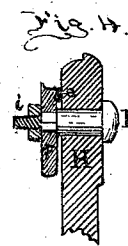
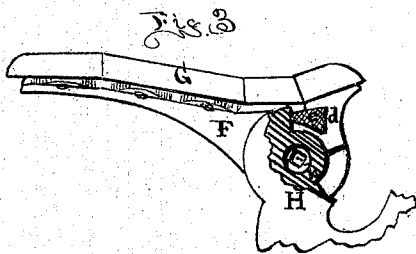
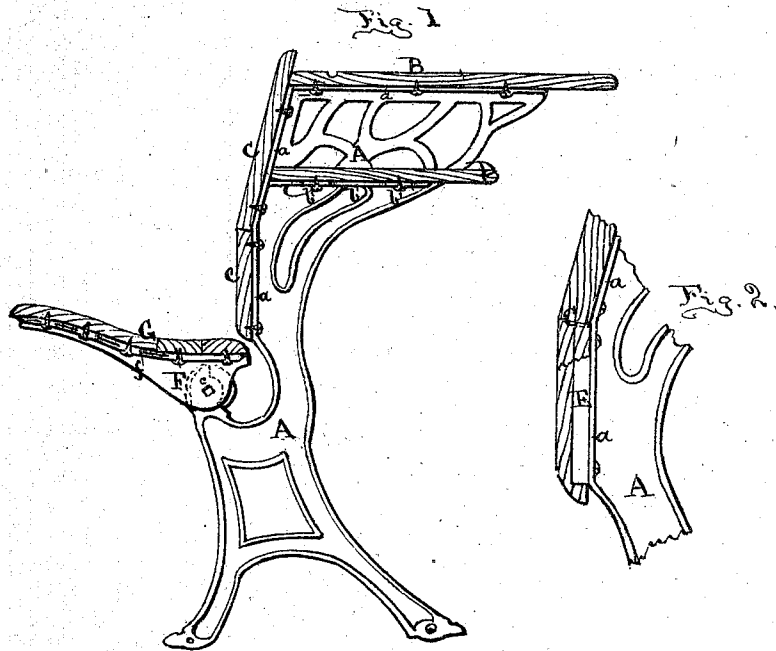


GEORGE H. GRANT.

Improvement in School-Desks and Seats.

No. 115,192.

Patented May 23, 1871.



Witnesses
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UNITED STATES PATENT OFFICE.

GEORGE H. GRANT, OF RICHMOND, INDIANA.

IMPROVEMENT IN SCHOOL-DESKS AND SEATS.

Specification forming part of Letters Patent No. 115,192, dated May 23, 1871.

I, GEORGE H. GRANT, of Richmond, in the county of Wayne and State of Indiana, have invented certain Improvements in School-Furniture, of which the following is a specification:

My invention relates to improvements in the construction of a combined school-desk and seat; and the invention consists in a new and improved combination of devices for hinging the folding seat to the standards or frame in such manner as to prevent the friction consequent on raising and lowering the seat from unscrewing the nuts or stripping the screw-threads of the bolts by which the brackets of the seat are hinged to the standards, and thereby providing a joint of permanent utility, not subject to the disadvantages of those heretofore in use. It also consists in constructing the hinge of the seat-brackets with a recess within the joint, for the reception of a wedge or cushion of rubber or other suitable material, for the purpose of breaking the shock of the folding seat, and preventing friction between the plates of the joint and the friction of the stop, thereby obviating noise and straining of the joint. It further consists in a new and improved mode of securing the back of the seat to the standards, in the manner and for the purpose to be hereinafter more fully set forth.

In the accompanying drawing, Figure 1 is a vertical section of my combined desk and seat. Fig. 2 is a sectional view, showing the mode of securing the seat-back to the standards. Fig. 3 is a separate view of the hinged joint of the seat. Fig. 4 is a sectional view, showing the construction of the hinge-bolt.

A represents one of the standards or side frames, constructed or cast with a supporting-flange, *a*, to which the desk B and seat-back C are secured by screws. A horizontal flange, *b*, provided with lugs *b'*, is also cast or secured to the standard for the purpose of supporting the book-shelf D, which is also secured thereto by screws passing through the lugs *b'*. A tongue or tenon, E, is also cast or secured to the vertical portion of the flange *a*, from which it projects, as shown in the drawing, for the

purpose of insertion into a corresponding gain or slot cut in the seat-back C. These tongues or tenons formed on either standard serve to strengthen and brace the connections of the standards with the desk and seat-back, preventing lateral pressure on the screws, and thereby producing a degree of stability heretofore unattainable without lateral braces or equivalent device. F represents one of the seat-brackets provided with lugged flanges *f*, to which the folding seat G is secured by screws passing through the lugs. The inner end of the plate is formed into a joint-piece and pierced with a square bolt-hole, *c*. A recess, *d*, is formed in the stop to receive a block or cushion of rubber, *e*, one end of which projects beyond the recess for the purpose of fending the shock of the stops of the joint when the seat is turned down. One side of the rubber block also projects beyond the recess and interposes between the two plates of the joint, thereby preventing friction and noise, while, being entirely within the joint, it cannot get out of place, or be got at or removed by the pupils without first removing the entire seat. H is the corresponding joint-plate formed in the frame A; it is pierced with round bolt-hole *h*. I is the bolt which forms the pivot of the hinge. The portion nearest the head is made round, the central portion is cut square, and the end is formed into a screw to receive a nut, *i*. This bolt is inserted from the outside of the standard, the round portion fitting the round hole *h* and forming the pivot of the hinge; the bracket F is then fitted onto the square part of the bolt and the nut screwed up tight to the bracket.

By this arrangement of parts the bolt is rigidly secured to the bracket, and all friction is removed from the screw and transferred to the round portion of bolt, thereby obviating the constant tendency of the nuts to unscrew or become loose and drop off through the operation of the hinge.

The construction and operation of my improved desk and seat are deemed sufficiently obvious from the foregoing description and the drawing herewith filed, and to those skilled

in the art further description is therefore unnecessary.

What I claim as my invention is—

1. The combination and arrangement of joint-piece H and bracket F, having recess *d* and rubber block *e*, with bolt I and nut *i*, substantially as and for the purpose set forth.

2. The tongue or tenon E, in combination

with the standards A and gained seat-back C, substantially as and for the purpose specified.

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