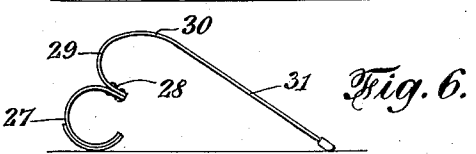
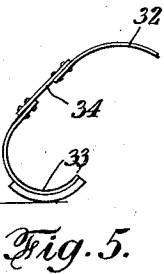
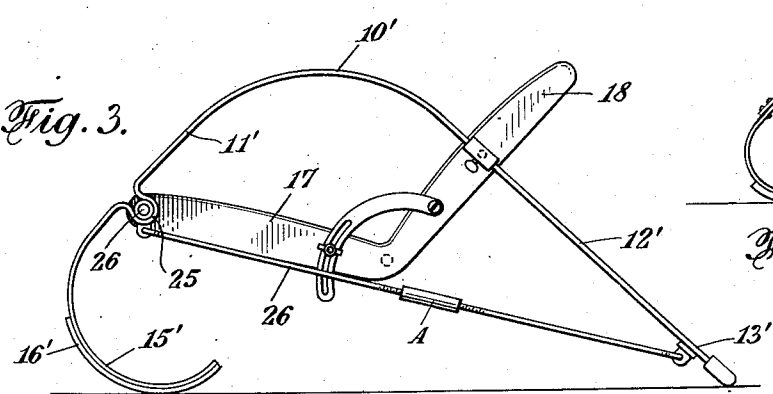
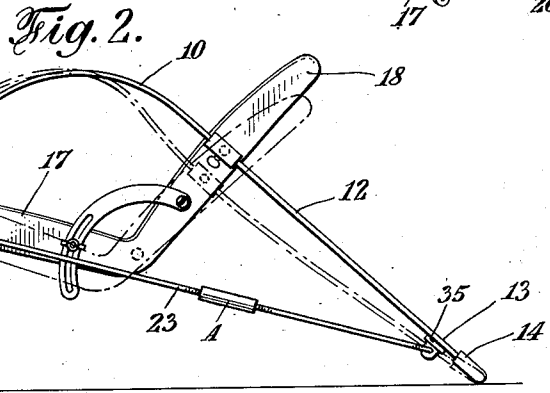
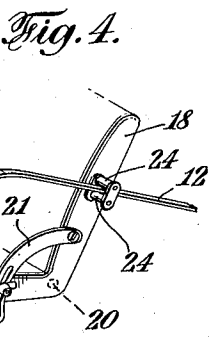
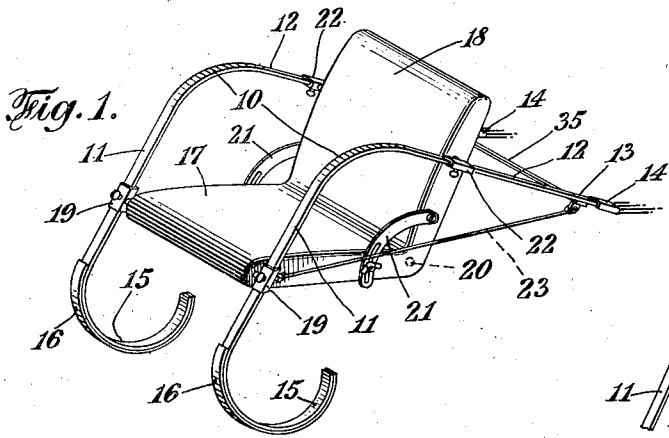


Oct. 22, 1940.

F. WAGNER
CHAIR CONSTRUCTION
Filed Nov. 22, 1938

2,218,863



INVENTOR
Fred Wagner.
BY *Paulm Klein*
his ATTORNEY

UNITED STATES PATENT OFFICE

2,218,863

CHAIR CONSTRUCTION

Fred Wagner, Long Island City, N. Y.

Application November 22, 1938, Serial No. 241,742

10 Claims. (Cl. 155—50)

This invention relates to chair constructions in general, and particularly to what may be called an "easy" or "rocking" chair.

One of the objects of this invention is to provide a relatively simple, inexpensive seat structure, wherein the supports of the seat consist of two parallelly arranged, substantially one piece resilient members, which are so constructed that they form elevated bowed sections, intended to serve as arm rests, and from which sections extend forwards and backwards, at divergent angular relations, frontal and rear portions, and wherein the frontal portions terminate in upwardly and rearwardly curved floor ends, while the rear portions are straight and terminate in straight ends.

Another object of this invention is to so construct and arrange the supports of the chair structure that they will be maintained in their parallel relation to one another, and wherein a seating instrumentality is so secured to the supports that the front edge of the seat joins the frontal portions of the supports, while the back of the seat is adjustably or movably associated with the straight rear portions of the support.

Another object of this invention is to provide in connection with my chair structure, an adjustable seat, wherein the angular relation between the seat and back portions may be altered.

Another object of this invention is to provide in connection with my chair structure, suitable means for bracing or otherwise connecting the frontal with the rear portions of the supports for preventing them from spreading.

A still further object of my invention is to so construct my chair structure as to permit the seat instrumentality associated therewith to roll upon or slide relative to the rear portions of the support.

A still further object of this invention is to so construct and arrange the various portions of my chair structure that when a person occupying it moves alternately forwards or backwards will cause an alternate forward and rearward flexing of the frontal and rear portions of the support, while at the same time the curved floor supports of the frontal portions will perform a combination rolling and rocking motion, although the floor ends of the rear portions of the supports will remain practically immovable.

The foregoing and still further objects of the present invention will become more fully apparent from the ensuing description, in connection with the accompanying drawing, which latter, al-

though showing specific forms of my invention, are by no means intended to limit me to the actual constructions illustrated.

In the drawing:

Fig. 1 is a perspective illustration of my chair structure in its presently preferred form.

Fig. 2 is a side elevation of such structure indicating the manner of movement imparted thereto by an occupant.

Fig. 3 illustrates a modified form of my chair structure.

Fig. 4 is a fragmental perspective illustration, of a still other modification of my chair structure.

Fig. 5 illustrates the structural detail of another embodiment employed in the construction of the frontal portion of the support, and

Fig. 6 is a diagrammatical illustration of a still other modified form of the side supports of my chair structure.

Referring now specifically to the figures, my chair structure consists of an arrangement of two individual, parallelly disposed resilient chair supports, each support being preferably made from one piece of material, or is so constructed as to constitute a virtually one-piece, continuous configuration.

I prefer to construct the side supports from flat strips of steel or other highly resilient material. Nevertheless, any other resilient material of different shape or cross section, such as bamboo, or specially treated wood, may be employed to good advantage. The construction of each of the supports is such that there is provided a bowed elevated portion 10, from which latter extend, at different angular relation to the floor line, frontal portions 11 and rear portions 12. The latter are preferably straight and terminate in straight ends 13, which I encase in protective pockets 14 made of rubber.

Frontal portions 11 of the supports terminate in rearwardly and upwardly curved formations or loops 15, the outer surfaces of which are provided with a facing 16 made of rubber. Both front and rear ends of the supports are adapted to rest upon a common supporting surface, such as a floor. However, loops 15 are entirely free of one another and are therefore capable of individually yielding or moving in response to the weight or force exerted upon them by the occupant of the chair.

Suspended from the side supports is a seating instrumentality consisting of a seat portion 17, and a back portion 18. The front edge of seat portion 17 is preferably secured at 19 to the

frontal portions of the supports, whereby a rigid connection between the two supports at their front is established. The attachment of seat 17 to the frontal support portions is made preferably adjustable so that the position of the seat may be altered to suit the comfort of the person intended to use the chair. However, the seat suspension must not interfere with the free action of loops 15.

Back 18 is connected with seat portion 17 by a hinge arrangement indicated at 20. The two seat members may be adjusted by segmental clamps 21 to any desired position relative to one another. Back member 18 is adjustably associated at 22 with back portions 12 of the supports, as illustrated in Figs. 1 and 2. However, back member 18 may also be permitted to slide upon back portions 12, in which case I preferably provide a brace or stay indicated at 23 in Figs. 1 and 2.

A modified arrangement is illustrated in Fig. 4, wherein back portion 18 is supported upon rear portion 12 of the support by means of rollers 24, which latter facilitate an easy movement of the seating instrumentality relative to the supports.

A still further modification of my device is shown in Fig. 3, wherein again an elevated bowed section 10' is illustrated, from which latter a frontal portion 11' extends forward, but which frontal portion is provided with a looped formation 25 for the reception of a pin 26, forming a hinge for the frontal edge of seat portion 17. From looped formation 25 extends curved floor end 15', provided with a rubber facing 16'; from the looped formation 25 also extends a brace 26 to the rear end 13' of rear portions 12' of the support.

Another modification of my supports is diagrammatically illustrated in Fig. 6, wherein the frontal floor end 27 consists of an individual loop which is secured at 28 to a semi-looped formation 29 of the upper structure of the support. The latter is again provided with an elevated, bowed section 30, from which extends rearwardly supporting portion 31.

In Fig. 5 still another construction of the frontal portion of the support is shown, wherein the elevated bowed section 32 forms a continuous part of the rear portion of the support (not shown), while the frontal portion consists of a curved element 33, which is joined by means of a straight connection 34 with bowed section 32.

In all construction I preferably space and join the floor ends of the rear portions of my supports by means of a brace 35, indicated in Fig. 1.

Function

After adjusting the seat to the desired height, and the back to the most comfortable incline, a person sitting in my chair structure may swing forwards or backwards, and by so doing, will cause a swinging of the entire frame, supporting the seat, alternately in forward and backward directions. The forward movement of the supports is clearly indicated by broken lines in Fig. 2, at which moment the floor ends of the front portions of my supports will roll and curve upwards in a rocking motion. The straight rear portion of the support will flex forwards, and simultaneously the front portion of the support will follow the forward motion. Because of the resiliency of the supports, the tendency of the outswung portions will be to revert to their normal positions, but due to the weight of the person sitting in the seat, the parts of the support

will swing beyond their normal position and will continue swinging forwards and backwards as long as movements are imparted to the structure by the person sitting in the chair.

When my device is provided with a brace, such as indicated at 23 and 26 of Figs. 1, 2, and 3, the back of the chair may be constructed in the manner illustrated in Fig. 4, whereby a sliding or rolling motion over the rear portions of the supports is facilitated. Such construction induces a more vigorous rocking movement of the structure, and greater comfort to the user.

Braces 23 and 26 are preferably made adjustable lengthwise, as indicated at A, so that the floor ends of the supports may be either spread further apart or brought closer together. When spread apart, the elevated bowed portions, serving as arm rests, will become lower, while when the braces are shortened these bowed portions of the support will become higher. The shortening or lengthening of the braces also controls the swinging or rocking movement of the structure in that when the braces are shortened the rocking movement will be of relatively shorter duration and comparatively "stiff," while when the braces are longer the rocking movement will be of longer duration and comparatively "soft."

While I have illustrated several forms of my chair structure, it is quite obvious that in order to meet various demands and conditions, changes and improvements may be required, and I, therefore, reserve for myself the right to make such changes and improvements as may become necessary, without departing from the broad scope of my idea, defined in the annexed claims.

I claim:

1. In a chair structure, a pair of substantially parallel, independent resilient one piece supports having elevated bowed sections and frontal and rear portions extending downwardly from the bowed sections at divergent angles towards a common supporting surface, such as a floor, the free floor end of the frontal portion consisting of an upwardly and rearwardly curved loop formation adapted for a restricted rolling-rocking motion upon the floor, the rear portion of the support being substantially straight to its free floor end, the latter being adapted to remain stationary upon the floor, an adjustable seat, consisting of a seat member and a back member, said seat member being fixedly associated with the frontal support portions, above their free floor ends, the back member of the seat being associated with said rear support portions, and a spacer connecting the floor ends of the latter portions.

2. In a chair structure, as set forth in claim 1, stays extending from the frontal to the rear portion of each support, the back member of the seat being adjustably associated with the rear support portions for facilitating its bodily movement in respect to the latter.

3. In a chair structure, a pair of parallel, resilient, spaced, one piece seat supports having elevated bowed sections serving as arm rests and from which extend downwardly to, and terminate at the floor, frontal and rear portions at divergent angles, wherein the frontal portions are shorter than the rear portions, the floor ends of the frontal portions being entirely free from one another and curving rearwards and upward and serving as rolling rockers, while the rear portions have straight floor ends adapted to remain stationary, a seat, having a back, suspended from said supports with the front seat edge associated

with the frontal portions, above the free curving floor ends, and the back of the seat being movably associated with the rear portions of the supports.

5 4. In a chair structure, as set forth in claim 3, the entire lower surfaces of the curved floor ends of the frontal portions and the straight ends of the rear portions of the supports having resilient coverings adapted to contact the floor or the like.

10 5. A chair structure comprising a pair of individual, spaced, parallel, resilient supports made from flat strip material, each support forming an elevated, downwardly bowed arm rest section from which extend at divergent angles toward
15 the floor a short frontal and a longer rear portion, the floor end of the frontal portions being curved rearwards and upwards for a rolling-rocking motion, and being entirely free of one another, the floor end of the rear portion being
20 straight, a seat suspended from the frontal portions, above the free curved floor ends, and movably associated with rear portions of said supports, and means for preventing an inadvertent spreading of the supports.

25 6. In a chair structure, a pair of substantially parallel, independently operable, resilient supports, each constituting an integral unit, each unit consisting of an elevated, substantially centrally located bowed arm-supporting section,
30 forming the highest part of the unit, and frontal and rear portions depending from the bowed central section at divergent angles towards a common supporting surface, such as a floor, said frontal and rear portions being operatively free
35 of one another, the frontal portion terminating in an upwardly and rearwardly curved floor end, while the rear portion extends in a substantially straight line to the floor, its floor end being

adapted to remain stationary, an adjustable seat, having an adjustable back member associated with and forming, at its adjusted position, a rigid connection between the frontal portions of the units and being located above their free, curved
5 floor ends, said back member being adjustably associated with said rear support portions, and a spacer connecting the free floor ends of the latter portions.

7. In a chair structure according to claim 6, 10 and wherein the frontal portions of the units are composed of a plurality of structural elements.

8. In a chair structure according to claim 6, and wherein the frontal portions of the units are composed of a plurality of structural elements, 15 and wherein one of the elements constitutes a straight connection between the bowed arm-supporting section and the curved floor end of the frontal portion.

9. In a chair structure according to claim 6, 20 and wherein the frontal portions of the units are composed of a plurality of structural elements, and wherein one of the elements is in the shape of a reception loop for accommodating the front support of the seat, and from which reception
25 loop the curved floor end of the frontal portion forms a continuation.

10. In a chair structure according to claim 6, and wherein the frontal portions of the units are composed of a plurality of structural elements, 30 and wherein one of the elements constitutes an inwardly directed semi-loop, which forms a continuation of the bowed arm-supporting section, while the curved floor end of the frontal portion constitutes an individual loop which is secured
35 to the end of said semi-loop.

FRED WAGNER.