, or whether the patentee instead intends for the claims and the embodiments in the specification to be strictly coextensive. See SciMed Life Sys., 242 F.3d at 1341. The manner in which the patentee uses a term within the specification and claims usually will make the distinction apparent. See Snow v. Lake Shore & M.S. Ry. Co., 121 U.S. 617, 630 (1887) (it was clear from the specification that there was “nothing in the context to indicate that the patentee contemplated any alternative” embodiment to the one presented).

In the end, there will still remain some cases in which it will be hard to determine whether a person of skill in the art would understand the embodiments to define the outer limits of the claim term or merely to be exemplary in nature. While that task may present difficulties in some cases, we nonetheless believe that attempting to resolve that problem in the context of the particular patent is likely to capture the scope of the actual invention more accurately than either strictly limiting the scope of the claims to the embodiments disclosed in the specification or divorcing the claim language from the specification. (限定するのではなく、正確に、という。)

In Vitronics, this court grappled with the same problem and set forth guidelines for reaching the correct claim construction and not imposing improper limitations on claims. 90 F.3d at 1582. The underlying goal of our decision in Vitronics was to increase the likelihood that a court will comprehend how a person of ordinary skill in the art would understand the claim terms. See id. at 1584. In that process, we recognized that there is no magic formula or catechism for conducting claim construction. Nor is the court barred from considering any particular sources or required to analyze sources in any specific sequence, as long as those sources are not used to contradict claim

meaning that is unambiguous in light of the intrinsic evidence. See id. at 1583-84; Intel Corp. v. VIA Techs., Inc., 319 F.3d 1357, 1367 (Fed. Cir. 2003). For example, a judge who encounters a claim term while reading a patent might consult a general purpose or specialized dictionary to begin to understand the meaning of the term, before reviewing the remainder of the patent to determine how the patentee has used the term. The sequence of steps used by the judge in consulting various sources is not important; what matters is for the court to attach the appropriate weight to be assigned to those sources in light of the statutes and policies that inform patent law. Vitronics, 90 F.3d at 1582. In Vitronics, we did not attempt to provide a rigid algorithm for claim construction, but simply attempted to explain why, in general, certain types of evidence are more valuable than others. Today, we adhere to that approach and reaffirm the approach to claim construction outlined in that case, in Markman, and in Innova. We now turn to the application of those principles to the case at bar.

IV

A

The critical language of claim 1 of the '798 patent—“further means disposed inside the shell for increasing its load bearing capacity comprising internal steel baffles extending inwardly from the steel shell walls”—imposes three clear requirements with respect to the baffles. First, the baffles must be made of steel. Second, they must be part of the load-bearing means for the wall section. Third, they must be pointed inward from the walls. Both parties, stipulating to a dictionary definition, also conceded that the term “baffles” refers to objects that check, impede, or obstruct the flow of something.

The intrinsic evidence confirms that a person of skill in the art would understand that the term “baffles,” as used in the '798 patent, would have that generic meaning.

The other claims of the '798 patent specify particular functions to be served by the baffles. For example, dependent claim 2 states that the baffles may be “oriented with the panel sections disposed at angles for deflecting projectiles such as bullets able to penetrate the steel plates.” The inclusion of such a specific limitation on the term “baffles” in claim 2 makes it likely that the patentee did not contemplate that the term “baffles” already contained that limitation. See Dow Chem. Co. v. United States, 226 F.3d 1334, 1341-42 (Fed. Cir. 2000) (concluding that an independent claim should be given broader scope than a dependent claim to avoid rendering the dependent claim redundant). Independent claim 17 further supports that proposition. It states that baffles are placed “projecting inwardly from the outer shell at angles tending to deflect projectiles that penetrate the outer shell.” That limitation would be unnecessary if persons of skill in the art understood that the baffles inherently served such a function. See TurboCare, 264 F.3d at 1123 (claim terms should not be read to contain a limitation “where another claim restricts the invention in exactly the [same] manner”). Dependent claim 6 provides an additional requirement for the baffles, stating that “the internal baffles of both outer panel sections overlap and interlock at angles providing deflector panels extending from one end of the module to the other.” If the baffles recited in claim 1 were inherently placed at specific angles, or interlocked to form an intermediate barrier, claim 6 would be redundant.

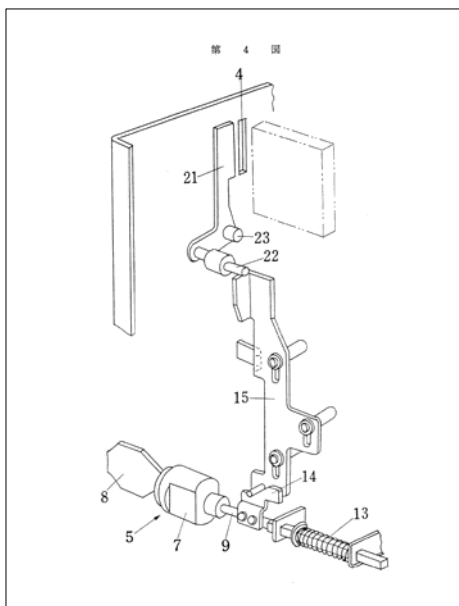
The specification further supports the conclusion that persons of ordinary skill in the art would understand the baffles recited in the '798 patent to be load-bearing objects

that serve to check, impede, or obstruct flow. At several points, the specification discusses positioning the baffles so as to deflect projectiles. See '798 patent, col. 2, ll. 13-15; id., col. 5, ll. 17-19. The patent states that one advantage of the invention over the prior art is that “[t]here have not been effective ways of dealing with these powerful impact weapons with inexpensive housing.” Id., col. 3, ll. 28-30. While that statement makes clear the invention envisions baffles that serve that function, it does not imply that in order to qualify as baffles within the meaning of the claims, the internal support structures must serve the projectile-deflecting function in all the embodiments of all the claims. The specification must teach and enable all the claims, and the section of the written description discussing the use of baffles to deflect projectiles serves that purpose for claims 2, 6, 17, and 23, which specifically claim baffles that deflect projectiles. See In re Wright, 999 F.2d 1557, 1561 (Fed. Cir. 1993).

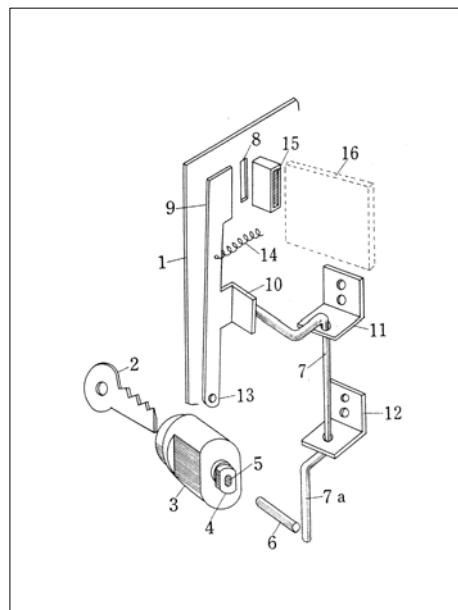
The specification discusses several other purposes served by the baffles. For example, the baffles are described as providing structural support. The patent states that one way to increase load-bearing capacity is to use “at least in part inwardly directed steel baffles 15, 16.” '798 patent, col. 4, ll. 14-15. The baffle 16 is described as a “strengthening triangular baffle.” Id., col. 4, line 37. Importantly, Figures 4 and 6 do not show the baffles as part of an “intermediate interlocking, but not solid, internal barrier.” In those figures, the baffle 16 simply provides structural support for one of the walls, as depicted below:

貸しロッカー事件(東京地判昭和52年7月22日)の関係図面

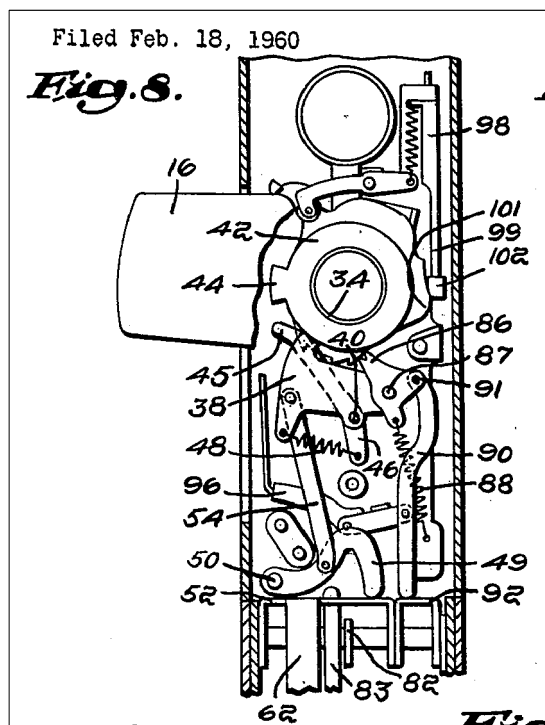
被告装置(判決書の図4)



原告の実用新案の図面(判決書の図5)



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[54] SONIC COLOR SYSTEM
 [76] Inventors: Jan R. Coyle, 514 E. Ghent Ave.;
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 Alegre, both of San Dimas, Calif.
 91773

2,875,271TM 2/1959 Moore et al. 178/5.2
 2,896,013 7/1959 Parker..... 178/5.4 R
 3,333,054 7/1967 Melchior et al. 178/5.4 S
 3,551,589 12/1970 Moskovitz..... 178/5.4

[22] Filed: May 23, 1969
 [21] Appl. No.: 827,248

Primary Examiner—Robert L. Richardson
 Assistant Examiner—John C. Martin

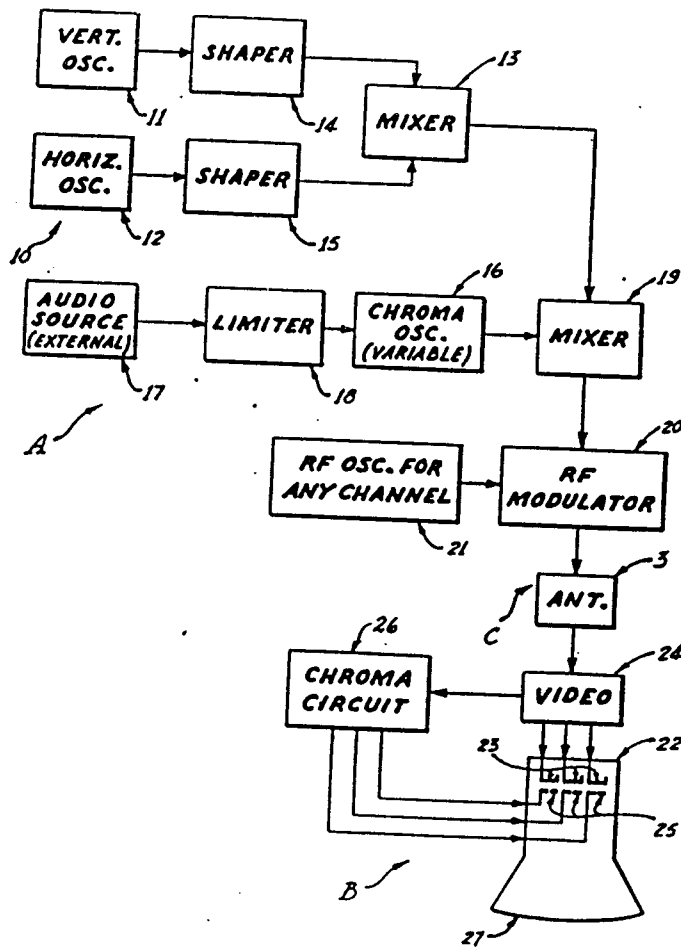
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[57] ABSTRACT

A sonic color system in which the electron guns of a cathode ray tube adapted to produce color images on the luminescent screen are controlled by a variable sonic input signal, and in which the sonic input signal varies an oscillator which is connected to the antenna terminals for the cathode ray tube circuitry.

[56] References Cited
 UNITED STATES PATENTS
 2,804,500 8/1957 Giacoletto 178/5.4

8 Claims, 2 Drawing Figures



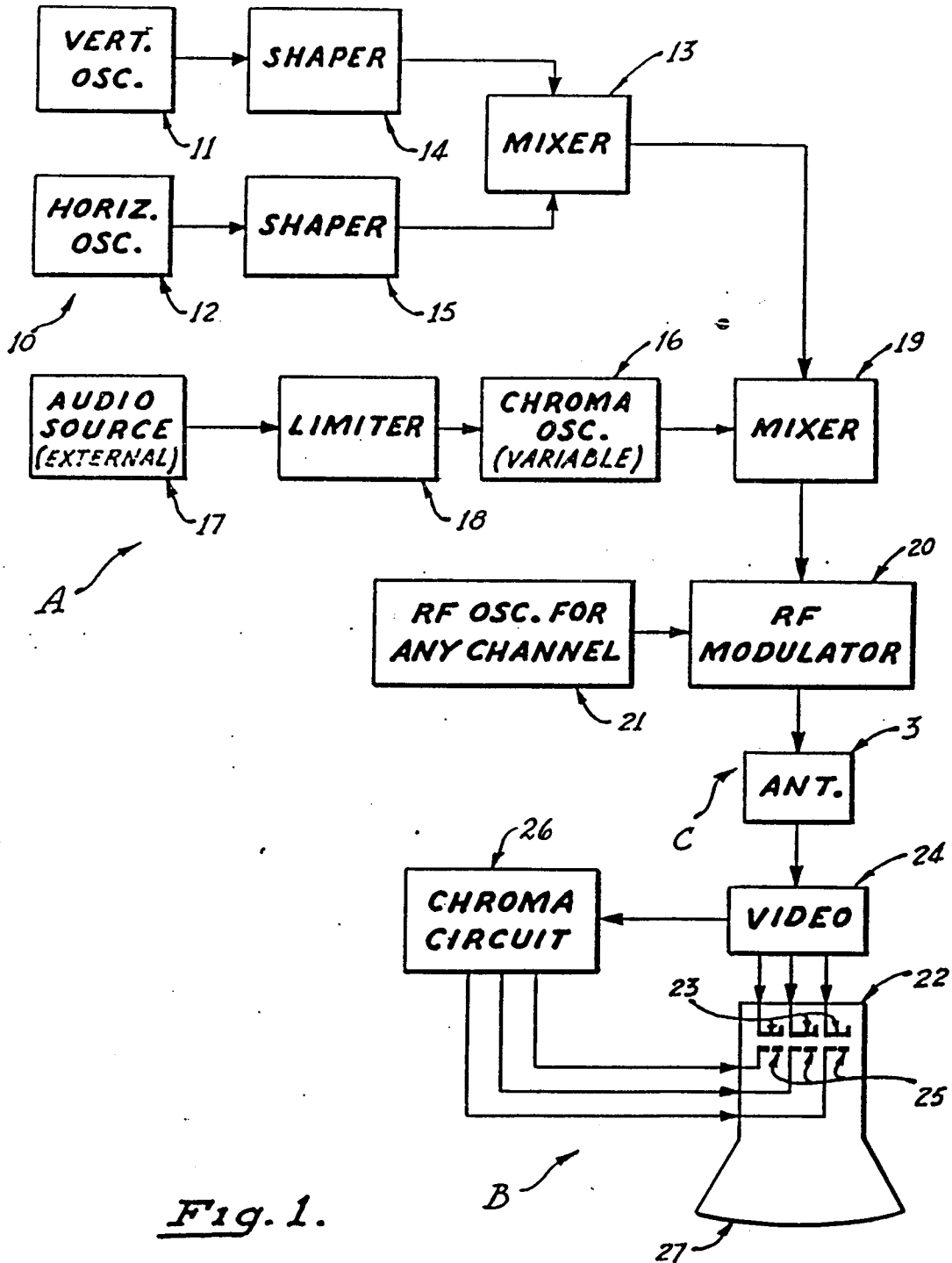


Fig. 1.

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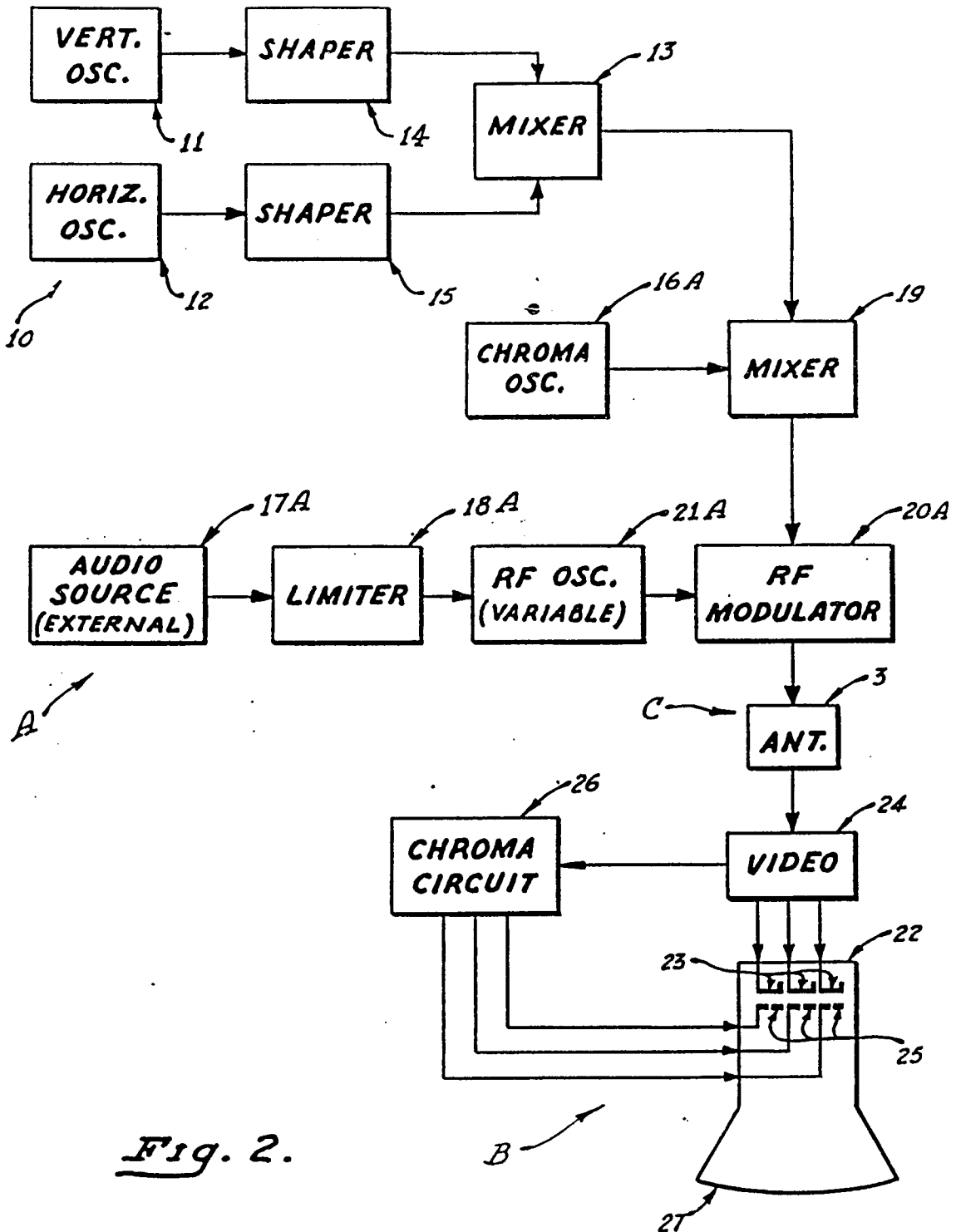


Fig. 2.

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SONIC COLOR SYSTEM

BACKGROUND OF THE INVENTION

It may be desirable for various purposes to control the electron guns of a cathode ray tube adapted to produce color images in response to a sonic or audio signal.

An example of the foregoing is the attachment of an audio responsive control device to the antenna of the usual color television set, such audio control device being also connectable to the audio output system or speaker leads of a record player, tape player or radio, and the audio control device so affecting the video circuitry of the television set that the electron guns will be caused to produce constantly varying colors of an indefinite pattern on the cathode ray tube screen, in response to variations of the sound produced by the record player or other audio source.

The provision of such means affords a tranquilizing effect and a pleasant atmosphere as the color show related only to the audio signal being played varies with the amplitude or frequency of the sound emitted from the record player. The present invention in this sense is particularly well suited to the amusement and entertainment of individuals or an audience who take pleasure from constantly changing colored lines or images.

Various other functions may be performed by the present invention where a sonic input signal is converted to a color of a particular hue and intensity depending upon the amplitude or the frequency of the input signal, such as the detection of unusual sounds in machinery indicative of potential problems, or the transmission of super sonic intelligence.

SUMMARY OF THE INVENTION

The present invention provides means for controlling the electron guns of a color type cathode ray tube having the usual video and color circuitry, wherein the grids of the electron guns are controlled by a variable oscillator which may be responsive to the sonic or audio output of a sonic or audio generator or record player or other audio source. The oscillator may be a variable chroma oscillator, or the oscillator may be a variable RF oscillator, the output of which is adapted to be mixed with the signal from a fixed frequency color oscillator.

More particularly, the invention contemplates the provision of a simple attachment for the standard color television set, the attachment being connectable to the usual antenna connections for the television set and also being connectable to the audio output circuit of a suitable audio source, such as a record or tape player, radio, or the like, whereby the television channel selector may be adjusted to a non-working television channel, and the audio output of the audio source will be converted to varying colors on the television screen depending upon the audio signal.

An object of the invention is to provide a television set with an attachment to produce a color show having relationship only to the output of an audio source, the attachment being connectable to the television antenna leads and to the audio source and being easy to manufacture and use.

This invention possesses many other advantages, and has other purposes which may be made more clearly apparent from a consideration of forms in which it may be embodied. These forms are shown in the drawings

accompanying and forming part of the present specification. They will now be described in detail, for the purpose of illustrating the general principles of the invention; but it is to be understood that such detailed descriptions are not to be taken in a limiting sense, since the scope of the invention is best defined by the appended claims.

BRIEF DESCRIPTION OF THE DRAWINGS

FIG. 1 is a schematic representation of one embodiment of the invention; and

FIG. 2 is a schematic representation of another embodiment of the invention.

DESCRIPTION OF THE PREFERRED EMBODIMENTS

Referring first to FIG. 1, the sonic color system, according to this invention, includes a sonic or audio control means A connected to a color producing means B, such as the cathode ray tube of a color television set. The color television set would normally include antenna connections C and the sonic color system A is adapted to be connected into the color television system by the simple expedient of connecting the sonic control system to these antenna connections C.

The sonic control means A includes synchronization control means generally denoted at 10, including a vertical control oscillator 11 and a horizontal control oscillator 12 connected to a mixer 13 which combines the signals from the vertical and horizontal oscillators. There may be interposed between the vertical control oscillator 11 and the mixer 13 a shaper 14 adapted to produce the desired wave form. A similar shaper 15 may be interposed between the horizontal control oscillator 12 and the mixer 13.

The sonic control system A also, in the present embodiment, includes a variable chroma oscillator 16 which is connected in circuit with an audio source 17. As the audio source 17 is of variable amplitude, a limiter 18 may be interposed between the chroma oscillator 16 and the audio source 17 to limit the amplitude from the signals of the audio source to the working range of the chroma oscillator 16.

An example of an audio source 17 would be the audio output of a record or tape player, or a radio, the signals from which are adapted to control the color pattern exhibited by the color producing means B. The chroma oscillator 16 is adapted to provide an output signal of variable amplitude and variable frequency which varies with the amplitude and frequency of the signal derived from the audio or sonic source 17.

The chroma oscillator 16 and the mixer 13 are connected to a mixer 19 where the synchronization control signals and the audio source control signals are mixed.

The output from the video and synchronization mixer 19 is connected to an RF modulator or mixer 20 which is also supplied with a RF carrier signal from a RF oscillator 21 which may be selected for any channel frequency, in the case of a television set, preferably a channel which is not in use by a broadcasting station, whereby to produce a carrier signal which is conducted to the television set by connection of the output from the RF modulator 20 to the antenna connections C.

The color producing means, generally illustrated in FIG. 1, is a usual cathode ray tube 22 having the usual electron guns therein including cathodes 23 connected with the usual video circuitry 24 and grids 25 con-

nected with the usual chroma circuitry 26, the chroma circuitry 26 being connected to and controlled by the video circuitry 24 as is customary.

In the operation of the embodiment described above, the chroma oscillator 16 under the influence of the sonic or audio source 17 is adapted to change the amplitude or frequency of the chroma signal, so that when it is compared to the internal chroma signal of the chroma circuitry 26, a change in the hue of the color produced by the electron guns on the cathode ray tube 22 will be observed. The hue obtained will depend upon the phase relationship of the two chroma signals at a given instant.

Referring to FIG. 2, a modified sonic or audio control system A is shown in combination with the color producing means B. In this embodiment there is illustrated synchronization control means 10 including the vertical synchronization oscillator 11 and the horizontal synchronization oscillator 12, together with shapers 14 and 15 connected to the mixer 13. Here, however, the chroma oscillator 16A is of a fixed frequency so as to obtain a solid color over the entire screen 27 of the cathode ray tube 22. In addition, the sonic or audio source 17A is connected through an amplitude limiter 18A to a variable RF oscillator 21A, the latter in turn being connected to the RF modulator or mixer 20A. The output from the modulator 20A, as in the previously described embodiment, is connected to the antenna terminal means C.

In this embodiment of FIG. 2, the variable RF oscillator will vary in response to changes in the amplitude of the sonic or audio signal to effect changes in the hue of the colors on the full screen as distinguished from the variation caused by the variable chroma oscillator 16 of the first-described embodiment, but in either case changes in the color burst frequency of all of the electron guns will be effected to produce a vertically spaced linear color change on the screen 27.

From the foregoing, it will be apparent that the sonic or audio control means A may be advantageously encapsulated in a small package connectable to the usual antenna connections of a color television set so that a pleasing effect may be produced on the color screen, the colors constantly changing in response to the changes in the audio output of the audio source which, as previously indicated may be a record or tape player or a radio, as examples.

On the other hand, it will be appreciated that the audio source may be any suitable audio source such as a microphone and amplifier whereby various audible signals may be employed to effect a variation in the color image on the screen 27 of the cathode ray tube 22.

In addition, it will be understood that the invention contemplates the application of various super sonic sig-

nals to the sonic control means A whereby to effect the desired color pattern changes in the color producing means B.

We claim:

1. In a sonic color system, the combination of color receiver means having a luminescent screen, electron guns for exciting said screen to produce color patterns on said screen, video circuit means and chroma circuit means connected to the cathodes and grids of said electron guns, antenna means for picking up signals and connected to said circuit means to control said electron guns, and sonic signal responsive means connected to said antenna means and including a chroma oscillator and a RF oscillator, one of said oscillators being variable to produce a variable phase signal depending on the sonic signal for controlling said circuit means to produce color patterns on said screen.

2. A system as defined in claim 1, wherein said sonic signal responsive means includes a variable chroma oscillator responsive to variations in amplitude of the sonic signal to variably control said electron guns.

3. A system as defined in claim 1, wherein said sonic signal responsive means include a variable RF oscillator responsive to variations in the frequency and amplitude of the sonic signal to variably control said electron guns.

4. A system as defined in claim 1, including means for limiting the amplitude response of said variable oscillator.

5. A system as defined in claim 1, wherein said sonic signal responsive means comprises synchronization control means, a video mixer in circuit with said synchronization control means and said sonic signal responsive means, said RF oscillator being variable and including a RF mixer in circuit with said video mixer and connected to said antenna means.

6. In a sonic color system, the combination of color pattern producing means having a luminescent screen, electron guns for exciting said screen, said guns having cathodes connected to sonic signal circuit means and grids connected to color circuit means to produce a color pattern on said screen dependent upon an input signal frequency, and sonic signal responsive means being connected to said guns via said sonic and color circuit means to provide a variable input signal and including a color oscillator and a RF oscillator, one of said oscillators being variable, and a sonic signal source connected to the variable oscillator to vary the phase of the input signal frequency.

7. In a sonic color system as defined in claim 6, said color oscillator being variable.

8. In a sonic color system as defined in claim 6, said RF oscillator being variable.

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