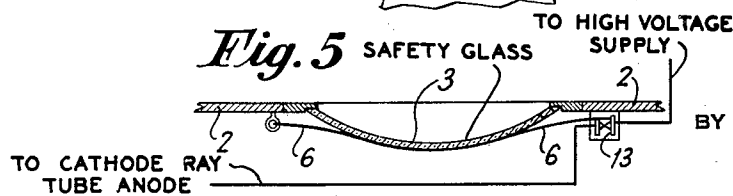
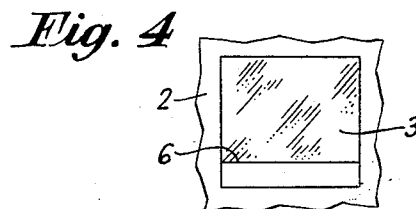
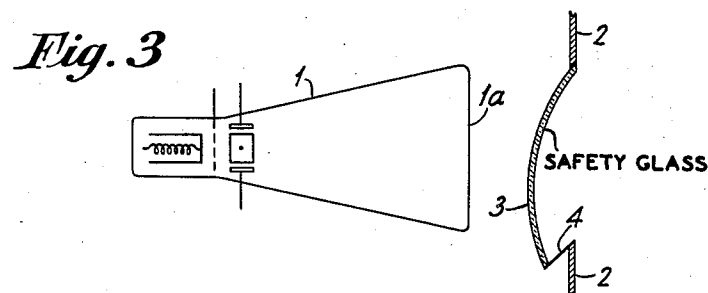
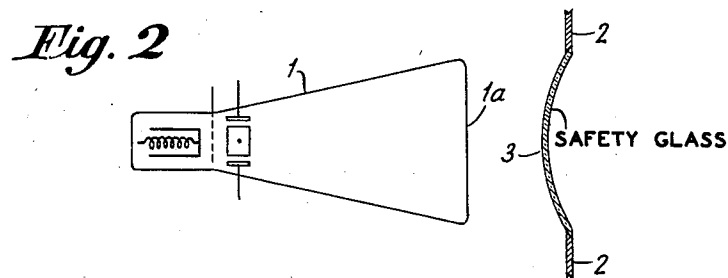
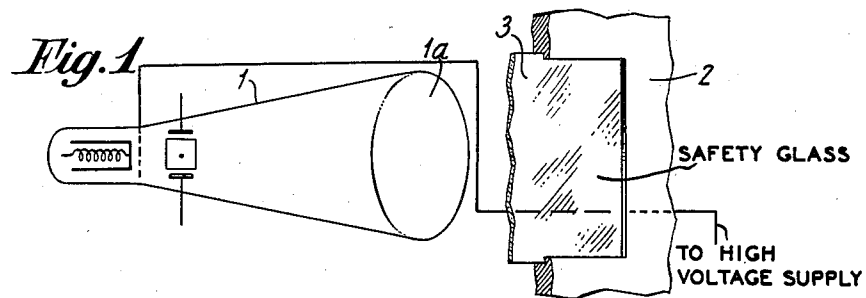


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A. A. LINSELL
TELEVISION RECEIVER

2,202,390

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TELEVISION RECEIVER

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4 Claims. (Cl. 178—7.5)

This invention relates to television receivers and more specifically to television receivers of the kind wherein a cathode ray tube is employed for reproducing the received pictures.

5 In the usual form of cathode ray tube receiver the cathode ray tube employed has a fluorescent screen at the large end of the tube and upon which the received pictures are built up by the scanning cathode ray beam. The end of the tube
10 must accordingly be visible from the outside of the cabinet or housing of the receiver as a whole, and since cathode ray tubes are somewhat fragile this leads to difficulties as regards cathode ray tube television receivers which are to be put into
15 the hands of the public who cannot be relied upon to treat them with care.

My invention will be best understood by reference to the following figures in which Fig. 1 represents a partly broken away perspective of a safety
20 glass viewing arrangement.

Fig. 2 illustrates a cross sectional view of a concave viewing arrangement.

Fig. 3 represents a viewing arrangement with light absorbing means.

25 Fig. 4 is one arrangement of safety means used cooperatively with viewing means.

Fig. 5 is still another arrangement of safety means used cooperatively with viewing means.

30 According to one feature of this invention the cathode ray tube of a television receiver of the cathode ray tube type is protected from damage by being mounted inside a cabinet or the like with the end upon which the received pictures are built up positioned behind a mechanically protecting window of transparent or semi-transparent and substantially unbreakable material
35 e. g. a window of so-called safety or unsplinterable glass. The accompanying Figure 1 represents in schematic perspective (partly broken away) such an arrangement. Here 1 represents the cathode ray tube by means of which pictures
40 are built up on the end wall 1a, 2 is one wall of the cabinet and 3 is the protecting window of safety glass. Instead of employing a safety glass protecting window at 3 the said window may be constituted by a metal grille of thin wires and open mesh.

Where, in carrying out this invention, there is employed a protecting window of safety glass or similar material, the said window is preferably
50 curved so as to present a concave face towards the viewer—that is to say so as to be convex in the direction of the cathode ray tube—said curvature being adopted in order that the pictures may
55 not be confused or obscured by reflections of ex-

ternal objects upon said window. Such an arrangement is shown in the accompanying Figure 2 where 3 represents the curved window. If desired, the said window may be curved in this manner, and may be terminated at one edge (as
5 shown in the accompanying Figure 3) by a member 4 which faces towards the said window and has a matt or black surface so that it absorbs light which strikes the concave face of the window and is reflected therefrom to said matt or
10 black surface.

If desired in carrying out this invention, means may be provided in association with the window or other mechanically protecting device whereby
15 in the event of said device being broken the set as a whole, or a predetermined circuit or circuits thereof, will be open-circuited. For example, in the case where a glass or like window is employed, one or more very thin "safety wires" may be stretched across or even embedded in the glass
20 and may be connected in series with the main electrical supply to the set as a whole, or at any rate in series with the high potential supply lead to the anode of the cathode ray tube at the earth or low potential end. With this arrangement, if
25 one of these thin safety wires is broken the set as a whole will be automatically switched off or at any rate the high tension to the cathode ray tube will be cut off. There are numerous possible arrangements of such wires, one satisfactory
30 arrangement being to provide two wires, arranged to form a cross across the window. The accompanying Figure 4 shows in face view one arrangement wherein a "safety wire" 6 is stretched across
35 the frame of a window 3. Such a safety wire may be for example of steel, silk, gut, quartz thread. Where the safety wires employed are not electrically conductive they cannot, of course, be included in electrical circuits but, as will be described later, such safety wires may be utilised
40 to give safety action mechanically instead of electrically.

It is, as above stated, not necessary that a safety wire or wires employed in carrying out
45 this invention be arranged normally to carry current or voltage, for a mechanical operation may be obtained by arranging a purely mechanical safety wire in such a way that if the window be broken or forced to open, the wire opens or allows
50 to open one or more normally closed switches in an essential operating circuit or circuits. For example the accompanying Figure 5 illustrates an arrangement wherein there is employed a curved window 3 across the convex surface of
55 which is stretched a wire 6 said wire being ten-

sioned sufficiently to hold closed a switch or switches (such as the switch 13) spring biased to the open position. If, now, the window be broken or removed the tension on the wire is relaxed and the switch or switches will open under the spring bias.

What I claim is:

1. In combination with a television receiver wherein a cathode ray tube is employed, and wherein high voltage operating circuits are used, a cabinet, a viewing window in said cabinet opposite the cathode ray tube, a concave shatter-proof viewing lens in the window, and means cooperatively associated with the lens for interrupting the high voltage operating circuits upon failure of the lens.

2. In combination with a television receiver wherein a cathode ray tube having a fluorescent screen is employed, and wherein high voltage operating circuits are used, a cabinet, a viewing window in said cabinet opposite the fluorescent screen of the cathode ray tube, a concave shatter-proof viewing lens in the window, and means in-

cluding a switch cooperatively associated with the lens for de-energizing the high voltage operating circuits upon structural failure of the lens.

3. A protective device for a television receiver including in combination a cathode ray tube employing high voltage operating circuits, a cabinet, a transparent or translucent viewing window in said cabinet including a concave shatter-proof member, and means cooperatively associated with said member for interrupting the high voltage operating circuits upon failure of the member.

4. A protective circuit for a television receiver including in combination, a cathode ray tube having a fluorescent screen and utilizing high voltage operating circuits, a cabinet, a viewing window in said cabinet opposite the fluorescent screen of said tube including a transparent or translucent member, and means including a switch cooperatively associated with said member for de-energizing the high voltage operating circuits upon structural failure of the member.

ALFRED AUBYN LINSELL.