

Feb. 14, 1950

C. GAUL

2,497,445

FILM MARKING DEVICE

Filed Oct. 9, 1944

Fig. 1

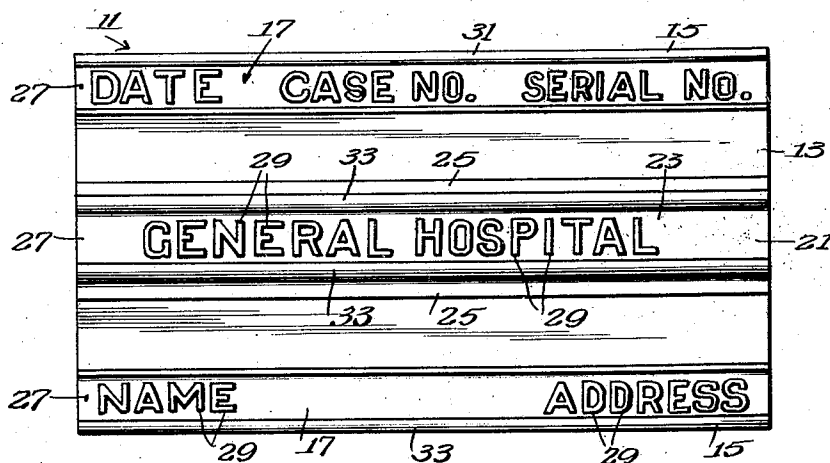


Fig. 2

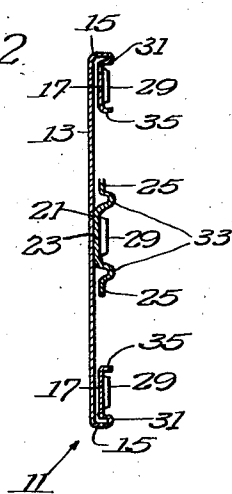
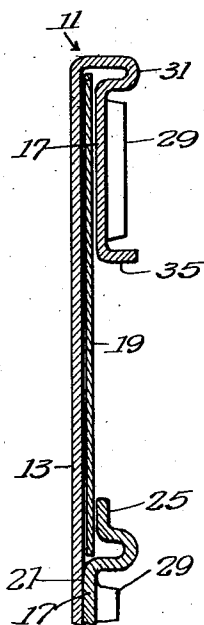


Fig. 3



Inventor
Clyde Gaul
By: Spencer, Margall, Johnston & Cook
Attys.

UNITED STATES PATENT OFFICE

2,497,445

FILM MARKING DEVICE

Clyde Gaul, Chicago, Ill., assignor to General Electric X-Ray Corporation, Chicago, Ill., a corporation of New York

Application October 9, 1944, Serial No. 557,787

9 Claims. (Cl. 40—64)

1

This invention relates in general to the marking of films and has more particular reference to improved means for marking X-ray negative films for purposes of identification.

It is, of course, desirable, if not essential for identification record purposes, to provide for the permanent marking of X-ray film negatives; and, to prevent error, the marking preferably should be made on the film at the time it is exposed for the production of a picture. Identification markings, in addition to a serial number, may include additional data such as the date of the picture, the name of the subject, the name of the organization, institution, or operator making the picture, and such other information as may be desired. Some of the information of more or less permanent character, such as the name of the organization or of the operator making the picture, or both, and the terms "Date," "Serial number," "Case number," "Name," "Address," may properly appear on a large number of films. Other data, of a changeable nature, such as the name and address of the subject, its individual serial or case number, and similar data pertaining to a particular subject, of necessity will appear only on a film or films, relating to that subject.

It is an important object of the present invention to provide an inexpensive, light weight, yet rugged and serviceable holder for mounting changeable data cards in handy position to be applied to a film during the exposure thereof, the holder carrying data of a permanent character thereon in position to be applied to the film, with the changeable data contained on a removable card in the holder.

Another object is to provide a holder of minimum overall thickness on which permanent data are applied by means of raised indicia characters, preferably of lead, and to form the holder in a manner to prevent the characters from being worn or knocked off as a result of rough usage in service. In this connection it should be understood that holders, in service, are not handled with great care, but are subject to all the wear and abuse that light weight, inexpensive equipment is expected to sustain in a photographic laboratory. It is to be expected that the holder will normally be dropped or tossed onto a table or shelf, face up or down, and generally banged about as a usual procedure throughout its service life. As a consequence, any raised indicia applied to an exposed face of the holder may wear away rapidly or become knocked loose; and it is an important object of the present invention

2

to minimize such wear and the danger of displacing such raised indicia in a holder of the character mentioned without unduly increasing either the weight or overall thickness of the holder.

A further object is to provide a flat, light weight card holder of thin X-ray transparent sheet metal, such as aluminum, folded to form a data card holder of minimum thickness and having raised indicia characters on a face thereof, such as lead, and the holder being formed with ribs in its indicia carrying surface for the dual purpose of protecting the indicia from wear or other damage in service and strengthening the holder to make the same substantially rigid against bending or warping, although constructed of light weight sheet material.

Other objects and advantages of the invention will become apparent as the same is more fully understood from the following description, which, taken in connection with the accompanying drawings, discloses a preferred embodiment of the invention.

Referring to the drawings:

Fig. 1 is a face view of a card holder embodying the present invention;

Fig. 2 is a sectional view through the card holder shown in Fig. 1; and

Fig. 3 is an enlarged showing of a portion of the device as shown in Fig. 2.

To illustrate the invention, the drawings show a card holder 11 made of relatively thin, preferably aluminum, sheet metal stock. The holder comprises a back member or plate 13 formed from a rectangular sheet of material, the upper and lower edges of which are bent to provide inwardly extending lips 17 along the top and bottom edges of the holder, spaced from the body of the plate 13 a distance sufficient to slidably receive edges of data cards 19 between the plate 13 and the overlying lips 17, said lips 17 being each connected with the back plate by means of the connecting portion 15.

The plate 13 also carries a strip of sheet metal 21, preferably comprising aluminum, and secured to the plate 13 in any suitable fashion, as by spot welding, in position extending substantially medially between and substantially parallel with respect to the lips 17. The strip 21 has a central portion 23 secured to the plate 13 and offset edge portions forming lips 25 spaced from the plate 13, said lips being in alignment with the lips 17 to form pockets for slidably receiving the edges of the data cards 19 opposite from the edges thereof which extend behind the lips 17.

3

Each lip 17 and the facing lip of the strip 21 thus form, with the plate 13, a card pocket into which a data card 19 may be inserted, endwise from either end of the holder. The cards 19 are adapted to carry data such as the name and address of the subject, the serial number and case number, and a date. Such data may be marked on the cards by printing or typing the same, in X-ray opaque ink, on the surfaces of the cards which are exposed between the lips, 17 and 25, when the cards are mounted in the holder.

The surfaces of the lips 17 and of the strip portion 23 which face away from the plate 13, form surfaces 27 for the mounting of indicia characters 29 representing data of a permanent nature, that is to say, information of a sort that may properly apply to a large number of films to be marked by means of the holder. The indicia characters 29 are preferably formed of suitable X-ray opaque material, such as lead. Characters of this nature may be easily formed, as by stamping or casting, to provide block characters which may be secured in position on the surfaces 27 by gluing the same in place with a suitable adhesive of preferably liquid repellant character. Shellac may be used for the purpose, if desired.

Since lead is a soft material, the characters 29, if placed upon an exposed surface, are subject to the danger of considerable wear due to contact with other objects, such as the top of a laboratory table upon which the holder may be dropped and moved. Furthermore, since the characters 29 extend above the surfaces 27, they are likely to be dislodged and knocked from the holder in the event that they are subjected to any sharp blows in service.

In order to protect the characters 29 from undue wear and from dislodgment, and also to rigidify the holder, in view of its relatively flimsy light weight sheet metal construction, the folding of the material of the plate 13 in forming the lips 17 is accomplished in a manner providing ribs or flutes 31 along the top and bottom edges of the holder at the base of the lips 17, said flutes forming projections on the lips 17, and extending forwardly of the characters 29. By means of these ribs or flutes 31, contact of the characters 29 with any flat surface on which the holder may be dropped face down is prevented, the tops of these ribs or flutes 31 extending in a plane offset forwardly of the tops of the characters 29.

The ribs or flutes 31 will ordinarily afford adequate protection for the indicia characters 29 but, for additional protection the lips 25 of the medial strip 21 may also be provided with ribs or flutes 33 extending adjacent the characters 29 on the mid-portion 23 of the strip. The tops of the flutes or ribs 33 may extend in the plane of the tops of the ribs 31 to form projections on the lips 25 extending forwardly of the tops of the characters 29 to prevent engagement of said characters with a table top upon which the holder may be dropped or moved, face downwardly.

As an additional character preserving expedient, the terminal edges of the lips 17 may be bent away from the backing plate 13 to provide ribs or flanges 35, the free edges of which lie in the plane of the tops of the ribs or flutes 31 and 33, whereby said flanges 35 constitute projections on said lips 17 extending forwardly of the characters 29 thereon.

In addition to the character preserving function of the ribs or flutes 31 and 33 and the flanges 35, such ribbed and flanged construction will impart rigidity to the lips 17 and 25, and will thus serve to strengthen and rigidify the holder against

4

warpage and other deformation in service. Additional rigidification may be imparted by forming a flange on the end of the back plate 13 in position extending from the top to the bottom edge of the holder, at one end thereof. In such case, of course, the data cards 19 will have to be inserted in the holder from the end thereof opposite from such flange.

The device of the present invention affords an exceedingly thin, light weight holder adapted to be positioned, as in the corner of an X-ray film cassette, free to occupy minimum space during the exposure of a film in the cassette. So positioned, the holder will apply on the film, during exposure thereof, not only the data represented by the data characters 29 on the holder, but also such data as may be applied on the data cards 19 mounted in the holder.

It is thought that the invention and its numerous attendant advantages will be fully understood from the foregoing description, and it is obvious that numerous changes may be made in the form, construction and arrangement of the several parts without departing from the spirit or scope of the invention, or sacrificing any of its attendant advantages, the form herein disclosed being a preferred embodiment for the purpose of illustrating the invention.

The invention is hereby claimed as follows:

1. A card holder comprising a sheet metal back plate, having top and bottom edges folded to form lips spaced from the back plate to provide pockets for receiving the edges of removable data cards, a strip of metal having a central portion secured to said plate medially between said lips, said strip having opposed edges respectively facing said lips and offset from said central portion to form pockets for receiving the edges of the data cards remote from said lips, raised indicia characters in alignment on said central portion and facing away from said plate, certain of said lips being formed to provide ribs projecting forwardly of said raised characters to rigidify the holder and protect the characters from contact with a surface on which the holder may be deposited, face downwardly.

2. A card holder comprising a sheet metal back plate, sheet metal card holding members on said back plate and providing spaced apart pocket forming lips for receiving the edges of a removable data card in front of said back plate, said members providing forwardly facing display surfaces for mounting raised indicia characters thereon, in position extending forwardly thereof, and projections formed on said lips and extending adjacent and forwardly of said indicia characters to rigidify the lips and to protect the characters against contact with a support surface on which the holder may be deposited, face downwardly.

3. A card holder comprising a sheet metal back plate, sheet metal card holding members on said back plate, said card holding members comprising each a lip spaced forwardly of said back plate, to provide a pocket for receiving the edge of a removable data card in front of said back plate, and a connecting portion integral with, and extending along the lip, said connecting portion being secured to said back plate, said members providing forwardly facing display surfaces for mounting raised indicia characters thereon, in position extending forwardly thereof, and a projection formed on a said lip and extending forwardly of said indicia characters to rigidify the lip and to protect the characters against contact with a support surface on which the holder may be deposited, face downwardly.

5

4. A card holder comprising a sheet metal back plate, and sheet metal card holding members on said back plate, said card holding members comprising each a lip spaced forwardly of said back plate, to provide a pocket for receiving the edge of a removable data card in front of said back plate, and a connecting portion integral with, and extending along the lip, said connecting portion being secured to said back plate, said members providing forwardly facing display surfaces for mounting raised indicia characters thereon, in position extending forwardly thereof, and a rib formed on and along a said lip and extending forwardly of said indicia characters to rigidify the lip and to protect the characters against contact with a support surface on which the holder may be deposited, face downwardly.

5. A card holder comprising a sheet metal back plate, and sheet metal card holding members on said back plate, said card holding members comprising each a lip spaced forwardly of said back plate, to provide a pocket for receiving the edge of a removable data card in front of said back plate, and a connecting portion integral with, and extending along the lip, said connecting portion being secured to said back plate, said members providing forwardly facing display surfaces for mounting raised indicia characters thereon, in position extending forwardly thereof, and a flute formed in at least one of said members at and along the junction of the lip connecting portion thereof, said flute extending forwardly of said indicia characters to rigidify the lip and to protect the characters against contact with a support surface on which the holder may be deposited, face downwardly.

6. A card holder comprising a sheet metal back plate, and sheet metal card holding members on said back plate, said card holding members comprising each a lip spaced forwardly of said back plate, to provide a pocket for receiving the edge of a removable data card in front of said back plate, and a connecting portion integral with, and extending along the lip, said connecting portions being secured to said back plate, said members providing forwardly facing display surfaces for mounting raised indicia characters thereon, in position extending forwardly thereof, and a flange formed on and extending along the edge of said lip, said flange projecting forwardly of said indicia characters to rigidify the lip and to protect the characters against contact with a support surface on which the holder may be deposited, face downwardly.

7. A card holder comprising a sheet metal back plate and spaced apart means, at the opposite edges of said back plate, providing inwardly extending pocket forming lips in front of said back plate for receiving the edges of removable data

6

cards, a sheet metal strip having a central portion secured to the back plate between said lips, and opposed edges offset from said central portion to provide additional lips forming pockets for receiving the edges of said cards remote from said inwardly extending lips, said central portion providing a forwardly facing display surface for mounting raised indicia characters thereon, in position extending forwardly thereof, certain of said lips having portions extending forwardly of said indicia characters to protect the same against contact with a support surface on which the holder may be deposited, face downwardly.

8. A card holder comprising a sheet metal back plate having top and bottom edges folded to form integral lips spaced from the back plate to provide pockets for receiving the edges of removable data cards, raised indicia characters in alignment on at least one of said lips in position facing away from said plate, said lips being formed with projections extending outwardly of the said characters to protect the same from contact on a surface on which the holder may be deposited facing downwardly.

9. A card holder comprising a sheet metal back plate, sheet metal card holding means on said back plate, said means comprising lips spaced forwardly of said back plate, to provide pockets for receiving the edges of a removable data card in front of said back plate, and an integral connecting portion extending along the lip and secured to said back plate, said means providing forwardly facing display surfaces for mounting raised indicia characters thereon in position extending forwardly thereof, and a flute formed in and along said lips, at the junction of said lips with the said connecting portions, to rigidify said lips, said flutes extending forwardly of said raised indicia characters to protect the same against contact with a supporting surface on which the holder may be deposited face downwardly.

CLYDE GAUL.

REFERENCES CITED

The following references are of record in the file of this patent:

UNITED STATES PATENTS

Number	Name	Date
791,997	Bagby	June 13, 1905
1,091,574	Hines	Mar. 31, 1914
1,177,715	Marbach	Apr. 4, 1916
1,225,073	Stafford et al.	May 8, 1917
1,333,478	Falconer	Mar. 9, 1920
1,507,099	Wood	Sept. 2, 1924
1,821,577	Povalski	Sept. 1, 1931
2,018,175	Knight	Oct. 22, 1935
2,071,912	Auer	Feb. 23, 1937
2,342,847	Crosby	Feb. 29, 1944