

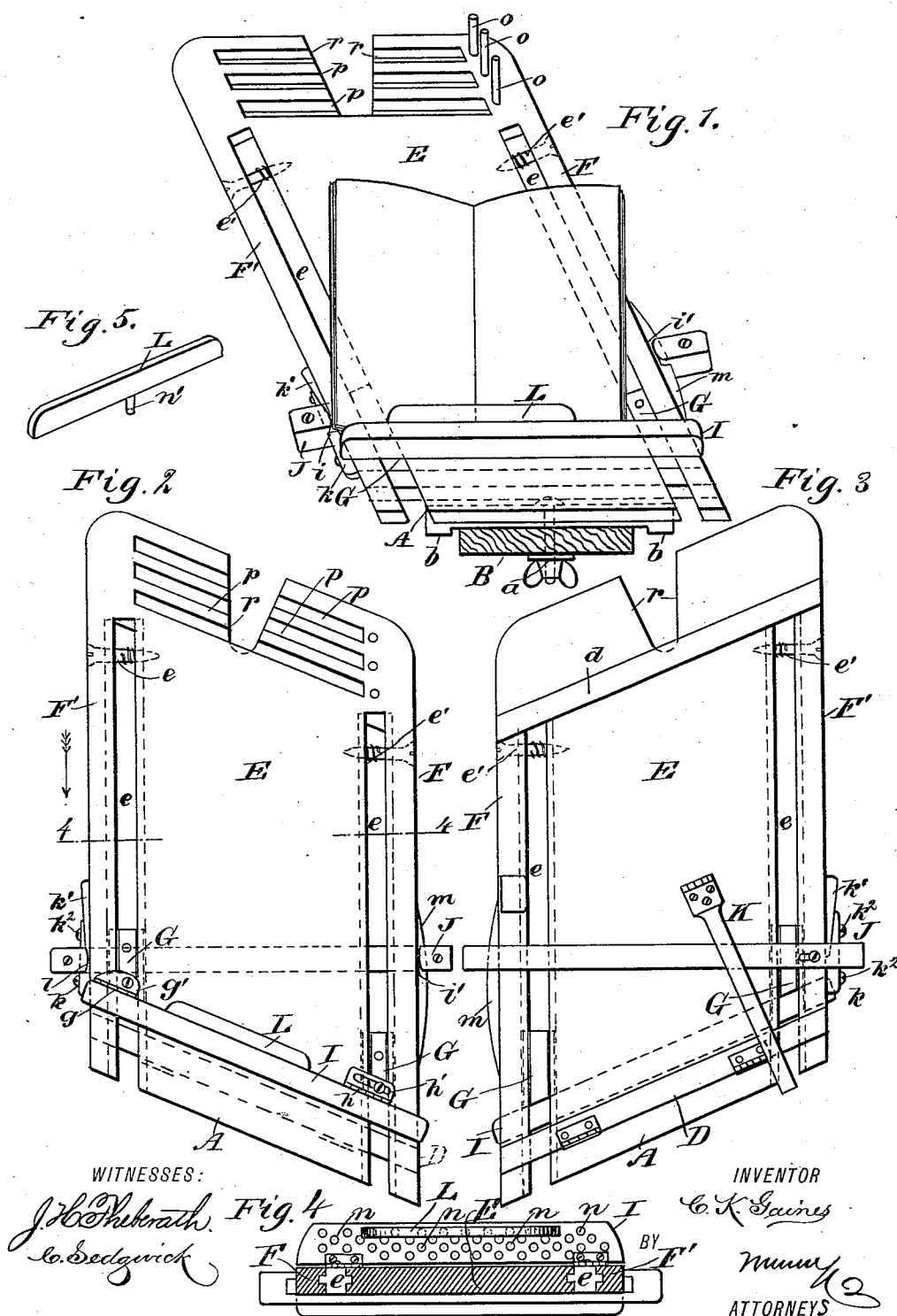
(No Model.)

3 Sheets—Sheet 1.

C. K. GAINES.
BOOK REST AND WRITING SLAB.

No. 469,133.

Patented Feb. 16, 1892.



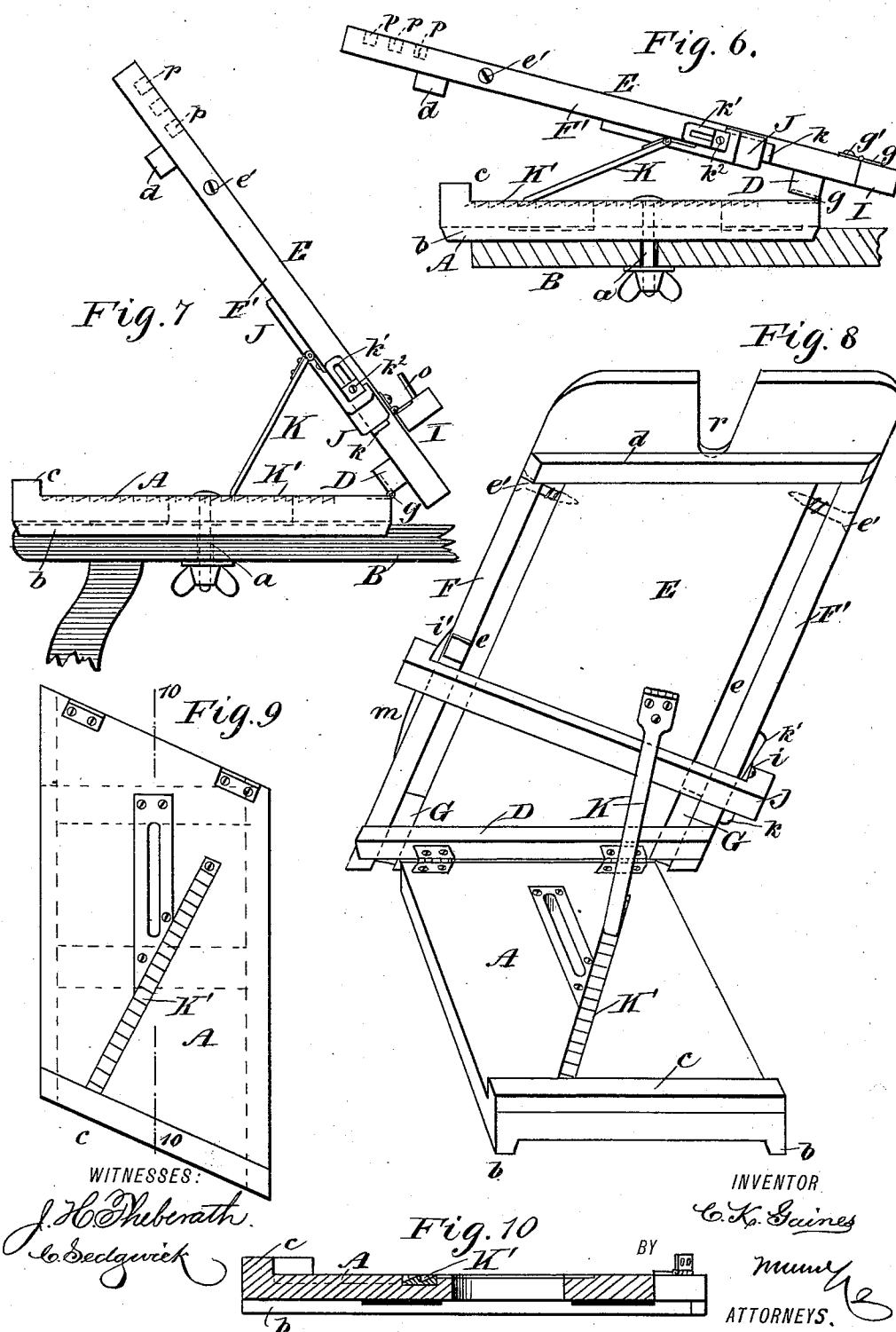
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3 Sheets—Sheet 2.

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UNITED STATES PATENT OFFICE.

CHARLES K. GAINES, OF CANTON, NEW YORK.

BOOK-REST AND WRITING-SLAB.

SPECIFICATION forming part of Letters Patent No. 469,133, dated February 16, 1892.

Application filed May 15, 1891. Serial No. 392,807. (No model.)

To all whom it may concern:

Be it known that I, CHARLES K. GAINES, of Canton, in the county of St. Lawrence and State of New York, have invented a new and useful Book-Rest and Writing-Slab, of which the following is a full, clear, and exact description.

This invention has for its objects to provide an improved adjustable attachment for the arm of a chair or other seat which is adapted for dual use as a book-rest and book-holder, and also to support writing-paper, movably retaining either article in any desired position.

To these ends my invention consists in the construction and combination of parts, as is hereinafter described and claimed.

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

Figure 1 is a perspective front elevation of the device adjusted to support a book shown in position thereon and a chair-arm in section whereon the book-support is secured. Fig. 2 is a front face view of the device in a perpendicular position detached from the chair-arm. Fig. 3 is a rear face view of the parts shown in Fig. 2. Fig. 4 is a transverse section taken on the line 4 4 in Fig. 2, viewed in the direction of an arrow in said figure. Fig. 5 is a detached view of a portion of the book-support. Fig. 6 is a side view of the device adjusted for service as a writing-slab and mounted on a chair-arm shown in section and broken away from the chair. Fig. 7 is a side view of the device adjusted as a book-rest secured on a chair-arm shown broken away. Fig. 8 is a rear view of parts shown in Fig. 7 similarly adjusted. Fig. 9 is a plan view of the base-board of the device detached. Fig. 10 is a longitudinal section of the base-board, taken on the line 10 10 in Fig. 9. Fig. 11 is a top view of the device in place on a chair-arm adjusted to hold paper for writing purposes. Fig. 12 is a front view of a slightly-modified form of the securing mechanism that movably retains the book-rest in proper adjustment upon the tablet or slab that sustains the book; and Fig. 13 is a longitudinal section of the parts shown in Fig. 12, taken on the line 13 13 in said figure.

In the different views where shown A rep-

resents the base-board, whereon other parts of the device are sustained, and consists of a rhomb-shaped piece of material having sufficient length, breadth, and thickness for strength and to afford the necessary support to the imposed parts, which will be described in their order.

The base-board A is designed to be secured adjustably upon the arm B of a chair, (not shown,) and to facilitate such a connection the arm is transversely slotted, as shown by dotted lines in Fig. 11, there being a longitudinal slot formed near the center of width of the base-board and at a suitable distance from the ends to receive a bolt *a*, whereby the board A may be firmly attached in place on the arm and be altered in position as may be desired, two longitudinally-extending ribs *b*, located one along each side edge of the board on its lower surface, providing checks that limit the swinging movement of the same when adjusted, and a transverse rib *c* on the upper surface at the forward edge of said board serves to prevent warping or splitting of the same, and is otherwise useful as a support for another piece, which will be described.

On the lower diagonal transverse edge of the base-board A a bar D is hinged, that is attached to the lower surface of the writing-slab E near its lower end, which slab is also utilized as a support for a book, paper, or manuscript to be used, as will appear.

The slab E is formed of any proper material, and is rhomboidal in contour, its angular shape being substantially similar to that of the base-board A, having a nearly equal width and increased length as compared thereto.

Upon the lower side and near the upper end of the slab E a transverse stiffening-strip *d* is affixed, which by preference is extended sufficiently over the side edges of the slab to engage the lower sides of two spring-bars F F', which are oppositely located parallel to the side edges of the slab and at an equal distance therefrom.

As shown in Figs. 1 and 4, the side edges of the slab E and adjacent edges of the spring-bars are grooved at the center of their thickness for the reception of a similarly-formed slide-block G in each channel *e*, that extends

from end to end of the bars, said bars having their upper terminals coincident with the lower edge of the transverse strip *d* and their lower extremities aligning with the lower edge of the slab whereon they are affixed, there being an adjusting-screw *e'* inserted through each bar from their outer edges near their upper ends and into the edges of the slab E, which screws by their adjustment clamp the bars toward the edges of the slab, as may be required.

The slide-blocks G, previously mentioned, are designed to sustain the end portions of a book-ledge I, which latter is hinged in a peculiar manner to the slide-blocks, as shown clearly in Figs. 11 and 12. One block, preferably on the left side of the slab E, is provided with a pivot connection to the hinge-leaf that engages it, as at *g'*, the other leaf of this hinge *g* being of ordinary form and screwed fast upon the vertical face of the ledge I. If desired, the pivoted connection *g'* of the hinge *g* may be changed to a slotted form, as shown in Fig. 11. The hinge *h* which connects the other slide-block G to the opposite end portion of the book-ledge I, has its leaf *h'* slotted, as shown, for the loose connection of this leaf with the block mentioned by the insertion of a pivot or screw through said slot into the block, such a connection of parts acting, in conjunction with the slide-blocks when these are free, to move in the channels *e*, permitting said blocks to be slid so as to afford any desired degree of inclination to the edge of the book-ledge I.

The preferred means for securing the book-ledge I at any desired angle with regard to the channels *e* consists in the provision of a clamping-bar J, that is designed to draw the exterior edges of the spring-bars F F' toward each other, and thus retain the slide-blocks G wherever they may be moved while the spring-bar is unclamped.

Referring to Figs. 2 and 3, it will be seen that the clamping-bar J is made of a greater length than the width of the slab E and attached spring-bars F F', having shoulders produced at *i i'* a proper distance from each terminal end, the material being reduced in thickness between said shoulders to enable the bar to embrace wedging devices attached to the exterior edges of the spring-bars. On one spring-bar F, between the clamping-bar shoulder *i* and its own exterior edge, a pair of oppositely-sloped wedges *k k'* are located. The wedge *k*, being secured by screws *k²* upon the edge of the spring between the fixed wedge and the spring-bar, may be adjusted endwise and retained at any desired point by one of the securing-screws. The opposite shoulder *i'* of the clamping-bar J is grooved on its face transversely, forming a hook upon this end of the clamping-bar, which overlaps a cam-sloped projection *m*, which projects from the spring-bar F.

As indicated in Fig. 3, the clamping-bar J is longitudinally slotted at a point where it

is imposed upon the spring-bar F for the introduction of a screw, which is a pivot-point for said bar, whereon it may be vibrated to cause the shoulder *i'* to press upon the cam projection *m* and draw the spring-bars toward each other, so as to lock the slide-blocks G, or be oppositely moved and release said blocks when this is necessary, the slot in the clamping-bar allowing it to have sufficient movement endwise to lock or release the blocks, as stated.

Upon the rear side of the slab E at a proper point there is a prop-bar K, loosely secured by hinging one end of the bar thereto, the other pendent end of said bar having an interlocking engagement with a ratchet-toothed rack K', that is formed on or secured to the base-board A, as represented in Figs. 8 and 9, the prop and rack affording means to adjust the slab E at any desired inclination from a horizontal position.

There are a number of perforations *n* formed in the side of the book-ledge I for the reception of a dowel-pin *n'*, that projects from the side of a keeper-strip L, which latter is thus held projected from the ledge to have impinging contact with the leaves of a book that rests against the ledge when the device is used as a book-support. (See Fig. 1.)

It will be noticed in Fig. 8 that the rack K' is extended diagonally on the base-board A and prop-bar K inclined sidewise to track therewith, the effect of which arrangement is to support a book on the slab E inclined toward the reader on the right side, it being understood that the device is secured as an entirety upon the right arm of a chair so that the position of a book, magazine, or paper may be altered to suit the incidence of light rays or the vision of the occupant of the chair whereon the book-rest is placed.

By provision of the clamping-bar J and its peculiar attachment to the slide-blocks G, as described, its movement at one end will enable the reader to instantly change the degree of inclination of the book-ledge I, so as to raise or lower one side edge of the book, while its inclination from a horizontal plane can be effected with equal facility.

When the device is used to support reading matter, one or more of the cylindrical pins *o*, shown supported at the right near the top of the slab E in Fig. 1, may be removed and inserted in one or more of the perforations *n* in the book-ledge I and afford means to hold the leaves of a book open or a newspaper or manuscript in place on the slab E, taking the place of the keeper-strip L.

At the upper end of the slab E a series of parallel transverse channels *p* are formed for the reception of a pen or pencil, as represented in Figs. 11 and 12, and to enable the user to readily pick up either for service a V-shaped notch *r* is cut out of the slab from its upper edge downwardly across the channels, which will expose the pen-handle or pencil-body, as plainly indicated, so that any

such instruments for writing may be held securely and be taken from the channels freely.

When the slab E is used to write upon, the prop-bar K is preferably adjusted to lower said slab nearer a horizontal plane, as represented in Figs. 6 and 11, a paper-holding clip M of ordinary form being provided, which is affixed at a proper point on the slab so as to grip and retain writing-paper in place unobstructed by the ledge I, which is turned down so as to lie in the same plane with the slab E at its lower edge and form a continuation of the same for the support of the arm of the writer.

In Figs. 12 and 13 a modified means for retaining the book-ledge I adjustably in place on the slab E is shown, and consists, essentially, of a ratchet-cut rack s, formed on the upper surface of each of the spring-bars FF', which racks are engaged by one or more mating teeth a', formed on each end of the book-ledge that is in contact therewith, so that the slide-blocks G may be moved and retained at any point that the hinges of the book-ledge will allow by simply rocking the ledge so as to clear the toothed racks, and when adjusted permitting the ledge to rest by its gravity in locked contact with said racks.

In case the modification just described is employed the clamping-bar J may be dispensed with and the adjustment for the proper frictional contact of the slide-blocks G be effected with the screws e' in an obvious manner.

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

1. The combination, with a board or slab, of blocks longitudinally adjustable on the slab or board to the extreme end thereof and a ledge hinged to the said blocks so as to be turned down into the same plane with the slab and form a continuation thereof, substantially as described.

2. The combination, with a slab or board, of blocks fitted to slide longitudinally on the board to the extreme end thereof and a ledge hinged to the said blocks so as to be turned down into the same plane with the slab and form a continuation thereof, substantially as described.

3. The combination, with a slab or board, of blocks fitted to slide longitudinally on the slab or board to the extreme end thereof, a ledge hinged to the blocks, and means for adjusting the said blocks, whereby the ledge may be turned to be at right angles to the slab or made to lie in the same plane therewith, substantially as herein shown and described.

4. The combination, with a slab or board provided with guideways, of blocks fitted to slide in said guideways, means for adjustably holding the blocks in said guideways, and a ledge hinged to the said blocks, one of the hinges having a pivotal connection with one of the blocks and the other hinge having a

sliding connection with the other block, substantially as and for the purpose set forth.

5. The combination, with a slab or board provided with spring-bars on opposite sides and with channels between the bars and the side edges of the board or slab, of blocks fitted to slide in the channels, a ledge hinged to the blocks, a pivoted clamping-bar, and a cam projection on one of the spring-bars with which the clamping-bar engages, substantially as herein shown and described.

6. The combination, with a base-board which is adapted to be secured adjustably on a seat-arm and is provided with a rack on its upper surface, of a flat slab hinged near its lower edge on the lower edge of the base-board, a prop hinged to the slab engaging the rack, a book-ledge extending transversely across the lower end of the slab and having a sliding and hinged connection therewith, and a device for retaining the book-ledge in place, substantially as described.

7. The combination, with a base-board that is securable adjustably upon a chair-arm, a ratchet-cut rack thereon, a slab having a transverse rib that is hinged on the base-board near its lower edge, and a pendent prop hinged by one end on the slab to engage its free end with the rack, of two spring-bars on the edges of the slab, separated therefrom by equal channels, a slide-block in each channel, a transverse book-ledge hinged to the slide-blocks, and a clamping-bar engaging the spring-bars, substantially as described.

8. The combination, with a base-board having a diagonal rack, of a slab hinged obliquely to the base-board and provided with a prop inclined sidewise and engaging the rack, substantially as and for the purpose set forth.

9. In a combined book-rest and writing-slab, a slab having its top surface transversely channeled in series near the upper edge to receive writing implements, the top edge of said slab having a V-shaped notch cut therein to permit the free removal of the pen or pencil, substantially as described.

10. In a combined book-rest and writing-slab, the combination, with a base-board adjustably securable on a chair-arm, a hinged slab thereon, a spring-bar at each side edge of the slab, separated therefrom by equal channels, and a slide-block in each channel, of a book-rest hinged to the slide-blocks, one of the hinges having a pivotal connection with one of the slide-blocks and the other hinge having a sliding connection with the other block, substantially as described.

11. In a combined book-rest and writing-slab, the combination, with a base-board adjustably secured on a chair-arm, a diagonal rack thereon, a hinged slab, a hinged prop on the slab, a spring-bar at each side edge of the slab, separated equally and mainly therefrom, a slide-block for each spring-bar, working in grooves in said bars and adjacent edges of the slab, a hinged book-ledge perforated to

receive a dowel-pin on a keeper-strip, and a
keeper-strip, of a clamping-bar having a shoulder
near each end, wedges adjustable on one
spring-bar, that engage a shoulder on the
5 clamping-bar, said clamping-bar being slotted
and pivoted in said slot on the spring-bar
mentioned, and a cam projection on the other
spring-bar, that the remaining shoulder of

clamping-bar may impinge and hug the
spring-bars on the slide-blocks, substantially as
described.

CHARLES K. GAINES.

Witnesses:

NELSON L. ROBINSON,
JACOB I. TALLMAN.