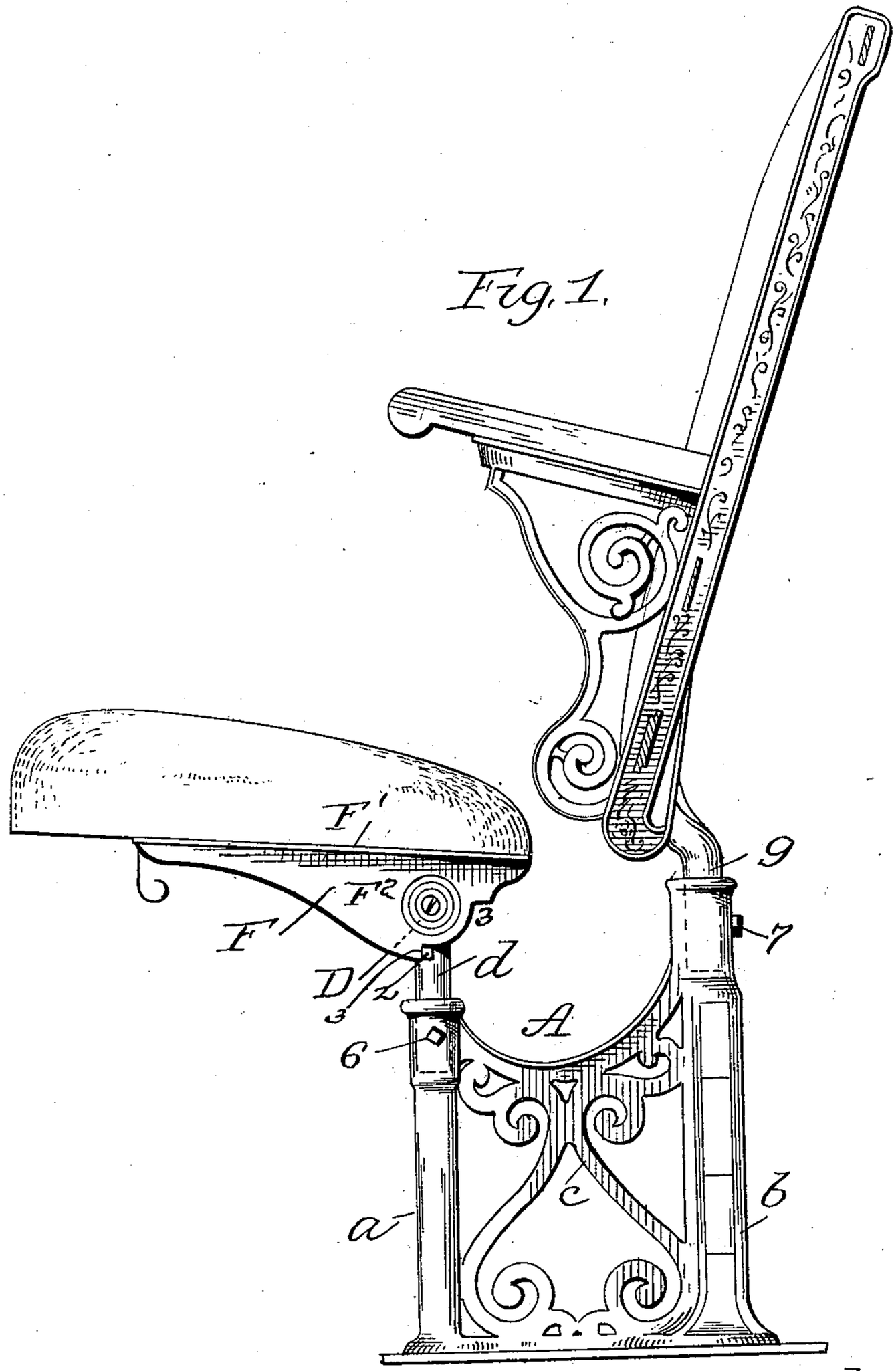
(No Model.) 3 Sheets—Sheet 1.

A. D. LINN & L. GOHLKE.

CHAIR.

No. 557,406. Patented Mar. 31, 1896

Fig. 1.



Attest
Walter Dwaddell
F. L. Middleton

Inventors:
Allen D. Linn
Louis Gohlke
by Ellis Spear Atty.

ANDREW B. GRAHAM, PHOTO-LITHO. WASHINGTON, D.C.

(No Model.) 3 Sheets—Sheet 2.

A. D. LINN & L. GOHLKE.

CHAIR.

No. 557,406. Patented Mar. 31, 1896.

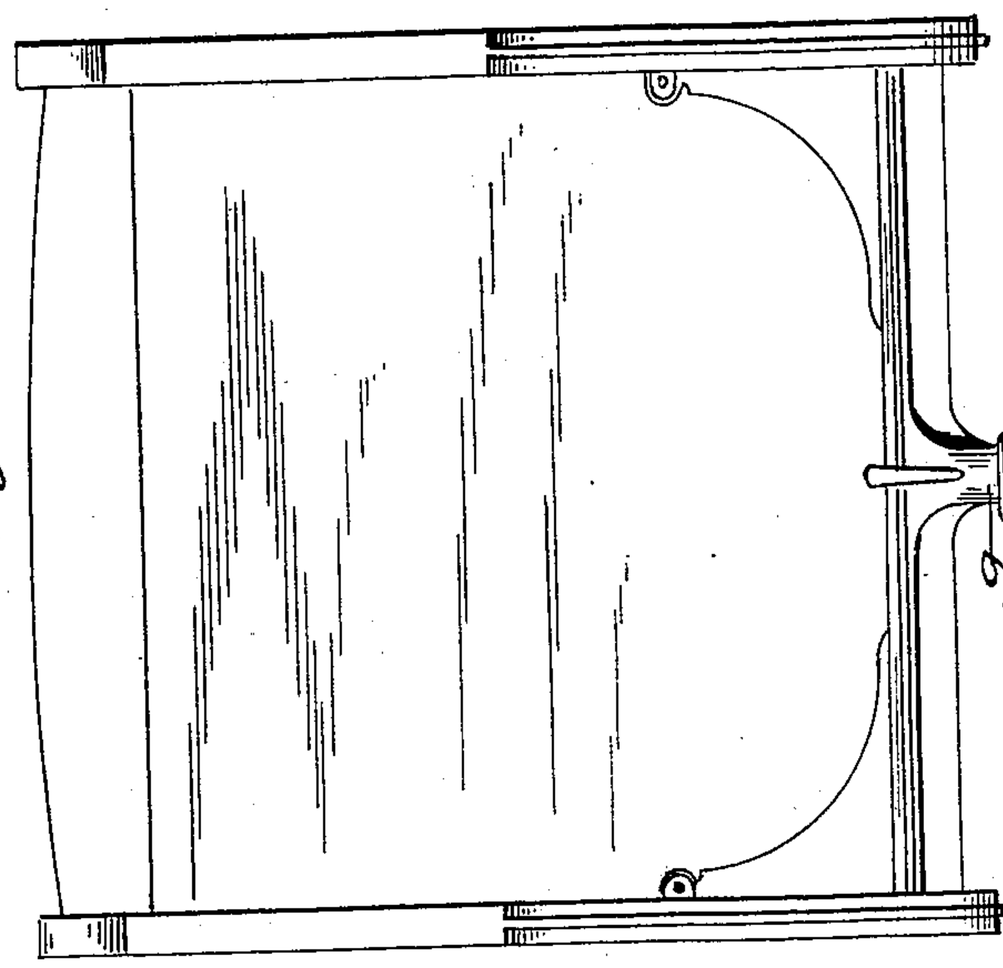


Fig. 3.

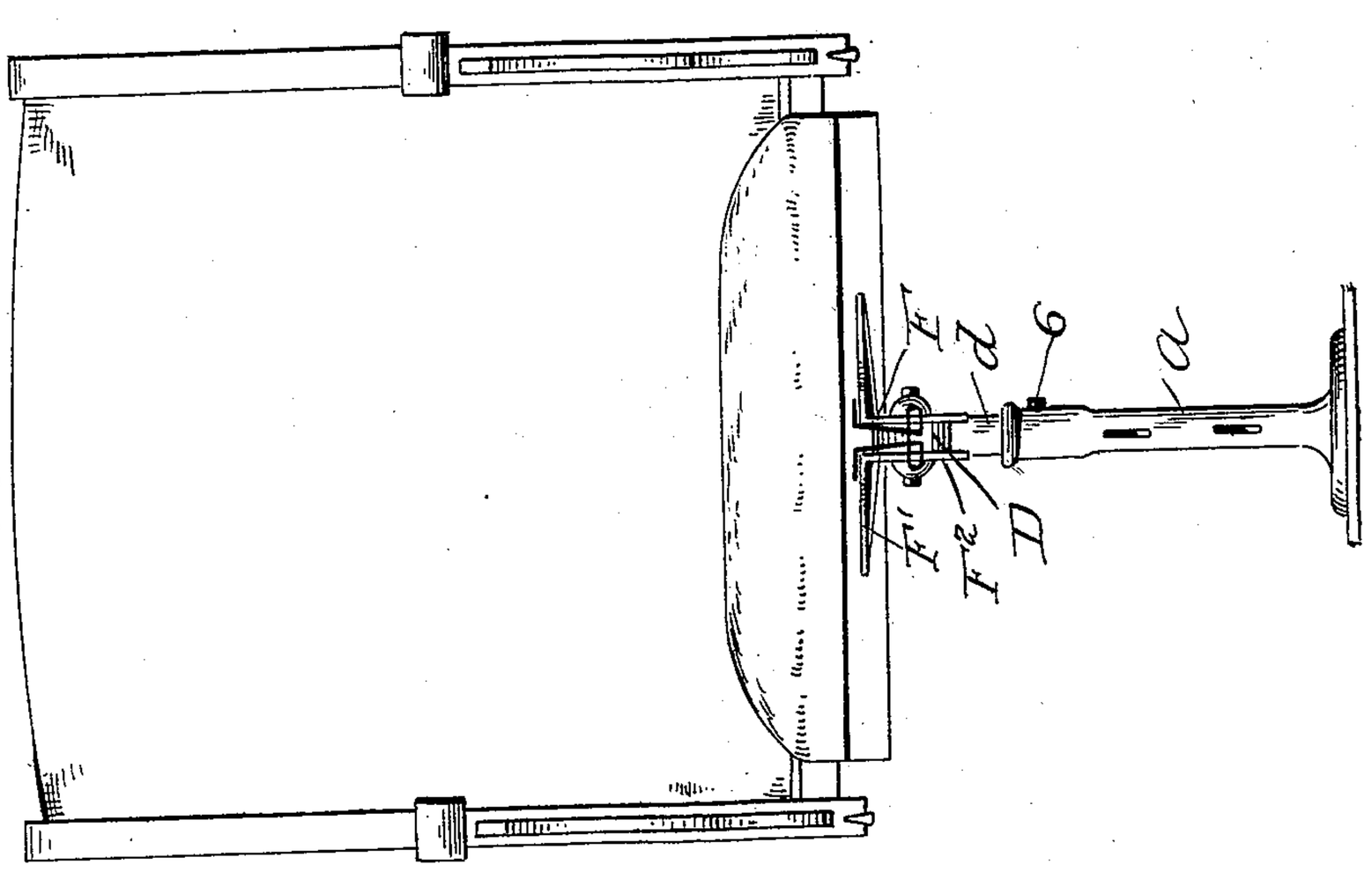


Fig. 2.

Attest
Walter Donaldson
F. L. Middleton

Inventors
Allen D. Linn
Louis Gohlke
by Ellis Spear Atty

ANDREW B. GRAHAM. PHOTO-LITHO. WASHINGTON, D.C.

(No Model.) 3 Sheets—Sheet 3.

A. D. LINN & L. GOHLKE.

CHAIR.

No. 557,406. Patented Mar. 31, 1896.

Fig. 4.

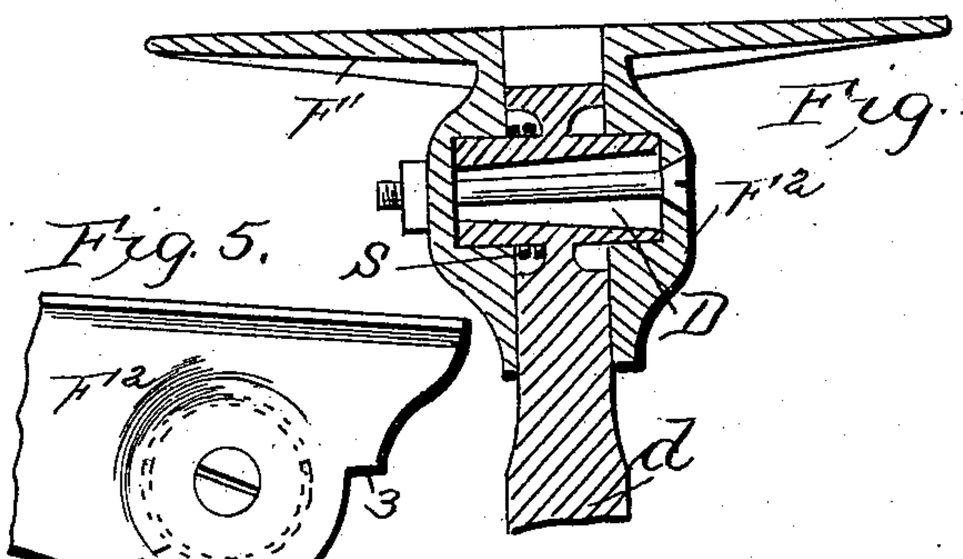


Fig. 5.

Fig. 7.

Fig. 6.

Attest
Wm. F. Hall
Walter D. Emerson

Inventors
A. D. Linn
Louis Gohlke
by Ellis Spear Atty

ANDREW B. GRAHAM, PHOTO-LITHO. WASHINGTON, D.C.

UNITED STATES PATENT OFFICE.

ALLEN D. LINN AND LOUIS GOHLKE, OF GRAND RAPIDS, MICHIGAN, ASSIGNORS TO THE GRAND RAPIDS SCHOOL FURNITURE COMPANY, OF SAME PLACE.

CHAIR.

SPECIFICATION forming part of Letters Patent No. 557,406, dated March 31, 1896.

Application filed January 23, 1895. Serial No. 535,892. (No model.)

To all whom it may concern:

Be it known that we, ALLEN D. LINN and LOUIS GOHLKE, citizens 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 Chairs, of which the following is a specification, reference being had therein to the accompanying drawings.

The object of our invention is to provide a seat for school-rooms, theaters, or audience-rooms generally, and it relates particularly to the connection between the seat and back and the supports for the same, as will be hereinafter described.

A further object of the invention is to prevent the clashing of the seat when thrown up or down.

The invention is illustrated in the accompanying drawings, in which—

Figure 1 represents the chair in side elevation. Fig. 2 shows a front view of the same; Fig. 3, a rear elevation. Figs. 4, 5, 6, and 7 show details relating to the spring-joint of the chair-seat.

In the drawings the standard which supports the seat is shown at A, and it is formed of two columns *a b*, which are connected and braced to each other by means of a web *c*, preferably of open ornamental work and preferably cast in one piece with the columns. In the upper ends of these columns are sockets fitted to receive the shanks or pintles *d g* attached to and projecting from the seat and back and forming the support for the same. The ends of these pintles are supported and turn on the bottom walls of the sockets of said columns.

The shank *d*, which supports the seat, has a flattened head and trunnions D cast in one piece, on which the seat-brackets F F rest directly and turn. The head has an annular groove on the side, concentric with the trunnion, which groove is adapted to receive a spring *s*. This spring is provided with laterally-bent ends, one of said ends being rigidly secured to the seat-bracket and the other rigidly secured to the standard. The spring is so adjusted in relation to the seat that when the seat is in its normal position or intermediate of its two extreme positions—*i. e.*, up and down—no tension is exerted upon the same, but to move the seat in either direction past this neutral point it is necessary to overcome the tension of said spring, and this tension increases as the seat nears either of said extreme positions. This feature of the spring (adjusted to be neutral in the middle position of the seat) may be applied to other forms of chairs besides that shown in the present case, and its advantages in connection with all forms of hinged chair bottoms or seats will be readily apparent.

The positive stop for the upward and downward movements of the seat is effected by means of a lug 2 on the shank *d* and shoulders 3 3 on the bracket, which in the limit of movement bear against the lug. The tension of the spring at these limits is greatest and gradually checks the movements.

The shank is held in the socket by means of a set-screw 6, and as the shank and socket are both cylindrical in form the seat may be turned laterally to any angle and accurately adjusted.

The rear column *b* is similar to the column *a* and receives the cylindrical shank *g* of the back. This is preferably bent or curved and is firmly fixed to the back at the middle of the lower part, and is held by a set-screw 7, also adjustably. Both seat and back are subjected to the greatest strain in vertical plane from front to rear, and the columns connected, as shown, are most firmly braced in this plane. By means of the columns and shanks the seats and backs may both or either of them be swung to right or swung left to adjust them laterally to any desired extent. The supporting-columns and these connections and the bracket may be cast in any ornamental form, and though no nut-lock or washer is required the bosses may be cast in shapes imitating the form of these parts.

We claim—

1. In combination, the seat and back, the two columns resting upon independent bases, the web connecting the sides of said columns, the sockets located in their upper portions and the pintles projecting from said back and seat the ends of said pintles being sup-

ported and turning on the bottom walls of said sockets, substantially as described.

2. In combination, in a chair, a pivoted seat capable of assuming in the opposite limits of its movements a horizontal and a vertical position, and a spring normally holding said seat centrally between said extreme positions, said spring being put under tension by the movement of said seat in either direction past said central position, substantially as described.

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

ALLEN D. LINN.
LOUIS GOHLKE.

Witnesses:
L. T. GIBSON,
J. H. MEGREW.