IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF NEBRASKA

ACTIVISION TV, INC., Plaintiff, v. PINNACLE BANCORP, INC., and JON BRUNING, Attorney General of Nebraska (in his official capacity); DAVID D. COOKSON, Chief Deputy Attorney General of Nebraska (in his official capacity); DAVID A. LOPEZ, Assistant Attorney General of Nebraska (in his official capacity), Defendants.	§ § § § § § § § § § § § § § § § §	Civil Action No. 8:13-cv-00215

FIRST AMENDED COMPLAINT

Plaintiff Activision TV, Inc., by way of this First Amended Complaint for Patent Infringement (Count I – Patent Infringement), Declaratory Judgment of No Violation of Nebraska State Law (Count II – DJ on State Claims), and Section 1983 Violations (Count III - § 1983 Claim) against, respectively, Defendants Pinnacle Bancorp, Inc., Jon Bruning, David D. Cookson, and David A. Lopez (collectively "Defendants"), hereby amends its Original Complaint filed in this suit with respect to Defendant Pinnacle, and realleges the allegations, claims and causes of action asserted in the Original Complaint, and additionally alleges as follows:

THE PARTIES

1. Plaintiff Activision is a corporation organized under the laws of Delaware with its principal place of business at 5400 Yahl Street, Suite D, Naples, Florida 34109.

2. Upon information and belief, Defendant Pinnacle is a corporation organized under the laws of Nebraska, with bank charters in Nebraska, Texas, Wyoming, and Colorado, and with a registered agent for service of process of Lynn Dinsdale Marchese, 702 B Avenue, Central City, Nebraska 68826.

3. Upon information and belief, Defendant Jon Bruning is the Attorney General for the State of Nebraska and in his official capacity has a place of business at 2115 State Capitol Building, Lincoln, NE 68509-8920, and may be served at that address.

4. Upon information and belief, Defendant David D. Cookson is the Chief Deputy Attorney General for the State of Nebraska and in his official capacity has a place of business at 2115 State Capitol Building, Lincoln, NE 68509-8920, and may be served at that address.

5. Upon information and belief, Defendant David A. Lopez is an Assistant Attorney General for the State of Nebraska and in his official capacity has a place of business at 2115 State Capitol Building, Lincoln, NE 68509-8920, and may be served at that address.

JURISDICTION AND VENUE

6. This is an action for patent infringement arising under the patent laws of the United States, 35 U.S.C. § 271, *et seq*.; an action under 28 U.S.C. § 2201, and the First, Fifth and Fourteenth Amendments to the U.S. Constitution, and Article VI, Clause 2 of the U.S. Constitution ("the Supremacy clause") for declaratory judgment that Plaintiff Activision, and its representatives and counsel, have not violated any Nebraska state laws related to unfair competition and deceptive trade practices; and an action for relief under 42 U.S.C. § 1983, and

the First, Fifth and Fourteenth Amendments to the U.S. Constitution, and the Supremacy clause seeking remedy for violations of Plaintiff Activision's constitutional rights and rights under federal law.

7. This Court has subject matter jurisdiction over this action under 28 U.S.C. §§ 1331, 1332, 1338(a), 1338(b), 1367; 28 U.S.C. § 2201; and 28 U.S.C. § 1367.

8. This Court has personal jurisdiction over Defendant Pinnacle at least because Defendant Pinnacle has ongoing and systematic contacts with this District and the United States, and has committed patent infringement in this District, and because it is a corporation organized in this District. Defendant Pinnacle has approximately thirty-two bank locations and numerous additional ATM locations in this District.

9. This Court has personal jurisdiction over Defendants Bruning, Cookson, and Lopez at least because, on information and belief, these Defendants respectively in their official capacity have ongoing and systematic contacts with this District, have and maintain offices in this District, and reside in this District, and have committed wrongful acts which both occurred within this District, and which have had an impact or effect in this District.

10. Venue is proper in this District under 28 U.S.C. §§ 1400(b), 1391(b), and 1391(c). Venue as to Defendant Pinnacle is proper on the basis of the allegations provided in Paragraph 8 above. Venue as to Defendants Bruning, Cookson, and Lopez is proper on the basis of the allegations provided in Paragraph 9 above.

AMENDMENT AS OF RIGHT

11. Plaintiff repeats and realleges the allegations of paragraphs 1 through 10 as though fully set forth herein.

12. On July 12, 2013, Plaintiff filed the original Complaint in this action against Defendant Pinnacle, asserting the same allegations, claims and causes of action as are relevant to Count I of this First Amended Complaint.

13. Defendant Pinnacle has not yet been served with the original Complaint, nor has it answered or otherwise submitted a responsive pleading in this suit.

14. Under FED. R. CIV. P. 15, Plaintiff files this First Amended Complaint as of right.

COUNT I

DEFENDANT PINNACLE'S INFRINGEMENT OF U.S. PATENT NOS. 7,369,058 and 8,330,613

15. Plaintiff repeats and realleges all of the preceding Paragraphs as though fully set forth herein.

16. On May 6, 2008, United States Patent No. 7,369,058 ("the '058 Patent) entitled "REMOTE CONTROL ELECTRONIC DISPLAY SYSTEM," was duly and legally issued by the United States Patent and Trademark Office. A true and correct copy of the '058 Patent is attached as Exhibit A to this Complaint.

17. On December 11, 2012, United States Patent No. 8,330,613 ("the '613 Patent," or, collectively with the '058 Patent, the "Activision Patents"), entitled "REMOTE CONTROL ELECTRONIC DISPLAY SYSTEM," was duly and legally issued by the United States Patent and Trademark Office. A true and correct copy of the '613 Patent is attached as Exhibit B to this Complaint.

18. Plaintiff Activision, as the assignee and owner of all right, title, and interest in and to the Activision Patents, has the right to assert causes of action arising under said patents and the right to any remedies for infringement thereof.

19. Defendant Pinnacle has been directly infringing and continues to directly infringe one or more claims of each of the Activision Patents in the United States at least by using digital signage systems with branded enclosures housing vertical 32'' LCD screens managed by Nanonation, Inc.'s CommandPoint management system software, in Defendant Pinnacle's locations throughout the United States, including within this judicial district, in violation of 35 U.S.C. § 271 (a). The infringing digital signage systems are deployed in at least 56 locations in Nebraska, Kansas, Missouri, and Texas and include several infringing systems deployed in Pinnacle locations within Hy Vee grocery stores.

20. Because of Defendant Pinnacle's infringement of the Activision Patents, Plaintiff has suffered damages and will continue to suffer damages in the future.

21. Plaintiff has suffered irreparable injury due to the acts of infringement by Defendant Pinnacle and will continue to suffer such irreparable injury unless Defendant Pinnacle's infringing activities are enjoined.

22. Defendant Pinnacle has had notice of its infringement of the '058 Patent since at least February 7, 2013, when counsel for Activision sent Defendant Pinnacle a notice letter by certified mail.

23. Upon information and belief, Defendant Pinnacle has continued to infringe despite its knowledge of the '058 Patent and Activision's notice of infringement.

COUNT II

DECLARATORY JUDGMENT OF NO VIOLATION OF NEBRASKA STATE LAW, INCLUDING BUT NOT LIMITED TO NEB. REV. STAT. § 59-1601 *et seq.* (Reissue 2010, Supp. 2012), AND NEB. REV. STAT. § 87-301 *et seq.* (Reissue 2008, Supp. 2010)

24. Plaintiff repeats and realleges the allegations of all of the preceding paragraphs as though fully set forth herein.

25. Plaintiff Activision is a company who makes, sells, installs, and manages remote digital signage systems.

26. The remote digital signage systems that are part of Plaintiff Activision's business are covered by at least some claims of patents owned by Plaintiff Activision.

27. Dave Gothard is the inventor of both the '058 Patent and the '163 Patent.

28. Dave Gothard is the founder of Plaintiff Activision, and at all times has been the president and a key part of the Activision business.

29. Plaintiff Activision prior to 2012 believed that a number of companies in the United States were infringing the Activision Patents.

30. To assist it in investigating this potential infringement, and to undertake any appropriate licensing or enforcement activities, Plaintiff Activision chose to seek experienced and recognized patent counsel.

31. In this regard, Plaintiff Activision initially retained the well-known law firm of Kirkland & Ellis LLP.

32. After being retained by Plaintiff Activision, Kirkland & Ellis LLP undertook licensing and enforcement activities, which included filing several infringement suits on behalf of Plaintiff Activision. All of these suits were resolved by the defendants taking a license to Activision's patents.

33. In early 2012, Plaintiff Activision chose to seek new counsel, but continued to prefer to retain recognized and experienced patent counsel.

34. In this regard, on or about June 2012, Plaintiff Activision retained Farney Daniels PC (then Farney Daniels LLP) to represent Plaintiff Activision in connection with its attempts to identify parties infringing patents owned by Plaintiff Activision, and to seek licenses from such

infringers, and, if necessary, to bring suit for infringement against infringers if licenses could not be agreed upon.

35. Farney Daniels PC is a law firm with headquarters in Georgetown, Texas ("the Farney Daniels firm"), with offices in San Mateo, California; Dallas, Texas; Minneapolis, Minnesota; and Wilmington, Delaware.

36. M. Brett Johnson is a shareholder in the Farney Daniels firm, and is the managing shareholder of the firm's Dallas office.

37. William Bryan Farney is a shareholder in the Farney Daniels firm, and is the managing shareholder of the firm, and is based in the Georgetown office.

38. The Farney Daniels firm specializes in patent litigation, licensing and counseling.

39. On or about June 2012, Plaintiff Activision retained the Farney Daniels firm to advise and represent Plaintiff Activision in connection with its licensing and enforcement of the Activision Patents.

40. On or about the dates set forth in the table below, Plaintiff Activision, using the Farney Daniels firm, sent letters regarding the Activision Patents to certain companies in Nebraska, as identified in the following table (the identified letters are attached to this Complaint as Exhibits, and are incorporated herein by reference):

Paragraph	Company	Letter Date	Exhibit No.
40a	Borsheim Jewelry Company, Inc.	2/7/13	C1
40b	CSG Systems, Inc.	2/7/13	C2
40c	CSG follow up letter	3/1/13	C3
40d	Marcus Theatres Corp. d/b/a Douglas Theatres	2/7/13	C4
40e	Nanonation, Inc.	8/1/12	C5
40f	Pinnacle Bancorp, Inc.	2/7/13	C6

41. In each of those letters, Plaintiff Activision identified to the recipient at least some of Activision's patents.

42. The Activision Patents, at the time the letters were sent, and now, are presumed valid under 35 U.S.C. § 282.

43. In each of those letters, Plaintiff Activision invited the recipient to take a license under the Activision Patents if the recipient concluded it was infringing those patents.

44. None of the companies who were recipients of the letters in Exhibits C1-C6 contacted Plaintiff Activision to deny infringement. Although Borsheim Jewelry Company, Inc., responded that it no longer used its system, it did not deny the system infringed when in use.

45. None of the companies who were recipients of the letters in Exhibits C1-C6 contacted Plaintiff to allege that the Activision Patents were invalid.

46. On or about June 3, 2013, Plaintiff Activision brought suit for infringement of the Activision Patents against CSG Systems, Inc. ("CSG"), in the U.S. District Court for the District of Delaware, and is represented by Richard Weinblatt of Stamoulis & Weinblatt LLC, who filed the suit (hereinafter referred to as "the CSG Delaware suit"). A copy of the Complaint for the CSG Delaware suit is attached hereto as Exhibit D, and incorporated herein by reference.

47. On information and belief, CSG is a Delaware corporation with a principal place of business in Nebraska.

48. On or about June 5, 2013, Plaintiff Activision brought suit for infringement of the Activision Patents against CenturyLink, Inc. d/b/a Century Link Communications ("CenturyLink"), in the U.S. District Court for the Eastern District of Texas, and is represented by Jennifer Parker Ainsworth of Wilson, Roberston & Cornelius, P.C., who filed the suit

(hereinafter referred to as "the CenturyLink Texas suit"). A copy of the Complaint for the CenturyLink Texas suit is attached hereto as Exhibit E, and incorporated herein by reference.

49. On information and belief, CenturyLink is a Louisiana Corporation with headquarters in Louisiana, with operations in at least Texas and Nebraska.

50. On or about July 12, 2013, Plaintiff Activision brought suit for infringement of the Activision Patents against Defendant Pinnacle in the U.S. District Court for the District of Nebraska, and is represented by John Passarelli of Kutak Rock, LLP, who filed the suit. That suit was embodied in the original Complaint in this case.

51. Plaintiff Activision intended, in each case, to move for the admission of William Bryan Farney and M. Brett Johnson of Farney Daniels PC *pro hac vice*, for the Farney Daniels firm to serve as lead counsel for Activision in the respective cases.

52. On information and belief, no U.S. District Court has ever denied a motion for admission *pro hac vice* with respect to William Bryan Farney.

53. On information and belief, no U.S. District Court has ever denied a motion for admission *pro hac vice* with respect to M. Brett Johnson.

54. On information and belief, the *pro hac vice* motions Plaintiff Activision intended to file with respect to Mr. Farney and Mr. Johnson, have now been, or are now being filed at or about a time contemporaneous with the filing of this First Amended Complaint.

55. On July 18, 2013, Defendants Bruning, Cookson and Lopez provided to the Farney Daniels firm a letter ("the Nebraska AG July 18 letter" – attached hereto as Exhibit F, and incorporated herein by reference).

56. The Nebraska AG July 18 letter alleged that the Farney Daniels firm had "issued demand letters upon several entities based in or with a substantial presence in the State of Nebraska alleging infringement of certain patents."

57. On information and belief, the "demand letters" referred to in the Nebraska AG July 18 letter included at least the letters sent by the Farney Daniels firm on behalf of Activision, attached hereto as Exhibit C1-C6, and further identified in Paragraph 40a-40f above.

58. The Nebraska AG July 18 letter alleged that certain of the entities on whose behalf the Farney Daniels firm sent "demand letters" were "non-practicing entities" with regard to their respective patents.

59. On information and belief, as of July 18, 2013, the Nebraska AG's position was that Plaintiff Activision was a "non-practicing entity" with regard to its patents.

60. On information and belief, on July 18, 2013, Defendant Bruning, or a person acting at his direction or under his authority, expressly told at least one reporter of the Omaha World-Herald that Plaintiff Activision was such a "non-practicing entity."

61. On information and belief, on July 18, 2013, Defendant Bruning, or a person acting at his direction or under his authority, expressly told at least one reporter of the Omaha World-Herald that Plaintiff Activision was a "patent troll."

62. On information and belief, prior to July 18, 2013, Defendant Bruning had one or more communications with at least one employee, officer, or shareholder of Defendant Pinnacle, in which Plaintiff Activision's attempts to license or enforce the Activision Patents with respect to Defendant Pinnacle was discussed.

63. On information and belief, prior to July 18, 2013, a person acting at the direction of Defendant Bruning, or under his authority, had one or more communications with at least one

employee, officer, or shareholder of Defendant Pinnacle, in which Plaintiff Activision's attempts to license or enforce the Activision Patents with respect to Defendant Pinnacle was discussed.

64. On information and belief, prior to July 18, 2013, Defendant Bruning, or a person acting at his direction or under his authority, had one or more communications with at least one employee, officer, or shareholder of Defendant Pinnacle in which Plaintiff Activision was referred to as a "patent troll."

65. On information and belief, as of July 18, 2013, Defendant Bruning believed the term "patent troll" to be an allegation that was disparaging.

66. On information and belief, on or prior to July 18, 2013, neither Defendants Bruning, Cookson, or Lopez, nor persons acting at their direction or under their control, had contacted Plaintiff Activision, or any owner or employee thereof, to determine whether Plaintiff Activision engaged in business practicing the Activision Patents.

67. On information and belief, on or prior to July 18, 2013, neither Defendants Bruning, Cookson, or Lopez, nor persons acting at their direction or under their control, had contacted the Farney Daniels firm to determine whether Plaintiff Activision engaged in business practicing the Activision Patents.

68. The Activision Patents were invented by Dave Gothard.

69. Plaintiff Activision was founded by Dave Gothard for the purpose of engaging in business practicing the Activision Patents.

70. Plaintiff Activision does engage in a business practicing the Activision Patents.

71. The Nebraska AG July 18 letter alleged that at least some of the "demand letters" that were alleged to have been sent by the Farney Daniels firm contained "infringement assertions [that] are unsubstantiated."

72. On information and belief, Defendants Bruning, Cookson, and/or Lopez intended the allegation in the preceding Paragraph to apply to at least some of the letters sent by the Farney Daniels firm on behalf of Activision.

73. On information and belief, as of July 18, 2013, neither Defendants Bruning, Cookson, or Lopez, nor any person acting at their direction or under their control, had identified any infringement assertion contained in a letter sent by the Farney Daniels firm on behalf of Activision that was unsubstantiated.

74. On information and belief, as of July 18, 2013, neither Defendants Bruning, Cookson, or Lopez, nor any person acting at their direction or under their control, had reviewed the products and services of the companies identified in Exhibits C1-C6 to determine whether they infringed, or did not infringe, patents owned by Activision.

75. On information and belief, as of July 18, 2013, neither Defendants Bruning, Cookson, or Lopez, nor any person acting at their direction or under their control, had obtained or reviewed the file histories of the Activision Patents to form an opinion as to the proper scope to be accorded any of the claims in the Activision Patents.

76. The Nebraska AG July 18 letter alleged that at least some of the "demand letters" that were alleged to have been sent by the Farney Daniels firm contained "false, misleading, or deceptive statements."

77. On information and belief, Defendants Bruning, Cookson, and/or Lopez intended the allegation referred to in the preceding Paragraph to apply to at least some of the letters sent by the Farney Daniels firm on behalf of Activision.

78. On information and belief, as of July 18, 2013, neither Defendants Bruning, Cookson, or Lopez, nor any person acting at their direction or under their control, had identified

any statement contained in a letter sent by the Farney Daniels firm on behalf of Activision that was false, misleading, or deceptive.

79. On information and belief, as of July 18, 2013, neither Defendants Bruning, Cookson, or Lopez, nor any person acting at their direction or under their control, had conducted any investigation, nor obtained information from which it could base a conclusion, that any statement made in the following portion of the letter written by the Farney Daniels firm on behalf of Plaintiff Activision to Defendant Pinnacle (*see* Exhibit C6) was unsubstantiated, false, misleading, or deceptive:

> We write on behalf of Activision TV, Inc. ("Activision"), based in Naples, Florida. Activision is a noted innovator in digital display systems and a leader in the digital advertising market. Activision's patented technology allows it to offer digital media delivery systems far superior to those of its competitors. Activision's founder, Mr. David Gothard, is an inventor and businessman long applauded and honored for his history of innovation and for his successful career. Mr. Gothard's ingenuity is the driving force behind the creation of systems and products for delivery of dynamic digital display solutions provided by Activision.

80. On information and belief, as of July 18, 2013, neither Defendants Bruning, Cookson, or Lopez, nor any person acting at their direction or under their control, had conducted any investigation, nor obtained information from which it could base a conclusion, that any statement made in the following portion of the letter written by the Farney Daniels firm on behalf of Plaintiff Activision to Defendant Pinnacle (*see* Exhibit C6) was unsubstantiated, false, misleading, or deceptive:

> We specifically write regarding the following patents, all entitled "Remote Control Electronic Display System," and collectively referred to herein as the "Activision Patents":
>
> - U.S. Patent No. 6,215,411
> - U.S. Patent No. 6,384,736

- U.S. Patent No. 7,369,058

81. On information and belief, as of July 18, 2013, neither Defendants Bruning, Cookson, or Lopez, nor any person acting at their direction or under their control, had conducted any investigation, nor obtained information from which it could base a conclusion, that any statement made in the following portion of the letter written by the Farney Daniels firm on behalf of Plaintiff Activision to Defendant Pinnacle (*see* Exhibit C6) was unsubstantiated, false, misleading, or deceptive:

> The Activision Patents listed above are the direct product of Mr. Gothard's life's work. As the inventor of the Activision Patents, he has invested a tremendous amount of time and money into the development of the technology covered by the Activision Patents. Activision is the owner, by assignment, of all right, title, and interest in the Activision Patents. The Activision Patents generally relate to various aspects of digital signage, including remote controlled electronic display systems. You can find and review each of the Activision Patents listed above at www.google.com/patents.

82. On information and belief, as of July 18, 2013, neither Defendants Bruning, Cookson, or Lopez, nor any person acting at their direction or under their control, had conducted any investigation, nor obtained information from which it could base a conclusion, that any statement made in the following portion of the letter written by the Farney Daniels firm on behalf of Plaintiff Activision to Defendant Pinnacle (*see* Exhibit C6) was unsubstantiated, false, misleading, or deceptive:

> We have identified your company as one that uses the patented technology, and we are contacting you to initiate discussions regarding your need for a license. In this letter, we explain what the Activision Patents cover, how your actions infringe those patents, and explain why a license is needed. We should note that we have written you with the understanding that you are the proper person to contact on behalf of Pinnacle Bank. If you are not the proper person to handle this matter on behalf of Pinnacle Bank, please provide this letter to the proper person, and notify us so that we may update our records and contact that individual directly in the future.

83. On information and belief, as of July 18, 2013, neither Defendants Bruning, Cookson, or Lopez, nor any person acting at their direction or under their control, had conducted any investigation, nor obtained information from which it could base a conclusion, that any statement made in the following portion of the letter written by the Farney Daniels firm on behalf of Plaintiff Activision to Defendant Pinnacle (*see* Exhibit C6) was unsubstantiated, false, misleading, or deceptive:

> As you may know, a patent's scope is defined by its claims, and you will see that each of the Activision Patents has different claims. While those differences matter and mean that each patent is distinct, the Activision Patents do, as a group, generally relate to the same technology field, and cover, as their titles suggest, remote control electronic display systems. Obviously each claim is separately drafted and you should consider the scope of each claim separately.

84. On information and belief, as of July 18, 2013, neither Defendants Bruning, Cookson, or Lopez, nor any person acting at their direction or under their control, had conducted any investigation, nor obtained information from which it could base a conclusion, that any statement made in the following portion of the letter written by the Farney Daniels firm on behalf of Plaintiff Activision to Defendant Pinnacle (*see* Exhibit C6) was unsubstantiated, false, misleading, or deceptive:

> Activision has learned that your organization uses remote control digital signage technology and/or related products. By engaging in any such activities, Pinnacle Bank infringes one or more of the claims of each of the Activision Patents. Specifically, that Pinnacle Bank uses in its day-to-day operations an electronic media display system. Activision therefore seeks to discuss an appropriate resolution of Pinnacle Bank's past and ongoing infringement of the Activision Patents. We trust that Pinnacle Bank will agree to conform its behavior to respect our client's patent rights by negotiating a license rather than knowingly violating federal law by continuing to reap the benefits of our client's hard-earned patented technology without license.

85. On information and belief, as of July 18, 2013, neither Defendants Bruning, Cookson, or Lopez, nor any person acting at their direction or under their control, had conducted any investigation, nor obtained information from which it could base a conclusion, that any statement made in the following portion of the letter written by the Farney Daniels firm on behalf of Plaintiff Activision to Defendant Pinnacle (*see* Exhibit C6) was unsubstantiated, false, misleading, or deceptive:

> Take notice that Activision has no interest in seeking a license from someone who does not infringe. If Pinnacle Bank does not utilize remote controlled digital signage as covered by the Activision Patents, then we will discuss with you how your position can be confirmed so that we may discontinue further unnecessary correspondence. In the more likely scenario that Pinnacle Bank does require a license, we are prepared to work with you to reach an agreement as to reasonable terms.

86. On information and belief, as of July 18, 2013, neither Defendants Bruning, Cookson, or Lopez, nor any person acting at their direction or under their control, had conducted any investigation, nor obtained information from which it could base a conclusion, that any statement made in the following portion of the letter written by the Farney Daniels firm on behalf of Plaintiff Activision to Defendant Pinnacle (*see* Exhibit C6) was unsubstantiated, false, misleading, or deceptive:

> We invite you to consult with a patent attorney regarding this matter. Patents are exclusive property rights granted by law, and there can be serious consequences for infringement. Infringers who continue to infringe in the face of an objectively high risk of infringement of a valid patent can be forced to pay treble (triple) the actual damages, as well as the patent owner's litigation costs, including all attorney's fees.

87. On information and belief, as of July 18, 2013, neither Defendants Bruning, Cookson, or Lopez, nor any person acting at their direction or under their control, had conducted any investigation, nor obtained information from which it could base a conclusion, that any

statement made in the following portion of the letter written by the Farney Daniels firm on behalf of Plaintiff Activision to Defendant Pinnacle (*see* Exhibit C6) was unsubstantiated, false, misleading, or deceptive:

> Please contact us within three weeks of the date of this letter, so that we may confer with you regarding an appropriate license arrangement. You may contact me directly at (512) 9489038 or rkiddie@farneydaniels.com. We look forward to hearing from you.

88. The Nebraska AG July 18 letter further demanded, under the authority provided to the Nebraska Attorney General under NEB. REV. STAT. § 87-303.03(1)(b), that the Farney Daniels firm "immediately cease and desist the initiation of any and all new patent infringement enforcement efforts within the State of Nebraska pending the outcome of this office's investigation."

89. On information and belief, Defendants Bruning, Cookson and/or Lopez, or persons acting at their direction or under their control, have informed at least some of the companies who were recipients of Plaintiff Activision's letters attached as Exhibits C1-C6 that the "cease and desist order" issued by the Nebraska AG (Exhibit F) applies to the Farney Daniels firm with respect to its representation of Plaintiff Activision, at least as against those companies.

90. Defendants Bruning, Cookson, and/or Lopez intend the "cease and desist order" contained within the Nebraska AG July 18 letter to prevent the Farney Daniels firm from representing Plaintiff Activision with respect to litigation or licensing of the Activision Patents with respect to at least some of the companies identified as recipients of Exhibits C1-C6.

91. The Nebraska AG July 18 letter accuses counsel for Activision of violating Nebraska state law, including but not limited to NEB. REV. STAT. §§ 59-1602, 87-302, and/or 87-303.01.

92. On information and belief, Defendants Bruning, Cookson, and/or Lopez intended the allegation in the preceding Paragraph to apply to at least some of the letters sent by the Farney Daniels firm on behalf of Activision.

93. A justiciable and immediate controversy exists as to whether Plaintiff Activision, or its representatives including the Farney Daniels firm, violated any Nebraska law in the sending of any letters into the State of Nebraska, or in filing, or participating in the preparation of filing of the original Complaint in this suit.

94. On information and belief, sending a letter containing statements such as those contained in the letter to Defendant Pinnacle attached hereto as Exhibit C6, does not constitute activities with respect to any "goods or services" as that term is used in NEB. REV. STAT. § 87-302.

95. On information and belief, sending a letter containing statements such as those attached hereto as Exhibit C6, does not constitute activities that would qualify as any conduct enumerated under subparts 1-19 of NEB. REV. STAT. § 59-1602.

96. On information and belief, statements made in the letters attached hereto as Exhibits C1-C6 would additionally be immune from any assertion of violation of NEB. REV. STAT. § 87-302, under the doctrine of litigation privilege.

97. On information and belief, statements made in the letters attached hereto as Exhibits C1-C6 would additionally be immune from any assertion of violation of NEB. REV. STAT. § 59-1602, under the doctrine of litigation privilege.

98. On information and belief, prior to July 18, 2013, neither Defendants Bruning, Cookson, or Lopez, nor any person acting at their direction or under their control, had conducted any investigation, nor obtained information from which it could base a conclusion that any

communication by the Farney Daniels firm on behalf of Plaintiff Activision into the State of Nebraska was "objectively baseless."

99. On information and belief, prior to July 18, 2013, neither Defendants Bruning, Cookson, or Lopez, nor any person acting at their direction or under their control, had conducted any investigation, nor obtained information from which it could base a conclusion that any communication by the Farney Daniels firm on behalf of Plaintiff Activision into the State of Nebraska was "subjectively baseless."

100. On information and belief, prior to July 18, 2013, neither Defendants Bruning, Cookson, or Lopez, nor any person acting at their direction or under their control, had contacted the Farney Daniels firm seeking any information to assess whether any communication by the Farney Daniels firm on behalf of Plaintiff Activision into the State of Nebraska was "objectively baseless."

101. On information and belief, prior to July 18, 2013, neither Defendants Bruning, Cookson, or Lopez, nor any person acting at their direction or under their control, had contacted the Farney Daniels firm seeking any information to assess whether any communication by the Farney Daniels firm on behalf of Plaintiff Activision into the State of Nebraska was "subjectively baseless."

102. On information and belief, prior to July 18, 2013, neither Defendants Bruning, Cookson, or Lopez, nor any person acting at their direction or under their control, had contacted Plaintiff Activision seeking any information to assess whether any communication by the Farney Daniels firm on behalf of Plaintiff Activision into the State of Nebraska was "objectively baseless."

103. On information and belief, prior to July 18, 2013, neither Defendants Bruning, Cookson, or Lopez, nor any person acting at their direction or under their control, had contacted Plaintiff Activision seeking any information to assess whether any communication by the Farney Daniels firm on behalf of Plaintiff Activision into the State of Nebraska was "subjectively baseless."

104. On information and belief, prior to July 18, 2013, neither Defendants Bruning, Cookson, or Lopez, nor any person acting at their direction or under their control, had contacted any person to determine the subjective understanding of Plaintiff Activision, or any owner or officer of Plaintiff Activision, regarding its patent rights as expressed in the communications forwarded into Nebraska on its behalf by the Farney Daniels firm.

105. On information and belief, prior to July 18, 2013, neither Defendants Bruning, Cookson, or Lopez, nor any person acting at their direction or under their control, had conducted any investigation, nor obtained information from which it could base a conclusion that the original Complaint in this case filed by Kutak Rock on behalf of Plaintiff Activision was "objectively baseless."

106. On information and belief, prior to July 18, 2013, neither Defendants Bruning, Cookson, or Lopez, nor any person acting at their direction or under their control, had conducted any investigation, nor obtained information from which it could base a conclusion that the original Complaint in this case filed by Kutak Rock on behalf of Plaintiff Activision was "subjectively baseless."

107. On information and belief, prior to July 18, 2013, neither Defendants Bruning, Cookson, or Lopez, nor any person acting at their direction or under their control, had contacted

the Kutak Rock law firm seeking any information to assess whether the original Complaint in this case filed by Kutak Rock on behalf of Plaintiff Activision was "objectively baseless."

108. On information and belief, prior to July 18, 2013, neither Defendants Bruning, Cookson, or Lopez, nor any person acting at their direction or under their control, had contacted the Kutak Rock law firm seeking any information to assess whether the original Complaint in this case filed by Kutak Rock on behalf of Plaintiff Activision was "subjectively baseless."

109. On information and belief, prior to July 18, 2013, neither Defendants Bruning, Cookson, or Lopez, nor any person acting at their direction or under their control, had contacted Plaintiff Activision seeking any information to assess whether the original Complaint in this case filed by Kutak Rock on behalf of Plaintiff Activision was "objectively baseless."

110. On information and belief, prior to July 18, 2013, neither Defendants Bruning, Cookson, or Lopez, nor any person acting at their direction or under their control, had contacted Plaintiff Activision seeking any information to assess whether the original Complaint in this case filed by Kutak Rock on behalf of Plaintiff Activision was "subjectively baseless."

111. On information and belief, prior to July 18, 2013, neither Defendants Bruning, Cookson, or Lopez, nor any person acting at their direction or under their control, had contacted any person to determine the subjective understanding of Plaintiff Activision, or any owner or officer of Plaintiff Activision, regarding the merits or bases of its original Complaint in this case.

112. On information and belief, neither Defendants Bruning, Cookson, or Lopez, nor any person acting at their direction or under their control, has any good faith basis to allege that federal law does not preempt any Nebraska state law as it may apply to the sending of the letters in Exhibits C1-C6, or the filing of the original Complaint, absent proof that such letters or such Complaint was objectively baseless, and also subjectively baseless.

113. On information and belief, neither Defendants Bruning, Cookson, or Lopez, nor any person acting at their direction or under their control, had any good faith basis to conclude that, given the federal law regarding personal jurisdiction with respect to the sending of letters such as those in Exhibits C1-C6, that Plaintiff Activision could be subject to personal jurisdiction in the State of Nebraska based upon the sending of the letters in Exhibits C1-C6.

114. On information and belief, neither Defendants Bruning, Cookson, or Lopez, nor any person acting at their direction or under their control, had any good faith basis to conclude that, given the federal law regarding personal jurisdiction with respect to the sending of letters such as those in Exhibits C1-C6, that the Farney Daniels firm could be subject to personal jurisdiction in the State of Nebraska on the basis of sending those letters on Activision's behalf.

115. On information and belief, on or before August 2, 2013, one or more of Defendants Bruning, Cookson, and Lopez informed CenturyLink that Defendants Bruning, Cookson, and Lopez's actions against the Farney Daniels Firm were such that they would impact the ability of Activision to serve CenturyLink with the complaint filed in the CenturyLink action.

116. The allegations and actions taken by Defendants Bruning, Cookson, and Lopez alleging that actions taken by or on behalf of Activision with respect to its assertion of its U.S. patent rights are in violation of Nebraska state laws has served to impair Activision's patent rights, including Activision's ability to exercise its lawful rights with respect to its U.S. patents, by impairing, among other things, the rights of Activision to:

(a) send letters to actual or potential infringers operating in the state of Nebraska without fear of suit by Defendants Bruning, Cookson, and Lopez;

(b) exercise its constitutional right to counsel of its choice in assisting Activision in enforcing its U.S. patent rights without fear of a violation of any Nebraska state law;

(c) send letters regarding patents to companies who may have Nebraska operations, but who are incorporated outside of Nebraska, and headquartered outside of Nebraska, using counsel of Activision's choice, without fear of being accused of violation of Nebraska state law;

(d) use counsel of Activision's choice in litigating patent infringement suits asserting Activision patents in courts outside of Nebraska against companies who may have Nebraska operations, without fear of being sued or found liable for violation of Nebraska state law; and/or

(e) enter into licensing discussions with parties infringing Activision's patent rights without having such parties discount the value of Activision's rights by virtue of allegations that the assertion of Activision's patent rights may be limited by alleged violations of Nebraska state law.

117. A justiciable and immediate controversy exists with respect to whether the sending of letters to companies in Nebraska by Activision's counsel, inclusive of the letter sent to Defendant Pinnacle, violates Nebraska state law.

118. A justiciable and immediate controversy exists as to whether the filing of Plaintiff Activision's original Complaint in this case, and its filing of this First Amended Complaint, violates Nebraska state law.

119. Neither the actions of Plaintiff Activision, or its counsel, in sending the letters identified in Exhibits C1-C6 violated any Nebraska state law.

120. The application of the Cease & Desist Order in Exhibit F to Farney Daniels to prevent the Firm from sending letters similar to those in Exhibit C, on behalf of Activision in the

future, comprises an unconstitutional "prior restraint" of Free Speech and violation of the First and Fourteenth Amendments to the U.S. Constitution.

121. Any application under Nebraska state law to sanction or preclude the sending by Plaintiff Activision, or its authorized representatives or counsel, letters such as those found in Exhibits C1-C6 would violate the rights of Plaintiff Activision under at least:

(a) the First Amendment to the U.S. Constitution;

(b) the Fifth Amendment to the U.S. Constitution;

(c) the Fourteenth Amendment to the U.S. Constitution;

(d) Title 35, U.S. Code; and

(e) Article VI, Clause 2 of the U.S. Constitution ("the Supremacy clause").

122. Neither the actions of Plaintiff Activision, or its counsel, in preparing, or in filing, the original Complaint in this case, or this First Amended Complaint, violated any Nebraska state law, and any assertion of the same violates the rights of Plaintiff Activision under at least:

(a) the First Amendment to the U.S. Constitution;

(b) the Fifth Amendment to the U.S. Constitution;

(c) the Fourteenth Amendment to the U.S. Constitution;

(d) Title 35, U.S. Code; and

(e) Article VI, Clause 2 of the U.S. Constitution ("the Supremacy clause").

COUNT III

VIOLATION BY DEFENDANTS BRUNING, COOKSON, AND LOPEZ OF PLAINTIFF ACTIVISION'S RIGHTS UNDER 42 U.S.C. § 1983, AND THE FIRST, FIFTH AND FOURTEENTH AMENDMENTS TO THE U.S. CONSTITUTION

123. Plaintiff repeats and realleges the allegations of all of the preceding paragraphs as though fully set forth herein.

124. Plaintiff Activision consistently prefers to be represented by recognized and experienced patent counsel. Plaintiff Activision, upon investigation, reasonably believed, and still believes, that Farney Daniels PC is such counsel.

125. During the approximate year in which Farney Daniels has been representing Plaintiff Activision, Plaintiff has been able to identify and to seek licenses from a number of companies who are infringing Plaintiff's patents.

126. Plaintiff Activision considers the litigation and licensing experience provided by Farney Daniels to be a key component of its ability to properly and successfully identify infringers, reach licensing agreements with those infringers, and bring suit if necessary and appropriate with respect to infringers who will not agree to a license.

127. As part of the representation by Farney Daniels of Plaintiff Activision, Plaintiff authorized Farney Daniels to send the letters identified in Exhibit C. On information and belief, Plaintiff Activision believes and asserts that Farney Daniels has knowledge and experience with respect to the infringement issues related to the parties to whom letters were sent as identified in Exhibit C.

128. As part of the representation by Farney Daniels of Plaintiff Activision, Plaintiff authorized Farney Daniels to investigate and prepare for litigation asserting patent infringement against Defendant Pinnacle, as well as CSG and CenturyLink in connection with the above-identified suits.

129. On information and belief, Plaintiff Activision believes and asserts that Farney Daniels has knowledge and experience with respect to the infringement issues and related issues in each of those suits such that it would be of detriment to Plaintiff Activision to not have Farney

Daniels admitted *pro hac vice*, as is customary, to serve as lead counsel in these cases, including the present case.

130. In the July 18 Nebraska AG Letter, Defendants Bruning, Cookson, and Lopez communicated in part a Cease & Desist Order to Farney Daniels, ordering the Firm to "immediately cease and desist the initiation of any and all new patent infringement enforcement efforts within the State of Nebraska pending the outcome of this office's investigation pursuant to § 87-303.03(1)(b)."

131. NEB. REV. STAT. § 87-303.03(1)(b) provides: "The Attorney General, in addition to other powers conferred upon him or her by the Uniform Deceptive Trade Practices Act: … (b) [m]ay issue a cease and desist order, with or without prior hearing, against any person engaged in activities in violation of the act, directing such person to cease and desist from such activity."

132. On information and belief, Defendants Bruning, Cookson, and Lopez intend the Cease & Desist Order to apply to prevent Farney Daniels from representing Plaintiff Activision in the suits previously filed against CenturyLink and CSG, as well as in this suit, including with respect to Count I for patent infringement asserted against Defendant Pinnacle.

133. On information and belief, at least one of Defendants Bruning, Cookson, and Lopez, or parties authorized by them, have communicated at least to CenturyLink that they consider their Cease & Desist Order to have at least the scope and effect as set forth in the preceding Paragraph.

134. On information and belief, Defendants Bruning, Cookson, and/or Lopez prior to July 18, 2013, had not learned of any facts to support a position that Plaintiff Activision's choice of Farney Daniels was not reasonable, at least because:

(a) the senior attorneys at Farney Daniels possess substantial experience in both patent litigation and licensing;

(b) that at least some of the attorneys at the Firm have technical backgrounds relevant to the Activision Patents;

(c) at least some of the attorneys at the Firm have experience in dealing with technical experts who may be relevant to this case, as well as the suits against CenturyLink and CSG; and

(d) because the national recognition of individual attorneys at Farney Daniels, and of the Firm collectively, enhances Plaintiff Activision's ability to maximize the effectiveness and efficiency of the legal representation that it requires in its enforcement effort with respect to the Activision Patents, and justifies its strong preference to be represented by Farney Daniels as lead counsel in the present case.

135. On information and belief, absent the actions taken by Defendants Bruning, Cookson, and Lopez as reflected in the July 18 Nebraska AG Letter, the admission to this Court by lawyers at Farney Daniels to serve as lead counsel in this present suit would be customarily granted.

136. On information and belief, it is the position of Defendants Bruning, Cookson, and Lopez that the Cease & Desist Order issued by them precludes any attorney at Farney Daniels from representing Activision in the present case (assuming they were admitted by this Court *pro hac vice*).

137. On information and belief, it is the position of Defendants Bruning, Cookson, and Lopez that the Cease & Desist Order issued by them precludes any attorney at Farney Daniels from representing Activision in the CenturyLink and CSG cases, and any other cases involving

companies who have at least some operations in Nebraska, assuming that attorneys at that Firm otherwise obtained permission for such representation in the relevant Court *pro hac vice*.

138. On information and belief, it is the position of Defendants Bruning, Cookson, and Lopez that the Cease & Desist Order issued by them precludes any attorney at Farney Daniels from representing Activision by sending letters either asserting patent infringement, or inquiring as to potential patent infringement, to any company incorporated in or headquartered in Nebraska who may be infringing Plaintiff Activision's patents.

139. On information and belief, it is the position of Defendants Bruning, Cookson, and Lopez that the Cease & Desist Order issued by them precludes any attorney at Farney Daniels from representing Activision by sending letters either asserting patent infringement, or inquiring as to potential patent infringement, to any company who may be infringing Plaintiff Activision's patents who may in part be conducting such infringing activities in Nebraska, whether or not the letter to be sent to such company is sent into Nebraska or elsewhere.

140. On information and belief, Plaintiff Activision has a right to retain counsel to have that counsel send letters on Activision's behalf notifying a party reasonably believed to be infringing a patent owned by Activision of that potential infringement, and to inquire as to the same. Such right is protected by at least the First, Fifth, Fourteenth Amendments to the U.S. Constitution.

141. On information and belief, Activision's rights to send letters such as those identified in Exhibit C, or to bring suit as represented by the original Complaint in this case, cannot be impeded or impaired by any state law in Nebraska by virtue of the Supremacy Clause, and the Preemption Doctrine, absent allegation and proof that the actions of Activision or its counsel were both objectively baseless and subjectively baseless.

142. On information and belief, Defendants Bruning, Cookson, and Lopez conducted no investigation and had no reasonable basis to believe or assert that any statements contained in the letters in Exhibit C, or the suits represented by Exhibits D or E, or this suit, contain any statements related to the Asserted Patents or their infringement that was objectively baseless.

143. On information and belief, Defendants Bruning, Cookson, and Lopez conducted no investigation and had no reasonable basis to believe or assert that any statements contained in the letters in Exhibit C, or the suits represented by Exhibits D or E, or this suit, contain any statements related to the Asserted Patents or their infringement that was subjectively baseless.

144. On information and belief, the Cease & Desist Order issued by Defendants Bruning, Cookson, and Lopez deprived Plaintiff Activision of its choice of counsel to send letters regarding the Activision Patents notifying identified infringers in Nebraska of their infringement, or inquiring of potential infringers identified in Nebraska of their potential infringement.

145. On information and belief, the Cease & Desist Order issued by Defendants Bruning, Cookson, and Lopez was without basis in law.

146. On information and belief, the Cease & Desist Order issued by Defendants Bruning, Cookson, and Lopez was issued without a hearing.

147. On information and belief, the regulation of the practice of law is reserved to the Nebraska Supreme Court.

148. On information and belief, Defendants Bruning, Cookson and/or Lopez, or persons acting at their direction or under their control, do not have the authority to regulate law firm conduct or regulate the practice of law within the state of Nebraska.

149. On and information and belief, the practice of law in this Court, and the admission to practice *pro hac vice* before this Court, are governed by the rules and decisions of this Court.

150. On and information and belief, Defendants Bruning, Cookson, and/or Lopez, or persons acting at their direction or under their control, do not have authority to direct or regulate the practice of law before this Court, or to determine which attorneys are permitted to practice before this Court.

151. On information and belief, the Cease & Desist Order issued by Defendants Bruning, Cookson, and Lopez, deprived and continues to deprive Plaintiff Activision of its right to choice of counsel in violation of at least:

(a) the First Amendment to the U.S. Constitution;

(b) the Fifth Amendment to the U.S. Constitution;

(c) the Fourteenth Amendment to the U.S. Constitution;

(d) Title 35, U.S. Code; and

(e) Article VI, Clause 2 of the U.S. Constitution ("the Supremacy clause").

PRAYER FOR RELIEF

WHEREFORE, Plaintiff respectfully demands judgment for itself and against Defendants as follows:

PRAYER FOR RELIEF – COUNT I

A. An adjudication that Defendant has infringed the Activision Patents;

B. Permanently enjoining and restraining Defendant, its agents, affiliates, subsidiaries, servants, employees, officers, directors, attorneys, and those persons in active concert with or controlled by Defendant from further infringing the Activision patents;

C. An award of damages to be paid by Defendant adequate to compensate Plaintiff for its past infringement of the Activision Patents and any continuing or future infringement of the Activision Patents through the date such judgment is entered, together with pre-judgment and post-judgment interest, costs and expenses as justified under 35 U.S.C. § 284;

D. To the extent that Defendant's conduct with respect to the Activision Patents is found to be willful, enhanced damages pursuant to 35 U.S.C. § 284 for such willful infringement of the Activision Patents.

E. An accounting of all infringing acts including, but not limited to, those acts not presented at trial and an award for Plaintiff's damages for any such acts;

F. A declaration that this case is exceptional under 35 U.S.C. § 285, and an award of Plaintiff's reasonable attorneys' fees; and

G. Such other and further relief at law or in equity as the Court deems just and proper.

PRAYER FOR RELIEF – COUNT II

H. A declaration that neither Plaintiff Activision, nor counsel acting on its behalf, have violated Nebraska Consumer Protection Act, NEB. REV. STAT. § 59-1601 *et seq*. (Reissue 2010, Supp. 2012).

I. A declaration that neither Plaintiff Activision, nor counsel acting on its behalf, have violated The Uniform Deceptive Trade Practices Act, NEB. REV. STAT. § 87-301 *et seq*. (Reissue 2008, Supp. 2010).

J. Such preliminary and permanent injunctive relief as Plaintiff may show itself to be entitled.

K. Such other and further relief at law or in equity as the Court deems just and proper.

PRAYER FOR RELIEF – COUNT III

L. An order enjoining Defendants Bruning, Cookson, and Lopez, and any of their authorized agents or representatives from enforcing the Cease & Desist Order provided in the July 18 Nebraska AG Letter with respect to Farney Daniels PC, or specific attorneys in that Firm, or otherwise admitted by this Court to represent Activision in this case.

M. An order enjoining Defendants Bruning, Cookson, and Lopez, and any of their authorized agents or representatives from enforcing the Cease & Desist Order provided in the July 18 Nebraska AG Letter with respect to Farney Daniels PC, or specific attorneys in that Firm, from representing Activision in the sending of letters related to Activision Patents to parties in the State of Nebraska, or to companies outside the State of Nebraska who may also have operations in Nebraska.

N. Such preliminary and permanent injunctive relief as Plaintiff may show itself to be entitled.

O. Such other and further relief at law or in equity as the Court deems just and proper.

JURY DEMAND

Pursuant to Rule 38 of the Federal Rules of Civil Procedure, Plaintiff demands a trial by jury on all issues triable as such.

PLACE OF TRIAL

Pursuant to NE Civ. R. 40.1(b), Plaintiff hereby requests that trial of this case take place in Omaha, Nebraska.

August 19, 2013

ACTIVISION TV, INC., Plaintiff

By: /s/ John P. Passarelli

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Edward Warin #14396
Sean P. Connolly #23614
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Omaha, Nebraska 68124-2342
(402) 392-1500

EXHIBIT A

US007369058B2

(12) United States Patent
Gothard

(10) Patent No.: US 7,369,058 B2
(45) Date of Patent: May 6, 2008

(54) **REMOTE CONTROL ELECTRONIC DISPLAY SYSTEM**

(76) Inventor: **Dave Gothard**, 3985 E. Patrick La., Las Vegas, NV (US) 89120

(*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 0 days.

(21) Appl. No.: **10/874,102**

(22) Filed: **Jun. 21, 2004**

(65) **Prior Publication Data**

US 2004/0227640 A1 Nov. 18, 2004

Related U.S. Application Data

(63) Continuation of application No. 10/010,556, filed on Nov. 8, 2001, now abandoned, which is a continuation-in-part of application No. 09/500,284, filed on Feb. 8, 2000, now Pat. No. 6,215,411, which is a continuation of application No. 09/295,894, filed on Apr. 21, 1999, now Pat. No. 6,384,736, which is a continuation-in-part of application No. 09/132,456, filed on Aug. 11, 1998, now abandoned.

(60) Provisional application No. 60/083,597, filed on Apr. 30, 1998.

(51) **Int. Cl.**
G08B 5/00 (2006.01)
G08B 5/36 (2006.01)
G08B 23/00 (2006.01)

(52) **U.S. Cl.** **340/815.4**; 340/815.47; 340/815.49; 340/815.6; 340/693.5

(58) **Field of Classification Search** 340/815.4, 340/815.47, 815.49, 693.5
See application file for complete search history.

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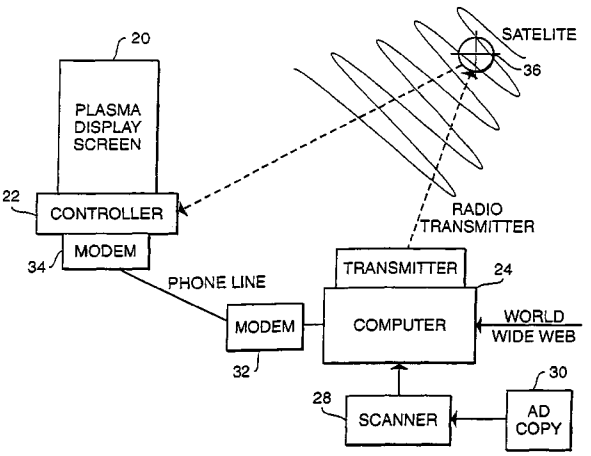
Primary Examiner—Julie Bichngoc Lieu
(74) *Attorney, Agent, or Firm*—Robert J. Schaap

(57) **ABSTRACT**

A remotely controlled electronic display sign which operates with a plasma display and which provides for humidity and heat control and the like allowing the sign to be used in various environments. The sign is essentially self-contained and includes those components necessary for enabling a display of desired material from a remote control source or one located at the sign. A controller in or associated with the sign is accessible either electrically, or through satellite transmission or other wireless transmission from the remote source which allows the display of the sign to be changed at will. Thus, an operator at a remote source may, with the aid of a pre-prepared graphic design, transmit that design to the controller at or associated with the sign for display of that graphic information and potentially with sound.

25 Claims, 7 Drawing Sheets



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EP	1244303	A2	9/2002
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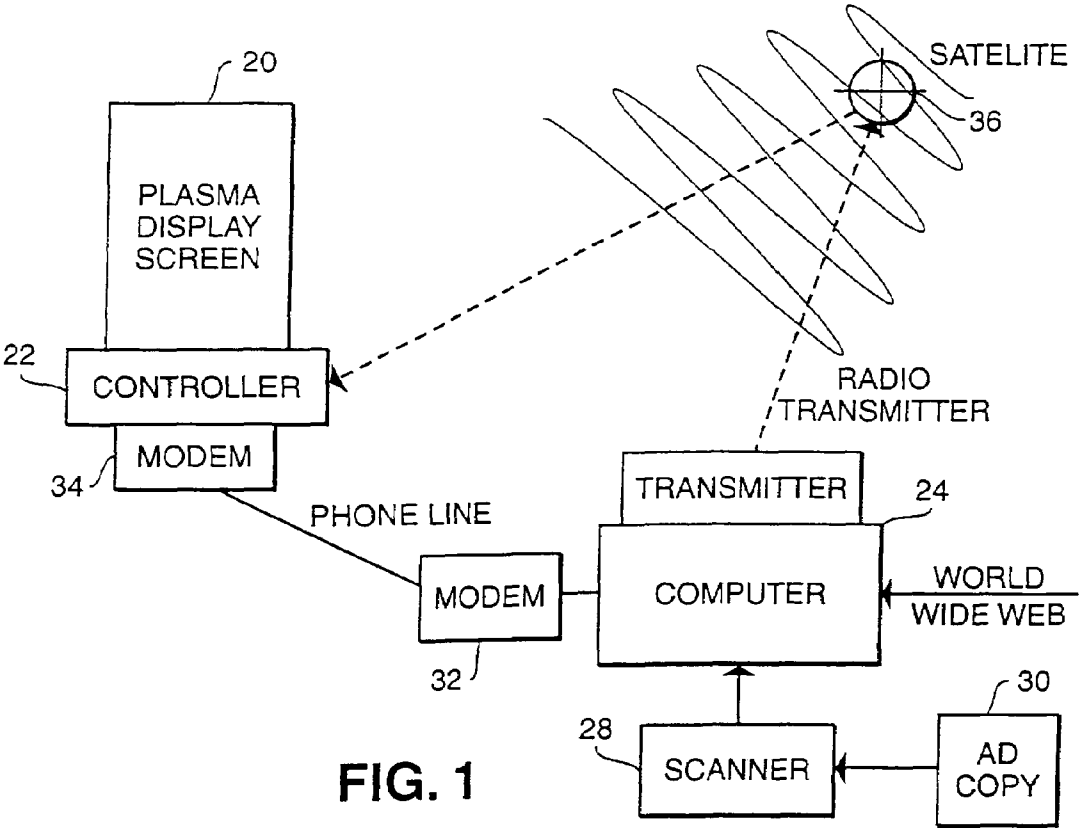
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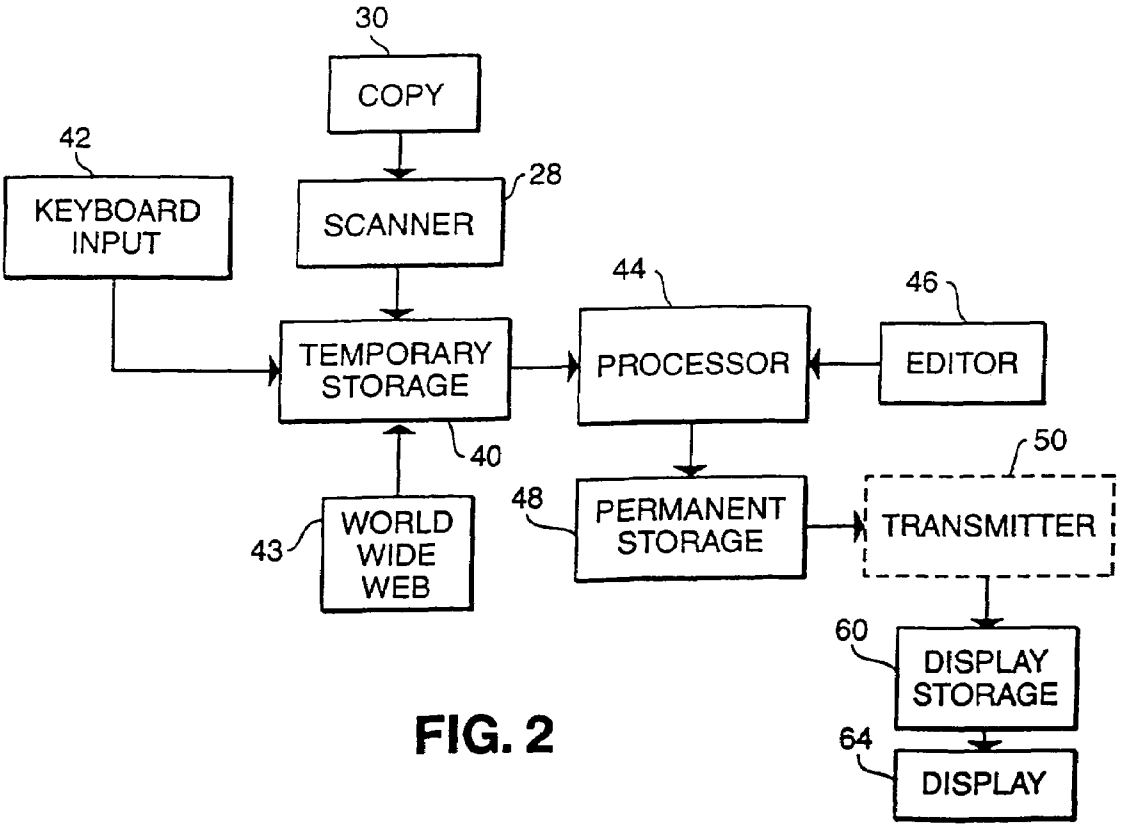
FIG. 1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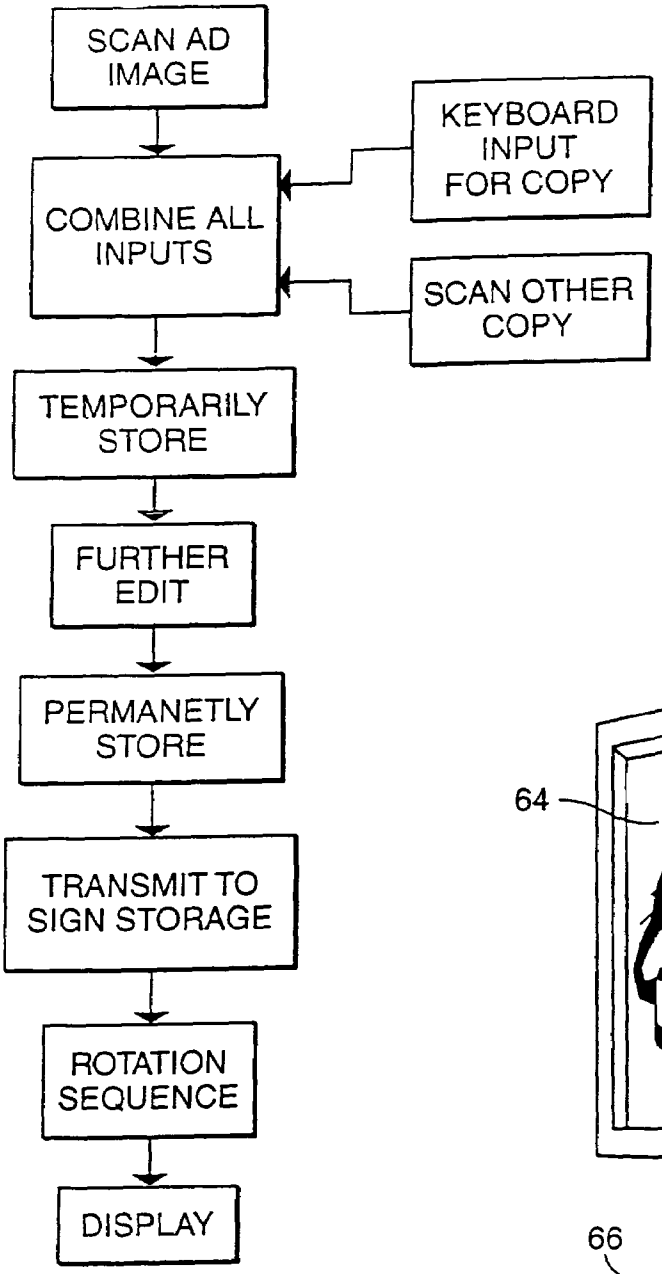
DISPLAY

FIG. 2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PERMANETLY STORE
TRANSMIT TO SIGN STORAGE
ROTATION SEQUENCE
DISPLAY

FIG. 3

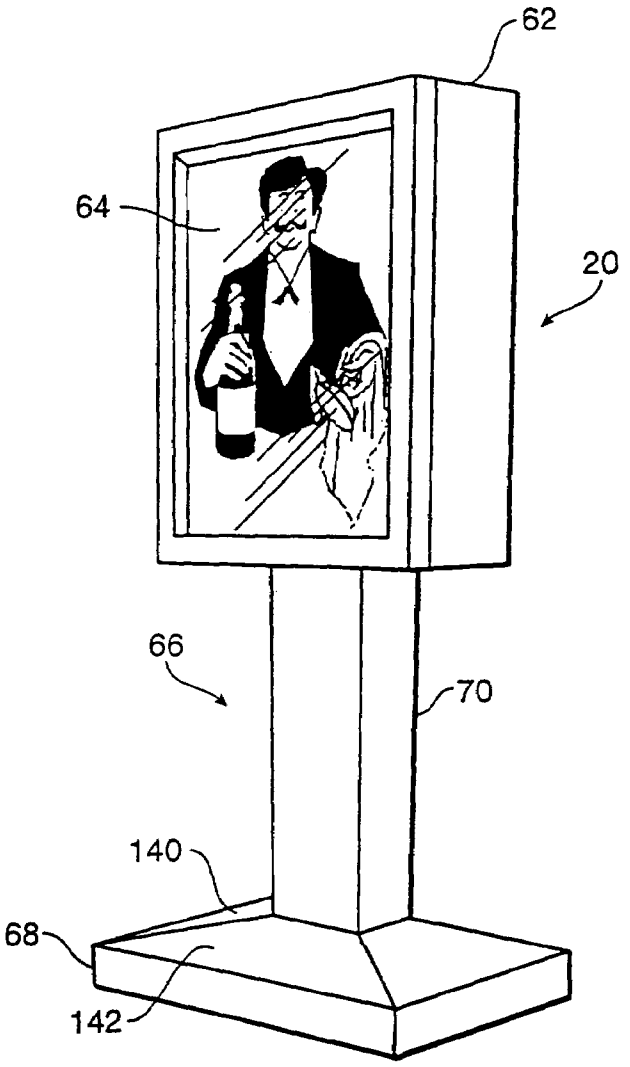
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FIG. 12

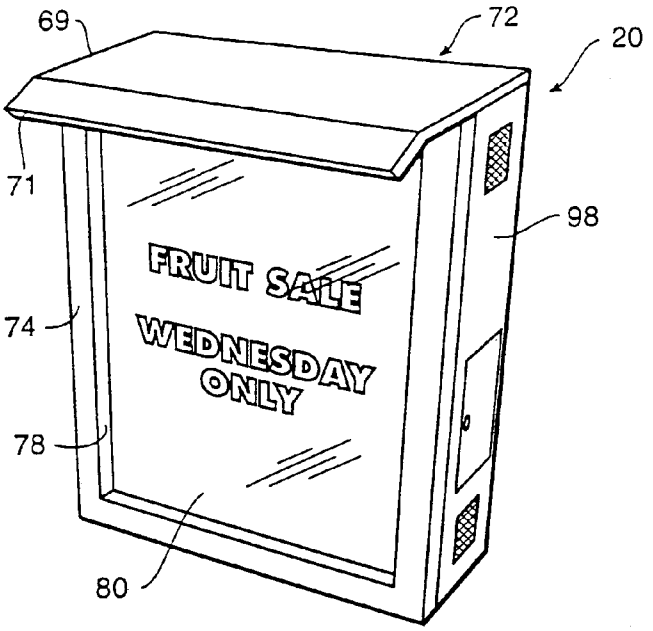


FIG. 4

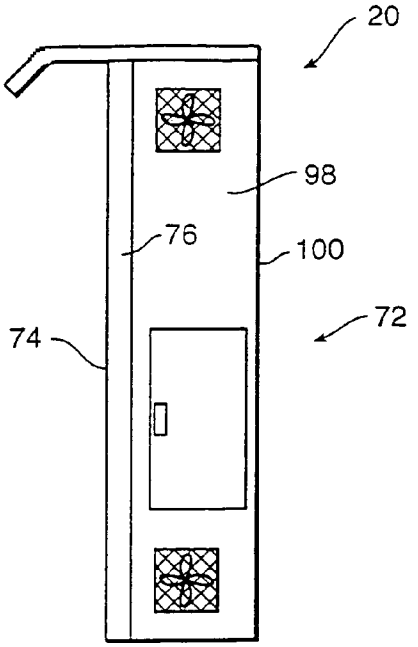


FIG. 5

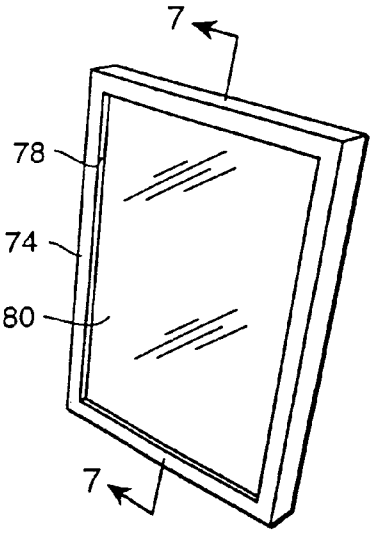


FIG. 6

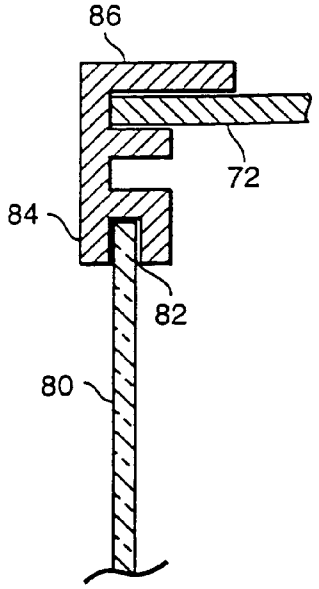


FIG. 7

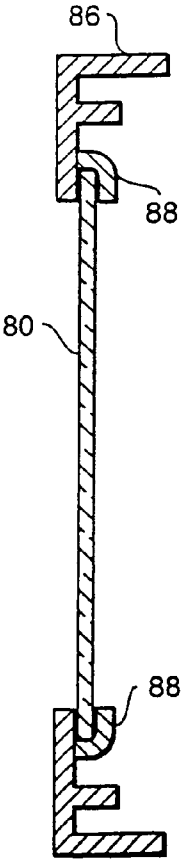


FIG. 8

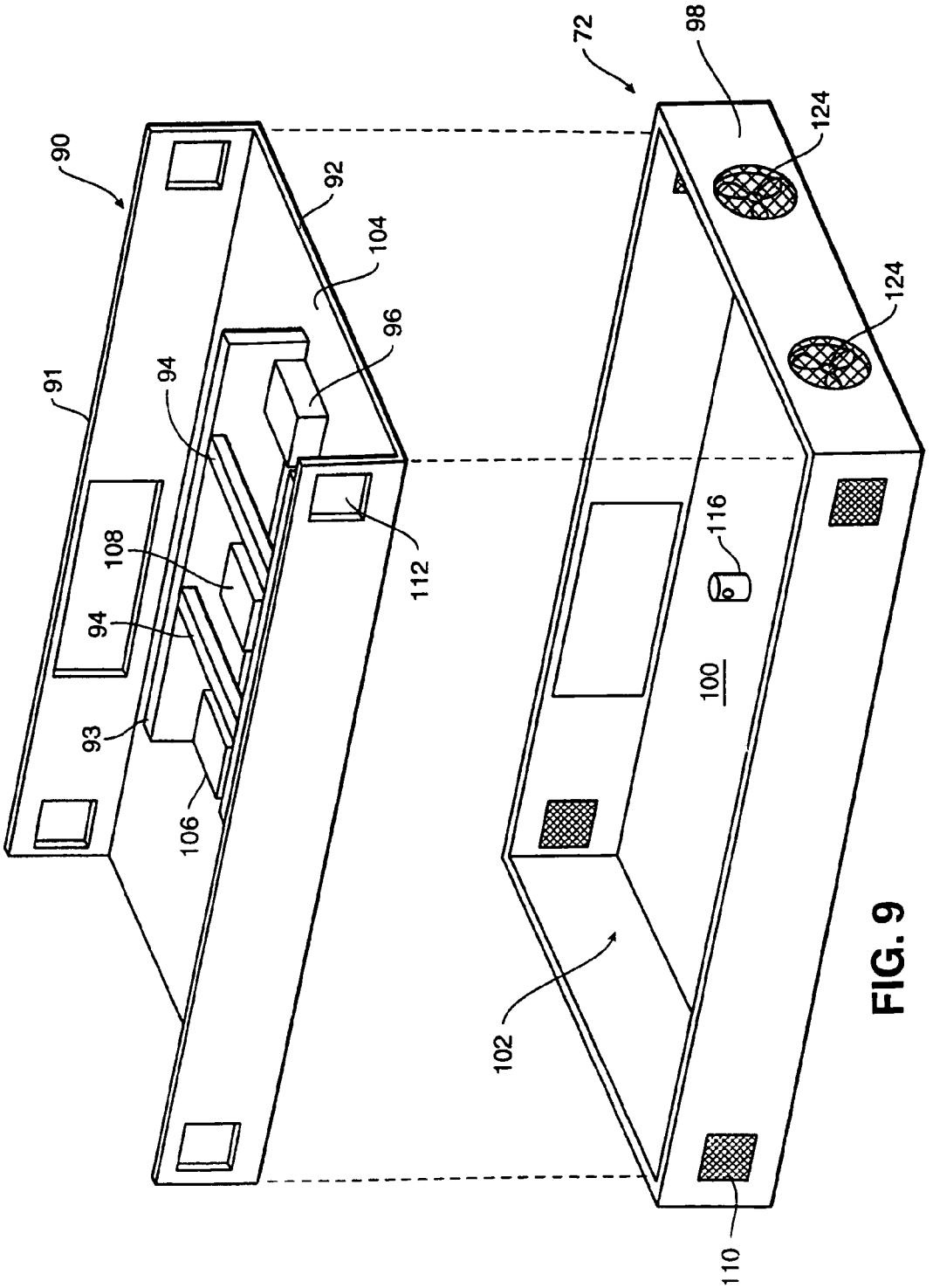


FIG. 9

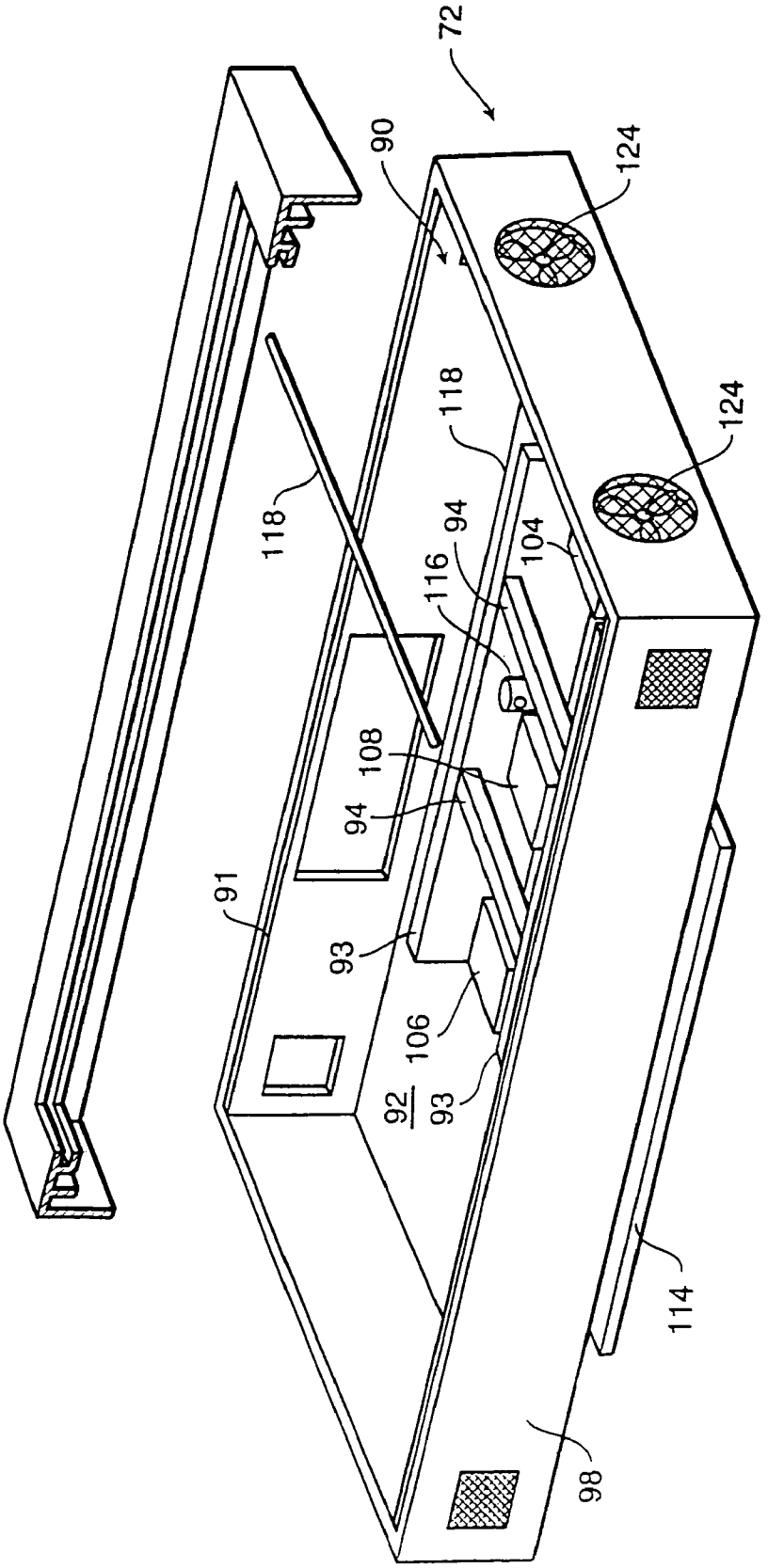


FIG. 10

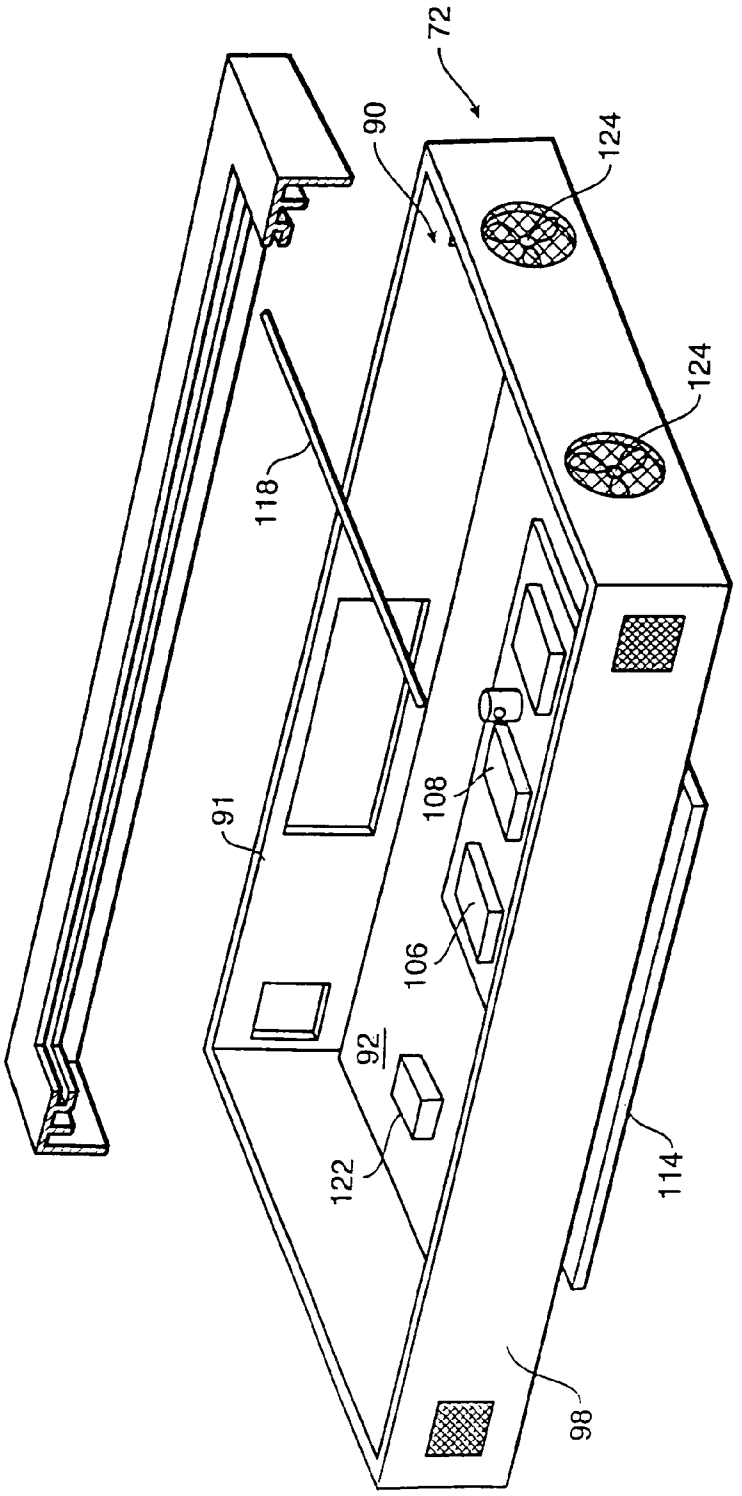


FIG. 11

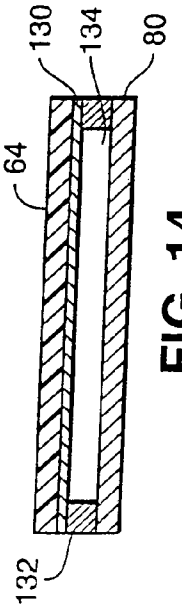


FIG. 14

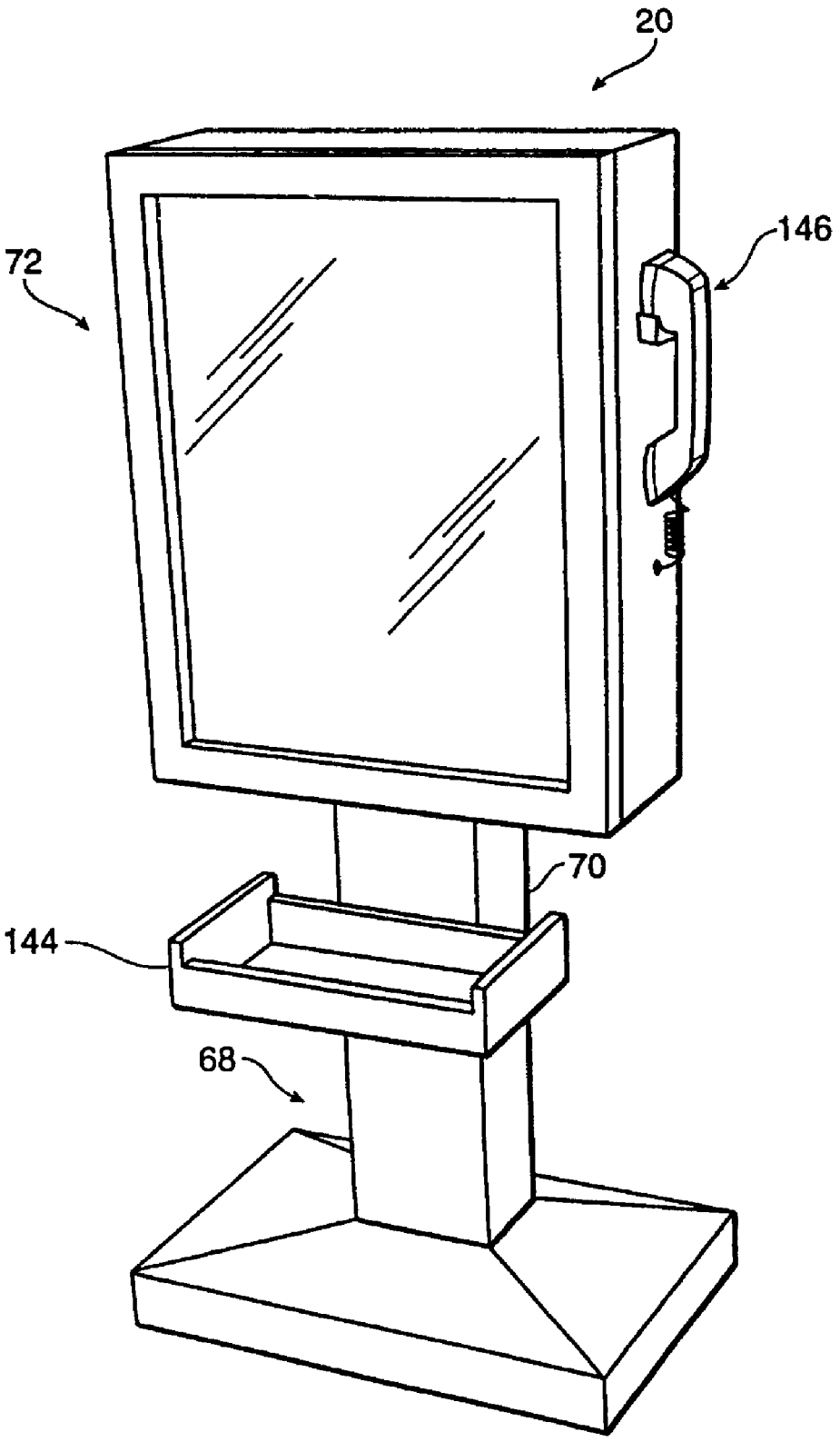


FIG. 13

REMOTE CONTROL ELECTRONIC DISPLAY SYSTEM

RELATED APPLICATION

This application is based on and is a continuation of my U.S. patent application Ser. No. 10/010,556, filed Nov. 8, 2001 now abandoned, for Remote Control Electronic Display System and which is, in turn, a continuation-in-part of my U.S. Utility patent application Ser. No. 09/500,284, filed Feb. 8, 2000, for Remote Control Electronic Display System (now U.S. Pat. No. 6,215,411 B1, dated Apr. 10, 2001) and which is, in turn, a continuation of my U.S. Utility patent application Ser. No. 09/295,894, filed Apr. 21, 1999, for Remote Control Electronic Display System (now U.S. Pat. No. 6,384,736 B1, dated May 7, 2002) and which is, in turn, a continuation-in-part of my U.S. Utility patent application Ser. No. 09/132,456, filed Aug. 11, 1998 (now abandoned) and which is, in turn, based on and claims priority from my U.S. Provisional Patent Application Ser. No. 60/083,597, filed Apr. 30, 1998 (now expired).

BACKGROUND OF THE INVENTION

1. Field of the Invention

This invention relates in general to certain new and useful improvements in display signs, and more particularly, to remotely controlled electronically operable display signs in which a display on a sign may be changed at will from a remote source, and methods of displaying information in such manner that the sign is used as an instrument to enhance the image of a product or service.

2. Brief Description of Related Art

Display signs are used in a wide variety of industries, frequently as promotional and advertising aids. Thus, many retail stores will employ display signs in the front of their stores or elsewhere featuring products which are being sold or otherwise offered by that establishment. Display signs are also frequently used for traffic control by various municipalities and governmental agencies.

Essentially all display signs presently available are static in that they carry a substrate with a message or design thereon and which is to be conveyed, as for example, a paper sheet having information thereon for display and which may be frequently mounted behind a transparent member such as a sheet of glass.

In many cases, the poster or other display sheet may be mounted within a frame having a light source mounted therein. In this case, the front face of the sheet may be lighted from lights located along portions of the periphery of the frame. In some cases, when using a somewhat transparent or translucent sheet, back lighting may also be employed.

The cost of preparing display signs made with paper and paper-board substrates can be quite substantial. Initially, the art work must be prepared often times by hand, although certain computer aids for purposes of preparing the drawing may be available. Nevertheless, preparation of the drawing is labor intensive. Thereafter, multi-color printing is usually required in order to complete the preparation of the paper or paper-board sign or display. These various steps, as indicated, are labor intensive and therefore materially add to the overall costs of preparing a sign or display, particularly when made of a paper or paper-board material.

In addition to the foregoing, there are also costs involved in the shipping or transport of these signs. Generally, they cannot be folded or bent or they would otherwise be unsuitable for use. As a result, special precautions and shipping containers must be provided for transport of the paper or paper-board substrate signs or displays.

There have also been display signs which use a frame and a source of light along with a glass or plexiglass sheet having an image or other information literally formed on the sheet, as for example, by means of glass etching, masking, or the like. However, with this type of display, when it is necessary or desirable to change the display in the sign, it is necessary to prepare a new piece of glass or plexiglass or otherwise a masking on a rear surface thereof having other information presented thereon.

Here again, the cost of preparing an etched glass sheet can be quite substantial. The same also holds true of the outer transparent sheets with masks on the rear surface thereof to create a design or display with that sheet. Again, because of the frailty of these sheets, substantial precautions must be taken for the transport or shipment of these sheets.

There is presently no display sign capable of having information changed thereon as quickly as information can be changed on the screen of a computer monitor. Moreover, and independently thereof, there is presently no effective display sign which can be changed from a remote location.

OBJECTS OF THE INVENTION

It is, therefore, one of the primary objects of the present invention to provide an electronic display sign which uses a flat panel display image and which can readily be changed in accordance with electronic signals applied thereto.

It is another object of the present invention to provide an electronic display sign of the type stated which can be altered rapidly through the use of a computer or otherwise through an image scanner.

It is a further object of the present invention to provide an electronic display sign of the type stated which can be controlled from a remote source and the display on the sign can be changed at will from that remote source.

It is an additional object of the present invention to provide a display sign of the type stated which completely eliminates the need for interchangeable substrates bearing the information to be displayed.

It is also an object of the present invention to provide an electronic display sign and a method of altering a display on a sign electronically and without using interchangeable substrates bearing information to be displayed.

It is another salient object of the present invention to provide a method of displaying information by generating that information from a remote source and transmitting that information to a display sign.

It is still another object of the present invention to provide a unique circuit enabling operation of a display sign from a remote source.

It is still a further object of the present invention to provide a method of displaying information on the screen of the display sign, potentially along with other external action, such as the addition of sound or the like, to enhance a product or a service on the display sign.

It is yet another object of the present of the invention to provide a display sign of the type stated which can be used to provide value plus advertising and which also enables the use of animation with respect to any message displayed thereon.

With the above and other objects in view, my invention resides in the novel features of form, construction, arrangement and combination of parts presently described and pointed out in the claims.

BRIEF SUMMARY OF THE INVENTION

The present invention relates in general terms to a display system including a display sign which is electronically accessible from a remote source and which enables the almost automatic change of a display pursuant to control of an operator at the remote source. In a broad sense, the display system of the present invention comprises a display sign having a display panel thereon as well as display generating means at the remote source for generating a display to be displayed on that display panel. The display is actually generated in the form of an electrical signal and the system comprises a transmitting means for transmitting the electrical signal representing the display to the display panel of that display sign.

The present invention also provides a method of generating a display on a display sign from a remote source. The method involves the steps of generating the display and then transmitting that display to the display sign in the form of electrical signals representing the display. The display sign is provided with electronics using the received electrical signal to recreate the generated display and present same on the display panel.

In one embodiment of the invention, the means for transmitting the display is an electrical conductor connected between the display sign and the display generating means at the remote source. In another embodiment of the invention, the means for transmitting the display is a wireless transmission means, such as by means of radio frequency transmission, satellite transmission, or the like.

In a more preferred embodiment of the invention, the means for generating the display comprises an image generating means which enables the generation of initial image forming part of the display and a temporary storage for temporarily storing that image. Editing means are also provided for adding material to or otherwise modifying the image. Thereafter, a permanent storage is provided to enable storage of the generated display in electrical format, at least until such time as transmission thereof to the display sign.

In still a more preferred embodiment, the apparatus comprises a scanning means for scanning a particular image and converting the image into electrical signals representative thereof. The image is then stored in the temporary storage. A keyboard input may be connected to that temporary storage for introducing information through a keyboard input. In addition, means is provided for adding other copy material. Thereafter, all of the material added can be edited by an operator to form a display. The display is then stored in a permanent storage.

It is also possible to generate a display, or to otherwise add information to a display, or otherwise alter a display by means of information introduced over the world wide web. Thus, various inputs can be made from a variety of sources and all of which can be processed and added to or otherwise used to modify a proposed image, as may be desired.

At a predetermined time, the stored display can then be transmitted to a storage in the sign. Moreover, a plurality of different displays can be stored at the remote source and these displays can be sequentially transmitted to the display sign. In this way, an operator can manually or automatically control the generation of a plurality of desired displays in a predetermined time sequence.

The present invention not only allows for the display to be generated at the sign from a remote source, but it also allows for a plurality of displays to be presented in a desired format and in a desired predetermined time arrangement, as aforesaid. As a result, there is no need to use hard copy displays, such as pre-printed paper displays. Furthermore, minor changes can be electronically made in a display as, for example, minor price changes can be made without the necessity of re-printing.

The display sign is also of a unique construction in that it comprises means for controlling certain atmospheric conditions and, particularly, temperature in the display sign. Furthermore, an interference filter is formed on the surface of the display panel to preclude excess heat generation within the display sign. The display panel is preferably a plasma display, as hereinafter described in more detail.

The display sign preferably includes an outer housing which may be provided with a removable front face or so-called "cover". The front face is provided with an enlarged opening in order to enable a display panel to appear through that opening. A transparent protective sheet may be disposed over the display panel.

The housing is in the form of a rectangularly shaped box, although it may adopt other shapes. The major components which enable the display including the display panel are preferably mounted on a separate chassis to enable easy and convenient assembly of the display sign. The separate chassis is secured through the display box to a mounting station, such as a display stand. In this way, only one having authorized access to the interior of the display housing can disconnect the chassis and the mounting station.

The chassis in the preferred embodiment includes a power supply for operating the plasma display panel. In addition, the chassis may also comprise a second power supply for operation of a processor or computer within the housing. The computer is designed for connection to the temporary storage at the remote source and will receive generated displays in electrical signal format. The computer is programmed to recreate those displays at the sign and generate the same through the plasma display panel. For this purpose, the computer is also mounted on the chassis.

The housing is preferably provided with a plurality of openings extending primarily throughout the side wall thereof. Moreover, venting fans may also be provided for venting heated air in the housing to the exterior.

The foregoing objects and the advantages of this invention have been met and fulfilled by this system and method which has been briefly described in the general description. However, the invention will now be described in more detail in the following detailed description and in the accompanying drawings. Nevertheless, it is to be understood that these drawings and the following detailed description are only set forth for purposes of illustrating the general principles of the invention. Therefore, it should be understood that the accompanying drawings and the detailed description are not to be taken in a limiting sense.

BRIEF DESCRIPTION OF THE DRAWINGS

Having thus described the invention in general terms, reference will now be made to the accompanying drawings in which:

FIG. **1** is a schematic component view showing those elements necessary for generating a display either through hard wired conveyance or otherwise wireless conveyance of information;

FIG. **2** is a schematic circuit diagram showing major components necessary involved in the generation of an electronic display from a remote source;

FIG. **3** is a schematic flow diagram showing those steps involved in generating a display from a remote source;

FIG. **4** is a perspective view of one form of display sign constructed in accordance with and embodying the present invention;

FIG. **5** is a side elevational view of the display sign of FIG. **4**;

FIG. **6** is a perspective view of a lid or cover which extends over the display sign;

FIG. **7** is a fragmentary vertical sectional view taken along line **7-7** of FIG. **6**;

FIG. **8** is a vertical sectional view, similar to FIG. **7**, and showing a slightly modified form of cover used with the display sign of the present invention;

FIG. **9** is an exploded perspective view showing some of the major components in the display sign of the present invention;

FIG. **10** is an exploded fragmentary perspective view, partially broken away, and somewhat similar to FIG. **9**, and showing the various components in their assembled position;

FIG. **11** is a fragmentary sectional view showing one form of panel construction used in the present invention;

FIG. **12** is a perspective view showing one type of mounting for a display sign constructed in accordance with and embodying the present invention; and

FIG. **13** is a fragmentary perspective view showing a modified form of display sign constructed in accordance with and embodying the present invention.

DETAILED DESCRIPTION OF A PREFERRED EMBODIMENT

Referring now in more detail and by reference characters to the drawings, FIG. **1** illustrates the major components forming part of a display system D in accordance with the present invention. This display system primarily shows the generation of a display from electrical signals representative of that display at a remote location and transmission to a display sign for recreation on that display sign.

In accordance with the schematic illustration of FIG. **1**, the display system D comprises a display sign **20**. Incorporated within the display sign **20** or otherwise being connected to the display sign is a sign controller **22**. This controller may adopt the form of a microprocessor or computer in the sign and preferably includes a storage, as hereinafter described in more detail.

The display system D of the invention further comprises a display generating means **24** at a remote source and which is usually comprised of a computer **26** which may adopt the form of a processor and storage, as well as a scanner **28**. In the embodiment of the invention as shown, the scanner receives ad copy **30** and generates a display in electrical format which can then be transmitted from the computer **26** to the display sign **20**.

One of more inputs from the world wide web can also be connected to the computer **26**, as shown in FIG. **1**, for aiding in or otherwise being used to generate the copy which is to be displayed on the plasma display screen **20**. The computer **26**, in the embodiment as illustrated, may be located at a remote site with respect to the display sign **20**. However, it should also be understood that the display sign **20** also includes its own internal computer so that the entire display is essentially self-contained and can be operated without communication with a remote source. However, the remote source is needed in order to change any display which may otherwise be stored in the memory of the computer at the display screen, or to otherwise modify the manner in which the display is made.

FIG. **1** also illustrates both a hard wire conductor means for transmitting the generated display, as well as a wireless means for transmitting the generated display. For the purposes of hard wire conductor transmission, the computer **26** is provided with a modem **32** and the controller **22**, and the display sign **20** is similarly provided with a corresponding modem **34**. As indicated previously, wireless transmission is also available and could adopt the form of microwave signal transmission, radio frequency transmission, including satellite transmission, or the like. In this respect, the signal which is generated is still an electrical signal in either radio frequency format or other wireless transmission format for wireless transmission. For purposes of wireless transmission, a satellite **36**, as shown, may be employed, such that the wireless transmission will follow the path **38** shown in the dotted lines of FIG. **1**.

FIG. **2** illustrates those major components forming part of the display system of the present invention. In this case, the display system comprises the scanner **28** which is usually employed for purposes of generating the initial image. Typically, a pre-prepared image of the element to be displayed is used and scanned from the scanner **28** into a temporary storage **40**. The image to be scanned by the scanner **28** may be a pre-drawn image or otherwise, it can be an image adopted from an existing source. The scanner **28** will effectively digitize the image and thereby store that digitized image into the temporary storage **40**.

A keyboard input **42** is also connected to the temporary storage **40** for introducing information, such as typewritten information, into that storage. The temporary storage **40** also receives an input from a world wide web **43** and which is schematically illustrated in FIG. **2**. In effect, the world wide web would actually constitute one or more inputs from computer transmission lines.

The temporary storage **40** operates in conjunction with a processor **44** and a manually operable editor **46**. The editor **46** is primarily designed to manipulate the images introduced into the processor **44** and the information from the keyboard input **42** into a desired format. Thus, a user of the system can manually superpose one image over another or otherwise modify two images by blending them together, etc. The editor **46** merely contains controls to enable the processor **44** to perform those functions. In this sense, the editor could also be another keyboard input much in the same manner as a computer keyboard input.

The information from the temporary storage **40** is then introduced into a permanent storage **48** where it can be retained, either indefinitely, or at least until such time as it is transmitted to a display sign, as hereinafter described in more detail.

The display system of the invention may also comprise a transmitting means **50** in the form of a transmitter, which is schematically illustrated in FIG. **2**. The transmitter means **50** may adopt any conventional form of a transmission means as, for example, the modems **32** and **34**, or otherwise for wireless transmission, a radio frequency transmitter, etc.

The aforesaid components constitute those major components which will form part of the display system and the remote site. Thereafter, the images which form the displays along with the other incorporated information therein can be transmitted to a display storage **60** located at and forming part of a display sign **20**. The display sign **20**, through its own processor, as hereinafter described, enables the generation of a display on a display panel **64** forming part of the display sign **20**. The display panel **64** is also hereinafter described in more detail.

The display sign **20** may form part of or otherwise may be mounted on a stand **66**, as best shown in FIG. **12**. The stand **66** conventionally includes a base **68** as well as an upstanding leg **70**, the latter of which would engage and support the display sign **20**. However, it should also be understood that the display sign **20** could be provided with a mounting means, as hereinafter described, for mounting to a wall or like structure.

FIG. **3** illustrates some of the major steps associated with the method for generating a display from a remote source. In this case, it can be seen that an image, such as an advertising image, is scanned and digitized for introduction into a temporary storage, such as the temporary storage **40**. Again, keyboard input information is also provided, as well as other copy information, as shown in FIG. **3**. This other copy information is typically introduced through the scanner **28**.

After the display has been formed, it is stored in the permanent storage **48** and then introduced into the display storage **60**. FIG. **3** also illustrates a rotational sequence program which can be used at the remote site or at the display sign. Thus, various displays can be generated in sequence at the display sign and at pre-determined time intervals.

The display sign **20** is more fully illustrated in FIGS. **5-11** of the drawings. The display sign **20** generally comprises an outer housing **72**, such as a rectangularly shaped housing. The housing is preferably formed of a metal and even more preferably a light weight metal, such as aluminum, although it could be formed of steel or other structural materials. In this respect, the housing could also be formed of plastics and even reinforced composite plastics.

The housing **72** is provided with a removable lid or cover plate **74** having a depending rim **76** which fits around a portion of the side wall of the housing **72**. In addition, the lid or cover plate **74**, is provided with an enlarged central opening **78** in order to enable the display panel **64** to appear therethrough. A transparent cover plate **80**, in the nature of a protective sheet, could also be included in this opening **78** if desired. Furthermore, the removable lid or cover plate **74** is secured to the housing **72** in some manner as to preclude unauthorized opening as, for example, tamper-proof fasteners.

In order to preclude glare on the display panel **64**, a top plate **69** is mounted on the upper end of the housing and carries at its outer end an angularly located somewhat downwardly struck visor **71**. This construction is effective in reducing glare on the display screen **64**, particularly from overhead light sources. The top plate **69**, which also functions as a visor, is optional in construction and can be eliminated in those environments where not required. It is also possible to provide a non-glare coating on the transparent cover plate **80**, although the coatings themselves have not necessarily been fully effective in eliminating all glare. In a preferred embodiment, the top plate **69** has an overall dimension from the rear of the housing of about 7". The lip **71** extends downwardly from the top plate **69** at a about a 45° angle. However, other sizes and angular relationships could be used, as may be required.

The transparent protective sheet **80** may be formed of a transparent plastic material, or otherwise it may be formed of glass. However, glass is not preferred due to the fact that it will crack or shatter with any rough handling. The transparent protective sheet **80** is retained in a U-shaped grove **82** formed at the edge of the opening **78**. This opening is formed by an integrally created U-shaped channel **84** surrounding the edge of the opening **78**, as best illustrated in FIG. **7** of the drawings. In addition, the lid or cover member **74** is also provided with a U-shaped channel **86** perpendicularly arranged to the grove **82** and which is sized to receive the forwardly presented edge of the housing **72**, as also best shown in FIG. **7** of the drawings.

FIG. **8** illustrates a slightly modified embodiment of the construction shown in FIG. **7**. In place of the formation of a U-shaped channel **84**, a plurality of brackets or tabs **88** affixed to the inside of the cover member **74** surrounding the opening **78**, are used to hold the transparent sheet **80** in a fixed position. The remaining portions of the lid are substantially identical to those shown and described in connection with FIG. **7**.

The operating components forming part of the display sign **20** are actually mounted on a chassis **90** disposed within the housing **72**. The chassis **90** comprises a pair of longitudinally extending side plates **91** and which are connected by a bottom plate or chassis plate **93**, as best shown in FIG. **9** of the drawings. Moreover, and by reference to both FIGS. **9** and **10**, it can be seen that the chassis **90** is disposed within the housing **72**, as hereinafter described. Mounted on the upper surface of the chassis plate **92** are a pair of longitudinally extending frame bars **93** and which are connected by transversely extending cross-bars **94**. Moreover, the longitudinally extending frame members **93** and the cross-bars **94** can be mounted on a supporting plate **96**. Although the supporting plate **96** is provided in a preferred embodiment, it is not absolutely necessary and this plate could be eliminated, if desired.

The housing **72** is preferably comprised of an enclosing side wall **98** and a rear wall **100** which extends thereacross and thereby forms an interior chamber **102**. The chassis **90** can be secured to this rear wall **100** by means of screws or other fasteners (not shown) which extend through the back plate. However, other forms of securement could be provided for this purpose, as hereinafter described.

The major operating components of the display sign are mounted on this chassis which is located within the housing **72**, as aforesaid. These major operating components include a power supply **104** for the computer **26** and which also contain the display storage **60**. A separate power supply **108** is also mounted on the chassis plate **96** and provides operating current for the other components of the display housing. The computer is effectively a microprocessor and contains the storage, as aforesaid, as well as a random access memory and a processor for controlling the display of a sign and also is operated from a control source at a remote location. Thus, and in this respect, the computer **106** is effectively a "slave" computer in that it receives instructions from the remote source and performs those instructions in the display sign by generating the proper display in accordance with the signals submitted to the computer **106**.

Located on and secured to the upper surface of the chassis **90** is the display panel **64**. In a preferred embodiment of the invention, the display panel is a plasma display. These display units are relatively thin and have a thickness in the order of about 35 mm. One of the preferred forms of display panel is made by Fujitsu and is identified as a "Full Color Plasma Display". These displays effectively operate as high-definition direct-view television monitors.

These displays generally contain about 640 horizontal display pixels and about 480 vertical pixels along with about 1920 horizontal display cells and 480 vertical display cells. Moreover, they operate with gradations of red, green and blue and present a viewing angle of about 140°. Internally, the display is usually comprised of an IF controller, a data controller, a random access memory, and a driver controller.

Nevertheless, since the plasma display is available in the art, it is therefore neither illustrated nor described in any further detail herein.

It is important to recognize that the display sign itself is generally fully self-contained and can literally be moved and operated at different locations. This is unlike the larger versions of display signs in which separate computer operated systems are required in order to operate the display panel itself. These display signs are effectively made with high definition and high resolution display panels. The panels are flat, as aforesaid, and can be operated at standard line current, such as 120 volt AC current. As indicated previously, all of these plasma operated display panels are computer operated. In accordance with the present invention, the entire display panel, whether or not a plasma panel, is computer operated from a computer source located within the display sign housing. In this sense, a remote source is used to generate the display which is to be shown on the display panel. However, a plurality of displays can be pre-prepared and stored in the memory of the computer contained in the display panel housing. Nevertheless, the remote source would be used to revise or alter those displays, as may be required.

Based on the foregoing, the display panel of the invention can be described as a self-contained computer controlled flat panel display screen providing high resolution and definition. Although it is preferable to use the plasma operated display panel, it is possible to use those relatively flat computer controlled display panels which are not plasma operated but nevertheless still provide high resolution and definition and which are still nevertheless portable. Therefore, the display panel which is referred to as a computer controlled display panel is preferably one which is self-contained and includes a computer controlling a flat panel display screen of the type which provides both high resolution and definition and which is also relatively portable without the need for heavy transport equipment. This computer controlled display panel, when used in a display sign, also has a computer operating the display panel located in the display sign housing.

The aforesaid plasma display screens are relatively thin in their overall construction, having a thickness within the range of about 35 mm, as aforesaid. Nevertheless, the flat panel display panel of the present invention is one which is deemed to have a thickness which does not exceed about six inches. Moreover, the entire display sign preferably does not have a thickness exceeding about twelve inches. Although it is possible to use a computer for controlling the display panel outside of the sign housing, it is preferable to incorporate the computer in the sign housing.

The display panel used in the display system of the present invention differs substantially from that of a standard television type display. In a television display, the image will change at the display rate as, for example, fifty frames per second. Even though the image may not change such that the viewer perceives of a same display, the master pattern is such that the image on that screen nevertheless changes at the display rate. In the case of the present invention, the display on the screen may remain for essentially any period of time, including several seconds or several minutes, and there is no composite of frames to generate an image.

As indicated previously, the display system of the invention is portable. In other words, the entire display housing and stand can be moved from one location to another without heavy lifting and transporting equipment. The entire display panel and housing, along with the stand, could weigh as much as one hundred seventy pounds, but it is nevertheless liftable and movable by two or three persons. In contrast, with some of the large display signs which are presently used as, for example, a marquees over large hotels and the like, those displays may weigh several thousand pounds and require a hoist and like equipment to move same. Nevertheless, since the entire display housing can be transported from one location to another and, indeed, the display panel can be easily transported from one location to another without the need for heavy cranes and the like, these display panels and, for that matter, the entire display sign is deemed to be portable.

The location of each of the aforesaid operating components within the housing does generate heat within the housing. For this purpose, the housing **72** is provided with a plurality of apertures **110** on the side walls thereof, as shown in FIG. **9**. In like manner, the chassis is provided with aligned apertures **112**, as also shown in FIG. **9**. In this way, air-flow ventilation is allowed. Moreover, and if desired, either exhaust fans or air in-take fans could be provided in adjacent relationship to the openings **110** and **112**. Other types of ventilation means could also be provided, if desired.

It has been found in connection with the present invention that optimum flow and ventilation is achieved when a pair of oppositely disposed air intakes and a pair of oppositely disposed air outlets are provided. In addition, two fans are preferably used for air circulation throughout the housing. Thus, in the embodiment as shown in FIG. **9**, for example, there are a pair of air inlets **110** and a pair of air outlets **112**. Mounted on the bottom wall of the housing, as hereinafter described, are a pair of fans **124**. This type of arrangement is highly effective in precluding condensation formation in the space between the actual display panel **64** and the transparent cover plate **80**.

The entire housing **72** is mounted on a mounting plate or support plate **114**, as best shown in FIG. **10** of the drawings. In this case, the support plate **114** is, in turn, secured to a wall or other support structure as, for example, the stand **66**, as shown in FIG. **12**. The mounting plate **114** is a provided with an upstanding protrusion **116** which extends through an opening (not shown) in the rear wall **100** of the housing. Thereafter, a locking pin **118** is provided for extension through the side walls of the housing and the opening in the protrusion **116**. In this way, it is virtually impossible to remove the display sign from the mounting plate **114**, unless one has authorized access to the interior of the housing **72**. However, it should be understood that other means for mounting the housing **72** to the mounting plate **114** could be provided for this purpose.

The display panel **64** may be disposed on the upper surface of the chassis, as aforesaid, or otherwise located within the housing. In addition, it may be connected to the electronics and located within the cover plate **74** in adjacent relationship to the transparent cover plate **80**. However, the display panel is preferably provided with an interference film or layer **130** which reduces heat introduction into the housing and operates as a type of interference film. Nevertheless, the interference film **130** could be located on the transparent cover plate **80** for this particular purpose. FIG. **14** shows a stacked arrangement in which the display panel **64** is provided with the interference film **130** and the outer transparent cover plate **80**. If desired, these components could be laminated together.

It is also possible to provide a spacer frame **132** between the transparent cover plate **80** and the display panel **64**, thereby providing an intermediate isolated space **134**, all as best shown in FIG. **14**. If the space **134** is properly insulated, then there is little or no possibility of condensation forming

in the interior thereof. Moreover, the space **134** could be evacuated during the construction of the assembly.

It has also been found that the plasma operated screens will generate radio frequency interference. Moreover, it has been found that the interference film which is employed can be placed directly on the plasma operated display panel in order to preclude this interference. For this purpose, the interference layer is approximately 1.5 mil thick. It has been found that a plastic cover cannot be used for this purpose because of potential out gassing.

The display system of the present invention provides a unique advantage which has not been heretofore available. The display can be generated in this case as an analog display. Prior art systems, on a limited basis, have used computers to generate a display on a sign. However, that display is necessarily generated in a digital format and, thus, has significant limitations on the quality and the ability of a particular display to be generated. Contrariwise, in the present invention, a display, which may be generated from a photographic image, can be essentially recreated on a display sign from a remote source.

The display system of the present invention not only operates as a true display sign per se, but it is also effective in operating as a type of product or service promotion enhancing medium. Thus, not only does the display sign present a display as such, but the manner in which the display system is operated literally has been found to provide a type of advertising or promotional medium. For this purpose, the display stand itself may be provided with an arrangement for displaying products. Referring again to FIG. **12**, it can be seen that a plurality of upstanding dividers **140** (four as shown) divide the upper surface of the base **68** into individual compartments **142**. Various products can be displayed directly in these individual compartments. As a simple example, if the display stand were used in a supermarket, cans of a specified vegetable may be literally stacked in one of the compartments **142**, packaged meat products could literally be displayed in another one of the compartments, etc. For this purpose, the construction of the base can vary and, for that matter, additional shelves can be mounted on the legs **70** in order to increase the display space.

In another embodiment of the invention, the display sign can be used as a type of point of sale promotion enhancer. Referring FIG. **13**, for example, it can be observed that there is a display sign **20** also mounted on a stand **68** having an upstanding leg **70**. For purposes of providing information, such as coupons which could be used, e.g. in a drugstore, a rack **144** is mounted on the leg **70**, as shown in FIG. **13**. This rack can be sub-divided into individual compartments for holding various types of informational sheets which may be picked up by a user. In addition, and for purposes of making reservations when a display advertises a particular feature or event, or when the display advertises a hotel, for example, a telephone **146** can also be connected to the outer housing **72**. This telephone **146** could either be a dialing telephone or one which is connected directly to a source capable of taking a reservation or otherwise booking an arrangement for the caller. Thus, as a simple example, the display sign could be generating displays featuring a particular hotel and if the observer is pleased with the displays generated, he or she can merely pick up the telephone handset, as shown in FIG. **13**, and immediately access an operator or other agent capable of making the reservation or booking the particular event or hotel room for the caller.

These few features alone illustrate the wide versatility capable of being achieved with the display system of the present invention. In this respect, the display system can generate a type of "streaming media", that is, it possesses the capability of presenting continuously groups of advertisements which may be run together end on end and, for that matter, can even blend advertisements. This may be particularly advantageous when a product display is also set up on the base, as previously described. In addition, the display can actually be animated with a type of 3-D presentation. Various graphic aids can also be used. As a simple example, the display can be generated initially from top to bottom or from bottom to top. FIG. **12** shows, for example, a display which is coming from the lower right hand corner of the display screen and which is being increased in size over time. Thereafter, the next display could come from a different corner or from a side, top or bottom of the screen. This type of presentation has been found to generate a great deal of attention.

In addition to the foregoing, the product or service which is being generated can also be animated in order to obtain attention of individuals. Furthermore, sound can be generated. Thus, as a simple example, on each occasion when a new product or service is offered or, for that matter, when images of a particular product or service being offered changes, a bell can ring or other noise can be generated in order to catch the viewer's attention. As indicated previously, the basket or rack enables hand-outs to the viewer and, thus, represents a type of "uplift" advertising, that is, it causes people to purchase more of a particular product or service than they would otherwise purchase.

The display system of the invention also has the capability, particularly when operated from a remote source, of causing alterations of the display at any point in time. Thus, for example, if an eight ounce box of a particular product is being displayed, it is possible to immediately cause a four ounce box of that same product or, for that matter, another product to be presented over the image of the eight ounce box of product. Moreover, with the animation and the fact that the display can be generated in essentially any fashion, it is possible to place a product or service in a most favorable light.

It is also possible to operate a plurality of these display signs at a single location or at different locations from one remote source. Moreover, all of the display signs could be operated simultaneously or individually. In addition, all of the display signs could be connected together through a single telephone circuit enabling the access of all of the individual display panels.

One of the features of the display stand of the invention is the fact that it actually attracts the viewer, that is, viewers will literally stand in front of the display in order to view same. This has been found to be important in that it actually increases the purchase or other acquisition of the service or product. Thus, the display stand not only functions to merely advise of the availability of a product or service, but it provides information about that product or service and, in addition, promotes and enhances the product and service so that the interest of the viewer is increased in that product and service by viewing the display. In this way, the display device not only functions to present displays, but it actually functions to enhance and increase the advertising appeal of a particular product or service.

Thus, there has been illustrated and described a unique and novel display system which enables a display sign to be operated from a remote source and where a display can be generated at the sign based on signals from the remote source and which are transmitted to the display sign for generation of an analog display thereon. The display system

and the display sign forming a part thereof thereby fulfill and meet all of the objects and advantages which have been sought. It should be understood that many changes, modifications, variations and other uses and applications will become apparent to those skilled in the art after considering this specification and the accompanying drawings. Therefore, any and all such changes, modifications, variations and other uses and applications which do not depart from the spirit and scope of the invention are deemed to be covered by the invention.

Having thus described my invention, what I desire to claim and secure by Letters Patent is:

1. A display system for generating an image on a display member and allowing for enhancing the image which is displayed thereon, said display system comprising:

a) an outer housing;

b) a display panel on said housing and being observable to a viewer; and

c) a dedicated computer means in proximity to said housing and dedicated only to the operation of said display system, said computer means operating on the basis of a series of sequential programmed instructions at a predetermined time or on a real time basis, said computer means controlling the image presented on said display panel, said computer means capable of altering the manner in which a display is generated on the screen and capable of providing computer generated effects on a display on the display panel and thereby modify the image displayed on said display panel.

2. The display system of claim **1** further characterized in that system is a display sign and said housing is mounted on a stand which has shelf space for holding a product of the type being displayed on said display panel or printed information on a product or service of the type being displayed thereon.

3. A display apparatus for generating a display in the form of successively displayed images at a generally fixed location, said display apparatus comprising:

a) an electronically operable flat display panel with wide angle viewing for displaying such successively displayed images;

b) self-contained computer operated processing means associated with said display apparatus for generating a plurality of displays from electronic signals containing information relating to the displays and which signals are delivered from a remote source;

c) memory means associated with said display apparatus forming part of said processing means and storing information delivered from a remote source in digital signal format as digital signals and allowing the digital signals to be reconverted to visible images which are displayed at the display panel, thereby enabling the displays to be presented on a large screen format, and where a large number of different displays are storable in said memory means and displayed at time selected periods independently of external electronic signals from a remote source; and

d) said computer operated processing means receiving the information from the remote source and controlling the display of that information as displays on the display panel and also controlling the generation of displays on the display panel which are stored in the memory means, and said computer also being operable independently for operating as a stand alone computer and as a means for accessing the internet through the world wide web.

4. The display apparatus of claim **3** further characterized in that receiving means is provided in association with said display apparatus for receiving electronic signals transmitted to the display apparatus from the remote source and which are representative of the plurality of displays at the display apparatus.

5. The display apparatus of claim **3** further characterized in that said display apparatus is readily transportable and completely self-contained and positionable at a generally fixed location for operation at that fixed location.

6. The display apparatus of claim **3** further characterized in that said display apparatus is locatable at a substantial distance from a signal generating means at said remote source which generates signals capable of being converted to images which are displayed at the display apparatus, so that said display apparatus is operable as a self-contained unit independently of any networking for generation of displays.

7. The display apparatus of claim **3** further characterized in that said apparatus comprises means in said display apparatus for sequencing a plurality of sequential displays which are generated at a remote source and transmitted to said display apparatus and which are re-generated from the stored electronic signals and displayed at the display apparatus.

8. The display apparatus of claim **3** further characterized in that said apparatus comprises means in the display apparatus and associated with the processing means for holding a plurality of displays in the form of digital signals for ultimate presentation on said display panel and presentation of said displays at any of a plurality of time selected periods.

9. The display apparatus of claim **3** further characterized in that said display panel comprises a flat panel high resolution plasma operated screen.

10. A method for generating a plurality of displays at a display generating remote source and electronically transmitting the displays to a readily transportable display apparatus located at a substantial distance from the remote source for presentation at the display apparatus, said method comprising:

a) electronically generating a plurality of displays at a display generating remote source with each in the form of visual images;

b) converting the visual images to corresponding electronic signals at the display generating remote source;

c) transmitting the electronic signals to a self-contained computer processing means associated with the display apparatus;

d) storing the electronic signals representative of the images in the form of digital signals in a memory means associated with said computer processing means and which is also associated with the display apparatus;

e) positioning the display apparatus at a fixed location for operation at that fixed location for a display of the images on a display panel forming part of the display apparatus;

f) re-converting the digital signals into corresponding visual images and displaying same on the display apparatus thereby enabling the images to be presented on a large screen format; and

g) operating the computer processing means to cause the generation of visual displays from the remote source and which are presented on the display panel and controlling the generation of displays which are stored in the memory means, said computer processing means

also being operated independently as a stand alone computer and for also accessing the internet through the world wide web.

11. The method of generating the displays of claim **10** further characterized in that said method comprises automatically controlling at the display apparatus the time of a particular display which is regenerated at the display apparatus.

12. The method for generating the displays of claim **11** further characterized in that said display apparatus is operable without need for electronic signal networking, such that the display apparatus operates as a self-contained and stand alone unit.

13. The method for generating the displays of claim **10** further characterized in that the images are fixed and non-continuous.

14. The method for generating the displays of claim **12** further characterized in that the method comprises sequentially transmitting said plurality of displays from said remote source to said display apparatus in the form of digital signals and storing the digital signals representative of those displays at said memory means in said display apparatus, and providing display generating signals at said processing means for sequentially displaying said individual displays.

15. A self-contained display apparatus capable of generating a display from electronic signals generated and transmitted to said apparatus from a remote source, said display apparatus comprising:

a) an outer housing being locatable at any of a plurality of fixed locations;

b) a relatively thin high resolution display panel on said housing and being observable to a group of viewers;

c) self-contained computer controlled processor means associated with said housing and being operable with said display panel, said processor means receiving digital electronic signals from a remote source and which contain data related to the displays to be generated, said processor means also causing generation of a plurality of different displays on the display panel based on the digital signals received from the remote source for presentation of the displays;

d) storage means operatively connected to said processor means to receive and store the different displays so that they are sequentially displayable; and e) said computer operated processing means receiving the information from the remote source and controlling the display of that information as visual displays on the display panel and also controlling the generation of displays on the display panel which are stored in the memory means, and said computer also being operable independently for operating as a stand alone computer and as a means for accessing the internet through the world wide web.

16. The display apparatus of claim **15** further characterized in that said relatively thin high resolution panel is a plasma operated display panel and is protected by a transparent cover plate.

17. A display apparatus capable of generating a display from electronic signals generated and transmitted to said apparatus from a remote source, said display apparatus comprising:

a) an outer housing being locatable at any of a plurality of fixed locations;

b) a relatively thin high resolution display panel on said housing and being observable to a group of viewers;

c) self-contained computer controlled processor means associated with said housing and being operable with said display panel, said processor means receiving digital electronic signals from a remote source and which signals contain data related to the displays to be generated, said processor means also causing generation of displays on the display panel based on the digital signals received from the remote source for presentation of the displays; and

d) internal ventilating means in said housing to control heat generation by providing for heat dissipation and to reduce any condensation formed therein.

18. The display apparatus of claim **17** further characterized in that means is provided on the rear of said housing to mount the housing to a fixed support without placing undue stress on the display panel.

19. A display apparatus capable of generating a display from electronic signals generated and transmitted to said apparatus from a remote source, said display apparatus comprising:

a) an outer housing being locatable at any of a plurality of fixed locations;

b) a relatively thin high resolution display panel on said housing and being observable to a group of viewers;

c) self-contained computer controlled processor means associated with said housing and being operable with said display panel, said processor means receiving digital electronic signals from a remote source and which signals contain data related to the displays to be generated, said processor means also causing generation of displays on the display panel based on the digital signals received from the remote source for presentation of the displays; and

d) a self-contained power supply is associated with an interior compartment of said housing for operating said processor means.

20. The display apparatus of claim **19** further characterized in that said processor means contains a memory with size sufficient large to contain information necessary to sequentially display a plurality of stored displays.

21. A display sign capable of generating a display from electronic signals generated and transmitted to said apparatus from a remote source, said display sign comprising:

a) an outer housing being locatable at any of a plurality of fixed locations;

b) a relatively thin high resolution display panel on said housing and being observable to a group of viewers;

c) self-contained computer controlled processor means associated with said housing and being operable with said display panel, said processor means receiving digital electronic signals from a remote source and which signals contain data related to the displays to be generated, said processor means also causing generation of displays on the display panel based on the digital signals received from the remote source for presentation of the displays;

d) means associated with said housing to maintain said housing on a back support plate;

e) said support plate having an outward projection which extends into said housing; and

f) said projection being located to receive a backing pin extending through a side wall of said housing and into said projection to secure said housing to said support plate and prevent unauthorized access to said housing.

22. A process for generating a display on an image display apparatus from signals from a remote source, said process comprising:

a) providing a flat panel display member having a high resolution display screen at a location having viewing accessibility;

b) generating a display at a remote location from a plurality of sources including scanning of pre-generated material to obtain an individual image therefrom;

c) converting the display as generated to equivalent digital electronic signals representative of a plurality of said individual images;

d) transmitting said electronic signals to a dedicated processor in association with said display member and operating said display member;

e) causing generating of a plurality of individual successively presented images on said display member based on the transmitted electronic signals; and

f) positioning the display device at a generally fixed location for displaying of such images.

23. The process for generating a display of an image of claim **22** further characterized in that said process comprises presenting wide angle viewing with said display member, such that a group of people can readily and easily view the display member from a wide array of viewing angles.

24. A display system for generating an image on a display member and allowing for enhancing the image which is displayed thereon, said display system comprising:

a) an outer housing;

b) a display panel on said housing and being observable to a viewer;

c) a dedicated computer means in proximity of said housing and dedicated only to the operation of a display system comprising said display panel, said computer means operating on the basis of a series of sequential programmed instructions at a predetermined time or on a real time basis, said computer means controlling the image presented on said display panel, said computer means capable of altering the manner in which a display is generated on the screen and capable of providing computer generated effects on a display on the display panel and thereby modify the image displayed on said display panel; and

d) means for enabling live interaction between users of images on the display panel.

25. The display system of claim **24** further characterized in that said live interaction is telephonic communication.

* * * * *

UNITED STATES PATENT AND TRADEMARK OFFICE

CERTIFICATE OF CORRECTION

PATENT NO. : 7,369,058 B2
APPLICATION NO. : 10/874102
DATED : May 6, 2008
INVENTOR(S) : David Gothard

It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

On the cover page, the Item (63) of the Related U.S. Application Data should read as follows:

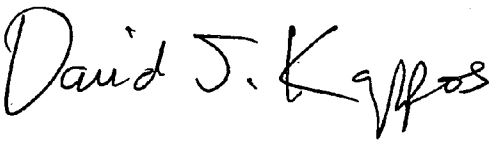
Continuation of application No. 10/010,556, filed on November 8, 2001, now abandoned, which is a continuation of application No. 09/295,894, filed on April 21, 1999, now US 6,384,736, which is a continuation-in-part of application No. 09/132,456, filed on August 11, 1998, now abandoned.

Column 1, lines 6 through 28, should read as follows:

Continuation of application No. 10/010,556, filed on November 8, 2001, now abandoned, which is a continuation of application No. 09/295,894, filed on April 21, 1999, now US 6,384,736, which is a continuation-in-part of application No. 09/132,456, filed on August 11, 1998, now abandoned, which claimed the benefit of Provisional Patent Application number 60/083,597, filed on April 30, 1998.

Signed and Sealed this

Twenty-ninth Day of June, 2010



David J. Kappos
Director of the United States Patent and Trademark Office

EXHIBIT B

US008330613B2

(12) **United States Patent**
Gothard

(10) **Patent No.: US 8,330,613 B2**
(45) **Date of Patent: Dec. 11, 2012**

(54) **REMOTE CONTROL ELECTRONIC DISPLAY SYSTEM**

(75) Inventor: **Dave Gothard**, Las Vegas, NV (US)

(73) Assignee: **Locke International Teast**, Naples, FL (US)

(*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 999 days.

(21) Appl. No.: **12/116,053**

(22) Filed: **May 6, 2008**

(65) **Prior Publication Data**

US 2010/0309208 A1 Dec. 9, 2010

Related U.S. Application Data

(63) Continuation of application No. 10/874,102, filed on Jun. 21, 2004, now Pat. No. 7,369,058, which is a continuation of application No. 10/010,556, filed on Nov. 8, 2001, now abandoned, which is a continuation of application No. 09/295,894, filed on Apr. 21, 1999, now Pat. No. 6,384,736, which is a continuation-in-part of application No. 09/132,456, filed on Aug. 11, 1998, now abandoned.

(60) Provisional application No. 60/083,597, filed on Apr. 30, 1998.

(51) **Int. Cl.**

G08B 23/00	(2006.01)
G08B 5/00	(2006.01)
G08B 5/36	(2006.01)
G09G 5/00	(2006.01)
G06F 15/00	(2006.01)

(52) **U.S. Cl.** **340/815.4**; 340/815.47; 340/815.49; 340/815.6; 340/693.5; 340/693.9; 345/2.1; 345/501

(58) **Field of Classification Search** ..... None
See application file for complete search history.

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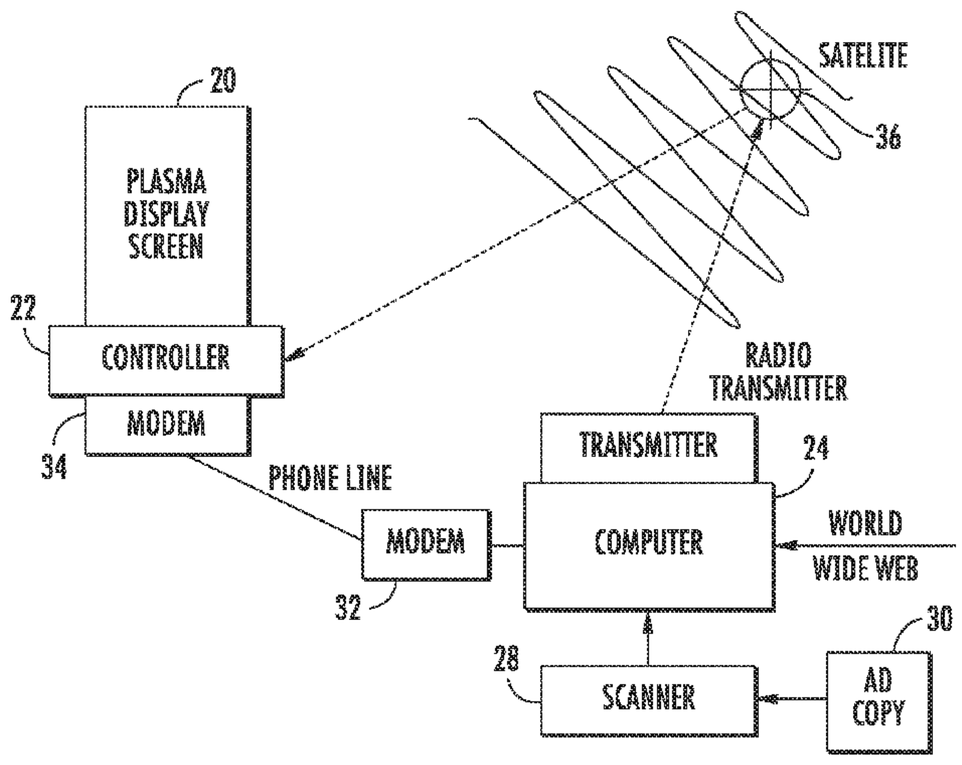
Primary Examiner — Julie Lieu
(74) *Attorney, Agent, or Firm* — Edward K. Welch, II; IP&L Solutions

(57) **ABSTRACT**

A remotely controlled electronic display sign which operates with a plasma display and which provides for humidity and heat control and the like allowing the sign to be used in various environments. The sign is essentially self-contained and includes those components necessary for enabling a display of desired material from a remote control source or one located at the sign. A controller in or associated with the sign is accessible either electrically, or through satellite transmission or other wireless transmission from the remote source which allows the display of the sign to be changed at will. Thus, an operator at a remote source may, with the aid of a pre-prepared graphic design, transmit that design to the controller at or associated with the sign for display of that graphic information and potentially with sound.

13 Claims, 7 Drawing Sheets



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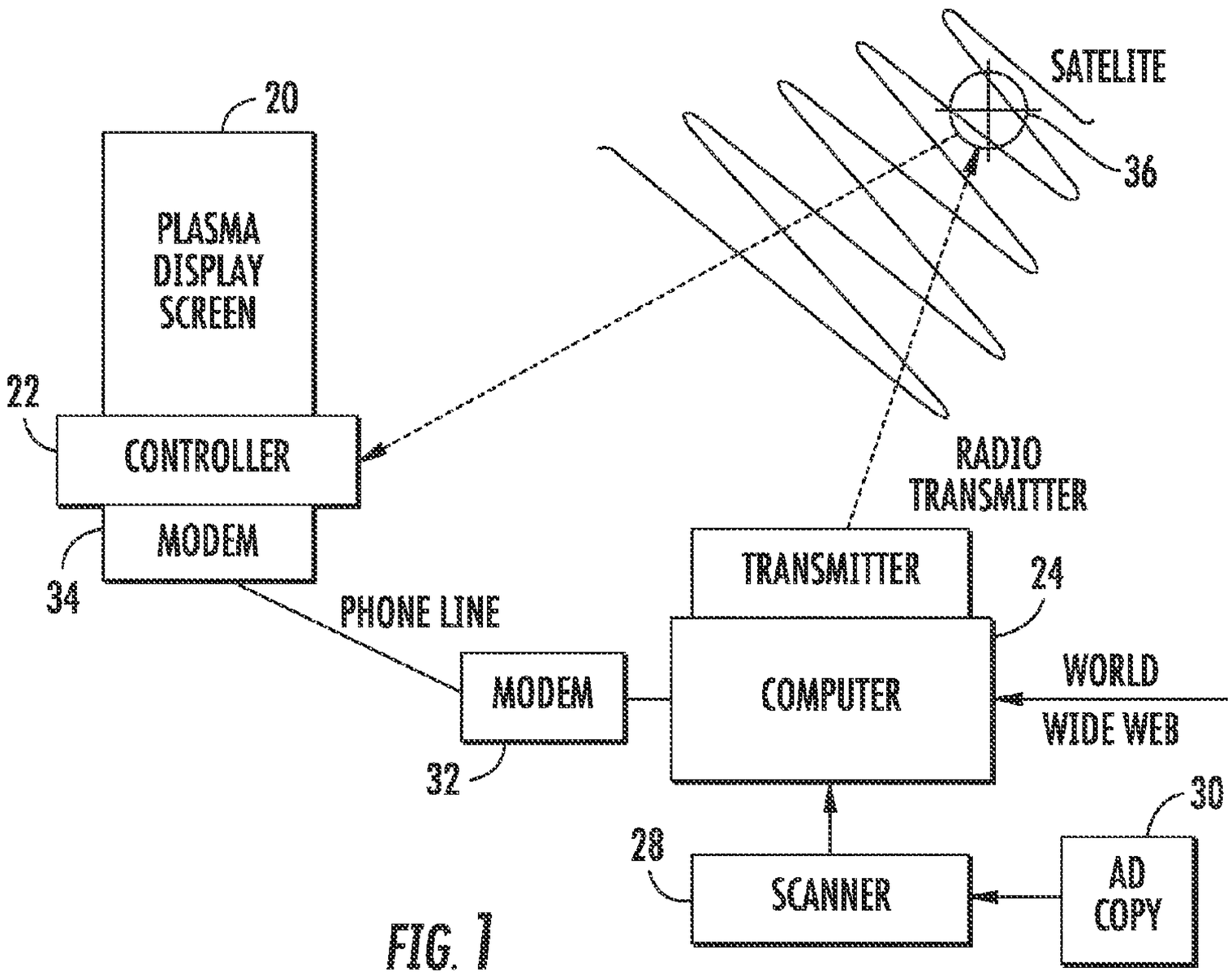
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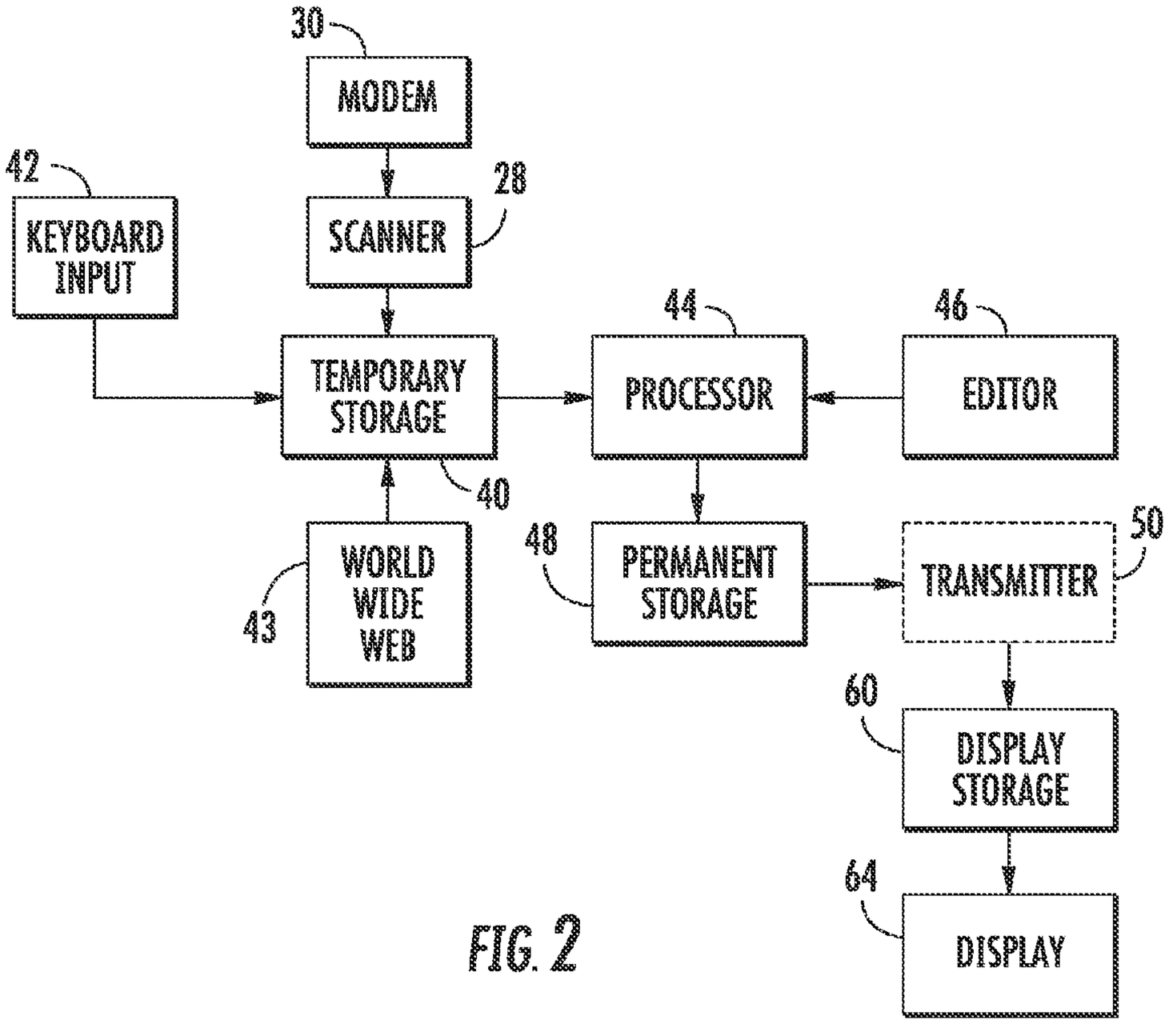
PLASMA DISPLAY SCREEN
22
CONTROLLER
MODEM
34
PHONE LINE
MODEM
32
SATELITE
36
RADIO TRANSMITTER
TRANSMITTER
24
COMPUTER
WORLD WIDE WEB
30
AD COPY
28
SCANNER

FIG. 1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MODEM
42
KEYBOARD INPUT
28
SCANNER
44
46
TEMPORARY STORAGE
PROCESSOR
EDITOR
40
48
PERMANENT STORAGE
50
TRANSMITTER
43
WORLD WIDE WEB
60
DISPLAY STORAGE
64
DISPLAY

FIG. 2

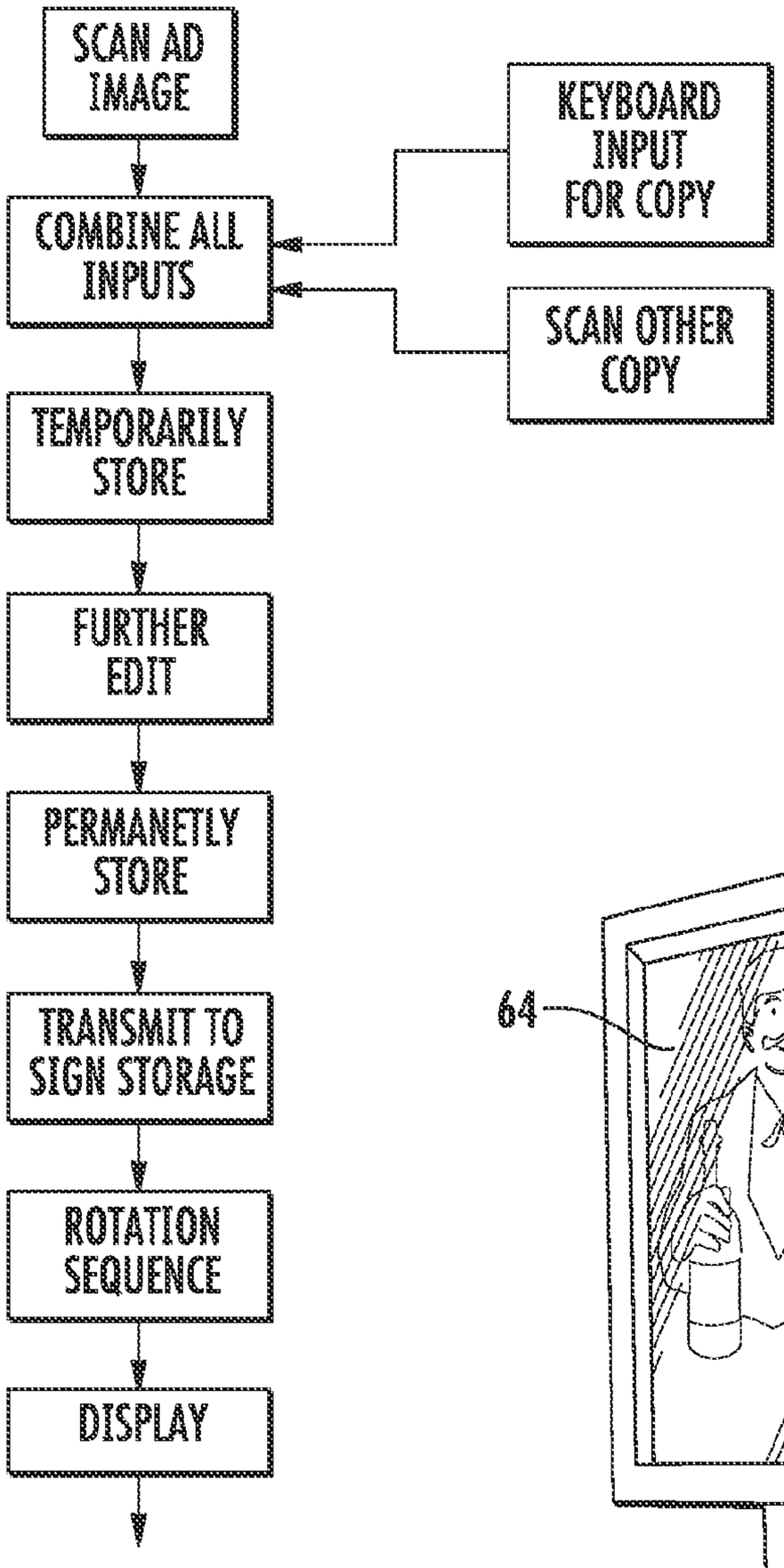
SCAN AD IMAGE
COMBINE ALL INPUTS
KEYBOARD INPUT FOR COPY
SCAN OTHER COPY
TEMPORARILY STORE
FURTHER EDIT
PERMANETLY STORE
TRANSMIT TO SIGN STORAGE
ROTATION SEQUENCE
DISPLAY

FIG. 3

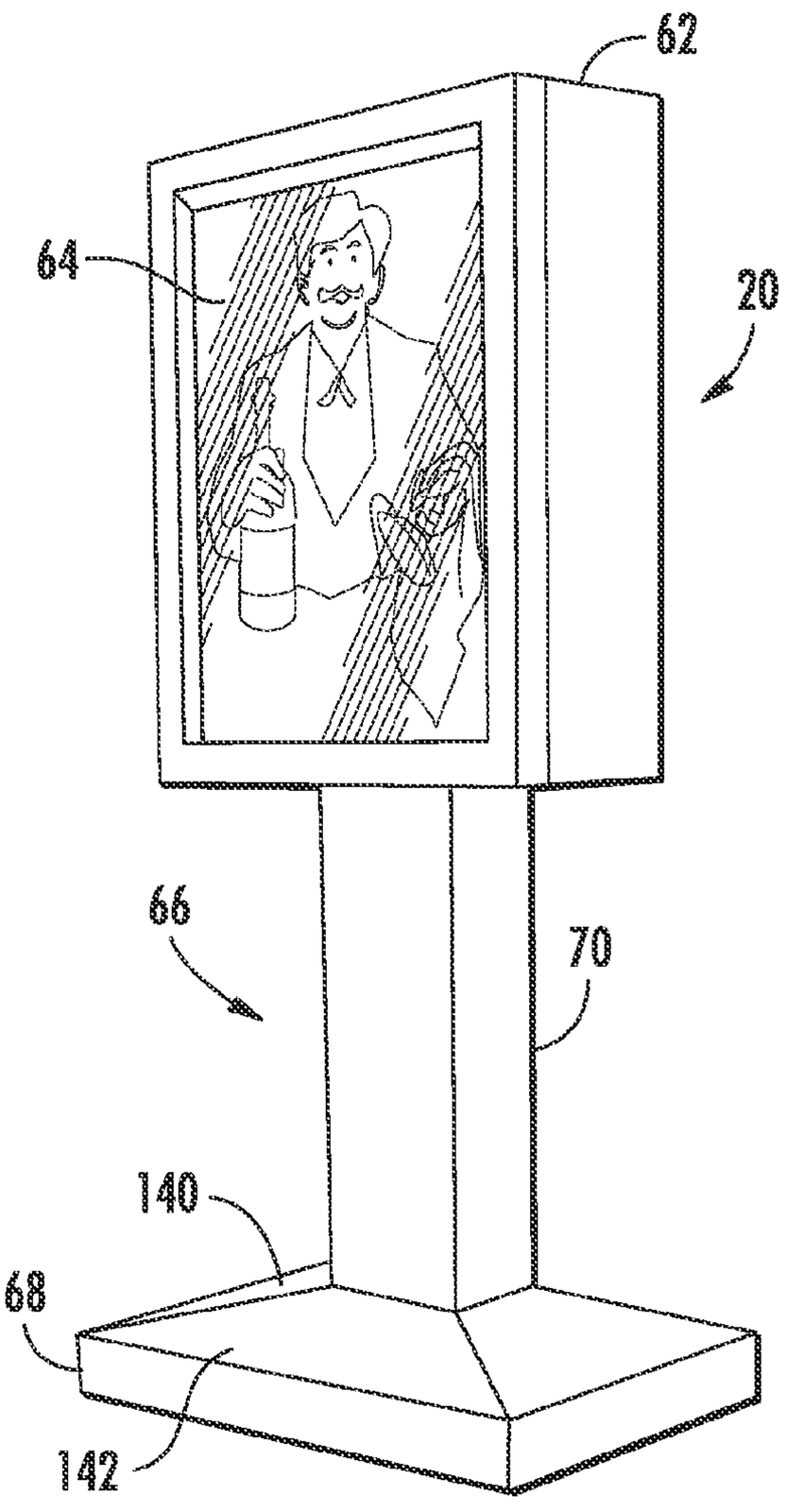
62
64
20
66
70
140
68
142

FIG. 12

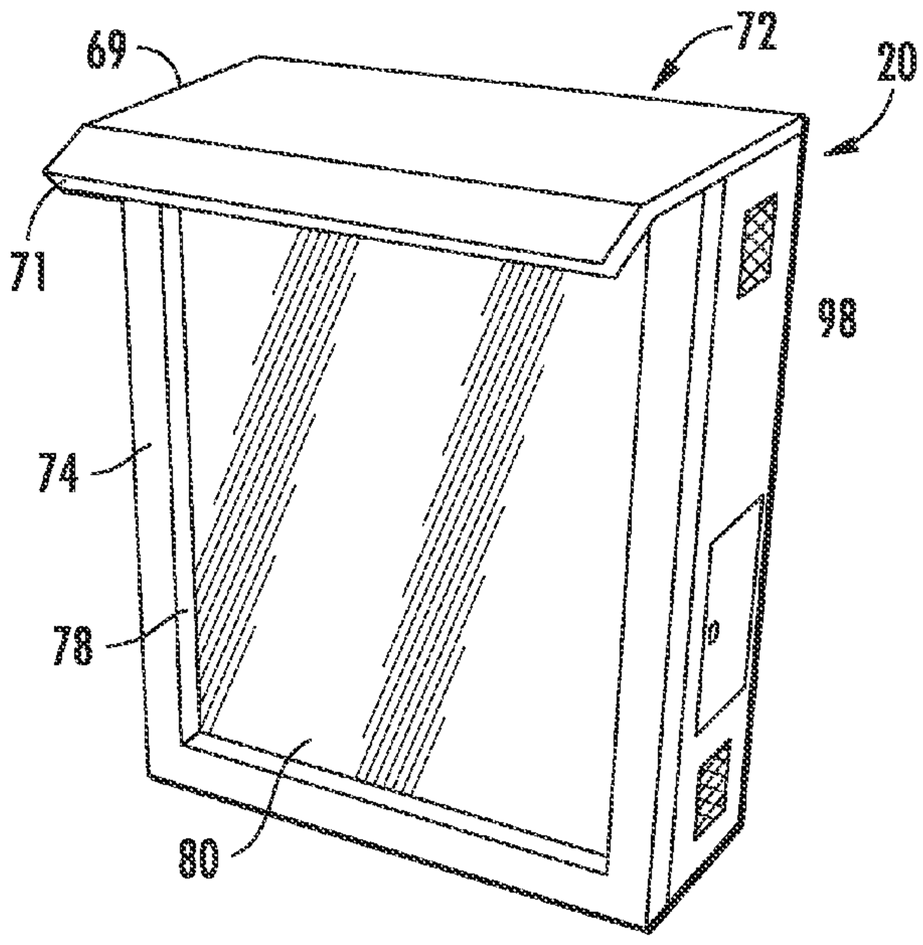

FIG. 4

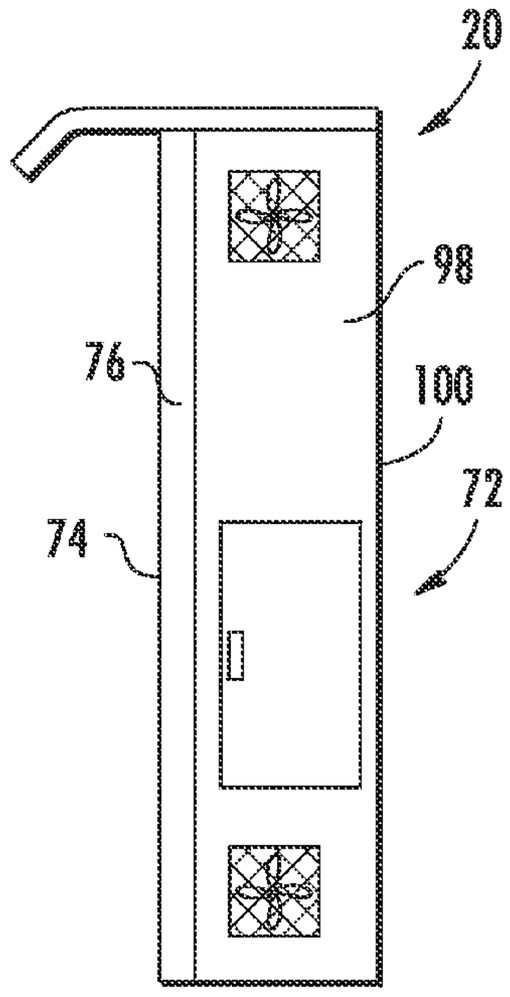

FIG. 5

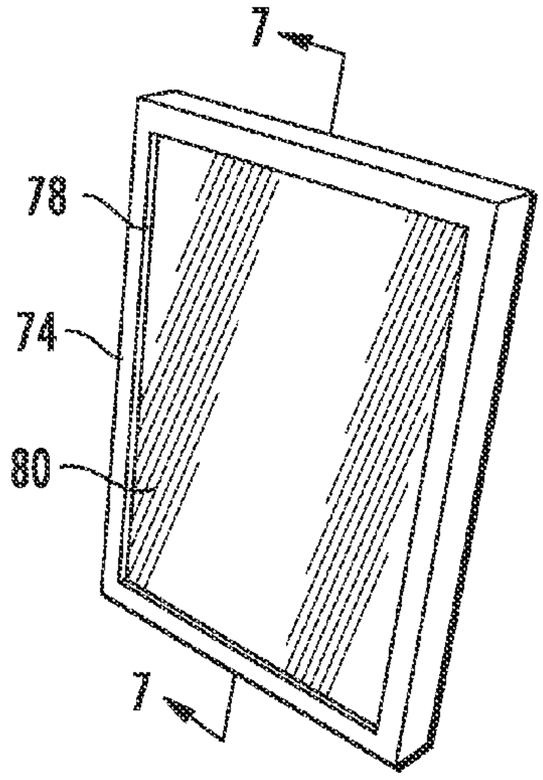

FIG. 6

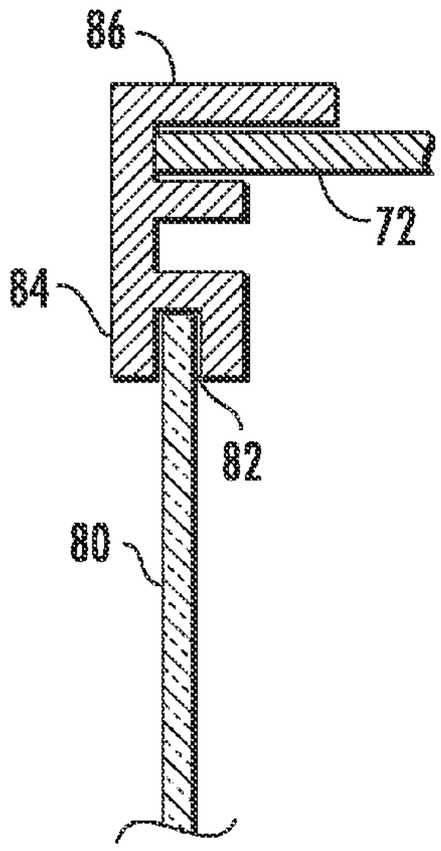

FIG. 7

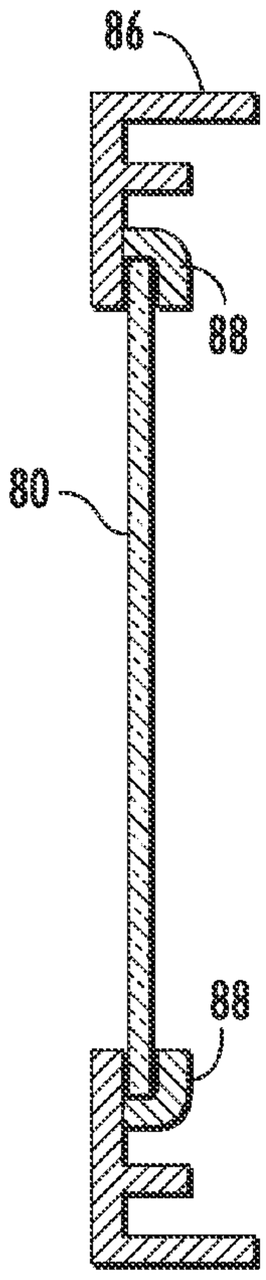

FIG. 8

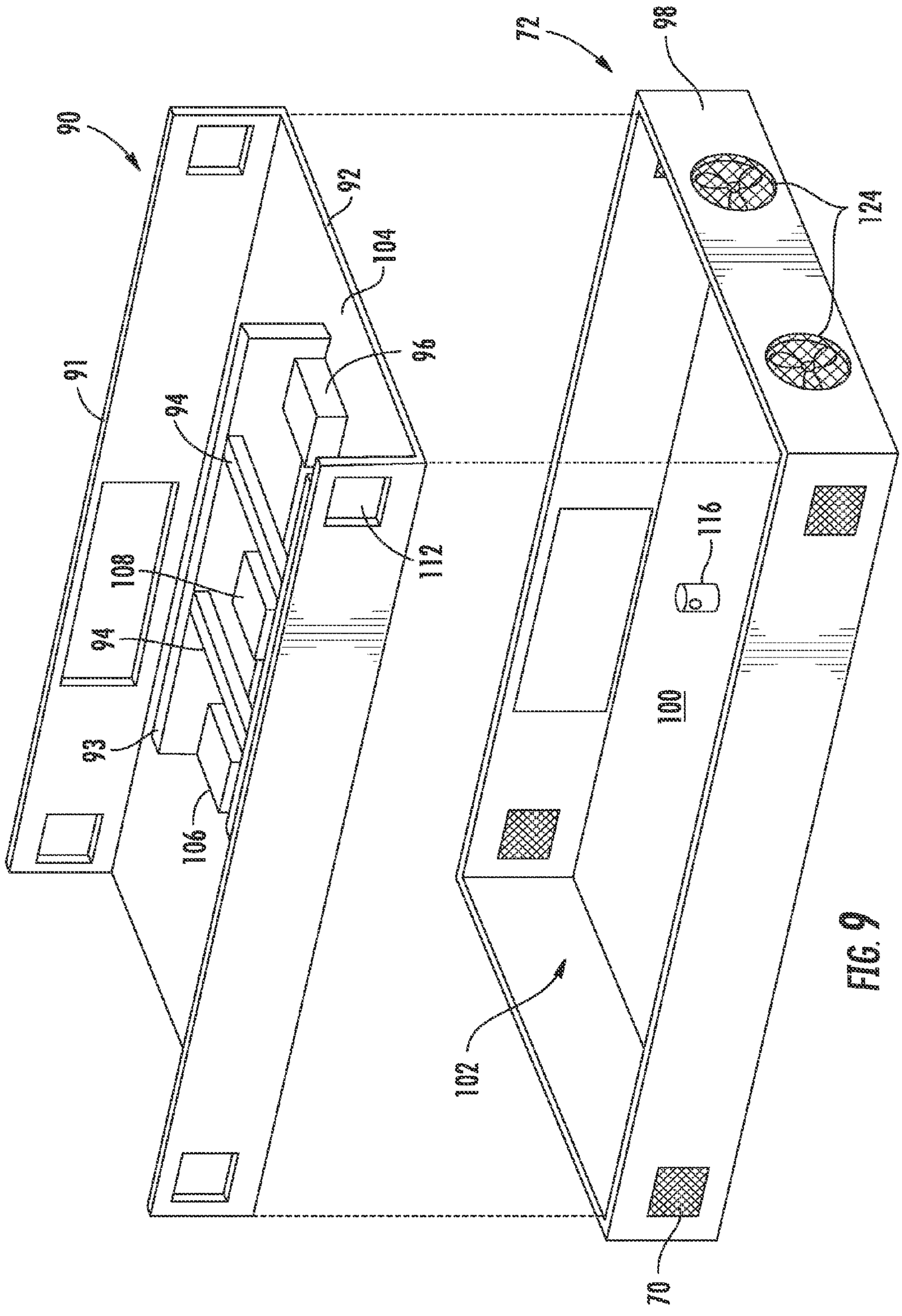

FIG. 9

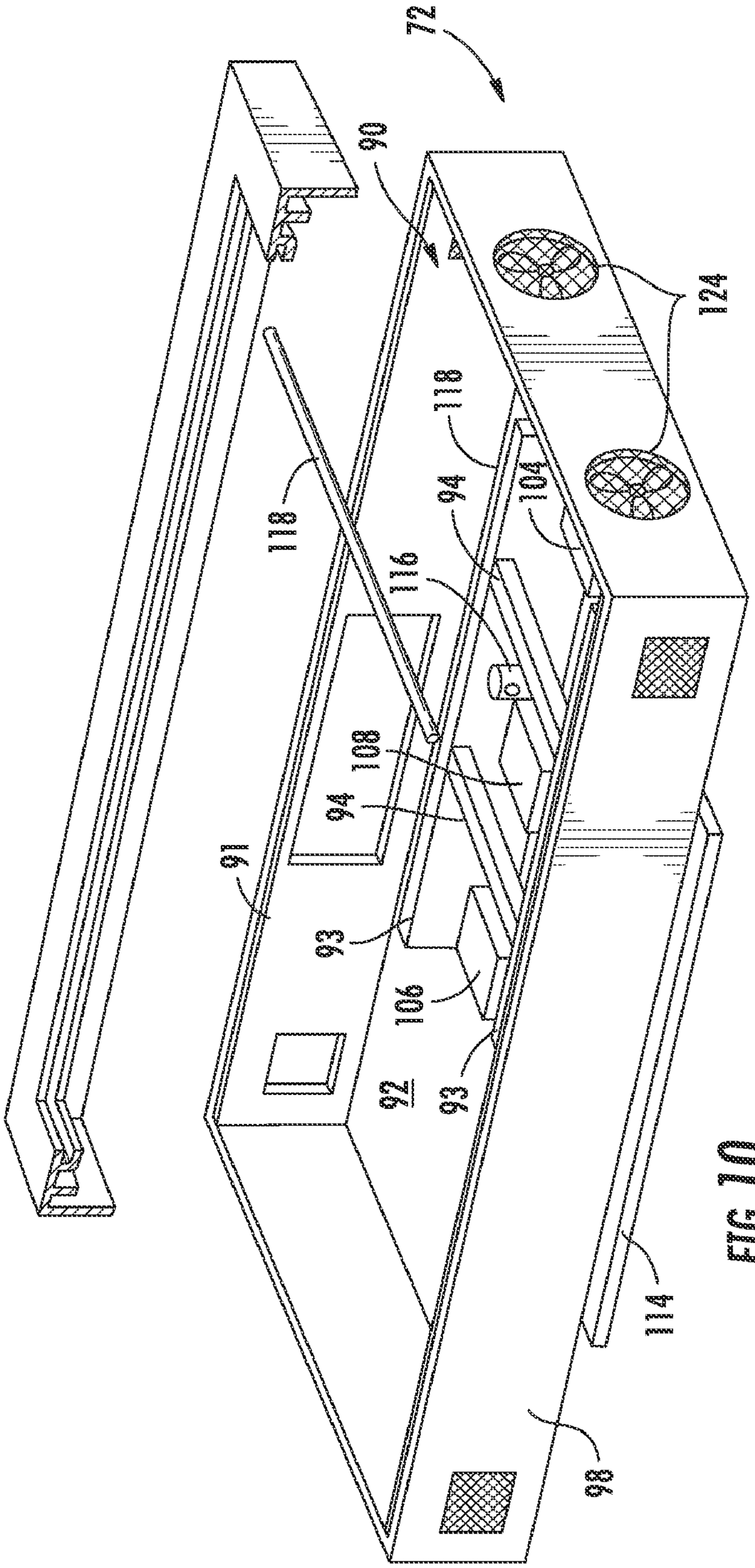

FIG. 10

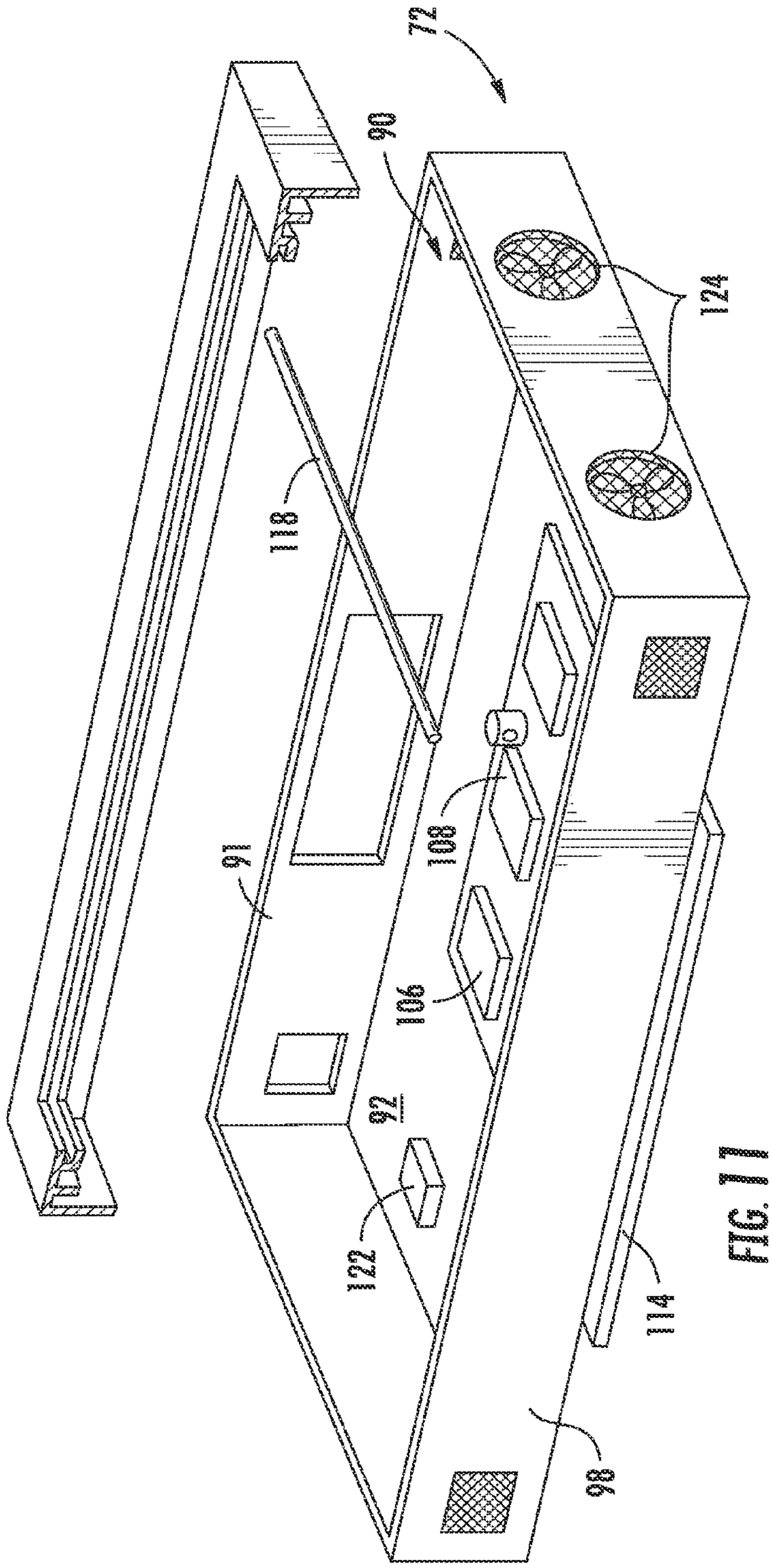

FIG. 13

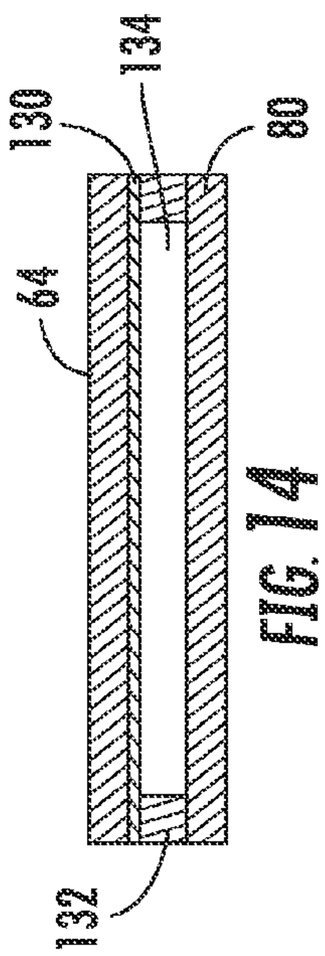

FIG. 14

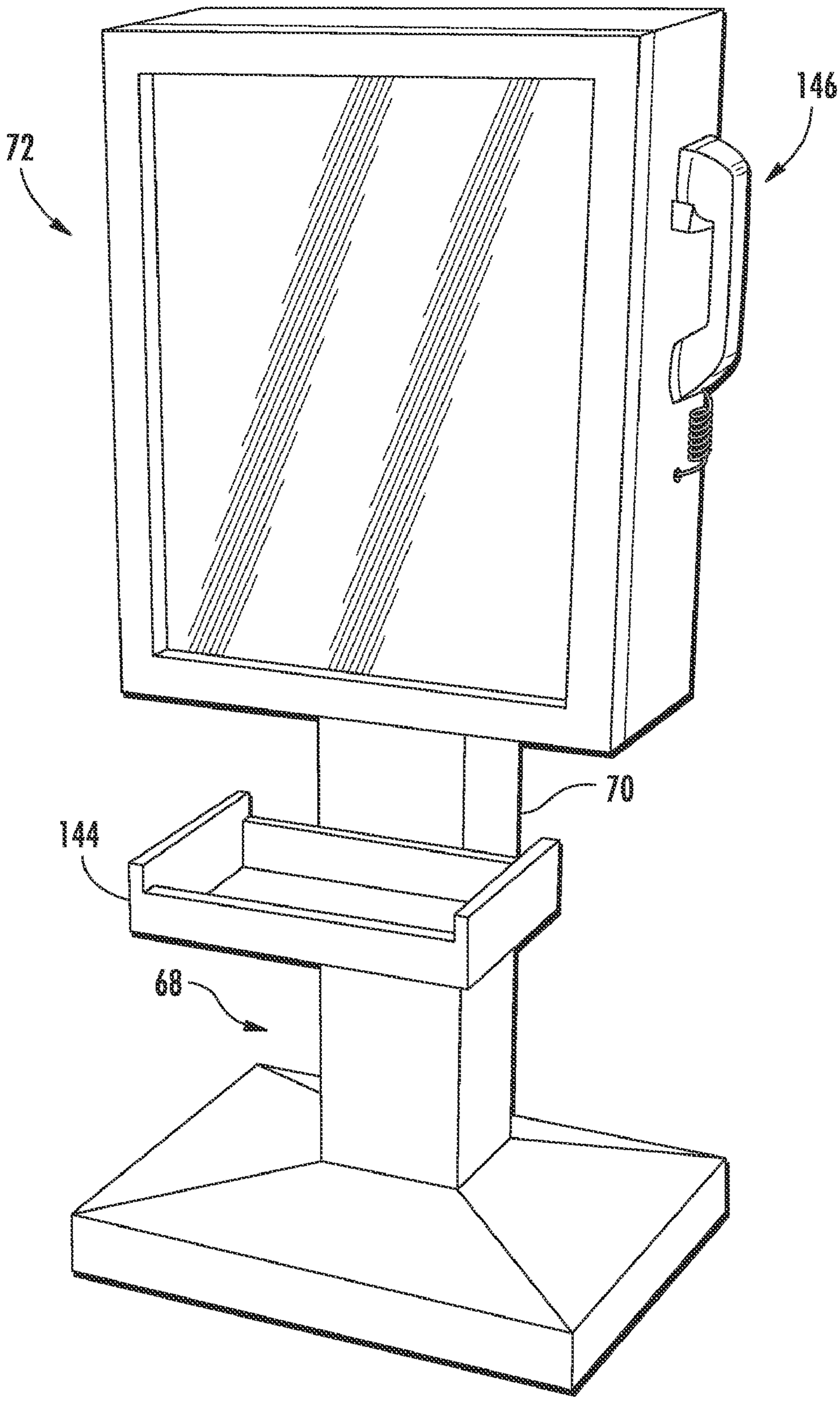

FIG. 13

REMOTE CONTROL ELECTRONIC DISPLAY SYSTEM

RELATED APPLICATIONS

This application is a continuation of U.S. Ser. No. 10/874,102, filed Jun. 21, 2004, now U.S. Pat. No. 7,369,058, which is a continuation of U.S. Ser. No. 10/010,556, filed on Nov. 8, 2001, now abandoned, which is a continuation of application Ser. No. 09/295,894, filed on Apr. 21, 1999, now U.S. Pat. No. 6,384,736, which is a continuation-in-part of application Ser. No. 09/132,456, filed on Aug. 11, 1998, now abandoned, which claimed the benefit of Provisional Patent Application No. 60/083,597, filed on Apr. 30, 1998.

BACKGROUND OF THE INVENTION

1. Field of the Invention

This invention relates in general to certain new and useful improvements in display signs, and more particularly, to remotely controlled electronically operable display signs in which a display on a sign may be changed at will from a remote source, and methods of displaying information in such manner that the sign is used as an instrument to enhance the image of a product or service.

2. Brief Description of Related Art

Display signs are used in a wide variety of industries, frequently as promotional and advertising aids. Thus, many retail stores will employ display signs in the front of their stores or elsewhere featuring products which are being sold or otherwise offered by that establishment. Display signs are also frequently used for traffic control by various municipalities and governmental agencies.

Essentially all display signs presently available are static in that they carry a substrate with a message or design thereon and which is to be conveyed, as for example, a paper sheet having information thereon for display and which may be frequently mounted behind a transparent member such as a sheet of glass.

In many cases, the poster or other display sheet may be mounted within a frame having a light source mounted therein. In this case, the front face of the sheet may be lighted from lights located along portions of the periphery of the frame. In some cases, when using a somewhat transparent or translucent sheet, back lighting may also be employed.

The cost of preparing display signs made with paper and paper-board substrates can be quite substantial. Initially, the art work must be prepared often times by hand, although certain computer aids for purposes of preparing the drawing may be available.

Nevertheless, preparation of the drawing is labor intensive. Thereafter, multi-color printing is usually required in order to complete the preparation of the paper or paper-board sign or display. These various steps, as indicated, are labor intensive and therefore materially add to the overall costs of preparing a sign or display, particularly when made of a paper or paper-board material.

In addition to the foregoing, there are also costs involved in the shipping or transport of these signs. Generally, they cannot be folded or bent or they would otherwise be unsuitable for use. As a result, special precautions and shipping containers must be provided for transport of the paper or paper-board substrate signs or displays.

There have also been display signs which use a frame and a source of light along with a glass or Plexiglas sheet having an image or other information literally formed on the sheet, as for example, by means of glass etching, masking, or the like.

However, with this type of display, when it is necessary or desirable to change the display in the sign, it is necessary to prepare a new piece of glass or Plexiglas or otherwise a masking on a rear surface thereof having other information presented thereon.

Here again, the cost of preparing an etched glass sheet can be quite substantial. The same also holds true of the outer transparent sheets with masks on the rear surface thereof to create a design or display with that sheet. Again, because of the frailty of these sheets, substantial precautions must be taken for the transport or shipment of these sheets.

There is presently no display sign capable of having information changed thereon as quickly as information can be changed on the screen of a computer monitor. Moreover, and independently thereof, there is presently no effective display sign which can be changed from a remote location.

OBJECTS OF THE INVENTION

It is, therefore, one of the primary objects of the present invention to provide an electronic display sign which uses a flat panel display image and which can readily be changed in accordance with electronic signals applied thereto.

It is another object of the present invention to provide an electronic display sign of the type stated which can be altered rapidly through the use of a computer or otherwise through an image scanner.

It is a further object of the present invention to provide an electronic display sign of the type stated which can be controlled from a remote source and the display on the sign can be changed at will from that remote source.

It is an additional object of the present invention to provide a display sign of the type stated which completely eliminates the need for interchangeable substrates bearing the information to be displayed.

It is also an object of the present invention to provide an electronic display sign and a method of altering a display on a sign electronically and without using interchangeable substrates bearing information to be displayed.

It is another salient object of the present invention to provide a method of displaying information by generating that information from a remote source and transmitting that information to a display sign.

It is still another object of the present invention to provide a unique circuit enabling operation of a display sign from a remote source.

It is still a further object of the present invention to provide a method of displaying information on the screen of the display sign, potentially along with other external action, such as the addition of sound or the like, to enhance a product or a service on the display sign.

It is yet another object of the present of the invention to provide a display sign of the type stated which can be used to provide value plus advertising and which also enables the use of animation with respect to any message displayed thereon.

With the above and other objects in view, my invention resides in the novel features of form, construction, arrangement and combination of parts presently described and pointed out in the claims.

BRIEF SUMMARY OF THE INVENTION

The present invention relates in general terms to a display system including a display sign which is electronically accessible from a remote source and which enables the almost automatic change of a display pursuant to control of an operator at the remote source. In a broad sense, the display system

of the present invention comprises a display sign having a display panel thereon as well as display generating means at the remote source for generating a display to be displayed on that display panel. The display is actually generated in the form of an electrical signal and the system comprises a transmitting means for transmitting the electrical signal representing the display to the display panel of that display sign.

The present invention also provides a method of generating a display on a display sign from a remote source. The method involves the steps of generating the display and then transmitting that display to the display sign in the form of electrical signals representing the display. The display sign is provided with electronics using the received electrical signal to recreate the generated display and present same on the display panel.

In one embodiment of the invention, the means for transmitting the display is an electrical conductor connected between the display sign and the display generating means at the remote source. In another embodiment of the invention, the means for transmitting the display is a wireless transmission means, such as by means of radio frequency transmission, satellite transmission, or the like.

In a more preferred embodiment of the invention, the means for generating the display comprises an image generating means which enables the generation of initial image forming part of the display and a temporary storage for temporarily storing that image. Editing means are also provided for adding material to or otherwise modifying the image. Thereafter, a permanent storage is provided to enable storage of the generated display in electrical format, at least until such time as transmission thereof to the display sign.

In still a more preferred embodiment, the apparatus comprises a scanning means for scanning a particular image and converting the image into electrical signals representative thereof. The image is then stored in the temporary storage. A keyboard input may be connected to that temporary storage for introducing information through a keyboard input. In addition, means is provided for adding other copy material. Thereafter, all of the material added can be edited by an operator to form a display. The display is then stored in a permanent storage.

It is also possible to generate a display, or to otherwise add information to a display, or otherwise alter a display by means of information introduced over the World Wide Web. Thus, various inputs can be made from a variety of sources and all of which can be processed and added to or otherwise used to modify a proposed image, as may be desired.

At a predetermined time, the stored display can then be transmitted to a storage in the sign. Moreover, a plurality of different displays can be stored at the remote source and these displays can be sequentially transmitted to the display sign. In this way, an operator can manually or automatically control the generation of a plurality of desired displays in a predetermined time sequence.

The present invention not only allows for the display to be generated at the sign from a remote source, but it also allows for a plurality of displays to be presented in a desired format and in a desired predetermined time arrangement, as aforesaid. As a result, there is no need to use hard copy displays, such as pre-printed paper displays. Furthermore, minor changes can be electronically made in a display as, for example, minor price changes can be made without the necessity of re-printing.

The display sign is also of a unique construction in that it comprises means for controlling certain atmospheric conditions and, particularly, temperature in the display sign. Furthermore, an interference filter is formed on the surface of the display panel to preclude excess heat generation within the display sign. The display panel is preferably a plasma display, as hereinafter described in more detail.

The display sign preferably includes an outer housing which may be provided with a removable front face or so-called "cover." The front face is provided with an enlarged opening in order to enable a display panel to appear through that opening. A transparent protective sheet may be disposed over the display panel.

The housing is in the form of a rectangularly shaped box, although it may adopt other shapes. The major components which enable the display including the display panel are preferably mounted on a separate chassis to enable easy and convenient assembly of the display sign. The separate chassis is secured through the display box to a mounting station, such as a display stand. In this way, only one having authorized access to the interior of the display housing can disconnect the chassis and the mounting station.

The chassis in the preferred embodiment includes a power supply for operating the plasma display panel. In addition, the chassis may also comprise a second power supply for operation of a processor or computer within the housing. The computer is designed for connection to the temporary storage at the remote source and will receive generated displays in electrical signal format. The computer is programmed to recreate those displays at the sign and generate the same through the plasma display panel. For this purpose, the computer is also mounted on the chassis.

The housing is preferably provided with a plurality of openings extending primarily throughout the side wall thereof. Moreover, venting fans may also be provided for venting heated air in the housing to the exterior.

The foregoing objects and the advantages of this invention have been met and fulfilled by this system and method which has been briefly described in the general description. However, the invention will now be described in more detail in the following detailed description and in the accompanying drawings. Nevertheless, it is to be understood that these drawings and the following detailed description are only set forth for purposes of illustrating the general principles of the invention. Therefore, it should be understood that the accompanying drawings and the detailed description are not to be taken in a limiting sense.

BRIEF DESCRIPTION OF THE DRAWINGS

Having thus described the invention in general terms, reference will now be made to the accompanying drawings in which:

FIG. **1** is a schematic component view showing those elements necessary for generating a display either through hard wired conveyance or otherwise wireless conveyance of information;

FIG. **2** is a schematic circuit diagram showing major components necessary involved in the generation of an electronic display from a remote source;

FIG. **3** is a schematic flow diagram showing those steps involved in generating a display from a remote source;

FIG. **4** is a perspective view of one form of display sign constructed in accordance with and embodying the present invention;

FIG. **5** is a side elevational view of the display sign of FIG. **4**;

FIG. **6** is a perspective view of a lid or cover which extends over the display sign;

FIG. **7** is a fragmentary vertical sectional view taken along line **7-7** of FIG. **6**;

FIG. **8** is a vertical sectional view, similar to FIG. **7**, and showing a slightly modified form of cover used with the display sign of the present invention;

FIG. **9** is an exploded perspective view showing some of the major components in the display sign of the present invention;

FIG. **10** is an exploded fragmentary perspective view, partially broken away, and somewhat similar to FIG. **9**, and showing the various components in their assembled position;

FIG. **11** is a fragmentary sectional view showing one form of panel construction used in the present invention;

FIG. **12** is a perspective view showing one type of mounting for a display sign constructed in accordance with and embodying the present invention; and

FIG. **13** is a fragmentary perspective view showing a modified form of display sign constructed in accordance with and embodying the present invention.

FIG. **14** is a vertical sectional view showing the relationship of the display panel and a transparent cover plate therefor used in the system of the present invention.

DETAILED DESCRIPTION OF A PREFERRED EMBODIMENT

Referring now in more detail and by reference characters to the drawings, FIG. **1** illustrates the major components forming part of a display system D in accordance with the present invention. This display system primarily shows the generation of a display from electrical signals representative of that display at a remote location and transmission to a display sign for recreation on that display sign.

In accordance with the schematic illustration of FIG. **1**, the display system D comprises a display sign **20**. Incorporated within the display sign **20** or otherwise being connected to the display sign is a sign controller **22**. This controller may adopt the form of a microprocessor or computer in the sign and preferably includes a storage, as hereinafter described in more detail.

The display system D of the invention further comprises a display generating means **24** at a remote source and which is usually comprised of a computer **26** which may adopt the form of a processor and storage, as well as a scanner **28**. In the embodiment of the invention as shown, the scanner receives ad copy **30** and generates a display in electrical format which can then be transmitted from the computer **26** to the display sign **20**.

One of more inputs from the World Wide Web can also be connected to the computer **26**, as shown in FIG. **1**, for aiding in or otherwise being used to generate the copy which is to be displayed on the plasma display screen **20**. The computer **26**, in the embodiment as illustrated, may be located at a remote site with respect to the display sign **20**. However, it should also be understood that the display sign **20** also includes its own internal computer so that the entire display is essentially self-contained and can be operated without communication with a remote source. However, the remote source is needed in order to change any display which may otherwise be stored in the memory of the computer at the display screen, or to otherwise modify the manner in which the display is made.

FIG. **1** also illustrates both a hard wire conductor means for transmitting the generated display, as well as a wireless means for transmitting the generated display. For the purposes of hard wire conductor transmission, the computer **26** is provided with a modem **32** and the controller **22**, and the display sign **20** is similarly provided with a corresponding modem **34**. As indicated previously, wireless transmission is also available and could adopt the form of microwave signal

transmission, radio frequency transmission, including satellite transmission, or the like. In this respect, the signal which is generated is still an electrical signal in either radio frequency format or other wireless transmission format for wireless transmission. For purposes of wireless transmission, a satellite **36**, as shown, may be employed, such that the wireless transmission will follow the path **38** shown in the dotted lines of FIG. **1**.

FIG. **2** illustrates those major components forming part of the display system of the present invention. In this case, the display system comprises the scanner **28** which is usually employed for purposes of generating the initial image. Typically, a pre-prepared image of the element to be displayed is used and scanned from the scanner **28** into a temporary storage **40**. The image to be scanned by the scanner **28** may be a pre-drawn image or otherwise, it can be an image adopted from an existing source. The scanner **28** will effectively digitize the image and thereby store that digitized image into the temporary storage **40**.

A keyboard input **42** is also connected to the temporary storage **40** for introducing information, such as typewritten information, into that storage. The temporary storage **40** also receives an input from a World Wide Web **43** and which is schematically illustrated in FIG. **2**. In effect, the World Wide Web would actually constitute one or more inputs from computer transmission lines.

The temporary storage **40** operates in conjunction with a processor **44** and a manually operable editor **46**. The editor **46** is primarily designed to manipulate the images introduced into the processor **44** and the information from the keyboard input **42** into a desired format. Thus, a user of the system can manually superpose one image over another or otherwise modify two images by blending them together, etc. The editor **46** merely contains controls to enable the processor **44** to perform those functions. In this sense, the editor could also be another keyboard input much in the same manner as a computer keyboard input.

The information from the temporary storage **40** is then introduced into a permanent storage **48** where it can be retained, either indefinitely, or at least until such time as it is transmitted to a display sign, as hereinafter described in more detail.

The display system of the invention may also comprise a transmitting means **50** in the form of a transmitter, which is schematically illustrated in FIG. **2**. The transmitter means **50** may adopt any conventional form of a transmission means as, for example, the modems **32** and **34**, or otherwise for wireless transmission, a radio frequency transmitter, etc.

The aforesaid components constitute those major components which will form part of the display system and the remote site. Thereafter, the images which form the displays along with the other incorporated information therein can be transmitted to a display storage **60** located at and forming part of a display sign **20**. The display sign **20**, through its own processor, as hereinafter described, enables the generation of a display on a display panel **64** forming part of the display sign **20**. The display panel **64** is also hereinafter described in more detail.

The display sign **20** may form part of or otherwise may be mounted on a stand **66**, as best shown in FIG. **12**. The stand **66** conventionally includes a base **68** as well as an upstanding leg **70**, the latter of which would engage and support the display sign **20**. However, it should also be understood that the display sign **20** could be provided with a mounting means, as hereinafter described, for mounting to a wall or like structure.

FIG. **3** illustrates some of the major steps associated with the method for generating a display from a remote source. In

this case, it can be seen that an image, such as an advertising image, is scanned and digitized for introduction into a temporary storage, such as the temporary storage **40**. Again, keyboard input information is also provided, as well as other copy information, as shown in FIG. **3**. This other copy information is typically introduced through the scanner **28**.

After the display has been formed, it is stored in the permanent storage **48** and then introduced into the display storage **60**. FIG. **3** also illustrates a rotational sequence program which can be used at the remote site or at the display sign. Thus, various displays can be generated in sequence at the display sign and at pre-determined time intervals.

The display sign **20** is more fully illustrated in FIGS. **5-11** of the drawings. The display sign **20** generally comprises an outer housing **72**, such as a rectangularly shaped housing. The housing is preferably formed of a metal and even more preferably a light weight metal, such as aluminum, although it could be formed of steel or other structural materials. In this respect, the housing could also be formed of plastics and even reinforced composite plastics.

The housing **72** is provided with a removable lid or cover plate **74** having a depending rim **76** which fits around a portion of the side wall of the housing **72**. In addition, the lid or cover plate **74** is provided with an enlarged central opening **78** in order to enable the display panel **64** to appear therethrough. A transparent cover plate **80**, in the nature of a protective sheet, could also be included in this opening **78** if desired. Furthermore, the removable lid or cover plate **74** is secured to the housing **72** in some manner as to preclude unauthorized opening as, for example, tamper-proof fasteners.

In order to preclude glare on the display panel **64**, a top plate **69** is mounted on the upper end of the housing and carries at its outer end an angularly located somewhat downwardly struck visor **71**. This construction is effective in reducing glare on the display screen **64**, particularly from overhead light sources. The top plate **69**, which also functions as a visor, is optional in construction and can be eliminated in those environments where not required. It is also possible to provide a non-glare coating on the transparent cover plate **80**, although the coatings themselves have not necessarily been fully effective in eliminating all glare. In a preferred embodiment, the top plate **69** has an overall dimension from the rear of the housing of about 7". The lip **71** extends downwardly from the top plate **69** at a about a 45° angle. However, other sizes and angular relationships could be used, as may be required.

The transparent protective sheet **80** may be formed of a transparent plastic material, or otherwise it may be formed of glass. However, glass is not preferred due to the fact that it will crack or shatter with any rough handling. The transparent protective sheet **80** is retained in a U-shaped grove **82** formed at the edge of the opening **78**. This opening is formed by an integrally created U-shaped channel **84** surrounding the edge of the opening **78**, as best illustrated in FIG. **7** of the drawings. In addition, the lid or cover member **74** is also provided with a U-shaped channel **86** perpendicularly arranged to the grove **82** and which is sized to receive the forwardly presented edge of the housing **72**, as also best shown in FIG. **7** of the drawings.

FIG. **8** illustrates a slightly modified embodiment of the construction shown in FIG. **7**. In place of the formation of a U-shaped channel **84**, a plurality of brackets or tabs **88** affixed to the inside of the cover member **74** surrounding the opening **78**, are used to hold the transparent sheet **80** in a fixed position. The remaining portions of the lid are substantially identical to those shown and described in connection with FIG. **7**.

The operating components forming part of the display sign **20** are actually mounted on a chassis **90** disposed within the housing **72**. The chassis **90** comprises a pair of longitudinally extending side plates **91** and which are connected by a bottom plate or chassis plate **93**, as best shown in FIG. **9** of the drawings. Moreover, and by reference to both FIGS. **9** and **10**, it can be seen that the chassis **90** is disposed within the housing **72**, as hereinafter described. Mounted on the upper surface of the chassis plate **92** are a pair of longitudinally extending frame bars **93** and which are connected by transversely extending cross-bars **94**. Moreover, the longitudinally extending frame members **93** and the cross-bars **94** can be mounted on a supporting plate **96**. Although the supporting plate **96** is provided in a preferred embodiment, it is not absolutely necessary and this plate could be eliminated, if desired.

The housing **72** is preferably comprised of an enclosing side wall **98** and a rear wall **100** which extends thereacross and thereby forms an interior chamber **102**. The chassis **90** can be secured to this rear wall **100** by means of screws or other fasteners (not shown) which extend through the back plate. However, other forms of securement could be provided for this purpose, as hereinafter described.

The major operating components of the display sign are mounted on this chassis which is located within the housing **72**, as aforesaid. These major operating components include a power supply **104** for the computer **26** and which also contain the display storage **60**. A separate power supply **108** is also mounted on the chassis plate **96** and provides operating current for the other components of the display housing. The computer is effectively a microprocessor and contains the storage, as aforesaid, as well as a random access memory and a processor for controlling the display of a sign and also is operated from a control source at a remote location. Thus, and in this respect, the computer **106** is effectively a "slave" computer in that it receives instructions from the remote source and performs those instructions in the display sign by generating the proper display in accordance with the signals submitted to the computer **106**.

Located on and secured to the upper surface of the chassis **90** is the display panel **64**. In a preferred embodiment of the invention, the display panel is a plasma display. These display units are relatively thin and have a thickness in the order of about 35 mm. One of the preferred forms of display panel is made by Fujitsu and is identified as a "Full Color Plasma Display". These displays effectively operate as high-definition direct-view television monitors.

These displays generally contain about 640 horizontal display pixels and about 480 vertical pixels along with about 1920 horizontal display cells and 480 vertical display cells. Moreover, they operate with gradations of red, green and blue and present a viewing angle of about 140°. Internally, the display is usually comprised of an IF controller, a data controller, a random access memory, and a driver controller. Nevertheless, since the plasma display is available in the art, it is therefore neither illustrated nor described in any further detail herein.

It is important to recognize that the display sign itself is generally fully self-contained and can literally be moved and operated at different locations. This is unlike the larger versions of display signs in which separate computer operated systems are required in order to operate the display panel itself. These display signs are effectively made with high definition and high resolution display panels. The panels are flat, as aforesaid, and can be operated at standard line current, such as 120 volt AC current. As indicated previously, all of these plasma operated display panels are computer operated.

In accordance with the present invention, the entire display panel, whether or not a plasma panel, is computer operated from a computer source located within the display sign housing. In this sense, a remote source is used to generate the display which is to be shown on the display panel. However, a plurality of displays can be pre-prepared and stored in the memory of the computer contained in the display panel housing. Nevertheless, the remote source would be used to revise or alter those displays, as may be required.

Based on the foregoing, the display panel of the invention can be described as a self-contained computer controlled flat panel display screen providing high resolution and definition. Although it is preferable to use the plasma operated display panel, it is possible to use those relatively flat computer controlled display panels which are not plasma operated but nevertheless still provide high resolution and definition and which are still nevertheless portable. Therefore, the display panel which is referred to as a computer controlled display panel is preferably one which is self-contained and includes a computer controlling a flat panel display screen of the type which provides both high resolution and definition and which is also relatively portable without the need for heavy transport equipment. This computer controlled display panel, when used in a display sign, also has a computer operating the display panel located in the display sign housing.

The aforesaid plasma display screens are relatively thin in their overall construction, having a thickness within the range of about 35 mm, as aforesaid. Nevertheless, the flat panel display panel of the present invention is one which is deemed to have a thickness which does not exceed about six inches. Moreover, the entire display sign preferably does not have a thickness exceeding about twelve inches. Although it is possible to use a computer for controlling the display panel outside of the sign housing, it is preferable to incorporate the computer in the sign housing.

The display panel used in the display system of the present invention differs substantially from that of a standard television type display. In a television display, the image will change at the display rate as, for example, fifty frames per second. Even though the image may not change such that the viewer perceives of a same display, the master pattern is such that the image on that screen nevertheless changes at the display rate. In the case of the present invention, the display on the screen may remain for essentially any period of time, including several seconds or several minutes, and there is no composite of frames to generate an image.

As indicated previously, the display system of the invention is portable. In other words, the entire display housing and stand can be moved from one location to another without heavy lifting and transporting equipment. The entire display panel and housing, along with the stand, could weigh as much as one hundred seventy pounds, but it is nevertheless liftable and movable by two or three persons. In contrast, with some of the large display signs which are presently used as, for example, a marquees over large hotels and the like, those displays may weigh several thousand pounds and require a hoist and like equipment to move same. Nevertheless, since the entire display housing can be transported from one location to another and, indeed, the display panel can be easily transported from one location to another without the need for heavy cranes and the like, these display panels and, for that matter, the entire display sign is deemed to be portable.

The location of each of the aforesaid operating components within the housing does generate heat within the housing. For this purpose, the housing **72** is provided with a plurality of apertures **110** on the side walls thereof, as shown in FIG. **9**. In like manner, the chassis is provided with aligned apertures

112, as also shown in FIG. **9**. In this way, air-flow ventilation is allowed. Moreover, and if desired, either exhaust fans or air in-take fans could be provided in adjacent relationship to the openings **110** and **112**. Other types of ventilation means could also be provided, if desired.

It has been found in connection with the present invention that optimum flow and ventilation is achieved when a pair of oppositely disposed air intakes and a pair of oppositely disposed air outlets are provided. In addition, two fans are preferably used for air circulation throughout the housing. Thus, in the embodiment as shown in FIG. **9**, for example, there are a pair of air inlets **110** and a pair of air outlets **112**. Mounted on the bottom wall of the housing, as hereinafter described, are a pair of fans **124**. This type of arrangement is highly effective in precluding condensation formation in the space between the actual display panel **64** and the transparent cover plate **80**.

The entire housing **72** is mounted on a mounting plate or support plate **114**, as best shown in FIG. **10** of the drawings. In this case, the support plate **114** is, in turn, secured to a wall or other support structure as, for example, the stand **66**, as shown in FIG. **12**. The mounting plate **114** is a provided with an upstanding protrusion **116** which extends through an opening (not shown) in the rear wall **100** of the housing. Thereafter, a locking pin **118** is provided for extension through the side walls of the housing and the opening in the protrusion **116**. In this way, it is virtually impossible to remove the display sign from the mounting plate **114**, unless one has authorized access to the interior of the housing **72**. However, it should be understood that other means for mounting the housing **72** to the mounting plate **114** could be provided for this purpose.

The display panel **64** may be disposed on the upper surface of the chassis, as aforesaid, or otherwise located within the housing. In addition, it may be connected to the electronics and located within the cover plate **74** in adjacent relationship to the transparent cover plate **80**. However, the display panel is preferably provided with an interference film or layer **130** which reduces heat introduction into the housing and operates as a type of interference film. Nevertheless, the interference film **130** could be located on the transparent cover plate **80** for this particular purpose. FIG. **14** shows a stacked arrangement in which the display panel **64** is provided with the interference film **130** and the outer transparent cover plate **80**. If desired, these components could be laminated together.

It is also possible to provide a spacer frame **132** between the transparent cover plate **80** and the display panel **64**, thereby providing an intermediate isolated space **134**, all as best shown in FIG. **14**. If the space **134** is properly insulated, then there is little or no possibility of condensation forming in the interior thereof. Moreover, the space **134** could be evacuated during the construction of the assembly.

It has also been found that the plasma operated screens will generate radio frequency interference. Moreover, it has been found that the interference film which is employed can be placed directly on the plasma operated display panel in order to preclude this interference. For this purpose, the interference layer is approximately 1.5 mil thick. It has been found that a plastic cover cannot be used for this purpose because of potential out gassing.

The display system of the present invention provides a unique advantage which has not been heretofore available. The display can be generated in this case as an analog display. Prior art systems, on a limited basis, have used computers to generate a display on a sign. However, that display is necessarily generated in a digital format and, thus, has significant limitations on the quality and the ability of a particular display

to be generated. Contrariwise, in the present invention, a display, which may be generated from a photographic image, can be essentially recreated on a display sign from a remote source.

The display system of the present invention not only operates as a true display sign per se, but it is also effective in operating as a type of product or service promotion enhancing medium. Thus, not only does the display sign present a display as such, but the manner in which the display system is operated literally has been found to provide a type of advertising or promotional medium. For this purpose, the display stand itself may be provided with an arrangement for displaying products. Referring again to FIG. **12**, it can be seen that a plurality of upstanding dividers **140** (four as shown) divide the upper surface of the base **68** into individual compartments **142**. Various products can be displayed directly in these individual compartments. As a simple example, if the display stand were used in a supermarket, cans of a specified vegetable may be literally stacked in one of the compartments **142**, packaged meat products could literally be displayed in another one of the compartments, etc. For this purpose, the construction of the base can vary and, for that matter, additional shelves can be mounted on the legs **70** in order to increase the display space.

In another embodiment of the invention, the display sign can be used as a type of point of sale promotion enhancer. Referring to FIG. **13**, for example, it can be observed that there is a display sign **20** also mounted on a stand **68** having an upstanding leg **70**. For purposes of providing information, such as coupons which could be used, e.g. in a drugstore, a rack **144** is mounted on the leg **70**, as shown in FIG. **13**. This rack can be sub-divided into individual compartments for holding various types of informational sheets which may be picked up by a user. In addition, and for purposes of making reservations when a display advertises a particular feature or event, or when the display advertises a hotel, for example, a telephone **146** can also be connected to the outer housing **72**. This telephone **146** could either be a dialing telephone or one which is connected directly to a source capable of taking a reservation or otherwise booking an arrangement for the caller. Thus, as a simple example, the display sign could be generating displays featuring a particular hotel and if the observer is pleased with the displays generated, he or she can merely pick up the telephone handset, as shown in FIG. **13**, and immediately access an operator or other agent capable of making the reservation or booking the particular event or hotel room for the caller.

These few features alone illustrate the wide versatility capable of being achieved with the display system of the present invention. In this respect, the display system can generate a type of "streaming media", that is, it possesses the capability of presenting continuously groups of advertisements which may be run together end on end and, for that matter, can even blend advertisements. This may be particularly advantageous when a product display is also set up on the base, as previously described. In addition, the display can actually be animated with a type of 3-D presentation. Various graphic aids can also be used. As a simple example, the display can be generated initially from top to bottom or from bottom to top. FIG. **12** shows, for example, a display which is coming from the lower right hand corner of the display screen and which is being increased in size over time. Thereafter, the next display could come from a different corner or from a side, top or bottom of the screen. This type of presentation has been found to generate a great deal of attention.

In addition to the foregoing, the product or service which is being generated can also be animated in order to obtain attention of individuals. Furthermore, sound can be generated. Thus, as a simple example, on each occasion when a new product or service is offered or, for that matter, when images of a particular product or service being offered changes, a bell can ring or other noise can be generated in order to catch the viewer's attention. As indicated previously, the basket or rack enables hand-outs to the viewer and, thus, represents a type of "uplift" advertising, that is, it causes people to purchase more of a particular product or service than they would otherwise purchase.

The display system of the invention also has the capability, particularly when operated from a remote source, of causing alterations of the display at any point in time. Thus, for example, if an eight ounce box of a particular product is being displayed, it is possible to immediately cause a four ounce box of that same product or, for that matter, another product to be presented over the image of the eight ounce box of product. Moreover, with the animation and the fact that the display can be generated in essentially any fashion, it is possible to place a product or service in a most favorable light.

It is also possible to operate a plurality of these display signs at a single location or at different locations from one remote source. Moreover, all of the display signs could be operated simultaneously or individually. In addition, all of the display signs could be connected together through a single telephone circuit enabling the access of all of the individual display panels. In other words, one computer can operate a plurality of display signs or other display generating panels through telephone circuitry or by other means.

One of the features of the display stand of the invention is the fact that it actually attracts the viewer, that is, viewers will literally stand in front of the display in order to view same. This has been found to be important in that it actually increases the purchase or other acquisition of the service or product. Thus, the display stand not only functions to merely advise of the availability of a product or service, but it provides information about that product or service and, in addition, promotes and enhances the product and service so that the interest of the viewer is increased in that product and service by viewing the display. In this way, the display device not only functions to present displays, but it actually functions to enhance and increase the advertising appeal of a particular product or service.

Thus, there has been illustrated and described a unique and novel display system which enables a display sign to be operated from a remote source and where a display can be generated at the sign based on signals from the remote source and which are transmitted to the display sign for generation of an analog display thereon. The display system and the display sign forming a part thereof thereby fulfill and meet all of the objects and advantages which have been sought. It should be understood that many changes, modifications, variations and other uses and applications will become apparent to those skilled in the art after considering this specification and the accompanying drawings. Therefore, any and all such changes, modifications, variations and other uses and applications which do not depart from the spirit and scope of the invention are deemed to be covered by the invention.

Having thus described out invention, what I desire to claim and secure by Letters Patent is:

1. A display system for generating one or more images of a product or service on a display panel and enhancing the image of the product or service displayed thereon, sad display system comprising:

i) at least one display sign comprising:

a) an outer housing and

b) a display panel on said housing and being observable to a viewer; and

ii) a computer means in proximity to said housing and dedicated to the operation of the at least one display sign, said computer means operating on the basis of a series of sequential programmed instructions at a predetermined time or on a real time basis, sad computer means A) controlling the image presented on said display panel, B) being capable of altering the direction and manner in which the image is generated on the display panel, D) being capable of providing enhancement of any computer generated effects to an image on the display panel to thereby enhance or modify the image displayed on said display panel, and E) being capable of providing animation to the image of a displayed product or service to increase consumer appeal to the displayed product or service.

2. The display system of claim **1** further characterized in that computer means is a dedicated computer means dedicated to the operation of the display system and for operation as a stand alone computer means.

3. The display system of claim **1** further characterized in that said computer means is a dedicated computer means.

4. The display system claim **1** further characterized in that each display sign is located in a position so as to orient the display panel to be observed by a plurality of observers.

5. The display system of claim **1** further characterized in that certain of said housings are mounted on stands which have shelf space for holding a product of the type being displayed on said display panel or printed information on a product or service of the type being displayed on the display panel.

6. The display system of claim **1** comprising a self-contained computer operated processing means associated with said display sign for generating a plurality of displays from electronic signals containing information relating to the displays and memory means associated with said processing means and storing information delivered in digital signal format as digital signals and allowing the digital signals to be reconverted to visible images which are displayed at one or more selected ones of said display panels, and where a large number of different displays are storable in said memory means and displayed at time selected periods independently of external electronic signals from a remote source.

7. The display system of claim **6** further characterized in that said computer operated processing means is capable of receiving electronic signal containing information relating to the displays from a remote source the information from the remote source and controlling the display of that information as displays on the display pane and also controlling the generation of displays on the display panel which are stored in the memory means, and said computer also being operable independently for operating as a stand alone computer and as a means for accessing the internet through the World Wide Web.

8. The display system of claim **1** further characterized in that said system further comprises: receiving means for receiving electronic signals transmitted to the display system from a remote source and which are representative of a plurality of displays to be displayed on one or more of the display panels.

9. The display apparatus of claim **1** further characterized in that said display signs are readily transportable and completely self-contained and positionable at a generally fixed location for operation at that fixed location.

10. The display system of claim **1** further characterized in that said display system comprises a plurality of display signs each of which is locatable at a substantial distance from a signal generating means at a remote source which generates signals capable of being converted to images to be displayed by the display sign, whereby each said display sign is operable as a self-contained unit independently of any networking for generation of displays.

11. The display system of claim **1** further characterized in that said display panel comprises a flat panel high resolution display screen.

12. The display system of claim **1** further characterized in that the said housing is mounted on a stand which has shelf space for holding a product of the type being displayed on said display panel or printed information on a product or service of the type being displayed thereon.

13. The display system of claim **1** wherein the images are displayed as a succession of images.

* * * * *

EXHIBIT C1

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February 7, 2013

VIA CMRRR

9414 7112 0108 0884 9989 87

CERTIFIED MAIL TRACKING NUMBER

Mr. Brian Snover
Berkshire Hathaway Inc. d/b/a Borsheims
3555 Farnam Street, Suite 1440
OMAHA, NE 68131

Re: Borsheims's Infringement of Activision TV, Inc.'s U.S. Patent Nos. 6,215,411, 6,384,736, and 7,369,058.

Dear Mr. Snover:

We write on behalf of Activision TV, Inc. ("Activision"), based in Naples, Florida. Activision is a noted innovator in digital display systems and a leader in the digital advertising market. Activision's patented technology allows it to offer digital media delivery systems far superior to those of its competitors. Activision's founder, Mr. David Gothard, is an inventor and businessman long applauded and honored for his history of innovation and for his successful career. Mr. Gothard's ingenuity is the driving force behind the creation of systems and products for delivery of dynamic digital display solutions provided by Activision.

We specifically write regarding the following patents, all entitled "Remote Control Electronic Display System," and collectively referred to herein as the "Activision Patents":

- U.S. Patent No. 6,215,411
- U.S. Patent No. 6,384,736
- U.S. Patent No. 7,369,058

The Activision Patents listed above are the direct product of Mr. Gothard's life's work. As the inventor of the Activision Patents, he has invested a tremendous amount of time and money into the development of the technology covered by the Activision Patents. Activision is the owner, by assignment, of all right, title, and interest in the Activision Patents. The Activision Patents generally relate to various aspects of digital signage, including remote controlled electronic display systems. You can find and review each of the Activision Patents listed above at www.google.com/patents.

We have identified your company as one that uses the patented technology, and we are contacting you to initiate discussions regarding your need for a license. In this letter, we explain what the Activision Patents cover, how your actions infringe those patents, and explain why a

license is needed. We should note that we have written you with the understanding that you are the proper person to contact on behalf of Borsheims. If you are not the proper person to handle this matter on behalf of Borsheims, please provide this letter to the proper person, and notify us so that we may update our records and contact that individual directly in the future.

As you may know, a patent's scope is defined by its claims, and you will see that each of the Activision Patents has different claims. While those differences matter and mean that each patent is distinct, the Activision Patents do, as a group, generally relate to the same technology field, and cover, as their titles suggest, remote control electronic display systems. Obviously each claim is separately drafted and you should consider the scope of each claim separately.

Activision has learned that your organization uses remote control digital signage technology and/or related products. By engaging in any such activities, Borsheims infringes one or more of the claims of each of the Activision Patents. Specifically, that Borsheims uses in its day-to-day operations an electronic media display system. Activision therefore seeks to discuss an appropriate resolution of Borsheims's past and ongoing infringement of the Activision Patents. We trust that Borsheims will agree to conform its behavior to respect our client's patent rights by negotiating a license rather than knowingly violating federal law by continuing to reap the benefits of our client's hard-earned patented technology without license.

Take notice that Activision has no interest in seeking a license from someone who does not infringe. If Borsheims does not utilize remote controlled digital signage as covered by the Activision Patents, then we will discuss with you how your position can be confirmed so that we may discontinue further unnecessary correspondence. In the more likely scenario that Borsheims does require a license, we are prepared to work with you to reach an agreement as to reasonable terms.

We invite you to consult with a patent attorney regarding this matter. Patents are exclusive property rights granted by law, and there can be serious consequences for infringement. Infringers who continue to infringe in the face of an objectively high risk of infringement of a valid patent can be forced to pay treble (triple) the actual damages, as well as the patent owner's litigation costs, including all attorney's fees.

Please contact us within three weeks of the date of this letter, so that we may confer with you regarding an appropriate license arrangement. You may contact me directly at (512) 948-9038 or rkiddie@farneydaniels.com. We look forward to hearing from you.

Sincerely,

Robert Kiddie, Esq.

EXHIBIT C2

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February 7, 2013

VIA CMRRR

9414 7112 0108 0884 9289 60

CERTIFIED MAIL TRACKING NUMBER

Mr. Joseph Ruble
CSG Systems, Inc. d/b/a CSG Systems
2525 North 117th Avenue
Omaha, NE 68164

Re: CSG Systems' Infringement of Activision TV, Inc.'s U.S. Patent Nos. 6,215,411, 6,384,736, and 7,369,058.

Dear Mr. Ruble:

We write on behalf of Activision TV, Inc. ("Activision"), based in Naples, Florida. Activision is a noted innovator in digital display systems and a leader in the digital advertising market. Activision's patented technology allows it to offer digital media delivery systems far superior to those of its competitors. Activision's founder, Mr. David Gothard, is an inventor and businessman long applauded and honored for his history of innovation and for his successful career. Mr. Gothard's ingenuity is the driving force behind the creation of systems and products for delivery of dynamic digital display solutions provided by Activision.

We specifically write regarding the following patents, all entitled "Remote Control Electronic Display System," and collectively referred to herein as the "Activision Patents":

- U.S. Patent No. 6,215,411
- U.S. Patent No. 6,384,736
- U.S. Patent No. 7,369,058

The Activision Patents listed above are the direct product of Mr. Gothard's life's work. As the inventor of the Activision Patents, he has invested a tremendous amount of time and money into the development of the technology covered by the Activision Patents. Activision is the owner, by assignment, of all right, title, and interest in the Activision Patents. The Activision Patents generally relate to various aspects of digital signage, including remote controlled electronic display systems. You can find and review each of the Activision Patents listed above at www.google.com/patents.

We have identified your company as one that uses the patented technology, and we are contacting you to initiate discussions regarding your need for a license. In this letter, we explain what the Activision Patents cover, how your actions infringe those patents, and explain why a

license is needed. We should note that we have written you with the understanding that you are the proper person to contact on behalf of CSG Systems. If you are not the proper person to handle this matter on behalf of CSG Systems, please provide this letter to the proper person, and notify us so that we may update our records and contact that individual directly in the future.

As you may know, a patent's scope is defined by its claims, and you will see that each of the Activision Patents has different claims. While those differences matter and mean that each patent is distinct, the Activision Patents do, as a group, generally relate to the same technology field, and cover, as their titles suggest, remote control electronic display systems. Obviously each claim is separately drafted and you should consider the scope of each claim separately.

Activision has learned that your organization uses remote control digital signage technology and/or related products. By engaging in any such activities, CSG Systems infringes one or more of the claims of each of the Activision Patents. Specifically, that CSG Systems uses in its day-to-day operations an electronic media display system. Activision therefore seeks to discuss an appropriate resolution of CSG Systems' past and ongoing infringement of the Activision Patents. We trust that CSG Systems will agree to conform its behavior to respect our client's patent rights by negotiating a license rather than knowingly violating federal law by continuing to reap the benefits of our client's hard-earned patented technology without license.

Take notice that Activision has no interest in seeking a license from someone who does not infringe. If CSG Systems does not utilize remote controlled digital signage as covered by the Activision Patents, then we will discuss with you how your position can be confirmed so that we may discontinue further unnecessary correspondence. In the more likely scenario that CSG Systems does require a license, we are prepared to work with you to reach an agreement as to reasonable terms.

We invite you to consult with a patent attorney regarding this matter. Patents are exclusive property rights granted by law, and there can be serious consequences for infringement. Infringers who continue to infringe in the face of an objectively high risk of infringement of a valid patent can be forced to pay treble (triple) the actual damages, as well as the patent owner's litigation costs, including all attorney's fees.

Please contact us within three weeks of the date of this letter, so that we may confer with you regarding an appropriate license arrangement. You may contact me directly at (512) 948-9038 or rkiddie@farneydaniels.com. We look forward to hearing from you.

Sincerely,

Robert Kiddie, Esq.

EXHIBIT C3

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March 1, 2013

VIA CMRRR
CSG Systems, Inc.
2525 N. 117th Avenue
Omaha, NE 68164

9414 7112 0108 0407 0490 97

CERTIFIED MAIL
TRACKING NUMBER

Re: Activision TV, Inc., LLC Patent Licensing

Dear Sir or Madam:

We are again writing on behalf of our client, Activision TV, Inc. ("Activision"). Several weeks ago, we wrote to you on Activision's behalf regarding their patent licensing program. In that letter, we described the patents, the technology, and what constitutes infringement. We then invited you to respond by entering into discussions to take a license. As neither our client nor we have received a response from you, Activision has asked us to determine whether we can work out a license with you, or whether additional steps might be required.

As background, our firm practices nationally and specializes solely in patent litigation and licensing. We are the lead outside counsel for Activision TV, Inc. in handling its patent matters. While our representation can involve litigation, it is our client's preference here that we first make all reasonable efforts to reach an agreement on a license. We are prepared to work with you to reach an agreement on reasonable terms. To that end, we do need to hear from you within two weeks of the date of this letter.

We encourage you to retain competent patent counsel to assist you in this matter, if you have not already done so, and you think it would be beneficial. If you have already retained patent counsel, please forward this letter to them and have them advise us of their representation (or you may so inform us directly) so that we may direct all future correspondence to them.

You may contact us at (512) 582-2828 or rkiddie@farneydaniels.com.

Sincerely,

Robert Kiddie

EXHIBIT C4

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February 7, 2013

VIA CMRRR

Mr. Thomas F. Kissinger
The Marcus Corporation d/b/a
Douglas Theatres in Lincoln, Nebraska
100 E Wisconsin Ave #1900
Milwaukee, WI 53202

9414 7112 0108 0884 9210 84
CERTIFIED MAIL
TRACKING NUMBER

Re: Douglas Theatres in Lincoln, Nebraska's Infringement of Activision TV, Inc.'s U.S. Patent Nos. 6,215,411, 6,384,736, and 7,369,058.

Dear Mr. Kissinger:

We write on behalf of Activision TV, Inc. ("Activision"), based in Naples, Florida. Activision is a noted innovator in digital display systems and a leader in the digital advertising market. Activision's patented technology allows it to offer digital media delivery systems far superior to those of its competitors. Activision's founder, Mr. David Gothard, is an inventor and businessman long applauded and honored for his history of innovation and for his successful career. Mr. Gothard's ingenuity is the driving force behind the creation of systems and products for delivery of dynamic digital display solutions provided by Activision.

We specifically write regarding the following patents, all entitled "Remote Control Electronic Display System," and collectively referred to herein as the "Activision Patents":

- U.S. Patent No. 6,215,411
- U.S. Patent No. 6,384,736
- U.S. Patent No. 7,369,058

The Activision Patents listed above are the direct product of Mr. Gothard's life's work. As the inventor of the Activision Patents, he has invested a tremendous amount of time and money into the development of the technology covered by the Activision Patents. Activision is the owner, by assignment, of all right, title, and interest in the Activision Patents. The Activision Patents generally relate to various aspects of digital signage, including remote controlled electronic display systems. You can find and review each of the Activision Patents listed above at www.google.com/patents.

We have identified your company as one that uses the patented technology, and we are contacting you to initiate discussions regarding your need for a license. In this letter, we explain

what the Activision Patents cover, how your actions infringe those patents, and explain why a license is needed. We should note that we have written you with the understanding that you are the proper person to contact on behalf of Douglas Theatres in Lincoln, Nebraska. If you are not the proper person to handle this matter on behalf of Douglas Theatres in Lincoln, Nebraska, please provide this letter to the proper person, and notify us so that we may update our records and contact that individual directly in the future.

As you may know, a patent's scope is defined by its claims, and you will see that each of the Activision Patents has different claims. While those differences matter and mean that each patent is distinct, the Activision Patents do, as a group, generally relate to the same technology field, and cover, as their titles suggest, remote control electronic display systems. Obviously each claim is separately drafted and you should consider the scope of each claim separately.

Activision has learned that your organization uses remote control digital signage technology and/or related products. By engaging in any such activities, Douglas Theatres in Lincoln, Nebraska infringes one or more of the claims of each of the Activision Patents. Specifically, that Douglas Theatres in Lincoln, Nebraska uses in its day-to-day operations an electronic media display system. Activision therefore seeks to discuss an appropriate resolution of Douglas Theatres in Lincoln, Nebraska's past and ongoing infringement of the Activision Patents. We trust that Douglas Theatres in Lincoln, Nebraska will agree to conform its behavior to respect our client's patent rights by negotiating a license rather than knowingly violating federal law by continuing to reap the benefits of our client's hard-earned patented technology without license.

Take notice that Activision has no interest in seeking a license from someone who does not infringe. If Douglas Theatres in Lincoln, Nebraska does not utilize remote controlled digital signage as covered by the Activision Patents, then we will discuss with you how your position can be confirmed so that we may discontinue further unnecessary correspondence. In the more likely scenario that Douglas Theatres in Lincoln, Nebraska does require a license, we are prepared to work with you to reach an agreement as to reasonable terms.

We invite you to consult with a patent attorney regarding this matter. Patents are exclusive property rights granted by law, and there can be serious consequences for infringement. Infringers who continue to infringe in the face of an objectively high risk of infringement of a valid patent can be forced to pay treble (triple) the actual damages, as well as the patent owner's litigation costs, including all attorney's fees.

Please contact us within three weeks of the date of this letter, so that we may confer with you regarding an appropriate license arrangement. You may contact me directly at (512) 948-9038 or rkiddie@farneydaniels.com. We look forward to hearing from you.

Sincerely,

Robert Kiddie, Esq.

EXHIBIT C5

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August 1, 2012

VIA CERTIFIED MAIL, RETURN RECEIPT REQUESTED

Mr. Bradley Walker
CEO
Nanonation, Inc.
301 S. 13th Street, Suite 700
Lincoln, NE 68508

Re: Nanonation, Inc.'s infringement of U.S. Patent Nos. 6,215,411, 6,384,736, and 7,369,058, and recently allowed U.S. Patent Application No. 12/116,053

Dear Mr. Walker:

We write regarding the following patents, all entitled "Remote Control Electronic Display System" and collectively referred to herein as the "Activision Patents":

- U.S. Patent No. 6,215,411 (the "'411 Patent")
- U.S. Patent No. 6,384,736 (the "'736 Patent")
- U.S. Patent No. 7,369,058 (the "'058 Patent")
- Recently allowed U.S. Patent Application No. 12/116,053 (the "'053 Application")

We represent Activision TV, Inc. ("Activision"), the owner, by assignment, of the rights and title in and to the Activision Patents.

The Activision Patents generally relate to various aspects of digital signage. For your information and review, I specifically call to your attention the following representative claims: Claims 3 and 10 of the '411 Patent; Claims 12 and 38 of the '736 Patent; Claims 1, 15, and 22 of the '058 Patent; and Claims 27, 33, and 38 of the '053 Application.

Activision has learned that Nanonation, Inc. ("Nanonation") develops, assembles, sells, installs, and manages remotely sourced display signs and systems that infringe one or more claims of each of the Activision Patents. Nanonation's infringing products include its digital signage and kiosks.

Activision has suffered damages due to Nanonation's past infringement, and will suffer damages and irreparable harm in the future in the absence of injunctive relief to stop Nanonation's infringing activities. Accordingly, please contact me as soon as possible at (512) 582-2828 to discuss an appropriate resolution of Nanonation's past and ongoing infringement. Thank you in advance for your attention to this urgent matter.

Very truly yours,

/s/ M. Brett Johnson

M. Brett Johnson

MBJ/MG/kb

EXHIBIT C6

FARNEY DANIELS PC

Silicon Valley
Dallas

800 South Austin Ave., Suite 200
Georgetown, Texas 78626-5845
512-582-2828

www.farneydaniels.com

Delaware
Austin/Georgetown

February 7, 2013

9414 7112 0108 0884 9667 88

CERTIFIED MAIL TRACKING NUMBER

VIA CMRRR
Attn: President/CEO
Pinnacle Bank d/b/a Pinnacle Bank
1401 North Street
Lincoln, NE 68508

Re: Pinnacle Bank's Infringement of Activision TV, Inc.'s U.S. Patent Nos. 6,215,411, 6,384,736, and 7,369,058.

Dear Sir/Madame:

We write on behalf of Activision TV, Inc. ("Activision"), based in Naples, Florida. Activision is a noted innovator in digital display systems and a leader in the digital advertising market. Activision's patented technology allows it to offer digital media delivery systems far superior to those of its competitors. Activision's founder, Mr. David Gothard, is an inventor and businessman long applauded and honored for his history of innovation and for his successful career. Mr. Gothard's ingenuity is the driving force behind the creation of systems and products for delivery of dynamic digital display solutions provided by Activision.

We specifically write regarding the following patents, all entitled "Remote Control Electronic Display System," and collectively referred to herein as the "Activision Patents":

- U.S. Patent No. 6,215,411
- U.S. Patent No. 6,384,736
- U.S. Patent No. 7,369,058

The Activision Patents listed above are the direct product of Mr. Gothard's life's work. As the inventor of the Activision Patents, he has invested a tremendous amount of time and money into the development of the technology covered by the Activision Patents. Activision is the owner, by assignment, of all right, title, and interest in the Activision Patents. The Activision Patents generally relate to various aspects of digital signage, including remote controlled electronic display systems. You can find and review each of the Activision Patents listed above at www.google.com/patents.

We have identified your company as one that uses the patented technology, and we are contacting you to initiate discussions regarding your need for a license. In this letter, we explain what the Activision Patents cover, how your actions infringe those patents, and explain why a

license is needed. We should note that we have written you with the understanding that you are the proper person to contact on behalf of Pinnacle Bank. If you are not the proper person to handle this matter on behalf of Pinnacle Bank, please provide this letter to the proper person, and notify us so that we may update our records and contact that individual directly in the future.

As you may know, a patent's scope is defined by its claims, and you will see that each of the Activision Patents has different claims. While those differences matter and mean that each patent is distinct, the Activision Patents do, as a group, generally relate to the same technology field, and cover, as their titles suggest, remote control electronic display systems. Obviously each claim is separately drafted and you should consider the scope of each claim separately.

Activision has learned that your organization uses remote control digital signage technology and/or related products. By engaging in any such activities, Pinnacle Bank infringes one or more of the claims of each of the Activision Patents. Specifically, that Pinnacle Bank uses in its day-to-day operations an electronic media display system. Activision therefore seeks to discuss an appropriate resolution of Pinnacle Bank's past and ongoing infringement of the Activision Patents. We trust that Pinnacle Bank will agree to conform its behavior to respect our client's patent rights by negotiating a license rather than knowingly violating federal law by continuing to reap the benefits of our client's hard-earned patented technology without license.

Take notice that Activision has no interest in seeking a license from someone who does not infringe. If Pinnacle Bank does not utilize remote controlled digital signage as covered by the Activision Patents, then we will discuss with you how your position can be confirmed so that we may discontinue further unnecessary correspondence. In the more likely scenario that Pinnacle Bank does require a license, we are prepared to work with you to reach an agreement as to reasonable terms.

We invite you to consult with a patent attorney regarding this matter. Patents are exclusive property rights granted by law, and there can be serious consequences for infringement. Infringers who continue to infringe in the face of an objectively high risk of infringement of a valid patent can be forced to pay treble (triple) the actual damages, as well as the patent owner's litigation costs, including all attorney's fees.

Please contact us within three weeks of the date of this letter, so that we may confer with you regarding an appropriate license arrangement. You may contact me directly at (512) 948-9038 or rkiddie@farneydaniels.com. We look forward to hearing from you.

Sincerely,

Robert Kiddie, Esq.

EXHIBIT D

IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF DELAWARE

ACTIVISION TV, INC.,	§	
	§	
Plaintiff,	§	
	§	**Civil Action No. _____**
v.	§	
	§	
CSG SYSTEMS, INC.,	§	**DEMAND FOR JURY TRIAL**
	§	
Defendant.	§	

COMPLAINT FOR PATENT INFRINGEMENT

Plaintiff Activision TV, Inc. ("Plaintiff"), by way of this Complaint for Patent Infringement ("Complaint") against Defendant CSG Systems, Inc. ("Defendant"), hereby alleges as follows:

THE PARTIES

1. Plaintiff is a corporation organized under the laws of Delaware with its principal place of business at 5400 Yahl Street, Suite D, Naples, Florida 34109.

2. Upon information and belief, Defendant is a corporation organized under the laws of Delaware with a place of business at 2525 North 117th Avenue, Omaha, Nebraska 68164.

JURISDICTION AND VENUE

3. This is an action for patent infringement arising under the patent laws of the United States, 35 U.S.C. § 271 *et seq*.

4. This Court has subject matter jurisdiction over this action under 28 U.S.C. §§ 1331 and 1338(a).

5. This Court has personal jurisdiction over Defendant at least because Defendant has ongoing and systematic contacts with this District and the United States.

6. Venue is proper in this District under 28 U.S.C. §§ 1400(b) and 1391.

COUNT I

INFRINGEMENT OF U.S. PATENT NOS. 6,384,736, 7,369,058, 6,215,411 and 8,330,613

7. Plaintiff repeats and realleges the allegations of paragraphs 1 through 6 as though fully set forth herein.

8. On May 7, 2002, United States Patent No. 6,384,736 ("the '736 Patent"), entitled "REMOTE CONTROL ELECTRONIC DISPLAY SYSTEM," was duly and legally issued by the United States Patent and Trademark Office. A true and correct copy of the '736 Patent is attached as Exhibit A to this Complaint.

9. On May 6, 2008, United States Patent No. 7,369,058 ("the '058 Patent," or, collectively with the '736 Patent, the "Activision Patents"), entitled "REMOTE CONTROL ELECTRONIC DISPLAY SYSTEM," was duly and legally issued by the United States Patent and Trademark Office. A true and correct copy of the '058 Patent is attached as Exhibit B to this Complaint.

10. On April 10, 2001, United States Patent No. 6,215,411 ("the '411 Patent," or, collectively with the '736 Patent and the '058 Patent, the "Activision Patents"), entitled "REMOTE CONTROL ELECTRONIC DISPLAY SYSTEM," was duly and legally issued by the United States Patent and Trademark Office. A true and correct copy of the '411 Patent is attached as Exhibit C to this Complaint.

11. On December 11, 2012, United States Patent No. 8,330,613 ("the '613 Patent," or, collectively with the '736 Patent, the '058 Patent, and the '411 Patent, the "Activision Patents"), entitled "REMOTE CONTROL ELECTRONIC DISPLAY SYSTEM," was duly and legally

issued by the United States Patent and Trademark Office. A true and correct copy of the '613 Patent is attached as Exhibit D to this Complaint.

12. Plaintiff, as the assignee and owner of all right, title, and interest in and to the Activision Patents, has the right to assert causes of action arising under said patents and the right to any remedies for infringement thereof.

13. Defendant has been directly infringing and continues to directly infringe one or more claims of each of the Activision Patents in the United States at least by using digital kiosks in locations throughout the United States in violation of 35 U.S.C. § 271(a).

14. Because of Defendant's infringement of the Activision Patents, Plaintiff has suffered damages and will continue to suffer damages in the future.

15. Plaintiff has suffered irreparable injury due to the acts of infringement by Defendant and will continue to suffer such irreparable injury unless Defendant's infringing activities are enjoined.

16. Defendant has had notice of its infringement of the '736, '058, and '411 Patents since at least February 7, 2013, when counsel for Activision sent Defendant a notice letter by certified mail.

17. Upon information and belief, Defendant has continued to infringe despite its knowledge of the '736, '058, and '411 Patents and Activision's notice of infringement.

JURY DEMAND

Pursuant to Rule 38 of the Federal Rules of Civil Procedure, Plaintiff demands a trial by jury on all issues triable as such.

PRAYER FOR RELIEF

WHEREFORE, Plaintiff respectfully demands judgment for itself and against Defendant as follows:

A. An adjudication that Defendant has infringed the Activision Patents;

B. Permanently enjoining and restraining Defendant, its agents, affiliates, subsidiaries, servants, employees, officers, directors, attorneys, and those persons in active concert with or controlled by Defendant from further infringing the Activision patents;

C. An award of damages to be paid by Defendant adequate to compensate Plaintiff for its past infringement of the Activision Patents and any continuing or future infringement of the Activision Patents through the date such judgment is entered, together with pre-judgment and post-judgment interest, costs and expenses as justified under 35 U.S.C. § 284;

D. To the extent that Defendant's conduct with respect to the Activision Patents is found to be willful, enhanced damages pursuant to 35 U.S.C. § 284 for such willful infringement of the Activision Patents;

E. An accounting of all infringing acts including, but not limited to, those acts not presented at trial and an award for Plaintiff's damages for any such acts;

F. A declaration that this case is exceptional under 35 U.S.C. § 285, and an award of Plaintiff's reasonable attorneys' fees; and

G. Such other and further relief at law or in equity as the Court deems just and proper.

Dated: June 3, 2013

STAMOULIS & WEINBLATT LLC

/s/ Richard C. Weinblatt

Stamatios Stamoulis #4606
stamoulis@swdelaw.com
Richard C. Weinblatt #5080
weinblatt@swdelaw.com
Two Fox Point Centre
6 Denny Road, Suite 307
Wilmington, DE 19809
Telephone: (302) 999-1540

Attorneys for Plaintiff
Activision TV, Inc.

EXHIBIT E

IN THE UNITED STATES DISTRICT COURT
FOR THE EASTERN DISTRICT OF TEXAS
MARSHALL DIVISION

ACTIVISION TV, INC.,	§	
	§	
Plaintiff,	§	
	§	**Civil Action No. 2:13-cv-462**
v.	§	
	§	
CENTURYLINK, INC. D/B/A CENTURY LINK COMMUNICATIONS,	§	**DEMAND FOR JURY TRIAL**
	§	
Defendant.	§	

COMPLAINT FOR PATENT INFRINGEMENT

Plaintiff Activision TV, Inc. ("Plaintiff"), by way of this Complaint for Patent Infringement ("Complaint") against Defendant CenturyLink, Inc. d/b/a Century Link Communications ("Defendant"), hereby alleges as follows:

THE PARTIES

1. Plaintiff Activision is a corporation organized under the laws of Delaware with its principal place of business at 5400 Yahl Street, Suite D, Naples, Florida 34109.

2. Upon information and belief, Defendant is a corporation organized under the laws of Louisiana with a place of business at 450 Main Street, Lake Dallas, Texas 75065.

JURISDICTION AND VENUE

3. This is an action for patent infringement arising under the patent laws of the United States, 35 U.S.C. § 271, *et seq.*

4. This Court has subject matter jurisdiction over this action under 28 U.S.C. §§ 1331 and 1338(a).

5. This Court has personal jurisdiction over Defendant at least because Defendant has ongoing and systematic contacts with this District and the United States.

6. Venue is proper in this District under 28 U.S.C. §§ 1400 (b) and 1391.

COUNT I

INFRINGEMENT OF U.S. PATENT NOS. 7,369,058 and 8,330,613

7. Plaintiff repeats and realleges the allegations of paragraphs 1 through 6 as though fully set forth herein.

8. On May 6, 2008, United States Patent No. 7,369,058 ("the '058 Patent"), entitled "REMOTE CONTROL ELECTRONIC DISPLAY SYSTEM," was duly and legally issued by the United States Patent and Trademark Office. A true and correct copy of the '058 Patent is attached as Exhibit A to this Complaint.

9. On December 11, 2012, United States Patent No. 8,330,613 ("the '613 Patent," or, collectively with the '058 Patent, the "Activision Patents"), entitled "REMOTE CONTROL ELECTRONIC DISPLAY SYSTEM," was duly and legally issued by the United States Patent and Trademark Office. A true and correct copy of the '613 Patent is attached as Exhibit B to this Complaint.

10. Plaintiff Activision, as the assignee and owner of all right, title, and interest in and to the Activision Patents, has the right to assert causes of action arising under said patents and the right to any remedies for infringement thereof.

11. Defendant has been directly infringing and continues to directly infringe one or more claims of each of the Activision Patents in the United States at least by using digital signage systems in locations throughout the United States in violation of 35 U.S.C. § 271 (a).

12. Because of Defendant's infringement of the Activision Patents, Plaintiff has suffered damages and will continue to suffer damages in the future.

13. Plaintiff has suffered irreparable injury due to the acts of infringement by Defendant and will continue to suffer such irreparable injury unless Defendant's infringing activities are enjoined.

14. Defendant has had notice of its infringement of the '058 Patent since at least February 7, 2013, when counsel for Activision sent Defendant a notice letter by certified mail.

15. Upon information and belief, Defendant has continued to infringe despite its knowledge of the '058 Patent and Activision's notice of infringement.

JURY DEMAND

Pursuant to Rule 38 of the Federal Rules of Civil Procedure, Plaintiff demands a trial by jury on all issues triable as such.

PRAYER FOR RELIEF

WHEREFORE, Plaintiff respectfully demands judgment for itself and against Defendant as follows:

A. An adjudication that Defendant has infringed the Activision Patents;

B. Permanently enjoining and restraining Defendant, its agents, affiliates, subsidiaries, servants, employees, officers, directors, attorneys, and those persons in active concert with or controlled by Defendant from further infringing the Activision patents;

C. An award of damages to be paid by Defendant adequate to compensate Plaintiff for its past infringement of the Activision Patents and any continuing or future infringement of the Activision Patents through the date such judgment is entered, together with pre-judgment and post-judgment interest, costs and expenses as justified under 35 U.S.C. § 284;

D. To the extent that Defendant's conduct with respect to the Activision Patents is found to be willful, enhanced damages pursuant to 35 U.S.C. § 284 for such willful infringement of the Activision Patents;

E. An accounting of all infringing acts including, but not limited to, those acts not presented at trial and an award for Plaintiff's damages for any such acts;

F. A declaration that this case is exceptional under 35 U.S.C. § 285, and an award of Plaintiff's reasonable attorneys' fees; and

G. Such other and further relief at law or in equity as the Court deems just and proper.

Dated: June 5, 2013

Respectfully submitted,

/s/ Jennifer Parker Ainsworth

Jennifer Parker Ainsworth
Texas State Bar No. 00784720
jainsworth@wilsonlawfirm.com
WILSON, ROBERTSON & CORNELIUS, P.C.
909 ESE Loop 323, Suite 400
P.O. Box 7339 [75711]
Tyler, Texas 75701
Telephone: (903) 509-5000
Facsimile: (903) 509-5092

Attorneys for Plaintiff
Activision TV, Inc.

EXHIBIT F

STATE OF NEBRASKA
Office of the Attorney General
2115 STATE CAPITOL BUILDING
LINCOLN, NE 68509-8920
(402) 471-2682
TDD (402) 471-2682
FAX (402) 471-3297 or (402) 471-4725

JON BRUNING
ATTORNEY GENERAL

DAVID D. COOKSON
CHIEF DEPUTY ATTORNEY GENERAL

July 18, 2013

VIA CERTIFIED UNITED STATES MAIL

Farney Daniels LLP
Attn: M. Brett Johnson, Partner
800 South Austin Avenue, Suite 200
Georgetown, TX 78626-5845

Re: **Possible Unfair/Deceptive Patent Enforcement Efforts Within the State of Nebraska**

Dear Mr. Johnson:

It has come to the attention of this office that your firm has issued demand letters upon several entities based in or with a substantial presence in the State of Nebraska alleging the infringement of certain patents. It is our further understanding your firm or the entities on whose behalf your firm has made such allegations are non-practicing entities with regard to the vast majority of the patents in question, and that several of your infringement assertions are unsubstantiated and contain false, misleading, or deceptive statements. If the latter is true, it could constitute a violation of the Nebraska Consumer Protection Act, NEB. REV. STAT. § 59-1601 *et seq.* (Reissue 2010, Supp. 2012), and the Uniform Deceptive Trade Practices Act, NEB. REV. STAT. § 87-301 *et seq.* (Reissue 2008, Supp. 2010).

The protection of Nebraska consumers and businesses from baseless harassment, particularly that which bears the potential for costly and destructive litigation, is a top priority of this office. We view as especially egregious threats which serve to advance no valid legal purpose or the legitimate protection of productive intellectual property but, rather, seek only to extract quick settlements from those otherwise committed to building their businesses and providing positive value to society. We will use every means at our disposal to prevent such conduct and deter its future occurrence.

It is notable that this is not the first time your firm or an entity on whose behalf your firm ostensibly represents has been the subject of an investigation by this office. Accordingly, we are concerned that Farney Daniels has exhibited a pattern and practice within Nebraska of deceptively alleging patent infringement and subsequent litigation.

Unfair or deceptive acts or practices in the conduct of any trade or commerce are unlawful. *See* NEB. REV. STAT. § 59-1602 and NEB. REV. STAT. §§ 87-302 and 87-303.01.

Violations of §§ 59-1602, 87-302, or 87-303.01 can subject an offender to civil penalties of up to $2,000 (two thousand dollars) *per violation. See* §§ 59-1614 and 87-303.11. The Office of the Attorney General is empowered to bring an action in the name of the state to restrain and prevent violations of the Consumer Protection Act and the Uniform Deceptive Trade Practices Act. *See* §§ 59-1608 and 87-303.05.

This office is currently investigating whether your firm's activities within the State of Nebraska constituted violations of NEB. REV. STAT. §§ 59-1602, 87-302, and 87-303.01. Pursuant to §§ 59-1611 and 87-303.03, we hereby demand that you respond to the Civil Investigative Demand enclosed herein by **August 19, 2013.**

The possible violations specified in this letter are serious and require your immediate and unconditional cooperation. Given the significant ramifications posed to Nebraska consumers and businesses by your potentially unlawful conduct, **I hereby demand that you immediately cease and desist the initiation of any and all new patent infringement enforcement efforts within the State of Nebraska pending the outcome of this office's investigation pursuant to § 87-303.03(1)(b).**

Sincerely,

JON BRUNING
Attorney General of Nebraska

David D. Cookson
Chief Deputy Attorney General

Enclosure