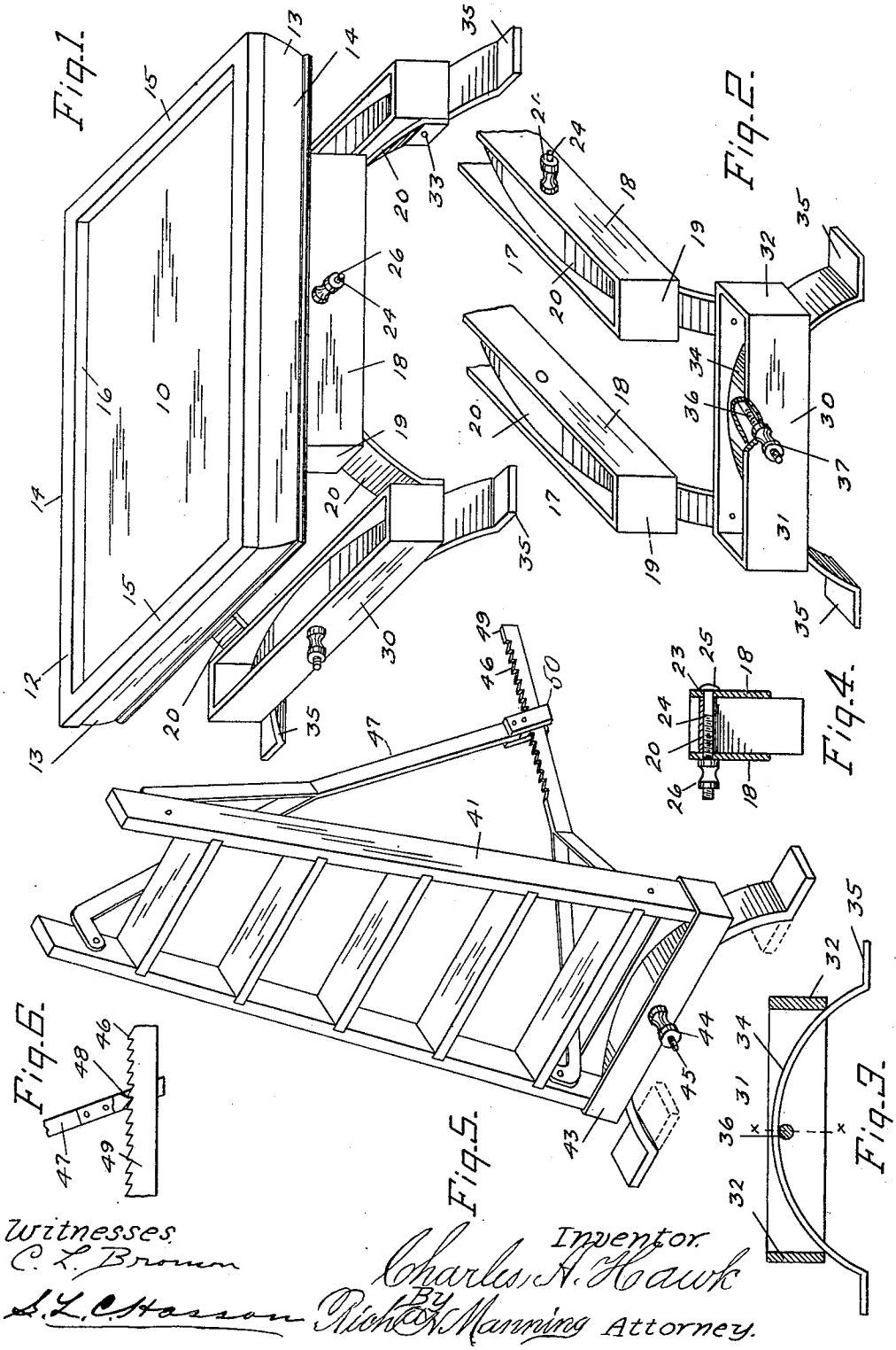
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ADJUSTABLE SUPPORTING DEVICE FOR MOVABLE OBJECTS.

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ADJUSTABLE SUPPORTING DEVICE FOR MOVABLE OBJECTS.

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To all whom it may concern:

Be it known that I, CHARLES A. HAWK, a citizen of the United States of America, residing at Kansas City, in the county of Jackson and State of Missouri, have invented certain new and useful Improvements in Adjustable Supporting Devices for Movable Objects; and I do hereby declare that the following is a full, clear, and exact description of the invention, such as will enable others to make and use the same, reference being had to the accompanying drawings, forming a part of this specification.

The objects of the invention are: first: an adjustable base or support for movable objects, such as tables and other household furniture, ladders and the like, and such an adjusted position obtained as will be irrespective of the declensions of the floor or ground; second, to enable the movable object to be angularly adjustable, in a novel, expeditious manner; and third: to afford a combined adjustable leg and brace, to movable objects.

The invention consists in the novel construction and combination of parts, such as will be first fully described and then specifically pointed out in the claims.

In the drawings: Figure 1 is an isometric view of a table, embodying the invention. Fig. 2 is a detail, isometric view of the angularly adjustable supporting body and base for the table top. Fig. 3 is a longitudinal vertical, sectional, view of one of the table-adjusting members. Fig. 4 is a transverse, vertical, sectional view taken on the line *x*—*x*, on Fig. 3. Fig. 5 is an isometric view of a step ladder, showing the invention applied thereto; and Fig. 6 is a detail view of the rack and support for a coöperating ladder adjustment.

Similar numerals of reference indicate corresponding parts in all the figures of the drawing.

Referring to the drawing, 10 indicates a table top, the surface of which is smooth, and may be used for any game requiring a perfectly level position. The top, as shown, is supported within a frame 12, the sides 14 and ends 15, of the frame, as shown, being outwardly curved at 13, the upper portion of the sides and ends of the frame extending a short distance above the line of the upper surface of the table top 10, to afford a guiding surface 16, which retains movable objects from leaving the table top. Beneath the side members 14, of the frame 12, are rectangular clamping box frames or body 17, of the requisite width and having longitudinal, parallel side plates 18, spaced apart the requisite distance, and end plates 19, the upper edge portions of said sides and ends of the box frames being secured fixedly to the lower surface of the sides 14, of the frame 12, of the table top, the ends of which box extend to a point approximately one-fourth the distance inwardly from the line of the ends 15, of the box frame 12, of the table top. The sides 18, of the clamp box frame 17, are made of yielding material, and within said sides are inserted the curved or arched plates 20, which are of equal width to the space between the inner surfaces of said sides 18, of the box clamp, the ends of the curved plates 20 passing in contact with the lower, inner surfaces of the ends 19, of the said box frames 17, and to a short distance below the lines of said ends. Through opening 23, in the side plates 18 of each box, extends a clamping screw 24, upon one end of which screw is a head 25, bearing upon the outer surface and one side 18, of the box frame, and upon the other end of the screw is a clamping nut 26, bearing upon the outer surface of the opposite side plate 18, of said frame, the screw passing beneath the lower surface of the plate 20, so that said screw acts simply to bind the sides of plates 20, which may be adjusted in any degree desired.

30 indicates the adjustable clamping box frames, constituting the base of the table, and being the same in width as the box frames 17, the adjustable box 30 being shorter in length than the fixed box frames 17, and approximately that of the ends 15, of the table. The adjustable box frames 30 are placed in position beneath the said ends 15, of the table, and the lower end portions of the respective adjusting plates 20 placed flatwise in position against the outer surfaces of the inner plates 31, which form the sides of the respective adjustable box frames 30, and secured thereto at points close to the lines of the outer ends 32, of said box frames by the rivets 33.

Within the box frames 30 are combined table supporting superposed leg and brace curved plates 34, which are of the same width as the plates 20, the ends of which plates 34 extend downwardly in contact with the lower, inner surfaces of the ends

32, of the adjustable box frames 30, to the line of the floor, and said ends bent outwardly at 35, to form feet and support the table. Extending through the sides 31 of the adjustable box frames 30 is an adjusting screw 36, having a head, which screw is the same as the adjusting screw 24, said adjusting screw 36 passing beneath the lower surface of the plate 34, and is provided with an adjusting nut 37, which is the same as the adjusting nut 24, and the box frames 17.

In order to adjust the table top 10, in one direction, the adjusting nut 36 is loosened, and the table canted or brought into a horizontal position independently of the position of the feet 35, which support the entire table top and adjusting devices, it being observed that in said adjustment the inner surfaces of the sides 18, of the box frames move frictionally against the outer surfaces of the plate 20, and the ends of the table move upwardly or downwardly as respects the upper surfaces of the adjustable box frames 30, and toward or from said surfaces alternately as respects the adjustable box frames at the ends of the plates 20. Another adjustment of the table top is obtained by loosening the nut 37, on the screw 36, on the adjusting box or body frames 30, and the positions of the box frames 30, which are permitted a sliding movement in the arc of a circle, change and are inclined in the desired direction, the inner surfaces of the sides 31 moving in frictional contact with the leg plates 34, the box frames 30 being adjusted at the proper angle independently of the position of the feet 35, which may rest upon entirely different levels or depressions, after which adjustment of the clamping screws 37 are caused to clamp the sides of the box frames firmly against the outer surfaces of the plate 34, as before. It is obvious, therefore, that the principle of an angular adjustment is obtained in my invention with the advantage of a double bearing of the adjusting devices, one being braced at the ends of the upper box frames, and the other at the ends of the lower box frames, so that the combined strength will support any weight upon or carried by the table top. The plates 20 and 34 may be either rigid or yielding, and when applied to a rocking chair or like furniture the advantage of a yielding plate will be obvious. Or, when applied to a ladder, as seen in Fig. 5, the plate may be made from a casting so as to be rigid, or, if made from yielding material, the box frames 40, which are applied to the lower ends of the standards 41, afford a like brace to the plate 42, within the clamping box 43, which is the same as the clamping frame 30, and provided with a clamping screw 44 and clamping nut 45, which are the same as the clamping screw 36 and nut 37, before described. The other adjustment of the ladder, as seen, consists of a forked rack 49, secured pivotally at the forked ends to the lower portion of the standards 41, of the ladder, and a forked brace 47, pivoted at its upper ends to the upper portions of the standards 41 the rack 49 being provided with engaging teeth 46, a loop 50 secured to said lower end of the forked brace 47, prevents accidental disengagement of the brace from the rack 49.

The invention is applicable to movable objects, which require supporting means, the utility of the invention being seen in its application to billiard tables, where the surface of the table must be level, and maintained so, whether the floor be level or not, and other uses of the invention, which will be obvious to any maker of furniture or even carriages and wagons, if so desired. The feet 35 may be bent inwardly, if preferred, on the table supports, as seen in dotted lines on the ladder support in Fig. 5, in the latter case the inwardly-bent feet being preferable, in order to connect another for extension purposes.

I have shown but one form of the clamping devices, other forms being left to the particular requirements of the object to which the invention is applied, with such modifications of the invention employed as are within the scope of the appended claims.

Having fully described my invention, what I now claim as new and desire to secure by Letters Patent is:

1. A supporting base for the adjustment of movable objects comprising an arched plate and a rectangular box frame having yielding side members the lower surfaces of the end members of said frame having a sliding contact with the convex surface of the arched plate, and a clamping screw bolt connected with and extending transversely to the yielding side members of said box frame beneath and in contact with the inner concave surface of said arched plate.

2. A supporting base for the adjustment of movable objects comprising a yielding arched base plate and a rectangular shaped box frame having yielding side members, the lower surfaces of the end members of said box frame having sliding contact with the convex surface of the arched plate and a clamping screw bolt extending transversely through the said yielding side members of said box frame in contact with the inner surface of said arched base plate.

3. A supporting base for the adjustment of superposed movable objects, comprising parallel base members and parallel yielding arched plates having their end portions secured flatwise to the inner surfaces of the respective base members, and parallel box frames having the lower surfaces of the end

members of said frames mounted slidingly on the convex surfaces of said arched plates and clamping devices acting to control the sliding movement of said parallel box frames upon said plates.

4. An adjustable base for table tops comprising sets of upper and lower rectangular box frames, the lower set being provided with yielding side members and parallel arched plates upon the upper convex surface of which plates the lower surfaces of the ends of said lower set of the box frames are slidingly mounted, and clamping screw bolts extending through said yielding side members beneath the lines of the inner concave surfaces of said plates, the upper set of parallel box frames having yielding side members extending at right angles to the lower set of box frames and arched plates supporting the upper box frames the lower ends of which arched plates are bent at an angle and connected with the inner surfaces of the side members of the said lower set of box frames.

5. A supporting base for the adjustment of movable objects, comprising a yielding arched plate having feet, and a rectangular box frame having yielding side members and the lower surfaces of the end members bearing upon the convex surface of the arched plate and clamping means which act to clamp said yielding side members to the outer surface of the said yielding arched plate.

6. An adjustable body support for movable objects comprising parallel box frames having yielding side members supporting said body, arched plates within said frames having the end members of said frames bearing upon the convex surfaces of said arched plates, clamping bolts extending through said yielding side members beneath the lines of the concave inner surfaces of said plates and clamping nuts thereon and yielding foot supports for the ends of said arched plates.

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Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."