

C. E. MARTIN.  
Educational Appliance.

No. 196,532.

Fig. 1 Patented Oct. 30, 1877.

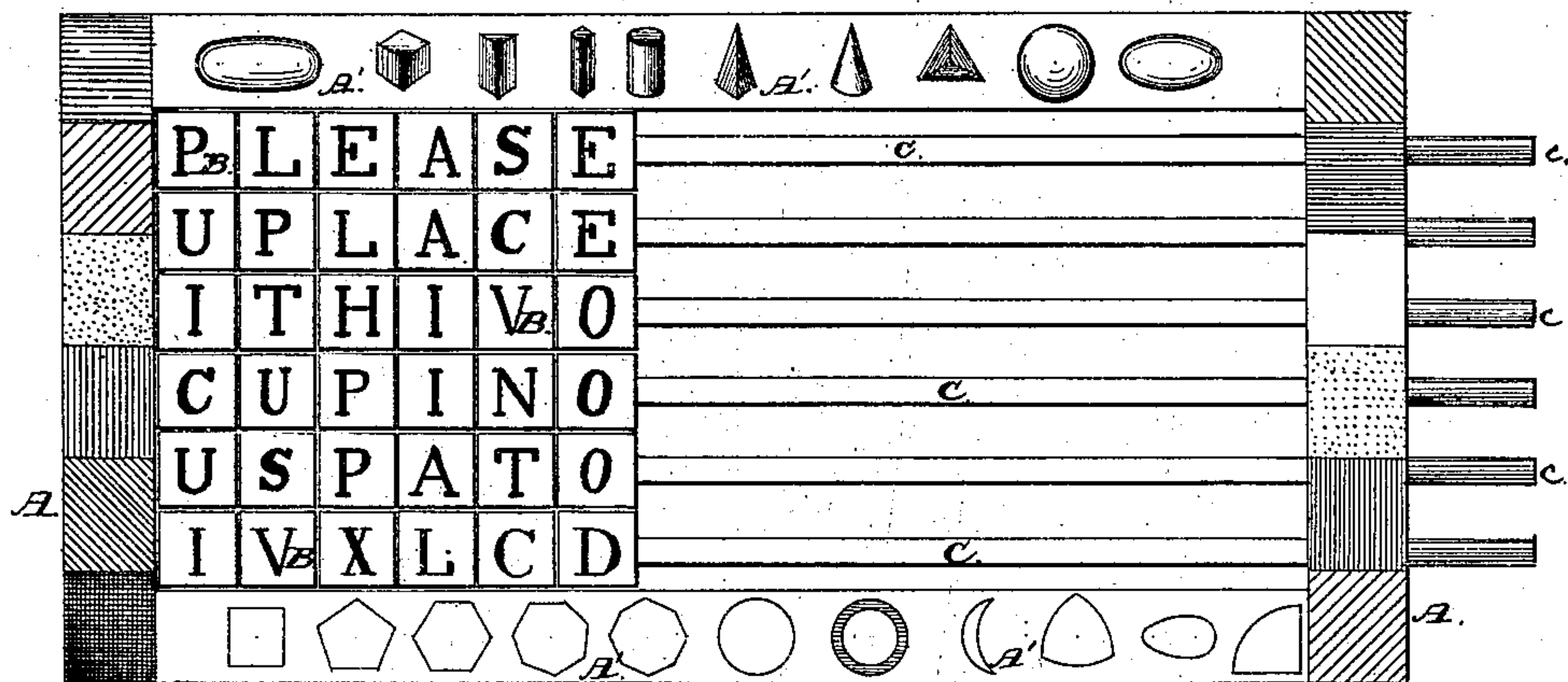


Fig. 2.

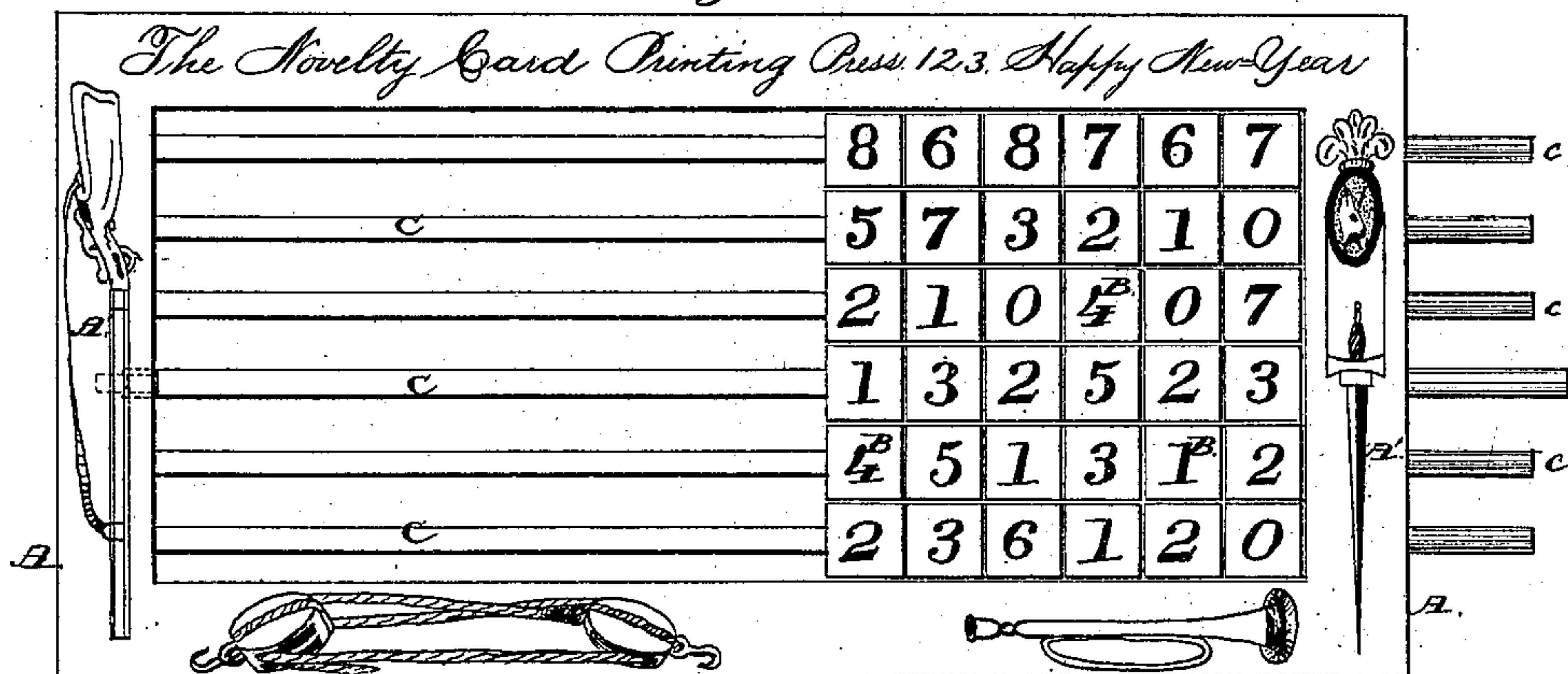
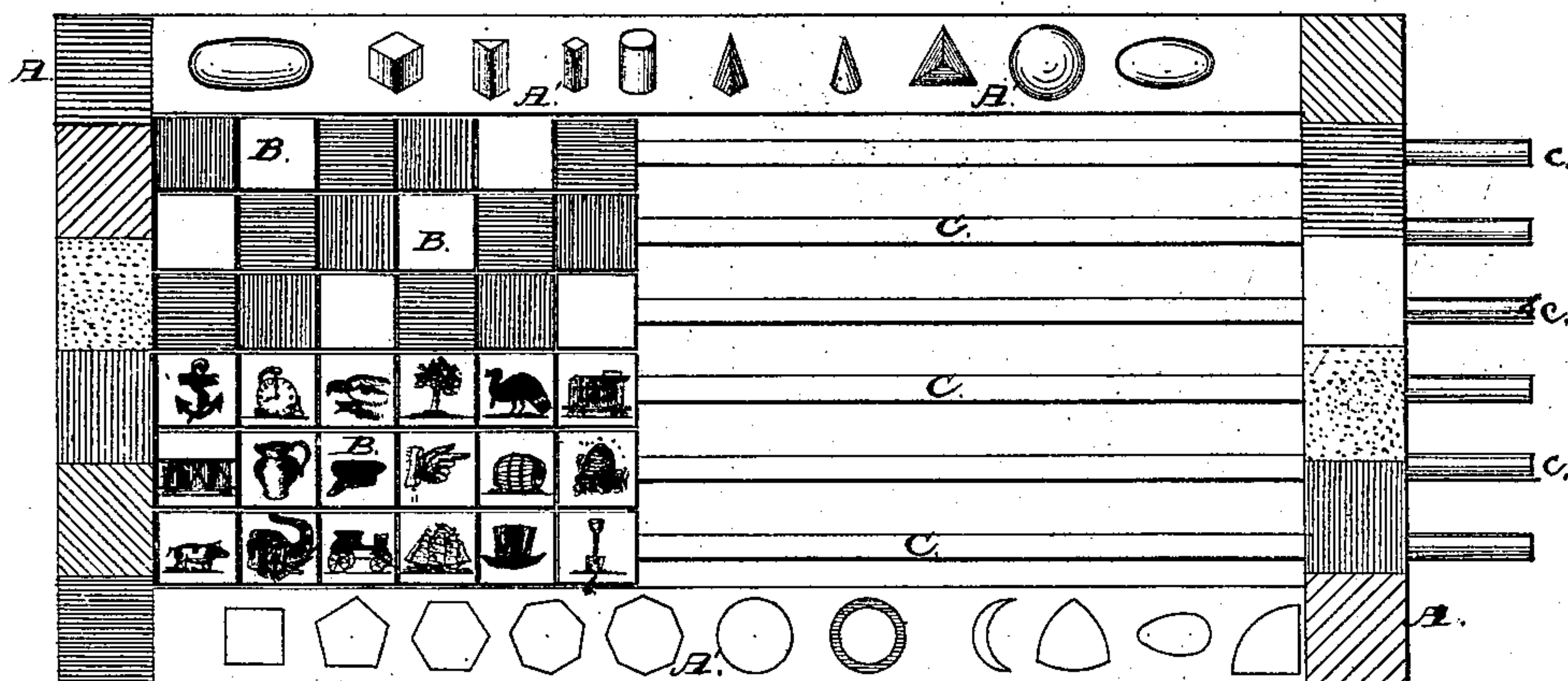


Fig. 3.



Attest:

G. W. Porel  
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Inventor:

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# UNITED STATES PATENT OFFICE.

CHARLES E. MARTIN, OF CHICAGO, ILLINOIS.

## IMPROVEMENT IN EDUCATIONAL APPLIANCES.

Specification forming part of Letters Patent No. **196,532**, dated October 30, 1877; application filed June 18, 1877.

*To all whom it may concern:*

Be it known that I, CHARLES E. MARTIN, of Chicago, in the county of Cook and State of Illinois, have invented a new and useful Improvement in Educational Apparatus; and I do hereby declare that the following is a full and exact description of the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon.

Figure 1 is a face view of one of the sides of the apparatus, showing the movable letters made to slide upon the rods. Fig. 2 shows the opposite face side, with figures or numerals upon the cube-shaped blocks; also, the object views upon the margin of the frame; and Fig. 3 shows another face view of the blocks after the same have been given one-fourth turn, one half to the right, the other half to the left, showing object-pictures upon a portion of the blocks, and a plain surface upon another portion of the blocks.

Similar letters of reference denote corresponding parts in all the figures.

The object of the invention is to provide an educational table having the colored blocks, as in the ordinary abacus, but having said blocks provided with square or other shaped holes, and placed loosely upon corresponding bars, so that when the rod is turned the blocks turn with it.

The invention consists of a rectangular or other shaped frame, provided with two face sides, and having the said sides covered with pictures or other objects, so that, in connection with the figured blocks, lessons may be given. It is also provided with longitudinal rods or bars, preferably made square in form, except a portion at each end of the rods, which are round in form. Upon these rods are placed square blocks, having upon the sides letters, numerals, pictures, &c., and in such a manner that words may be formed, arithmetical problems solved, object-lessons, &c., given, all of which will be hereinafter explained.

In the drawings, A represents the frame, which may be made rectangular in shape, or otherwise, as desired. This frame may, for convenience' sake, be placed upon supports to keep the frame in a vertical position.

A' are figures, objects, problems, &c., placed

upon the face of the frame. B represents blocks, preferably square in form, upon which are placed letters, numerals, objects, colors, &c. C are longitudinal bars, preferably made square in cross-section, and upon which the blocks B (by means of central holes of shape to correspond with the bars) are free to slide, it being borne in mind that only blocks enough are placed upon each bar or rod to fill one-half of its length, for a purpose hereinafter explained.

The ends of the rods C are rounded, and the end designated *c* projects far enough through the frame to form a handle, which can be grasped by the hand when it is desired to turn the rod. The reverse end has also a round tenon, fitting into a round hole within the frame. The face of these shallow holes are squared a short portion of their depth, and of size to correspond with the size of the square portion of the rods, so that the rods will, when in the full depth of the holes, be securely locked by the use of these square parts, and held in a position to prevent turning. Different kinds of letters, characters, numerals, &c., may be used upon the face of the blocks, the object sought in the invention being to so arrange that a large number of words may be spelled, long columns of figures added together, and a large number of changes made, by having many blocks that can be shifted back and forth upon the rods at the will of the operator. When it is desired to turn the rods (which is done one at a time) with the accompanying blocks, the said blocks are slid to the end having the vacant space, the rod is then drawn endwise until the square portion of the same is released from the square part of the hole made in the frame, when it can be turned in the vacant space between the adjacent rods, as will be readily understood without further description. Spiral springs may be used, if desired, upon the rod, so as to automatically bring the rods in position after the withdrawal.

For school purposes the apparatus may be as large as required, it only being necessary to be of a size not too large to prevent the easy manipulation. For family use, small frames having less scope may be used.

By the use of this apparatus instructive lessons in the educational branches to which it



is adapted can be given, and the same more readily impressed upon the memory of the learner than can be done from books alone.

I am aware that educational devices have been made having blocks placed upon rods, so that each block will turn independently upon its axis. These I do not claim; but

What I claim as new, and desire to secure by Letters Patent, is—

1. In an educational table, the smooth-faced frame, having pictured objects upon the frame, combined with the square rods or bars, carrying lettered blocks, arranged to operate substantially as described.

2. The combination of the frame, the square rods or bars, having rounded ends, the square blocks centrally mounted upon the same, so

that the rods and blocks revolve together, substantially as described.

3. As a new article of manufacture, the educational apparatus having a double-faced frame, with pictured objects upon the said face, the square rods, the cube-shaped blocks mounted upon the said rods, and adapted to slide, but not to turn, upon the same, all arranged and operating substantially as described, and for the purpose set forth.

This specification signed and witnessed this 28th day of February, 1877.

CHAS. E. MARTIN.

Witnesses:

G. W. FORD,

M. T. MARTIN.