

(No Model.)

2 Sheets—Sheet 1.

W. T. SLAUGHTER.
BLACKBOARD.

No. 524,617.

Patented Aug. 14, 1894.

Fig. 2.

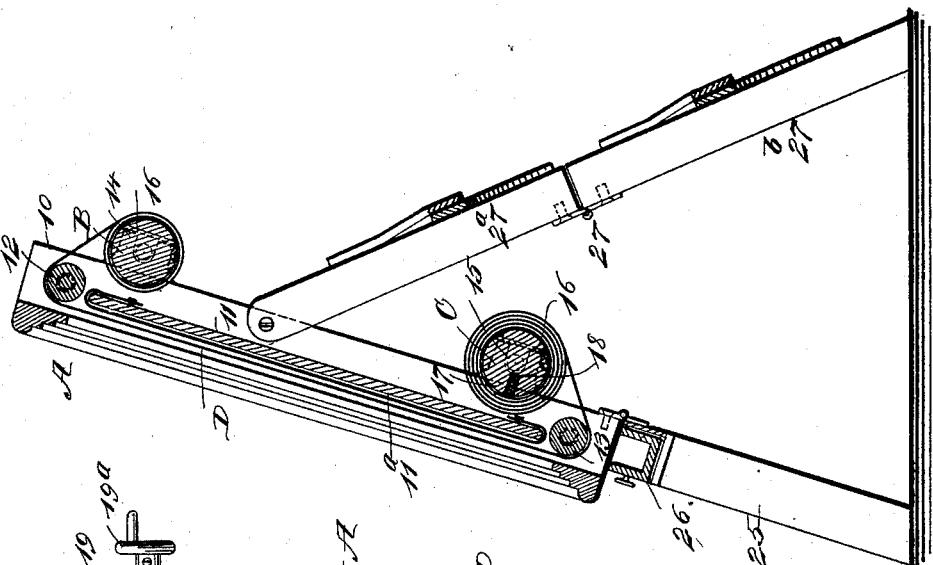


Fig. 1.

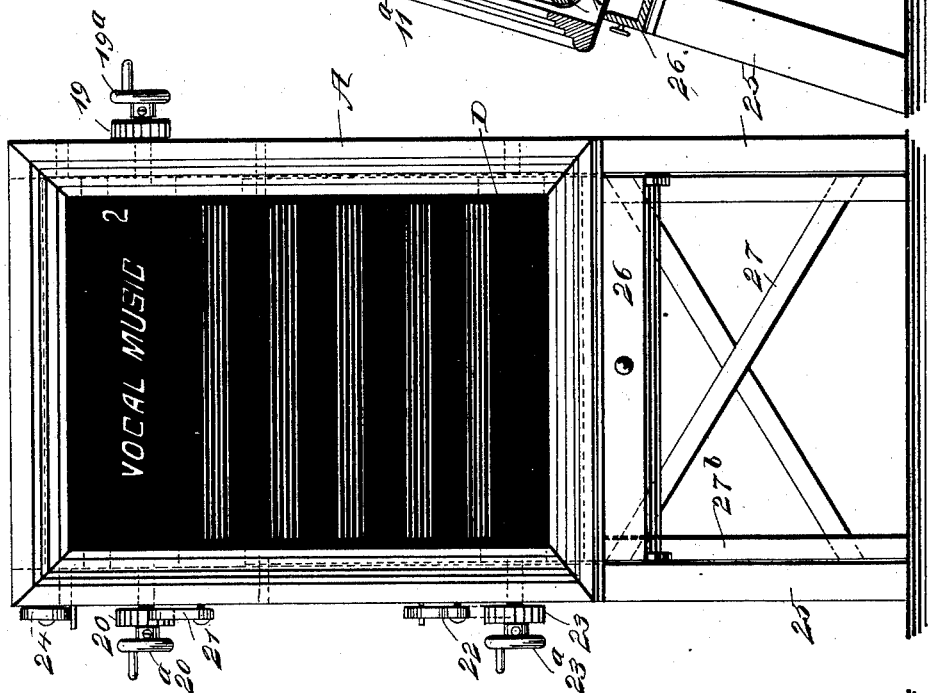
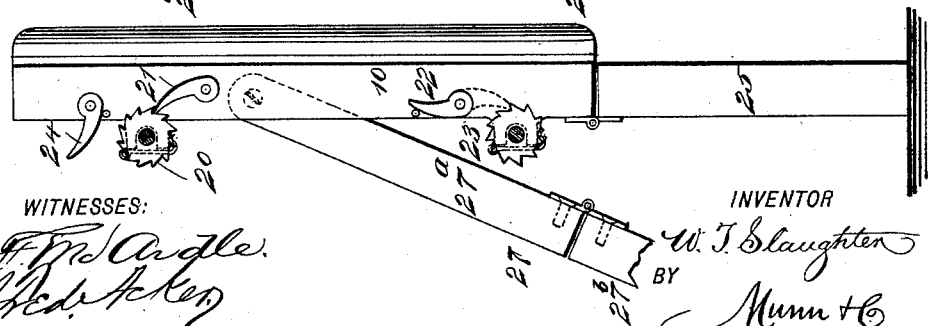


Fig. 3.



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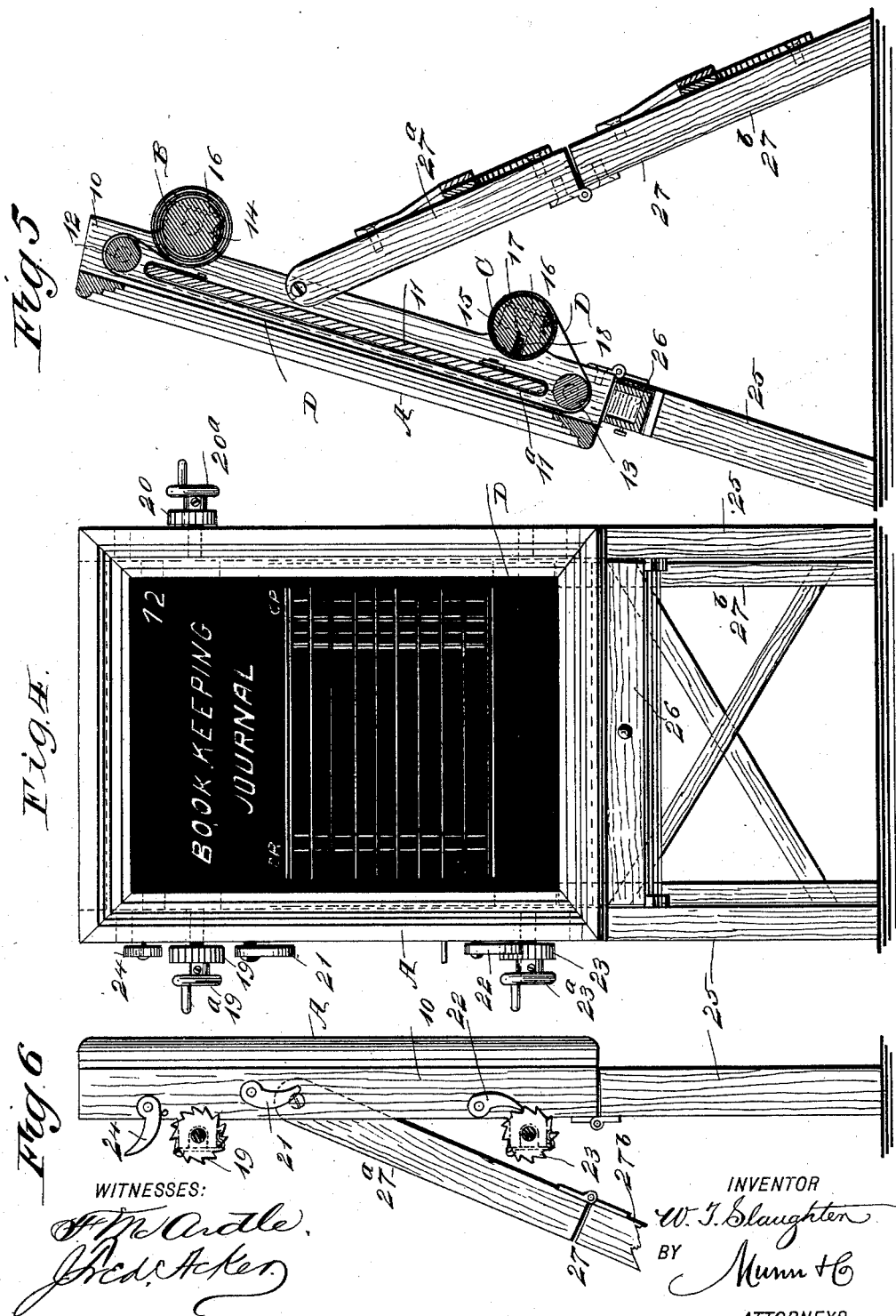
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2 Sheets—Sheet 2.

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UNITED STATES PATENT OFFICE

WILLIAM T. SLAUGHTER, OF GREENVILLE, SOUTH CAROLINA.

BLACKBOARD.

SPECIFICATION forming part of Letters Patent No. 524,617, dated August 14, 1894.

Application filed May 21, 1894. Serial No. 511,917. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM T. SLAUGHTER, of Greenville, in the county of Greenville and State of South Carolina, have invented a new and Improved Blackboard, of which the following is a full, clear, and exact description.

My invention relates to an improvement in blackboards, and it has for its object to provide a blackboard in which in addition to the ordinary stationary face a chart may be employed, which when used will conceal the ordinary face, the chart being so arranged that it can be wound upon either of two rollers located at predetermined distances apart at the back of the board proper, the said rollers being therefore out of sight from the front of the board.

A further object of the invention is to provide guide rollers over which the chart is adapted to pass, which guide rollers are located both above and below the stationary surface of the blackboard, being so placed that the chart will be held from the said stationary surface, thus permitting of both sides of the chart being utilized, the subjects being either removably produced thereon, or permanently so, since the chart will not under any condition while in use rub against the stationary surface of the board.

A further object of the invention is to provide for the ready detachment from or attachment to one of the rollers, of one end of the chart, thus enabling the chart to be entirely rolled upon one of the rollers, and the roller removed and stored away or carried to another apartment.

A further object of the invention is to so construct the main receiving or storage roller that it may be reversed with respect to the fixed portion of the board, and operated as conveniently in the one position as in the other.

Another object of the invention is to provide a means whereby any desired subject upon the chart may be brought to view at the front of the board, held in that position against moving, and stretched so as to present the subject with the best possible effect.

The invention consists in the novel construction and combination of the several parts, as

will be hereinafter fully set forth, and pointed out in the claims.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar figures and letters of reference indicate corresponding parts in all the views.

Figure 1 is a front elevation of the improved blackboard. Fig. 2 is a longitudinal vertical section, taken near the center. Fig. 3 is a side elevation, the trunnions of the rollers being in section back of the knobs by means of which they are manipulated. Fig. 4 is a view similar to Fig. 1, in which, however, the chart has been reversed. Fig. 5 is a vertical central section taken through the board, with the chart in the position shown in Fig. 4; and Fig. 6 is a side elevation similar to that shown in Fig. 3, illustrating the manner in which the pawls are placed when the chart has been reversed.

In carrying out the invention a frame A, which may be as ornamental and as deep as desired, is provided for the front portion of the board. This frame may be in the nature of those provided for pictures, and may be of any desired contour; preferably, however, it is made rectangular.

Upon each side at the back of the frame side pieces 10, are secured of any desired width, the said side pieces standing at a right angle to the said back, as shown in Figs. 2 and 3. The side pieces are connected by a stationary section 11 of the blackboard, which however is made to terminate short of the upper and lower ends of the side extensions 10 of the frame, yet the upper and lower ends of this stationary section of the board will be concealed by the corresponding portions of the frame A.

The stationary section 11 may be covered with a slated material 11^a, as shown in the drawings, or it may be otherwise prepared upon its outer face to be written or drawn upon with chalk or an equivalent material.

A friction roll 12, is journaled in the side extensions 10 above the stationary section 11 of the board, and a second friction roll 13, is located in like manner at the lower end of the said stationary section; and these two friction rolls are so placed that their forward

faces will extend beyond the plane of the front face of the stationary section of the board. Thus any object, such as a sheet of material for example, passed over the friction rolls and over the front of the fixed board 11, will in no manner contact with the latter.

Transversely aligning bearings 14, are produced upon the side extensions 10 near their upper ends, while similar bearings 15, are located upon said side extensions near their lower ends, the bearings being covered or closed at their outer or receiving ends by a clasp 16, of any approved construction, which as shown in the drawings may be a cover of spring material, hinged at its upper end upon the bearings and held in clamping engagement at its lower end with the lower portions of the bearings.

The upper set of bearings 14, is adapted to receive what may be termed the main or receiving roller B, while a second roller C, is journaled in the lower bearings, the said rollers being adapted to carry the chart D of a slated material, or of any yielding sheet material having a surface capable of being drawn or written upon.

The chart is of sufficient width to extend well into the side portions of the frame A; thus the side edges of the chart will be concealed, as will likewise be the friction rolls 12 and 13 over which the chart will pass, since said rolls will be back of the top and bottom portions of the frame. The chart is adapted to be permanently secured to the upper or receiving roller B, and to be detachably connected to the lower roller C, and this latter attachment is preferably effected by securing at one end of the chart a strip 17 of wood or an equivalent material, the said strip being made to enter a longitudinal slot 18 made in the roller C.

The chart when connected with both of the rollers B and C, will extend over both friction rolls 12 and 13, and over the front face of the stationary board, there being ample space between this board and the frame A to admit of the passage of the chart without the latter engaging with either surface.

The trunnions of the upper roller B, extend beyond both outer faces of the said extensions 10 of the frame, and are provided near each extremity with a ratchet wheel, the wheel upon one side being designated as 19 and that upon the other side as 20. The teeth of these two wheels are inclined in opposite directions, and at the extremity of one trunnion it is provided with a hand wheel 19^a, or its equivalent, while the extremity of the opposite trunnion is provided with a like device 20^a.

Upon the outer face of one side extension 10 a pawl 21 is pivoted, adapted for engagement with a ratchet wheel connected with the upper roller B, the said pawl being located below the wheel, while a second pawl 22, is provided on the same side of the frame for engagement with a ratchet wheel 23, located upon one trunnion of the lower roller C, the

said trunnion being also provided with a hand wheel 23^a. The pawl 22, is usually located over the ratchet wheel 23.

A third pawl 24 is located on the same side of the frame near the top, and is adapted for engagement for example with the ratchet wheel 19 of the upper roll when said roller is reversed, since the pawl 21, is to engage as heretofore stated with the ratchet wheel 20.

In order that the board when not in use may be stored in the least possible space, the front legs 25 are hinged to the back of the frame, and the said legs are adapted to carry the chalk box 26, or the equivalent thereof. The rear legs 27, are made in two hinged sections 27^a and 27^b, the upper section being pivoted to the side extensions 10.

It will be observed that all of the mechanism, with the exception of the ratchets and pawls and operating wheels, is located at the back of the board out of the way, and is in no sense visible from the front.

In the operation of this device, the board being set in proper position, if the chart is to be employed to demonstrate any particular subject or subjects, or to assist in the demonstration thereof, the roller B containing the desired chart is placed in position at the back of the board. The free end of the chart is then carried over the top friction roll 12, over the front face of the stationary board and around the under portion of the lower friction roll 13 to an attachment in the manner described to the lower roller C. The pawls are then carried out of engagement with all the ratchet wheels, and the chart is rolled preferably from the upper roller B entirely upon the lower roller C. The lower pawl 22, is then thrown in engagement with the lower ratchet wheel 23, and the upper roller is then revolved by manipulating one of the wheels 20^a or 19^a, connected with it, until the desired subject or face, or surface of the chart has been brought to view within the margin of the frame A, the pawl 22 serving to prevent the chart from dropping downward or backward.

When any particular subject is reached that is to be left exposed for any time, it will probably be necessary to stretch the chart in order to present a smooth face. This is accomplished by carrying the pawl 21 in engagement with the ratchet wheel 20 of the upper roller, the pawl 22 remaining in engagement with the ratchet wheel of the lower roller. The two hand wheels 20^a and 23^a, are then turned in opposite directions until the chart has been sufficiently stretched, whereupon the pawls will prevent the chart from slipping. When all of the subjects have been exposed the lower end of the chart will leave the lower roller and will pass upward, and the entire chart will be wound upon the upper roller. A rubber band may be employed to hold the chart in this position, and the roller may be transported readily from place to place.

If the subjects on the opposite side of the chart are to be brought to view, the roller B

is reversed, or turned end for end, as shown in Fig. 4, bringing the ratchet wheel 19 at that side of the frame upon which the pawls are located, and the lower pawl 21 is not used in this case, after the chart has been wound upon the roller C, but the upper pawl 24, is dropped downward to an engagement with the said ratchet wheel 19. Suitable stops are employed which will limit the movement of the pawls when they are thrown out of engagement with their ratchet wheels.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

1. A blackboard, the same consisting of a frame having extensions at its back, a stationary blackboard located at the rear of the frame and spaced therefrom, a friction roll located at the top and bottom of the stationary board, rollers located at the back portion of the frame at the rear of the fixed board near the top and bottom of the latter, and a double face removable and reversible chart extending from one roller to the other over the friction rolls and in front of the fixed board, whereby the said chart will not be engaged with the frame or the fixed board and the matter upon both surfaces will be preserved from chafing upon the fixed board, substantially as and for the purpose specified.

2. In a blackboard, the combination, with an exhibiting frame provided with a display opening, and rear extensions at its sides, and a blackboard secured in the side extension of the frame back of the display opening, of a friction roll journaled in the extensions of the frame above and below the stationary board, the front faces of the rolls extending in a measure farther forward than the corresponding face of the board, a receiving roller removably journaled at the upper back portion of the frame and reversible end for end and in its bearings, a second and corresponding

roller journaled at the lower rear portion of the frame, and a double face chart attached to the upper or receiving roller, passed over the two friction rolls and over the front face of the stationary board out of engagement therewith, the said chart being detachably connected with the lower roller, the said blackboard being visible through the display opening upon the removal of the chart as and for the purpose set forth.

3. In a blackboard, the combination, with an exhibiting frame provided with a display opening and rear extensions at its sides, and a blackboard secured in the side extensions of the frame back of the display opening, of a friction roll journaled in the extensions of the frame above and below the stationary board, a receiving roller removably journaled at the upper back portion of the frame and reversible end for end in its bearings, a second and corresponding roller journaled at the lower rear portion of the frame, a double face chart attached to the upper or receiving roller, passed over the two friction rolls and over the front face of the stationary board out of engagement therewith, the said chart being detachably connected with the lower roller, ratchet wheels located near the ends of the receiving roller, having oppositely-inclined teeth, a ratchet wheel secured upon one end of the lower roller, pawls located upon the frame and adapted for engagement with the said ratchet wheels, whereby the chart may be stretched and held in stretched position, and means, substantially as shown and described, for turning either of the rollers, the said blackboard being visible through the display opening upon the removal of the chart as and for the purpose set forth.

WILLIAM T. SLAUGHTER.

Witnesses:

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W. F. METTS.