

2 Sheets--Sheet 1.

N. S. KETCHUM.
School-Desks.

No. 148,712.

Patented March 17, 1874.

Fig. 1.

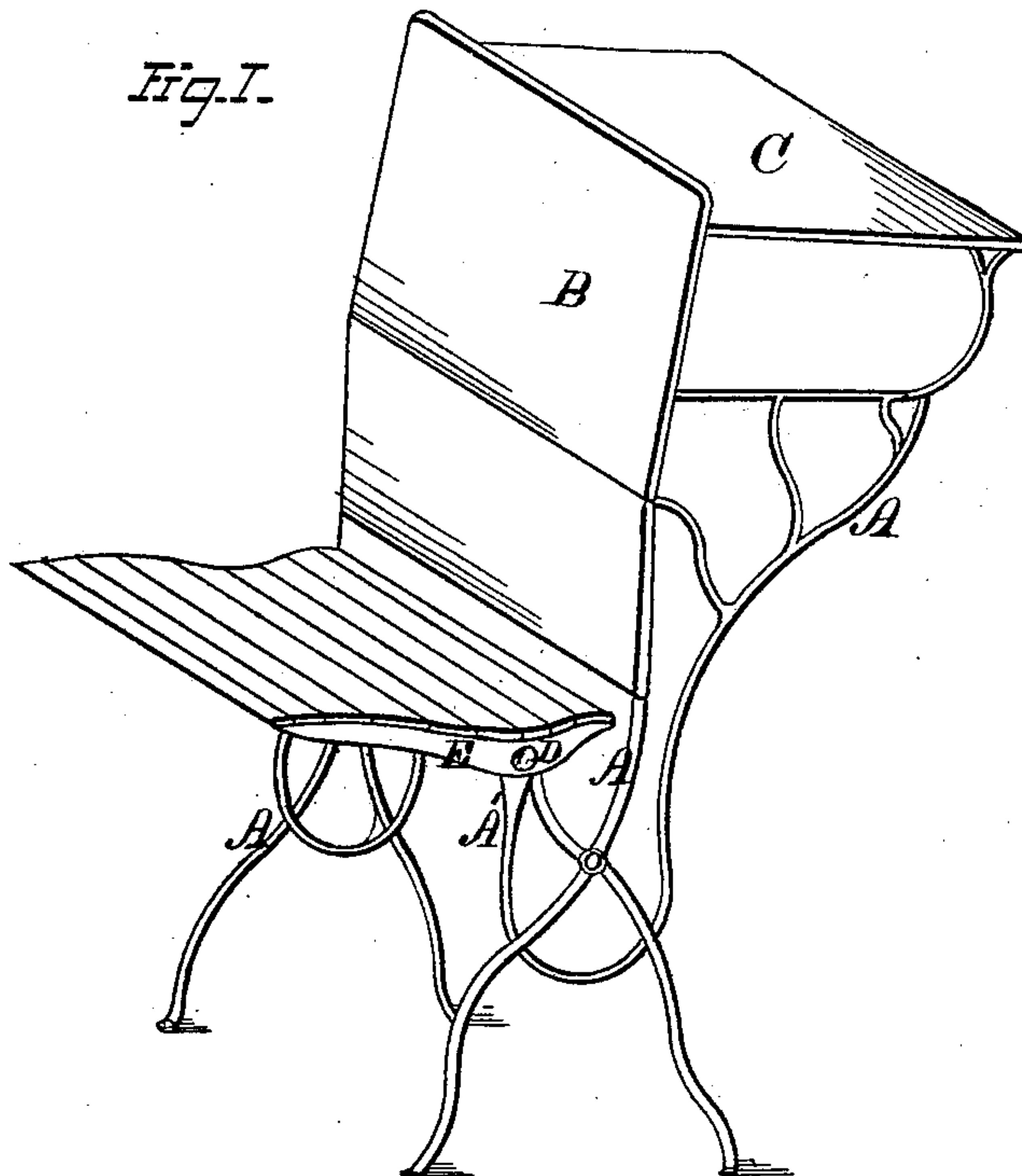
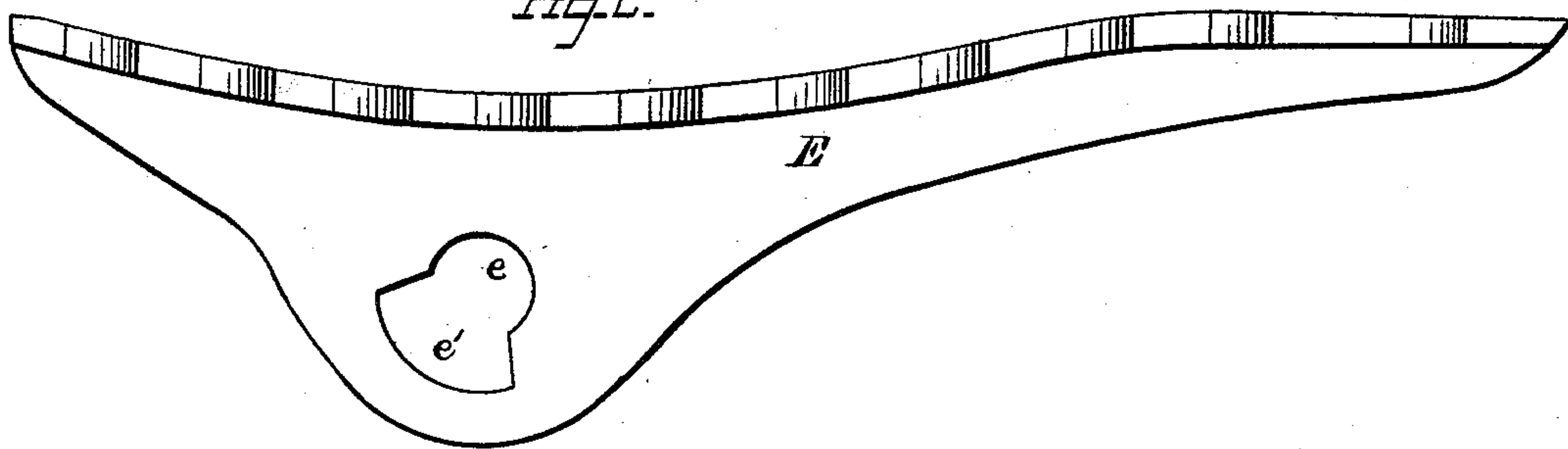


Fig. 2.



WITNESSES:

Gas E Hutchinson
John R. Young

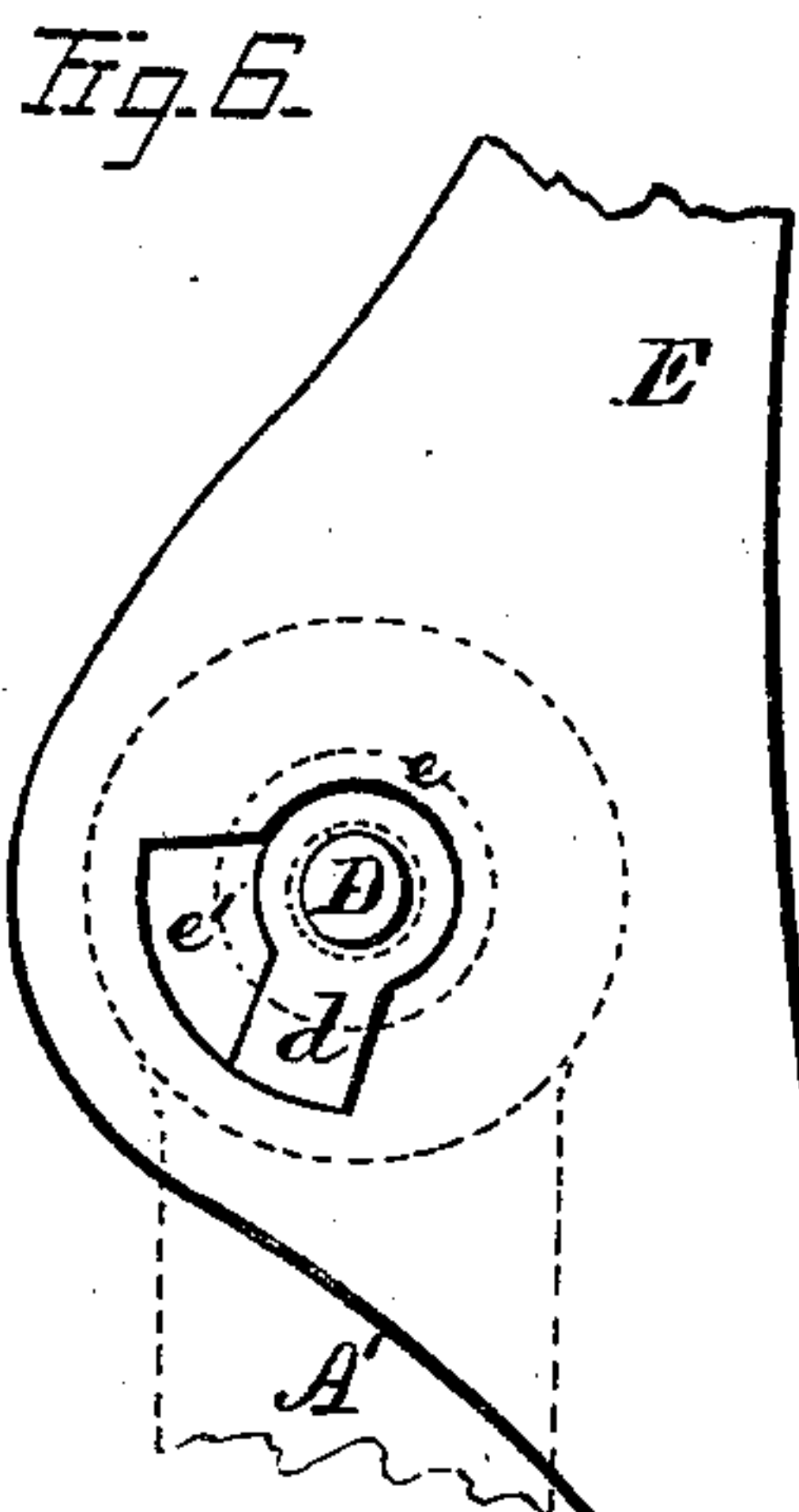
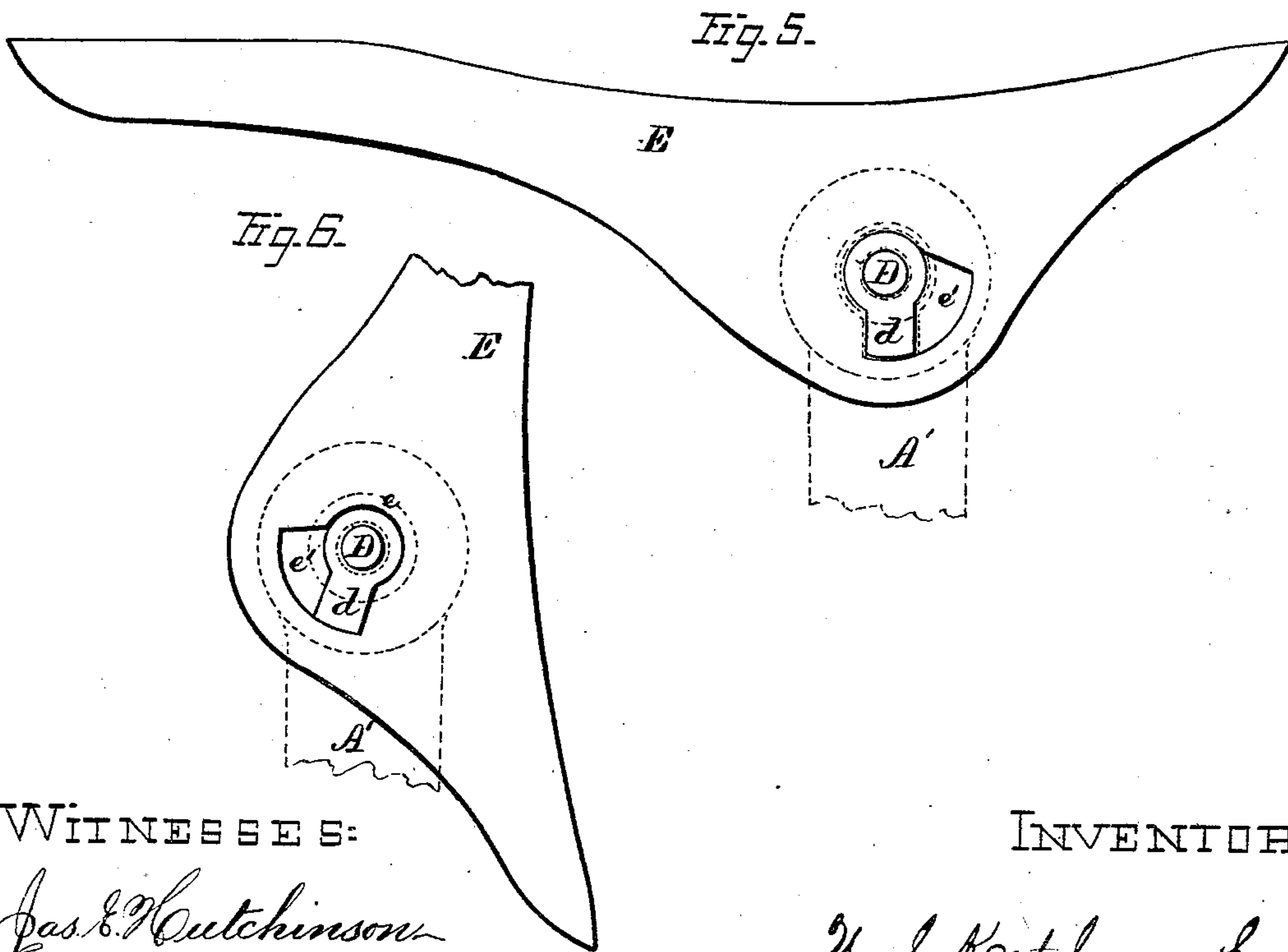
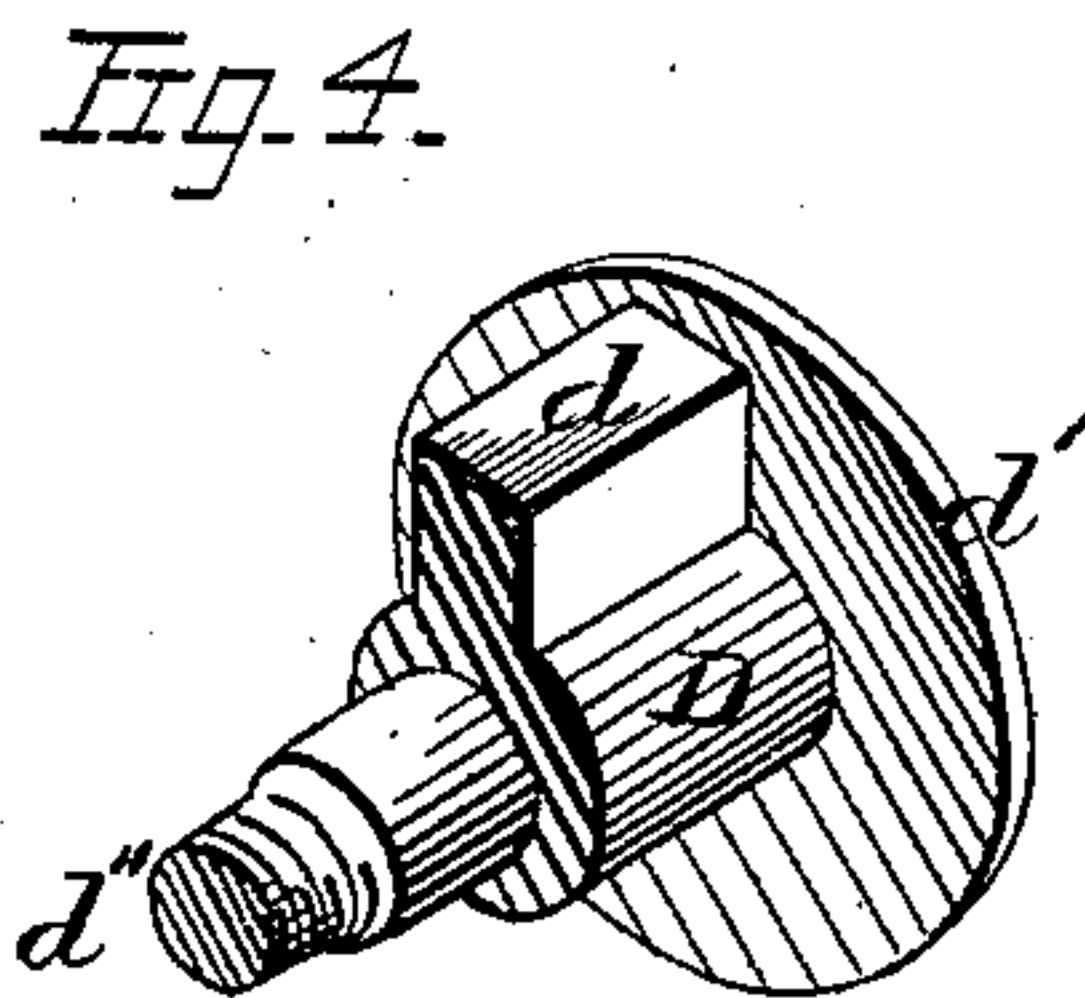
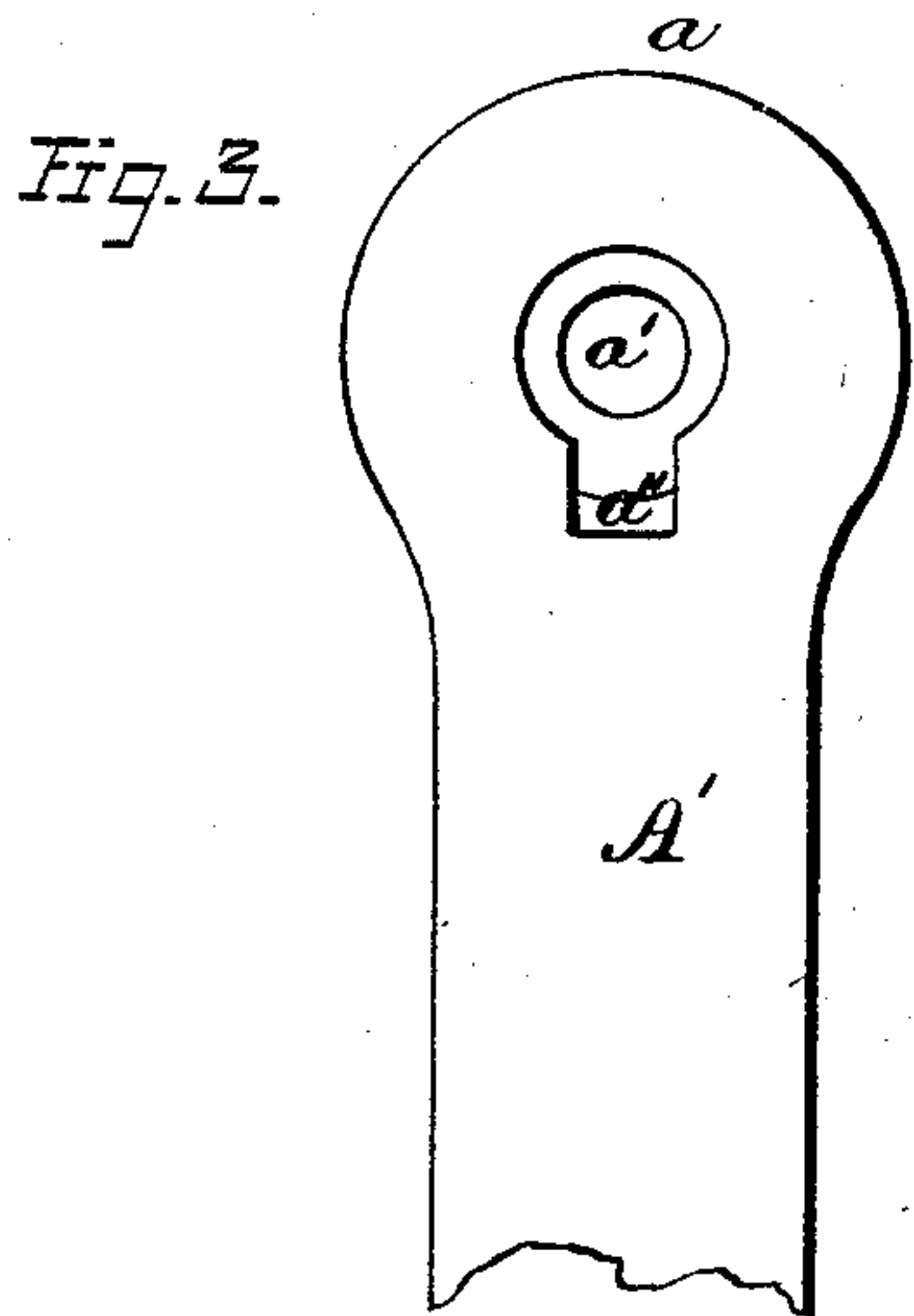
INVENTOR.

N. S. Ketchum, by
Prindle and Beane, his Attys

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UNITED STATES PATENT OFFICE.

NATHANIEL S. KETCHUM, OF ROCK FALLS, ILLINOIS, ASSIGNOR TO THE
EUREKA MANUFACTURING COMPANY, OF SAME PLACE.

IMPROVEMENT IN SCHOOL-DESKS.

Specification forming part of Letters Patent No. 148,712, dated March 17, 1874; application filed
October 22, 1873.

To all whom it may concern:

Be it known that I, N. S. KETCHUM, of Rock Falls, in the county of Whitesides and in the State of Illinois, have invented certain new and useful Improvements in School-Desks; and do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawing making a part of this specification, in which—

Figure 1 is a perspective view of a desk and seat containing my improvements. Fig. 2 is a plan view of the inner face of the seat-arm. Fig. 3 is a like view of the outer face of the upper end of the standard. Fig. 4 is a perspective view of the bolt upon which said seat-arm is pivoted; and Figs. 5 and 6 are elevations of the outer side of said seat-arm, showing, respectively, the relative positions of parts when said arm occupies a horizontal and a vertical position.

Letters of like name and kind refer to like parts in each of the figures.

The design of my invention is to simplify the construction and increase the efficiency of a combined school desk and seat; to which end it consists in the peculiar construction and combination of the parts forming the joint or pivotal bearing between the seat arm and standard, substantially as and for the purpose hereinafter specified.

In the annexed drawings, A represents a frame that supports one end of the device, which frame is connected to or with a similar frame by means of a back, B, and desk C, in the usual manner. Extending upward and forward from the front side of each frame end A is an arm or standard, A', which, upon its upper end and outer side is provided with a semi-spherical boss, *a*, that contains a central opening, *a'*, for the reception of a bolt, D. The seat-arm E has the usual external form, and is provided with an opening, *e*, through which and through the opening *a'*, within the standard A', the bolt D is passed, and forms an axial or pivotal bearing for and upon which said seat-arm moves in a vertical plane. Upon the lower side of the body of the bolt D is provided a feather, *d*, which has, transversely, about one-half the dimensions of the same, projects radially outward to an equal distance,

and extends from the head *d'* to the reduced and threaded end *d''* of said bolt. A slot or key-way, *a''*, exactly corresponding in dimensions to the key or feather *d*, is provided within the lower side of the standard-opening *a'*, while within the seat-arm E the metal is removed upon the lower and rear sides of the opening *e*, so as to form an opening, *e'*, which has nearly the shape and dimensions of one-fourth of a circle.

As thus constructed, the operation of said parts is as follows: The bolt D is prevented from turning by means of its key and the key-way *a''* within the standard A, while the seat-arm is permitted to pass from a horizontal to a vertical position, and at the limit of motion in either direction is arrested by the impact of the side of the opening *e'* upon or against the corresponding side of said key.

It will be seen that as the opening or enlargement *e'* is entirely below the pivotal center, it does not in any manner lessen the real bearing-surface of the opening *e*, and consequently, does not in the least impair the durability of the parts, while by thus arranging the stops within the joint, there is less liability to breakage or injury, the device is more simple in construction, costs less, and presents a much better appearance.

I am aware that pivoted seat-arms provided with lugs which work within segmental openings in the standard and limit the motion of said arm have been used heretofore, and that, therefore, the limitation of motion by means of stops is not new.

Having thus fully set forth the nature and merits of my invention, what I claim as new is—

The standard A', provided with the opening *a'* and key-way *a''*, and the seat-arm E, provided with the opening *e* and enlargement *e'*, combined by means of the bolt D, provided with the feather or key *d*, substantially as and for the purpose specified.

In testimony that I claim the foregoing I have hereunto set my hand this 21st day of September, 1873.

NATHANIEL S. KETCHUM.

Witnesses:

J. G. CRAWFORD,
M. A. BURNS.