

(No Model.)

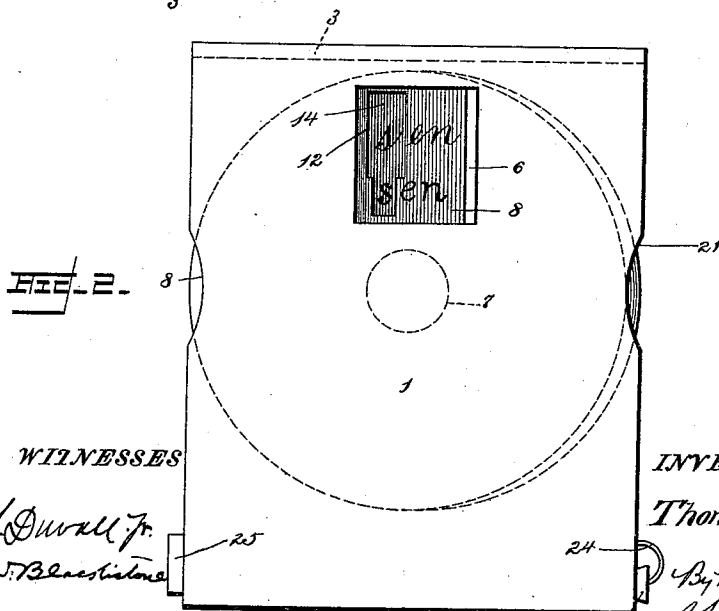
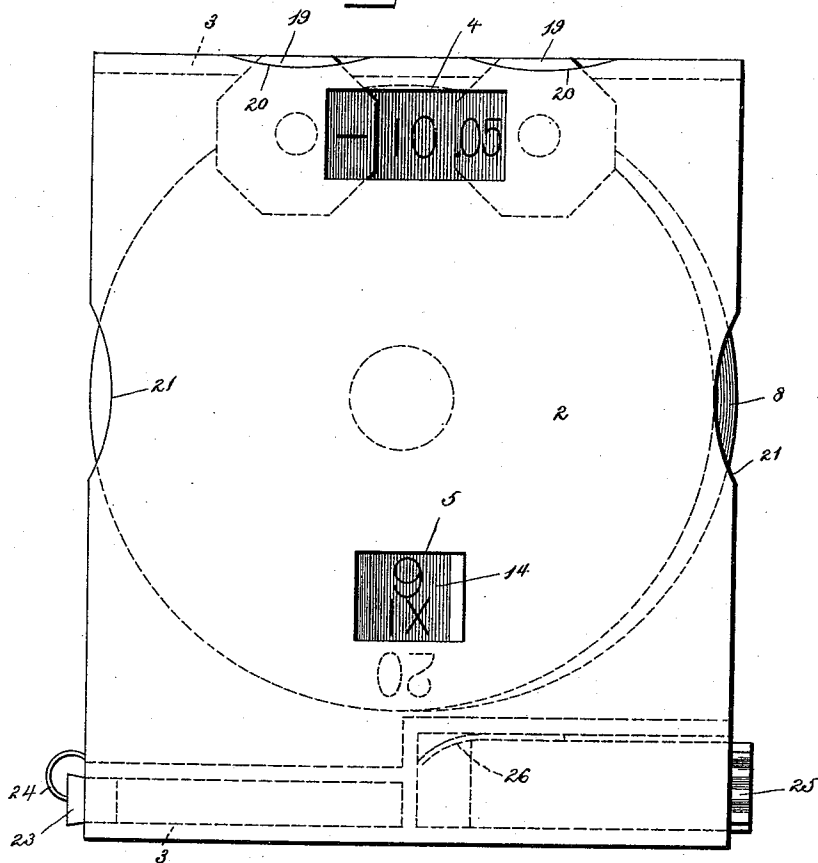
2 Sheets—Sheet 1.

T. HOOLEY.
BLACKBOARD.

No. 536,526.

Patented Mar. 26, 1895.

FIG. 1.



WITNESSES

Edw. S. Duvall Jr.
Frank J. Blackstone

INVENTOR:

Thomas Hooley.

By his Attorney.

M. S. Duvall.

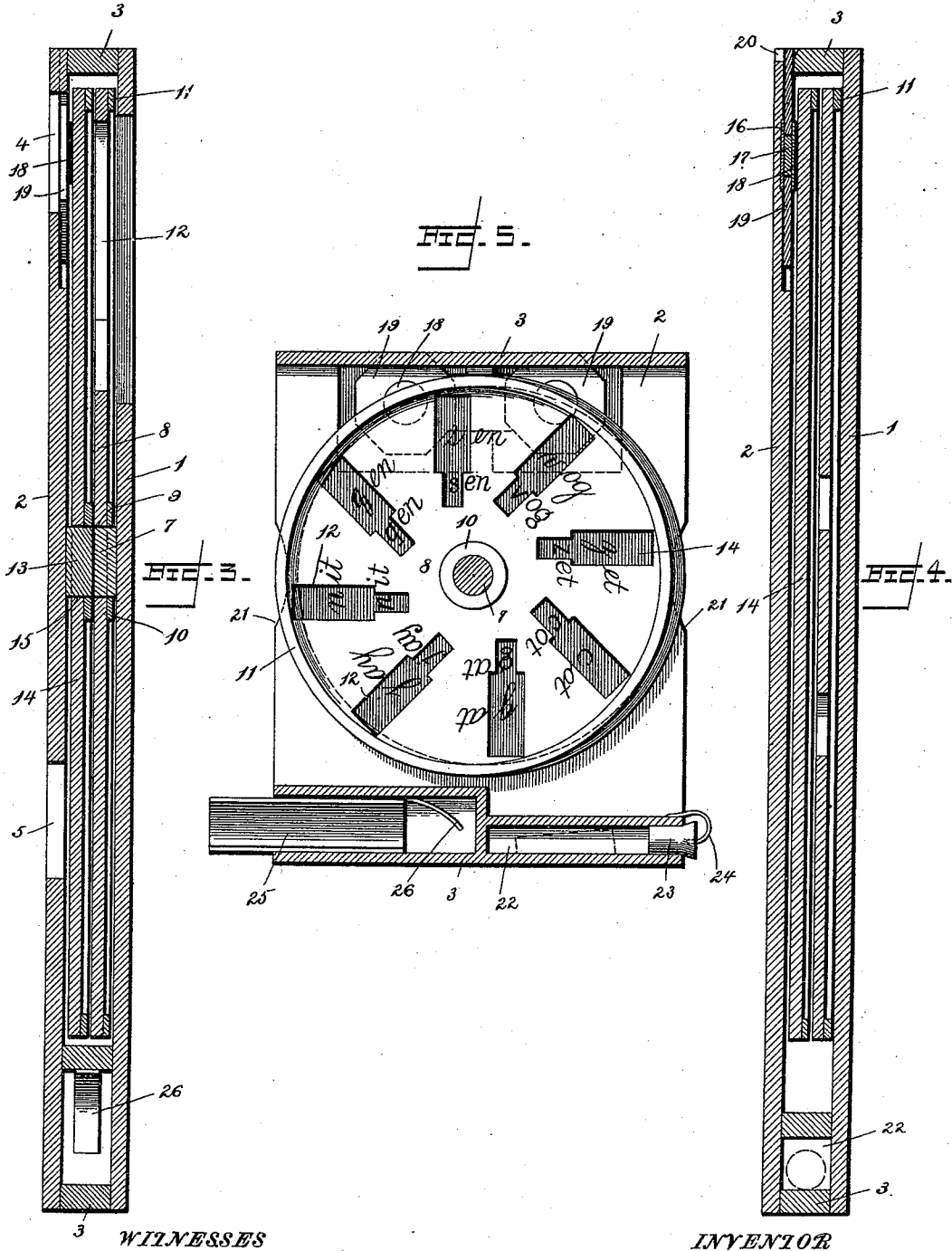
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INVENTOR

Edw. S. Duwall Jr.
Frank D. Bloodstone.

Thomas Hooley
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UNITED STATES PATENT OFFICE.

THOMAS HOOLEY, OF DAVENPORT, IOWA.

BLACKBOARD.

SPECIFICATION forming part of Letters Patent No. 536,526, dated March 26, 1895.

Application filed March 30, 1894. Serial No. 505,668. (No model.)

To all whom it may concern:

Be it known that I, THOMAS HOOLEY, a citizen of the United States, residing at Davenport, in the county of Scott and State of Iowa, have invented certain new and useful Improvements in Blackboards; 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.

My invention relates to improvements in educational appliances, and has particular reference to that class thereof known as blackboards.

The objects of my invention are to produce a simple device or appliance designed to be employed in the education of the young, and so constructed that while capable of being used as an ordinary blackboard, it is also capable of being used for the purpose of illustrating to the young mind the various characters of the alphabet, numerals, signs, or symbols employed in arithmetic in its various branches, and also capable of producing words by which orthography may be taught, and finally to provide for the reception of the eraser and also of the crayon used.

Other objects and advantages of the invention will appear in the following description and the novel features thereof will be particularly pointed out in the claims.

Referring to the drawings:—Figure 1 is a front view of a blackboard embodying my invention. Fig. 2 is a rear view. Fig. 3 is a central vertical sectional view. Fig. 4 is a similar view at one side of the center. Fig. 5 is a longitudinal sectional view.

Like numerals of reference indicate like parts in all the figures of the drawings.

In the practice of my invention I employ a back wall 1 and a front wall 2, the same being of rectangular shape and corresponding to each other, said walls having their outer faces so treated as to serve as blackboards. Between these walls at the upper and lower edges spacing-strips 3 are inserted, and the two walls and strips are tacked, screwed, or otherwise secured together. The front wall 2 is provided near its upper edge with an ob-

long opening 4 and at a point slightly below its center with an opening 5, which is eccentrically arranged with relation to the opening 4. The rear wall is provided above its center with a vertically disposed oblong opening 6, and upon its inner surface below said opening is provided with a stub-shaft or boss 7. Arranged upon this stub-shaft or boss 7 and adapted to revolve is a disk 8 having a blackboard surface preferably, and provided at its center with an opening 9 which receives the boss 7, and which is surrounded upon its rear face by a fixed annular washer 10. The same face of the disk 8 is provided at its periphery with a spacing ring or rib 11. This washer and rib have frictional contact with the inner surface of the back wall 1. Between the rib and washer the disk 8 is provided with a series of slots 12 which are tangentially disposed and are designed to register with the opening 6 in the back wall. The slots 12 are at their lower ends slightly reduced.

The front wall is provided upon its inner side between the openings 4 and 5, with a boss 13 similar to the boss 7 of the back wall, and arranged thereupon and adapted to revolve thereon is a disk 14 whose opposite sides are preferably blackened. The disk 14 has an opening 15 at its center which receives the boss 13, and is otherwise imperforate.

The rear wall of disk 14 is provided with two concentric series of letters alphabetically arranged, the outer series being preferably script and the inner series printed, or if desired these letters may be omitted and simply the black surface appear. These series of letters however, or the spaces which they occupy, may be observed through the oblong tangentially disposed openings 12 of the disk 8, and this disk is provided upon its back face at one side of each opening with one or a plurality of letters, such for instance as short syllables which correspond to the letters on the back of the disk 14, that is to say the outer series are preferably written or in script, and the inner series printed. These, however, may be omitted and simply the black surface appear.

The front face of the disk 14 is provided with numerals arranged in three concentric series in this instance, the outer series running in the present instance from 1 to 20 and being indiscriminately arranged, and the inner series running from 1 to 20 and being numerically arranged. The central series correspond to the inner series and give the Roman numerals. The outer series of numerals appear through the opening 4 of the front wall, and the two inner series appear through the opening 5 of the front wall.

The front wall near its upper end and upon its inner side is provided with a shallow recess at each side of the opening 4, and secured to the bottom of this recess, by glue or otherwise, are disks 16 upon which are concentrically arranged short stub-shafts 17 at whose outer ends disks 18 are located. Between the two disks 16 and 18 of each stub-shaft I arrange small revolving disks 19 which are preferably octagonal, and one of these disks 19 is preferably provided with such characters as dollar marks, plus signs, signs of division, subtraction, &c. The opposite disk may carry any numerals, symbols or signs desired. The disks 19 are arranged some distance apart so that between them will appear the outer numerals on the disk 14. By this latter arrangement it will be seen that by revolving the small disks 19 and the large disk 14, various combinations of figures may be presented through the opening 4, and these combinations may be altered at will and changed indefinitely by placing numerals at either or both sides of the opening 4 upon the blackboard 2. I prefer to print, paint or otherwise permanently place upon the disks 19 and 14 the symbols or signs and the numerals, though if desired, simply black surfaces may appear and crayon be employed for the purpose. Through the opening 5 the numerals may be seen and also the Roman numerals corresponding. By reversing the blackboard so that the back will be at the front, the large disks may be revolved so that the letters on the disk 14 will be seen through the slots or openings on the rear disk, and simple words be spelled. So also may crayon be employed to add other letters to these words, thus making various combinations of letters and spelling different words.

For the purpose of facilitating the turning of the small disks 19, slots 20 are formed in the upper edges of the blackboard, and for the purpose of facilitating the turning of the large disks, similar slots 21, or cutaway portions are produced at the opposite side edges of the board.

Below the large disks I produce between the front and rear walls a chalk receptacle of such size as to receive a stick of chalk or crayon, the outer end of the receptacle being open and temporarily closed through the medium of a cork or other plug 23, which I prefer to attach to the board by an elastic or

other cord 24. The opposite receptacle receives the usual eraser 25, and I secure in the upper side or wall of this latter receptacle a flat spring 26 whose free end bears upon the eraser and retains the same in position. It will thus be seen that the device may be readily handled without danger of dropping and breaking the crayon or the eraser.

From the foregoing description in connection with the accompanying drawings, it will be seen that I have provided a very simple, and at the same time extremely useful, educational appliance for training the young mind in the alphabet and figures, and also giving primary instructions in the first branches of mathematics, and also in easy spelling. The remaining surface of the blackboard it will be observed may be used for other purposes.

I do not limit my invention to the precise details of construction herein shown and described, but hold that I may vary the same to any degree and extent within the knowledge of the skilled mechanic.

Having described my invention, what I claim is—

1. A casing having an opening, in combination with a main disk rotatably mounted, and adapted to have its surface exposed through the opening, and opposite auxiliary disks arranged for rotation between the main disk and board, and spaced apart, and adapted to have their surfaces exposed through said opening at the opposite sides thereof, substantially as specified.

2. The combination with the board 1, having the opening 6, of a pair of disks 8 and 14 rotatably arranged in rear of the opening, the front disk 8 having a slot 12 of less width than the opening in the board and adapted to expose the surface of the disk 14 through the same, substantially as specified.

3. The combination with a casing having the opening 6 in one of its walls, of the disk 8 arranged for rotation below the opening, and having tangential slots 12 of less width than the opening 6, and an imperforate disk 14 in rear of the disk 8 and adapted to have its surface exposed through said tangential slots 12, substantially as specified.

4. The combination with the walls 1 and 2, the same being spaced apart to form a casing, the board 1, having the upper slot 6, and the board 2 having the upper and lower slots 4 and 5 and an upper recess, of the stub-shafts 7 and 13 arranged upon the two boards, disks 14 and 8 arranged upon the stub-shafts, the disk 8 having the openings 12 of less width than the opening in the board 1, and the two disks 19 arranged at opposite sides of the opening 4 of the board 1, and spaced apart so as to expose the adjacent disk 14, substantially as specified.

5. The combination with the casing having the upper opening in its wall and a recess in the rear face of said wall, of the shaft 13 be-

low the opening, a disk 14 arranged thereon
and adapted to be exposed through the open-
ing, retaining-disks 16 arranged in the bottom
of the recess, stub-shafts 17 extending from
5 said retaining-disks 16, retaining-disks 18 on
the inner ends of the stub-shafts, and auxil-
iary marking-disks 19 arranged on the stub-
shafts between disks 16 and 18 and adapted

to be exposed through the opening in the wall,
substantially as specified. 10

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

THOMAS HOOLEY.

Witnesses:

E. A. ANTRIM,

GEORGE W. ASHTON.