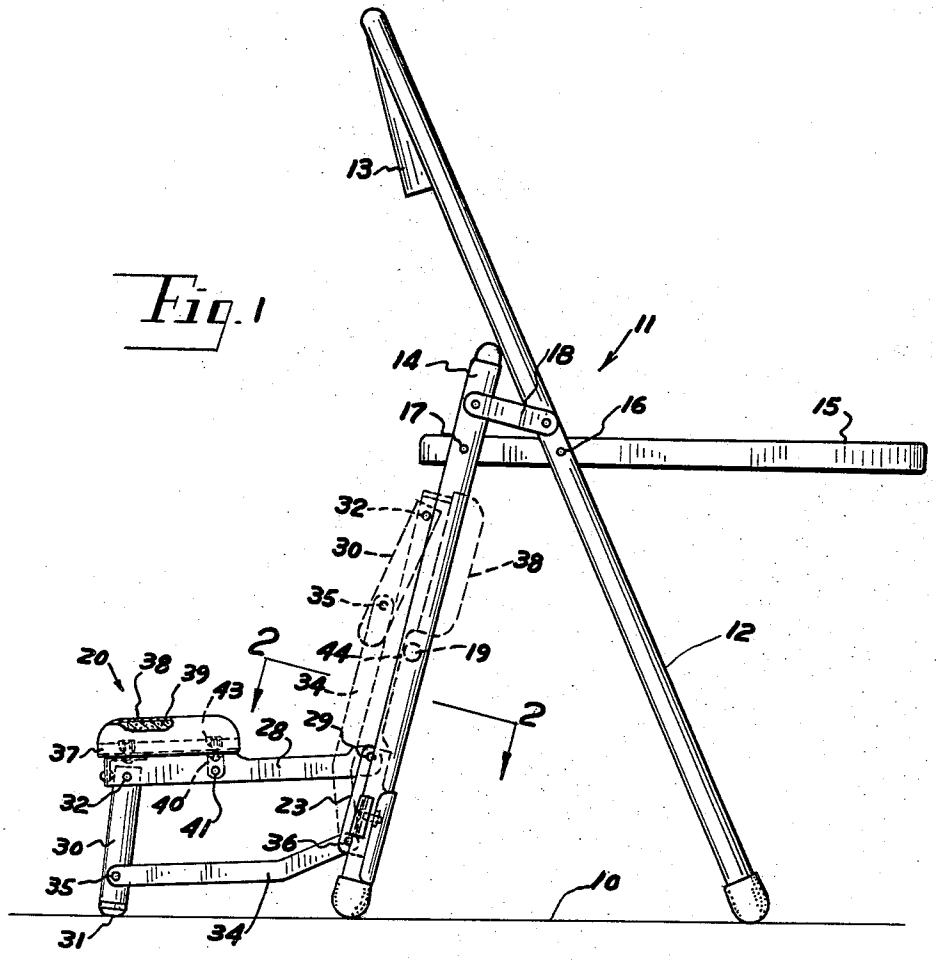
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KNEELER ATTACHMET FOR CHAIRS

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Fig. 1



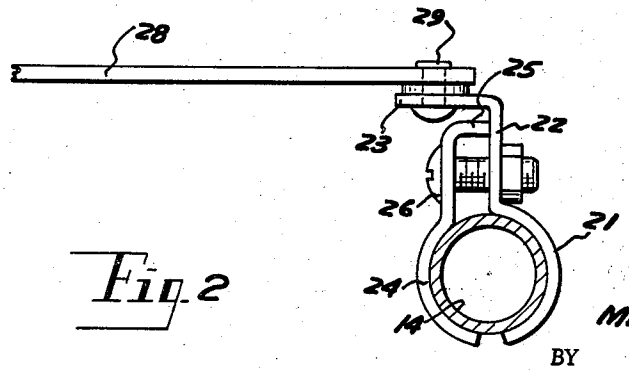


Fig. 2

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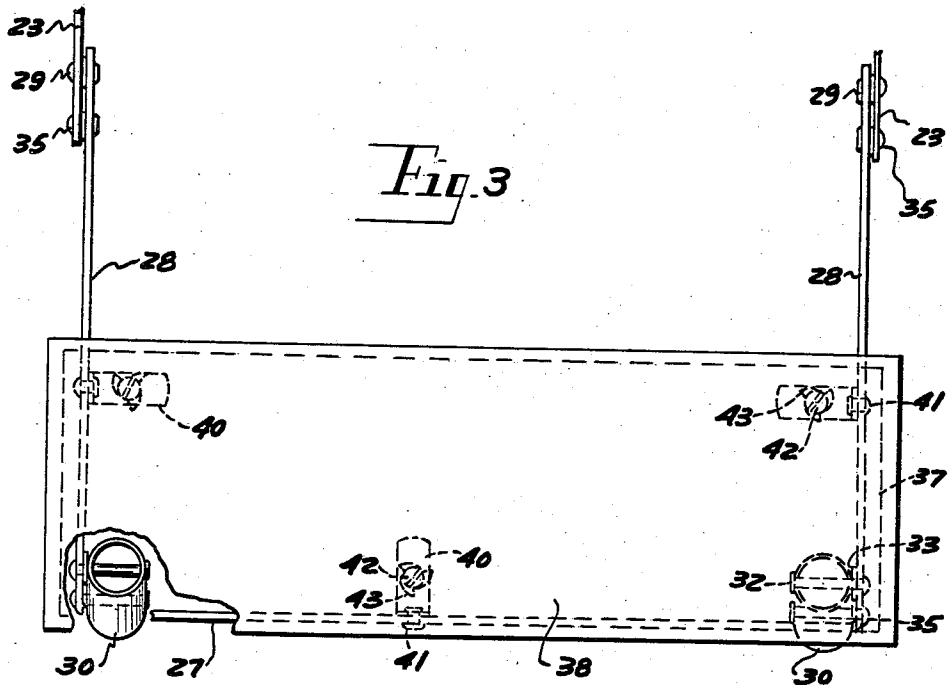


Fig. 3

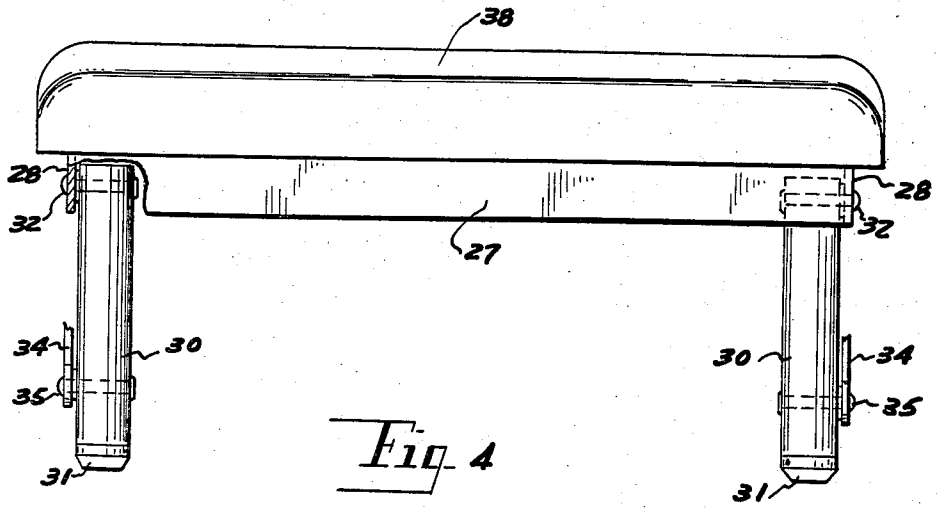


Fig. 4

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KNEELER ATTACHMENT FOR CHAIRS

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1 Claim. (Cl. 297—426)

The present invention relates to kneeler attachment for chairs, and more particularly to a kneeler attachment for the rear legs of any type of chair, whether it be folding or non-folding, and which is adapted for connection to the rear legs of the said chair.

Heretofore in this field, various means have been employed for providing kneelers associated with chairs. Often times these have been costly and cumbersome, difficult to assemble, and difficult to use.

It is the object of the present invention to provide a novel form of kneeler attachment which is of a substantially parallelogram linkage construction, and wherein the said kneeler assembly is removably clamped to the rear legs of a chair, and which may be tilted from a substantially horizontal use position, to a collapsed substantially upright position into substantially parallel nesting registry within and adjacent the rear legs of the chair.

It is another object of the present invention to provide a novel form of clamp bracket assembly by which the said kneeler may be easily attached and at the same time adjusted and/or disengaged from the chair when no longer needed, without in any way modifying the function and operation of the chair or the chair structure.

It is a further object of the present invention to provide a novel form of clamp bracket assembly and associated U-shaped support means for the said kneeler wherein the free ends of the support are pivotally connected to the clamp brackets, and wherein adjacent the bight portion of the support there are pivotally connected thereto a pair of depending spaced auxiliary legs and an associated linkage by which when the kneeler is not in use, may be pivotally collapsed into substantial upright position within or adjacent to the plane of the rear legs of the chair.

These and other objects will be seen from the following specification and claim in conjunction with the appended drawings in which:

FIG. 1 is a side elevational view, partly broken away and sectioned of the present kneeler attachment as connected with one form of chair.

FIG. 2 is a fragmentary section on an enlarged scale, taken on line 2—2 of FIG. 1.

FIG. 3 is a fragmentary plan view partially broken away of the present kneeler attachment shown in FIG. 1.

FIG. 4 is a front elevational view thereof.

It will be understood that the above drawings illustrate merely a preferred embodiment of the invention and that other embodiments are contemplated within the scope of the claim hereinafter set forth.

Referring to the drawings, the present kneeler attachment is adapted for mounting upon any type of chair upon the rear legs thereof.

In the illustrative embodiment shown in FIG. 1, there is a folding chair 11 having a front frame 12, defining a pair of parallel spaced front legs which incorporates at the upper end of said frame a backrest 13. The chair includes a pair of parallel spaced upwardly inclined rear legs 14, there being a suitable seat 15 interposed between said pairs of front and rear legs pivotally interconnected therewith as at points 16 and 17 and incorporating suitable linkage 18, which respectively interconnects corresponding front and rear legs.

The said rear legs intermediate their ends have a transverse crossbrace 19 interposed therebetween and secured

thereto in a conventional manner, as shown in FIG. 1, which crossbrace has the additional function as hereinafter explained of retaining the kneeler when pivotally collapsed into a non-use position, as shown in dotted lines, FIG. 1.

The present kneeler attachment, generally indicated at 20, FIG. 1, is adapted for any chair which has a pair of rear legs such as the rear legs 14, and is removably secured thereto by a suitable clamp bracket, such as shown in section, FIG. 2.

A clamp bracket is secured to each of the said rear legs 14 and provides a means for connecting the kneeler attachment to the rear legs of the chair in such a fashion that the same may be easily adjusted thereon, easily attached and easily removed, if desired.

The said clamp bracket includes a first arcuate strap 21 engageable with the front surface of the rear legs 14 and which has extension 22 and which terminates in the upright mounting plate 23. The clamp bracket also includes the arcuate strap 24 in opposed relation with respect to strap 21, and which strap 24 terminates in the extension 25, which operatively engages extension 22 of the first strap and is adjustably secured thereto and with respect to the chair leg as by the fastener 26.

The present kneeler assembly includes the substantially horizontal U-shaped support 27, whose free ends 28 are pivotally connected as by rivets 29 to the respective mounting plates 23 of the clamp brackets on the rear legs of the chair, as best shown in FIGS. 2 and 3.

A pair of parallel spaced substantially upright auxiliary legs 30 of tubular form with stop buttons 31 within their lower ends to engage the floor surface 10, are pivotally connected at their upper ends, as by rivets 32, to rear portions of the respective legs 28 forming a part of the U-shaped support. The relationship of the said legs upon the interior of the U-shaped support frame 27—28, as best shown in FIG. 3, there being suitable spacers 33 interposed between the said auxiliary leg and an adjacent portion of the leg 28 forming a part of the U-shaped frame.

A pair of laterally spaced, substantially parallel links 34 are arranged below the U-shaped support 27—28, being substantially parallel to the plane of said support, and at their one ends are pivotally connected respectively to the auxiliary legs 30, as by the rivets 35. The said links at their other ends are pivotally connected to the respective mounting plates 23 as by additional rivets 36 to thus complete with the members 23, 30, 28 and 34 a parallelogram linkage.

A cushioned knee pad including an outer flexible plastic or similar covering 38, or vinyl or other material, is mounted transversely across the outer end of the U-shaped support 27—28, and suitably secured thereto. The cushion pad itself includes a supporting hardboard 37, FIGS. 1 and 3, over which the flexible cover 38 of vinyl or Naughahyde is positioned with a suitable cushion material 39 interposed as, for example, cotton padding or Tuflex, or other resilient yielding material, including sponge rubber, or other flexible substance.

The kneeling pad assembly, including the hardboard 37 has secured thereto a series of fasteners 43 adapted to receive the additional fasteners 42 by which a plurality of angular clips 40 are secured to the undersurface of the said pad, and which depend therefrom for cooperative engagement with portions of the U-shaped support frame 27—28.

A pair of said clips adjacent opposite ends of the hardboard have depending portions which bear against the interior of the legs 28 forming a part of the U-shaped support and are fixedly secured thereto as by fasteners 41. An additional clip depends centrally from a rear

portion of the pad and engages the bight portion of the U-shaped support 27 and is also fixedly secured thereto as by a fastener 41, which may be a screw or a rivet.

In the illustrative embodiment, the kneeling pad fasteners 43 are projected into the hardboard 37 in order to cooperatively receive the fastening screws 42 which project upwardly thereinto, as best illustrated in FIGS. 1 and 3.

In the present device, it is noted that the upright mounting plates 23 which form respective parts of the clamp brackets, extend towards each other inwardly of the chair legs so that the U-shaped support 27—28 and associated kneeler attachment may be pivotally collapsed upwardly to the dotted line storage or non-use position shown in FIG. 1. In such position, as shown in dotted lines, the upper edge portions of the members 28 of the U-shaped support cooperatively engage the cross rod 19, between the rear legs as at point 44, which thus serves as a suitable stop limiting collapsing movement of the kneeler attachment.

Due to the linkage construction, it is noted that the auxiliary legs 30 also collapse substantially into the plane of the rear legs, or adjacent thereto, and that the connecting links 34, when in collapsed position, are in substantial alignment with the respective auxiliary legs 30 to thus provide a compact assembly of the kneeler attachment when in its collapsed dotted line position, shown in FIG. 1.

Accordingly, it is seen that the substantially aligned auxiliary legs 30 and connecting links 34 lie substantially in a plane which is adjacent to and parallel to the plane of the rear legs 14. When not in use, accordingly, they may be pivotally collapsed as shown, and wherein it is seen that the kneeler pad itself, as indicated in dotted lines, is nested and stored within and between the rear legs 14 of the chair.

While a folding type of chair has been shown, for illustration, it is contemplated that the present kneeler attachment may be adapted to and attached to any chair which has rear legs whether it be folding or non-folding.

Having described the invention, reference should now be had to the following claim.

I claim:

Means for detachably connecting a kneeler to parallel tubular rear legs of a chair comprising;

a U-shaped support having its bight horizontally disposed in back of the chair legs near their lower ends and having its own legs projecting forwardly towards the chair legs but disposed inside such chair legs;

a pair of arcuate clamping members disposed around each chair leg near its lower end to embrace and clamp such chair leg;

one clamping member being on the forward surface of such chair leg and the other clamping member being on the rear side of such chair leg;

a screw bolt inside each chair leg adjustably connecting the clamping members of each pair and disposed on a horizontal axis parallel to the adjacent support legs;

the forward surface clamping member of each pair having a rearwardly extending portion adjacent but outside the adjacent support leg;

a horizontally disposed pivot pin connecting each support leg to the adjacent rearwardly extending portion of the adjacent forward surface clamping member and arranged on an axis perpendicular to that of the adjacent screw bolt;

and a link below and parallel to the support leg and connected to said forward surface clamping member by a second horizontally disposed pivot pin.

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