(No Model.)

F. W. PRESTON.

FRAME FOR HOLDING BLOCKS FOR EDUCATIONAL PURPOSES.

No. 456,708. Patented July 28, 1891.

Fig. 1.

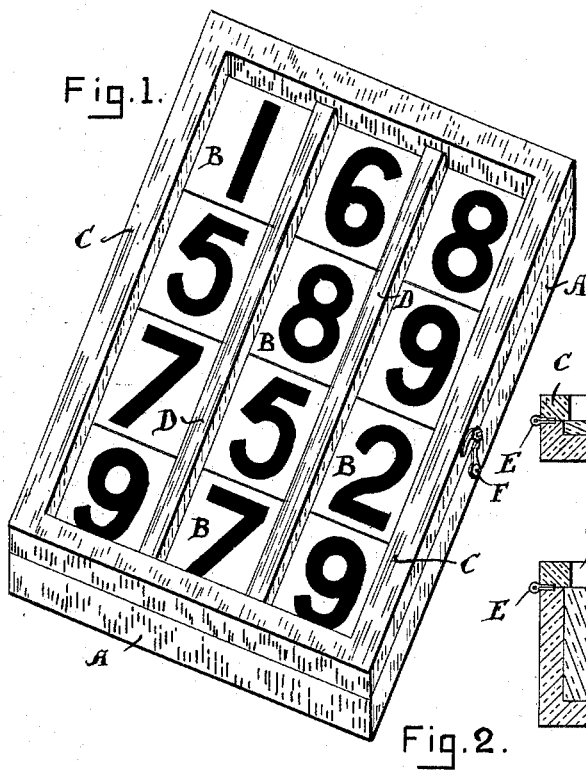


Fig. 2.

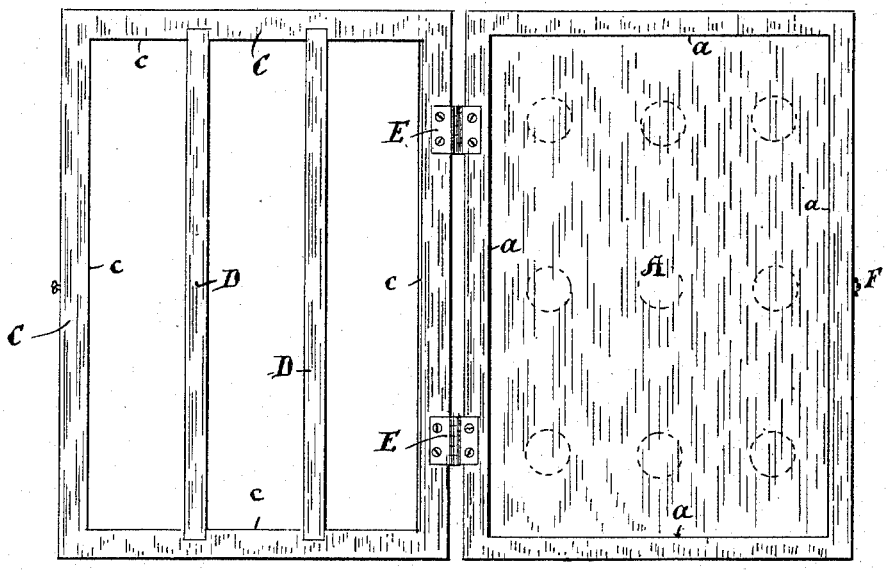


Fig. 5.

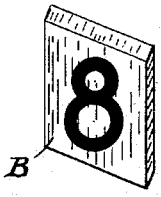


Fig. 6.

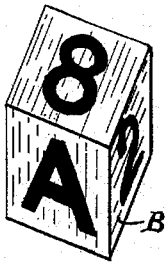


Fig. 3.

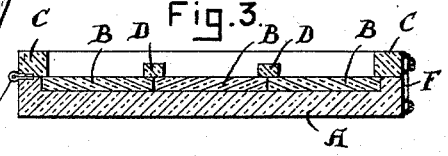
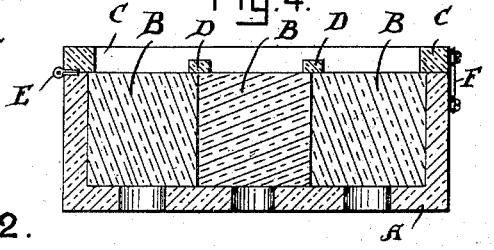


Fig. 4.



Witnesses.
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Attorney.

UNITED STATES PATENT OFFICE.

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FRAME FOR HOLDING BLOCKS FOR EDUCATIONAL PURPOSES.

SPECIFICATION forming part of Letters Patent No. 456,708, dated July 28, 1891.

Application filed December 15, 1890. Serial No. 374,669. (No model.)

To all whom it may concern:

Be it known that I, FRANK W. PRESTON, a citizen of the United States, residing at New Ipswich, in the county of Hillsborough and State of New Hampshire, have invented certain new and useful Improvements in Frames for Holding Blocks for Educational Purposes, of which the following, taken in connection with the accompanying drawings, is a specification.

The object of my invention is to produce a frame for holding blocks having upon their surface figures or letters to be used for educational purposes; and it consists of a tray of a depth equal to the thickness of the blocks and a frame hinged thereto, the inner edges of which are slightly smaller than the inner edge of the tray, said frame being provided with bars to retain the blocks in place.

Referring to the accompanying drawings, Figure 1 represents a perspective view of a frame embodying my invention, fitted with blocks having numbers upon their surface. Fig. 2 is a view of the frame when open. Fig. 3 is a vertical cross-section through the frame, showing the blocks held therein. Fig. 4 is a similar view of a frame adapted to receive cubes. Fig. 5 is a view of one of the blocks. Fig. 6 is a view of a cube.

A represents a tray, the depth of which is equal to the exact thickness of the blocks B which it is to receive.

C is a frame, which is connected to the tray A by hinges E, and when in the closed position is secured by a catch F or other suitable fastening. The sides of the frame are wider than the sides of the tray and project inward past the inner edges of the tray, so as to overlap the blocks and prevent their falling out if the tray should happen to be inverted. When there is more than one row of blocks in the tray, it is necessary to use cross-bars D, one for each additional row. These bars are secured to the ends of the frame at equidistant points between the sides and have their inner or lower faces even with the bottom of the frame, so that when the frame is closed down upon the tray each cross-piece will rest upon and overlap the edges of the blocks in two adjacent rows just enough to retain them in the tray without covering or hiding the character upon the face of the blocks, the blocks being placed contiguous to or touching each other in the tray.

To use the frame, the catch F is first unfastened and the frame C opened, as shown in Fig. 2. The desired blocks are now placed in the tray A and the frame C brought on the top of the same. The catch is then secured. The blocks are now held firmly by the inner edges *c* of the frame overlapping the edges of the blocks all round, and the bars D overlap the inner edges of the outside blocks and the edges of the central blocks. If the blocks employed have numbers upon their surface, as shown in Fig. 1, a sum in addition is presented, and if it is desired to present another sum all that need be done is to shift two of the blocks. For instance, if the figures 1 and 8 in the upper row, were transposed, an entirely different sum would be presented. The blocks can be thus shifted so as to give a great many different sums, although only two blocks need be shifted each time. When letters are used, the blocks can be arranged so that each row will spell some word, which a pupil can commit to memory. They can then be arranged to spell other words.

Although I have shown the frame as containing only twelve blocks, if it is desired it can be made of a size to receive any desired number of blocks, and of course the number of bars D would be regulated by the number of blocks the width of the tray is to receive.

If desired, the bottom of the tray A may be formed with a number of small holes, as shown in Fig. 4 and in dotted lines in Fig. 2, one under each block, so that the blocks which it is desired to remove or change can be raised by the finger being passed through the hole under the said block. This would be particularly applicable when cubes are employed.

What I claim as my invention is—

An educational appliance consisting of a tray, blocks arranged contiguously therein, a slatted frame hinged to one side of the tray, and a catch upon the opposite side of the tray, the blocks being provided with characters and having their upper surfaces even with the top of the tray and the frame having its sides wider than the sides of the tray and projecting inwardly over the outer edges of the

blocks, and the slats or bars being secured at equidistant points between the sides and each having its lower face even with the top of the tray and adapted to rest upon and overlap the edges of two adjacent rows of blocks, substantially as described.

In testimony whereof I have signed my name to this specification, in the presence of two subscribing witnesses, on this 9th day of December, A. D. 1890.

FRANK W. PRESTON.

Witnesses:

WILLIAM A. PRESTON,

LILLIAN CHAPMAN.