

No. 615,867.

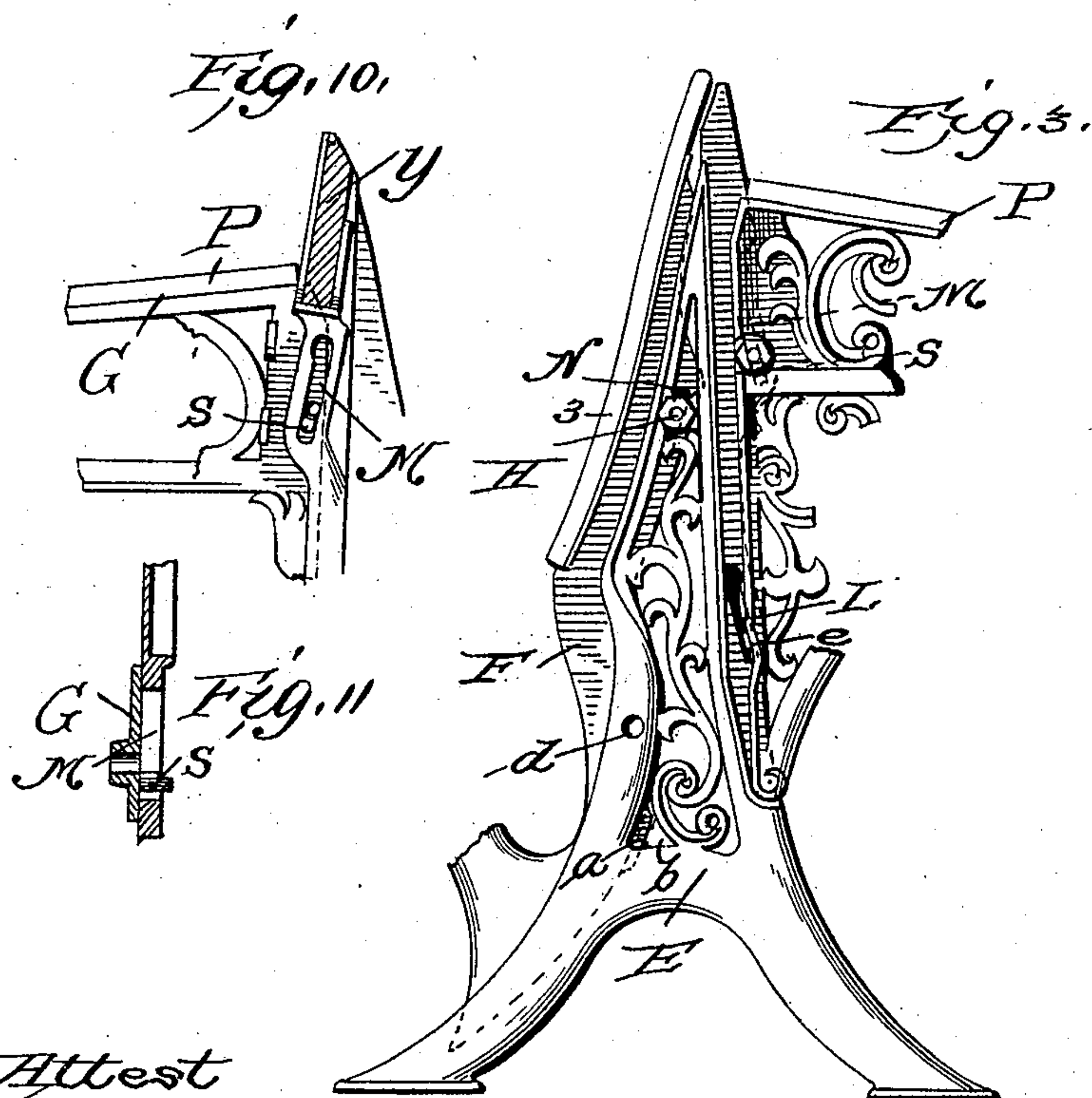
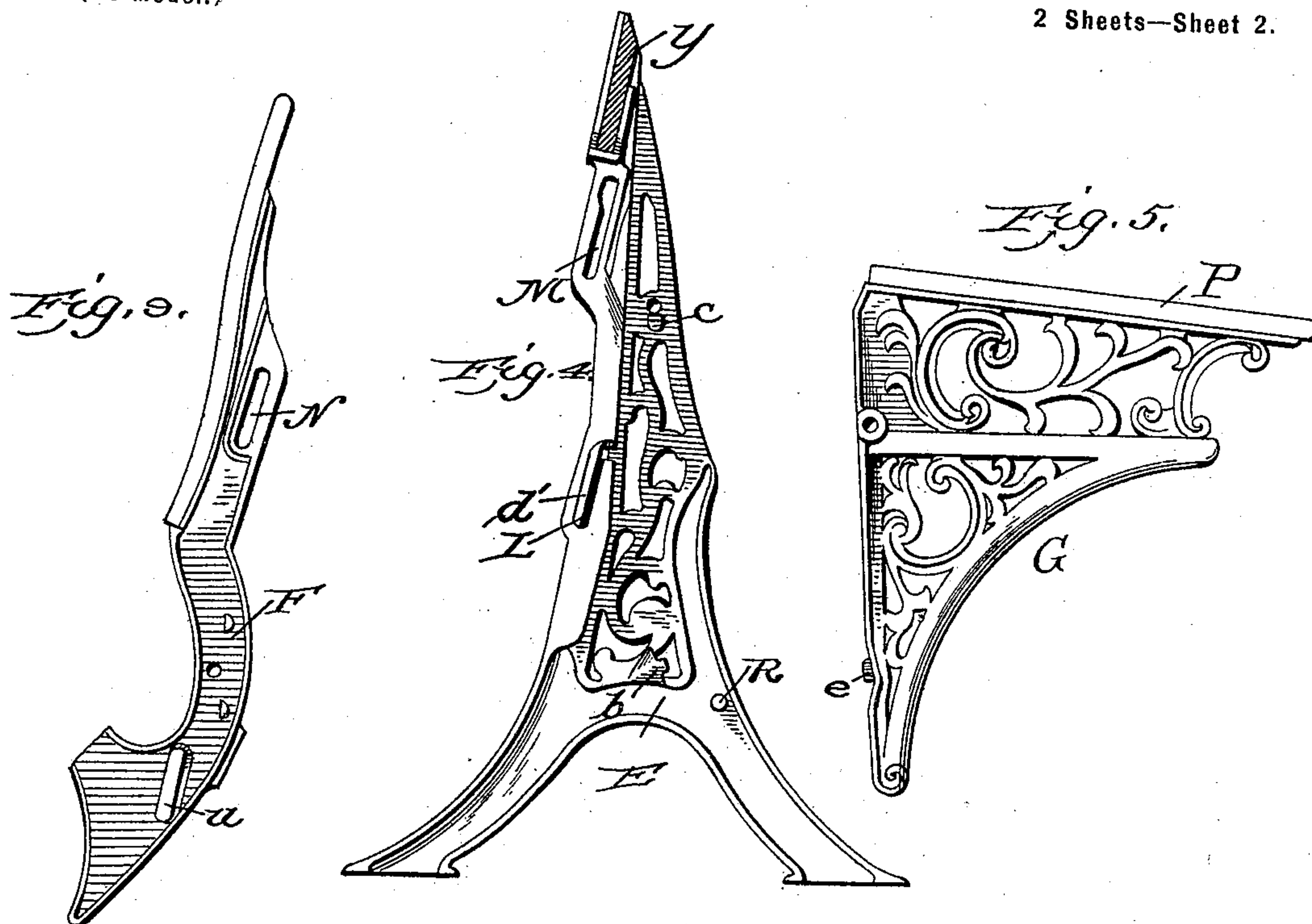
Patented Dec. 13, 1898.

A. D. LINN.
COMBINED DESK AND SEAT.

(Application filed June 30, 1897.)

(No Model.)

2 Sheets—Sheet 2.



Attest
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UNITED STATES PATENT OFFICE.

ALLEN D. LINN, OF GRAND RAPIDS, MICHIGAN, ASSIGNOR TO THE GRAND RAPIDS SCHOOL FURNITURE COMPANY, OF SAME PLACE.

COMBINED DESK AND SEAT.

SPECIFICATION forming part of Letters Patent No. 615,867, dated December 13, 1898.

Application filed June 30, 1897. Serial No. 642,952. (No model.)

To all whom it may concern:

Be it known that I, ALLEN D. LINN, a citizen of the United States, residing at Grand Rapids, in the county of Kent and State of Michigan, have invented certain new and useful Improvements in a Combined Desk and Seat, of which the following is a specification, reference being had therein to the accompanying drawings.

My invention relates to that class of combined school desks and seats in which various adjustments of the desk or seat are secured in connection with front and rear adjustment, so that the desk or seat may be adapted in all respects to the size of the user.

My said invention consists of the special constructions hereinafter explained.

In the drawings, Figure 1 is a side elevation of the invention with the seat and desk in their highest position. Fig. 2 is a detail view of the standard. Fig. 3 shows a partial view of the parts in their lowest position. Fig. 4 is an inside view of one of the side standards. Fig. 5 is a detached view of the desk. Fig. 6 is a partial section on line *a a* of Fig. 1. Fig. 7 is a partial section on line *b b* of Fig. 1. Fig. 8 is a partial section on line *d d* of Fig. 1. Fig. 9 is a view of one of the supports. Figs. 10 and 11 show minor details.

The standards consist of side frames E, with flaring lower portions terminating in feet gradually tapering to the upper end. The seat 2 and back 3 are secured to supports F, arranged one at each side, and these supports are connected by a foot-rest I, as shown in Fig. 1, and these supports, with the foot-rest, seat, and back, constitute a frame. This frame is adjustably supported upon the standards E, fitting slightly within the same and bearing on the inner faces thereof. The connection is made by studs R on the standards entering inclined elongated channels *u* in the adjacent faces of the parts F of the frame, and to prevent displacement in the adjustment of the frame projections *a* on the parts F pass in front of overhanging lugs *b*, as shown in Fig. 7. The connection at the upper end between the supports F and the standards is made by inclined slots N in the supports F, through

which bolts H pass, extending through the standards, each being threaded upon its outer end to receive a nut. By reason of the inclined slots N bearing on the bolts and the inclined channels *u* it will be observed that as the supports F are moved up and down they will also have a movement backward or forward in relation to the standard, and thus automatically change the relation between the seat and the desk immediately in front of said seat, bringing the seat and desk nearer together or increasing the distance between them, according as the supports F are moved downwardly or upwardly.

The bolts securing the supports F and standards E together have their heads resting on projections *c*, extending from the inner faces of the standards just beneath the bolt-opening, and these projections not only serve to support the bolts when the nuts are loosened, but also serve to direct the supports F in their vertical movement. The supports F are not only connected by the back and the seat, but also by the foot-rest. This foot-rest is secured to the supports by a nail or screw at each end, and as the foot-rest keeps the supports separated and the projections or studs R enter the depression and groove in the supports from the outer faces of the supports it will be seen that even though the fastenings be withdrawn the seat and back frame cannot be removed without displacing the foot-rest and the back. The foot-rest I is secured by fastenings passing through the supports F into the ends of the foot-rest, and as the points where the fastenings pass through the supports are concealed by the front edges of the standards I provide an enlarged opening *d* through the front edges, adapted to register with the screws in the supports, and thus permit the withdrawal of the same, when desired, through these openings *d*.

The desk is composed of the side sections G, connected by the top P and the shelf Q, and the frame thus constituted is connected to the standards fitting the recessed edges of the said standards. A stud S engages an inclined slot M in the standard and a bolt passes through the desk-frame above the stud S, which supports the head of the bolt and

through the inclined slot. A second inclined slot L is made in the recessed flange of the standard, this being partially covered by a raised web *d'*, and a hook *e* in the lower edge of the desk-frame engages this slot and guides the desk-frame at this point.

The slots M and L are inclined in the opposite direction to the slot N and depression *u*, as it is essential that the desk-section should change its relation in a direction opposite to that of the seat and back frame.

In order to give a finish to the standard when the desk-section is lowered, I provide a cross-piece Y, which is exposed when the desk is lowered and is covered when the desk is raised.

What I claim is—

1. The standards E, having studs R, the bolts H passing through holes in said standards, in combination with connected supports F carrying the seat and back and having inclined channels *u* for the studs, and slots for the connecting-bolts, the parts being constructed and connected, substantially as described.

2. The standards E having studs R the bolts H passing through holes in said standard in combination with connected supports F carrying the seat and back and having inclined channels *u* for the studs, and slots for the connecting-bolts and supporting and directing projections, the parts being constructed and connected substantially as described.

3. The desk composed of the standards the side sections G, connected as described, and fitting the standards, having recessed edges, and having also a stud S engaging an inclined slot M in the standard, a hook *e* in the lower edge of the desk-frame engaging an inclined slot L in the recessed flange of the standard, a raised web *d'* and means for holding the parts together all substantially as described.

In testimony whereof I affix my signature in presence of two witnesses.

ALLEN D. LINN.

Witnesses:

L. T. GIBSON,
H. J. WATROUS.