

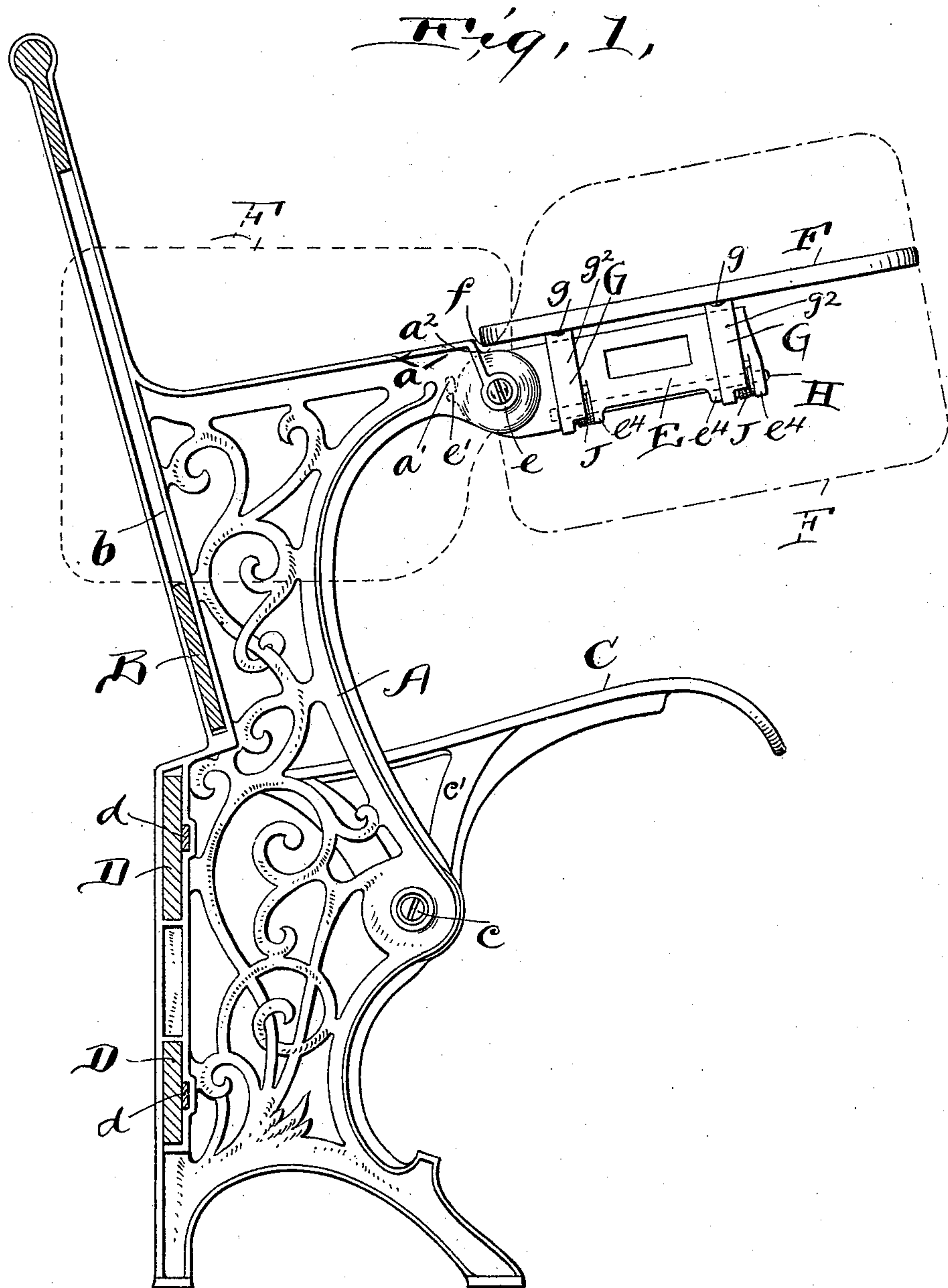
(No Model.)

2 Sheets—Sheet 1.

H. B. HITESHEW & W. F. SPIETH.  
LECTURE ROOM SEAT.

No. 601,874.

Patented Apr. 5, 1898.



Witnesses.  
E. B. Gilchrist  
H. M. Hutchison.

Inventors.  
Harvey B. Hiteshew  
William F. Spieth  
By their Attorneys,  
Thurston & Bates.

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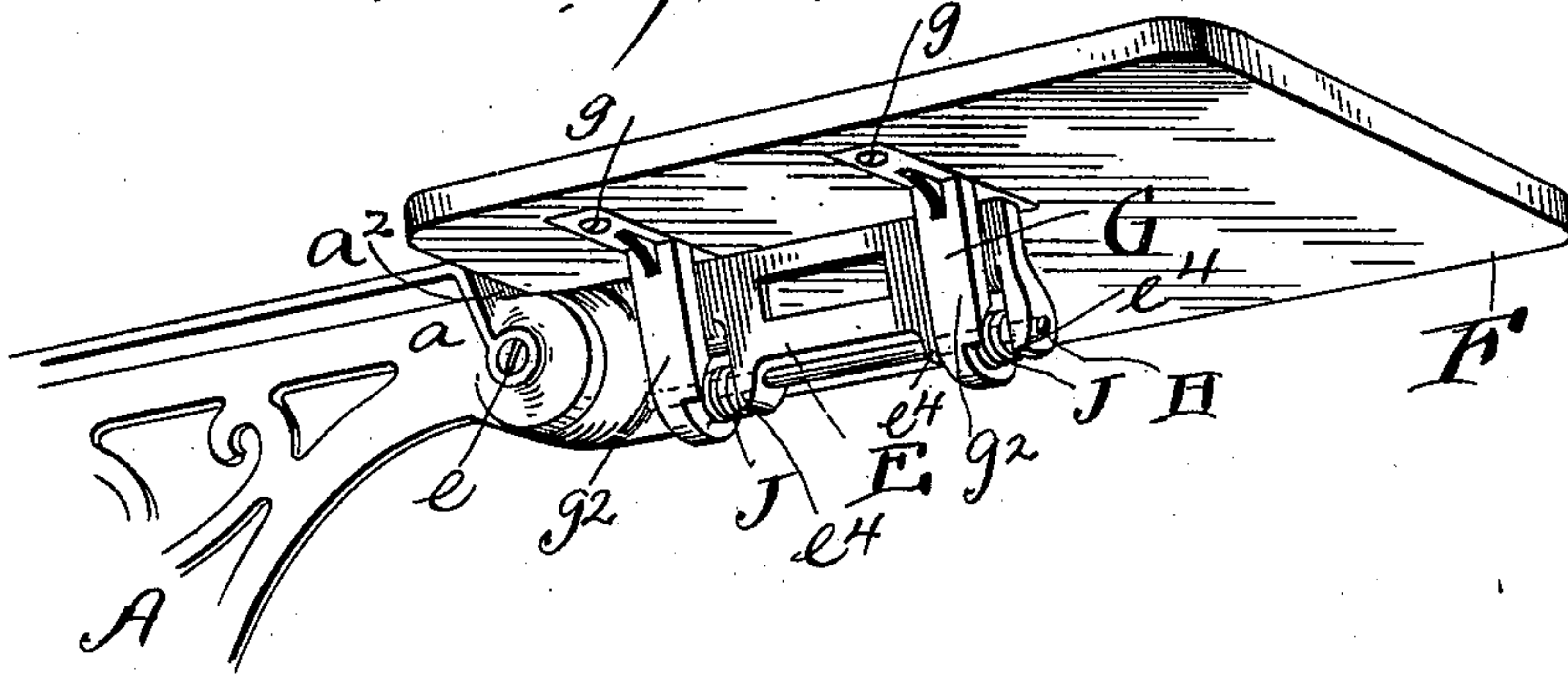
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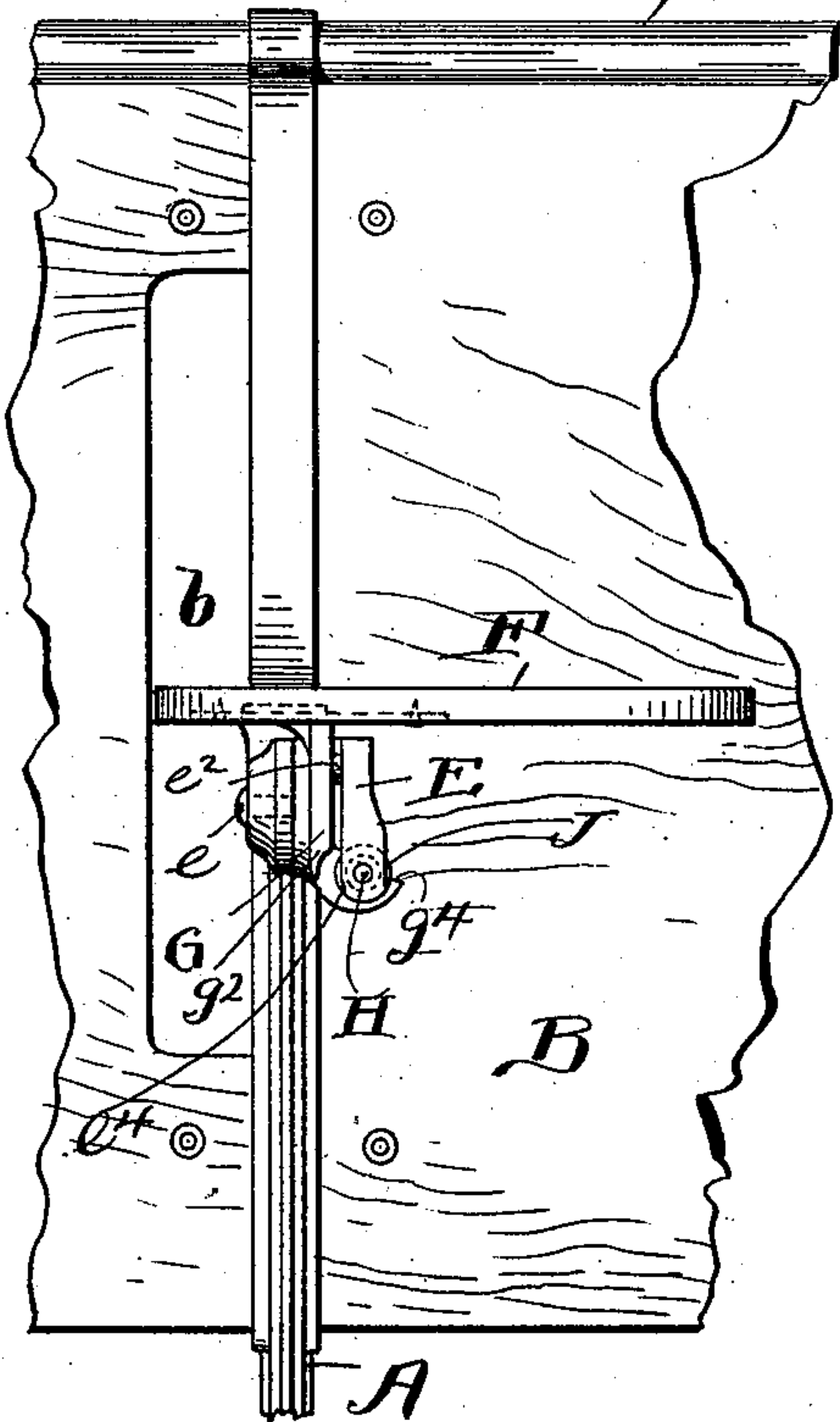
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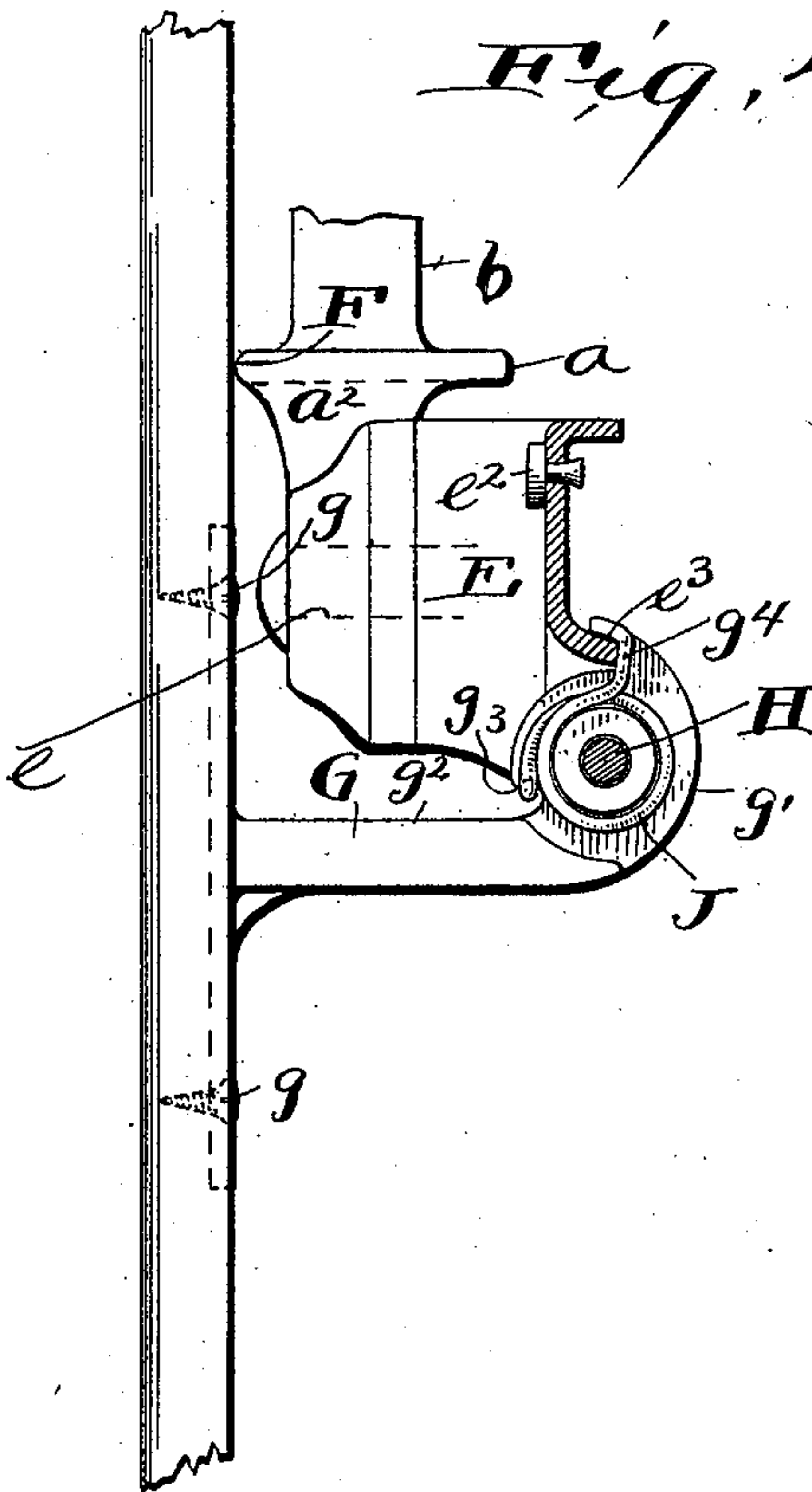
*Fig. 3,*



*Fig. 2,*



*Fig. 4,*



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A. M. Hutchison

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Thurston & Bates.



# UNITED STATES PATENT OFFICE.

HARVEY B. HITESHEW AND WILLIAM F. SPIETH, OF CLEVELAND, OHIO,  
ASSIGNORS TO THE CLEVELAND SCHOOL FURNITURE COMPANY, OF  
SAME PLACE.

## LECTURE-ROOM SEAT.

SPECIFICATION forming part of Letters Patent No. 601,874, dated April 5, 1898.

Application filed May 12, 1897. Serial No. 636,142. (No model.)

*To all whom it may concern:*

Be it known that we, HARVEY B. HITESHEW and WILLIAM F. SPIETH, citizens of the United States, residing at Cleveland, in the county of Cuyahoga and State of Ohio, have invented certain new and useful Improvements in Lecture-Room Seats; and we do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

The object of our invention is to provide a seat which shall have an arm-board adapted to stand approximately horizontal and thereby furnish a suitable tablet for writing or other purposes and adapted to be folded out of the way when not in use.

The invention is particularly applicable to lecture-rooms, but may be of use in theaters or other places.

It consists of a seat having a rigid arm, to which there is pivoted on a substantially horizontal transverse pivot an extension, to which extension an arm-board is pivoted on a pivot running longitudinal of the extension, so that the extended arm-board may be folded over and held in a position approximately parallel with the rigid arm by first turning said arm-board about its pivot substantially ninety degrees and then turning the extension over on its pivot about one hundred and eighty degrees, there being provided stops and springs for holding the arm-board in proper position when folded out.

The invention also consists of the specific means, substantially as hereinafter described, which we employ in accomplishing the object of our invention.

The drawings show our invention embodied in the best form at present known to us.

Figure 1 is a side elevation thereof. Fig. 2 is a front elevation of a portion of the seat, showing the arm-board. Fig. 3 is a perspective view of the arm-board, looking from a position below it. Fig. 4 is an enlarged detail view of a portion of the arm-board and its immediate support, the arm-board being shown in the position it occupies at the end of the first of the two folding movements.

Like letters of reference designate like parts in the several figures.

Referring to the parts by letters, A represents a rigid frame forming a side and a side arm *a* of the seat. Suitably secured to a plurality of these frames is the back B, which in ordinary cases would extend continuously each way from the frame A and serve as the back to a number of seats. The seat-board C is carried by the frame A in proper manner, preferably by being attached to arms *c'*, which are secured to two frames A by the horizontal pivots *c*. Suitable strips D may be secured to the frames to brace the lower parts thereof.

The extension E is pivoted by the substantially horizontal transverse pivot *e* to the outside of the end of the arm *a*. This extension is free to be folded over into a position alongside of the arm *a*, but when folded out or extended is held in a position which is substantially a straight prolongation of said arm by means of the lug *e'*, carried by said extension, engaging with the stop *a'* on the rigid arm. (Shown in dotted lines in Fig. 1.)

F represents the arm-board, and G G represent bracket-arms, which are secured, preferably, by screws to the under side of the board, from which they project at substantially right angles. These bracket-arms are pivoted to the extension E at its lower edge by the rod H, running, as shown, longitudinally through ears *e'* on the lower edge of the extension and through the laterally-extending ears *g'* on the lower ends of the bracket-arms G. When these bracket-arms stand in a vertical position, as shown in Figs. 1, 2, and 3, they lie close to the outer face of the extension E and contact either with that face or, preferably, with rubber stops *e''*, suitably secured thereto. When the bracket-arms are in this vertical position, the arm-board is held in its approximately horizontal position shown.

In order that the arm-board may be in proper position for use of the person occupying the chair, it is necessary that it project each way from a vertical plane through the pivot-rod H. The most satisfactory placing of the board brings about one-third of it outside of said plane and about two-thirds on the opposite side. Hence, theoretically, gravity would hold the board in place, the bracket-



arms G being against the stops  $e^2$ ; but this equilibrium is so unstable as to render the board practically useless, since a very slight pressure near the outer edge of the board would upset it. We therefore provide springs J, tending to hold the bracket-arms G against the stops  $e^2$ , and hence to hold the board in place. These springs are preferably made in the form shown, being coil-springs surrounding the rod H and having one end engaging with a flange  $e^3$  on the extension E and the other end with the lug  $g^3$  on the ear  $g'$ . These springs have sufficient force to hold the arm-board in place until an abnormal pressure is brought to bear upon it, such as is used when the arm-board is folded in. Lugs  $g^4$ , formed on the ears  $g'$ , impinge against the flange  $e^3$  when the arm-board is turned on its pivot substantially ninety degrees, and thus limit that movement and prevent any straining of the springs.

It will be noticed that the bottom of the folded-out arm-board is somewhat lower than a continuation of the top surface of the arm  $a$ , and therefore the rear edge  $f$  of the arm-board and the front corner  $a^2$  of the arm are adapted to cooperate as a stop and prevent the arm-board and extension from being turned any material distance about the latter's pivot when the arm is flat. This prevents the arm-board being injured by an attempt to fold it in an improper manner.

In folding in the arm-board when it is out it is first turned about the pivots H until it is in a vertical position, when it lies in a plane outside of the arm  $a$ . The arm-board and extension E are then turned about the pivot  $e$  of the latter about one hundred and eighty degrees. In the first part of this movement the rear corner of the board is carried beyond the arm  $a$ , and thereafter the engagement of the board with the outside of the arm will prevent said board from turning back again upon its pivot-rod H. When the extension E has been turned nearly one hundred and eighty degrees, the front edge of the board passes through a slot  $b$ , provided in the back B for that purpose. The edge of the arm-board rests on the bottom of the slot, and thus the movement is limited. In folding out the arm-board it is first turned, with the extension E about the pivot  $e$  until it is in the forward vertical position, as shown in Fig. 4. If the hand is now removed, the springs J will turn the board into place.

Having thus described our invention, we claim—

1. In a lecture-room seat, in combination, an arm, an extension thereof pivoted at one end to said arm near its forward end and adapted to be turned about said pivot through the upper portion of a circle from an approximately horizontal forward position to an approximately horizontal rear position, and an arm-board pivoted to said extension and adapted to be approximately horizontal when said extension is in its forward position and

approximately vertical when said extension is in its rear position, and one or more springs tending to retain said arm-board in its horizontal position when it is in that position, substantially as described.

2. In a lecture-room seat, in combination, the extension E pivoted to a support, the arm-board F, the bracket-arms G secured to said arm-board, the ears  $g'$  on said bracket-arms, the rod H extending through said ears, and the springs J surrounding said rod and bearing at one end against the extension E and at the other against the bracket-arms, substantially as described.

3. In a lecture-room seat, in combination, the extension E pivoted to a support, the arm-board F, the bracket-arms G secured to said arm-board, the ears  $g'$  on said bracket-arms, the rod H extending through said ears, and the springs J surrounding said rod and having one end hooked onto a flange  $e^3$  on said extension and the other onto the lug  $g^3$  on the ear of said bracket-arm, substantially as described.

4. In a lecture-room seat, in combination, the extension E pivoted to a support, the arm-board F, the bracket-arms G secured to said arm-board, the ears  $g'$  on said bracket-arms, the rod H extending through said ears, and the lug  $g^4$  adapted to engage with said extension and limit the extent of movement of the bracket-arms away from said extension, and a spring forcing said bracket-arms toward said extension, substantially as described.

5. In a lecture-room seat, in combination, the extension E pivoted to a support, the arm-board F, the bracket-arms G secured to said arm-board, the ears  $g'$  on said bracket-arms, the rod H extending through said ears and through ears on the extension whereby the bracket-arms may be swung substantially parallel with said extension, the lug  $g^4$  adapted to engage with said extension and limit the extent of movement of the bracket-arms away from said extension, and elastic stops  $e^2$  between said extension and said bracket-arms, said stops limiting the movement of the bracket-arms toward said extension, substantially as described.

6. In a lecture-room seat, the arm  $a$ , the extension E pivoted thereto and adapted to stand in a forward position in front thereof, the upper surface of said extension being below a prolongation of the upper surface of the arm  $a$ , an arm-board F pivoted to said extension, and adapted to stand approximately horizontal above the same, said arm-board when in this position having its lower surface below the said prolongation whereby the rear edge  $f$  of the arm-board and the front corner  $a^2$  of the arm cooperate as a stop preventing the turning of the extension about its pivot when the arm is in its approximately horizontal position, substantially as described.

7. In a lecture-room seat, in combination, the arm  $a$ , the extension E pivoted thereto at  $e$ , the lug  $e'$  and the stop  $a'$  limiting the movement of the extension in the forward direc-



tion, the arm-board F pivoted to said extension, a spring tending to hold said arm-board approximately horizontal, but allowing it to be tipped up into a substantially vertical position, whereby said extension may be folded over alongside of the arm *a*, substantially as described.

8. In a lecture-room seat, in combination, the side frame, having a forwardly-projecting arm, an extension E pivoted to the inner side of the front end of said arm on a transverse horizontal pivot, an arm-board, bracket-arms secured thereto having laterally-extended ears which are pivoted to the ears on the lower edge of said extension on a longitudinal horizontal pivot, and springs acting to turn said arm-board upon its pivot, substantially as described.

9. A lecture-room seat consisting of a continuous back B divided by a plurality of sides 20 A, and seats C, in combination with the extension E pivoted to a side, the arm-board F pivoted to said extension and pressed toward an approximately horizontal position above the same by a spring, a slot through the back 25 of the seat beyond said side, said arm-board being adapted to be folded back and project through said slot, substantially as described.

In testimony whereof we affix our signatures in presence of two witnesses.

HARVEY B. HITESHEW.  
WILLIAM F. SPIETH.

Witnesses:

E. L. THURSTON,  
ALBERT H. BATES.