

Jan. 27, 1970

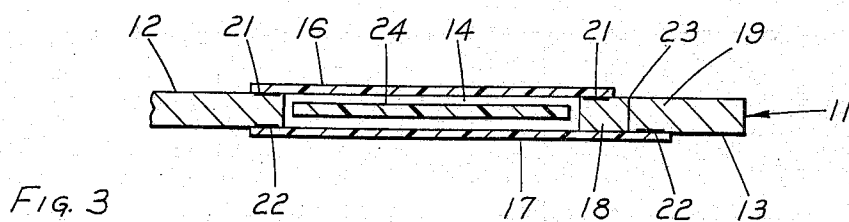
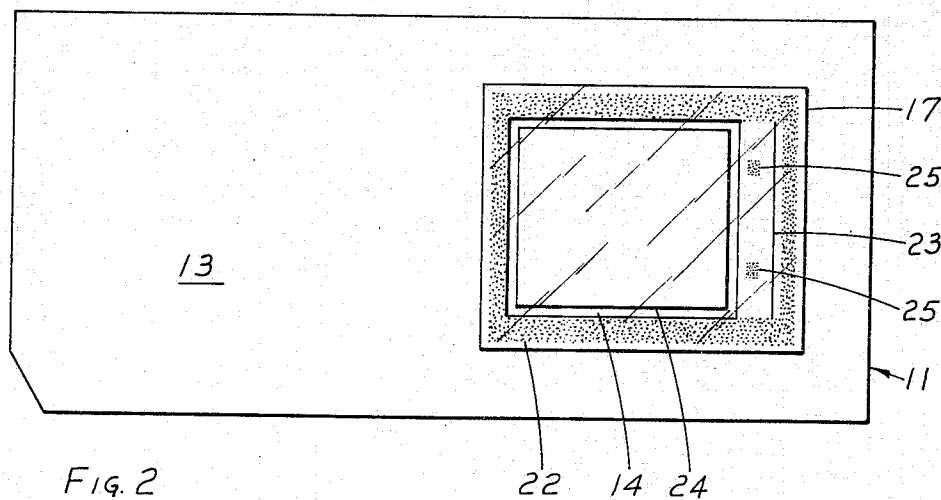
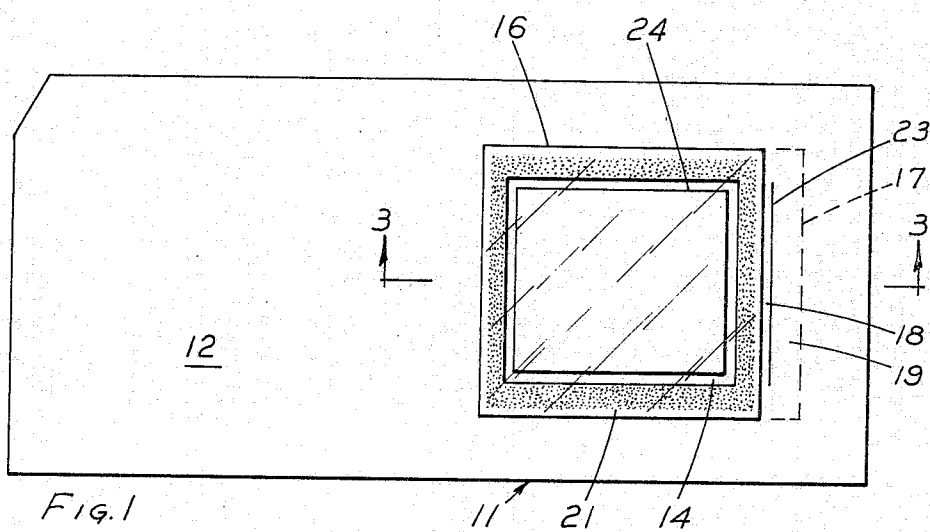
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3,491,471

APERTURE CARD WITH LOADING SLIT IN CARD

Filed May 9, 1968

3 Sheets-Sheet 1



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APERTURE CARD WITH LOADING SLIT IN CARD

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3 Sheets-Sheet 2

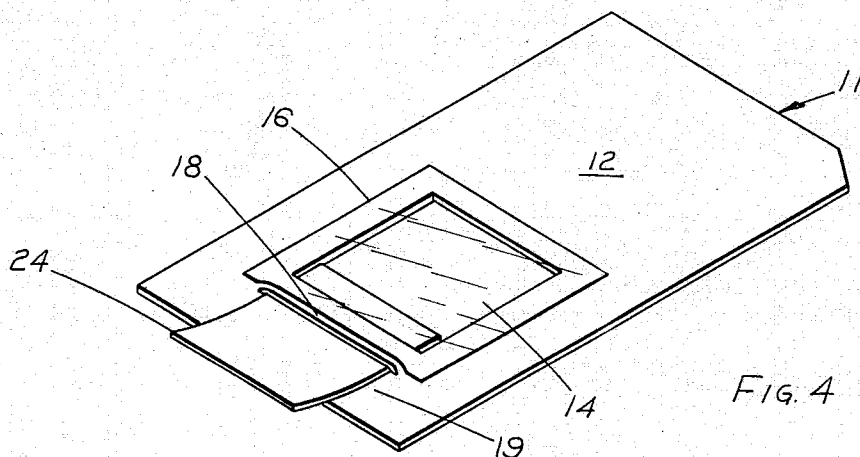


FIG. 4

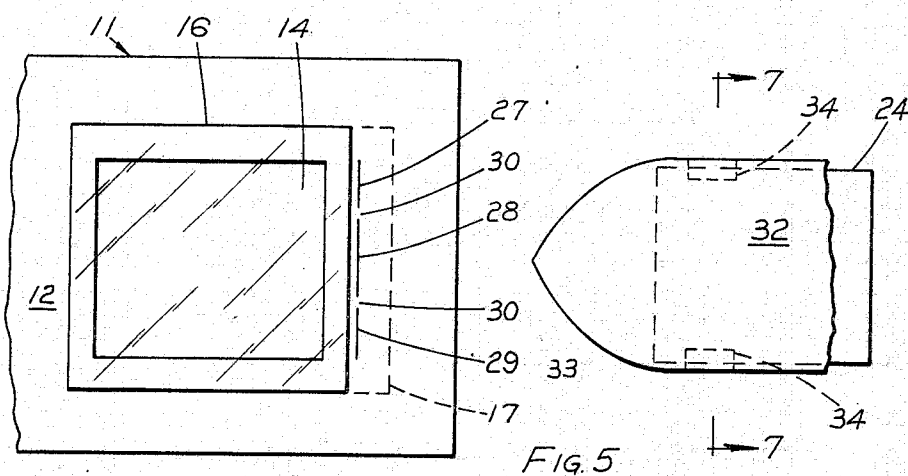


FIG. 5

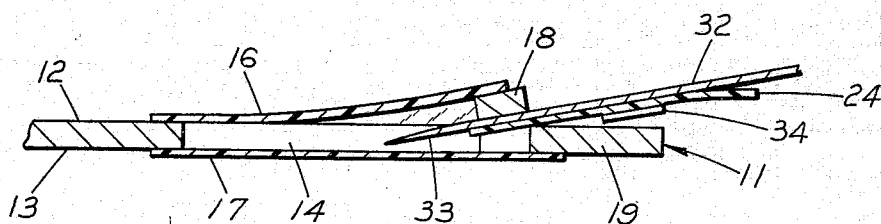


FIG. 6

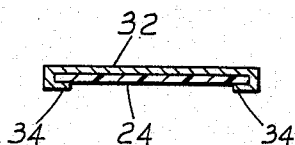


FIG. 7

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3 Sheets-Sheet 3

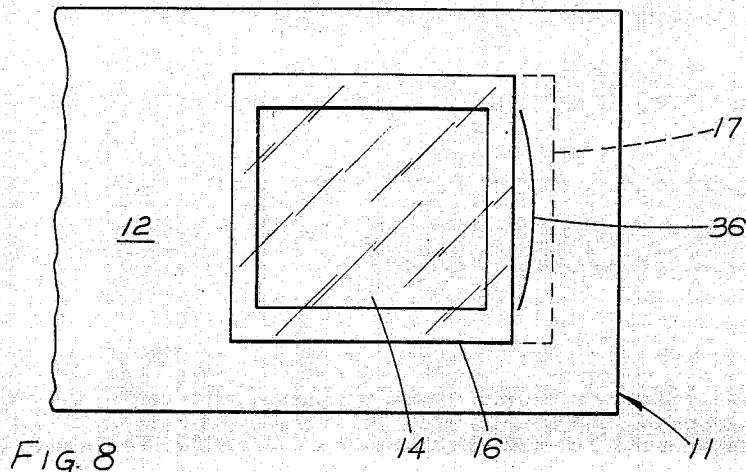


FIG. 8

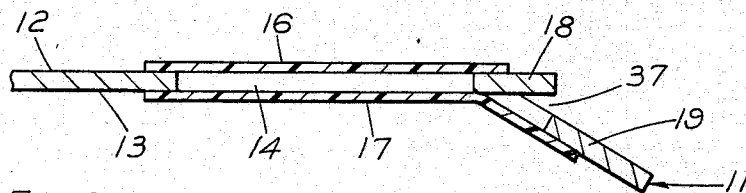


FIG. 9

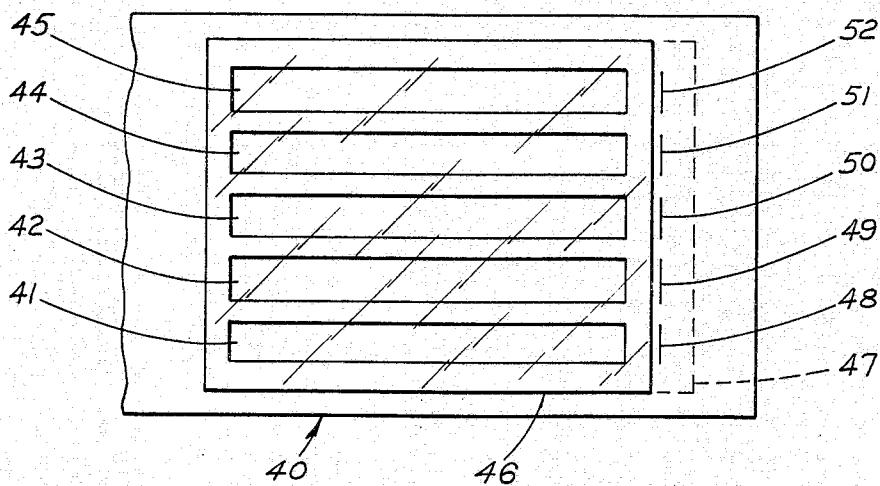


FIG. 10

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**3,491,471
APERTURE CARD WITH LOADING
SLIT IN CARD****Harry F. Semple, 998 Leahy Circle E.,
Des Plaines, Ill. 60016****Filed May 9, 1968, Ser. No. 727,825
Int. Cl. G09f 1/00****U.S. Cl. 40—159****10 Claims****ABSTRACT OF THE DISCLOSURE**

An aperture card has transparent films affixed to each side of the card about the periphery of the aperture. At one end of the aperture the film is longer and affixed to the card farther away from the aperture than is the film at the opposite side of the card. At the same end and between the lines of affixation of the films is a slit through the card to give access to the aperture for the insertion of a microfilm or the like.

BACKGROUND OF THE INVENTION

The conventional procedure for providing access to the interior of an aperture card is to have one edge of one of the films covering the aperture either unaffixed to the card or affixed with a resealable adhesive. This, of course, permits the film to be removed away from the card along that one edge so that a microfilm, picture or other object of a similar nature may be inserted into the aperture or removed therefrom, if desired. The problem that arises is that the film along that one edge is not as secure as the remaining parts of the film. This often results in the film at that one edge being caught by another card, some of the mechanical equipment with which the cards are used, etc., and the film is torn or at least loosened. This will then permit the escape of the object from the aperture with the danger of it being lost or reinserted in the wrong card. Even when the film has not been so damaged, the fact that it is not securely affixed to the card about all of its edges, may permit a similar escape of the object from the aperture.

The present invention is to remedy this defect or problem that has arisen in connection with the use of conventional aperture cards and to more securely hold the object in the aperture after it has been inserted therein. At the same time, ready access is provided to the interior of the aperture when desired. As will be hereinafter apparent, this is accomplished by putting the access opening to the aperture in the aperture card per se. This access opening is in the form of a slit in the card with the films being arranged so that the slit at one side of the card is exposed for initial entry and the slit at the opposite side of the card leads into the aperture.

Further objects and advantages will become apparent from the following description taken in conjunction with the drawings.

SUMMARY OF THE INVENTION

The invention relates to an aperture card having an access opening provided by a slit through the card with the slit at one side being exposed and the slit at the opposite side communicating with the aperture in the card.

DESCRIPTION OF THE DRAWINGS

FIGURE 1 is a view of one side of an aperture card embodying the present invention;

FIGURE 2 is a view of the opposite side of the card of FIGURE 1;

FIGURE 3 is an enlarged partial section as viewed at line 3—3 of FIGURE 1;

FIGURE 4 is a perspective view illustrating the manner

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of inserting a strip of microfilm into the embodiment of FIGURES 1—3;

FIGURE 5 is a view of a side of an alternative embodiment and illustrating a tool that may be employed to facilitate the insertion of a microfilm;

FIGURE 6 is an enlarged sectional view of the embodiment of FIGURE 5 showing the use of the tool in inserting the microfilm;

FIGURE 7 is a section taken at line 7—7 of FIGURE 5;

FIGURE 8 is a view of a portion of a further alternative embodiment;

FIGURE 9 is an enlarged sectional view of the embodiment of FIGURE 8, illustrating its manipulation to facilitate the insertion of an object into the aperture; and

FIGURE 10 is an illustration of a further embodiment of an aperture card having a plurality of apertures.

**DESCRIPTION OF THE SPECIFIC
EMBODIMENTS**

Although the following disclosure offered for public dissemination is detailed to ensure adequacy and aid understanding, this is not intended to prejudice that purpose of a patent which is to cover each new inventive concept therein no matter how others may later disguise it by variations in form or additions or further improvements. The claims at the end hereof are intended as the chief aid toward this purpose; as it is these that meet the requirement of pointing out the parts, improvements, or combinations in which the inventive concepts are found.

FIGURES 1—4 illustrate a card generally 11 having two faces 12 and 13, with an aperture 14 extending therebetween. At face 12 the aperture 14 is covered by a film 16, while at face 13 the aperture is covered by a film 17. It will be noted that at one end of the aperture the film 17 is longer than is the film 16. Thus at that end of the aperture there is a first portion 18 of the card over which the film 16 (as well as 17) lies, and a second portion 19 of the card over which only the film 17 lies. Film 16 is affixed to the card along an area inside of and extending entirely around the periphery of the film by a suitable adhesive 21. Similarly, entirely around, but inside, the periphery of film 17 is a band of adhesive 22 securing film 17 to the card.

Between portions 18 and 19 of the card is an access slit 23. Thus by raising the portion 18 of the card at the slit 23, as illustrated in FIGURE 4, there will be an opening extending from the exterior of the card at face 12, between portion 18 and film 17, and into the internal opening defined by aperture 14 in the card. An object such as a strip of microfilm 24 may be inserted through this access opening into the aperture. When the object has been inserted and the force employed to raise portion 18 of the card is removed, the portion 18 will return to the position illustrated in FIGURE 3 securely trapping the object 24 in the aperture.

Films 16 and 17 are merely thin, transparent plastic films. The stock from which cards 11 are conventionally made is normally heavier and more rigid than is the stock from which films 16 and 17 are formed. Because of this, the card is more likely to remain flat at slit 23, and there is considerably less likelihood, with this construction, of unintentionally having the access opening to the interior of the pocket coming apart with the result that the object in the aperture will unintentionally fall out of the aperture. As a further precaution against any such undesirable occurrence, several dots of pressure sensitive, resealable, adhesive may be placed between portion 18 of the card and the adjacent part of film 17. Two such dots of adhesive are illustrated at 25 in FIGURE 2. The adhesive can be such as those made of polyvinyl acetate.

FIGURES 5 and 6 illustrate an alternative embodiment

which corresponds to FIGURES 1-4, except for the configuration of the access slit. Thus, corresponding numbers have been applied to the corresponding parts. In the embodiment of FIGURES 5 and 6, the slot is discontinuous. It is formed by three smaller slots 27, 28 and 29. These are aligned with each other and separated by uncut or unsevered portions 30 of card 11. When it is desired to insert an object 24 into aperture 14, it is only necessary to pull up with a slight force on portion 18 of the card so as to tear the card at uncut portions 30 between the slots 27-29.

FIGURES 5-7 also illustrate a tool which may be advantageously employed to facilitate inserting objects 24 into aperture 14. This tool comprises a suitable handle, not shown, to which is affixed a flat blade 32. Blade 32 has a nose 33 at its distal end, with the distal end of the nose being tapered in thickness, as best seen in FIGURE 6. Rearwardly of the distal end of the blade are a pair of side guides 34 to hold the microfilm 24, while permitting the microfilm to slide therethrough longitudinally of the blade. The distal end of the nose 33 can be inserted in center slot 28 and by forcing the nose on into the slot, the uncut portions 30 will be severed. Thereafter the blade is moved approximately to the position illustrated in FIGURE 6, where it serves to hold the portion 18 of the card out of the way for easy access into aperture 14. From the FIGURE 6 position the microfilm 24 is slid to the left and into aperture 14. With the microfilm in the aperture, the blade 32 is withdrawn.

FIGURES 8 and 9 again illustrate an embodiment substantially corresponding to the embodiment of FIGURES 1-4, except for the configuration of the access slot. In this embodiment the slot 36 is curved with the ends of the slot being closer to aperture 14 than is the center of the slot. The advantage of such a curved slot is illustrated in FIGURE 9. With the card 11 held in the hands, the card is bent so that the right end turns downwardly with respect to the left end, as illustrated in FIGURE 9. When this is done, the slot 36 automatically opens to provide an access opening 37 leading to the interior of the aperture 14. With the opening 37 present, it is a simple matter to slide a microfilm or other object through this opening and on into aperture 14.

FIGURE 10 illustrates an alternative embodiment wherein the card generally 40 has five apertures 41-45. Covering these apertures on one side is a film 46 (corresponding to film 16), and on the opposite side is a film 47 (corresponding to film 17). Slits 48-52 are provided for each of the apertures 41-45 respectively. The slits 48-52 are not connected. The construction otherwise corresponds to that illustrated in FIGURES 1-4. The slits 48-52 are exposed on one side of the card (the upper side, as illustrated in FIGURE 10), and at the opposite side of the card provide access to the apertures 41-45. Apertures 41-45 can be used, for example, to hold 5 strips of 8 mm. film. If desired, for example, only two apertures could be provided to hold two strips of 16 mm. film within substantially the same space on a card. With the multiple aperture card as in FIGURE 10, a single slit (slits 48-52 connected) could be employed to provide access to all of the apertures.

I claim:

1. In an aperture card to hold an object, such as a piece of microfilm or the like, to be moved into the aperture after the card is produced and to be held in the aperture by pieces of film extending across the aperture at each face of the card, each of said films being sufficiently large to cover the aperture and a portion of the face of the

card surrounding the aperture, the improvement comprising:

said card having a slit therethrough from face to face, said slit being positioned adjacent, but spaced from, one edge of said aperture so that there is a first part of the card between the slit and the aperture and a second part of the card between the slit and the adjacent edge of the card, one of said films being affixed adjacent its periphery to one face of the card including said first part, the other of said films being affixed adjacent its periphery to the other face of the card including said second part, whereby access to the aperture to insert said object may be had through said slit and from there between said second film and said first part of the card to the aperture.

2. In an aperture card as set forth in claim 1, wherein there is an adhesive between at least a portion of said first part of the card and said other film, said adhesive being of a type capable of permitting said first part and second film to be separated and then readhered.

3. In an aperture card as set forth in claim 2, wherein said slit is straight.

4. In an aperture card as set forth in claim 2, wherein said slit is curved with the ends of the slit closer to the aperture than is the center of the slit.

5. In an aperture card as set forth in claim 1, wherein said slit is straight.

6. In an aperture card as set forth in claim 1, wherein said slit is curved with the ends of the slit closer to the aperture than is the center of the slit.

7. In an aperture card as set forth in claim 1, wherein said slit is discontinuous being interrupted at intervals along the length thereof by a short unsevered portion of the card.

8. In an aperture card as set forth in claim 7 of the type including a plurality of apertures each having one end thereof aligned with the corresponding end of each other aperture, wherein said slit extends adjacent said one end of the apertures.

9. In an aperture card as set forth in claim 1 of the type including a plurality of apertures each having one end thereof aligned with the corresponding end of each other aperture, wherein said slit extends adjacent said one end of the apertures.

10. The combination of an aperture card as set forth in claim 1 and a tool for loading said card, wherein said tool has a thin flat blade with a nose on the distal end, said blade having a width approximately equal to the width of said object, said nose being thinner at its distal end than is the remainder of the blade, and guides for said object along each edge of the blade and space rearwardly from the nose of the blade.

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U.S. Cl. X.R.

40-16

UNITED STATES PATENT OFFICE
CERTIFICATE OF CORRECTION

Patent No. 3,491,471 Dated January 27, 1970

Inventor(s) Harry F. Semple

It is certified that error appears in the above-identified patent and that said Letters Patent are hereby corrected as shown below:

Column 1, line 27, "removed" should be --moved--; column 1, line 55, "Furher" should be --Further--. Column 4, line 51, "is", second occurrence, should be --of--; Column 4, line 52, "space" should be --spaced--.

SIGNED AND
SEALED
JUL 7 1970

(SEAL)

Attest:

Edward M. Fletcher, Jr.

Attesting Officer

WILLIAM E. SCHUYLER, JR.
Commissioner of Patents