June 7, 1938. T. S. BUCKLEY 2,120,064

MEANS FOR IDENTIFYING X-RAY PHOTOGRAPHS

Filed May 24, 1935

Fig. 1.

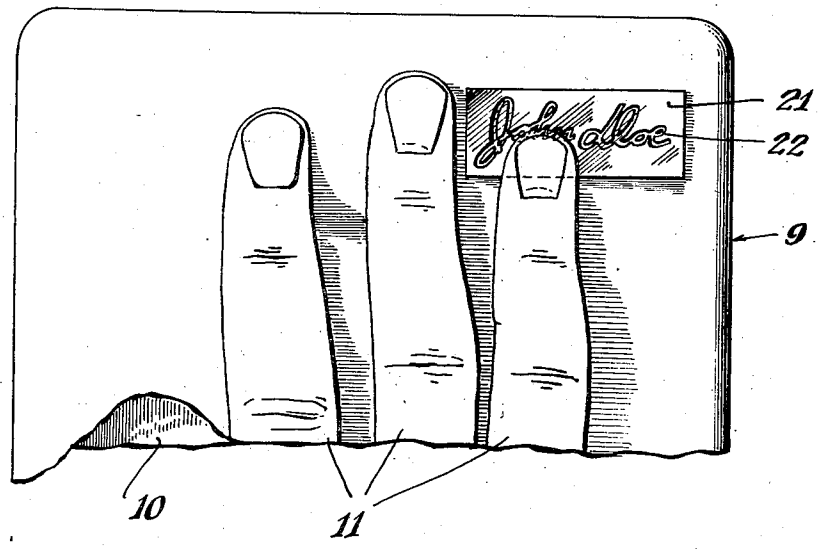


Fig. 2.

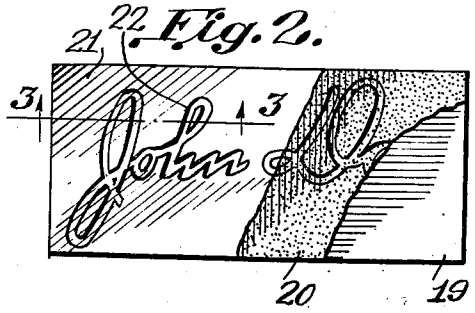
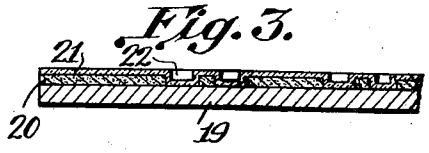


Fig. 3.



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MEANS FOR IDENTIFYING X-RAY PHOTOGRAPHS

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1 Claim. (Cl. 250—34)

This invention relates to a method of and means for identifying X-ray photographs. In hospitals and similar institutions where a large number of such photographs is taken it is important to provide means for identifying the patient shown in each photograph; and any method based on file numbers or the like is subject to the errors inevitable in such systems. Also, such photographs are frequently used in court, where direct positive proof of the identity of the patient or subject shown in a photograph is important, and any method that is not self-identifying can be challenged by showing the possibility of error.

The object of this invention is to provide a practical, convenient method and means whereby the identity of the subject shown in an X-ray photograph can be established from the photograph itself. It consists in general of photographing on the negative a manually traced inscription, such as a specimen of the handwriting of the subject, preferably his signature.

It is convenient to make the inscription on a small piece of sheet material, producing what may be referred to as a plaque. The plaque may be placed on the film case in the most appropriate position during exposure, depending upon the part of the body that is photographed. Proof that the inscription and the subject were simultaneously photographed may be provided by locating the inscription so that it overlaps a portion of the subject's anatomy that is not important to the purpose of the photograph.

Other objects and advantages will be apparent from the following description, taken in connection with the accompanying drawing, in which

Fig. 1 is a face view of the upper part of a case carrying a negative, with a plaque and part of a hand in position for X-ray photographing;

Fig. 2 is a face view of a plaque bearing the excised inscription, partly broken away; and

Fig. 3 is a fragmentary section on line 3—3 of Fig. 2.

The case 9 of the ordinary type contains the usual negative 10, over which are located the upper portions 11 of the fingers of a human hand. The plaque is illustrated in detail in Figs. 2 and 3 in which a card 19 is coated with impermeable material 20 covered with a sheet of yieldable material 21, so constituted that pressure on the cover sheet 21, as by writing thereon with a suitable stylus, will produce depressed lines 22 in which the impermeable material 20 is forced out laterally between the cover sheet 21 and the backing card 19.

In carrying out the process where a plaque is used, any suitable permeable sheet material may be used, such as cardboard, permeable sheet metal, and the like. In this connection it should be understood that the words permeable and impermeable refer to the ability of the material to resist the penetration of X-rays, and are to some extent relative. Material is considered impermeable when under given conditions of exposure it will resist the passage of the rays sufficiently to provide a legible contrast with adjacent permeable material on the negative.

The method facilitates the use of a thick layer of impermeable material, and is therefore especially suitable where prolonged exposure to the rays is necessary. It also permits a somewhat more convenient method of writing. A backing sheet of permeable material 19 is used, and the coating 20 may be of any desired impermeable material. Lead or lead salts are the most effective substances now known, and may be applied in various ways, in sheet form, or by dusting them upon an adhesive which is spread on the backing sheet 19. A more convenient method, however, is to employ a lead compound made up to a thick paste, such as white lead in any of the usual vehicles, spread evenly on the sheet 19.

The inscription may be excised in the sheet 20 of impervious material with a stylus. For convenience the word "excised" is used to mean not only the complete removal of material but also its removal from the inscription lines by forcing it laterally to leave a permanent space. The plasticity of the material in sheet 20 must, of course, be such that it can be thus excised, and will remain out of the inscription during exposure; and material that can be pushed or pressed out of the signature lines during writing is considered plastic for the purposes of this invention.

There are certain advantages in covering the sheet 20 of plastic material, among them being convenience in handling plaques made up in advance, and avoidance of distorted lines due to adhesion of the material to the stylus or uneven displacement of the material. The cover sheet 21 must be permeable, and should be sufficiently flexible to permit pressure of the stylus to displace the material in sheet 20 along the lines in which the stylus travels on cover sheet 21 during writing. Tough, flexible materials such as Cellophane, or other regenerated cellulosic materials, are suitable, particularly when the back sheet 19 and cover sheet 21 are translucent; for with this arrangement the plaque can be in-

spected to see whether proper pressure on the stylus has been used by holding the plaque to the light; and where necessary, portions can readily be retraced. Plaques of this type can be made with an impermeable sheet **20** sufficiently thick to produce a clear inscription even under the most prolonged exposure that is encountered in actual use.

While the invention is especially adapted to present practice in making X-ray photographs, certain features are also applicable to similar processes using other types of penetrative rays and emanations. The picture made by X-rays is referred to herein for convenience as a negative, but the term is not intended to be restrictive, as the invention applies equally to any type of picture made by penetrative rays according to this invention.

I claim:

A removable identification plaque for marking an X-ray negative, said plaque comprising a backing sheet permeable to X-rays, an intermediate layer of plastic material impermeable to X-rays, and a flexible smooth-surfaced cover sheet permeable to X-rays and depressible under scribing pressure into the plastic layer to form therein depressions wherein said plastic layer is rendered permeable to X-rays to produce the desired photographic marking on the negative.

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