

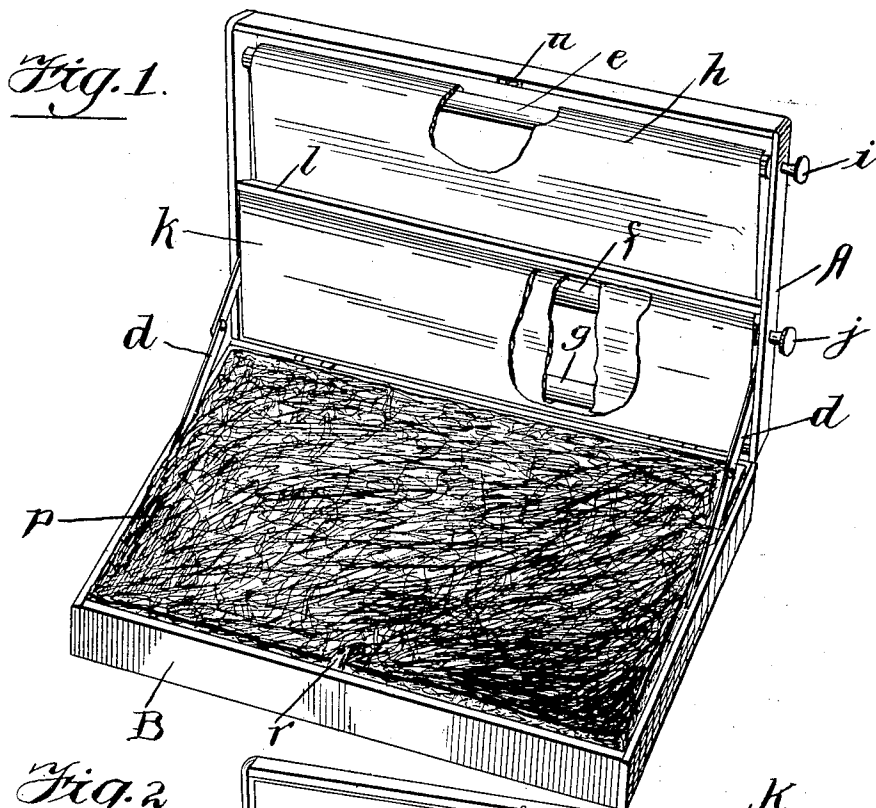
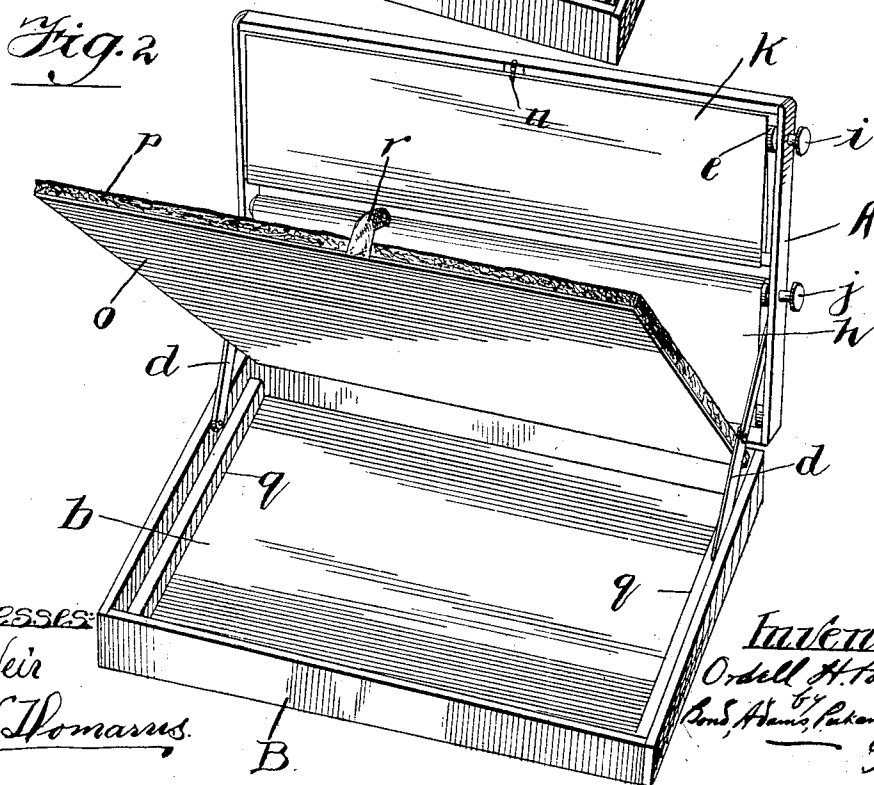
No. 763,926.

PATENTED JUNE 28, 1904.

O. H. POWERS.
EDUCATIONAL DEVICE.
APPLICATION FILED APR. 1, 1903.

NO MODEL.

2 SHEETS—SHEET 1.



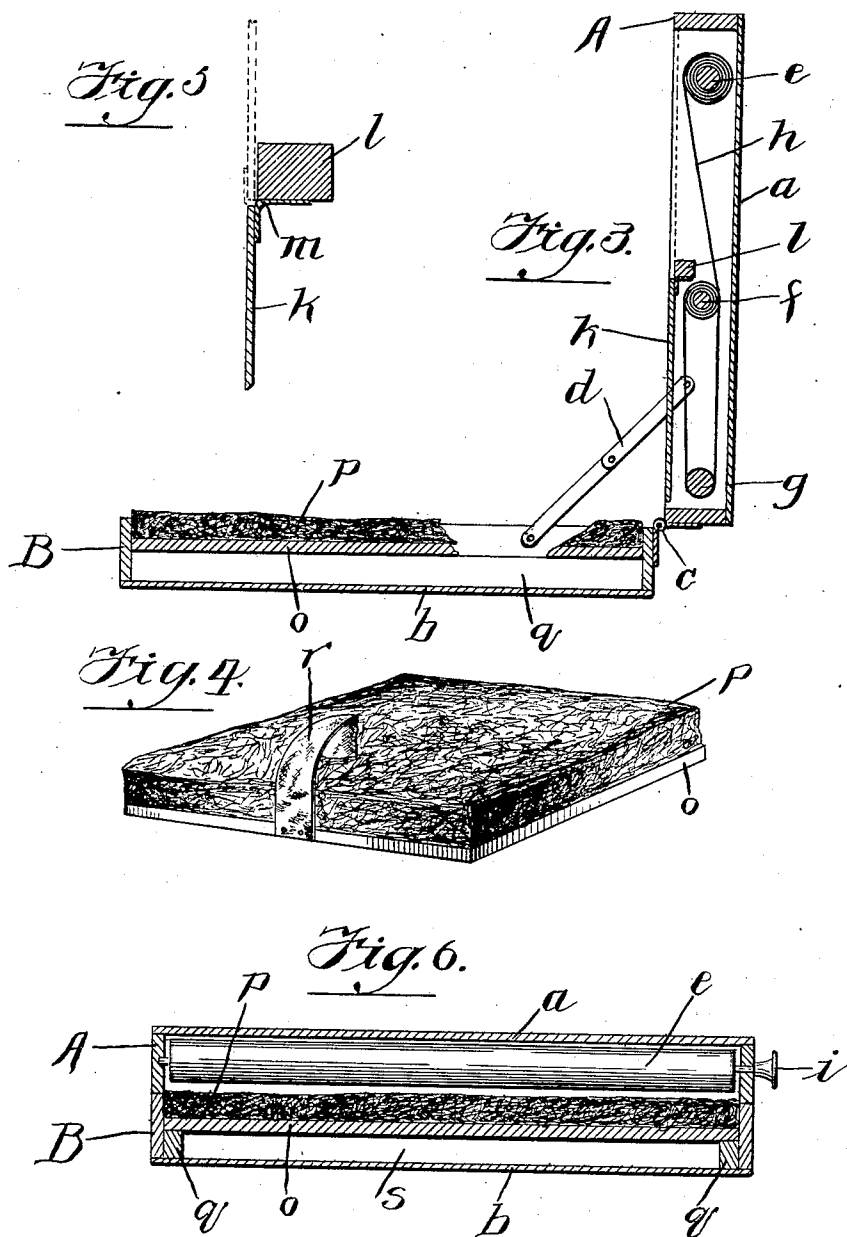
Witnesses:
J. B. Weir
Geo. T. Thomas.

Inventor:
Ordell H. Powers
By *[Signature]*
Attys.

O. H. POWERS.
EDUCATIONAL DEVICE.
APPLICATION FILED APR. 1, 1903.

NO MODEL.

2 SHEETS—SHEET 2.



Witnesses:

J. B. Weir
Geo. V. Thomas.

Inventor:

O. H. Powers.
By Bond, Adams, Rickard & Jackson
Attys.

UNITED STATES PATENT OFFICE.

ORDELL H. POWERS, OF VALPARAISO, INDIANA, ASSIGNOR TO POWERS, HIGLEY AND COMPANY, OF VALPARAISO, INDIANA, A CORPORATION OF ILLINOIS.

EDUCATIONAL DEVICE.

SPECIFICATION forming part of Letters Patent No. 763,926, dated June 28, 1904.

Application filed April 1, 1903. Serial No. 150,639. (No model.)

To all whom it may concern:

Be it known that I, ORDELL H. POWERS, a citizen of the United States, residing at Valparaiso, in the county of Porter and State of Indiana, have invented certain new and useful Improvements in Educational Devices, of which the following is a specification, reference being had to the accompanying drawings.

My invention relates to educational devices, and has for its objects to provide means for so mounting upon suitable rollers a long sheet or strip that matter which is printed, painted, or otherwise impressed upon both sides of the sheet or strip can be presented to view upon the turning of one of the rollers; to provide covering means whereby the matter appearing upon either side of the sheet or strip may be covered at will; to provide in connection with the frame in which said sheet or strip is inclosed another frame supporting a combined pad and blackboard, which pad and blackboard structure may be reversed within its frame, so as to bring either surface uppermost, the object of such pad and blackboard being to afford means whereby matter appearing upon the movable sheet or strip may be copied or represented either by marking with suitable crayons upon the blackboard-surface or by suitable indicating devices secured by impaling-pins stuck into the pad.

Still another object of my invention is to so arrange the combined pad and blackboard within this frame as to provide space beneath it in which to store crayons, papers, and the objects that are intended to be fastened by pins to the said pad.

These objects I accomplish by the devices and combinations of devices illustrated in the accompanying drawings and hereinafter specifically described.

Referring to the accompanying drawings, Figure 1 is a perspective view of the device in its open position with the pad in the lower frame uppermost, a portion of the movable sheet or strip and a portion of the curtain or shield carried by the upper frame being broken away. Fig. 2 is also a perspective view of the device in its open position and showing

the combined pad and blackboard raised to permit access to the space in the lower frame below such combined pad and blackboard. Fig. 3 is a vertical section through the device in its open position, a portion of the combined pad and blackboard being broken away. Fig. 4 is a perspective view of the combined pad and blackboard. Fig. 5 is a detail, being an enlarged vertical section through a portion of the curtain or shield and the cross-strip to which it is hinged, showing also in dotted lines the position of the curtain or shield when turned up; and Fig. 6 is a vertical section through the device in its closed position.

Referring to the several figures of the drawings, A represents a rectangular frame, preferably made of wood, having a backing *a*, which forms the top of the device, suitably secured thereto.

B indicates another and similar frame to which is secured a backing-piece *b*, forming the bottom of the device. These two frames are secured together by suitable hinges *c* and are held in proper position with respect to each other when the device is open by suitable jointed braces *d*, as shown, or otherwise. *e*, *f*, and *g* indicate three rollers suitably journaled in the side bars of the frame A, *e* indicating the upper roller when the frame A is raised, *f* the center roller, and *g* the lower roller.

h indicates a long sheet or strip, one end of which is pasted or otherwise suitably secured to the roller *e*, and the other end being in like manner secured to the roller *f*. This sheet or strip is, as shown, laid around behind the roller *f* and down and around the roller *g* up to the roller *f*, to which it is, as heretofore stated, attached at one end.

i indicates a knob at one side of the frame A and suitably secured to the end of the roller *e*, and *j* indicates a similar knob attached in like manner to one end of the roller *f*.

k indicates a curtain or shield flexibly hinged to a cross-bar *l*, extending centrally across the frame A and secured to the side bars of such frame. The hinge for this curtain or shield

is indicated by *m* and may be formed from cloth pasted to the curtain or shield and to the cross-bar, or any other suitable form of hinge may of course be employed.

5 It is designed to have painted, printed, or otherwise impressed upon both surfaces of the sheet or strip various characters, pictures, plans or other indications calculated to be employed as a means of education or instruction,
 10 and it is evident that with such sheet or strip arranged as shown and described matter appearing upon one surface of such sheet or strip will be shown above the roller *f*, while below such roller *f* matter appearing upon
 15 the opposite side of such sheet or strip will at the same time be shown, and as it would be very apt to cause confusion in the mind of the child or other person using the apparatus to have presented to his gaze at the same time
 20 such different matter the curtain or shield is provided, which, as will be seen, effectually screens from observation all matter upon one side of the sheet that would otherwise be seen if such curtain or shield were omitted.
 25 In Fig. 3 the curtain is shown as down, thereby screening from observation all matters appearing upon what may be termed the "rear" side of the sheet or strip, but of course leaving an unobstructed view of all
 30 matters that may appear upon what may be termed the "front" side of such sheet or strip. Now if it be desired to bring into view the matter that previously had been hidden by the curtain or shield such curtain or shield
 35 is turned up, as indicated in dotted lines in Figs. 3 and 5 and as shown in full lines in Fig. 2, and when in this raised position may be held by a turn-button *n* (see Fig. 2) or other suitable catch.

40 To bring into view all of the matters appearing upon the sheet, either of the knobs *i* and *j* is to be turned in order to wind the sheet or strip upon the roller *e* or the roller *f*.

45 In many cases it is important or desirable to have the matter that is displayed by the sheet or strip copied or represented in an appropriate manner, and to that end I provide, in connection with the frame A and the devices carried thereby, suitable means upon
 50 which such matters may be copied or represented. In some instances it is more desirable or feasible that the matter be copied by crayons on the blackboard, while in other instances it is better that such matter be represented by
 55 separate movable objects that can be quickly affixed in place in suitable relation to each other. I therefore provide for the above methods by placing within the frame B a combined pad and blackboard consisting of a
 60 board *o*, having its outer face suitably finished for writing upon with crayons and having affixed to its other face by glue or otherwise a comparatively thick pad of felt or other suitable material. This felt piece *p* is to be thick

enough to furnish a suitable support to the 65 impaling-pins that may be forced therein, which pins will serve to hold on such pad cardboard or other small movable articles employed in representing matter appearing on the sheet or strip *h*. The combined pad and 70 blackboard rests upon two strips *q q*, secured to the inner faces of opposite side pieces of the frame B, as shown. *r* represents a lifting-strap secured to one edge of the combined pad and blackboard to enable it to be lifted from 75 the strips *q q* sufficiently so that the user can readily grasp the pad and blackboard and reverse its position within the frame B when desired. By locating the combined pad and blackboard on the strips *q q* a space *s* is formed 80 between it and the bottom piece *h*, which furnishes a suitable place in which to store crayons, papers, and small objects used in connection with the device.

By means of this invention I provide in com- 85 pact form means for readily and effectively displaying such matter as is desirable in teaching certain classes of pupils and at the same time provide in connection therewith means that are well adapted for having copied or 90 represented thereon, either by crayons or by movable pieces secured by impaling-pins, matters appearing upon said movable sheet or strip. The construction also insures the holding in proper position of the movable sheet 95 from which copies or representations are to be made, and when the device as a whole is out of use it can be, as will be readily understood, closed up so as to occupy but little space, and all of the entire mechanism and matters used 100 in connection with the device will be effectually protected from dust, and the chances of any of the parts becoming broken or otherwise damaged or misplaced are but slight.

That which I claim as my invention, and desire to secure by Letters Patent, is— 105

1. In a device of the character described, the combination of two frames movably secured together, a movable sheet or strip carried by one of said frames, and a reversible 110 device carried by the other frame consisting of a blackboard and a pad secured thereto, substantially as specified.

2. The combination with a supporting-frame, of a reversible device carried thereby, 115 consisting of a blackboard and a pad secured thereto, substantially as specified.

3. In a device of the character described, the combination with a frame, of a movable sheet or strip secured therein, and a curtain 120 or shield pivotally connected with said frame and adapted when the device is in use to expose only the upper or lower portion of the said sheet or strip, substantially as specified.

ORDELL H. POWERS.

Witnesses:

ALBERT H. ADAMS,
 JOHN L. JACKSON.