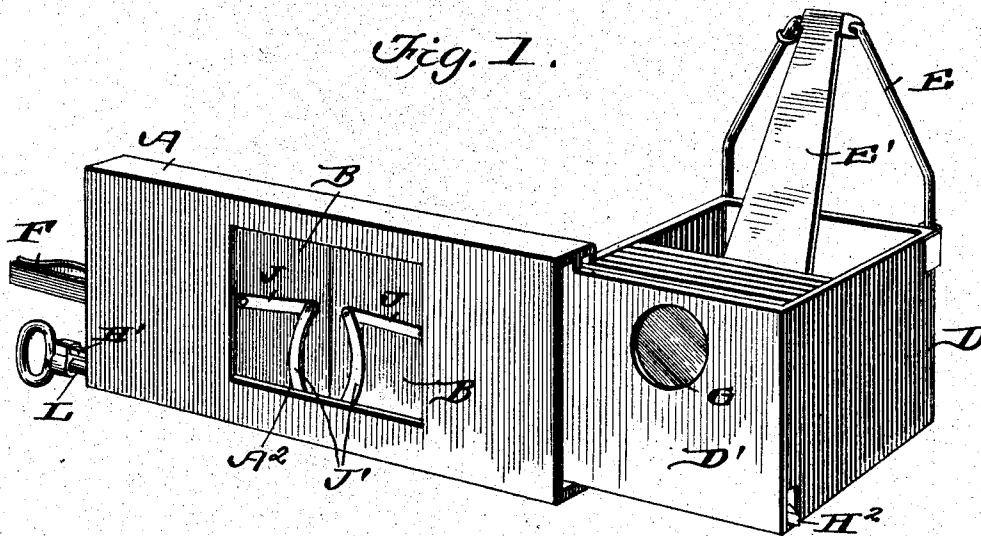
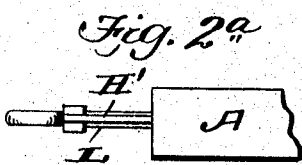
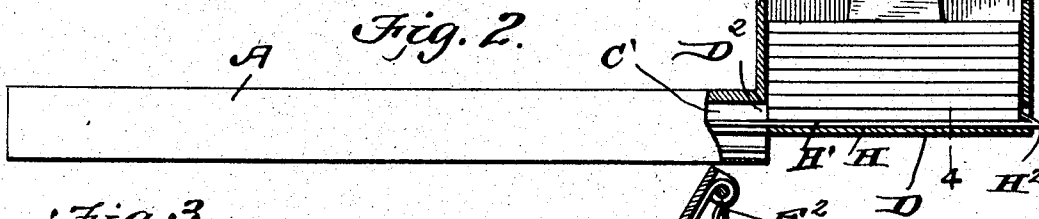
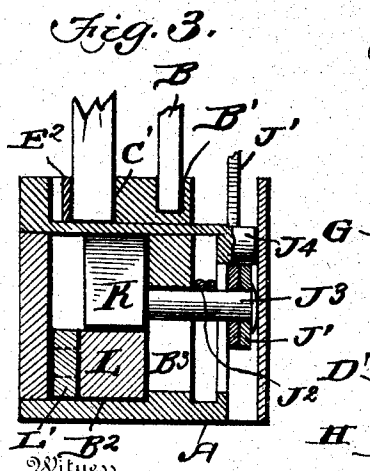
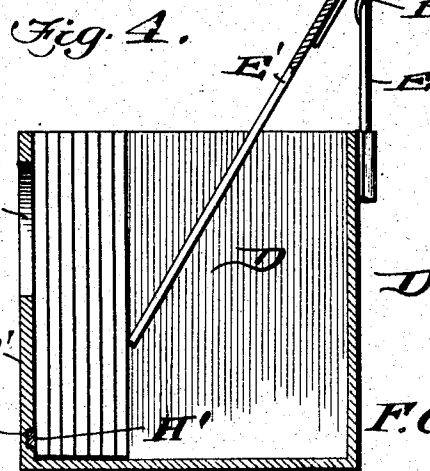


F. C. EDMONDS.
SLIDE CARRIER FOR STEREOPTICONS.
APPLICATION FILED FEB. 1, 1904.

2 SHEETS—SHEET 1.



Inventor

F. C. Edmonds.

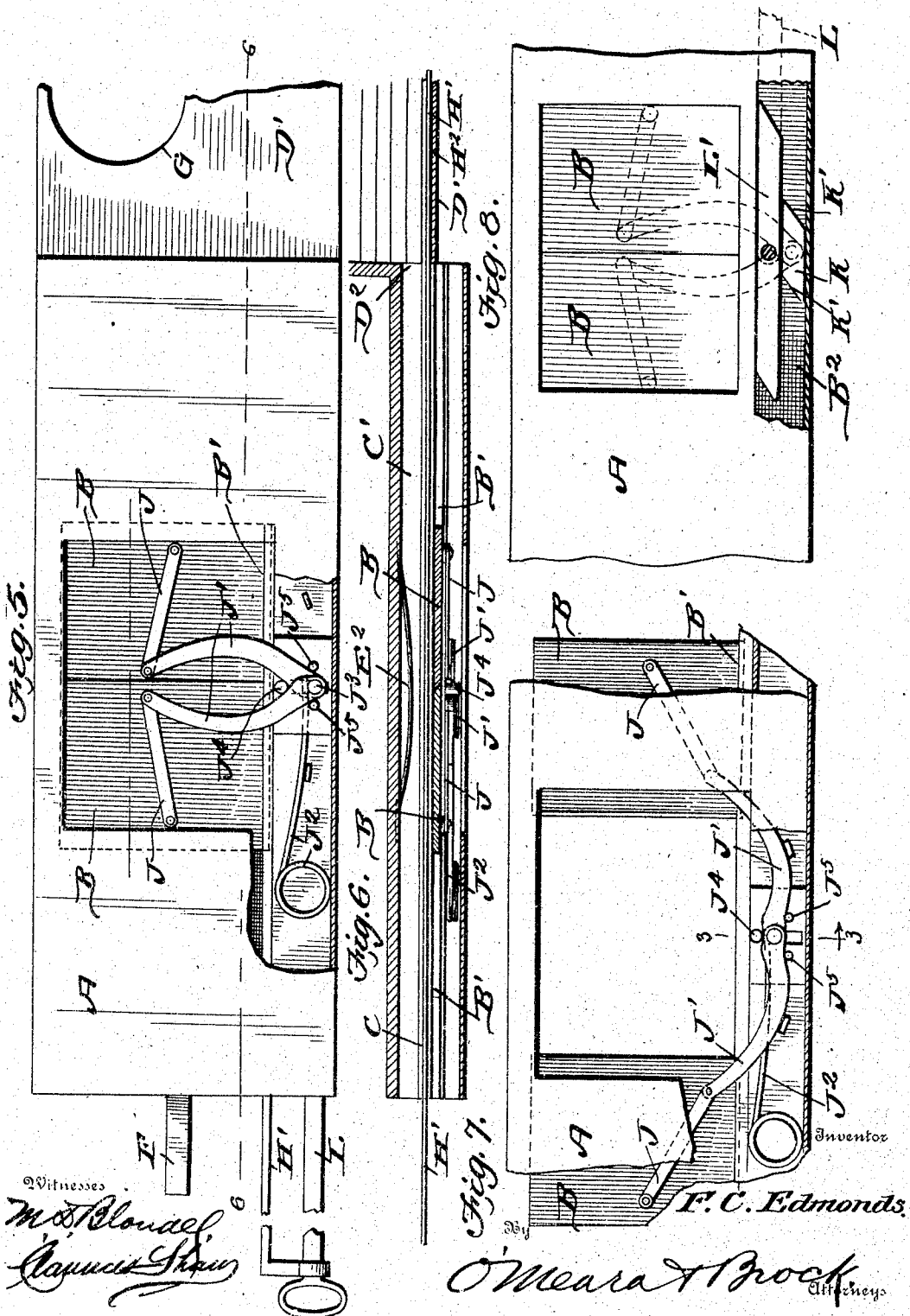
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2 SHEETS—SHEET 2.



UNITED STATES PATENT OFFICE.

FREDERICK CONWAY EDMONDS, OF LINDSAY, CANADA, ASSIGNOR
OF ONE-HALF TO ROBERT CHAMBERS, OF LINDSAY, ONTARIO,
CANADA.

SLIDE-CARRIER FOR STEREOPTICONS.

SPECIFICATION forming part of Letters Patent No. 786,883, dated April 11, 1905.

Application filed February 1, 1904. Serial No. 191,615.

To all whom it may concern:

Be it known that I, FREDERICK CONWAY EDMONDS, a subject of the King of Great Britain, residing at Lindsay, in the Province of Ontario and Dominion of Canada, have invented a new and useful Slide-Carrier for Stereopticons, of which the following is a specification.

My invention is an improvement in slide-carriers for use with magic lanterns and similar picture-projecting devices, and has for its object the practically instantaneous movement of a lantern-slide from a position between the light and the lens and the immediate replacement of said slide by a new slide with but one operation or movement on the part of the operator.

A further object is to screen said movement of the slides by a shutter acting simultaneously with the movement of the lantern-slides.

My invention consists of the novel features of construction and combination of parts hereinafter described, particularly pointed out in the claims, and shown in the accompanying drawings, in which—

Figure 1 is a perspective view of my improved carrier. Fig. 2 is a plan view, partly in section. Fig. 2^a is a detail plan view of the outer end of the slide-carrier. Fig. 3 is a section on the line 3 3 of Fig. 7. Fig. 4 is a section on the line 4 4 of Fig. 2. Fig. 5 is a detail front elevation, partly broken away and showing the shutters in a closed position, the arms and spring parts of the carrier being in section. Fig. 6 is a section on the line 6 6 of Fig. 5. Fig. 7 is a detail view showing the front of the carrier with the shutters open, parts being broken away and in section. Fig. 8 is a detail elevation of a portion of the carrier as seen from the rear, the shutters being closed and the arms being shown in dotted lines.

In the drawings, A represents a rectangular narrow casing or slide-carrier cut away in the rear longitudinally and centrally, leaving the upper and lower vertical flanges A'. In the front of the casing is centrally formed a

rectangular opening A², approximately the size of a standard-sized lantern-slide, the said opening being provided with the sliding shutters B, each shutter being adapted to cover one-half of the opening. Arranged in this carrier are longitudinal vertical ribs C, parallel to and spaced apart from the flanges A', the ribs being of the same height or width as the flanges A'. Secured to each flange A' and in alinement with the opening A² are bow-shaped springs A³, their central portions extending adjacent to the ribs C and adapted to hold a lantern-slide firmly against said ribs.

Arranged against one end of the carrier and secured thereto in any desired manner is a box D, forming a magazine for the lantern-slides. The front wall D' of the box extends in horizontal alinement with the ribs C, and on the side adjacent the carrier the box is vertically slotted, as at D², the slot registering with the groove C', in which the lantern-slide moves.

A wire-arched bracket E is arranged on the rear of the box, and a forwardly-swinging plate E' is pivoted to the top of the bracket, projecting forwardly and downwardly into the magazine. A spring E² continuously presses the plate E' forward, advancing the plates placed in the box to the front of the magazine, whereby one plate or slide is always held in position to be drawn through the slot D² into the groove C'.

At the opposite end of the carrier A are arranged two projecting spring-fingers F, adapted to hold a slide when it is ejected from the groove C' by the entrance of another slide into the said groove. A thumb-opening G is formed in the front of the magazine, and if it is desired to remove the slides from the magazine by lifting them out at the top a thumb or finger can be inserted through the opening G and the slides pressed away from the front wall of the magazine and can then be readily grasped between the thumb and a finger of the other hand and lifted out.

A longitudinal groove H is formed in the front wall of the magazine adjacent the bottom. Through this groove slides a rod H',

having at its end the spring-catch H^2 , which engages the rear edge of the slide adjacent the front wall of the magazine.

The shutters B travel in a suitable track B' .
 5 (Shown in Fig. 3.) Below the shutters is arranged a horizontal slideway B^2 , and the front wall of this slideway is vertically slotted, as shown at B^3 . The shutters are beveled on their meeting edges, making them light-tight,
 10 and the following described means are provided for actuating them: Straight arms J are pivoted to the shutters at one end, adjacent the non-beveled edge of the shutters, and extend nearly to the beveled edges. The inner ends
 15 of these arms J are pivoted to the upper ends of slightly-curved arms J' , which in turn are pivoted at their lower ends to a rod arranged transversely in the slot B^3 and adapted to be moved vertically in the said slot. Below the
 20 shutters B is arranged a spring J^2 , coiled on itself and having its ends secured to the rod J^3 and adapted to hold the rod in the upper end of the slot B^3 . A stop-pin J^4 is arranged at the upper end of the slot and is engaged by the curved arms J' . On each side of the slot
 25 B^3 are arranged stop-pins J^3 . To the inner end of the rod J^3 in the slideway B^2 is secured a horizontally-arranged block K, having oppositely-beveled ends K' . The shifting bar L
 30 works in the slideway B^2 and has pivotally connected to its inner end the block L' , similar in shape to the block K and beveled like that block. The block L' is pivoted to the shifting bar midway the ends of the said block.
 35 The outer end of the shifting bar L is formed into a suitable handle and is rigidly connected to the rod H' . It is obvious, therefore, that both the rod H' and the bar L are moved simultaneously and in the same direction.
 40 The operation of my device is as follows: The lantern-slides—say from twenty to thirty in number—are placed in the magazine. The shifting bar L is pressed inward, and the block L' passes under the block K. The rod H'
 45 moves along the lower rib C. As the shifting bar is drawn outward the catch H^2 at the inner end of the rod H' engages and draws the slide along the groove C' and centers it before the opening A^2 , the springs A^3 holding
 50 it into position. As the pivoted block L' is drawn outward it rides over the block K, forcing the block down and depressing the rod J^3 against the tension of the spring J^2 , and thus drawing the lower ends of the arms
 55 J' downward between the stop-pins J^3 , forcing the arms together and closing the shutters B. As the slide is centered the block L' passes out of engagement with the block K,

and the spring raises the rod J^3 and the shutters are again thrown open. A repetition of
 60 this operation will bring into position a new slide, the new slide ejecting the one first mentioned from its position in the rear of the opening A^2 . The ejected slides are finally
 65 caught by the fingers F, from which they are removed by the operator.

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

1. A device of the kind described, comprising a carrier having longitudinal grooves
 70 therein, a magazine at one end of the carrier and vertically slotted on one side in alinement with one of the grooves, a spring-pressed
 75 plate pivoted at the rear of the magazine and adapted to hold a lantern-slide in alinement with said slot, and means for drawing said slide through the slot into and along a groove of the carrier.

2. The combination with a lantern-slide
 80 carrier, of a magazine secured at the end of the carrier and opening into the carrier, a bracket on the rear wall of the magazine, a plate pivoted at the upper end to the bracket
 85 and having its lower end projecting downwardly and forwardly into the magazine, a spring adapted to press said plate forward, the plate being adapted to hold a lantern-slide against the front wall of the magazine and in
 90 alinement with said carrier, the said front wall having a horizontal groove on its inner face, and means arranged in the carrier and extending into said groove and adapted to draw the slide from the magazine into the
 95 carrier.

3. A device of the kind described comprising a carrier, a magazine arranged at one end of the carrier, a rod adapted to engage the slides held in the magazine and move them
 100 into the carrier, said carrier having a central opening, shutters adapted to close said opening, a shifting bar connected to the rod and adapted to move in the same direction, pivoted arms carried by the shutters and pivoted
 105 at their lower ends to a common rod adapted to move vertically, a beveled block arranged on the said last-mentioned rod, and a block pivoted to the shifting bar and adapted to engage and draw down the block carried by the
 110 vertically-movable rod during outward movement of the shifting bar.

FREDERICK CONWAY EDMONDS.

Witnesses:

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 JAMES A. PEEL.