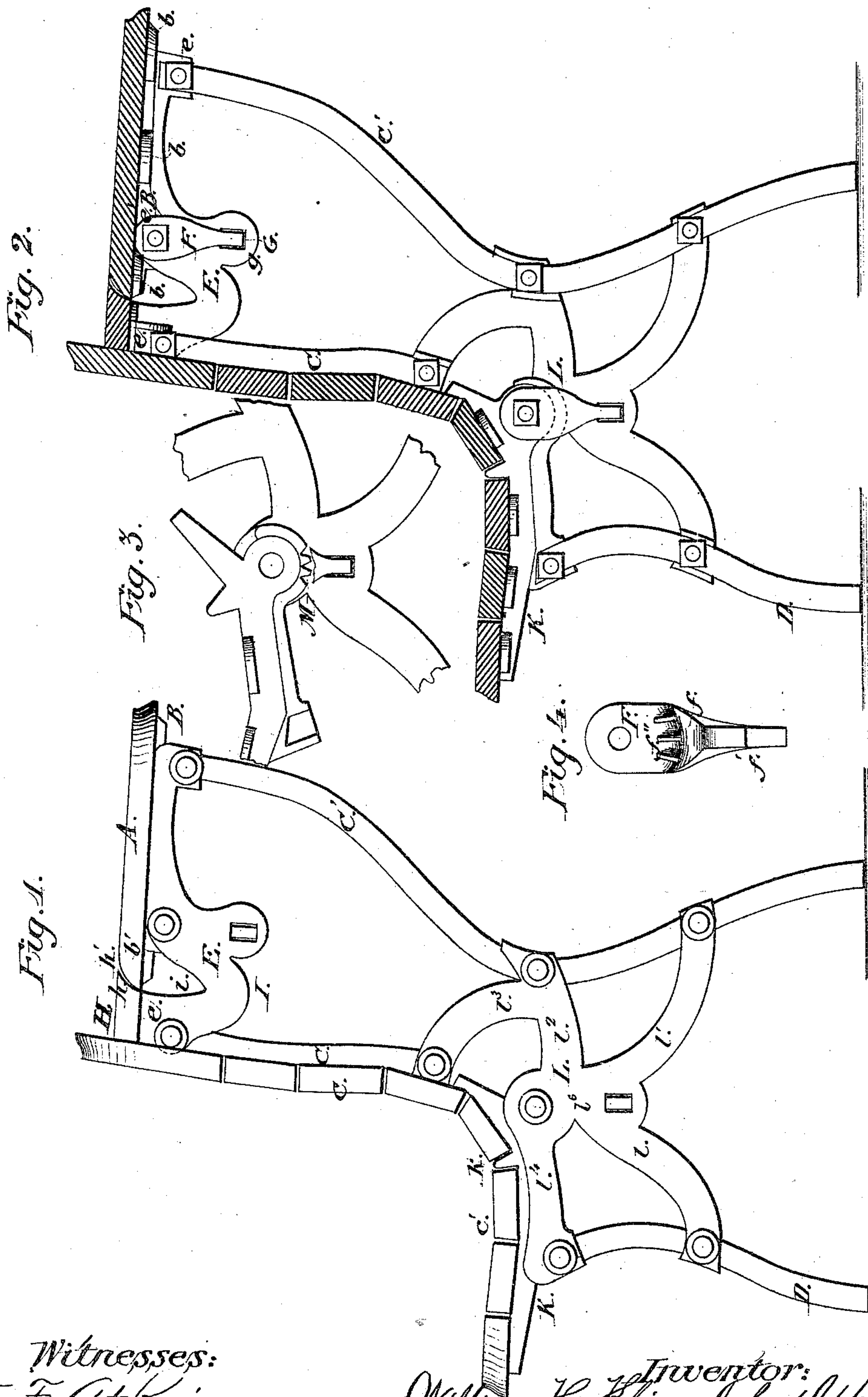


W. H. KLINE, J. UPHAM & S. D. TUTTLE.

SCHOOL-DESK AND SEAT.

No. 172,451.

Patented Jan. 18, 1876.



Witnesses:
J. F. Atkinson
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UNITED STATES PATENT OFFICE.

WILLIAM H. KLINE, JOHN UPHAM, AND STERLING D. TUTTLE, OF EATON,
OHIO.

IMPROVEMENT IN SCHOOL DESKS AND SEATS.

Specification forming part of Letters Patent No. 172,451, dated January 18, 1876; application filed
August 28, 1873.

To all whom it may concern:

Be it known that we, WILLIAM H. KLINE, JOHN UPHAM, and STERLING D. TUTTLE, all of Eaton, Preble county, State of Ohio, have invented a Combined School Desk and Seat, of which the following is a specification:

This invention relates to a combined school desk and seat, so constructed as to be neat, substantial, convenient, and comfortable, all as hereinafter fully set forth.

Our improvement consists, first, in a brace-frame or spider of peculiar construction, having a body which forms a bearing for the seat-hinge, lateral and downwardly-diverging braces, and standards for bracing the seat-back supports near their centers to the back lateral braces near their junction with the back legs, in combination with bent back and front legs and seat and seat-back supports. Our improvement consists, secondly, in a clamp provided with shoulders, shank, and corrugations, in combination with a desk or seat hinge formed with a notched heel and pintle.

In the accompanying drawing, Figure 1 represents an end view, and Fig. 2 a transverse vertical section, of the combined desk and seat; Fig. 3, an inside view of the lower brace and joint, with the nut and clamp removed; and Fig. 4, an inside view of the clamp.

A is the top of the desk, to the under side of which, near the ends, are fastened hinge-straps B, by means of ears *b* and screws. These hinge-straps have eyes at *b'*. C are bent wooden supports, to which the slats *c*, forming the back of the seat, are fastened by screws. C' are bent wooden legs in the rear of the desk and seat. D are bent wooden legs under the seat. The supports C and the legs C' are connected at their upper ends by peculiar hinge-braces E. These braces have at each end three-sided sockets *e*, to receive the upper ends of the supports and legs, which are firmly secured in the sockets by bolts and nuts. These braces have depressions *e'* to receive the eyes *b'* of the hinge-straps, and bolts pass through the eyes on the hinge-straps and the sides of the depressions on the hinge-braces, forming hinges for the lid of the desk. Clamps F, having shoulders *f*, shanks

f', and teeth *f''*, are placed on the hinge-bolts under the nuts, the shanks resting in sockets *g* in projections G on the hinge-braces, the shoulders *f* relieving the eyes on the hinge-straps from pressure, and the teeth *f''* engaging the teeth M on the hinge-braces, as shown in Fig. 3, thus preventing the clamps from turning. On the top of the sockets *e* on the hinge-braces is secured a strip, H, having a beveled edge, *h*, to match the beveled edge *h'* on the desk-top. The hinge-braces are bent at I to form depressions *i*, to permit the turning of the top of the desk. K are hinge-straps, like the hinge-straps B, except that they have projections *k*, forming sockets for the seat-slats. L are brace-frames or spiders for bracing the legs and back-supports, and having hinge-supports in the body *l'* thereof, similar to those of the hinge-supports E. The hinge-straps K and the hinge-supports on the spiders L are connected to form seat-hinges, in the same manner as the desk-top hinges are formed, embracing similar clamps and recesses. The brace-frames or spiders L have arms *l*, *l'*, *l''*, *l'''*, on the extremities of which are sockets receiving the legs and back-supports, and to which they are fastened by bolts and nuts, as shown.

What we claim is—

1. The spiders L, constructed with body *l'*, lateral braces *l''*, downwardly-diverging braces *l*, *l'*, and standards *l'''*, in combination with the bent back legs C', front legs D, seat-supports K, and seat-back supports C, said body *l'* forming a bearing for the seat-hinge, and the standards *l'''* bracing the seat-back supports near their centers to the lateral braces *l''*, near their junction with the back legs, substantially as set forth.

2. The clamp F, constructed with shoulders, shank, and corrugations, and applied substantially as set forth, in combination with a desk or seat hinge formed with a notched heel and pintle.

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Witnesses:

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