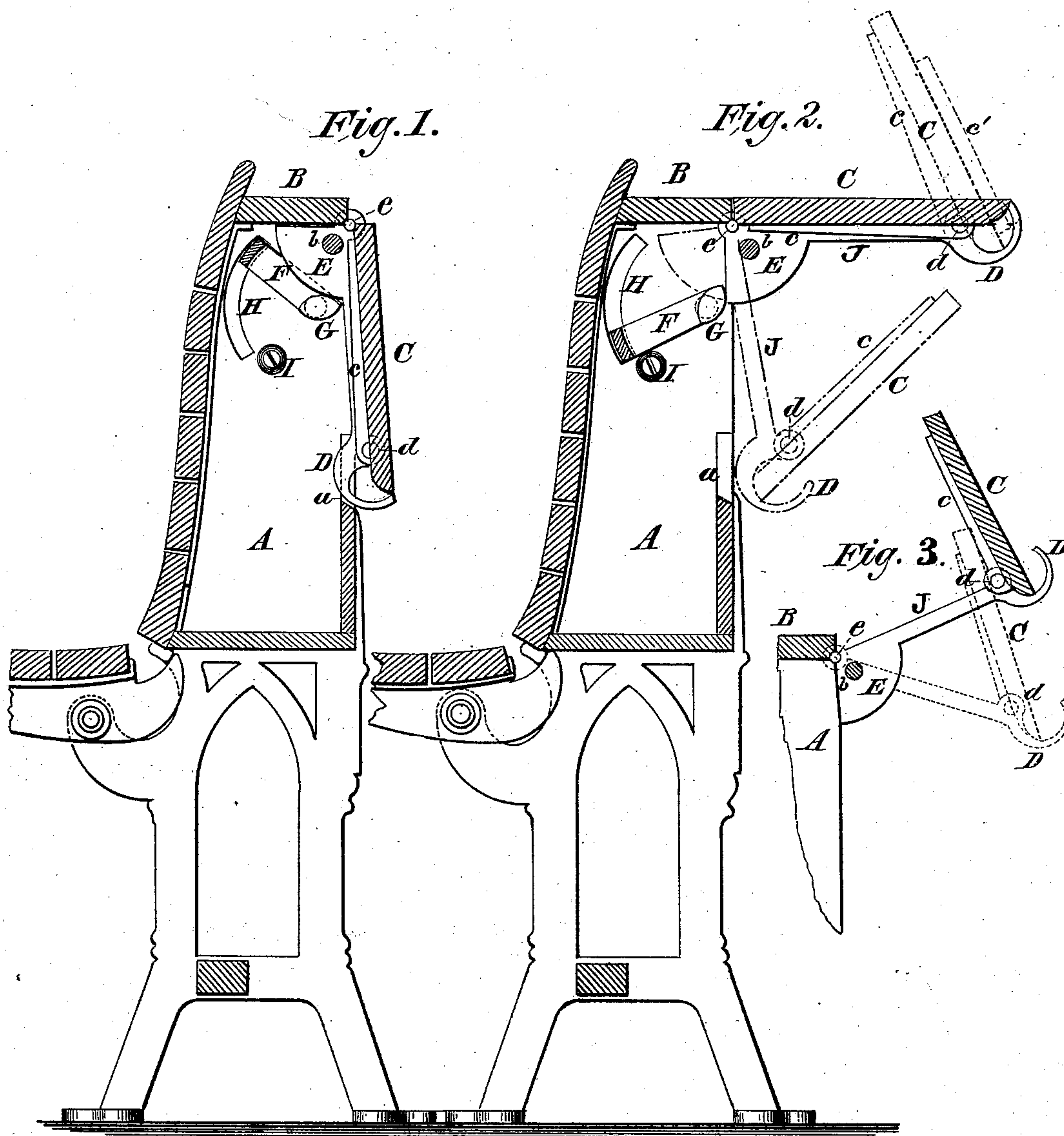


F. G. JOHNSON.
SCHOOL DESK.

No. 248,043.

Patented Oct. 11, 1881.



WITNESSES:

C. C. Lund.
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UNITED STATES PATENT OFFICE.

FRANK G. JOHNSON, OF BROOKLYN, NEW YORK.

SCHOOL-DESK.

SPECIFICATION forming part of Letters Patent No. 248,043, dated October 11, 1881.

Application filed April 16, 1879.

To all whom it may concern:

Be it known that I, FRANK G. JOHNSON, of the city of Brooklyn, county of Kings, and State of New York, have invented new and useful Improvements in School and other Desks; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the accompanying drawings, making a part of this specification, in which—

Figures 1 and 2 represent transverse elevations of the invention, and Fig. 3 a partial transverse section.

A represents the body of the desk; B, the stationary or immovable part of the desk-top; C, Fig. 1, the folding or movable portion of the desk-top turned down or in a folding position. Fig. 2 shows the movable portion of the desk-top in the position for writing, which, for convenience, I will call the "writing position."

The dotted lines above part C, in full lines, Fig. 2, represent the movable portion of the desk-top turned up from its front edge in a position for studying, which I will designate as the "study position," *c'* representing in dotted lines a book in position to be read or studied.

The dotted or broken lines below the part C, in full lines, Fig. 2, represent the movable desk-top folded, with its front edge drawn back to give the student access to the book-box A. Fig. 3 shows in full lines the movable desk-top in a study position (as it might be placed to accommodate a tall student) somewhat elevated above the usual study position, as shown by dotted lines, Fig. 2.

The dotted lines in Fig. 4 indicate the movable desk-top in the study position (as it might be placed by a short student) somewhat lowered from the usual study position, as shown in dotted lines at C, Fig. 2.

To render it possible to place the movable desk-top in these five different positions, and in all intermediate positions, both as to elevation and slope, I provide two movable supporting-arms, J, Figs. 2 and 3, united together by the cross-rod *b* and the curved cross-piece D, and hinge them (one on either end of the desk) at the points *e*. To the outer ends of these movable supporting-arms J, at the points *d*, are hinged two holding-arms, *c*, and to these arms *c* is securely fastened the movable desk-

top C. By these means the movable edge of the movable desk-top next to the student, when it (the desk-top) is resting on the movable supporting-arms J, can be raised and lowered as if its inner edge were hinged to the desk at the points *e*, and the two holding-arms *c*, to which the movable desk-top C is firmly fastened, being hinged to the outer ends of the movable supporting-arms J, the inner edge (the edge farthest from the student) can be raised and lowered as if it were hinged (as it really is) on the back edge, or near the back edge, next to the student. Hence, in effect, the movable desk-top C is hinged on both its front edge and back edge, while the compound movements which result from the combination of the two above-described movements enables the student to place the movable desk-top at any desired point of elevation, as well as to give it any required slope, as shown by Figs. 1, 2, and 3. Besides thus converting the top of the desk into an easel by raising its front edge toward the student, I also thereby automatically produce and provide a suitable book-rest, D, of such a character that it will securely hold, without the aid of the student's hand, any sized book, from the thickness of a sheet of paper to the largest school-book, however stiff and unyielding it may be. This book-rest D is produced as follows, namely: The supporting-arms J of the desk-top C are terminated from the hinge *d* of the carrying-arms *c* by a semicircular curve extended around and under and up in front of the back edge of the movable desk-top C, and joined together by a strip of the same curve from one supporting-arm, J, to the other. This curve is a section of a hollow cylinder described by that part of the movable desk-top C which extends toward the student beyond the hinge-points *d*. The capacity of this book-rest D will depend upon the diameter of its curve. The curve of the book-rest D is extended downward below and under the movable desk-top C, just below the edge of the same, when it (the desk-top C) is at its greatest elevation as an easel, to prevent paper from dropping down between the desk-top C and the bottom of the book-rest D. The curve of the book-rest D extends upward, to come up in front of the desk-top C only just flush with its upper surface when it (the desk-top C) rests on the supporting-arms J, to pre-

vent any projection of the book-rest D above the upper surface of the desk-top C. By this means a more or less V-shaped book-rest, D, is provided, which adapts itself to books of 5 different thicknesses. The book-rest D being open at the ends admits of sheets of paper, maps, &c., which may be larger than the length of the book-rest itself.

By this means of producing a book-rest for 10 the desk-top when it (the desk-top) is employed as an easel I do not at all destroy the uniform surface of the desk-top or the straight lines of the edges of the same, or project any obstacle in the way of the student, or require any act on 15 the part of the student to place or replace the book-rest, save to simply elevate the desk-top C to provide the easel.

It will be observed that this method of producing the easel and book-rest in no way de- 20 pends upon the movement of the supporting-arms J, for it is as applicable to a stationary desk—that is, to a desk in which the supporting-arms J are not movable, the movement of the supporting-arms J being provided for to 25 render the desk folding, to economize space and increase the passage-way between the rows of desks when the desk-tops are not in use.

The hinges, both at *c* and *d*, are made sufficiently friction-tight to support the movable 30 desk-top C in any desired position.

To firmly secure the movable desk-top C in what I term the "writing position," as shown in Fig. 2, C, I provide a rigid stop or support to the supporting-arms J in the following manner, namely: Upon the lower side of the front 35 ends of the supporting-arms J, I provide a suitable curved projection, E, to strike against the dog or stop G. This dog or stop G is oval in shape, and constitutes the short arm of a simple lever, of which the long arm is F. Such 40 a lever is provided at both the supporting-arms J.

I do not claim any part of the construction and arrangement of the arms by which the desk-top is attached to the frame, or of the 45 dogs or stops by which the desk-top is secured in a writing position.

What I claim as my invention, and desire to secure by Letters Patent, is—

In a school-desk, the desk-top C, hinged 50 near its front edge to the supporting-arms J, the arms constructed with a curved book-rest, D, so that such front edge may, when the top is elevated, swing down into said rest, and when depressed, such arms to swing out of and cover 55 up said rest, substantially as described.

FRANK G. JOHNSON.

Witnesses:

R. H. GALPEN,

FRANK CHAMBERS.