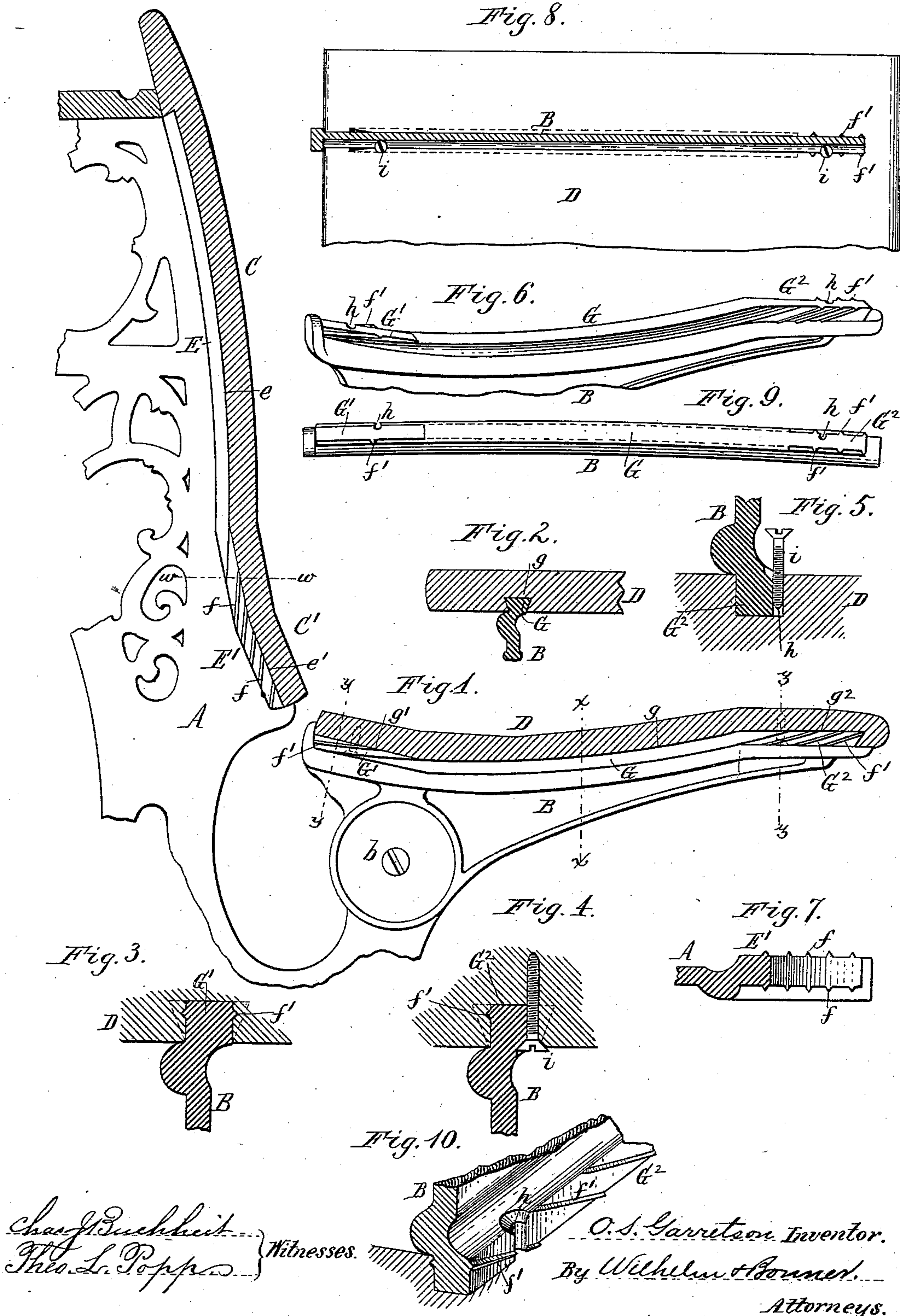


(No Model.)

O. S. GARRETSON.
SCHOOL FURNITURE.

No. 379,388.

Patented Mar. 13, 1888.



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SCHOOL-FURNITURE.

SPECIFICATION forming part of Letters Patent No. 379,388, dated March 13, 1888.

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To all whom it may concern:

Be it known that I, OLIVER S. GARRETSON, of the city of Buffalo, in the county of Erie and State of New York, have invented a new and
5 useful Improvement in School-Furniture, of which the following is a specification.

This invention relates to an improvement in the means whereby the wooden part of the backs and seats are secured to the iron frames
10 of school desks and seats and similar furniture.

The object of this invention is to attach the wooden parts to the iron frames in a simple and secure manner by means of locking-tongues
15 formed on the iron frames and entering grooves or mortises in the wooden parts. Heretofore dovetail and other tongues have been employed for this purpose; but these fastenings have not been satisfactory, because the curvature of the seats and backs rendered it impos-
20 sible to extend the tongues as closely to the edges of the seats and backs as required to firmly support these parts. Hence the seats and backs had to be made straighter than desirable in order to produce a comfortable seat;
25 or, if the proper curvature was given, the front and rear edges of the seat and the lower edge of the back had to be left unsupported.

My invention is designed to obviate these
30 difficulties; and it consists of the improvements in the construction of the furniture, which will be hereinafter fully set forth, and pointed out in the claims.

In the accompanying drawings, Figure 1 is
35 a vertical cross section of a school-seat provided with my improvement. Fig. 2 is a vertical section in line *x x*, Fig. 1. Figs. 3 and 4 are cross-sections, on an enlarged scale, in lines *y y* and *z z*, Fig. 1, respectively. Fig. 5 is a
40 similar cross-section showing the parts inverted and the screw inserted preparatory to driving it home. Fig. 6 is a perspective view of the seat-arm. Fig. 7 is a horizontal section, on an enlarged scale, in line *w w*, Fig. 1, with
45 the wooden back removed. Fig. 8 is a horizontal section, and Fig. 9 is a top plan view, of the seat-arm. Fig. 10 is a perspective view of one end of the seat-arm.

Like letters of reference refer to like parts
50 in the several figures.

A represents the supporting-frame, and B the seat-arm, pivoted thereto at *b* in a well-known manner.

C represents the wooden part of the back, and D the wooden part of the seat, secured,
55 respectively, to the frame A and arm B.

E represents a locking tongue or rib formed on the frame A and engaging in a groove, *e*, formed in the wooden back C. The tongue E and groove *e* are curved to correspond with
60 the principal curvature of the back. The lower portion, *C'*, of the back is curved forwardly, and the tongue E and groove *e* therefore do not reach the lower portion, *C'*.

E' represents an extension or continuation
65 of the tongue E, extending downwardly from the lower end of the tongue and seated in a continuation, *e'*, of the groove *e* in the rear side of the lower portion, *C'*, of the back. The tongue E has the form of a dovetail, T or Γ,
70 in cross-section; but any other suitable cross-section which will serve to lock the wooden part firmly on the supporting-frame may be employed.

The extension E' of the tongue E is simply
75 a rib having plain sides, as represented in Figs. 3 and 4, and does not partake of the dovetail locking form of the tongue E. The groove *e* is formed to correspond with the cross-section of the tongue E, and the extension
80 *e'* of the groove *e* corresponds in cross-section with the extension E' of the tongue E.

f represents angular or sharp-edged ribs formed on the sides of the extension E' concentric, or nearly so, with the curved tongue E and
85 adapted to embed themselves into the wood as the extension E' is driven into the groove *e'* of the wooden back, thereby firmly securing the back to the supporting-frame A. The ribs *f* may be constructed with a slight draft
90 to draw the tongue E outwardly or in close contact with the sides of the groove *e*. The back is secured to the frame by introducing the upper end of the tongue E into the lower end of the groove *e* and then sliding the
95 tongue into the groove, and finally driving the extension E' into the groove *e'*. The extension E' firmly supports the lower end, *C'*, of the back and permits the use of a back having the double curvature represented in the drawings.
100

G represents a curved locking-tongue of dovetail or other suitable cross-section, formed on the seat-arm B and engaging in a correspondingly-shaped groove, *g*, formed in the under side of the seat D.

G' represents an extension of the tongue G, formed at the rear end of the tongue and engaging in an extension, *g'*, of the groove *g*, formed in the lower side of the upwardly turned or curved rear portion of the seat D.

G² represents an extension of the tongue G, formed at the forward end of said tongue and engaging in a groove, *g*², in the downwardly-curved front portion of the seat D.

The extensions G' G² are constructed with flat sides, like the extension E', hereinbefore described, and are provided on their sides with angular ribs *f'* in the same manner as the extension E'. These ribs are arranged concentrically with the curvature of the main tongue G and embed themselves into the wood as they are driven into the grooves *g' g*².

The extensions G' G² support the curved rear and front portions of the seat and permit the use of a seat having the shape or curvature required for a comfortable seat.

The tongues E and G are preferably curved lengthwise in the plane of the back and seat, as represented in Fig. 9, and the grooves or mortises in the wooden parts C and D of the back and seat are made straight and slightly wider than the thickness of the tongues E and G, but so narrow that, although easily driven into the grooves, they will bind against the sides of the grooves before the tongues are completely driven home, thereby insuring a tight fit of the tongues when they are driven home.

It is obvious that the groove can be made curved and the tongue be made straight, if desired.

In order to further secure the wooden parts against displacement on the iron portion of the frame, the extensions G' G² of the tongue G may be provided in their sides with semi-circular notches or recesses *h*, adapted to receive fastening-screws *i*. The outer ends of these recesses are countersunk to receive the heads of the screws. These recesses receive and hold the screws in an upright position, as

represented in Fig. 5, thereby facilitating the insertion of the screws and doing away with the necessity of forming perforated ears on the casting for the purpose of receiving the fastening-screws.

I claim as my invention—

1. The combination, with a supporting-frame having a curved locking-tongue and an extension thereof constructed on its flat sides with sharp ribs which embed themselves in the wood, of a solid wooden seat or back provided with a locking-groove which receives the locking-tongue, and a flat-sided groove which receives the flat-sided ribbed extension of the tongue, substantially as set forth.

2. The combination, with a supporting-frame having a locking-tongue, E, and flat-sided extension E', provided with sharp ribs *f*, of a back, C, having a locking-groove, *e*, and a flat-sided groove, *e'*, which receive, respectively, the tongue E and extension E', substantially as set forth.

3. The combination, with a seat-arm having a locking-tongue, G, and flat-sided extensions G' G², provided with sharp ribs *f'*, of the seat D, having a locking-groove, *g*, and flat sided grooves *g' g*², which receive, respectively, the tongue G and extensions G' G², substantially as set forth.

4. The combination, with a supporting-frame provided with a curved locking-tongue, of a back or seat having a straight groove which receives the locking-tongue of the frame, and in which the curved tongue is sprung in driving it into the straight groove of the seat or back, substantially as set forth.

5. The combination, with a grooved seat or back, of a supporting-frame provided with a tongue which projects into the groove of the seat or back and which is constructed in its side with a recess or depression adapted to receive a fastening-screw, substantially as set forth.

Witness my hand this 16th day of April, 1884.

OLIVER S. GARRETSON.

Witnesses:

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