

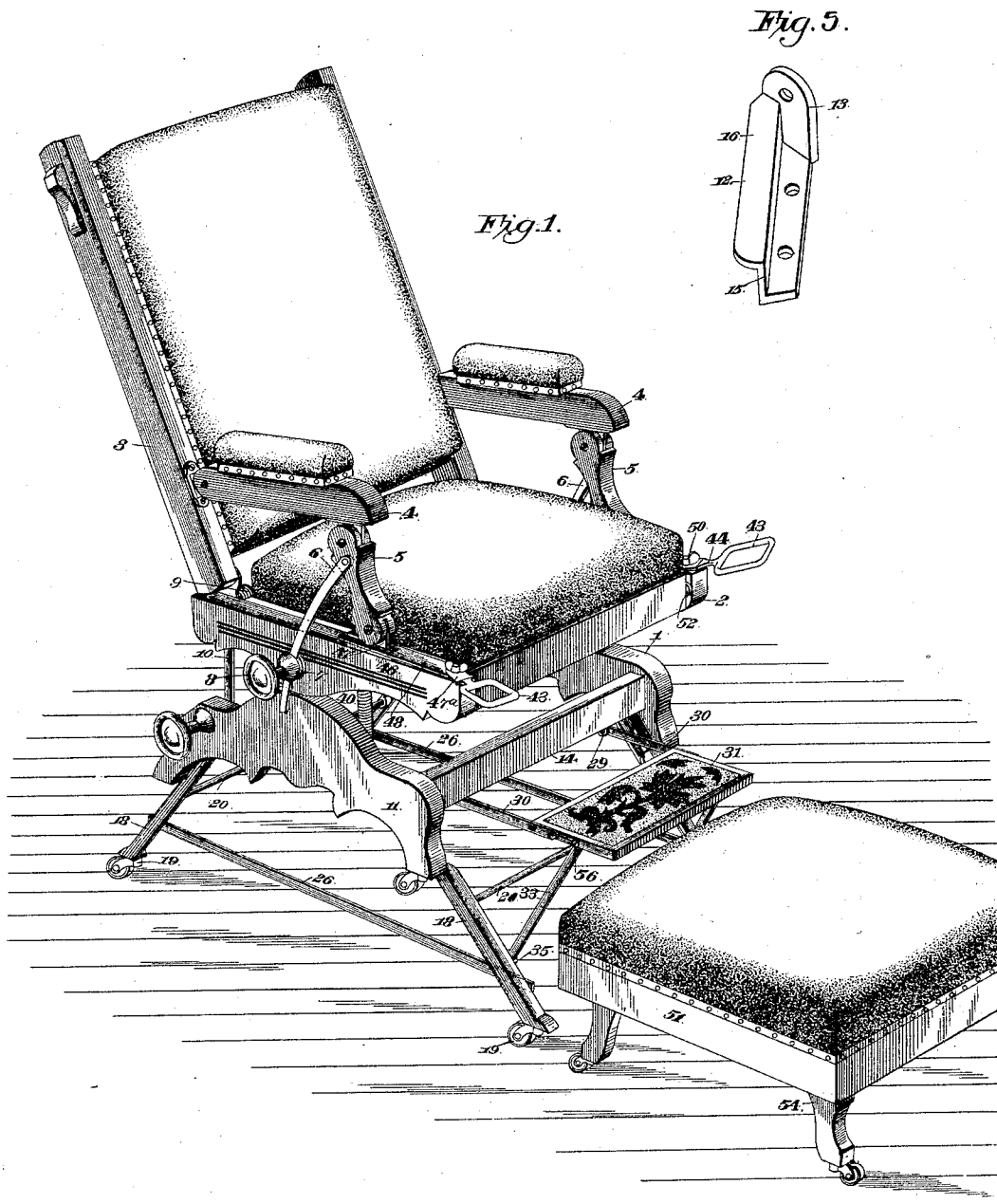
(No Model.)

3 Sheets—Sheet 1.

P. C. LEWIS.
CHAIR.

No. 482,745.

Patented Sept. 20, 1892.



Witnesses

M. Fowler

Wm. Bagges

By his Attorneys,

C. Snow & Co.

Inventor

Pearl C. Lewis

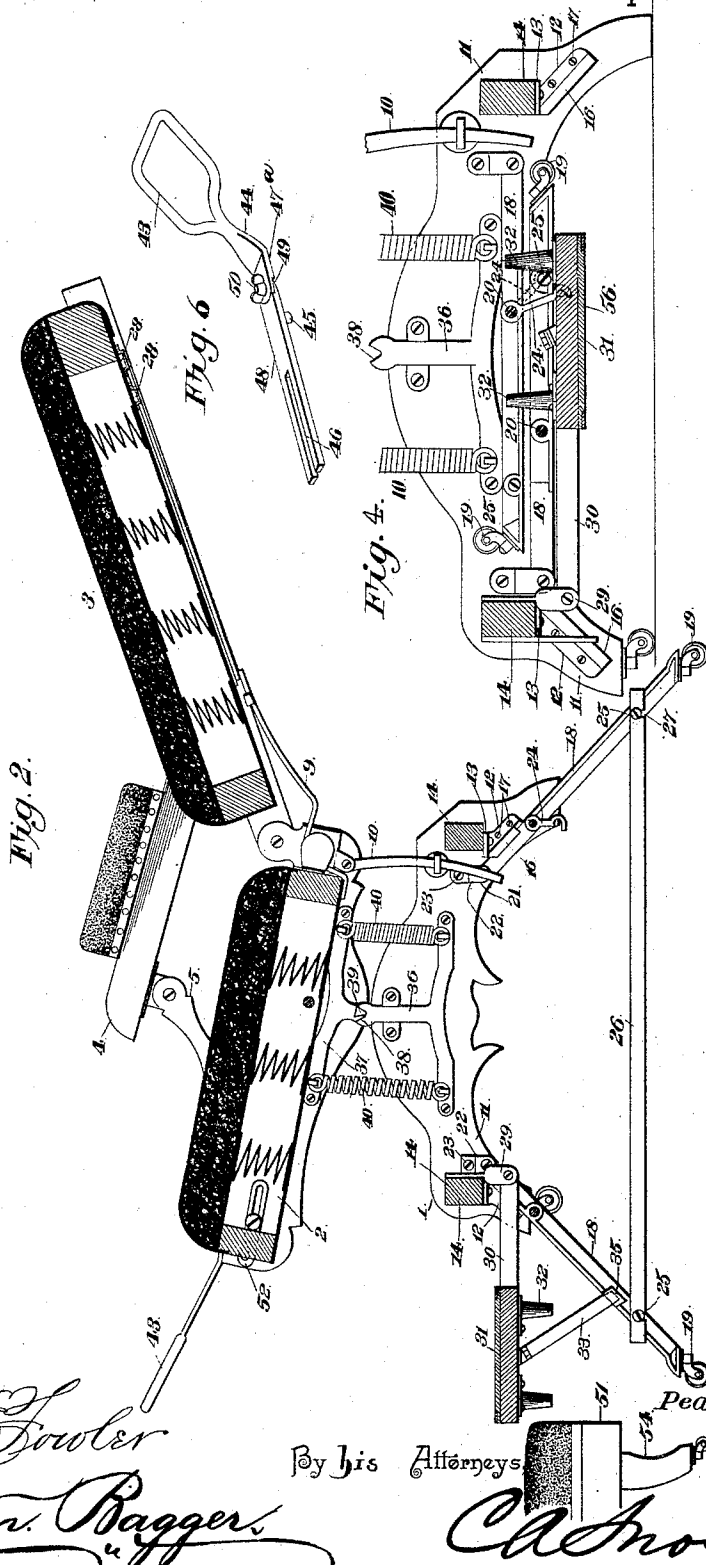
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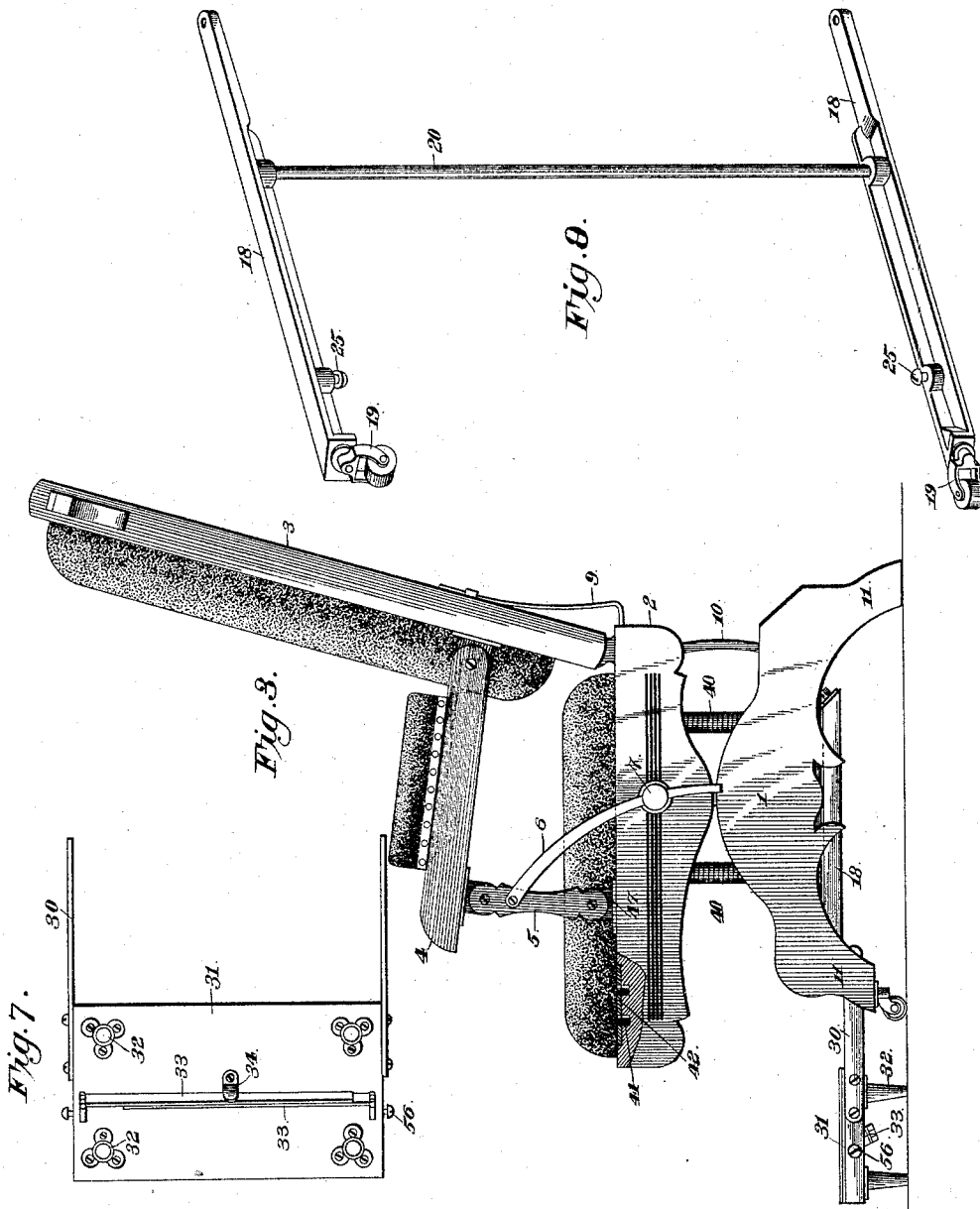
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UNITED STATES PATENT OFFICE.

PEARL C. LEWIS, OF CATSKILL, NEW YORK.

CHAIR.

SPECIFICATION forming part of Letters Patent No. 482,745, dated September 20, 1892.

Application filed February 13, 1891. Serial No. 381,318. (No model.)

To all whom it may concern:

Be it known that I, PEARL C. LEWIS, a citizen of the United States, residing at Catskill, in the county of Greene and State of New York, have invented a new and useful Chair, of which the following is a specification.

This invention relates to chairs; and it has for its object to provide a reclining-chair made in the manner shown and described in my application for Letters Patent, Serial No. 305,711, filed on the 2d day of April, 1889, and patented May 19, 1891, having the Patent No. 452,713, with an attachment by means of which it may be quickly and conveniently converted into a surgical or gynecological chair, thus enabling the said piece of furniture to be used as an ordinary office-chair and also for surgical and operating purposes, said invention being designed wholly in the nature of an improvement over said patent.

With these ends in view the invention consists in the improved construction, arrangement, and combination of parts, which will be hereinafter fully described, and particularly pointed out in the claims.

In the drawings hereto annexed, Figure 1 is a perspective view showing a chair constructed in accordance with my invention. Fig. 2 is a longitudinal vertical sectional view. Fig. 3 is a side elevation. Fig. 4 is a vertical sectional view taken through the base with the extension-legs folded under the same. Fig. 5 is a perspective detail view of one of the castings, by means of which the extensible legs are held when extended. Fig. 6 is a perspective detail view of one of the stirrups. Fig. 7 is a detail view of the foot-rest, showing the under side of the same. Fig. 8 is a perspective detail view showing two of the extensible legs and the rod connecting the same.

The chair proper comprises the base-frame 1, supporting the rocking-seat frame 2, the back-frame 3, hinged to the latter and connected by the arm-rests 4 with links 5, pivoted to the sides of the seat-frame. Pivottally connected to said base are the tapering or wedge-shaped braces 6, which are mounted in clamping devices 7, controlled by a single clamping-screw 8, so that by loosening the latter the back-frame of the chair may be gradually lowered by pressure exerted thereon. Springs

9 are provided to force the back-frame in a forward direction when relieved from pressure and when tension upon the wedge-shaped braces has been loosened. A wedge-shaped brace 10 is also connected pivottally with the seat-frame and extends through a suitable clamping device attached to the base-frame, in order that the seat-frame may be held from rocking upon the latter.

The legs 11 of the side pieces of the base-frame 1 are provided on their inner sides with plates or castings 12, provided at their upper ends with shoulders 13, bearing against the under sides of the cross-braces 14, connecting the side pieces of the base-frame. Said plates are provided with shoulders 15, having flanges 16, forming lateral shoulders or stops, and they are secured by means of screws 17, extending into the side pieces of the frame and through the shoulders 13 into the cross-braces 14. The said castings thus serve to secure the cross-braces in addition to their principal function, which is that of forming rests or bearing-plates for the folding leg-frames to be hereinafter more fully described. Each of the said folding leg-frames is composed of the side pieces or legs 18, constructed, preferably, of malleable iron and made L-shaped in cross-section throughout the greater portion of their lengths, so as to combine strength and lightness. The lower ends of said legs are provided with swiveled casters 19 of ordinary construction, and the said legs are connected by the transverse braces 20. The upper ends of the legs 18 are connected pivottally to the inner sides of the side pieces of the base-frame 1 by means of screws or bolts 21, passing through clips or securing-plates 22, which latter are secured to the said side pieces by means of screws 23.

The legs 18 are made of such dimensions that they may be conveniently folded under the base-frame of the chair, so as to be out of the way when the chair is to be used as an ordinary rocker or reclining-chair. When the leg-frames are thus folded, they may be secured by means of a suitable hook 24, mounted upon the rung or connecting-brace 20 of one of said leg-frames and engaging a lug 25 upon the other leg-frame, thus suspending the said leg-frames under the base-frame in such a position as to be out of the way and practically

out of sight, this manner of holding the legs beneath the chair of course being employed when the foot-rest, to be described, is not folded thereunder and connected therewith to support the same, as hereinafter set forth.

To unfold the leg-frames, it is only necessary to unhook the hook 24 and to tilt and lift the chair, so as to enable the said leg-frames to swing in an outward direction one after the other until the legs 18 engage the castings 12, against the shoulders and flanges 15 and 16 of which they rest. The leg-frames may then be connected by means of braces 26, having notches 27, adapted to engage the lugs 25, that extend inwardly from the several legs, and one of which is adapted to be engaged by the catch 24, as above described. These braces, when not in use, may be put out of the way in suitable pockets on the back of the chair, as shown at 28.

It will be understood from the foregoing description that the folding leg-frames may be very quickly and easily extended so as to elevate the chair-frame proper to the desired extent; also, that when the leg-frames are unfolded they will rest against and be braced by the castings 12. The latter, however, although they are very strong and durable, are not entirely relied upon for supporting the weight that may be placed upon the chair, they, as well as the legs 18, being very materially reinforced by the braces 26, upon which the strain is exerted longitudinally and which therefore acts as a truss to relieve the direct strain upon the legs.

The front cross-brace 14 of the base-frame of the chair is provided with depending brackets 29, to which are hinged the arms 30, carrying the foot-rest 31. The latter is provided on its under side with feet 32, which are of a suitable height to rest upon the floor when the leg-frames 18 are folded under the base-frame of the chair proper, and the latter rests upon the floor in a normal position.

Suitably hinged to the sides of the foot-rest 31 are the braces 33, which when not in use may be folded under the foot-rest and secured by means of an ordinary turnbuckle 34. When the chair is elevated upon the leg-frames 18 and is to be employed for surgical purposes, the braces 33 are extended and their lower ends may then be inserted into mortises or recesses 35 in the front legs 18, thus sustaining a foot-rest in a horizontal position. The said foot-rest then serves as a step to enable the patient to be conveniently seated in the chair. It will be observed that this foot-rest is supported entirely by the base-frame of the chair and that it has no connection whatever with the rocking seat. It will thus remain stationary at all times and will form a convenient table, upon which instruments may be placed while the chair is in use for surgical purposes.

The rocking seat is mounted upon the base-frame by means of T-shaped castings numbered, respectively, 36 and 37, the former of

which are provided with fulera 38 for the knife-edged bearings 39 of the latter. The ends of the arms of the said T-shaped castings are connected by springs 40. This construction is substantially like that shown in my Letters Patent above referred to, the principal improvement being in the use of the knife-edged bearings, which are practically noiseless and which enable the seat to rock very smoothly and easily.

The sides of the seat-frame are provided each with a series of recesses 41, which are reinforced by means of metallic plates 42, sunk in the said side pieces.

43 designates the stirrups, which are formed at the ends of arms or brackets 44, which may be of any suitable length and which are provided on their under sides with downwardly-extending lugs 45, adapted to engage any one of the said recesses.

The rear ends of the arms 48 are provided with longitudinal slots 46, adapted to straddle the lugs 47, by means of which the links 5 are pivoted to the side rails of the seat-frame. When the arms or brackets 44 are inserted under the lower ends of said links and the lugs 45 are caused to engage any one of the recesses 41, the said stirrups will be retained in position very securely. I prefer to construct the arms or brackets 44 in two pieces 47^a and 48, connected together pivotally, as shown at 49, and adapted to be retained securely in any desired position with relation to each other by means of suitably-arranged set-screws 50. When the stirrup-arms are thus constructed, they may be very readily adjusted laterally to suit the operator.

51 designates a frame, which is upholstered in any suitable manner to form a leg-rest and which is adapted to be connected detachably at the front end of the seat-frame, the outer end of said leg-rest frame being connected with the base-frame by means of folding and adjustable braces, all of which is fully set forth and claimed in my former patent. This leg-rest frame is provided with folding legs 54, as illustrated in my patent, which, when the said frame is detached from the chair, may be extended or unfolded, so as to convert the device into a stool or ottoman, affording a very convenient seat for the operator when the chair proper is used for surgical purposes. The legs 54 of the said stool, as well as the legs 18, are provided with casters at their lower ends to enable the said stool and chair to be very conveniently moved into any desired position with relation to each other.

The operation and advantages of my invention will be readily understood from the foregoing description, taken in connection with the drawings hereto annexed. It may be mentioned, first of all, that while my improved chair is particularly well adapted to be used for surgical and gynecological purposes, its use is not limited thereto; but it also affords a handsome and convenient piece of office-furniture. Normally the frames composed of

the legs 18 will remain folded under the base-frame of the chair, so that the appearance of the latter will not necessarily suggest its use. When the chair is to be used for surgical examinations or operations, the leg-frames 18 may be very quickly and easily unhooked and extended, thus elevating the chair to the proper height. The foot-rest 31 is then extended to an approximately horizontal position, where it is supported by means of the braces 32, thus affording a step to enable the patient to take a seat in the chair. The stirrups are then adjusted in the desired position upon the side rails of the seat-frame, and the chair is then ready for use. After the patient is seated the operator may lower the back-frame and adjust the seat to any desired position, and the stool or ottoman, which forms a part of the chair outfit, affords a very convenient seat of exactly the proper height for the operator, while the foot-rest 31, which, as above described, remains stationary while the seat-frame and back are being adjusted, forms a convenient shelf or rest upon which instruments may be placed.

It will be particularly observed that my improved chair is free from pawls and ratchets and similar means for adjusting its various parts, which are bound to be more or less noisy in operation. By means of the wedge-shaped braces herein described and the clamping devices for the same, all of which have been fully shown, described, and claimed in my previous patent, above referred to, the adjustment of the various parts may be effected smoothly and noiselessly and without necessarily alarming a nervous patient.

When the chair is in use as an ordinary office or reclining chair, the foot-rest 31 may remain extended or it may be folded back under the base-frame. In the latter case the catch 24 may be placed in engagement with the lug or stud 56 on either side of the said foot-rest, which may thus be supported and which in turn supports the folding leg-frames. When the foot-rest 31 is extended and rests upon the floor, it will be found exceedingly convenient, especially by ladies and short people. It also raises the feet off the floor, thus preventing cold feet.

Having thus described my invention, I claim and desire to secure by Letters Patent of the United States—

1. The combination, with a reclining-chair, of supplemental leg-frames pivoted to each end of the base-frame of said chair and adapted to overlap each other and fold within the base, and each provided with the locking-lugs 25, adapted to engage a transverse notched leg-frame brace, and a pivoted supporting-hook catch loosely connected to one of the leg-frames and at its free end adapted to detachably engage one of the locking-lugs 25 of the opposite leg-frame, substantially as set forth.

2. The combination, with a reclining-chair, of the plates or castings secured to the inner sides of the side pieces of the base-frame of said chair and having laterally-flanged shoulders,

and the oppositely-pivoted leg-frames adapted when extended from beneath said base-frame to rest within said lateral flanges, preventing lateral displacement, and against the main shoulder of said castings, substantially as and for the purpose set forth.

3. The combination, with a reclining-chair having the base-frame, the rocking seat, and the pivoted back-frame and the cross-pieces connecting the sides of the base-frame, of the plates or castings secured to the sides of the said base-frame and having heads abutting against and secured to the cross-pieces of the latter, and laterally-flanged shoulders, and the leg-frames connected pivotally to opposite ends of said base-frame by means of bolts or screws passing through clips or securing-plates and adapted when extended from beneath the frame to rest within said lateral flanges, forming supplemental stops, preventing lateral displacement, and against the main shoulder of said castings, substantially as set forth.

4. The combination of a reclining-chair, supplemental leg-frames pivoted to each end of the base-frame of said chair and one of which frames is provided with a hook, said leg-frames being adapted to overlap each other and be folded under the base-frame, brackets pivoted to the front end of the latter, a foot-rest rigidly secured between the outer ends of said brackets and provided with lugs or studs, said foot-rest being adapted to be folded beneath the frame beneath the folded leg-frames and is supported thereunder by said hook of one of the leg-frames engaging a lug or stud thereof, substantially as set forth.

5. The combination, with a reclining-chair, of the supplemental leg-frames pivoted to and adapted to be folded under the base-frame of the same, arms or brackets pivoted to said base-frame, extending out horizontally from beneath and to the front of the same and carrying a foot-rest adapted to be folded under said base-frame and leg-frames, and means for supporting the foot-rest and leg-frames together independently of said base-frame when thus folded, substantially as set forth.

6. The combination, with a reclining-chair, of the supplemental folding leg-frames pivoted to the base-frame of said chair, the legs of the front frame being provided with mortised recesses, the arms or brackets pivoted independently to said base-frame and carrying the foot-rest, the legs or brackets hinged to the same and adapted to engage the recesses or mortises in the front legs, and a turn-buckle to secure said legs or brackets when folded under the same, said leg-frames and foot-rest being adapted to be folded and locked together beneath the base-frame and independently therefrom, substantially as and for the purpose set forth.

7. The combination, with a chair constructed substantially as described, the side rails of which are provided with notches or recesses, and the arm-connecting lugs, of the arms or

brackets adapted to rest flat upon the forward ends of said side rails and having the stirrups at their front ends, longitudinal slots at their rear ends adapted to straddle said lugs, and
5 downwardly-extending lugs or pins adapted to engage the notches or recesses in the side rails of the chair, substantially as specified.

8. The combination, with a chair constructed substantially as described, the side rails of
10 which are provided with the arm-connecting lugs, and notches or recesses located at their forward ends, of the metallic plates provided with perforations registering with said notches or recesses, the stirrups having the arms or
15 brackets composed of two parts pivotally connected and adapted to be held securely with

relation to each other by means of a suitable set-screw, the rear end of said arm being provided with a longitudinal slot adapted to straddle said lugs within the side rails of the
20 chair, and with a downwardly-extending lug adapted to engage one of the series of recesses in the side rail of the said frame of said chair, substantially as and for the purpose herein set forth.

25 In testimony that I claim the foregoing as my own I have hereto affixed my signature in presence of two witnesses.

PEARL C. LEWIS.

Witnesses:

E. R. MACKAY,
G. H. JONES.