

THIS OPINION WAS NOT WRITTEN FOR PUBLICATION

The opinion in support of the decision being entered today (1) was not written for publication in a law journal and (2) is not binding precedent of the Board.

Paper No. 18

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte TOMOHIKO DOUKEN, ISAO KIZUYA,
and KIKUO TOMITA

Appeal No. 96-0526
Application 08/008,291¹

HEARD: JULY 14, 1997

Before JERRY SMITH, LEE, and CARMICHAEL, *Administrative Patent Judges*.

CARMICHAEL, *Administrative Patent Judge*.

DECISION ON APPEAL

This is an appeal from the final rejection of Claims 1-7 and 9-11. The other claim remaining in the application is Claim 8, which has been indicated as directed to patentable subject matter. Final Rejection at 7.

We reverse.

¹ Application for patent filed January 25, 1993.

BACKGROUND

The claims

Appellants' Claim 1 is illustrative of the invention involved in the present appeal:

1. A CRT display device comprising:

a CRT (cathode-ray tube) which includes a shadow mask, electron beam projection means, and a glass tube with said shadow mask and said electron beam projection means built therein;

said glass tube including a tube face which is irradiated with an electron beam passed through said shadow mask, thereby displaying a picture on said tube face;

said shadow mask being arranged inside said glass tube;

a housing in which said glass tube is disposed and which includes a ground terminal and an opening through which said tube face projects; and

shield means connected to said ground terminal and arranged so as to confront that part of said CRT display device which extends from a peripheral edge of said shadow mask to a peripheral edge of said tube face of said CRT, so as to cover at least said part, said shield means being made of a conductive material and being arranged outside said glass tube.

The rejections

The examiner relies on the following prior art:

Dougherty et al. (Dougherty)	4,710,670	Dec. 1, 1987
Suehiro et al. (Suehiro)	4,858,016	Aug. 15, 1989
Lill et al. (Lill)	3,952,152	Apr. 20, 1976

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Claims 1-5, 7, and 9-11 stand rejected under 35 U.S.C. § 103 as unpatentable over Dougherty in view of Suehiro. Final Rejection at 2. Claim 6 stands rejected under 35 U.S.C. § 103 as unpatentable over Lill. Final Rejection at 5.

The invention

The disclosed invention relates to shielding a CRT user from electromagnetic radiation. Specification at 1. With reference to Figure 2, the invention is concerned with radiation 8b leaking around the edge of a shadow mask 5. Shield 4a is placed to stop such radiation from exiting out the front of CRT housing 3. An alternative embodiment is shown in Figure 5. In addition to being formed on the CRT's front surface as in Figure 2, the shield 4b in Figure 5 is also formed on the CRT's side surfaces. Specification at 15, lines 2-5.

The prior art

Dougherty is concerned with shielding a CRT from external interference. Figure 2A shows a shield 48 and 30 which shields the CRT's electron beams from stray magnetic flux transverse to the tube axis. Column 7, lines 6-10. The stray flux is shown as flux 54, 56, 58, and 60 in Figure 2A.

Suehiro is concerned with shielding a CRT from external interference and providing an anti-explosion band to prevent

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scattering of broken tube pieces. Suehiro describes Figure 1's shield 6 and anti-explosion band 2 as prior art. Column 1, lines 10-47. Suehiro's invention involves combining the shield and anti-explosion band as shown in Figures 2-5. Column 2, lines 39-46.

Lill is concerned with shielding a CRT user from electromagnetic radiation. Column 1, lines 31-44. This is accomplished with a wire mesh screen 20 covering the entire viewing area of the CRT's face 12. Column 2, lines 4-11. An epoxy adhesive is used to bond elements together. Column 2, lines 46-57.

DISCUSSION

Claim 1 recites a shield connected to a ground terminal. Appellants argue that the cited art does not disclose or suggest a ground terminal connected to a shield. Appeal Brief at 18-19. The examiner contends that the ground terminal is suggested by Suehiro's securing shield 6 to a cabinet with screws and that Dougherty's frame 30 is connected to funnel coating 26 which is electrically connected to ground. Examiner's Answer at 7. We agree with appellants.

As pointed out by appellants, Suehiro does not indicate that the cabinet is conductive or that the connection to the cabinet

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results in connecting the shield to ground. Appeal Brief at 19. There is no indication in the cited art that the screws form a grounding circuit with the cabinet. Suehiro's shield 3 and band 2 function as part of a magnetic circuit. Column 2, lines 39-45. The examiner provides no reason why elements of the magnetic circuit would be electrically grounded. There is simply no suggestion to add the recited ground terminal to Suehiro.

With respect to Dougherty, we do not agree with the examiner's finding that funnel coating 26 is electrically conductive to ground. Examiner's Answer at 9, lines 19-20. As appellants point out (Appeal Brief at 19, lines 8-16), Dougherty's funnel coating is adapted to receive a high electrical potential. Column 5, lines 12-14. The examiner offers no reason why an element adapted to receive a high electrical potential would be electrically grounded. There is no suggestion in Dougherty to attach the shield to a ground terminal.

The cited art as a whole does not suggest connecting a shield to a ground terminal as recited. Therefore, we do not sustain the rejection of claim 1.

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Claims 2-5, 7, and 9-11

Claims 2-5, 7, and 9-11 recite the ground terminal addressed above. Therefore, we do not sustain the rejection of these claims for the same reason as for Claim 1 discussed above.

Claim 6

Claim 6 recites a method including the step of coating an inner wall of the housing with a resin which contains conductive particles to form a conductive shield. The examiner contends that it would have been obvious to use resin instead of epoxy as a bonding substance in Lill because resin and epoxy are interchangeable and well known in the art. Appellants argue that even if that were so, there is no suggestion to use a resin which contains conductive particles. Appeal Brief at 25, lines 19-25; Reply Brief at 11, lines 1-9. We agree with appellants.

The sole reference does not mention resin. The examiner proffers no motivation to replace Lill's epoxy with conductive resin. As appellants point out (Appeal Brief at 10), Lill uses epoxy to achieve a strong bond. Column 2, lines 46-58. We discern no suggestion in the cited art to substitute conductive resin as the bonding agent.

Thus, we do not sustain the rejection of Claim 6.

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