

OSBORNE & HAMMONS'
Improved School-Desk & Seat.

PATENTED JUN 27 1871

116477

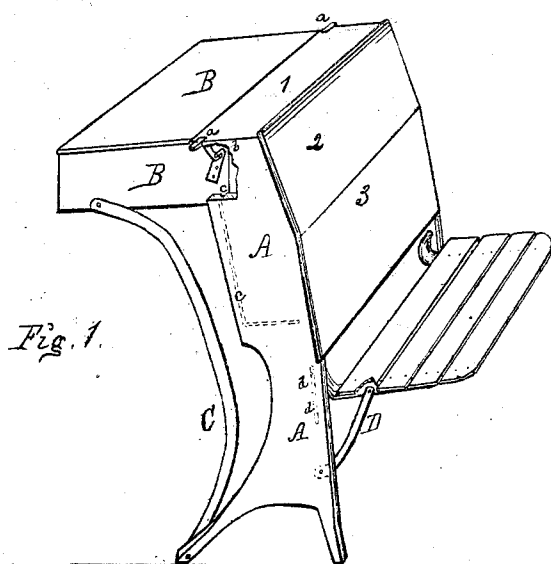


Fig. 1.

Fig. 2.

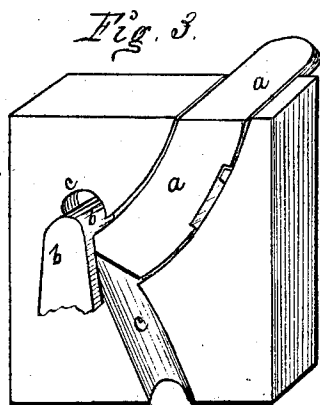
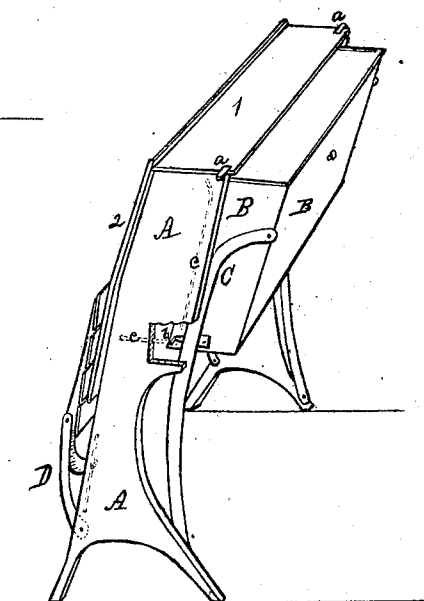


Fig. 3.

Witnesses.
G. A. Merrill
J. K. Marsh

Henry B. Osborne
Noah W. Hammon } Inventors.
Thomas G. Ormig
 Attorney.

UNITED STATES PATENT OFFICE.

HENRY B. OSBORNE AND NOAH W. HAMMON, OF DES MOINES, IOWA.

IMPROVEMENT IN SCHOOL-DESKS.

Specification forming part of Letters Patent No. 116,477, dated June 27, 1871.

To all whom it may concern:

Be it known that we, HENRY B. OSBORNE and NOAH W. HAMMON, of Des Moines, in the county of Polk and State of Iowa, have invented certain Improvements in School-Desks and Seats, of which the following is a specification:

Our invention is designed to provide a school-desk and seat that will fold, with natural and easy motions, into a narrower compass than usual, and in such a manner that it will be held in its respective positions, either open or folded, by the force of gravitation. It consists: First, in pivoting the desk and book-box to movable arms connected with the end frames at their base in such a manner that the desk and book-box together move from a vertical position between the end frames to a horizontal position as required for a desk. Second, in forming grooves on the inside of the frames in such a way that pins projecting from the sides of the book-box will follow in the grooves and guide the combined book-box and desk from a horizontal to a vertical position, and vice versa. Third, in a self-acting gravitating lock that holds the desk in its open and horizontal position. Fourth, in movable arms that support the seat and will hold it at any angle, as hereinafter described.

Figure 1 of our drawing is a perspective view of the desk and seat unfolded and in the positions required for use. Portions of the end frame are removed to show the projecting pins in the guiding-grooves. A A is one of the end frames. These may be made of wood or metal and of various ornamental forms and sizes. 1, 2, 3 represent the end frames connected by three pieces, which together form the stationary part of the desk. B B is the combined movable book-box and desk. C is a long arm pivoted to the book-box and also to the base of the end frame. D is a short arm pivoted to the seat-arm and also to the front of the end frame near the base. *a* is the self-acting gravitating lock. *b* is the pin held by the lock. *c c* is the groove in the frame traversed by the pin *b*. *d d* is a groove in the front of the end frame traversed by the end of the seat-arm, which is formed to enter the groove. Fig. 2 is a perspective view, showing the seat folded up close upon the stationary part of the desk, and the combined book-box and desk in a vertical position and almost withdrawn from between the end frames. It will be observed that

the grooves *c c* make a right angle at the bottom and that the pin *b* is near the corner of the angle. The book-box may be pushed in between the end frames and underneath the stationary top part 1, and, when in that position, it can be secured by a lock and key and its contents kept safe and private. By pulling it out far enough to allow the pin *b* to turn the corner in the groove *c c* and pass upward, the book-box and desk will turn on the pivoted arms D and assume a horizontal position, as shown in Fig. 1. Fig. 3 represents our self-acting gravitating lock, of nearly full size, in a section of the end frame. *a a* is the lock, made of metal, in the form of a segment, with a right-angled handle at its top. A slot or mortise corresponding in form with the lock is cut or cast in the end frame, and intersects the groove *c c*, which is inclined forward at its top. The pin *b*, secured on the side of the book-box, in its upward passage, strikes the angling end of the lock *a a*, and lifts it and passes it. As soon as the pin has passed, the lock *a a* drops again and catches and holds the pin *b*. By having one of these catches at each end of the desk a complete and simple means is provided for holding the desk firmly in its horizontal position as required for use. To unlock it, take hold of the projecting parts of the pieces *a a* and lift them sufficiently to allow the pins *b b* to descend in their grooves, and the book-box and desk will naturally and quietly gravitate to a vertical position and ready to be pushed forward within the stationary part of the desk. A shoulder is formed on the under side or edge of the lock *a a*, by which it is prevented from being lifted out of its place in the frame.

We are aware that a combined book-box and desk has been pivoted to a movable arm, and that projecting pins on the end frames, together with grooves in the ends of the book-box, serve to guide the same in a manner similar to the way in which our book-box is brought from a horizontal to a vertical position; but our arrangement differs materially both in the positions and the forms of the grooves, and also the movable arms. Our peculiar arrangement allows us to inclose our book-box entirely within the frames and the stationary top, and is, therefore, new and useful. We are aware that gravitating locks or catches have been used on school-desks; but we claim that our form and combination are new and use-

ful, and may be advantageously applied to different purposes. We are also aware that folding seats are common; but we claim that our mode of attaching a short arm to support the seat-arm is new and useful. By drawing the bolt which connects the short arm D with the seat-arm the friction can be regulated so that it will hold the seat at any angle, and falling of the seat and consequent noise will be prevented thereby. The use of the short arms also allows us to contract the base of our end frames and to bring our desk and seat into a very narrow space.

The short arm B, supporting the seat-arm, may be applied, independently of the long arm C, to the seats of variously-formed school-desks, church-seats, and other folding seats, in the same manner and for the same purposes, as set forth.

We claim as our invention—

1. The groove *c* or *d*, elbowed or straight, and the pin *b*, in combination with either the long arm C attached to the end frame A and book-box B, or with the short arm D attached to the end frame A and seat-arm, operating substantially as described.

2. In a school-desk, the long arm C combined with the base of the frame, the book-box A, the pin *b*, the elbowed groove *c*, and the gravitating lock *a*, all made and operating substantially as described.

HENRY B. OSBORNE.
NOAH W. HAMMON.

Witnesses:

JOHN H. MERRILL,
J. K. MARSH.