

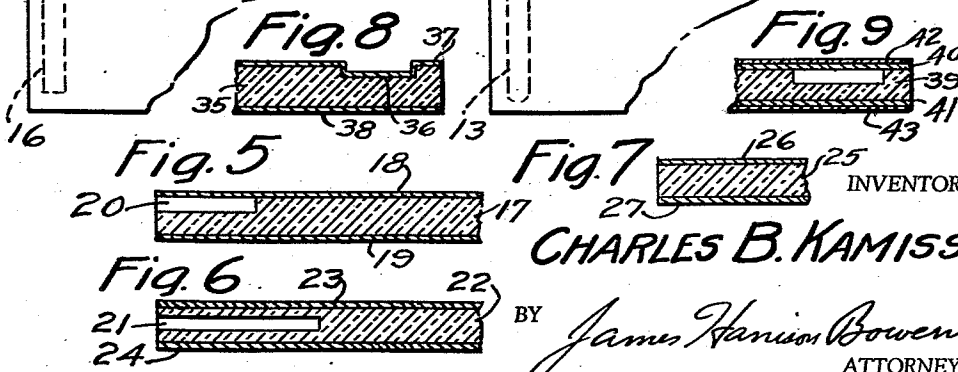
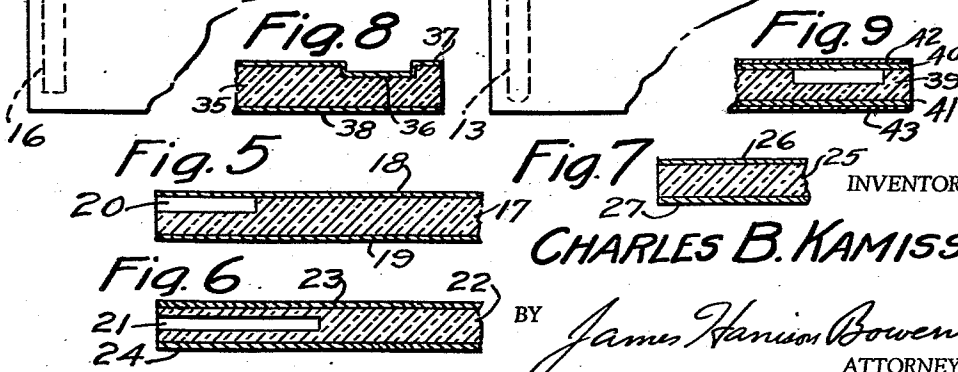
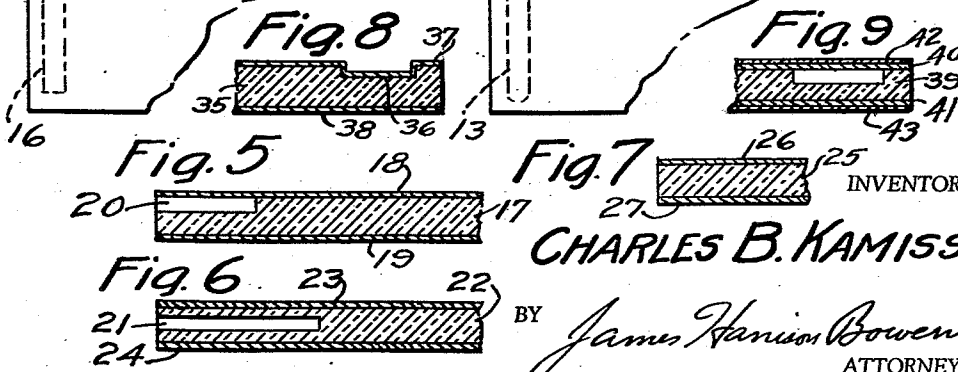
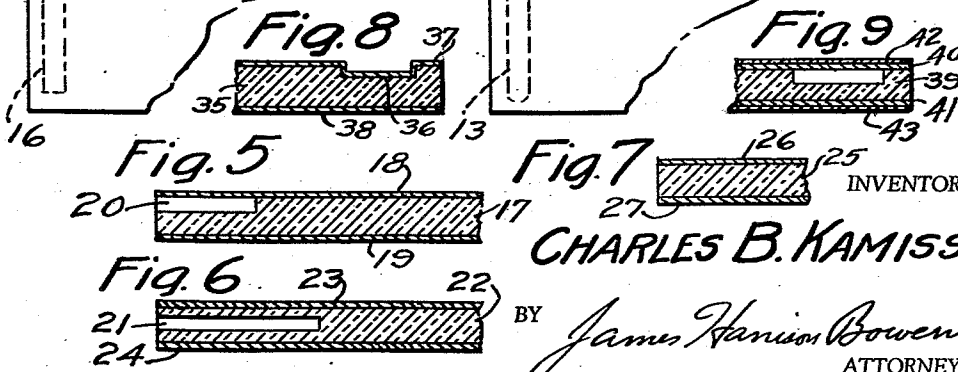
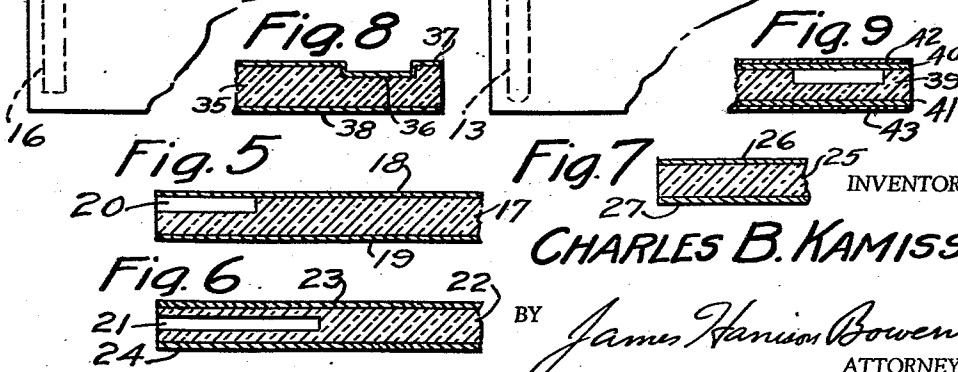
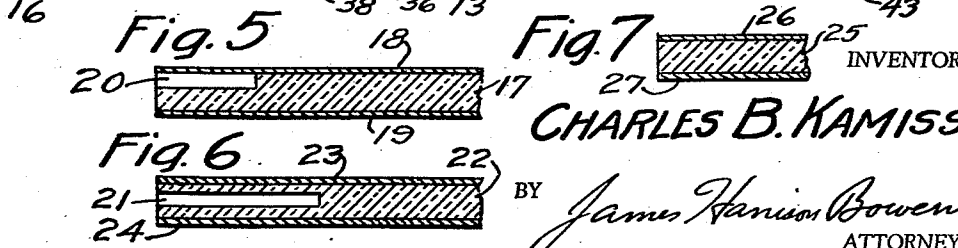
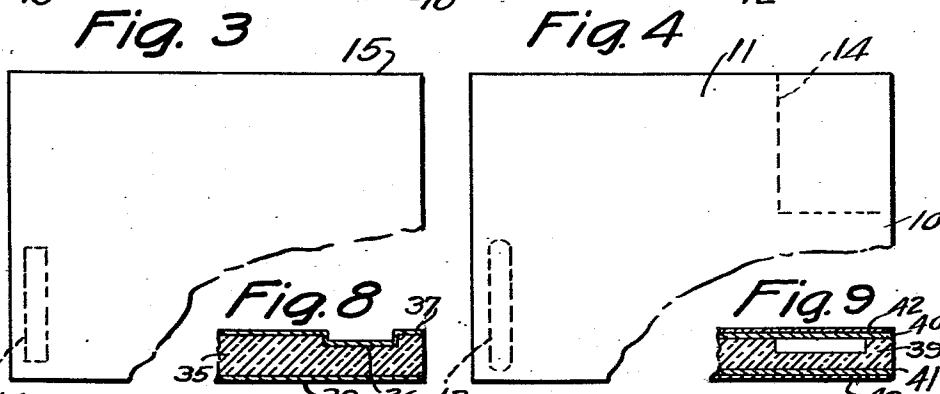
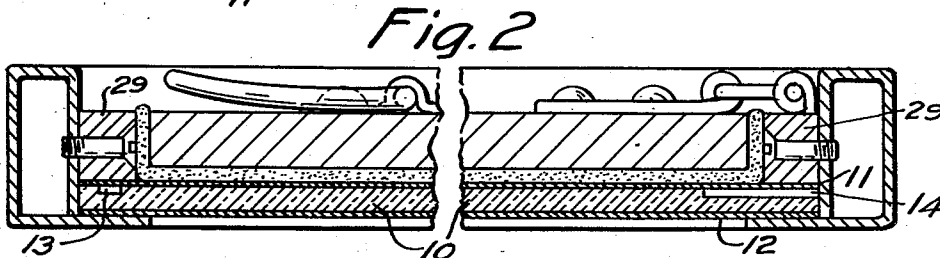
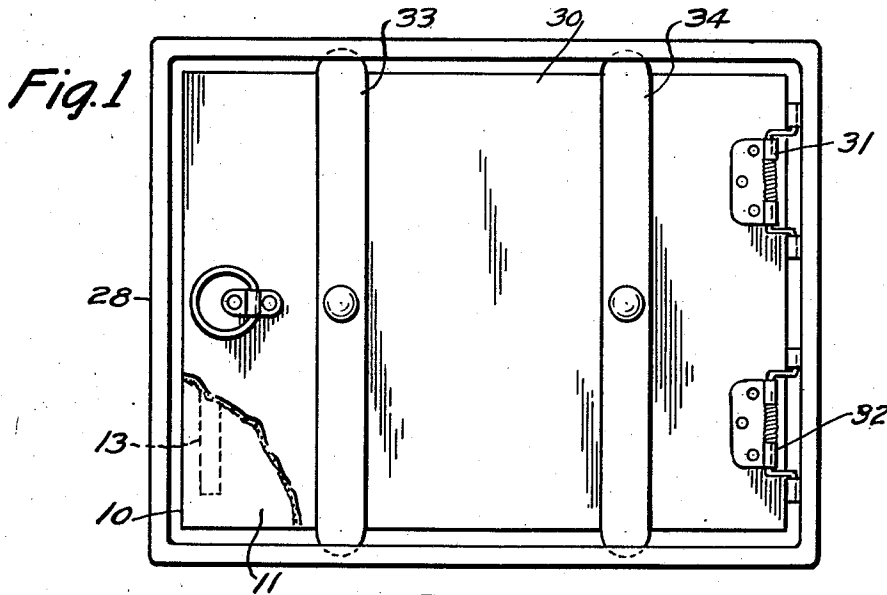
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2,812,441

X-RAY CASSETTE WARPPROOF BAKELITE FRONT

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X-RAY CASSETTE WARPPROOF BAKELITE FRONT

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12 Claims. (Cl. 250—68)

This invention relates to X-ray cassettes used for holding films in making X-ray pictures, and in particular a method of constructing a front for an X-ray cassette wherein the body of the front is protected from changes in atmospheric conditions so that warping caused by continuous absorption of moisture and drying out is substantially eliminated.

The purpose of this invention is to eliminate the possibility of failure in making X-ray pictures due to warping of the cassette front.

The conventional Bakelite plates that form cassette fronts are a continuous source of trouble as they warp or go bad and cause imperfect pictures. The warping is due to the fact that the laminated paper or other material with which the plates are made is pervious to moisture and consequently the characteristics thereof change with changes in atmospheric conditions.

With this thought in mind this invention contemplated an improved X-ray cassette front in which both surfaces thereof are coated with a material impervious to moisture and at the same time pervious to X-rays.

The object of this invention is, therefore, to provide means for making both surfaces of an X-ray cassette front impervious to moisture without interfering with conventional use of the front.

Also, in a conventional X-ray cassette front it is customary to use identification indicia and blocking lead in recesses in the plate forming the front, and with such indicia or blocking lead covered with adhesive tape in the usual manner it is possible for an unauthorized person to change the indicia, and thereby destroy identification of the picture.

To eliminate the possibility of changing such indicia the coating sheet or layer of this invention, which makes the plate impervious to moisture, is permanently applied to the side of the plate in which the indicia holding recesses are positioned after the indicia is in said recesses whereby it is impossible to change the indicia without destroying the plate.

Another object of this invention is, therefore, to provide an X-ray cassette front in which layers of material, impervious to moisture, are applied to both sides, and in which the said layer of material on one side of the front prevents identification indicia of the front being changed.

A further object of the invention is to provide a warpproof X-ray cassette front which is of a simple and economical construction.

With these and other objects and advantages in view the invention embodies an X-ray cassette front formed with a plate of Bakelite or other suitable material both side surfaces of which are coated with sheets of aluminum or foil of other material impervious to moisture and pervious to X-rays and in which the coating on one side of the plate protects identification indicia in a recess or recesses in the side of the plate on which the said coating is positioned.

Other features and advantages of the invention will ap-

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pear from the following description taken in connection with the drawing, wherein:

Figure 1 is an elevational view looking toward the back of an X-ray cassette with part of the back broken away showing the improved front therein.

Figure 2 is a longitudinal section through a typical X-ray cassette with the improved front therein, showing the parts on an enlarged scale and with parts broken away.

Figure 3 is a view showing an X-ray cassette front having an identification recess shown in dotted lines therein.

Figure 4 is a similar view showing an X-ray cassette front having an identification recess and also a recess for blocking lead therein.

Figure 5 is a detail showing a section through an edge of the warpproof X-ray cassette front showing a recess covered by a protecting coating and positioned in one side of the body of the front.

Figure 6 is a detail similar to that shown in Figure 5, showing a modification wherein a recess for identification indicia or blocking lead is positioned in the intermediate part of the front.

Figure 7 is a section through an edge of an X-ray cassette front, the side surfaces of which are coated.

Figure 8 is a section similar to that shown in Figure 7 illustrating a further modification wherein the coating layer extends downwardly into an indicia retaining recess in the plate.

Figure 9 is also a section through an edge of a plate adapted to form a cassette front illustrating another modification wherein a Bakelite plate is coated with layers of material impervious to moisture and pervious to X-rays and the said layers of material are coated with layers of Bakelite.

Referring now to the drawing wherein like reference characters denote corresponding parts the improved X-ray cassette warpproof front of this invention includes a plate 10 of Bakelite or other suitable material, a coating 11 on one side of the plate and a similar coating 12 on the opposite side of the plate.

The coatings 11 and 12 are preferably formed with aluminum foil, however, it will be understood that other materials impervious to moisture and pervious to X-rays may be used.

As illustrated in Figures 2 and 4, the plate 10 is provided with an indicia retaining recess 13 which is spaced from the edge of the plate and formed in one side thereof, and also a recess 14 for blocking lead and which is also formed in one side. It will be understood that either recess may be of any suitable size, and as many recesses may be provided as may be desired.

The plate 15 shown in Figure 3, is provided with a single identifying indicia retaining recess, and in this design the recess is spaced from the edge of the plate, the recess being milled or otherwise cut in from the side surface. This recess, which is indicated by the numeral 16, may also be of any suitable size and may be positioned as desired.

In Figure 5 a plate 17 having coating layers 18 and 19 on the side surfaces thereof is provided with a recess 20 that may be milled or otherwise cut in from the edge of the plate, and in Figure 6 a recess 21, which may be milled into an edge of a plate 22, is positioned midway between the side surfaces of the plate whereby identifying indicia or blocking lead is not in contact with the coating layers 23 and 24.

In the section shown in Figure 7 a plate 25 is illustrated, and this plate, which is formed without recesses, is coated with layers of aluminum, or with layers of other material, or foil, as indicated by the numerals 26 and 27, and the material of these layers is impervious to moisture and pervious to X-rays.

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In the section shown in Figure 8, a Bakelite plate 35 is provided with a recess 36 and a coating layer 37 on the side in which the recess is provided extends into the recess, as shown. The opposite side of the plate is also coated with a layer 38 and the layers 37 and 38 are of material that is impervious to moisture and pervious to X-rays.

The modification illustrated in Figure 9, shows a plate 39 coated with layers of aluminum 40 and 41, and the layers of aluminum are coated with layers of Bakelite or a similar material. Although the layers 40 and 41 are described as being of aluminum, and the protecting layers 42 and 43 of Bakelite it will be understood that the layers 40 and 41 may be of other material impervious to moisture and pervious to X-rays, and the plate and layers 42 and 43, may be of any suitable material that is pervious to X-rays.

It will be understood, therefore, that the improved X-ray cassette front of this invention comprises a plate or intermediate body of Bakelite, or other suitable material, permanently coated on both sides with aluminum foil, or other suitable material that protects the body from moisture, and the body may or may not be provided with identifying indicia or blocking lead recesses, and when such recesses are used they may be located in various positions in the plate.

The front or plate is used, as illustrated in Figures 1 and 2, in a cassette having a frame 28 in which the front is held with a bar 29, and a film is held against the front with a back 30 that is mounted on the frame with double jointed hinges 31 and 32, and urged toward the front with springs 33 and 34.

The aluminum foil or layers of protecting material are permanently affixed to the front or plate by heat and pressure, an adhesive, or other suitable means, and with the coating material in place over the recesses indicia or blocking lead positioned in the recesses is permanently secured therein and cannot be removed or changed without destroying the plate.

From the foregoing description it is thought to be obvious that a cassette front constructed in accordance with my invention is particularly well adapted for use by reason of the convenience and facility with which it may be assembled and used, and it will also be obvious that my invention is susceptible of some change and modification without departing from the principles and spirit thereof, and for this reason I do not wish to be understood as limiting myself to the precise arrangement and formation of the several parts herein shown in carrying out my invention in practice, except as claimed.

What is claimed is:

1. An X-ray cassette front comprising a main body portion of material pervious to X-rays, said main body portion being coated on both sides with material both pervious to X-rays and impervious to moisture, and said latter coating material being coated with a layer of material pervious to X-rays, the second coating material being the same as that from which the main body portion is formed.

2. An X-ray cassette front comprising a main body portion of material pervious to X-rays, said main body portion being coated on both sides with material both pervious to X-rays and impervious to moisture, and said latter coating material being coated with a layer of material pervious to X-rays, the second coating material being the same as that from which the main body portion is formed, said body having a recess therein and said recess being sealed with the coating on one side of the body.

3. An X-ray cassette front comprising a Bakelite plate, the side surfaces of which are coated with aluminum, said plate having recesses therein and said recesses sealed by the aluminum coating on one side of the plate, and coatings of material pervious to X-rays on the outer surfaces of the aluminum coatings.

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4. An X-ray cassette front having a main body portion of material pervious to X-rays and having a recess in one side thereof, said main body portion being coated on both sides with material both pervious to X-rays and impervious to moisture, and said latter coating material being coated with a layer of material pervious to X-rays, the second coating material being the same as that from which the main body portion is formed.

5. In an X-ray cassette front, the combination which comprises a body portion of material pervious to X-rays having a recess in one side, and a layer of material impervious to moisture and pervious to X-rays positioned on each side of said body, said layer on the side in which the recess is positioned sealing the said recess.

6. In an X-ray cassette front, the combination which comprises a Bakelite body having a recess in one side, and sheets of aluminum covering the side surfaces of said body and the sheet on the side in which the recess is positioned sealing said recess.

7. An X-ray cassette as described in claim 10, wherein said front is provided with a recess and said recess is covered with the said layer of material on the side of the front in which the recess is positioned.

8. An X-ray cassette front having a main body portion of material pervious to X-rays and having a recess therein, said main body portion being coated on both sides with material both pervious to X-rays and impervious to moisture, and the latter coating material being coated with a layer of material pervious to X-rays, the said second coating being of material the same as that of the main body portion.

9. An X-ray cassette front comprising a plate of material pervious to X-rays coated on both sides with layers of material impervious to moisture and pervious to X-rays, and said layers of coating material coated with layers of material from which the plate is formed.

10. In an X-ray cassette front, the combination which comprises a Bakelite body, a layer of aluminum on each side of the Bakelite body, and layers of Bakelite on the outer surfaces of said aluminum layers.

11. In an X-ray cassette front, the combination which comprises a Bakelite body, a layer of aluminum on each side of the Bakelite body covering said body, and layers of Bakelite on the outer surfaces of said aluminum layers, said layers of Bakelite and aluminum being secured together and also secured to the Bakelite body forming a homogeneous mass.

12. In an X-ray cassette front, the combination which comprises a Bakelite body, substantially rectangular-shaped and having thickness, a layer of aluminum on each side of said Bakelite body covering the body, and layers of Bakelite covering the outer surfaces of the aluminum layers, said layers of aluminum and Bakelite being fused together and the layers of aluminum fused to the Bakelite body, and said Bakelite body having an indicia retaining recess therein, the recess being covered by the aluminum and Bakelite layers.

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