A single memo card (C1) with four faces (F1T, F2T, F3B, F4B) is disclosed comprising two memo cards (C1, C2) interlocking by means of slits (S1, S2) in each card. Applications for the four-faced card include but are not limited to multi-alphabet business cards, multiple language learning aids, and recipe cards.
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Codes used to identify States party to the PCT on the front pages of pamphlets publishing international applications under the PCT.

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INTERLOCKING FOUR-FACED MEMO CARD

BACKGROUND OF THE INVENTION

Memo cards are thin pieces of cardboard of convenient dimensions having information written on one or both sides. They are convenient and well known tools used to store information and to assist in the organization and memorization of such material.

In the simplest case, the information to be stored is written or printed on only one side of a card. Perhaps the most common example is an ordinary business card, which contains the name, address, telephone number, and business affiliation of an individual printed on one side of the card. Business cards are usually 2 inches high by 3.5 inches wide by approximately .1 inch thick. Of course, there are many other examples of information stored on such cards. For example, homemakers may store cooking recipes on somewhat larger cards. Another common use of such cards is to use them to organize information. A researcher or author may write a set of facts or ideas on a set of cards, and then, by arranging and rearranging the cards, organize and reorganize the material.

It is well known that information may be written on both sides of a memo card.

Sometimes the reverse side of the card is used merely because there is insufficient room on the obverse for all the information to be stored on that card. The hypothetical homemaker, for example, might use the reverse of a recipe card in addition to the obverse because there is not enough room on the obverse for the entire recipe. We can say that one logical body of information is "partitioned" by storage on the two sides of the card. The information on the reverse side of the card is not the same as the information on the obverse. It is a continuation of the information.

In other instances there are specific advantages based on equivalence of identical information, to using the reverse side of the card. Business cards in two languages having different alphabets (say, Roman and Cyrillic) will have information in one alphabet on the obverse of the card and the same information in the second alphabet on the reverse side. There is an equivalence relation between the information on the two sides. It is the same information, but in a different format.

Another use has to do with memorization tasks. In learning a language, for example, one task that a student must master is to pair new vocabulary words from the target language with corresponding words in his native tongue. For example, in learning Spanish, an English speaker must learn to associate the English word "water" with the Spanish word "agua." One tool to facilitate this association process is to use a multi-lingual flash card, which has on the obverse a word printed in one language and on the reverse the same word translated into a second language. Here, too, there is an equivalence relation between the information on the two sides.

In the usual use of such flash cards the student reads one side of the flash card and then tests himself by thinking of the translation. For example, returning to the hypothetical
English speaking student learning Spanish, the student would read the word "water" on one side of the card and mentally test himself by seeing if he remembers the target word "agua." The direction of testing can go both ways, of course. A conscientious student will practice translating from Spanish to English and vice versa. Flash cards frequently have additional information on them. For example, cards with verbs on them frequently have the conjugations of that verb.

It must be understood that the information contained on memo cards does not have to be verbal. If a task requires learning to associate an image with a word, one side of the card will contain the image, the other the word.

I have used the term "side" to represent that area of a memo card upon which is written information. Another term that might be used is "face." The terms "face" and "side" are synonymous when used for a for a single card. I will refer to the term "face" to refer to a seemingly contiguous area upon which information may be written. My invention consists of a "dynamic multi-card" with four separate areas or "faces" upon which information may be written. It comprises two interlocked cards. As this specification teaches, a single "face" on a multi-card is comprised of two half sides on two separate cards. Hence forth I will use the term "face" to represent the logical area upon which information may be displayed, and "side" to represent the physical structure of a card. This invention is "dynamic" rather than static because it is possible to dynamically reconfigure the multi-card by rotating one of the interlocked cards about its axis. This dynamic reconfiguration brings third and fourth faces into view.

Although the double faced card is frequently useful and appropriate, there may be instances when it would be more convenient to have a card with four faces. A four faced card can be more convenient for two reasons. First, with four faces, there is twice as much area upon which a single data block may be partitioned. Our hypothetical housemaker can record a receipe that requires twice as much information storage. It is true that two separate cards could be used, but because the two cards are separate there are the inconveniences of (1) having first to use one card and then find and pick up the other and (2) having always to keep the two together (there is a danger of losing one card).

The second general case in which a four faced card would be more convenient is that in which there are four equivalent classes of information. In this case, each class can be written on a separate face.

For example, a four faced business card for use in the Pacific Rim might display the same information in the Korean, Chinese, Japanese, and Roman alphabets and character sets. A card for an individual doing business in the Mediterranean region might profitably display the same information in the Roman, Hebrew, Greek and Arabic alphabets on separate faces. In the same manner, a four faced flash card could be used to associate words any four languages. A four faced language learning card could have words in say, English, French, Spanish, and Italian. For example, one face could have the word "water" in
English, a second face would have "aqua" is Spanish, a third face would have "eau" in French, and the fourth face would have "acqua" is Italian. Any four languages can be associated this way.

Another use for a four faced card is the study of the Chinese language. Chinese is not written with the Roman alphabet. Rather, Chinese is written with characters, of which there are many thousands. These characters are not phonetic. To make matters more complicated, there are two sets of Chinese characters in common use. The orthodox character set (or "fantizi") has been in use for several thousand years. With the establishment of the People's Republic of China, the government of that nation embarked upon a program to simplify the characters. This second set of characters of simplified characters (or "jiantizi") is widely used in the People's Republic of China while the original fantizi are used in Taiwan and the rest of the world.

In order to assist students in learning and understanding the standard Chinese language, as well as to facilitate the transliteration of Chinese names and places for foreign understanding, the government of the Peoples Republic developed the "pinyin" romanization system. Each word in Chinese has a standard phonetic translation using the letters of the Roman alphabet ("a," "b," etc.). There are other systems for the romanization of the Chinese language, such as the Yale system and the Wade-Giles system. The basic operation is the same. They differ in the choice of letters to represent sounds. For example, the sound represented by an initial "x" in pinyin is represented by the pair of initial letters "hs" in the Wade system.

An English speaking student wishing to learn to speak and read Chinese must therefore learn the pronunciation of the translated word (by pairing the English with the pinyin) as well as learn to pair the English with the orthodox and simplified character, as well as learn to pair these characters with each other, and to pair each with the pinyin pronunciation. There are thus four equivalent classes of information to be associated (1) English word, (2) pinyin/phonetic representation, (3) simplified character, and (4) orthodox character.

For this reason, it has not been possible to use conveniently regular flash cards to study Chinese. Flash cards are available, but they have not heretofore permitted the student to test himself in all the necessary tasks. If the card has English on one face and pinyin, simplified and complex characters all on the other (which is common), it does not permit practice in the association of the pronunciation with characters (since both pinyin and characters are on the same face). If one wishes to practice associating the simplified form with the complex this also can not be accomplished because both forms are on the same face. A four faced flash card, however, would permit English, pinyin, fantizi and jiantizi each to be displayed on a separate face.

SUMMARY OF THE INVENTION

This disclosure teaches a new and useful invention, an interlocking "multi-card" having four faces. The invention comprises two cards each having a horizontal slit, the cards being
interlocked by means of the slits. The multi-card provides four faces upon which information can be recorded and displayed.

BRIEF DESCRIPTION OF THE DRAWINGS

In Figures 1 through 12, C1 and C2 represent the two cards comprising a single multi-card. S1 and S2 are horizontal slits found on cards C1 and C2 respectively. Each half of each side of C1 and C2 is identified by a three character reference with the face that it comprises. The initial character is "F," the second character is the numeral indicating the face number, and the terminal character is either the letter "T" or "B" indicating whether it is the first half (top) or second half (bottom) of the respective face. For example, F1T represents the first half of face 1, F1B represents the bottom of face 1, F2T is the top of face 2, etc. concluding with F4B, the bottom of face 4.

Figure 1 shows the obverse of first card C1. Figure 2 shows the reverse of first card C1. Figure 3 shows the obverse of second card C2. Figure 4 shows the reverse of second card C2. Figure 5 shows the correct orientation of first card C1 and second card C2 to interlock said two cards. Figure 6 shows the two cards interlocked. Figure 7 shows how card C1 being rotated to form a completed multi-card. Figure 8 shows face 1 of the multi-card. Figures 9 through 12 show how card C1 may be rotated about its horizontal axis to bring face 3 into view thereby dynamically reconfiguring the card.

DESCRIPTION OF THE PREFERRED EMBODIMENT

The multi-card consists of two cards of equal dimensions each made of thin cardboard or plastic. The exact dimensions of the cards are not critical, but are determined by convenience and the amount of material to be recorded on the card. I have found that cards equal in dimension and thickness to ordinary business cards (2" x 3.5" x .1") are very suitable for the purpose of memorizing Chinese words. I find that larger cards (3" x 5" or 4" x 6") are superior for use recording receipes and other items having more information than a single word or short phrase.

Figure 1 shows the obverse of first card C1. A horizontal slit S1 runs from the left edge of C1 to the center of card C1. The width of slit S1 is of approximately the same as the thickness of C1, on the order of .1 inches. The first half of C1, the area labeled F1T, constitutes the top of face 1 of the assembled multi-card, as can be seen in Figures 6, 7 and 8. F4B, the second half of the obverse of card C1, constitutes the bottom of face 4 of the multi-card.

Figure 2 shows the reverse of first card C1. The orientation of said reverse side as diagrammed in Figure 2 results from rotating first card C1 about the horizontal axis formed by slit S1 (top over bottom). F2T, the first half of the reverse side of card C1 and F3B, the second half of the reverse of card C1 constitute the top of face 2 and the bottom of face 3 of the multi-card when assembled in the orientation pictured in Figures 5 and 6.

Figure 3 shows the obverse of second card C2. Horizontal slit S2 runs from the right edge of C2 to the center of the card. The width of S2 is the same as that of S1. The top of
the obverse of card C2, that portion labeled F3T, constitute the first half of face 3 of the
multi-card when the cards are interlocked in the manner shown is Figures 5 and 6. The
bottom half of the obverse of C2, that portion labeled F1B, comprises the second half of the
first face of the multi-card. This can be seen in Figures 6, 7, and 8.

Figure 4 shows the reverse of second card C2 resulting from rotating C2 around the
horizontal axis. F4T and F2B comprise the portions of C2 that constitute the top of face 4
and the bottom of face 2 when C2 is interlocked with C1 in the manner shown in Figures 5
and 6.

Figures 5 and 6 show how cards C1 and C2 may be interlocked.

Figure 7 shows card C2 being rotated into position to comprise a multi-card.

Figure 8 is a view of face 1 of the assembled multi-card showing how F1T on card C1
and F1B on card C2 together constitute said face 1. It should be realized that in this
configuration, face 2 is visible on the reverse of the multi-card. Face 2 can be brought into
view by rotating the entire multi-card about its horizontal axis (rotating both cards
simultaneously).

Figures 9 through 12 show how, by rotating only card C1 about its horizontal axis, face
3 may be brought into view.

Those skilled in the art will realize that the assignment of the numbers 1, 2, 3, and 4 to
the faces of the multi-card is arbitrary. Furthermore, they will understand that a multi-card
having essentially blank faces will allow an individual to write on the faces of the card in
any order that the individual chooses. By "essentially blank" I mean a card either having no
writing on the faces or having the faces ruled to facilitate the user writing or drawing on the
faces.

The cards are able to flip in the manner shown in these figures. At first, there may be a
little difficulty flipping the cards, since there are several additional degrees of freedom
possible. With a little practice flipping the cards becomes easy and natural. If there is any
difficulty, however, a strip of cellophane tape can be affixed along the joint to act as a hinge
and eliminate all undesired degrees of freedom.

Furthermore, because the faces may be viewed in order, the multi-card can also be
used as a convenient method of recording a process involving a number of steps, such as
receipts or other processes. Applications include, but are not limited to, receipt cards,
multi-alphabet business cards, Chinese language learning aids, or four language learning
aids.
CLAIMS

I claim:

1. An interlocking four faced memo-card comprising;
   (a) a first card having an obverse side and a reverse side,
   (b) said first card having a first slit running from the center of one edge of said first card to the center of said first card;
   and;
   (c) a second card having an obverse side and a reverse side,
   (d) said second card having a second slit running from one edge of said second card
to the center of said second card,
   (e) said edge being opposite to said edge of said first card;
   (f) said first card interlocking with said second card by means of said first and second slits.

2. An interlocking memo-card according to claim 1 suitable for recording information on each said four faces wherein each said face is essentially blank.

3. A interlocking memo-card displaying four faces of information comprising;
   (a) an interlocking memo-card according to claim 1 wherein
   (b) said first slit on said first card defines a first half and a second half of said obverse side and a first half and a second half of said reverse side of said first card, the orientation of said first and second halves of said reverse side being determined by rotating said first card around the axis formed by said first slit; and;
   (c) said second slit on said second card defines a first half and a second half of said obverse side and a first half and a second half of said reverse side of said second card, the orientation of said first and second halves of said reverse side being determined by rotating said second card around the axis formed by said second slit wherein
   (d) a defined first face of said four faced memo-card comprises said first half of said obverse side of said first card and said second half of said obverse face of said second card;
   (e) a defined second face of said mult-card comprises said first half of said reverse side of said first card and said second half of said reverse side of said second card;
   (f) a defined third face of said mult-card comprises said second half of said reverse side of said first card and said first half of said obverse side of said second card;
   (g) a defined fourth face of said mult-card comprises said second half of said obverse side of said first card and said first half of said reverse side of said second card.

4. A multi-language learning card comprising an interlocking memo-card according to claim 3 wherein each said face displays words and phrases in separate languages.
5. A multi-language business card comprising an interlocking memo-card according to claim 3 wherein each said face comprises business information displayed in separate alphabets.

6. An interlocking memo card according to claim 3 wherein each said face displays a number of steps of a process.

7. An interlocking memo card according to claim 6 wherein the said steps of said process displayed on the said faces comprise a cooking receipt.
INTERNATIONAL SEARCH REPORT

A. CLASSIFICATION OF SUBJECT MATTER
   IPC(6): G09B 19/68
   US CL: 434/157, 171
   According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED
   Minimum documentation searched (classification system followed by classification symbols)

   Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

   Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

C. DOCUMENTS CONSIDERED TO BE RELEVANT

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Date of the actual completion of the international search 11 JULY 1996

Date of mailing of the international search report 04 SEP 1996

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