

April 22, 1952

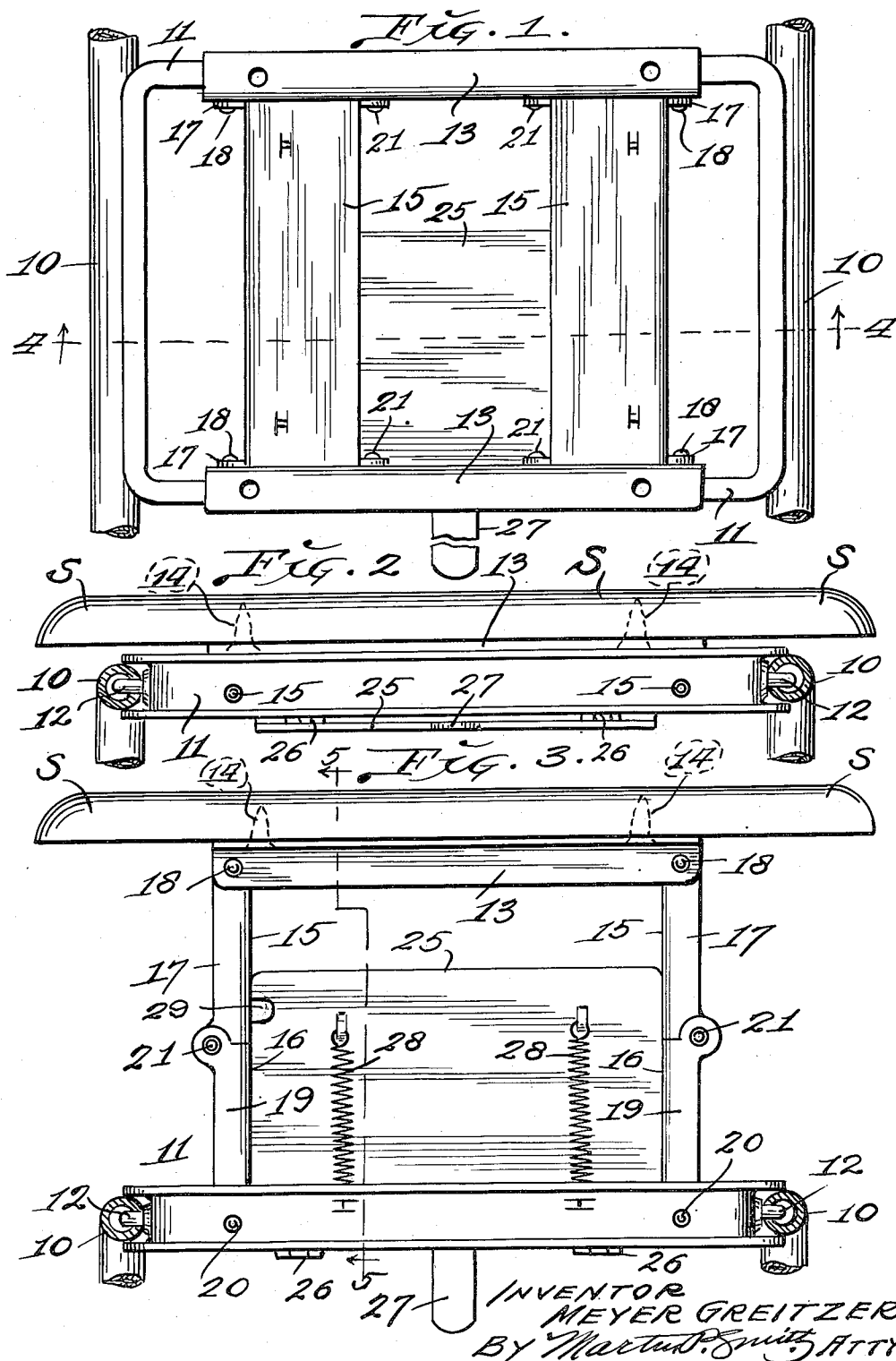
M. GREITZER

2,593,750

EXTENSIBLE SEAT FOR CHAIRS

Filed May 20, 1947

2 SHEETS—SHEET 1



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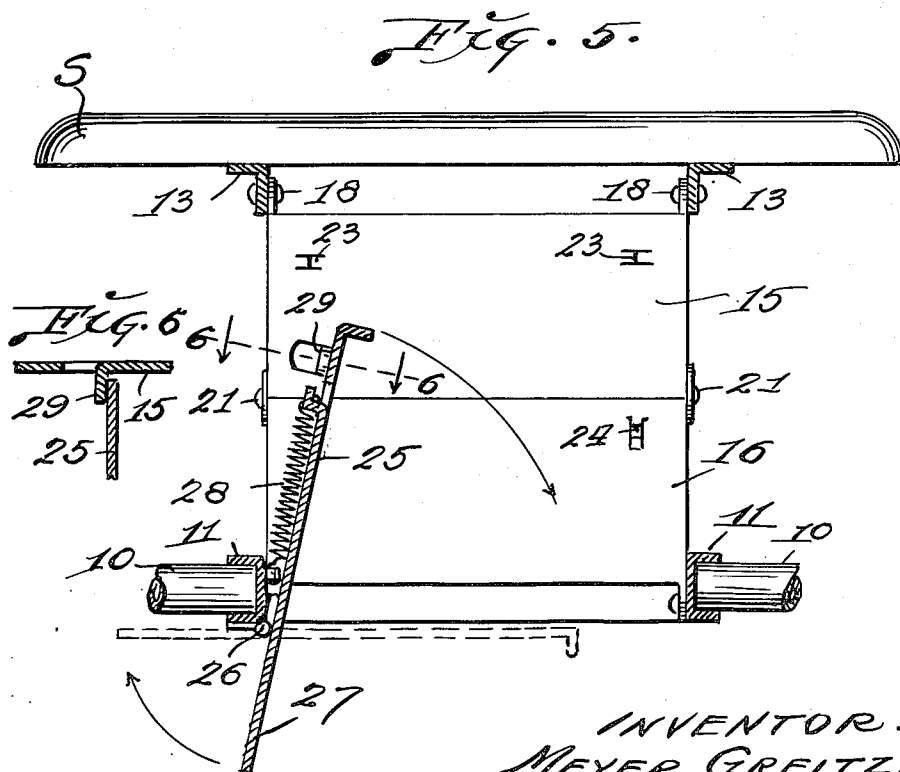
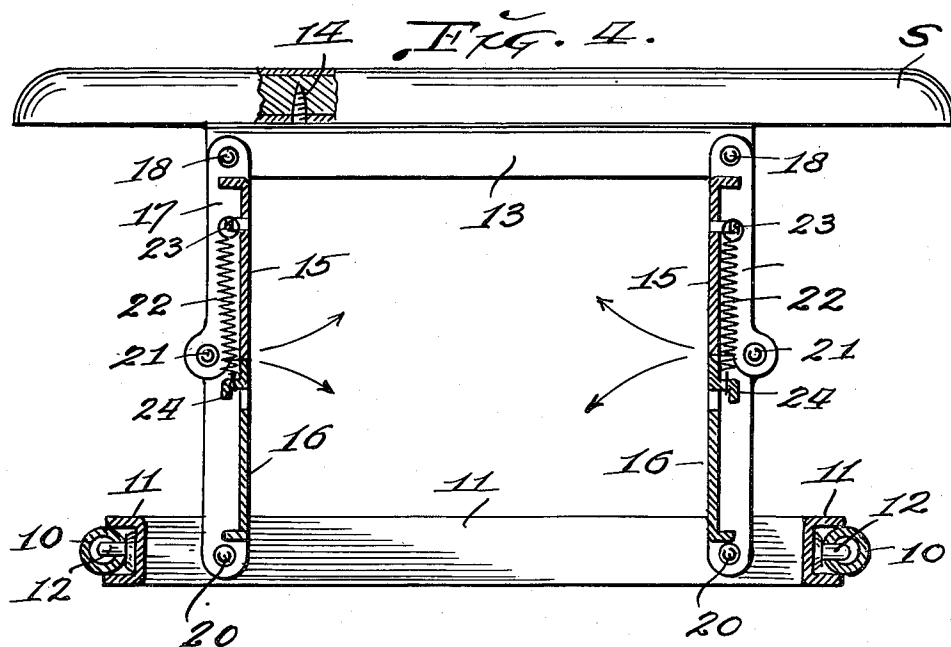
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2 SHEETS--SHEET 2



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UNITED STATES PATENT OFFICE

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EXTENSIBLE SEAT FOR CHAIRS

Meyer Greitzer, Los Angeles, Calif.

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2 Claims. (Cl. 155—38)

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My invention relates generally to chairs and more particularly to the seats thereof, the principal object of my invention being to provide a simple, practical and efficient unitary structure carrying the chair seat and adapted to be mounted on the chair frame, and which structure folds or collapses vertically, so as to elevate the seat and thereby temporarily convert an ordinary chair into a high chair for children's use.

Further objects of my invention are, to provide a chair seat elevating structure having simple and effective means for automatically and positively locking the folding structure when elevated, thus entirely eliminating the possibility of collapse of the structure while elevated and further, to provide a seat elevating structure of the character referred to that is simple, strong, durable, light in weight and which is capable of being easily and quickly applied to the chair frame and its seat.

With the foregoing and other objects in view, my invention consists in certain novel features of construction and arrangement of parts which will be hereinafter more fully described and claimed and illustrated in the accompanying drawings, in which:

Fig. 1 is a top plan view of the collapsible seat elevating structure.

Fig. 2 is a front elevational view of the structure applied to a chair frame and its seat with the latter in its normal or lowered position.

Fig. 3 is a front elevational view with the seat in elevated position.

Fig. 4 is a vertical section taken on the line 4—4 of Fig. 1 and showing the seat in elevated position.

Fig. 5 is a cross section taken on the line 5—5 of Fig. 3.

Fig. 6 is a detail section taken on the line 6—6 of Fig. 5.

Referring by numerals to the accompanying drawings which illustrate a preferred embodiment of my invention, 10—10 designates the horizontal seat supporting rails of a tubular metal chair frame, which rails provide a support for my seat elevating structure, the latter including a substantially rectangular base frame 11, preferably composed from a single piece of channel iron with its flanges outwardly presented.

Rails 10 fit snugly between the flanges of the side rails of frame 11, with pins 12 projecting from the webs of the side rails through apertures formed in the inner portions of rails 10, as seen in Figs. 2, 3 and 4.

This means for securing the chair seat carry-

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ing frame is set forth in U. S. Letters Patent No. 2,390,878, issued to me December 11, 1945.

A conventional chair seat S is secured on top of a pair of parallel rails 12, preferably angle bars, by screws 14.

Arranged between the end portions of rails 13 and the front and rear rails of frame 11, are upper and lower hinge plates 15 and 16 respectively. The ends of the upper plates 16 are bent at right angles to form flanges 17, the upper ends of which are pivoted to pins or rivets 18 adjacent the ends of rails 13, and the lower ends of flanges 19 on lower plate 16, are pivoted to pins or rivets 20 on the front and rear rails of base frame 11.

The lower ends of flanges 15 and upper ends of flanges 19 are pivotally connected by means of pins 21 same being offset outwardly from the vertical planes occupied by pivots 18 and 20, thus forming hinge joints which prevent accidental collapse of the folding structure.

Located on the outer faces of plates 15 and 16 adjacent their ends are retractile springs 22, the upper ends of which are anchored to loops 23 struck from plates 15 and the lower ends of these springs engage hooks 24, struck from plates 16 short distances from the joint between said plates 15 and from the hinge pins 21.

When the folding structure is open and elevated, springs 22 are under tension, thus yieldingly maintaining the plates 15 and 16 against folding movement and collapse, and when the hinged ends of said plates are pushed inwardly, said springs act to instantly fold or close the collapsible structure.

To secure the folding structure in open position and lock same against collapse, a plate 25 is connected by hinges to the front rail of face frame 10, and projecting from the hinged edge of said plate is a short handle 27.

When the structure is open with plates 15 and 16 vertically disposed, plate 25 occupies position between said plates 15 and 16, as seen in Fig. 5, thus effectively preventing the latter from folding inward.

The lower ends of retractile springs 28 are connected to frame 10 above hinges 26, and the upper ends of said springs are connected to plate 25 near its free edge.

A stop 29 on plate 15 near one end, limits the upward swinging movement of the locking plate 26. When collapsed, the folding structure is disposed within base frame 10, as seen in Figs. 1 and 2, and thus seat S is supported in its normal position just above side rails 10 of the chair frame.

To elevate the seat for children's use, said

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seat is lifted and when hinge plates 15 and 16 are vertically disposed with hinge pins 21 occupying vertical planes outwardly from that occupied by pivots 18 and 20 locking plate 25 will, under the influence of springs 28, be swung upward against stop 29 thus, in effect locking the folding structure against accidental collapse.

To lower the seat, plate 26, by means of handle 27 is swung downward to a horizontal position below frame 10, and the hinged edges of plates 15 and 16 are now pressed inward, or toward each other so that rails 13 and seat S carried thereby will, under tension strains of the springs 22, move to their normal lowered position.

An especially desirable feature of my invention is the structure including the hinge plates 15 and 16 and plate 25, which by a single movement or action, shifts the seat S into a self locked elevated position, and when the locking means is released, the seat by a single action, moves to its normal position on the base frame.

Thus it will be seen that I have provided a collapsible seat support for chairs, which is simple in structure, inexpensive of manufacture and very effective in performing the functions for which it is intended.

Minor changes in the size, form and construction of the various parts of my improved collapsible chair seat may be made and substituted for those herein shown and described without departing from the spirit of the invention, the scope of which is set forth in the appended claims.

I claim as my invention:

1. The combination with a chair frame and seat, of pairs of hinged plates connecting said frame and seat retractile springs disposed be-

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tween the members of each pair of hinged plates, a plate hinged to one side of said frame between said pairs of hinged plates and retractile springs associated with said hinged plate and frame for swinging said plate into position between said pairs of hinged plates when the latter are swung into vertical positions to elevate said seat.

2. The combination with a chair including side rails, of a frame mounted on said side rails, a chair seat, plates having their lower ends pivotally connected to the frame near its sides, hinge plates pivotally connected to said seat near its sides, the lower ends of said last mentioned hinge plates being hinged to the upper ends of the first mentioned hinge plates and retractile springs having their ends secured to said hinge plates and extending across the axis of the hinge connection between said plates.

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REFERENCES CITED

The following references are of record in the file of this patent:

UNITED STATES PATENTS

Number	Name	Date
928,726	Witthaus	July 20, 1909
1,079,674	Toutjian	Nov. 25, 1913
1,218,006	Schramm	Mar. 6, 1917
1,981,285	Reclicz	Nov. 20, 1934
2,182,915	Connolly	Dec. 12, 1939
2,427,234	Shepherd	Sept. 9, 1947

FOREIGN PATENTS

Number	Country	Date
515,336	France	Nov. 24, 1920
25,837	Great Britain	of 1910