Feb. 26, 1924. 1,485,146

R. MUNDELL

EDUCATIONAL AND GAME CARDS

Filed May 18, 1920 2 Sheets-Sheet 1

Fig. 1

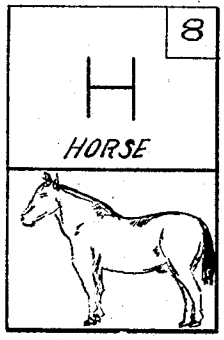


Fig. 2

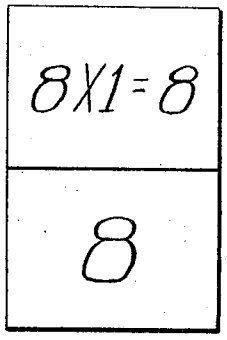


Fig. 3

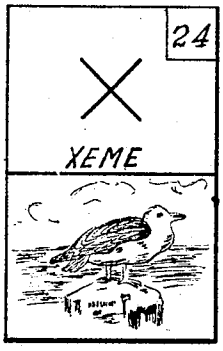
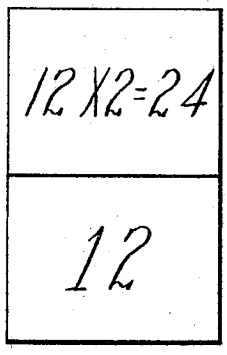


Fig. 4



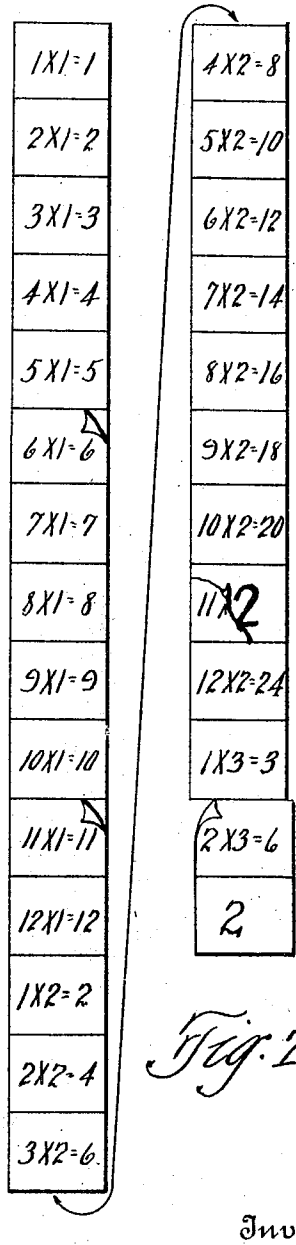


Fig. 7

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Fig. 5

1X2=2	2X2=4	3X2=6	4X2=8	5X2=10	6X2=12	7X2=14	8X2=16	9X2=18	10X2=20	11X2=22	12X2=24
1	2	3	4	5	6	7	8	9	10	11	12
1	2	3	4	5	6	7	8	9	10	11	12

Fig. 5a

1X2=2	2X2=4	3X2=6	4X2=8	5X2=10	6X2=12	7X2=14	8X2=16	9X2=18	10X2=20	11X2=22	12X2=24
1	2	3	4	5	6	7	8	9	10	11	12
12	11	10	9	8	7	6	5	4	3	2	1

Fig. 6

12X2=24	11X2=22	10X2=20	9X2=18	8X2=16	7X2=14	6X2=12	5X2=10	4X2=8	3X2=6	2X2=4	1X2=2
12	11	10	9	8	7	6	5	4	3	2	1

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UNITED STATES PATENT OFFICE.

ROSCOE MUNDELL, OF ROBESART, SASKATCHEWAN, CANADA.

EDUCATIONAL AND GAME CARDS.

Application filed May 18, 1920. Serial No. 382,432.

To all whom it may concern:

Be it known that I, ROSCOE MUNDELL, a subject of the King of Great Britain, residing at Robesart, in the Province of Saskatchewan, Dominion of Canada, have invented certain new and useful Improvements in Educational and Game Cards; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to new and useful improvements in games and particularly to card games.

One object of the invention is to provide a novel and improved set of cards by means of which children may be taught to read and to understand the principles underlying the various processes of arithmetic.

Another object is to provide a novel and improved device of this character wherein not only amusement is obtained by playing various games, but the minds of the players are improved and knowledge gained while playing.

Other objects and advantages will be apparent from the following description when taken in connection with the accompanying drawings.

In the drawings:

Figure 1 is a face view of one of the cards of one of the sets of the deck.

Figure 2 is a face view of the reverse side of the card shown in Figure 1.

Figure 3 is a front view of the face of twenty-fourth card of the same set.

Figure 4 is a reverse view of the card shown in Figure 3.

Figure 5 is a plan view of the cards arranged for the purpose of teaching addition.

Figure 5ª is a plan view of the cards arranged for the purpose of teaching subtraction.

Figure 6 is a plan view of the cards arranged for the purpose of teaching multiplication.

Figure 7 shows the arrangement of the cards to teach the different multiplication tables.

The complete deck consists of one hundred and forty-four cards, the deck being divided into five sets, or subdecks, each of four of which contains twenty-six cards, while the remaining set contains forty cards. Each of the sets has on one face, and on the upper portion, a letter of the alphabet, and in the upper right hand corner of said upper part, a number. The face of the card is divided by the central transverse line, and below this line is a picture of some animal, bird, or fish, the name of which begins with the letter which appears on the upper portion of the card. Below the letter on the upper portion of the card, appears the name of the animal. The numbers in the upper corners of the cards run consecutively throughout the series of cards of the set, these being 1 to 26, inclusive, while the letters run from A to Z, inclusive.

On the reverse side of the card is a central transverse line, dividing the rear face of the card into upper and lower portions. Printed on the upper portion of each card, throughout the entire deck of the five sets, is an element of the different multiplication tables. For instance: The first card of the first set has $1\times1=1$. The next card $2\times1=2$, etc., through the entire deck, the last card having $12\times12=144$. As there are only twenty-six cards in each of the first four sets, the last two cards of the first set have the first two elements of the 3 table, that is $1\times3=3$, and $2\times3=6$. The last cards of the third and fourth sets have $7\times6=42$, and $9\times8=72$, respectively. The last fourteen cards of the fifth set have $11\times11=121$, $11\times12=132$, and so on to $12\times12=144$. These elements of the multiplication tables are printed on the upper portions of these cards, while the large numbers are 1 to 12, repeated through the one-hundred and forty-fourth card. On the reverse sides of these fourteen cards may be any desired symbols and pictures. By this arrangement, the first card of the second set has $3\times3=9$, that of the third set $5\times5=25$, that of the fourth set $7\times7=49$, and that of the fifth set $9\times9=81$. On the lower portions of the cards are numbers, running consecutively throughout the entire deck, beginning with 1, of the first card of the first set, through 12, then beginning with 1 again, and running through 12, until the last card of the fifth set is reached, which has 12.

Figure 7 shows the manner in which the cards of one set, or the cards of the entire deck, may be placed on a table, with a view to the self-teaching of the different tables in multiplication. It will be noted that the

cards are laid on the table with their lettered faces down, and that each successive card, after the first one, is placed so that it hides or covers the lower half of the next preceding card. There will thus be exposed the upper portions of the cards whereon are printed the elements or parts of the multiplication tables. In the set shown in Figure 7, the 1 and 2 table, and the first two parts of the 3 table are seen.

In Figure 6 the cards are arranged for the purpose of teaching multiplication. The cards are placed in a row, side by side, the set shown being the ones having the 2 table thereon. A card having a large 2 on its lower half is slipped beneath each of the cards separately. It will be noted that the even numbers are printed in a color different from the odd numbers, and when placed as indicated, and the two (2) card slipped beneath one of the cards, the product of the large number on the extra card and the large number on that card which it is beneath will be found by glancing at the first number at the right-hand side of the upper half of the upper card. For instance, the extra card being beneath the 2 card of the row, the product of the 2 on the extra card and the 2 on the card above it, will be found to be 4 at the right of the upper half of the upper card on which is printed $2\times2=4$.

As shown in Figure 5, there are arranged two rows of cards for the purpose of teaching the principle of addition. While it is possible to arrange the cards whereby several numbers may be added, where the numbers are different, it is the object of the present invention to teach the principle of the arithmetical processes with the use of similar or like numbers. After the child has mastered the principle of the different processes, by using similar numbers, he will have progressed to the point where he will be able to reason out that 8 plus 6 equals fourteen, as well as that 7 plus 7 equals 14. In this case, however, like numbers are placed in vertical columns, and from these it will be seen that the two 6's added together will be 12, and this number 12 will be found at the right of the upper half of the upper card. Likewise the two 10's, will, when added together produce 20, found in the upper half of the upper card, as the product. When two rows of cards are used the 2 table is displayed at the tops of the upper cards, and when three rows are used the 3 table is used, and so on, the table being displayed being that represented by the number of rows of cards.

By taking the card appearing first in the 1 table, the second card of the 2 table, and so on through the 12 table, and placing a card having its lower number corresponding to that on the lower portion of the first-named cards, beneath each of the corresponding first-named cards, addition can be quickly learned.

Figure 5[a] shows the manner of placing the cards to teach the principle of subtraction. It will be noted that the two table appears at the tops of the upper row of cards, and that the upper row of cards is laid so that the 1 is on the left and the 12 on the right. It will be further noted that the lower row has its 12 at the left and its 1 at the right. Starting from the right 1 subtracted from 12 leaves 11, the first number of the next card to the left in the upper row. Likewise, 1 from 11 leaves 10, the next number to the left of the 11, and 2 from 11 leaves 9, the second number to the left of the 11, in the upper row. This is proceeded with until 6 subtracted from 7 is reached, which leaves 1, the first number of the upper row of cards.

Should, however, it be desired to subtract numbers not appearing in vertical columns, but in diagonal rows, such as 3 from 12, or 6 from 10, or 2 from 8, the difference is found by counting spaces to the left of the minuend equal to the number represented in the subtrahend. In the first example, 3 from 12, we count three to the left of the 12, which shows 9, likewise 6 from 10 shows 4 as the sixth number, in the upper row, to the left of the 10, and 2 from 8 shows 6 as the second number to the left of the 8.

The lettered sides of the cards can also be placed upwardly and the cards grouped to spell different words. In this case it will be necessary to use all of the deck, as letters may occur more than once in a word.

Besides the teaching of the processes of arithmetic, the cards can be used to play various games, which will be amusing as well as instructive, the persons learning to count, and perform the processes of arithmetic, automatically, as the games proceed.

Three examples of games which can be played with these cards are as follows: In the game or chance, the entire deck is used, with the multiplication table faces as the playing faces of the cards. These faces are blue and black, respectively. Two, three, or four persons can play this game, six cards being dealt to each player. The one to the left of the dealer bids trump after the dealer has turned the top card of the remaining portion of the deck face up. If the dealer has more cards in his hand of the color of the card turned up than of the other color, he may give the bidder one point and the trump remains the color turned up. If the dealer has more of the other color, he places the turned up card on the bottom of the remaining part of the deck and deals another card to each of the players. The color of the trump will be that of the highest bidder. The amounts bid may be any numbers desired, such as 8, 10, 12, 14, etc. The

highest bidder leads the high trump card and the rest of the players follow suit, throw off, or play higher trumps if possible. Each card taken in by the players other than the bidder counts one, but if the bidder makes his point, that is, takes the majority of the tricks, his cards each count two. The final score may be any number desired, such as 21, 31, etc.

Another game, which I designate as beg or stand, is played with one of the sets of the deck containing twenty-six cards and in this game, the picture sides are the faces of the cards and are red and green, respectively. The numbers in the upper right hand corners of the cards are employed in this game, and two or three may play the game. The cards are dealt, one at a time, until each player has five cards. The dealer then turns over the top card of the remaining part of the set and then the players begin bidding from the left of the dealer, the highest bidder making the trump. After the cards which have been dealt have been played, the cards are counted, each counting one and the numbers added to the scores, the one making 29 first winning the game. The one having the largest number of cards wins the play, after the cards have all been played, but if each player has taken in the same number of cards, a new hand is dealt around and the game played until one player gets more cards than the rest.

Another game is called lion. In this game, twenty-six cards are used, with the picture sides as the faces. The whole set is dealt, and those which are left over are placed in the center of the table in a pile, face up. The players then play successively, laying their cards one at a time on top of this pile and if the card played matches the top card of the pile, the player takes the pile and puts them at the bottom of his hand. Another card is then played by another player and the remaining players attempt to match the card which is uppermost. The card having the picture of the lion on its face is, of course, played by one of the players and as soon as this card is laid on the pile, someone must call "lion." The one first calling "lion" takes the entire pile. The one getting all the cards wins the game.

What is claimed is:

An educational device comprising a deck of cards each of which has its obverse and reverse faces divided into upper and lower portions, the upper portion of the reverse face of each card having a multiplier, multiplicand, and product, and the lower portion having a number corresponding to the multiplier of the upper portion, the upper portion of the obverse face of each card having a letter of the alphabet and the name of an object beginning with such letter and the lower portion having a pictorial representation of the object named in the upper portion, said upper portion of the obverse side of each card having a number in an upper corner thereof representing the numerical position of such letter in the alphabet.

In testimony whereof, I affix my signature, in the presence of two witnesses.

ROSCOE MUNDELL.

Witnesses:
IRA JOB,
EARL E. BOSWORTH.