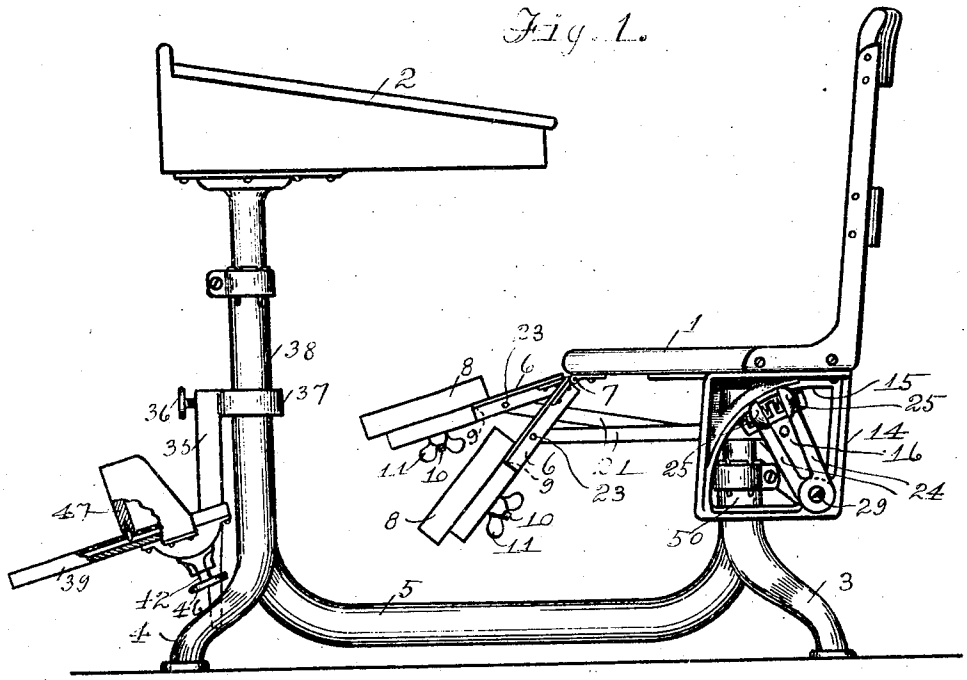
Oct. 23, 1928. 1,689,024

G. H. HAMILTON ET AL

SEAT STRUCTURE

Filed July 5, 1927 2 Sheets-Sheet 1

Fig. 1.



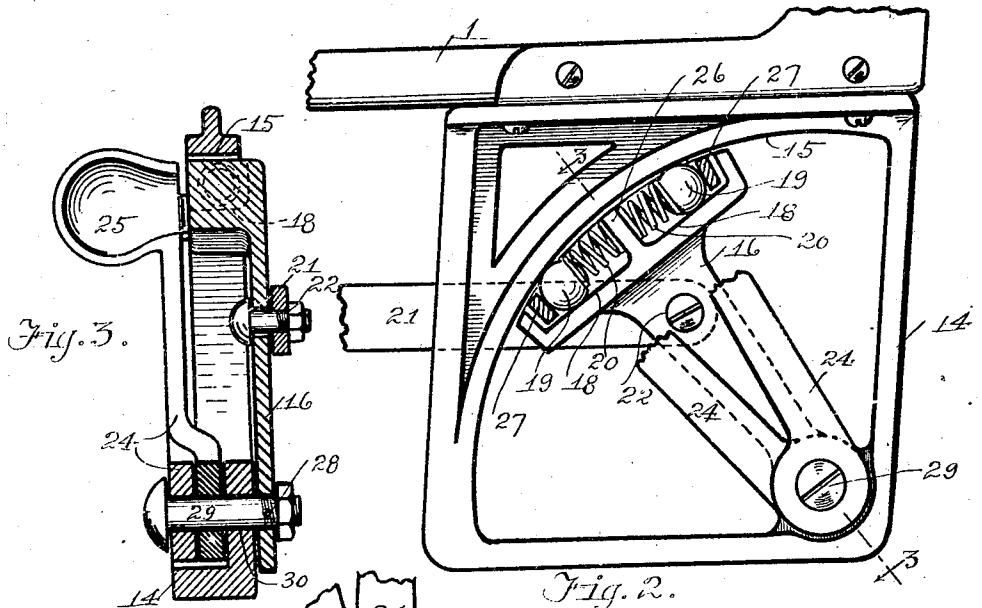


Fig. 2.

Fig. 3.

Fig. 4.

Witness:
G. E. Spalding

INVENTORS:
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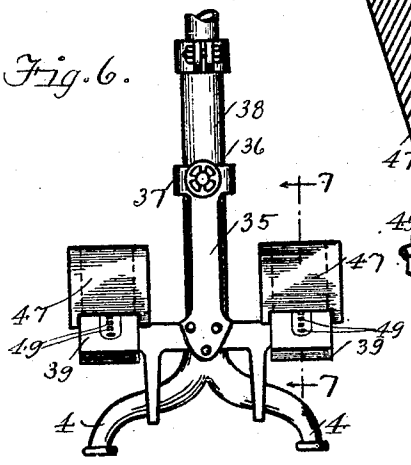
Oct. 23, 1928. 1,689,024

G. H. HAMILTON ET AL

SEAT STRUCTURE

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Fig. 6.



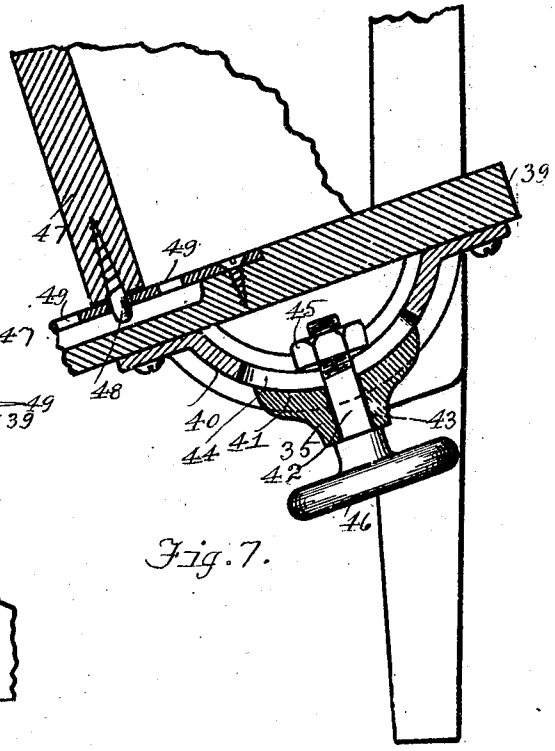


Fig. 7.

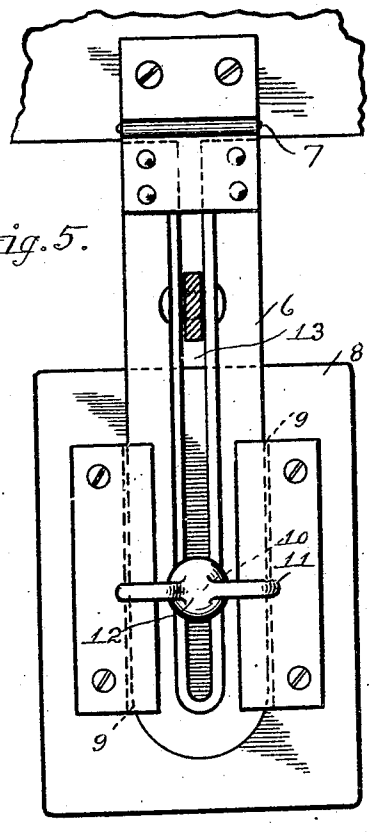


Fig. 5.

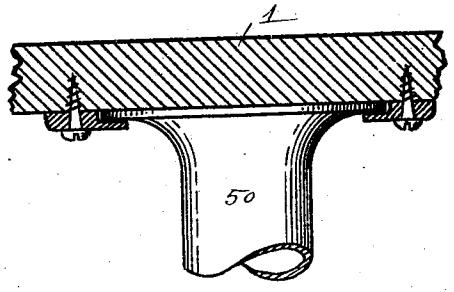


Fig. 8.

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Patented Oct. 23, 1928. 1,689,024

UNITED STATES PATENT OFFICE.

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SEAT STRUCTURE.

Application filed July 5, 1927. Serial No. 203,496.

The present invention relates to seat structures, particularly such as are used in schools and in connection with desks; and its object is to provide such a structure having improved adjustable leg rests for persons requiring the same.

This and other and more specific objects hereinafter appearing are attained by, and the invention finds preferable embodiment in, the structure hereinafter particularly described and illustrated by the accompanying drawings, in which:—

Figure 1 is a side view of a combined seat and desk structure provided with leg rests;

Figure 2 is a side view of a portion of the means for adjusting the position of one of the leg rests;

Figure 3 is a sectional view thereof taken on line 3—3 of Figure 2;

Figure 4 is a transverse sectional view of portions of the same;

Figure 5 is a bottom plan view of said leg rest;

Figure 6 is a left-hand end view of a portion of the combined structure, showing a second leg rest;

Figure 7 is a vertical sectional view of a portion of the same taken on line 7—7 of Figure 6; and

Figure 8 is a vertical sectional view of a portion of the seat illustrating the rotatable mounting thereof.

In the embodiment of the invention illustrated by said drawings, the combined seat and desk structure particularly adapted for use in schools has a seat 1 and desk 2 having legs 3 and 4 respectively and connected by a horizontal member 5. Mounted in connection with the seat 1 are a pair of rests for the upper portions of the legs of the occupant, each rest comprising a body portion 6 mounted at the forward edge of the seat, swingably on a horizontal axis 7. This body portion 6 carries a leg-supporting portion 8 slidable toward and away from the seat in a way 9 in said body portion, to adjusted positions in which said leg-supporting portion 8 may be releasably held by a threaded rod 10 carried by this leg-supporting portion and having a wing nut 11 whose head 12 bears on the body portion 6 adjacent its slot 13 through which this rod extends. Means are provided for swinging in a vertical plane and for releasably holding in swung positions this leg rest, such means as shown comprising a fixed member designated generally 14 carried by the seat and having an arcuate surface 15, and an arm member 16 mounted swingably concentrically with said arcuate surface and having a surface 18 inclined relatively thereto. A clamping element, as the ball 19 is adapted to be moved along and between said surfaces in the direction in which these surfaces approach each other to a position wherein said ball element wedgingly engages between said surfaces to clamp the members 14 and 16 against interrelative movement, said element 19 being pressed in said direction and to such position by a coiled spring 20. A link 21 is pivotally connected at 22 and 23 respectively to the swingable arm member 16 and the body portion 6 of said leg rest so that in the clamping position of the ball element 19 the leg rest is held in the swung position to which it may have been moved by said arm member or otherwise. The element or ball 19 is released from its clamping action and moved against the pressure of spring 20 by an arm 24 swingably mounted concentrically with the arm member 16, and provided with a handle portion 25 and an inward projection 27 engaging the ball element 19. As shown, a pair of such arms 24, a pair of ball elements 19 and a pair of springs 20 abutting on an intermediate stop 26 are provided, so that the handle portions 25 of these arms 24 may be pressed by hand toward each other thus releasing both elements or balls 19 from their clamping action.

By mounting the parts so that the arm member 16 is keyed at 28 on a shaft 29 rockable in a bearing 30 in member 14, and by mounting the arms 24 on said shaft with a turning movement thereon limited as by means of the shaft's projections 31 engaging one of the spaced sides of the axially-extending grooves 32 of the arms 24 (as seen in Figure 4), the arm member 16 and said leg rest may be swung by the arms 24 (in the released position of the ball elements 19) to desired positions.

A second pair of rests (for the lower or ankle portions of the legs of the occupant) are shown, comprising a body portion 35 releasably held in adjusted vertical positions as by the set screw 36 threaded in the collar 37 of said body portion and engaging the upright 38 on which the desk 2 is carried, each

of said rests comprising also a leg support 39 having a convex bearing surface 40 turnable in a vertical plane on the concave bearing surface 41 of the body portion. A threaded bolt 42 extends through an opening 43 in the body portion 35 and through a slot 44 of the leg support 39 and carries a nut 45, so that this bolt may be turned by its wheel handle 46 to clamp the leg support 39 in adjusted turned positions. This leg support carries a foot rest 47 movable toward and from the seat to adjusted positions in which it is releasably held as by its pin 48 adapted to be inserted into any one of a series of holes 49, such series extending in the longitudinal direction of support 39. The seat 1 may be mounted turnably in a horizontal plane on its upright support 50 as shown in Figure 8.

Although the arms 24 may turn freely and not limitedly as shown in Figure 4, their handles 25 may be pressed toward each other sufficiently to compress the springs 20 completely against the stop 26, whereupon the swinging movement of these arms 24 thus held together will swing the arm member 16 although the same be not keyed as hereinbefore set forth.

The leg rest particularly shown in Figure 7 and the same in combination with the leg rest particularly shown in Figures 1 and 5 are to be made the subject of a divisional application for patent.

The invention being intended to be pointed out in the claims, is not to be limited to or by details of construction of any particular embodiment thereof illustrated by the drawings or hereinbefore described.

What is claimed is:

1. In a structure of the character described: a seat; a leg rest mounted in connection therewith swingably in a vertical plane; means carried in connection with the seat for holding the leg rest in adjustable swung positions, comprising a fixed member having an arcuate surface, a swingably mounted member having a surface inclined to said arcuate surface, a clamping element adapted to be moved along said surfaces, means for releasably moving said element into wedgingly clamping engagement between said surfaces, and connections between the leg rest and said second-mentioned member for swinging the leg rest by the swinging movement of said second-mentioned member.

2. In a structure of the character described: a seat; a leg rest mounted in connection therewith swingably in a vertical plane; means carried in connection with the seat for holding the leg rest in adjustable swung positions, comprising a fixed member having an arcuate surface, a swingably mounted member having a surface inclined to said arcuate surface, a clamping element spring-pressed along said surfaces into wedgingly clamping engagement therebetween, a swingably mounted arm engaging said element to move the same reversely, and connections between the leg rest and said second-mentioned member for swinging the leg rest by the swinging movement of said second-mentioned member.

3. In a structure of the character described: a seat; a leg rest mounted in connection therewith swingably in a vertical plane; means carried in connection with the seat for holding the leg rest in adjustable swung positions, comprising a fixed member having an arcuate surface, a swingably mounted member having a surface inclined to said arcuate surface, a clamping element spring-pressed along said surfaces into wedgingly clamping engagement therebetween, means for moving said element reversely, and connections between the leg rest and said second-mentioned member for swinging the leg rest by the swinging movement of said second-mentioned member.

4. In a structure of the character described: a seat, a leg rest mounted in connection therewith swingably in a vertical plane and having a body portion and a leg-supporting portion slidable toward and from the seat to adjustably held positions on the body portion; means carried in connection with the seat for holding said body portion in adjustable swung positions, comprising a fixed member having an arcuate surface, a swingably mounted member having a surface inclined to said arcuate surface, a clamping element adapted to be moved along said surfaces, means for releasably moving said element into wedgingly clamping engagement between said surfaces, and connections between said body portion and said second-mentioned member for swinging said body portion by the swinging movement of said second-mentioned member.

5. In a structure of the character described: a seat; a leg rest mounted in connection therewith swingably in a vertical plane; means carried in connection with the seat for holding the leg rest in adjustable swung positions comprising a fixed member, a rock shaft, a second member keyed to the rock shaft, connections between the leg rest and said second member for swinging the leg rest by the swinging movement of said second member, means for releasably holding said members against interrelative movement, an arm having a limited turning movement on the rock shaft and engaging said holding means in said limited movement to operate the same.

6. In a structure of the character described: a seat; a leg rest mounted in connection therewith swingably in a vertical plane; means carried in connection with the seat for holding the leg rest in adjustable swung positions comprising a fixed member having an arcuate surface, a swingably mounted member having a stop and a surface inclined to said arcuate surface, a pair of clamping elements

oppositely spring-pressed from the stop along said surfaces into wedgingly clamping engagement therebetween, a pair of swingably mounted arms engaging said elements respectively to move the same reversely, and connections between the leg rest and said second-mentioned member for swinging the leg rest by the swinging movement of said second-mentioned member.

In testimony whereof we have hereunto set our hands at Grand Rapids, Michigan, this 30th day of June, 1927.

GEORGE H. HAMILTON.
ROY A. WHITE.