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System for practising alphabetical skills and the like.

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System for practising alphabetical skills comprising a flat base unit and at least one letter member, wherein the base unit comprises slots or fixing elements, preferably approximately arranged in (a grid of) at least three approximately equidistant rows and at least three equidistant columns, for at least partly receiving one or more letter members, such that a child can walk e.g. the letters of the word which is the answer to a question or riddle posed.

System for practising alphabetical skills and the like

FIELD OF THE INVENTION

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The invention relates to a system for practising alphabetical skills and/or applying letter use in a playful manner.

BACKGROUND TO THE INVENTION

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Various systems are known for, in particular children, practising, alphabetical skills. For example known are numerous board games involving the letters of the alphabet whereby a picture of e.g. an apple is shown on a card and a child has to make up the word 'apple' from chips, similar to those
15 Scrabble® is played with, with each one a letter printed on them. Also known are toy computers with names like 'My first PC laptop computer'. These come with learning activities to teach a child a.o. letters and words. A picture of an apple would be shown on the screen and the child would type the word 'apple' to move on to the next picture. A drawback of these systems is that the child
20 who is using them for practising its alphabetical skills is normally seated and fairly static.

DISCLOSURE OF THE INVENTION

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The invention provides for an novel system for practising alphabetical skills in which the above drawbacks may be obviated, while providing the desired training in an active setting. Thereto the invention provides a system for practising alphabetical skills comprising a flat base unit of preferably about one and a half meter wide and two meter long which
30 comprises a number of slots or fixing elements, comprising e.g. magnets or hook and loops fasteners, preferably approximately arranged in (a grid of) at

least three approximately equidistant rows and at least three equidistant columns, for cooperation with preferably at least nine letter members, each flat and preferably measuring approximately twenty centimetres wide and thirty centimetres long .Such dimensions allow the foot of a child to fit within the boundary of one letter mat), with each a letter of the alphabet printed on at least an upper side. Preferably the letter members cover the whole alphabet from A - Z (of any preferred language) and cover the more popular letters, such as 'E', double.

Below, the base unit and letter members are also referred to as play mat and letter mat respectively. All distinctable features are meant to be disclosed distinctly, even when described in conjunction with other features for briefness of the description. Distinctable features are meant to be features that may be taken out of the direct context in order to be used separately from features those are described with.

By providing a play mat and letter mats that form together a system for practising alphabetical skills, practising alphabetical skills may be done indoors in a physical manner with an easily varied configuration of the positions of the letter mats on the play mat.

In a second embodiment the play mat is provided with means to be able to 'recognize' the letter mats and preferably a processor means for processing signals received from the letter mats. Said signals could stem from RFID antennae embedded in a, e.g. 4x5, grid in the play mat. With the reading means wireless identifiable RFID tags provided in the letter mats may be read.

Furthermore in this embodiment the slots or fixing elements areas on the play mat are provided with means to sense the presence of a person at the specific location or tile, or specifically as an example that a child is

standing with at least one foot on aforementioned RFID letter mat. Said sensing means could comprise proximity sensors, pressure sensors or simply foil switches which make contact when stood on. The latter consists of two sheets of foil with there between a thin (approximately five millimetres thick) layer of non-conductive foam. The sides of said sheets that face each other have a mesh pattern, similar to the strings on a tennis racket, printed thereon with conductive ink. The foam has openings of approximately two centimetre diameter. If an object is placed on the foil switch the upper sheet is pushed downwards and the openings allow the print of the upper sheet to connect with the print of the bottom sheet, creating an electrical connection.

The foil switches and RFID antennae are connected to the processing means of a computer and a child or number of children would not need guidance from a teacher or parent to use this embodiment of the system for practising alphabetical skills.

The computer would preferably be integrated in, or alternatively connected by plug and socket to, the play mat outside the letter mat areas. Because the toy computer could instruct the child(ren) which letter mat to position where on the play mat and subsequently ask the child(ren) questions to which the answer has to be provided by stepping on appropriate letter mats in the right order. The RFID components would recognize which letter mat is placed where on the play mat and the proximity sensors would sense which letter mat is stepped on by the child.

Furthermore by providing said computer with connection means to an 'adult' computer or the internet directly, in any suitable way like e.g. via a USB socket or Wifi, the flash memory, or other suitable non-volatile memory means, of the toy computer could be updated with new sounds, clues, riddles, accompanying letter mat-configurations and/or answers and/or e.g. an

alphabet of another language like Greek or Russian for example (for which the user would buy a new set of letter mats with the characters of that alphabet). A removable memory cartridge would be an option too for adding variety to the clues, riddles, etcetera.

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The computer referred to would comprise the usual components known to the person skilled in the art, like a; processor, memory, loudspeaker, aforementioned connectivity components like USB socket or Wifi, but preferably not a screen nor a keyboard.

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In a third embodiment, which is an extension on the second embodiment, the slots or fixing element areas of the play mat comprise also an identification means for each slot or fixing mat area itself. This implies that each slot or fixing element area comprises identification means to identify which letter mat is placed thereon and furthermore means to sense that a child is standing with at least one foot on said letter mat and hence slot.

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A suitable material for a play mat or letter mat might be carpet-like or a top sheet of plastic like PVC, or woven polyester or soft and durable polyester/cotton, which could be provided with an anti-slip surface on top, combined with a bottom sheet with a e.g. rubber or a waterproof vinyl material at the ground facing surface, preferably with non-skid properties. Letter mats could comprise thin plastic inserts between a top and bottom sheet for rigidity.

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Depending on the fabric or material a playmate is made of, it could be stored easily after rolling it into a cylindrical shape or even folding the playmate around a pile of letter mats which preferably would make the system fit in a box of e.g. thirty centimeter wide, forty centimeter long and thirty centimeter high.

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BRIEF DESCRIPTION OF THE DRAWINGS

The invention will be explained in more detail on the basis of exemplary embodiments shown in the drawing. In the drawings:

5 FIG. 1 shows a schematic top view of a play mat with on it positioned a number of letter mats of the system according to the invention;

 FIG. 2 shows a cross-sectional schematic view of the device according to the invention along the lines 2-2 of FIG. 1;

10 FIG. 3 shows a schematic overhead view of a part of a first embodiment of a wiring diagram of the system according to the invention;

 FIG. 4 zooms in on the detail encircled in FIG 3;

 FIG. 5 shows a schematic overhead view of a part of a second embodiment of a wiring diagram of the system according to the invention;

15 FIG. 6 zooms in on the detail encircled in FIG 5;

 The figures are only schematic representations of preferred embodiments of the invention. In the figures, similar or corresponding parts are indicated by the same reference numerals.

20 DETAILED DESCRIPTION

 FIG. 1 shows a top view of a first embodiment of a system for practicing alphabetical skills 1. The system 1 comprises play mat 2 and letter mats 7. Play mat 2 comprises rectangular slots 3 that are cut out from the top
25 surface of the play mat 2. The slots 3 form in plan view approximately at least 3 rows and at least 3 columns. The slots 3 can accommodate letter mats 7 which, preferably each, carry indicia 8.

 Play mat 2 can be made of any suitable material floor mats are
30 generally made of, like e.g. foam, carpet and plastics including PVC.

The thickness of play mat 2 could be typically 8 millimeters and it may preferably be not rigid so as to allow for rolling the mat into a cylindrical shape or even for folding the mat for storage purposes.

5 The rectangular slots 3 are in plan view preferably about 20 centimeters wide and 25 centimeters long for to accommodate one or both of the feet of a child to stand thereon without crossing the boundary formed by perimeter 4 of slot 3. The depth of each rectangular slot 3 may be e.g. four millimeter. Instead of rectangular the plan view shape of the slots 3 could be
10 oval, round or irregular like the plan view of non-rounded natural stones or any other suitable shape.

 The indicia 8 may depict letters the 26 letters of the Latin alphabet or any other alphabet like e.g. the 22 letters of Hebrew. The indicia 8 on one
15 letter mat may also depict a combination of letters with their individual sound like e.g. 'ou' in English or 'ui' in Dutch.

 The play mat 2 may also comprise a START slot 5 where a child can stand on before crossing the imaginary bridge the play mat resembles and a
20 FINISH slot 6.

 In FIG. 1 between the slots 3 and the sides of play mat 2 an area 9 is indicated which could be decorated with print.

25 By providing a play mat 2 and letter mats 7 (with indicia 8) that fit in slots 3, a teacher or parent may practise alphabetical skills with a child indoors in a physical manner with an easily varied configuration of the positions of the letter mats 7 on the play mat 2.

FIG. 2 shows a cross-sectional schematic view of the play mat 2 comprising a bottom layer 2B and an upper layer 2A which has an opening which forms slot 3. In said slot 3 letter mat 7 fits.

5 FIG. 3 shows in ghost view a plan view of part of a play mat 2. In this second embodiment of a play mat 2 the perimeter 4 of positions for the letter mats (not shown) are preferably printed, by any suitable means, on the top surface of the play mat 2. The play mat 2 has no physical slots to cooperate with the letter mats, instead fixing means (not shown) are envisaged per letter
10 mat position 3 to keep the letter mats, which are placed on top of the play mat 2, in place. The fixing means may be elements (not shown) comprising e.g. approximately centrally positioned flat magnetic elements or hook and loop fasteners (e.g. disc shaped of about 1 inch diameter and 1 mm thickness and would be located centrally within the perimeter 4. Obviously the letter mats
15 would also comprise means to cooperate with aforementioned fixing means such that the letter mats can be removably fixed in place and their positions can be changed.

 In a third embodiment of the system the play mat 2 may house
20 electronic wiring 10 and modules 11.

 The electronic wiring 10 may connect the modules 11 such that the modules 11 form cross points of a matrix and such that the modules 11 are positioned in columns A – D and rows 1 – 7. Whereby row 1 has only one cross
25 point with column B. The position of module B – 1 would coincide with START slot 5, the position of the other modules 11 with the other remaining slots 3, i.e. fixing element areas, and the position of module B – 7 (not shown) with FINISH slot 6.

The electronic wiring 10 may extend on one side outside the matrix along the lines of the columns and the rows. The computer (not shown) would be connected to said lines and interrogate sequentially the lines of columns

5 A – D and rows 1 – 7 to establish whether there is a connection between a column line and a row line.

FIG. 4 shows a schematic wiring diagram of a module 11 which comprises switch module 12 and antenna module 13. In this embodiment switch module 12 is connected to line B and connected to antenna module 13. 10 Antenna module 13 is furthermore connected to line 3. In this way, if the switch module 12 is activated (by a child standing on the letter mat above it) line B and line 3 are connected via the antenna module 13 and the latter is activated and ready to read e.g. an RFID tag.

15 FIG. 5 is similar to FIG. 3 but shows an alternative wiring diagram for connecting alternative electronic modules 11 (see FIG. 6). Whereby all modules 11 are connected in series with a double wire in a meandering pattern over the columns and rows (no references given).

20 FIG. 6 shows a schematic wiring diagram of alternative module 11 which comprises switch module 12, antenna module 13 and position identification module 14. In this embodiment position identification module 14 may be similar to decoders used for digital command control model trains. The decoder (not shown) has an address and can also switch the antenna module 25 13 on or off. In this way the toy computer, which is connected to the In Out lines, can interrogate the decoders one by one, and switch on the antennae one by one to read the RFID tags of the letter mats. When a switch module 12 is pressed (by a child standing on the letter mat above it) the computer will not be able to establish contact with one of the decoders and can conclude which 30 letter mat the child stands on.

When using the system of the invention proposed, the rules of how it is used would normally be tuned to the level of the alphabetical ability of the child that tries to cross over the play mat with the letter mats positioned.

- 5 These rules would be agreed with/conveyed to the child beforehand. For example a teacher or parent could e.g. make a sound and the child should step on the letter mat which resembles the sound in the first row. The same is repeated for the second row and so on. Alternatively the child should step on the letter which comes after or before the letter that the teacher or parent
- 10 mentions. Alternatively the child could be given clues about a friend, like:” He has blond hair and blue eyes”. Subsequently the child should find a possible name of e.g. 4 letters amongst the letter mats laid out (see e.g. Fig.1) , with a letter in each row (if there are four rows). Because the letter mats lay on the play mat their configuration is easily changed for a next name to be guessed.
- 15 Normally the child would be supposed to only move forwards over the rows or also sideways in a row. Many ways of using the system proposed are imaginable.

- Many variants will be clear to the person skilled in the art. It is for
- 20 example also possible to have screens and proximity sensors fixed in the slots instead of placing the letter mats. The computer would control which letter is displayed on which screen. It is also possible that the position identification modules comprise each (just simply) a resistor and that the resistance values of all resistors are different such that the computer can ‘recognize’ each
- 25 position of which the switch module is activated by measuring said resistance value. The variants are understood to fall within the scope of the invention as set forth in the appended claims.

CONCLUSIES

1. Systeem voor het oefenen van alfabetische vaardigheden bevattende
een basisdeel en ten minste één letterdrager, waarbij het basisdeel
5 posities bevat voor het ten minste gedeeltelijk ontvangen van één of
meer letterdragers.

2. Systeem volgens conclusie 1, bevattende één of meer van de duidelijk te
onderscheiden kenmerken volgens bovenstaande beschrijving.

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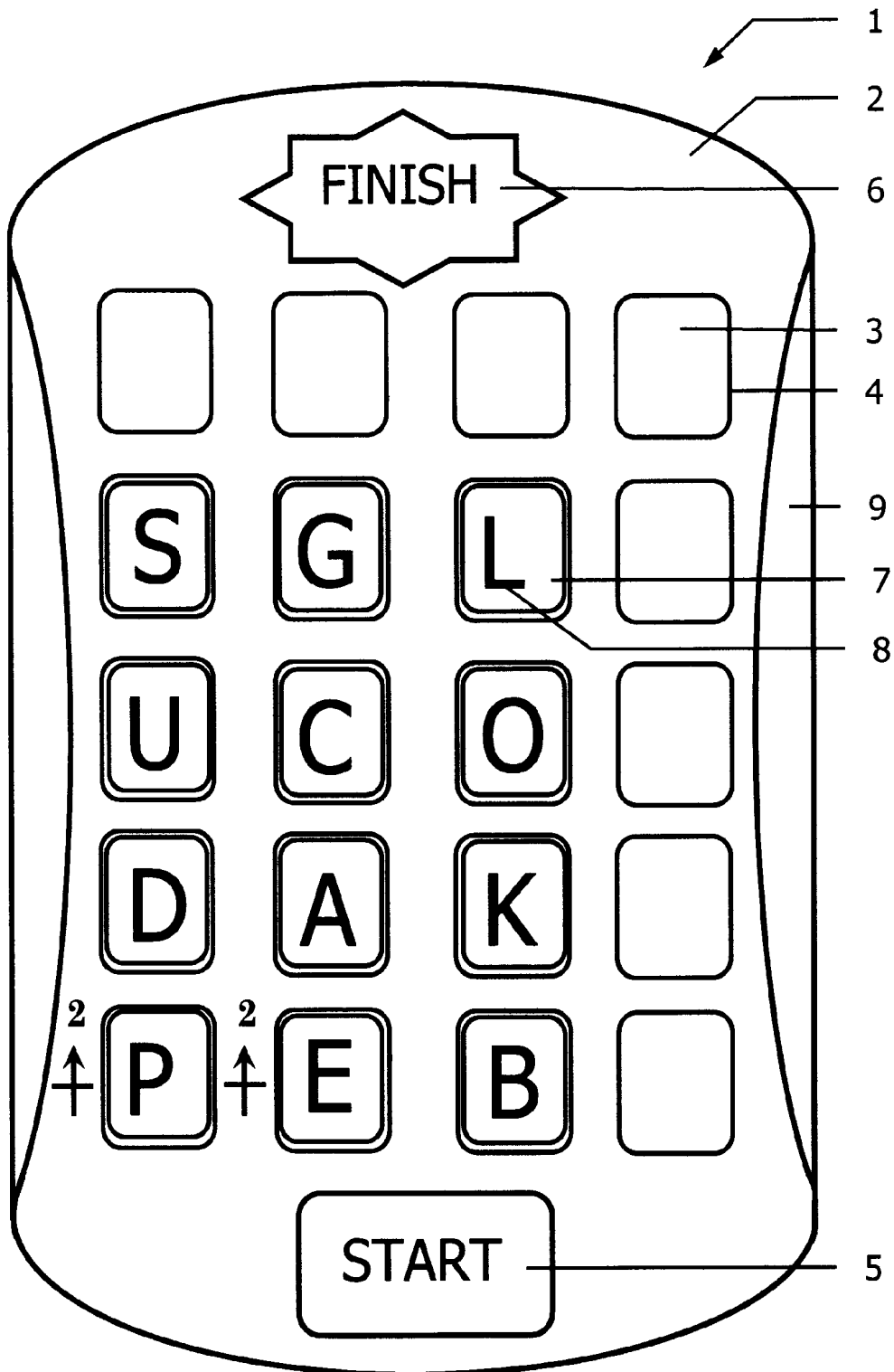


FIG. 1

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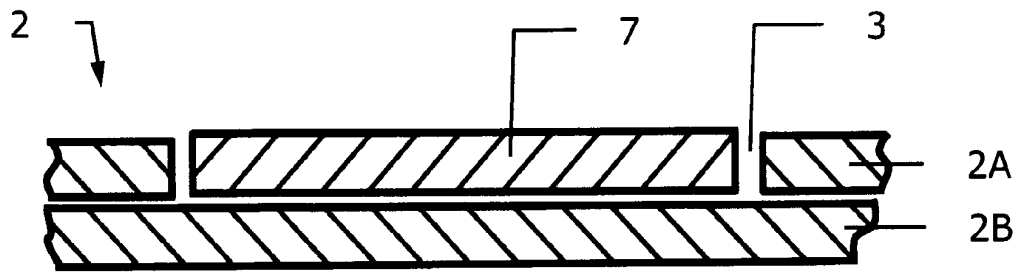


FIG. 2

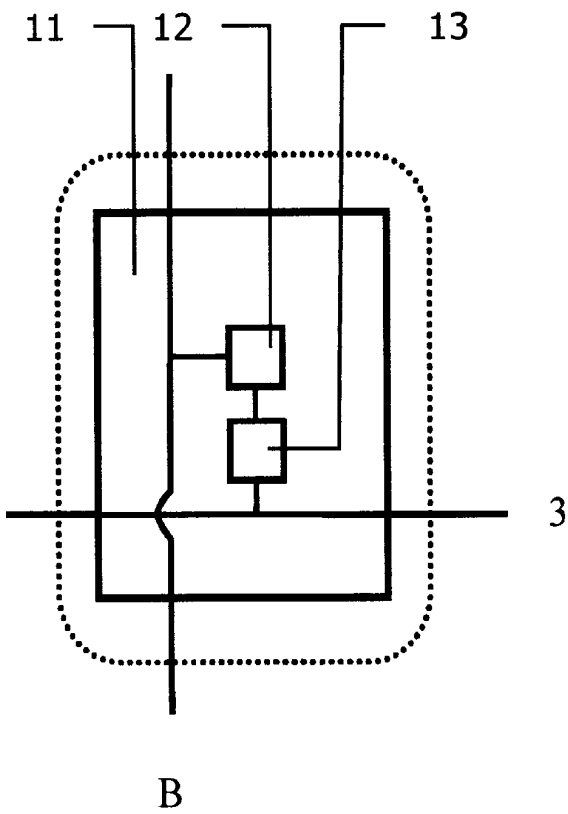


FIG. 4

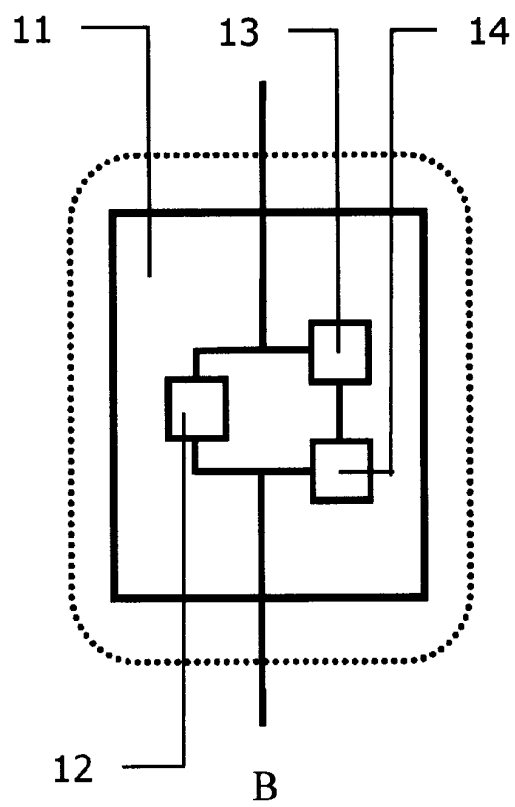


FIG. 6

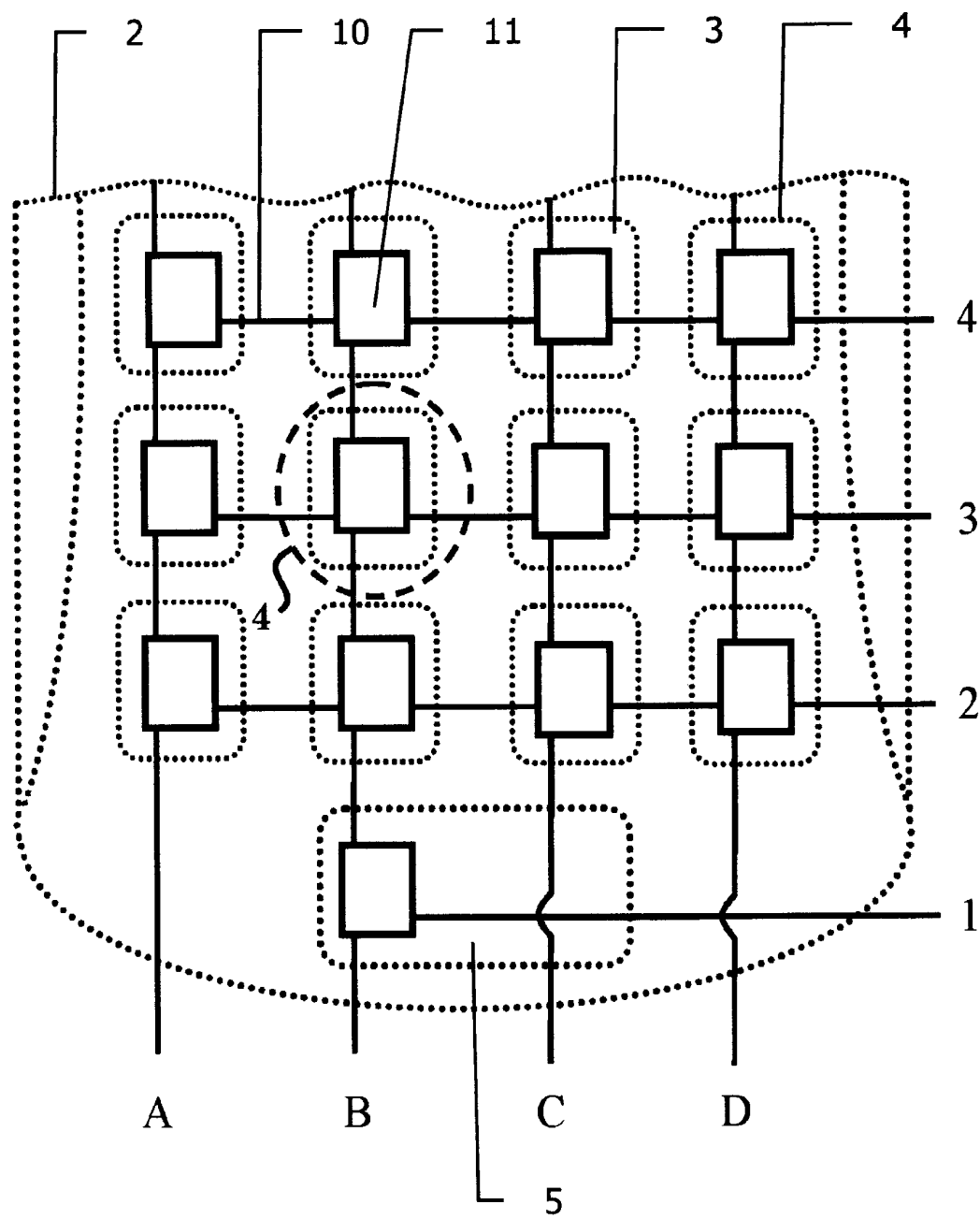


FIG. 3

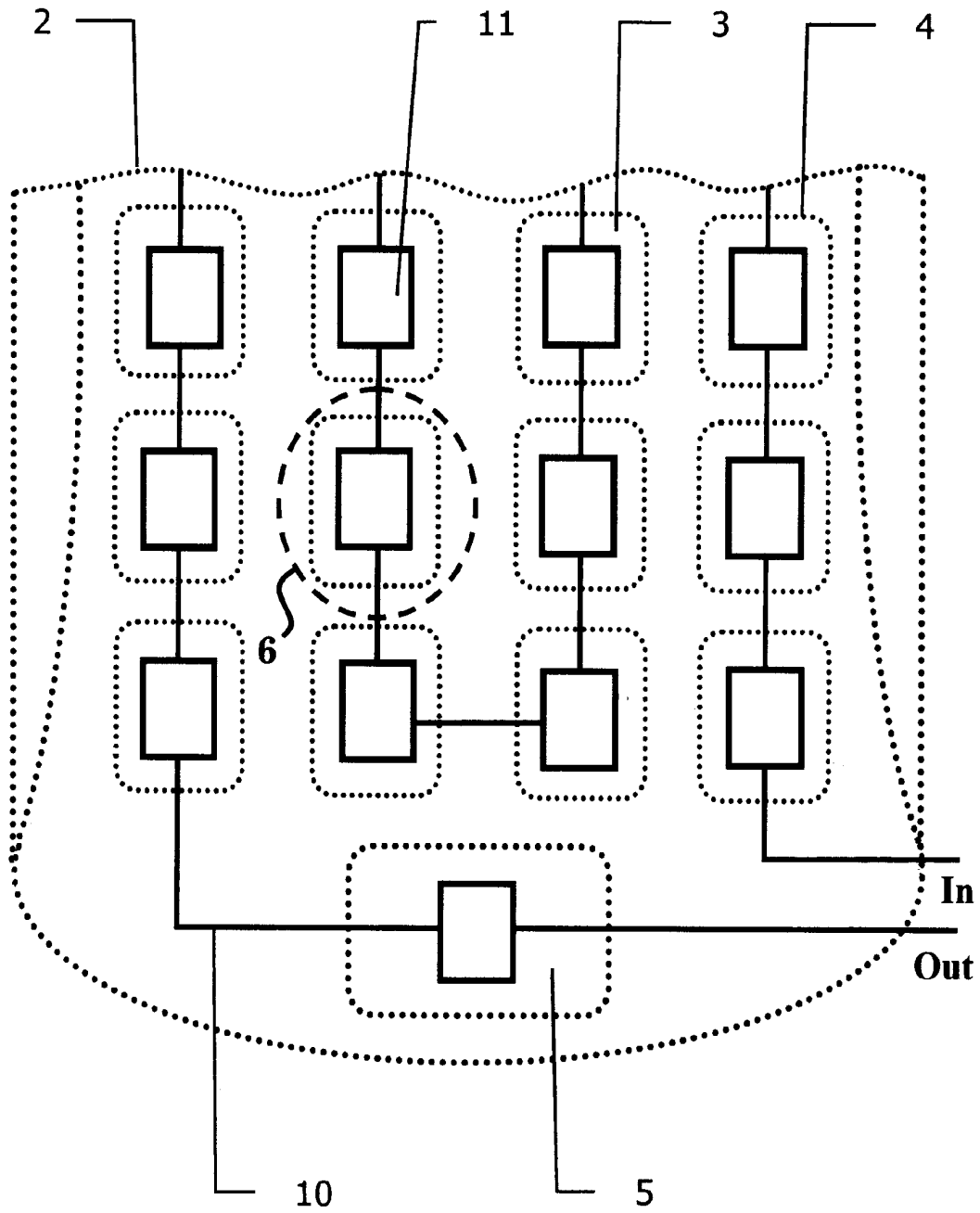


FIG. 5