T. E. THOMPSON.

EDUCATIONAL DEVICE.

APPLICATION FILED JULY 19, 1916.

1,253,908.

Patented Jan. 15, 1918.

4 SHEETS—SHEET 1.

Fig. 1.

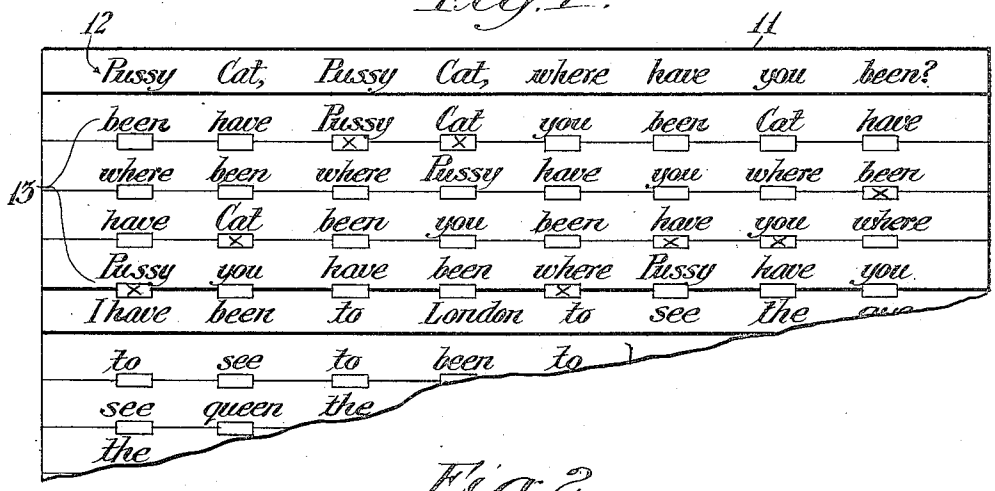


Fig. 2.

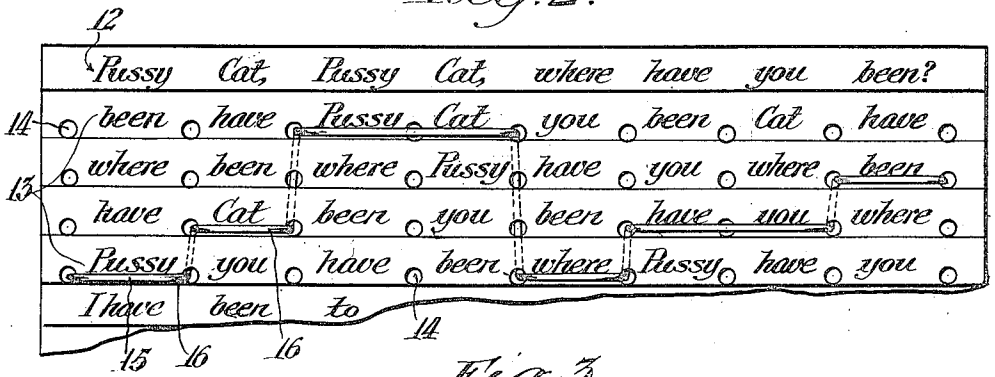
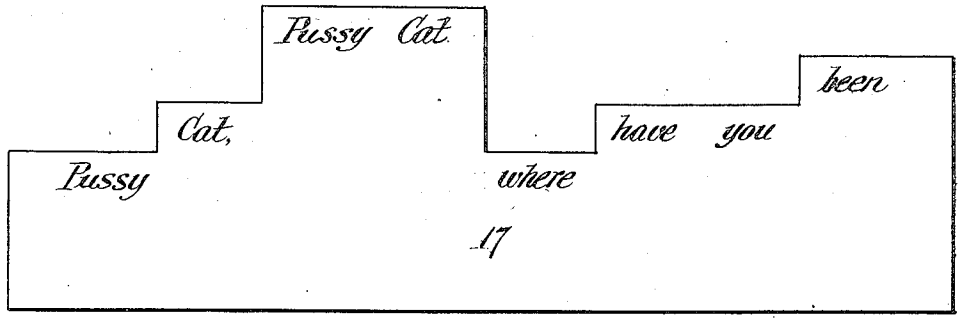


Fig. 3.



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4 SHEETS—SHEET 2.

Fig. 4.

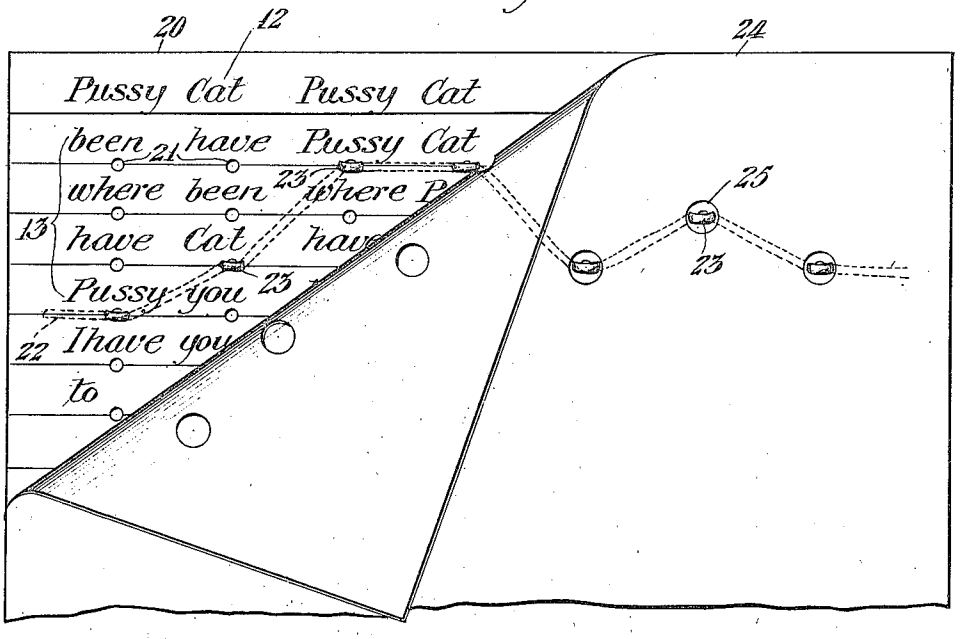
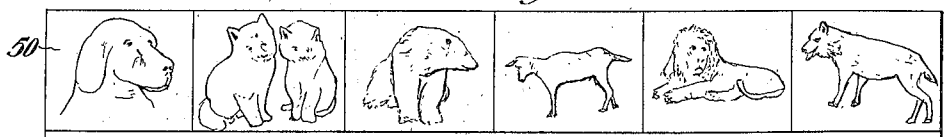


Fig. 5.



dog	cats	bear	goat	lion	wolf
goat 52	dog	bear	dog	cats	lion
53					
51 dog	goat	lion	bear	lion	goat
30					
cats	cats	dog	wolf	bear	wolf
bear	lion	wolf	goat	cats	dog

Fig. 6.

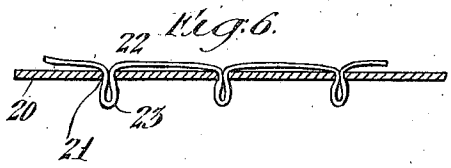
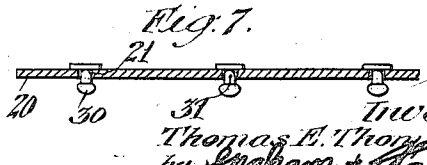


Fig. 7.



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4 SHEETS—SHEET 3.

Fig. 8.

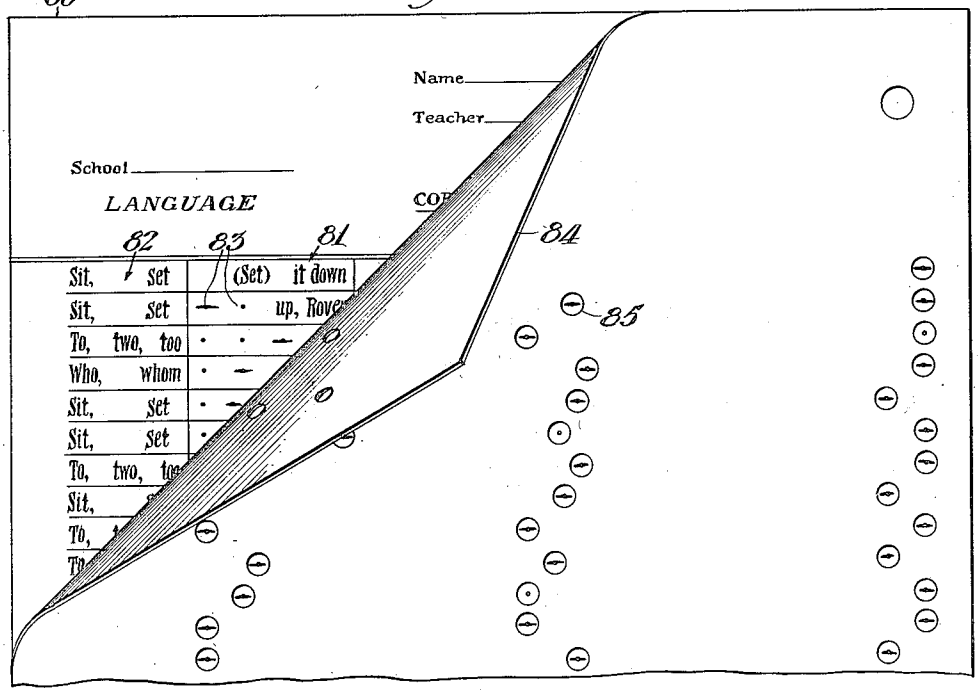
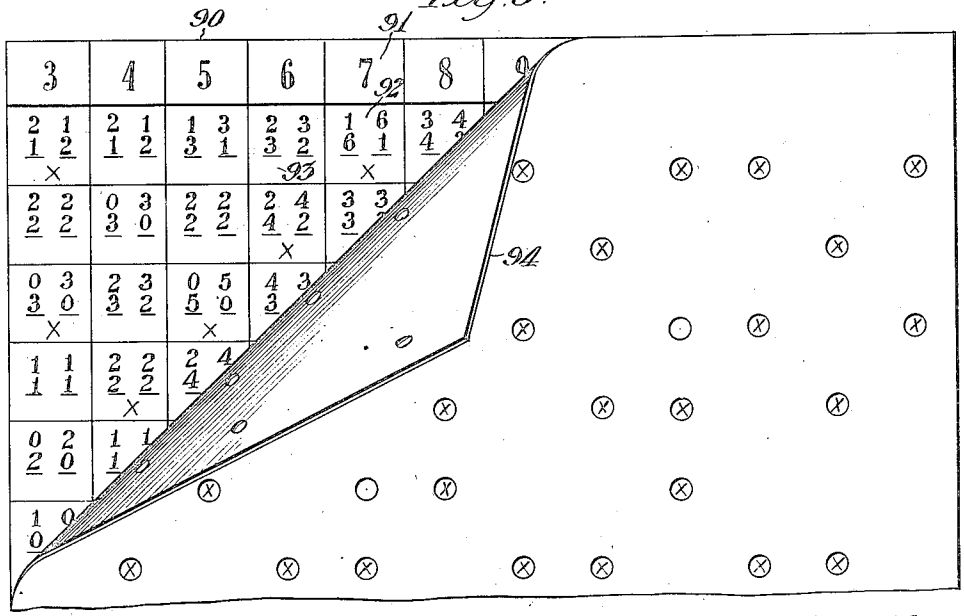


Fig. 9.



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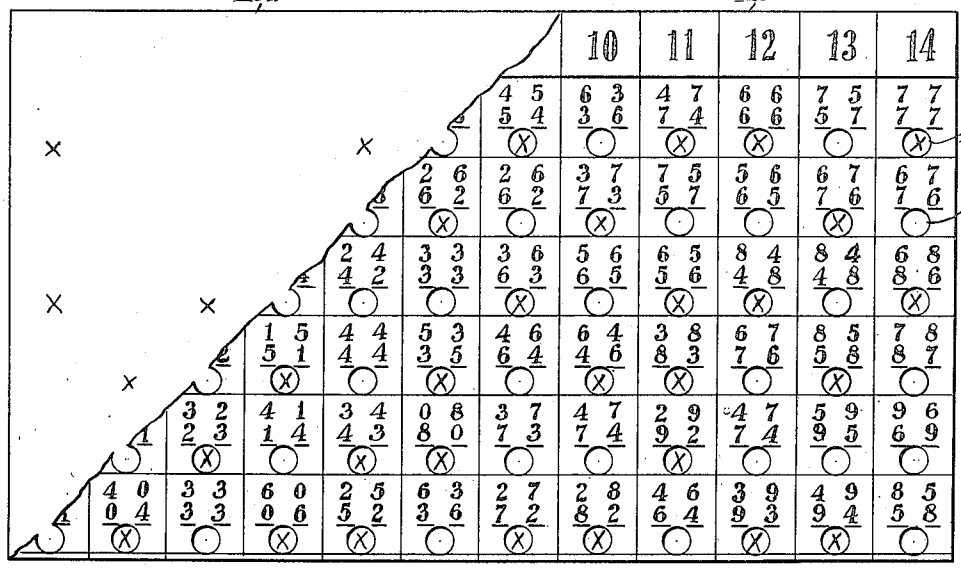
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4 SHEETS—SHEET 4.

Fig. 10.



NON-DICTATION SPELLING Name _____ Grade _____

Teacher _____ Per Cent

School _____ No. of Minutes

QUICK WRITTEN TEST Date _____

112

111 1	ind end fr iend einâ 113	isy isie b issy usy	er ter mat ur tur	tan tain ob tane taine	o oo t wo (2)
114 2	tur ter doc tor tar	dy ady re dây ädy	blig blige o blidge blidg	fur fer re ffer ffur	o oo t w (also)
3	bor bar la ber bour	son sen re ason asen	y ly ful ie lie	tical ticle ar ticel tecal	nealy naly fi nely nally

Fig. 11.

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UNITED STATES PATENT OFFICE.

THOMAS E. THOMPSON, OF MONROVIA, CALIFORNIA.

EDUCATIONAL DEVICE.

1,253,908. Specification of Letters Patent. Patented Jan. 15, 1918.

Application filed July 19, 1916. Serial No. 110,247.

To all whom it may concern:

Be it known that I, THOMAS E. THOMPSON, a citizen of the United States, residing at Monrovia, in the county of Los Angeles and State of California, have invented a new and useful Educational Device, of which the following is a specification.

My invention relates to the art of education. In this art it is common practice for the teacher to provide the pupils with various problems, the word "problem" being used in this sense indiscriminately to apply to anything to which the pupil is to provide a correct solution or answer, whether in the subject of arithmetic, language, geography, or any other branches of education.

It is also common practice for the pupil to write down answers to the problems, each of these answers being either a symbol, a figure, a word, or a group of symbols, figures, or words.

The principal object of my invention is to provide a primary card which shall contain a series of problems, each problem being associated with a group of incorrect and correct answers and marking spaces in which a pupil may designate those answers which are in his opinion correct.

A further object of the invention is to provide mechanical marking means by which the pupil may indicate his selection, and a still further object is to provide such mechanical means as will, in a measure, teach manual dexterity and occupy the pupil's mind in their application.

A further object of the invention is to provide a ready means by which the pupil, the teacher, or others, can accurately, and quickly, check the correctness of the pupil's work. More specifically the object is to provide a tell-tale sheet, either opaque or transparent, which shall be marked, cut, perforated, or provided with transparent portions, by which the correctness of the pupil's work can be determined by inspection by the application of the tell-tale sheet to the primary card.

A further object is to provide openings in the primary card through which markings may be made on a secondary sheet, the markings being quickly and easily checked as to their correctness by the tell-tale sheet.

More specifically my invention is designed to provide novel forms of spelling, arithmetic, and correct usage devices, as well as specific forms of tell-tale or correction sheets.

In the drawings, which are for illustrative purposes only:

Figure 1 illustrates a portion of a primary card used for teaching young pupils to recognize words.

Fig. 2 illustrates the same arrangement of the primary card perforated to allow the proper words to be indicated by threading string through the card.

Fig. 3 illustrates a serrated tell-tale sheet for checking the correctness of the pupil's work in connection with Figs. 1 and 2.

Fig. 4 illustrates a primary card similar to Figs. 1 and 2 in combination with a perforated tell-tale sheet for indicating the correctness of the pupil's work.

Fig. 3 illustrates a form of primary card for very young pupils, in which pictures are used as identifying data, and in which either loops of string, or buttons, are used for marking purposes.

Fig. 6 illustrates the method of looping the string used as illustrated in Fig. 5.

Fig. 7 illustrates a method of securing buttons in the primary card for indicating the answer.

Fig. 8 illustrates a primary card, this primary card being associated with a tell-tale sheet and suited to teach correct usage.

Fig. 9 illustrates a primary card and a tell-tale sheet adapted to teach arithmetic, or more specifically, addition.

Fig. 10 illustrates a perforated primary card in combination with a secondary or record sheet.

Fig. 11 illustrates a primary card for teaching spelling, in combination with a tell-tale sheet.

In all of these illustrations the pupil indicates the extent and correctness of his knowledge by either making a cross, or other mark, or by mechanically providing an indication by the use of a string, button, or other means; the correctness of his work being indicated solely by the position of the marking on the sheet.

In the simplest form of my invention, as illustrated in Fig. 1, there is provided a primary card 11 on which there is printed a legend 12, this legend running across the top of the card and consisting of a familiar verse reading as follows: "Pussy cat, pussy cat, where have you been". Associated with each word of the legend is a group of words 13, this group consisting of certain elements, each element being a word, and only one of

these elements corresponding with the word at the top of the column with which it is associated. For example, in the first column, the word "Pussy" appears in the legend 12, this word being the identifying data by which the word "Pussy" is picked out by the pupil from the group of words 13. The pupil indicates his selection by making a cross in the space below the word "Pussy" in the group 13 and by making similar marks under the proper words in the succeeding columns, so that the legend 12 is reformed successively from the various groups 13, and the position of the markings clearly showing the correctness of the pupil's work.

In Fig. 2 perforations 14 are provided between the words or elements of the various groups 13, and a string 15 is threaded through these perforations, this string forming loops 16 which pass directly under the work of the various groups which the pupil has selected. For the purpose of readily checking the correctness of the pupil's marking or indicating, a tell-tale sheet 17 may be provided, this tell-tale sheet being provided with serrations properly located to register with the loops 16 when it is applied to the primary card illustrated in Fig. 2. It should be noted that the tell-tale sheet operates wholly by position; that is, the correctness of the pupil's work is readily determined by the position only on the loops 16.

In the form of primary card 20 shown in Fig. 4, the same arrangement of the legend 12 and the groups 13 is provided, and round perforations 21 are provided beneath each word of each group 13. In this form of my invention a string 22 is used to form loops 23, as illustrated in Fig. 6, each loop 23 being formed by the pupil under what he regards as the proper word. For the purpose of checking the correctness of the pupil's work, a tell tale sheet 24 is provided, this sheet being provided with perforations 25 through which the loops 23 will project if the tell-tale sheet 24 is properly registered with relation to the primary card 20 and the pupil has correctly marked the proper words. If desired, a series of buttons 30, having enlarged ends, and a small throat 31, may be used as shown in Fig. 7, these buttons being forced through the perforations 21 and being of such a size that they naturally remain in the perforations 21, thus serving as indicating means for the pupil. By the use of mechanical marking means, such as buttons or strings, a single primary card may be used repeatedly where a permanent record of the pupil's work is not desired. These buttons will always project through the perforations 25 in the tell-tale sheet 24, when it is properly registered with the primary card 20, if the pupil has performed his work correctly. It will be seen that in the form of invention illustrated in Fig. 4 the position of the loops or buttons determines the correctness of the pupil's work.

In the above examples the words of the legend 12 have been used as identifying data. Other identifying data, may, however, be employed, as for example, the pictures 50 illustrated in Fig. 5. Each of the pictures 50 is accompanied by a group of words 51, and each of the words 52 forming the group is provided with a perforation 53 in which loops 23, or buttons 30, may be inserted. The correctness of the pupil's work can be readily checked by means of a tell-tale sheet similar to that shown at 24 in Fig. 4.

The work illustrated in Figs. 1 to 5 is designed to teach small children to identify words; it being found that they can be taught to identify words even before they learn to spell or identify letters. It is also designed to enable the teacher, by use of the serrated tell-tale sheet 17, or the perforated tell-tale sheet 24, to readily check the pupil's work, or in some cases to allow the pupil to check his own work without the interposition of the teacher.

The use of the string, as shown in Fig. 2 or Fig. 4 provides an occupation for the pupil's hands, this occupation being generally termed "busy work" and being of especial value in connection with small children.

The correct usage method illustrated in Fig. 8 is designed for larger pupils, the primary card 80 having a series of exercises 81 from each of which a portion is omitted. Each of these exercises is associated with identifying data 82, this identifying data consisting of two or more words or expressions, one of which may be correctly substituted in the exercise 81. As many spaces 83 are provided in the exercise 81 as there are alternate words or expressions in the identifying data 82 and the pupil makes his selection from the identifying data by marking a dash or cross in the space 83 corresponding to the position of what he regards as the correct word in the identifying data 82, or the sheet may be perforated and mechanical marking means employed like the buttons or strings previously explained. The correctness of the pupil's work is readily checked by means of a tell-tale sheet 84, this tell-tale sheet being provided with perforations 85 which register with the correct spaces 83 and by which the correctness of the pupil's marking can be instantly checked.

It should be noted that the tell-tale sheets 17, 24 and 84 are all "positive" sheets. That is, they are so perforated, or shaped, that they register with the correct markings. If desired, a negative tell-tale sheet may be

used, this tell-tale sheet being so shaped or perforated that it registers with all of the markings, except the correct one, and thereby immediately indicates the presence of false or incorrect markings.

In the place of using tell-tale sheets which are perforated, wholly or partially transparent sheets may be used on which the proper positions of the markings may be indicated by circles or other marks. Such a transparent sheet serves as both a positive and a negative tell-tale sheet.

In Fig. 9 a primary card 90 is shown upon which are a plurality of exercises, each exercise consisting of identifying data 91 which is in this case a desired answer to a problem in arithmetic. Located in a column directly below this answer are a group of elements 92, each element being an example in addition, some of these examples adding up to give the desired answer 91, and the remainder adding up to give other answers. Located below each example 92 is a space 93, and the pupil provides an indication in the spaces under the examples which add up to give the answer 91. This indication may consist of a cross, a dash, or the primary card 90 may be perforated so that a string, button, or other mechanical means, may be inserted, as previously explained. A tell-tale sheet 94 is provided, this tell-tale sheet being a "positive" one so that it will indicate at a glance the correctness of the pupil's work.

In Fig. 10 a primary card 100 is shown, this card being exactly similar in arrangement to the card 90 shown in Fig. 9, and being provided with perforations 101. This card is used with a secondary or record sheet 102, the secondary or record sheet consisting of a piece of paper of the same size as the primary card 100, or if of different size of such a size as to register in one direction or the other with the card 100. The pupil marks the correct examples through the perforations 101 in the card 100 on the sheet 102. The sheet 102 may then be corrected by the use of the tell-tale sheet 94 illustrated in Fig. 9.

In Fig. 11 a primary card for teaching spelling is shown, this card consisting of a series of spelling exercises. Each of these exercises consists of one word which is broken up into an obvious syllable and a group of alternate doubtful syllables. For example in exercise 111 we find an obvious syllable 112 or "fe" and a group 113 of doubtful syllables "ind," "end," "iend," "eiend." Opposite each doubtful syllable is a space 114 which the pupil may mark. Obviously a perforation may be substituted for each space 114, and strings or buttons may be used as previously described, or a secondary or record sheet may be used on which a permanent record may be marked. Obviously also since the correctness of the pupil's work depends on position, a tell-tale or overlay sheet may be used to correct this work.

It will be noted that my invention has many modifications, as illustrated and described above, but that the primary principles upon which they are based are the same.

In the following claims the words used have the following significance.

The word "element" signifies either a word, a figure, a picture, or other symbol, or a combination of words, figures, pictures or symbols.

The word "group" means two or more elements, as defined above.

The words "identifying data" means anything by which the correct answer may be inferred. This may be the figures forming the correct answer, as in the case of arithmetic; it may be the alternate words or expressions as used in language; it may be the single word at the head of the column as used in the "busy work" examples above; it may be a syllable of a word; or it may be a picture, or other symbol.

The word "markings" means a cross, or dash, made by the pupil by means of a pencil or other means on the paper itself, or may mean a string, button, glove fastener, or any other mechanical means by which the pupil may indicate his selection.

In the same manner the words "tell-tale sheet" may indicate a sheet which is serrated, perforated, or provided with transparent spaces, through which the correctness of the primary card may be determined. This tell-tale sheet may be either "positive" or "negative." If "positive," the word "positive" means a sheet by which the presence of correct markings may be checked. If "negative," the word "negative" means a sheet by which the presence of incorrect markings may be checked.

My invention consists in the use of a sheet with problems or exercises printed thereon, each problem or exercise being associated with a group of spaces, one or more of which the pupil may mark to indicate what he regards as the correct answer, the position alone of these markings being sufficient to indicate their correctness.

My invention also includes the method of marking by a string as shown in Figs. 2 or 6, and the buttons shown in Fig. 7, or equivalent mechanical means.

My invention further includes the various forms of tell-tale sheets shown, and their mechanical equivalents, by which the position of markings on the primary cards can be checked.

My invention further includes the conception of a secondary or record sheet which can be marked by means of and through any

of the various primary cards and which can be checked by means of any form of tell-tale sheet shown or described.

My invention further consists of certain very definite structures as set forth in the following claims.

I claim as my invention:—

1. An educational device comprising a primary card on which is printed a series of elements, these elements being arranged in groups; identifying data for each group by means of which one of said elements may be selected from said group; and a series of spaces in any of which a pupil may indicate such a selection, each space being associated with one of said elements.

2. An educational device comprising a primary card on which is printed a series of elements, these elements being arranged in groups; identifying data for each group by means of which one of said elements may be selected from said group; and a series of spaces each having a perforation therein and each space being associated with one of said elements.

3. An educational device comprising a primary card on which is printed a series of elements, these elements being arranged in groups; identifying data for each group by means of which one of said elements may be selected from said group; a series of spaces each having a perforation therein and each space being associated with one of said elements; and means so shaped that they can be secured in certain of said perforations to indicate a pupil's selection.

4. An educational device comprising a primary card on which is printed a series of elements, these elements being arranged in groups; identifying data for each group by means of which one of said elements may be selected from said group; a series of spaces each having a perforation therein and each space being associated with one of said elements; and a string adapted to be looped through said perforations to indicate a pupil's selection.

5. An educational device comprising a primary card on which is printed a series of elements, these elements being arranged in groups; identifying data for each group by means of which one of said elements may be selected from said group; and a series of spaces in any of which a pupil may indicate such a selection, each space being associated with one of said elements; in combination with a positive tell-tale sheet having perforations so placed that they register with the spaces of the elements on the primary card which correspond with said identifying data.

6. An educational device comprising a primary card on which is printed a series of elements, these elements being arranged in groups; identifying data for each group by means of which one or said elements may be selected from said group; a series of spaces each having a perforation therein and each space being associated with one of said elements; and means so shaped that they can be secured in certain of said perforations to indicate a pupil's selection; in combination with a positive tell-tale sheet having perforations so placed that said perforations register with each of said means when said sheet is applied to said card but only when said means are properly located.

7. An educational device comprising a primary card on which is printed a series of elements, these elements being arranged in groups; identifying data for each group by means of which one of said elements may be selected from said group; a series of spaces each having a perforation therein and each space being associated with one of said elements; and a string adapted to be looped through said perforations to indicate a pupil's selection; in combination with a positive tell-tale sheet having perforations therein so placed that said perforations register with each of said loops when said sheet is applied to said card provided said loops have been properly placed.

8. An educational device comprising a primary card on which is printed a series of alternates; means by which a pupil may indicate a selection from said series; and means for checking the correctness of said selection.

9. An educational device comprising a primary card on which is printed a series of alternates; means by which a pupil may indicate a selection from said series; and a tell-tale sheet adapted to be laid over said primary card and so shaped that the correctness of said selection can be visually checked.

10. A primary card having spaces in which a pupil can indicate his knowledge of a subject by placing markings thereon in spaces selected by the pupil; and a tell-tale sheet so shaped as to indicate the correctness of such knowledge when properly registered with said primary card by the position of the markings on the primary card.

11. A primary card having spaces in which a pupil can indicate his knowledge of a subject by placing markings thereon in spaces selected by the pupil; and a tell-tale sheet perforated in such a manner as to indicate the correctness of such knowledge when properly registered with said primary card by the position of the markings on the primary card.

12. A primary card having spaces in which a pupil can indicate his knowledge of a subject by placing markings thereon in spaces selected by the pupil; and a tell-tale sheet having perforations so placed as to indicate the correctness of such knowledge

when properly registered with said primary card by the position of the markings on the primary card.

13. A primary card comprising a legend composed of words arranged in their proper order, each word having associated with it a group of words in jumbled order and each of said words in jumbled order being associated with a space in which a pupil may indicate a selection from said group.

In testimony whereof, I have hereunto set my hand at Los Angeles, California, this 13th day of July, 1916.

THOMAS E. THOMPSON.