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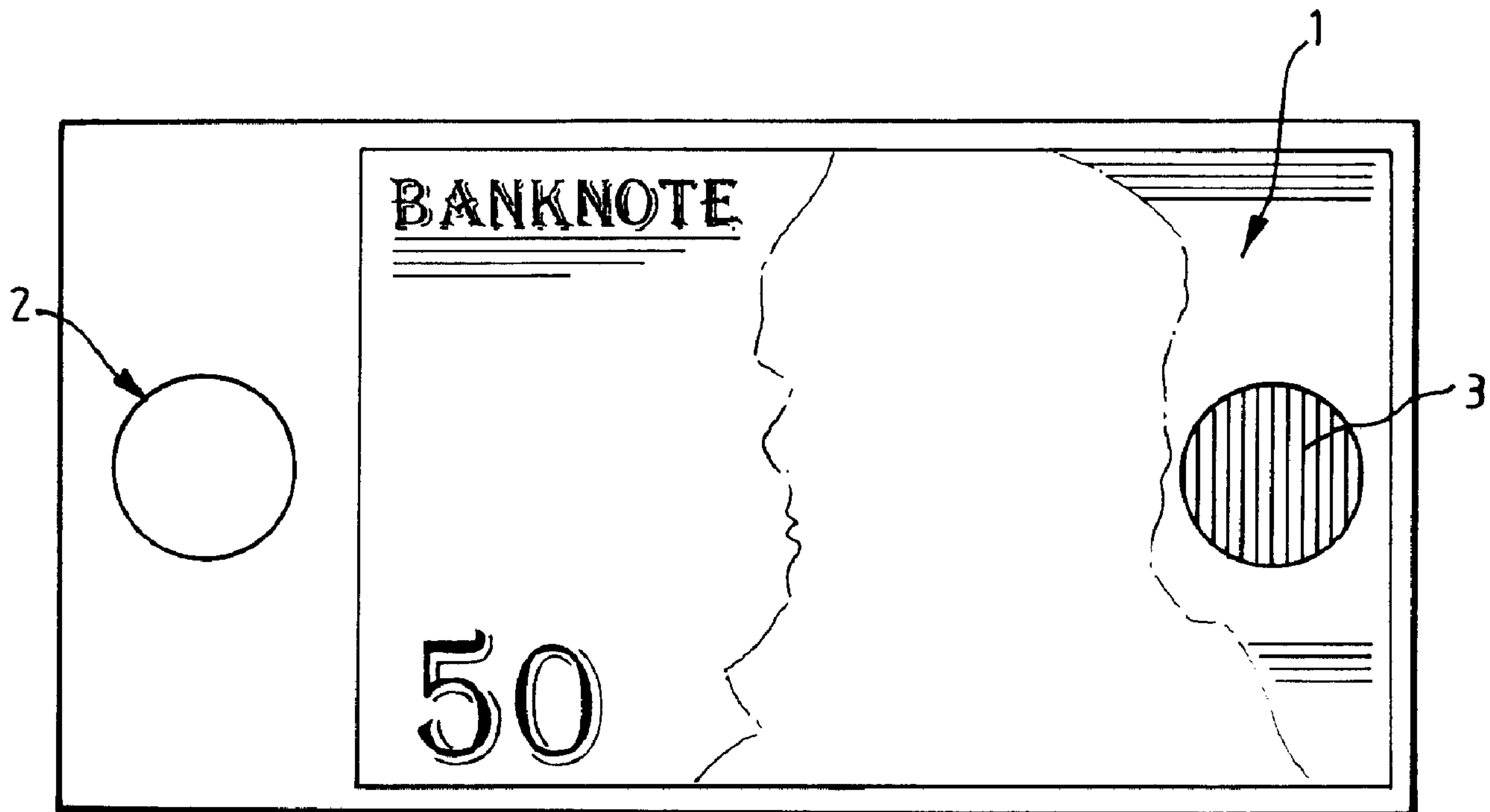
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(54) Title: SECURITY DOCUMENT AND/OR VALUE DOCUMENT



(57) Abrégé/Abstract:

The present invention relates to a security document and/or value document, in particular banknote, with security features and with a verification element for verifying the security feature. The object of the present invention, to develop a generically compliant security document and/or value document, in which security against forgery is increased and the document can be inspected for genuinity more easily and without the use of external aids, is accomplished in that at least one verification element 2 and at least one security feature 3 to be verifiable by this verification element 2 are integrated into the document 1 in various positions, whereby the verification element 2 and the security element 3 are brought over each other only when verification is to take place.



----- Translated from German -----

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A B S T R A C T

The present invention relates to a security document and/or value document, in particular banknote, with security features and with a verification element for verifying the security feature.

The object of the present invention, to develop a generically compliant security document and/or value document, in which security against forgery is increased and the document can be inspected for genuinity more easily and without the use of external aids, is accomplished in that at least one verification element 2 and at least one security feature 3 to be verifiable by this verification element 2 are integrated into the document 1 in various positions, whereby the verification element 2 and the security element 3 are brought over each other only when verification is to take place.

- Fig. 1 -

Security document and/or value document

The present invention relates to a security document and/or value document with security features and with a verification element for verifying a security feature.

In particular, documents of personal identification, banknotes, securities, documents, service cards, such as credit cards or the like, postage stamps and general products that require authorization, can often be manufactured by a process that is easily reproducible.

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With these products it is desirable to incorporate features that facilitate providing evidence of their genuineness, i.e. that show that they are originals.

These security features should preferably be fixed in an inseparable manner to the product that is to be authorized and/or they should have features that are difficult to reproduce.

The background of the invention is the manufacture and application of security features for security documents and/or value documents.

Numerous security features are known, such as fluorescing fibres or threads/planchettes/colours, microtypes, moiré-generating structures, holograms and similar.

Frequently, the security features implemented in products requiring protection consist of special colours having special spectral characteristics or magnetic properties or temperature-dependent behaviour (thermochrome colours). Barcode is used, in which the difference in reflectivity of the surface is utilized, or grid structures or film antennae utilizing the resonance frequency in an oscillating circuit are also put to use.

Security documents are known from AU 488 652, where the security features can be inspected by means of through-light viewing. Arranged between plastic webs, there is an optically varying security element, which can be viewed

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through a transparent window located in the above-lying cover web. The disadvantage here, in particular, is that with the naked eye the applied security features can only be viewed through-light, and that the material properties of the document are severely altered.

The implementation of only one transparent window on banknotes is also known as a security feature applied in practice (Australian banknotes).

DE 43 34 847 A1 describes a value document with a window where the base material is subsequently given a window-like knock-out, which is then covered by a transparent cover film, whereby the cover film in this part of the window incorporates additional security features. The process of manufacturing this subsequent break-out in the base material of the value document (security), to provide a window, and then covering this window with a cover film that partly incorporates additional security features, is technologically intensive and means that the material of the value document is made thicker. The requirement, that parts of the window must remain transparent so that the security features can be viewed through-light with the naked eye, limit the possibilities offered of providing security features arranged in a covered form. Just as with the known window threads used on banknotes, such possibilities involve elements which, in themselves, only serve as a security element but have no further function. These known windows may themselves also incorporate security features.

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The test for genuinity of the known security elements usually requires the application of special equipment, methods and, in particular, test equipment such as magnifying glasses for checking microtype, lenticular screens for checking hidden graphical elements, UV lamps for making fluorescences visible, or a through-light method for optically recognizing the respective security feature.

DE 36 09 090 A1 describes a value document (security) into which a security thread has been deposited, which can be viewed visually without a technical aid. The security thread consists of a transparent material. Impressed into the upper surface is a screen of cylindrical lenses. Applied directly to the opposite side of the film of the foil there is a printed image. This printed image is designed with consideration to the optical characteristics of the cylindrical lenses. By designing the printed image accordingly, it is possible to incorporate information here that only becomes visible from certain viewing angles.

A disadvantage here is that there is paper arranged directly beneath the thread, so that the security feature can only be viewed through reflection and not through transmission. Only the thread provides the element of security. The thread constitutes a conventional security element.

The object of the present invention is to develop a generically compliant security document and/or value document, in which security against forgery is increased and the document can be inspected for genuinity more easily and without the use of external aids.

Accordingly, the present invention broadly provides a security document, value document, or a security system, such as a banknote, with at least one security feature and with at least one verification element for verifying the security feature, wherein at least one verification element and at least one security element to be verified by this verification element are integrated in the document at different positions, whereby the verification element and the security feature are only superimposed when verification takes place.

The verification element and the security element may take a variety of different forms. In one preferred embodiment, at least one of the verification element and the security element is formed by a holographic filter or a hologram. In other embodiments, the at least one verification element is formed by at least one window, which may contain, as a verification means, a polarisation filter, an interference filter, a holographic filter or a hologram, and the security element may be formed as a coloured graphic element. In further embodiments, the at least one verification element may be formed as at least one lens, a mask for a parallax barrier display or a perforated zone.

By implementing on the document both security features as well as verification means, such as detectors for verifying these security means, what is accomplished is that no external means for checking the genuinity of the document are required. The authenticity of security features on a document, for example a banknote, can be checked by means of one or more transparent windows on the same banknote. The combination of security features and a verification system on one and the same banknote increases security against forgery, because the verification means can in itself also be designed as a security feature. Both the viewing side and the rear side of the banknote can be viewed to check authenticity. By suitably folding a banknote, or any other document that has been manufactured in accordance with the method of the invention, or by stacking several banknotes on top of each other, it is possible to check the security feature by bringing the security feature into interaction with the verification system, e.g. window.

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A verification element that has been applied to the value document can be used to check different security elements incorporated at different positions in the value document.

For example, in a passport two opposing pages can be used to verify the document. For this purpose, one of the pages can be fitted with the verification element, e.g. a lenticular screen film, on part or all of the page, while the other page may have the security feature that must be analyzed, for example a latently visible screen structure. The genuinity of the document is checked by suitably placing these two pages over each other. Similarly, two banknotes, checks or two other equivalent value documents can be checked for genuinity.

The decisive factor is the functionality of the window or windows integrated in the document. No substantial thickness is added to the document, because the security feature and the detection means are located on different parts of the document and not over each other.

The preferred embodiment of the verification element as a detector/analyzer or also a decoder in the form of one or several transparent windows, or also as a window with several analyzer areas with detection elements, ensures a multitude of different variations for testing the genuinity of a large number of possible security features.

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Preferably, the verification elements on/in one window or on/in several windows or sections of a window are formed of clear, transparent material and are preferably formed out of one of the following groups:

1. The verification elements are formed by lenticular lenses/cylindrical lenses/alternating images and autostereoscopic devices, which are located on/in a transparent film or similar; they make the optically coded security features or the structures printed on the document visible.

The lens screens preferably consist of equal-type cylindrical lenses, which are arranged parallel to each other, preferably at the same distance apart (e.g. 200 μm). Preferably, the focus of such a lens screen will be adjusted to match the optical thickness of the transparent substrate material used.

These cylindrical lenses can be introduced into the transparent material, e.g. PVC films, by several different means, e.g. by paging with a suitable master, or they can also be produced by casting the film in a suitable form or they can be introduced into the film by extrusion, using specially formed injection nozzles.

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2. The verification elements are formed by using Fresnel lenses or other similar magnifying optical structures, which facilitate the detection of very fine print or very small graphics on the respective document.

3. The verification elements are formed by preferably printed fine graphical structures that are applied to both the film of a window as well as to part of the document.

The window forms the mask for a "parallax-barrier display".

When the corresponding surfaces (window/security feature on the document) are placed on top of each other, so-called moiré structures are generated. Together with the line or dot screens in the area of the security feature on the document, the line or dot screens on the window form such a moiré structure. The moiré pattern thus formed is the characteristic security feature for the respective value document.

When the windows are arranged in such a manner that they are placed on top of each other when the document is folded, exactly register-true structures will create colour or pattern changes when the two surfaces are moved relatively to each other.

4. The verification elements are formed with polarizing filters.

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In the preferred embodiment, two clear windows are arranged adjacently or a window is divided into two analyzer areas.

The windows can be embodied as two polarizers for viewing polarisation stereo images.

It can be accomplished, that at least one specially formed window forms a "Polaroid-Vectograph".

Windows can be formed in such a way that a switch in contrast from transmitting to opaque can be implemented. Such structures can be implemented by means of half-wave zones, which are applied to a linearly polarizing film, for example by suitably oriented films of correct thickness:

- The bright and dark areas of an image are linearly polarizing areas with alternating horizontal and vertical polarising directions.

Windows can be formed, that implement a clear switch in colour based on the "colour shutter" principle.

5. The window is embodied as an interference filter/colour filter (transparent diffraction structures, multilayer systems).

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The transparent window is embodied as a holographic filter that reflects a narrow spectral range, either

- analogous to holographic laser-protection goggles, or
- a compound colour appears in a different colour,
- a pure spectral colour disappears.

Such a filter is also suitable for two clear windows, whereby the verification window may be subdivided into a holographic part and a non-filtering adjacent part.

The windows are embodied as two colour filters for viewing anaglyphs (stereo images) or as prisms, preferably as gradient-index prisms (superchromatic where possible), for a chromastereoscopic image.

Further advantageous embodiments of the present invention will become apparent from the sub-claims.

The invention will be described further with the help of the drawings described below; these show embodiment examples of a banknote serving as a value document. In these drawings:

Fig. 1 is a schematic representation of a banknote with a window and a security feature,

Fig. 2 is the schematic representation of an arrangement with a window having two zones on the banknote and serving as the

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verification element,

Fig. 2a is the schematic representation of an arrangement of one window with two zones according to Fig. 2, for forming a "Vectograph",

Fig. 2b is the schematic representation of an arrangement of one window with two zones according to Fig. 2, for forming different patterns,

Fig. 2c is the schematic representation of an arrangement of one window with two zones according to Fig. 2, for forming a chromastereoscopic image,

Fig. 2d is the schematic representation of an arrangement of one window with two zones according to Fig. 2, for forming "half-wave" zones,

Fig. 3 is the schematic representation of an arrangement of two adjacent windows with different verification elements,

Fig. 4 is the schematic representation of the creation of screen structures, and

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Fig. 5 is the schematic representation of a banknote with windows in one corner.

According to the representation in Fig. 1, a value document, e.g. a banknote 1, is embodied with one transparent window 2, which, by means of its being equipped with verification elements serving as a detector or similar, is used to verify a security feature located in zone 3 of the banknote 1. Verification of the security feature in zone 3 of the banknote 1 is accomplished, for example, by overlapping the two zones 2 and 3.

In the first embodiment example, the window 2 in Fig. 1 is provided with a lenticular screen that serves as a verification element. The orientation of the lens screen in the zone of the window 2 and the correspondingly printed screen, which serves as a security feature in zone 3 of the banknote 1, must be co-ordinated in such a way that the required effects become visible when zones 2 and 3 are brought to overlap each other suitably, for example by folding.

The printed screen structures serving as the security feature in zone 3 can be created with any type of printing technique that is applied in security printing, preferably the simultaneous-offset method (Letterset), because of the high resolution required.

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Fig. 4 shows a simple example of the creation of screen structures in the form of the letter "D". By overlapping the lens screen in window 2 with the line screen 4 in zone 3, a clear image 7 of the letter "D" appears in the eye of the beholder.

Also, printed line structures in combination with embossments, which show so-called tilt effects (DE 23 34 702), and which are preferably created using the intaglio process, can be made visible by suitably overlapping zones 2 and 3 (Fig. 1) of the banknote 1, whereby zone 2 must have the lens screen to enhance the tilt effect.

The lens screens preferably consist of equal-type cylindrical lenses, which are arranged parallel to each other, preferably at the same distance apart (e.g. 200 μm).

These cylindrical lenses can be introduced into a transparent material, e.g. PVC films, by several different means, e.g. by casting a film on a belt with a negatively formed profile or by extruding lens screens by means of specially formed injection nozzles, e.g. wide-slit nozzles.

The cylindrical lenses can also be produced by paging with a suitable pattern, or by rolling out films between rollers that have the corresponding negative profile.

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Gradient-index lenses can be made out of bleached silver halide layers or photo-polymers.

In a second embodiment example according to Fig. 1, the verification element in window 2 of banknote 1 is formed through Fresnel lenses or by means of similar magnifying optical structures that facilitate the recognition of very small type or graphical elements in zone 3 of document 1 when zones 2 and 3 are suitably overlapped. Here the very minimal thickness of the Fresnel lenses together with the good magnification of the lens, e.g. 5 to 10-fold, is a decisive advantage for integration into the substrate materials.

According to a third embodiment example, the verification element in window 2 of the banknote 1 in Fig. 1 is formed by fine line structures, which are also formed on a part of document 1 in zone 3. When the corresponding zones 2 and 3 of document 1 are overlapped, so-called moiré structures are generated. Examples of moiré-generating patterns are described in DE 28 19 640, DE 23 24 702, DE 26 03 558, DE 36 02 563.

The verification element in window 2 may consist of a printed line screen or a printed dot screen for a visual coding/decoding method for a banknote 1. In addition to printing fine dots and/or lines, it is also possible to punch zone 2 (window) of the document 1 or to perforate it, preferably by means of laser perforation, so that suitable overlapping of zones 2 and 3 of the banknote 1,

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e.g. by folding, will generate a moiré pattern. Zone 3 of the banknote 1 may consist of a transparent material with printed lines/screen, an opaque material with printed lines/screen or also a zone with a suitable perforation, preferably a laser perforation.

In a fourth embodiment example, a polarizing filter on/in a preferably transparent film material is integrated as a verification element in zone 2, e.g. of a banknote 1, in combination with a further similarly designed polarizing filter in zone 3. The polarizing filter in zone 3 is preferably designed vertically or parallel to the polarizing filter in zone 2 and works as an analyzer, so that suitable overlapping of zones 2 and 3 of the banknote 1 and rotation of the overlapping zones 2 and 3 against each other will cause the optical transparency (bright/dark) to alternate or change.

In a further embodiment, an additional dichroic (double refracting), graphically structured layer is applied, e.g. by printing, sputtering, casting and similar, so that suitable overlapping of zones 2 and 3 of the banknote 1 and rotation of the overlapping zones 2 and 3 against each other will cause a graphic element, e.g. a letter, to become visible.

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A further embodiment is achieved when one of the two polarisation filters in zones 2, 3 is replaced with a reflecting layer, whereby additionally a dichroic, graphically structured layer is applied to this reflecting layer. Suitable overlapping of zones 2 and 3 of the banknote 1 and rotation of the overlapping zones 2 and 3 against each other will cause a graphic element, e.g. a letter, to become visible.

A further embodiment provides that one of the two polarisation filters is replaced with a reflecting layer, whereby additionally a dichroic, graphically structured layer is applied to this reflecting layer. This double-refracting transparent layer can be preferably designed as a liquid-crystal-containing film. Suitable overlapping of zones 2 and 3 of the banknote 1, e.g. by folding, and by rotation of the overlapping zones against each other will cause a graphic element, e.g. a letter, to become visible.

For many verification effects it is desirable to easily and simply bring two different verification elements over the security feature. This often eases the perception of changes in the case of movement-effects or colour-switching effects. It eases verification in cases where a rotation of the verification element with respect to the security feature is necessary. With a single verification window 2, such a rotation would be very impracticable. To solve these problems, it has been suggested that the verification window 2 should be divided into two adjacent

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analyzer areas (Fig. 2, 2a through 2d) or that two adjacent windows 2 (Fig. 3) should be arranged with different verification elements.

Fig. 2c shows the embodiment of a window 2 serving as a verification element, where at least two clear analyzer zones 5, 6 are arranged adjacently as windows 2 serving as verification elements on the banknote 1. The analyzer zones 5, 6 are preferably holographic prisms, if possible embodied as superchromatic prisms, for a so-called chromastereoscopic image. Preferably the prisms are embodied as gradient-index prisms in the form of thin film materials.

An embodiment according to Fig. 2a provides that at least two adjacently arranged clear analyzer zones 5, 6 in a window 2 are embodied as a so-called "Vectograph". A Vectograph consists of two polyvinyl-alcohol films, which form linear polarizing filters when they are printed on with iodine paints. The two films are arranged in such a way that when the front side contacts the iodine paint vertical polarization results, and when the rear side contacts the iodine paint horizontal polarization results (Fig. 2a, 2b). Iodine paint is used to print a selected first pattern, for example a square 10 (Fig. 2a, 2b), on the front side, and a selected second pattern, for example a star 11 (Fig. 2a, 2b), on the rear side. When the two superimposed films are viewed with a linear analyzer (window 2, zone 5 in Fig. 2a, 2b), the first pattern (square 10) becomes visible when the analyzer is

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oriented horizontally 5, and the second pattern (star 11) becomes visible when the analyzer is oriented vertically 6. In the same manner is also possible to implement colour changes.

A verification window 2 divided in this manner with analyzer zones 5, 6 makes it unnecessary to have to rotate the window 2; the window 2 only needs to be shifted.

Similarly formed zones 5, 6 can be designed to implement a changeover in contrast from transmitting to non-transparent. Such structures can be implemented by applying to a linear polarizing film 8 (Fig. 2d) so-called "half-wave" zones 9 (phase plates with a phase shift of 180° between the ordinary ray and the extraordinary ray), for example by means of suitably oriented film materials of the correct thickness (Fig. 2d). The polarization direction is turned by 90° in these zones. This effect is particularly impressive with area-filling patterns. Similarly formed build-ups serve to implement a clearly discernible colour switchover based on the principle referred to as "colour shutter".

In a further embodiment of the verification element(s) in window 2 of the banknote 1, interference filters/colour filters, generally transparent refraction structures and multilayer systems are used.

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The interference filters/colour filters are formed in/on the preferably transparent film material or they consist of this material. The filters are integrated for example on a banknote 1 in zone 2 in combination with a coloured graphical element in zone 3. When zones 2, 3 of the banknote 1 are suitably overlapped, a certain spectral range in the graphic element, for example a character, is blanked out by zone 2 or allowed to pass through, so that a colour impression is perceived that differs from the original colour.

Both dyed, transparent materials as well as transparent materials with e.g. coloured vaporized/sputtered, printed colours can be used as interference filters/colour filters.

In a further embodiment, at least two clear analyzer areas 5, 6 are arranged adjacently according to the representation shown in Fig. 2 and 3. These zones 5, 6 are formed to at least two colour filters for viewing so-called anaglyphs (stereo images), whereby the anaglyphs are located in zone 3 of the banknote 1. When zones 5, 6 and 3 are suitably overlapped in a certain distance to each other, a stereo-impression is created.

All windows can be embodied in any arbitrary form, preferably in a form that is best suited to the respective selected verification element; thus the embodiment can also be thread-like or, as shown in Fig. 5, triangular in shape.

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The windows can be embodied at any points on the document, thus also in a corner of the document, as shown in Fig. 5 as an example; the requirement is only that it must be possible to bring together the security feature and the verification element for verifying the security feature in such a way that they can work together, for example by folding, twisting, superimposing one or several documents.

Superimposition can be accomplished by direct contact or, in some cases, with a gap between the security feature and the verification element.

----- Translated from German -----

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DRAWING REFERENCE LIST

- 1 Value document/banknote
- 2 Zone (window/verifier)
- 3 Zone (safety feature)
- 4 Line screen
- 5 Analyzer zone
- 6 Analyzer zone
- 7 Image
- 8 Polarization film
- 9 Half-wave zone
- 10 Square
- 11 Star

WHAT IS CLAIMED IS:

1. A security document, value document or a security system with at least one security feature and with a verification element for verifying the security feature, wherein at least one verification element and at least one security element to be verified by this verification element are integrated in a document at different positions, whereby the verification element and the security element are only superimposed when verification takes place, wherein at least one of the verification element and the security element is formed by a holographic filter or a hologram.
2. A security system especially for a security document, with a flat security element that under incident light holographically reconstructs a pattern in which concealed information is stored, and with a flat at least partly transparent verification element which on flat contact with the security element makes the information stored therein readable, wherein said security element and said verification element are arranged on the same security document.
3. A security document, a value document or security system according to claim 1 or claim 2 wherein the verification element is formed by at least one window, which contains as a verification means a hologram or a holographic filter.
4. A security document and/or value document or security system according to claim 3 wherein said at least one window containing the verification means is embodied as a holographic filter that reflects a narrow spectral range.
5. A security document, a value document or a security system according to claim 3 or claim 4 wherein the security element comprises a graphic element.
6. A security document, value document or a security system with at least one security feature and with at least one verification element for verifying the security feature wherein at least one verification element and at least one security element to be verified by the verification element are integrated in a document at different positions, whereby the verification element and the security element are

only superimposed when verification takes place, wherein the verification element is formed by at least one window, which contains as a verification means a polarisation filter, an interference filter a holographic filter or a hologram and the security element is formed as a coloured graphic element.

7. A security document, value document or a security system according to claim 5 or claim 6 wherein when the verification element and the security element are superimposed a colour impression of the graphic element is perceived that differs from the original colour.

8. A security document, value document or a security system according to claim 5 or claim 6 wherein the verification element and the security element are superimposed, part of the coloured graphic element, such as a letter, becomes visible.

9. A security document, value document or a security system according to claim 6 wherein the verification means is a filter that transmits or blocks out a certain spectral range.

10. A security document, value document or a security system according to claim 6 wherein the verification means is an interference filter.

11. A security document, value document or security system according to claim 10 wherein the interference filter comprises a transparent diffraction structure.

12. A security document, value document or security system according to claim 10 wherein the interference filter is a multilayer system.

13. A security document, value document or security system according to claim 6 wherein the verification means is a polarisation filter and the coloured graphic element comprises a dichroic graphically structured layer.

14. A security document, value document or security system, according to claim 13 wherein the polarisation filter and the dichroic graphically structured layer are superimposed, a graphic element becomes visible.
15. A security document, value document or security system according to claim 13 or claim 14 wherein the dichroic graphically structured layer is applied to a reflective layer.
16. A security document, value document or security system according to any one of claims 13 to 15 wherein the dichroic graphically structured layer is provided in a liquid-crystal containing film.
17. A security document, value document or security system according to any one of claims 13 to 15 wherein the dichroic graphically structured layer is applied by printing, sputtering or casting.
18. A security document according to claim 6 wherein the verification means is a holographic filter that reflects a narrow spectral range.
19. A security document, value document or security system according to any one of claims 3 to 18 wherein when the verification element and the security element are superimposed, a compound colour appears in a different colour.
20. A security document, value document or security system according to any one of claims 3 to 18 wherein when the verification element and the security element are superimposed, a pure spectral colour disappears.
21. A security document, value document or security system according to claim 1 or claim 6 wherein the verification element is formed by at least one window providing at least two analyzer zones with verification elements.
22. A security document, value document or security system according to claim 1 or claim 6 including at least two verification windows each forming an analyzer zone with a verification element.

23. A security document, value document or security system with at least one security and with a verification element for verifying the security feature, wherein at least one verification element and at least one security element to be verified by this verification element are integrated in the document at different positions, whereby the verification element and the security element are only superimposed when verification takes place, wherein at least two verification elements are formed by adjacent analyzer zones in one window or in at least two adjacent windows.
24. A security document, value document or security system according to any one of claims 21 to 23 wherein the analyzer zones are adjacently subdivided into a holographic zone and a non-filtering zone.
25. A security document, value document or security system according to any one of claims 21 to 23 wherein the analyzer zones are embodied as prisms for viewing a chromastereoscopic image.
26. A security document, value document or security system according to claim 25 wherein the prisms are holographic prisms or gradient index prisms.
27. A security document, value document or security system according to any one of claims 21 to 23 wherein the analyzer zones with the verification elements are adjacently embodied as at least two filters for viewing anaglyphs, or stereo images.
28. A security document, value document or security system according to claim 27 wherein the filters are holographic filters, polarisation filters or interference filters.
29. A security document, value document or security system according to any one of claims 21 to 23 wherein the analyzer zones are embodied as polarisers for viewing polarisation stereo images.

30. A security document, value document or security system according to any one of claims 21 to 23 wherein the analyzer zones form a Vectograph.

31. A security document, value document or security system, with at least one security feature and with a verification element for verifying the security feature, wherein

at least one verification element and at least one security element to be verified by this verification element are integrated in the document at different positions, whereby the verification element and the security element are only superimposed when verification takes place, wherein the at least one verification element is formed as at least one lens, a mask for a parallax-barrier display or a perforated zone.

32. A security document, value document or security system according to claim 31 wherein the at least one verification element is formed by lenticular lenses, cylindrical lenses or gradient-index lenses.

33. A security document, value document or security system according to claim 32, wherein the verification element comprises a lenticular screen consisting of cylindrical lenses arranged parallel to each other.

34. A security document, value document or security system according to claim 33 wherein the cylindrical lenses are uniform and at the same distance apart.

35. A security document, value document or security system according to claim 34 wherein the cylindrical lenses are spaced apart by approximately 20µm.

36. A security document, value document or security system according to claim 31 wherein the verification element is formed by at least one window which forms a mask for a parallax-barrier display.

37. A security document, value document or security system according to claim 31 or claim 36 wherein the at least one verification element comprises a line screen or dot screen.

38. A security document, value document or security system according to claim 37 wherein the lines or dots of the verification element are formed by perforations.

39. A security document, value document or security system according to claim 38 wherein the lines or dots of the verification element are laser perforations.

40. A security document, value document or security system according to any one of claims 31 to 39 wherein the security element comprises lines or dots.

41. A security document, value document or security system according to claim 40 wherein the lines or dots of the security element are printed.

42. A security document, value document or security system according to claim 40 wherein the lines or dots of the security element are perforations.

43. A security document, value document or security system according to claim 42 wherein the lines or dots of the security feature are laser perforations.

44. A security document, value document or security system according to any one of claims 1 to 43 wherein the verification element and the security feature of the document are, for the purpose of verifying the security feature, brought into position over each other by folding the document.

45. A security document, value document or security system according to claim 44 wherein the document comprises a banknote.

46. A security document, value document or security system according to any one of claims 1 to 43 wherein the document comprises a passport or other

booklet having one page incorporating the at least one verification element and another page having the security element.

47. A security document, value document or security system according to any one of claims 1 to 43 wherein the verification element of a document and the security element of another document are brought into position over each other for the purpose of verifying the security element.

FIG. 1

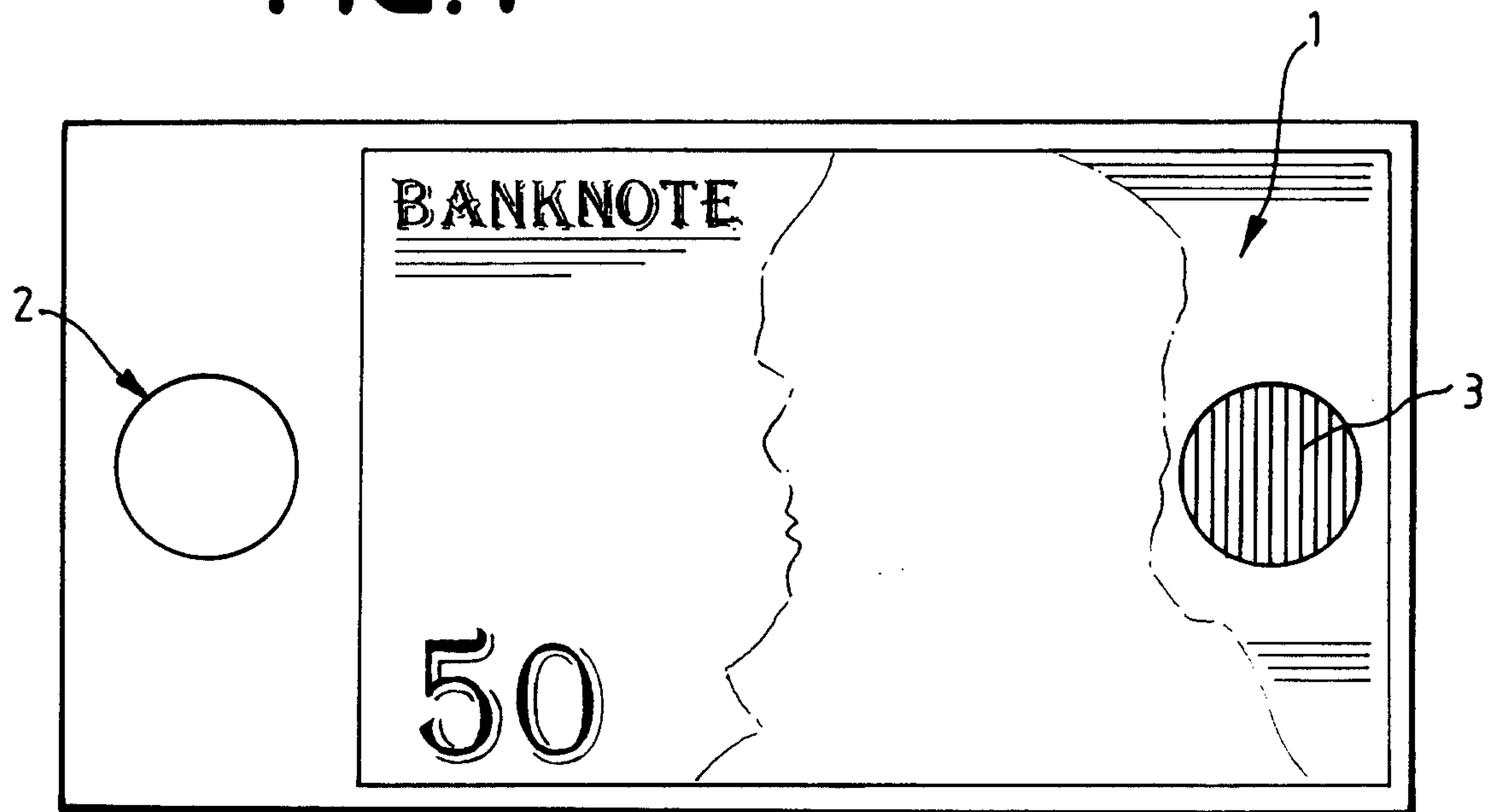


FIG. 2

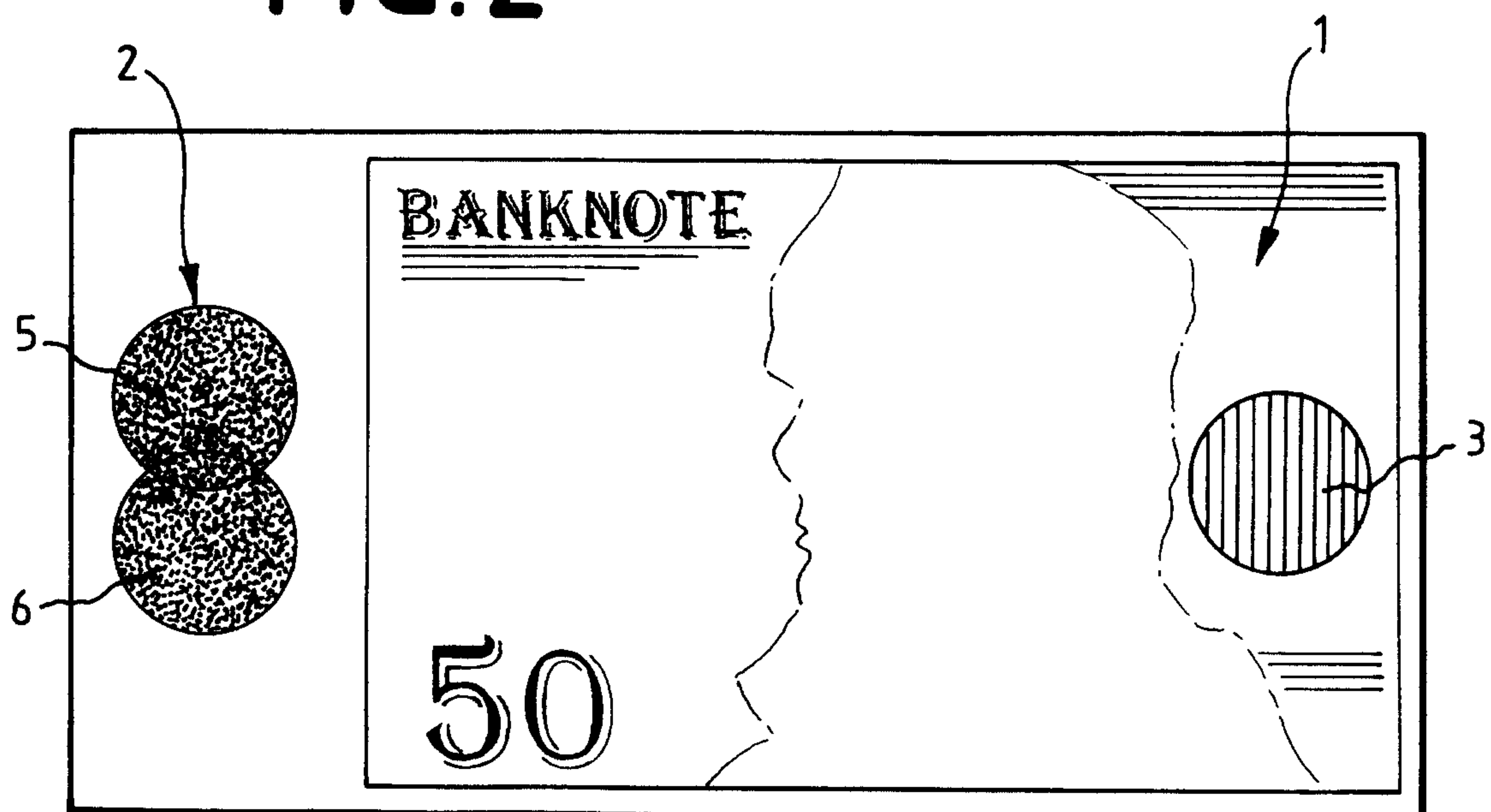


FIG. 2a

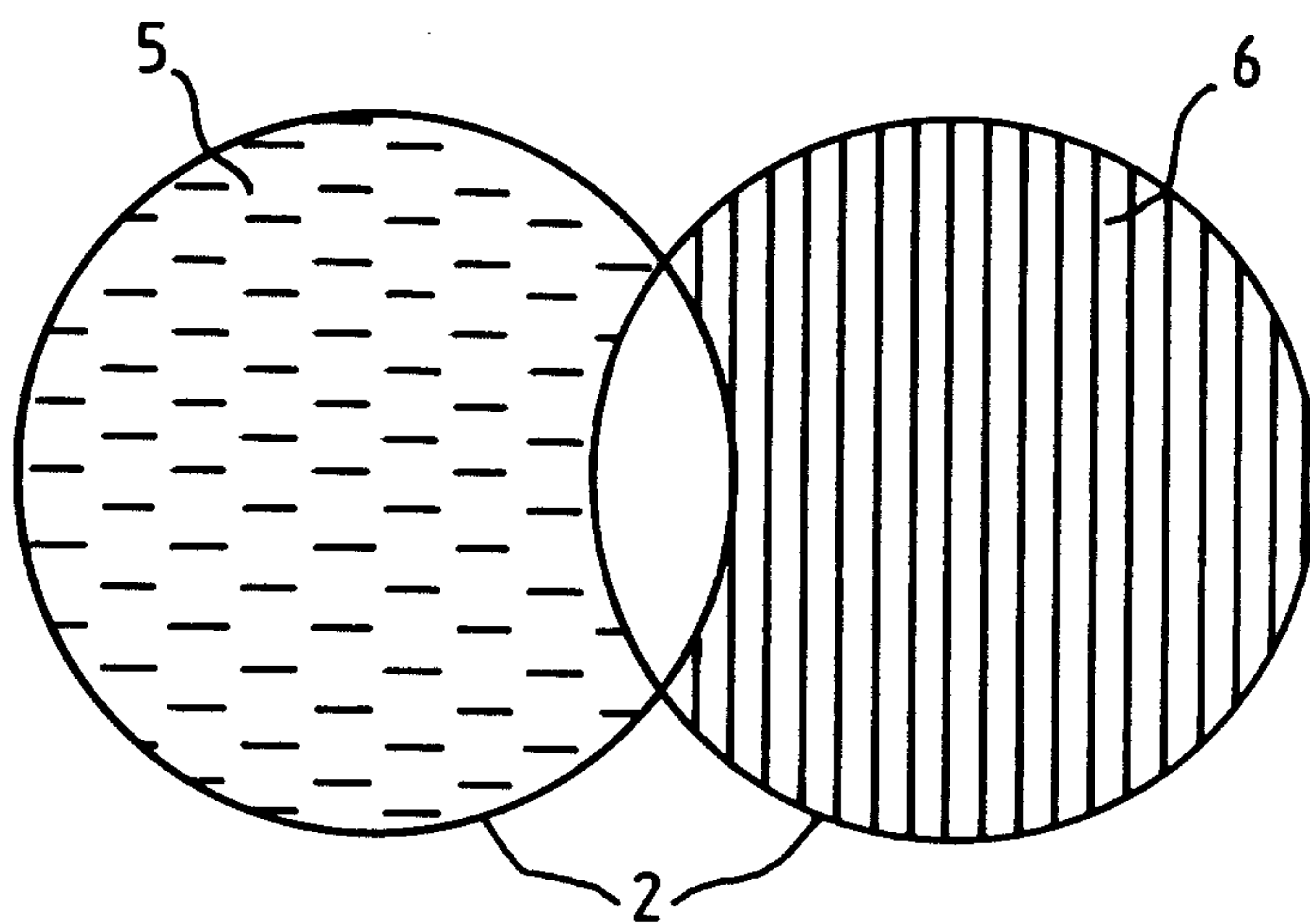
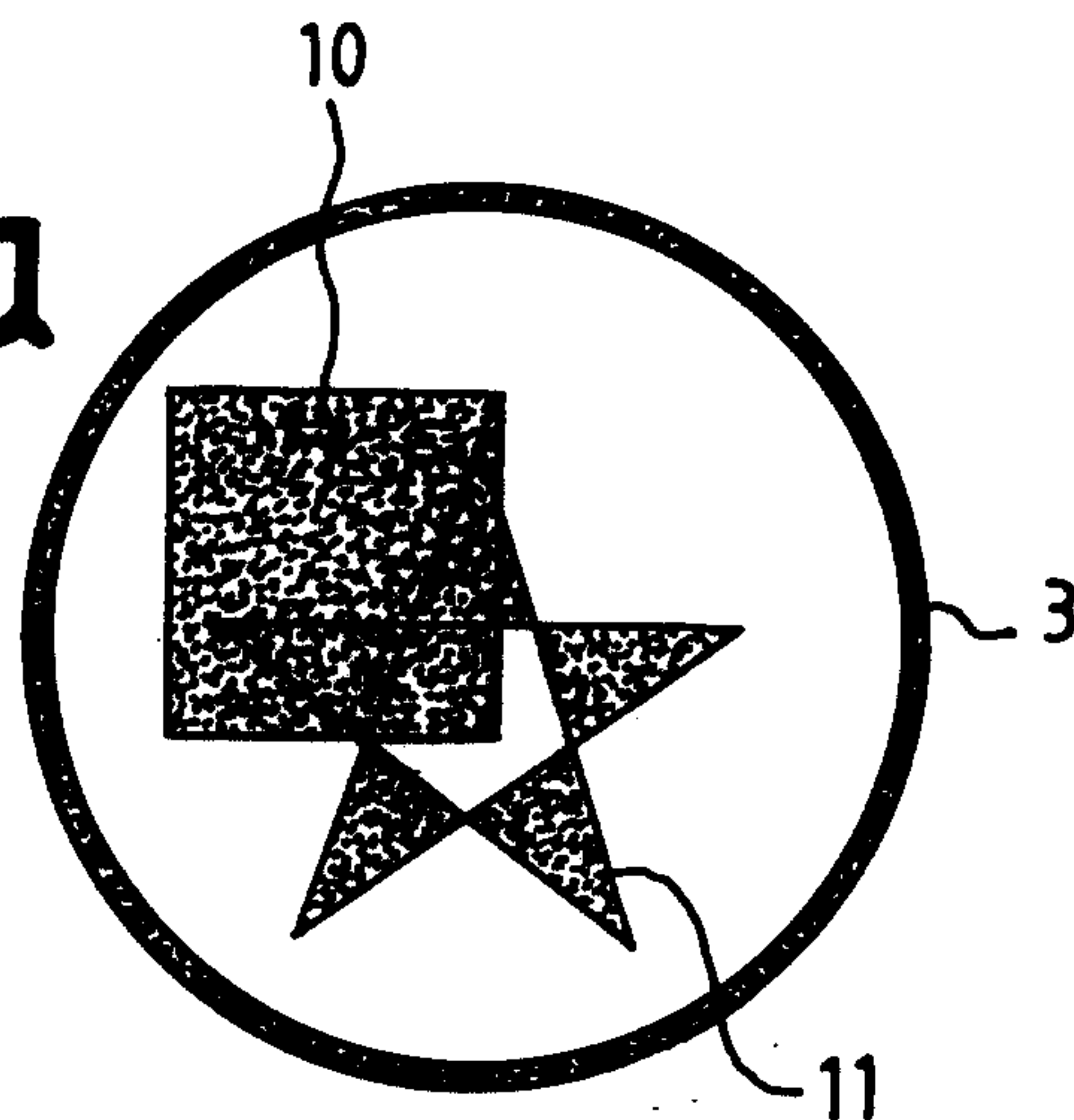


FIG. 2c

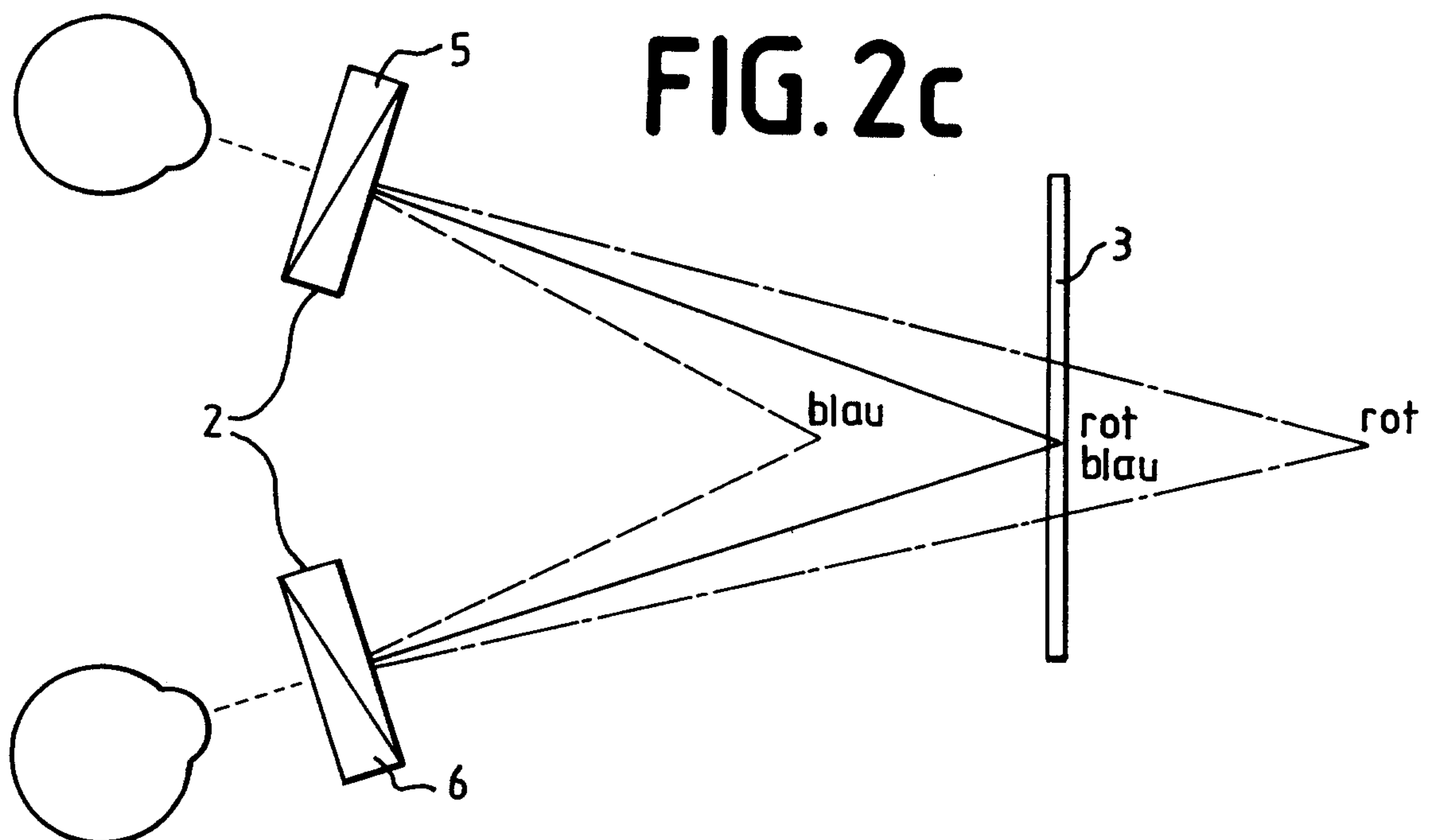


FIG. 2b

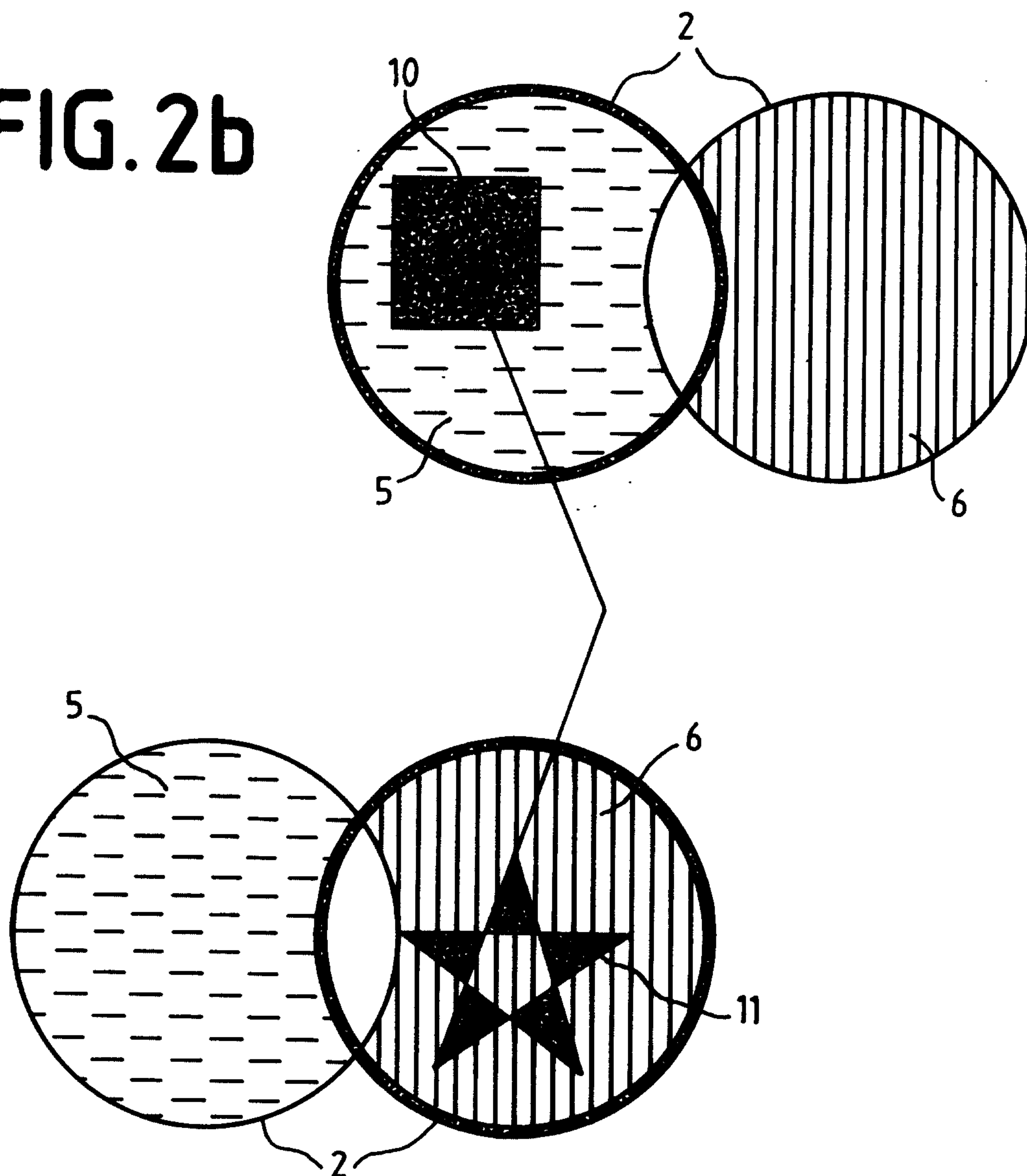


FIG. 2d

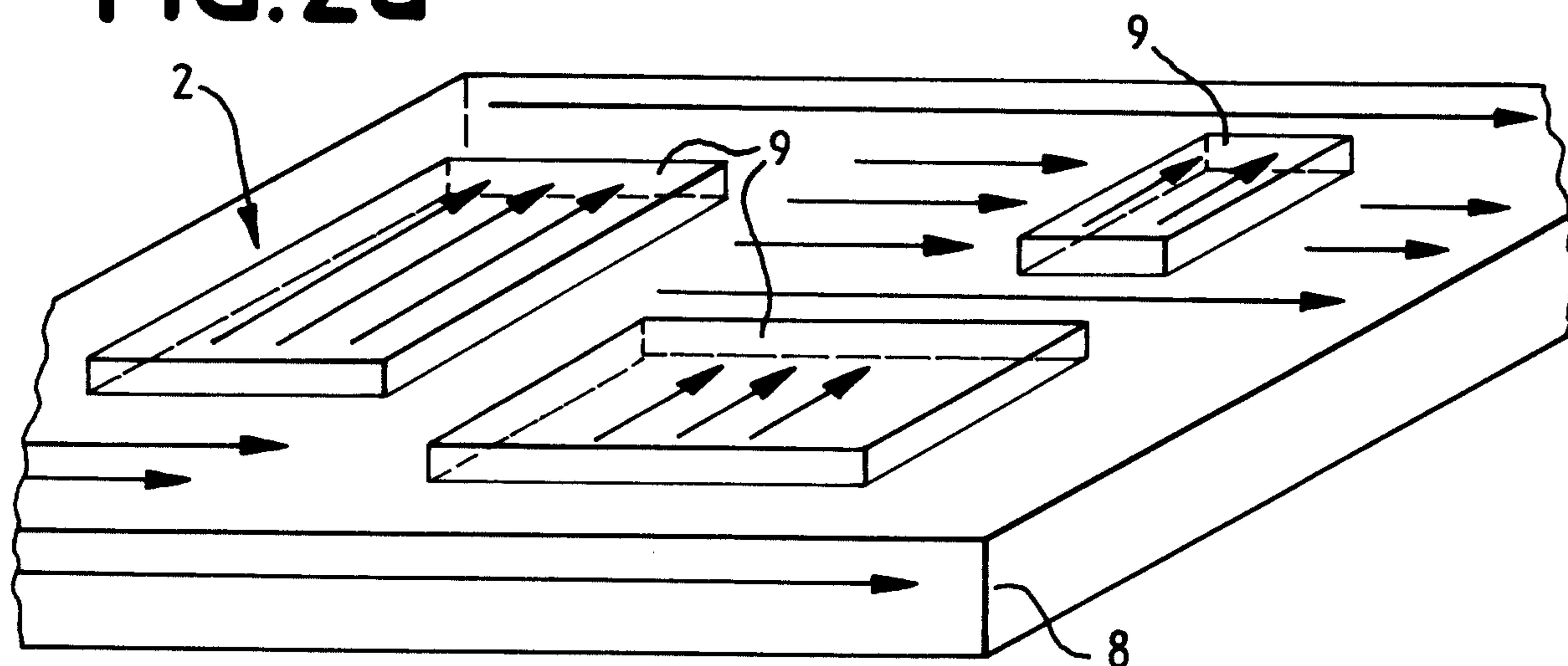


FIG.3

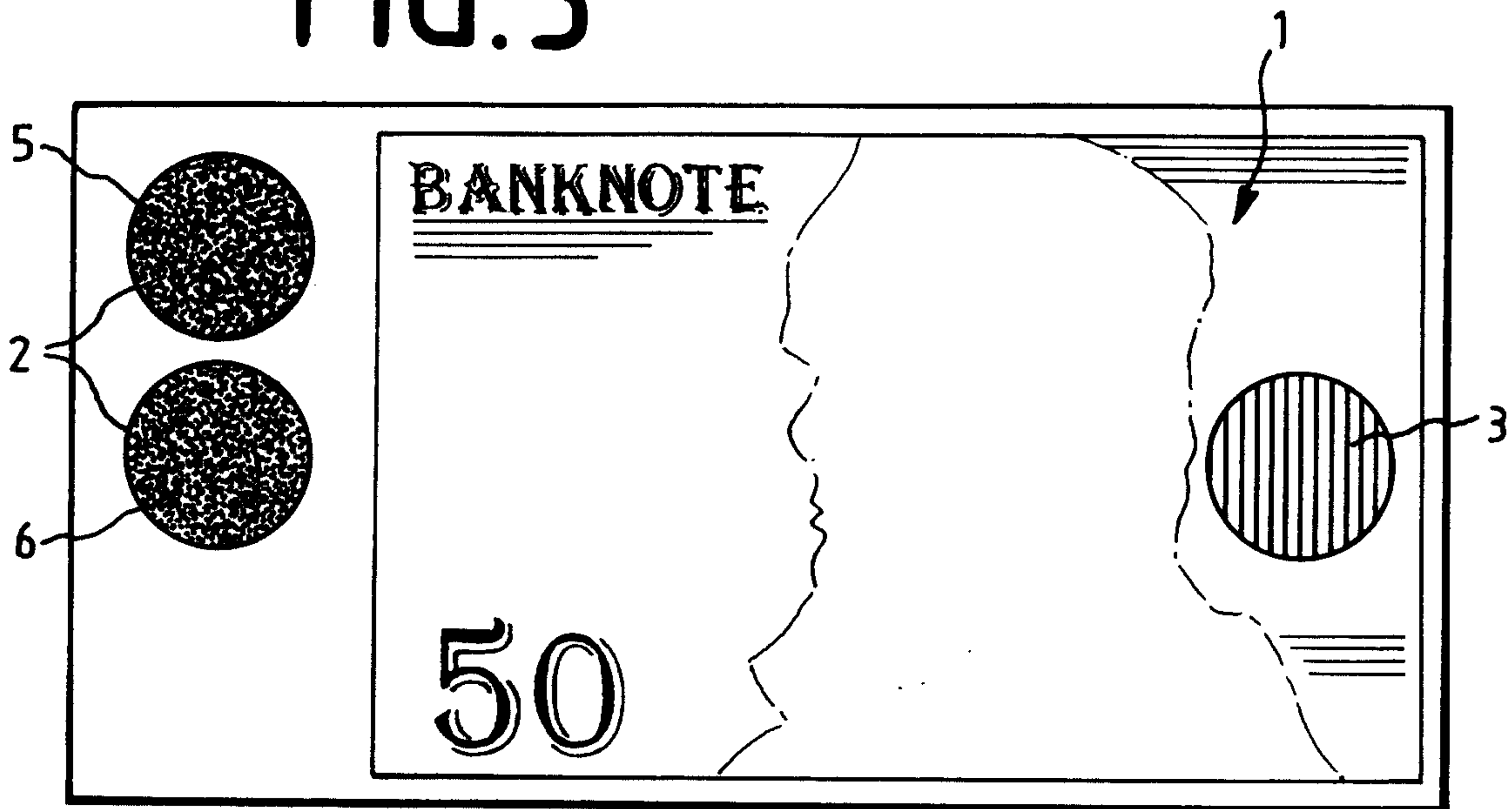


FIG.4

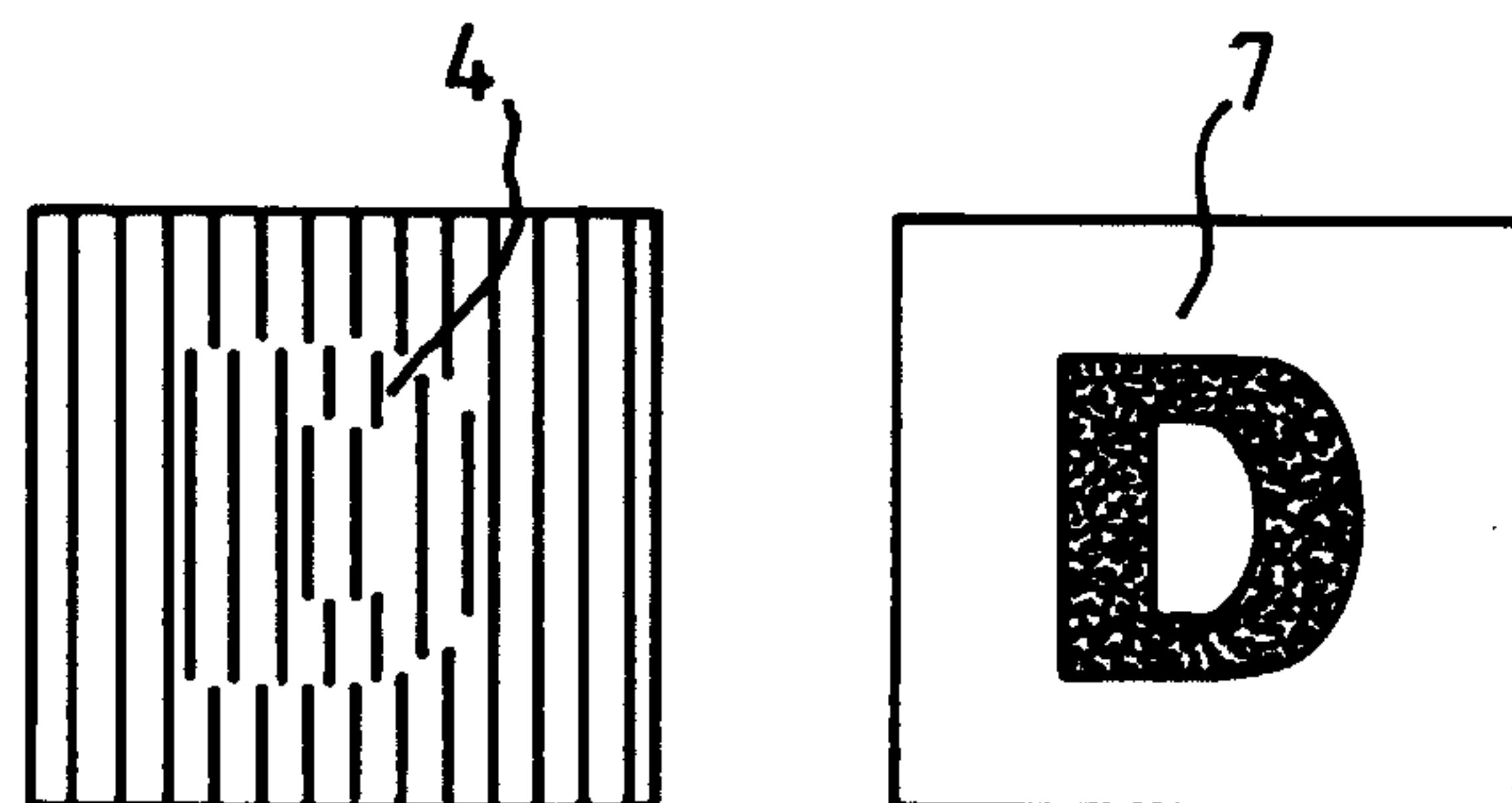


FIG.5

