No. 749,640. PATENTED JAN. 12, 1904.

J. H. SUTHERLAND.

COMBINED SCHOOL SEAT AND DESK.

APPLICATION FILED MAY 11, 1903.

NO MODEL. 2 SHEETS—SHEET 1.

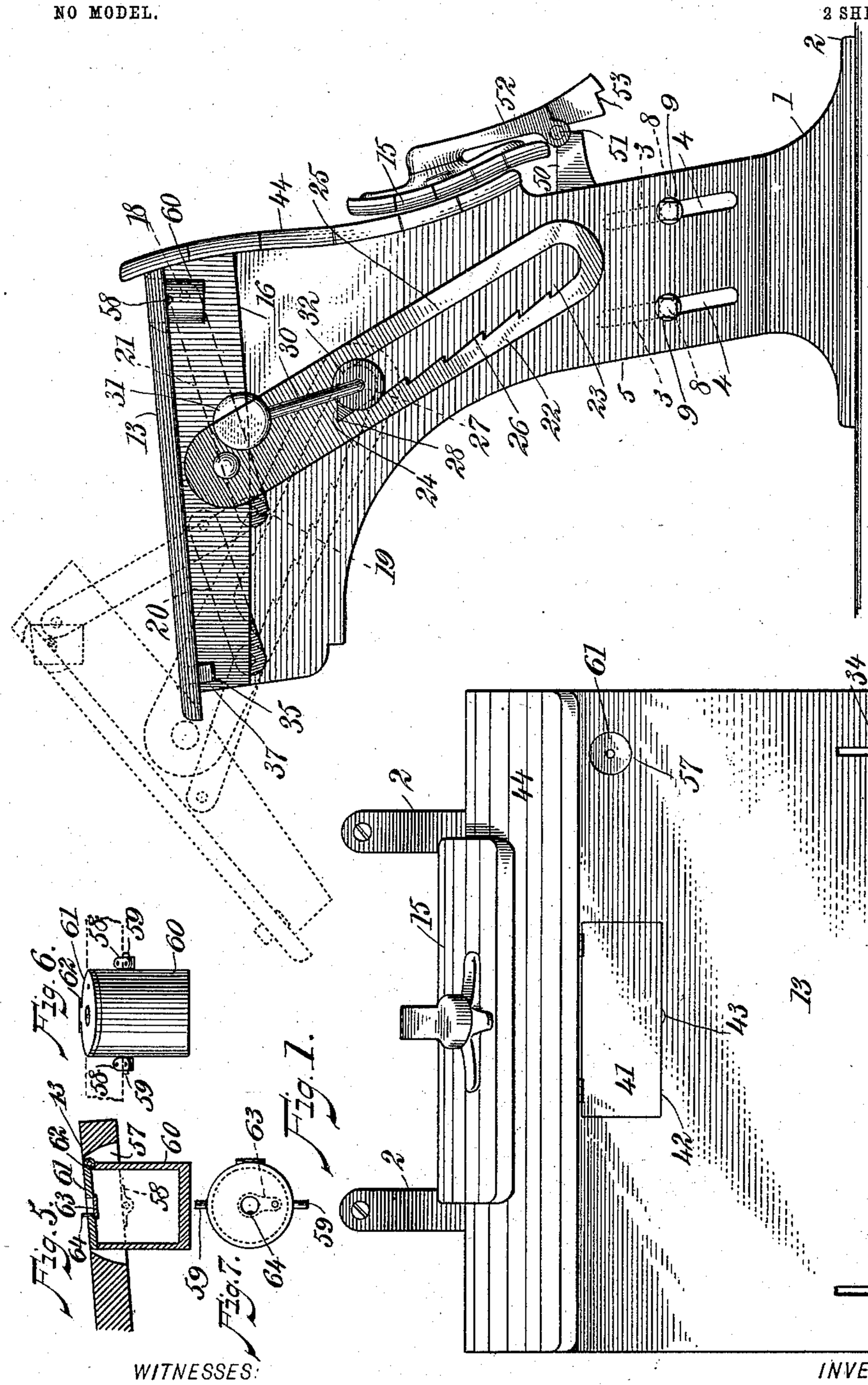

Fig. 2.

Fig. 1.

Fig. 6.

Fig. 5.

Fig. 7.

WITNESSES:

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NO MODEL. 2 SHEETS—SHEET 2.

Fig. 4.

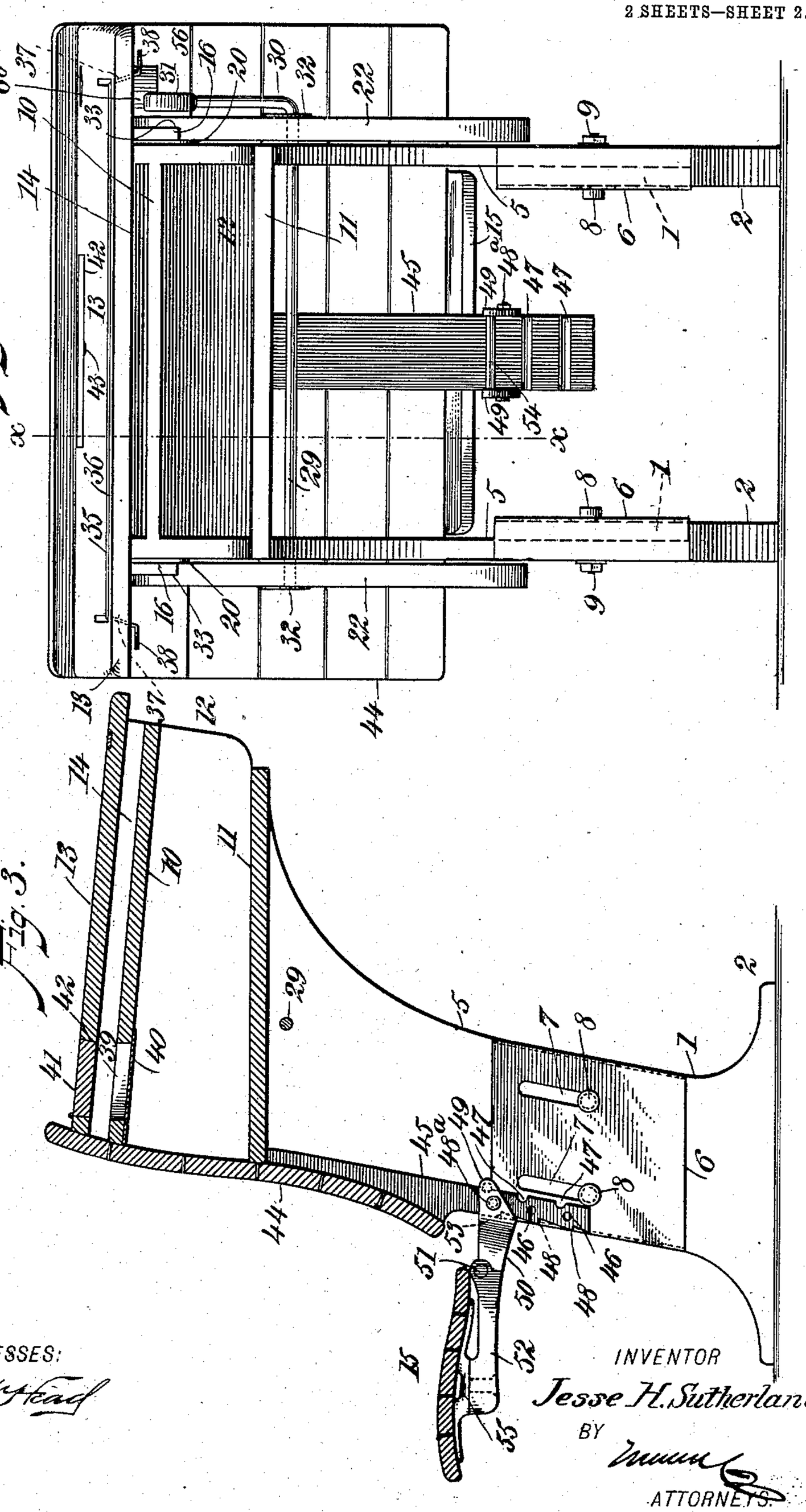

Fig. 3.

WITNESSES:

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UNITED STATES PATENT OFFICE.

JESSE H. SUTHERLAND, OF DAWKINS, COLORADO.

COMBINED SCHOOL SEAT AND DESK.

SPECIFICATION forming part of Letters Patent No. 749,640, dated January 12, 1904.

Application filed May 11, 1903. Serial No. 156,522. (No model.)

To all whom it may concern:

Be it known that I, JESSE H. SUTHERLAND, a citizen of the United States, and a resident of Dawkins, in the county of Pueblo and State of Colorado, have invented a new and Improved Combined School Seat and Desk, of which the following is a full, clear, and exact description.

This invention relates to combined school seats and desks; and it consists, substantially, in the construction, organization, and combinations of parts hereinafter particularly described and claimed.

The invention has for its principal object to provide a structure of this kind which is both effective and reliable in use, besides comprising comparatively few elements or parts which are not liable to get out of order, and also possessing the capacity for long and repeated service.

A further object is to provide a structure of the character referred to which is simple in construction and comparatively inexpensive to manufacture and one also in which the desk is bodily adjustable as to height, while the top thereof is independently adjustable to varying inclinations, whereby a pupil or scholar is enabled to occupy a natural or normal position while seated at the desk perusing or going over a lesson or book placed upon the top of the desk.

A further object of the invention is to provide a combined school seat and desk which is both light in weight and strong and durable, besides being readily taken apart for shipment or transportation and occupying comparatively small space when set up in position for use.

The above and additional objects are attained by means substantially such as are illustrated in the accompanying drawings, in which—

Figure 1 is a top or plan view of a combined school seat and desk embodying my improvements, the seat being shown as folded up against the back of the desk. Fig. 2 is a side elevation of my improved combined school seat and desk, also showing the seat in folded positions and representing very clearly both the means for effecting bodily adjustment of the desk as well as the means for effecting the adjustments of the top of the desk to varying angles or inclinations. Fig. 3 is a vertical transverse sectional elevation taken substantially on the line *x x* of Fig. 4 and showing the means for effecting independent adjustments of the seat. Fig. 4 is a vertical front elevation of the structure, also showing part of the seat-adjusting means more clearly; and Figs. 5, 6, and 7 are views in detail, representing different features of construction and organization of parts relating to the pivotally-suspended casing for the ink-well.

Preliminarily to a more detailed description, it may be stated that in the embodiment of the combined school seat and desk herein shown the sides and supporting legs and feet of the structure may be formed either of wood or metal or any other desired material, as may also the other parts of the structure, and it may be stated that I have provided a school-desk of special embodiment, and also that the several sets of adjusting devices to be referred to are also of special construction and organization, the parts being capable of ready operation without noise or friction and also without undue wear or liability to breakage or dislocation of said parts. While I have herein shown a certain preferred embodiment of my improvements, however, it will be understood that I am not limited to the precise details thereof in practice, since immaterial changes therein may be resorted to coming within the scope of my invention.

Specific reference being had to the accompanying drawings, 1 1 represents supporting-legs for the combined school seat and desk structure, said legs each having a foot 2 for resting upon the floor and also being formed with preferably duplicate vertical slots 3 3, (see dotted lines in Fig. 2,) the sides of which are in alinement with similar slots 4 4, formed in the lower parts of the side portions 5 5 of the desk, the said lower parts of said side portions being provided with inner metal sockets 6 6, having therein vertical slots 7 7, these sockets receiving the said legs 1 1 in an adjustable manner vertically, and the entire desk structure may be held to any position to which it may be adjusted bodily by means of headed screws 8, passing through

each set of the several slots referred to and having thereon fastening or securing nuts 9 for the structure.

The side portions 5 5 form parts of the desk proper, and they are each preferably widened at the upper edge thereof, as shown, while supported between said side portions a suitable distance from such upper edges are the upper and lower elements 10 and 11, constituting the top and bottom, respectively, of the body of the desk, the inner compartment 12 of which is open at the front for the purpose of access thereto by the scholar in placing books or other articles within the desk. The said element or top 10 of the desk-body is preferably set below the upper edges of the side portions 5 5, so as to form with an auxiliary top 13 an upper compartment 14 for the reception of paper, books, or other articles which may conveniently be placed therein. The auxiliary top 13 constitutes a support for the books, writing-sheets or other articles employed by the scholar at school, and the same is preferably made adjustable to any desired inclination to suit the convenience of the scholar occupying the seat 15, supported from a similar seat and desk structure (not shown) supposed to be located at the proper distance in rear of the present structure. Thus I provide the under side of said auxiliary top 13 with flanges 16 16, located, preferably, such distances from the side edges thereof as to come just outside of the upper part of the side portions 5 5, and movably connecting the inner surface of each of said flanges at 18 with the adjacent surfaces of the corresponding side portions at 19 are substantially parallel links 20 and 21, which are preferably constructed of flat metal, so as to be capable of easy working in the spaces between the parts 5 and 16 without obstruction. Secured to the outer side of each of the said flanges 16 at a point substantially intermediate the point of connection therewith of the upper end of the said links 20 and 21 is the upper end of an arm 22, having therein a longitudinal slot 23, the surface of the upper extremity 24 of which is constructed at an angle to the rearward side surface 25 thereof, the forward side surface of said slot being formed or provided with teeth or serrations 26, having each a straight side and a side upwardly and forwardly inclined with respect to the front of the structure, as shown in Fig. 2, for instance. Working in each of the slots 23 is an oscillating cam or dog 27, having a point 28, which engages the teeth 26, and also formed with a flat or angular upper side, as shown, corresponding to the said angular formation 24 of the upper extremity of said slot. Connecting the said cams or dogs in a rigid manner is a rocking bar 29, extending across the desk-body beneath the lower element 11 thereof, said bar having an arm or branch 30 at one end, provided with a weight 31, tending to maintain the said points 28 of the said cams or dogs normally in engagement with corresponding ones of the teeth 26 of the said forward sides of the slots in the adjusting-arms 22 for the auxiliary top 13. In order to prevent outward spreading of the arms 22 with reference to the side portions 5 5, the said cams or dogs are each provided on the outer face with a button or disk 32, the edges of which lap the edges of the slots 23 at the outer faces of the arms, (see Fig. 2,) and in order to bring the inner surface of each arm 22 as near as possible to the adjacent surface of the corresponding side portion 5 the upper ends of said arms are notched or recessed on their inner surfaces at 33, thereby bringing said inner surfaces of said arms substantially flush with the corresponding surfaces of the flanges 16 on the under side of the auxiliary top 13.

As a means of preventing books, paper sheets, or other articles from sliding from the surface of the auxiliary top 13 of the desk while this top is in an inclined position I form in said top, near the side edges thereof, parallel slots 34 34, which are intersected at the forward ends thereof by the ends of a longitudinal groove or recess 35, formed for a suitable depth in the upper surface of said top and in which groove or recess is adapted to fit a flat strip 36, of metal, having the ends thereof bent at 37 and passing through the said slots 34 at such an angle as to frictionally engage one of the sides of said slots, and thereby serve to hold the strip 36 in any position to which the same may be moved within the limits or range permitted by the length of said slots. Thus when the auxiliary top 13 is in substantially a horizontal position the strip 36 may be placed within the groove or recess 35 even or flush with the general surface of such top, and the strip will then not be in the way or prevent use being made of the desk for any purpose desired. When, however, the said top 13 is adjusted at an inclination, the strip 36 may be lifted from the groove or recess therefor and moved along the surface of the top to any desired position, and being thus brought above the general surface of the top it is apparent that the strip will act to engage the lower edge of a book or other article that may be placed upon such top either for reading or writing purposes. The ends of the branch members 37 of the said strip 36 are preferably formed with cranks or loops 38 to facilitate taking hold of them for purposes of manipulation by the scholar or other operative.

Formed in the top 10 of the body of the desk is substantially a rectangular opening 39, at the lower edge of which is a bottom or plate 40, thereby forming a convenient receptacle for pencils, erasers, chalks, and the like, and in order to give ready access to this receptacle I form in the auxiliary top 13, near the

rearward edge thereof, a corresponding opening, which is closed by a hinged or other movable door 41, the forward edge 42 of the latter opening being notched at 43 to facilitate the raising of said door by engagement of the finger-nail with the forward edge thereof, as will be understood.

The back 44 of the desk may be of any usual construction to conform as nearly as possible to the general curves of the back or body of the scholar or other person occupying the hinged seat 15, and preferably I provide means whereby said seat may be adjusted as to height independently of the bodily adjustments of the desk structure. Thus secured to the said back 44 in any suitable way and extending somewhat below the lower edge thereof is a hanger 45, having a series of openings 46 therethrough, said hanger having grooves 47 across the inner face thereof, while its outer face is provided with a series of teeth 48, having each a straight face and an upwardly and inwardly inclined face. (See Fig. 3.) A pin 48ª is inserted through any one of said openings, and said pin also passes through corresponding openings therefor in the arms 49 of a yoke 50, to which arms is hinged or pivoted at 51 a support 52 for the said seat 15, it being clearly apparent that in this way the seat may be folded or turned up against the said back 44, as shown in Figs. 1 and 2. The inner end of the said hinged support 50 is notched at 53 to engage the straight faces of the teeth 48, and it should be stated that the arms 49 of said yoke embrace the said hanger 45 and are connected by a member 54 taking into the grooves 47 of said hanger. (See Fig. 4.) To adjust the seat, the same is turned upwardly and the pin 48ª is removed from any particular one of the openings 46 in which it may have been previously placed, whereupon the member 54 of the yoke is dislodged from the corresponding groove 47, and then the yoke is raised or lowered, as may be desired, and the pin is then inserted through another one of said openings 46, as before, the member 54 also becoming seated in another one of said grooves 47, and then the seat may be turned down to have the notched inner end of the support 52 therefor engaged, as before, by another one of the said teeth 48.

The construction, organization, and operation of my combined school seat and desk will be fully understood without further description, and it may be added that sometimes I prefer to provide the said seat 15 with a pivot 55 to enable the same to be turned about from side to side while occupied.

The auxiliary cover 13 is formed with an opening 57 (see Fig. 5) just outside of or beyond the plane of one of the flanges 16 thereof, the sides or walls of which opening are beveled downwardly and outwardly, as shown, and fitted to the under side of this auxiliary cover on opposite sides of said opening 57 are bearings 58 for trunnions 59, projecting from the sides of a receptacle 60 for an ink-well, (not shown,) said receptacle being provided with a lid 61, hinged at 62, and having an opening therein closed by a slide 63, having a projection 64 therefrom for enabling the same to be easily operated to either open or close the opening, said opening being for the introduction of a pen when desired. From this described construction and organization of parts it will be seen that the said receptacle 60 will always maintain practically a horizontal position at whatever inclination the auxiliary cover 13 may be placed, thus overcoming any liability to spilling of ink which may be contained in the ink-well.

By rocking the bar 29 in one direction through the medium of its handle 30 the cams or dogs may be disengaged from the teeth 26, whereupon the auxiliary top 13 may be swung or moved forwardly to any desired inclination, and then by releasing the said handle the said cams or dogs will be again carried into engagement with certain ones of said teeth by the fall or gravitating action of the weight 31. When the said top is carried back to horizontal position, as shown in Fig. 2, the upper flat faces of the cams or dogs are brought into compact relationship with the angular surfaces of the upper extremities of the slots 23, and thus will the parts be held rigidly in their proper positions.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

1. A school-desk comprising vertical side portions, an auxiliary top having flanges on its under side, links movably connecting said flanges with said side portions, duplicate arms each having a slot therein, and secured at their upper ends to the flanges, each arm also having teeth on the forward edge of its slot, movable dogs working in these slots, and adapted to engage said teeth, and a weighted rocking bar connecting said cams, the upper extremity of each of the slots being at an angle to the rearward edge thereof, and each of said cams being flattened on its upper side, as shown, and for the purpose described.

2. A school-desk comprising vertical side portions, an auxiliary top having an opening therein, and provided on its under side with flanges, links movably connecting said flanges with said side portions, duplicate arms each having a slot therein, and secured at their upper ends to the flanges, each arm also having teeth on the forward edge of its slot, movable dogs working in these slots, and adapted to engage said teeth, a weighted rocking bar connecting said cams, and a receptacle for an ink-well pivotally suspended at opposite sides of said opening, the upper extremity of each of said slots being at an angle to the rearward

edge thereof, and each of said cams being flattened on its upper side, as shown, and for the purpose described.

3. A school-desk constructed with a body having therein a compartment open at the front, and provided with an auxiliary top, portions of the sides together with the upper part of said compartment, uniting with the top in the formation of another compartment above the first, said upper part being formed with an opening therein having a bottom, and said auxiliary top having a corresponding opening therein closed by a door.

4. A school-desk having a top adapted to be adjusted to different inclinations, said top having parallel slots formed therein transversely a suitable distance apart, and provided with a longitudinal groove or recess in its upper surface, the ends of said groove intersecting the forward ends of said slots; and a strip adapted to fit said groove flush with the said surface of the top, and having means at the ends passing through said slots and engaging the sides thereof.

5. In a combined school seat and desk, a desk having a back provided with a hanger formed therethrough from side to side with a plurality of holes, one above the other, and having teeth on its outer face and grooves on its inner face, a yoke embracing said hanger, and having a member adapted to the grooves, a support pivoted to the yoke and having its inner end constructed to engage said teeth, and a rotatable seat held on said support.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

JESSE H. SUTHERLAND.

Witnesses:
W. T. BARNARD,
E. C. CASH.