J. T. HAY.

POCKET FOLDING CHAIR.

APPLICATION FILED MAR. 28, 1910.

1,035,823.

Patented Aug. 13, 1912.

2 SHEETS—SHEET 1.

Fig. 2.

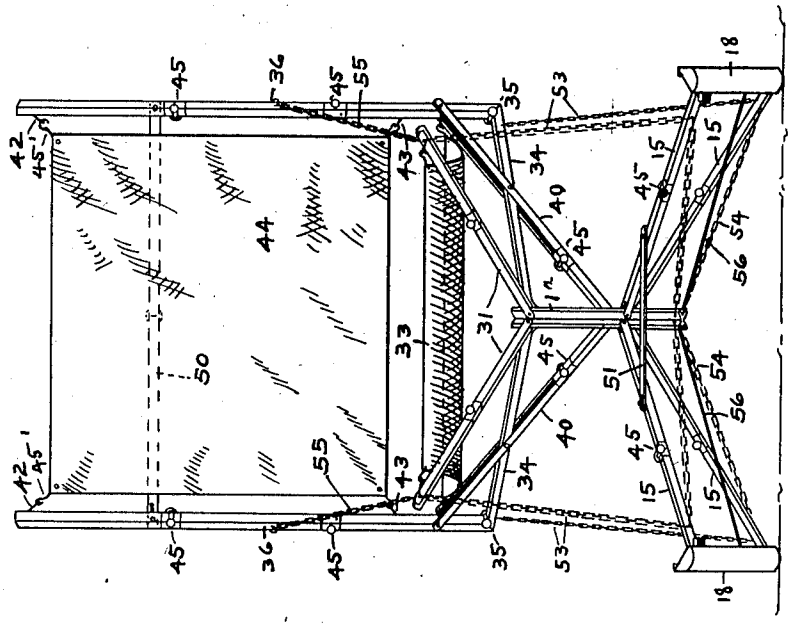

Fig. 9.

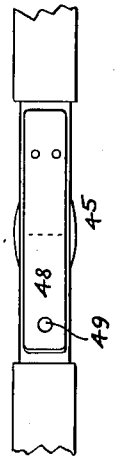

Fig. 10.

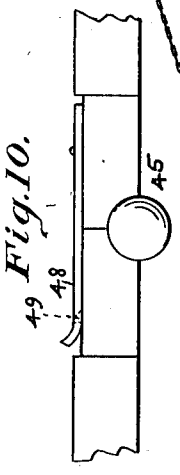

Fig. 1.

WITNESSES

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Fig. 4.

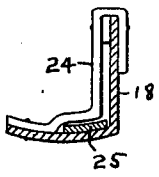

Fig. 5.

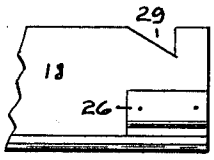

Fig. 6.

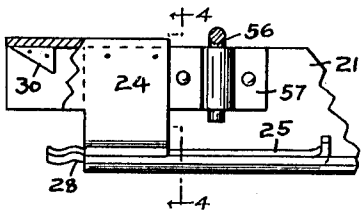

Fig. 11.

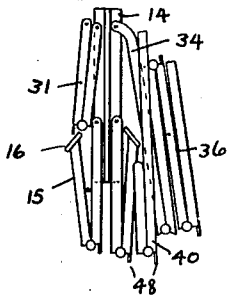

Fig. 12.

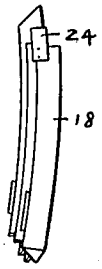

Fig. 7.

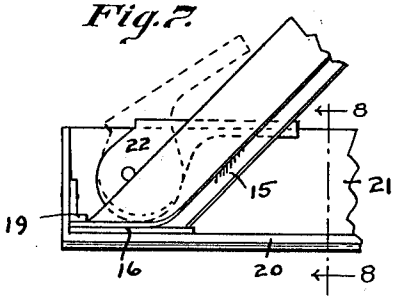

Fig. 3.

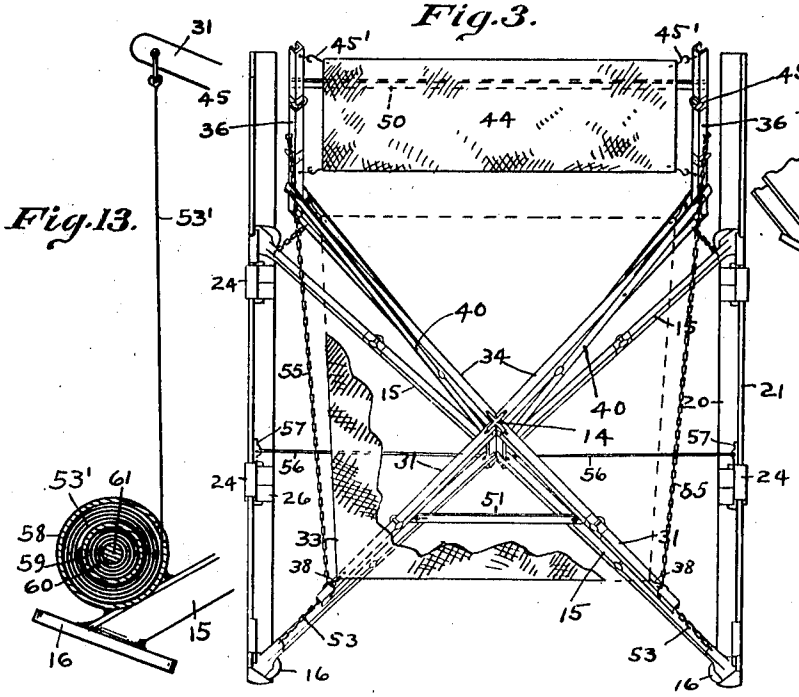

Fig. 8.

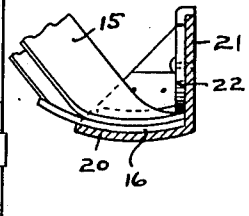

Fig. 13.

WITNESSES

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JOHN T. HAY, OF DARKE COUNTY, OHIO.

POCKET FOLDING CHAIR.

1,035,823. Specification of Letters Patent. Patented Aug. 13, 1912.

Application filed March 28, 1910. Serial No. 552,114.

To all whom it may concern:

Be it known that I, JOHN T. HAY, a citizen of the United States, residing near Union City, in the county of Darke and State of Ohio, have invented certain new and useful Improvements in Pocket Folding Chairs, of which the following is a specification.

This invention relates to improvements in folding chairs which are adapted to be folded into a small package capable of introduction into a coat pocket or other comparatively small space, and the object is to provide a chair that will be comfortable as a seat when opened out but which can be condensed into a small space for transportation from one place to another.

I accomplish the object of the invention by the mechanism illustrated in the accompanying drawings, in which—

Figure 1 is a view in side elevation of my improved chair in position to be used as a seat. Fig. 2 is a front view of same. Fig. 3 is a top plan view showing the seat broken away and removed in part to disclose the underlying mechanism of the chair. Fig. 4 is a vertical section of one of the rockers on the line 4—4 of Fig. 6. Fig. 5 is a side elevation of one of the ends forming the joint or separable part of the rocker. Fig. 6 is a like view of the mate or opposite end portion of the rocker which is adapted to cooperate with the part shown in Fig. 5. In Fig. 6 a portion of the sleeve to receive the opposite member of the joint is broken away and sectioned. Fig. 7 is a detail in elevation looking toward the inner side of the rocker of the means for removably securing the rocker to the superimposed chair. Fig. 8 is a vertical section on the line 8—8 of Fig. 7. Fig. 9 is a top view and Fig. 10 a side view of the hinge joint used at various parts of my improved chair. Fig. 11 represents the chair with the rockers removed and the chair in its folded condition. Fig. 12 shows the rockers as separately folded from the remaining portion of the chair, and Fig. 13 illustrates a modified form of flexible tie and reel for automatically winding it up.

Like characters of reference indicate like parts throughout the several views of the drawings.

14 is the main post to which the oblique braces of my chair are pivotally attached. This post is maintained when the chair is in position for use, substantially in a vertical position under the middle of the seat of the chair and is of such length as to avoid touching the chair seat or floor upon which the chair may be placed. This post will preferably be formed with four equi-distant longitudinal V-shaped channels extending the full length of the post and forming four radial flanges which will be embraced by the bifurcated ends of the diagonal braces, which bifurcated ends will be hinged or pivotally secured to the post by means of suitable rivets as shown.

15 are diagonal braces, four in number, having their upper ends bifurcated and pivotally secured to the post 14. These braces, as well as all of the frame work of the chair so far as is practicable, will be formed out of angle or channel iron in order to secure maximum strength with minimum weight. The drawings show the braces as formed out of channel iron. The lower ends of the braces are provided with shoes 16, preferably rigidly secured to said braces. These shoes will provide a suitable bearing for the chair upon the floor or ground or other supporting surface. In the drawings I have shown them as resting upon and secured to removable rockers 18. These rockers have a flange 19 raised above the base of the rocker sufficiently to receive a projecting end of the shoe as shown in Fig. 7. The rocker will preferably comprise a base plate 20 which will be transversely curved to cause it to remove obstructions from its path in the usual manner and a vertical member 21 to stiffen and strengthen the structure of the rocker. Pivotally secured to the inner side of the rocker-plate 21 is a cam lever 22 which is adapted to be moved into clamping contact with the shoe 16 to securely lock the diagonal braces 15 to the rockers.

For convenience in folding and carrying the rockers they will be transversely divided into a plurality of parts, here shown as three in number and these will be removably connected in the following manner: A splicing plate 24 which is shaped like an inverted U in cross section overlaps the upper edge of the plates 21 of the rocker and extends a suitable distance on each side of the joint to properly embrace and support the parts to be united. The inner member of this U-

shaped plate is carried down to the plate 20 and is riveted to the latter, but it is bent over a sliding plate 25 resting upon the rocker plate 20. The adjacent end of the divided rocker to be joined is provided with a holding plate 26 to receive the end of the sliding plate 25 when the latter is moved longitudinally under said plate 26, and the slide 25 is bent as shown as 28 to form a lock to prevent the withdrawal of the slide 25 from the plate 26 except by pressing down the bent end 28. That end of the divided rocker to which the plate 26 is riveted is provided with a notch 29 in its upper edge to engage a correspondingly shaped lug 30 within the bend of the U-shaped plate 24, whereby, when the notched end of the rocker is engaged under the lug 30 and between the members of the inverted U-shaped plate 24, and the slide 25 is locked under the plate 26 the ends of the divided rocker will be rigidly and securely united.

Pivotally secured to the post 14 near the upper end of the post are the two diagonal braces 31 which extend to the front corners of the chair seat 33. Pivotally secured also to the post 14 are the two diagonal and rearwardly projected braces 34, and 36 are the respective posts which form the frame or the supports for the back of the chair and which are connected with the diagonal braces 34 by means of the prop-joints 35. The prop-joints 35 are constructed so as to arrest the posts 36 at the proper angles to provide a chair-back of the proper slope. Rings 37 are provided at the outer ends of the diagonal braces 31 and at suitable distances on the post 36 above the prop-joints 35 for the attachment of seat 33, and the seat 33 which will preferably be of canvas or other suitable flexible material will have corner hooks 38 to engage rings 37 for the removable attachment of the seat 33 to the chair.

Pivotally secured to the braces 34 are the diagonal braces 40, the upper ends of which are notched to hook over the sides of the rings 37 close to the post 36, and the lower ends of the braces 40 are notched to receive one of the flanges of post 14, and downward movement of the brace 40 caused by the weight of a person on the chair will be stopped by the contact of said ends with the pivoted ends of the lower braces 15.

The posts 36 will be provided with rings 42 near their upper ends and the lower rings 43, all of which will be for the purpose of the attachment of a canvas or other flexible material 44 to complete the back of the chair. This material 44 is provided with corner hooks 45 for the removable attachment of the part 44 to the rings in the posts 36.

The posts 36 will preferably be in jointed sections, here shown as three in number, and these sections will be united by means of suitably disposed prop-joints 45. The diagonal braces 15, 31, 34 and 40 will each be in two transversely divided parts which are connected by prop-joints 45 whereby all of said parts may be folded into a more compact package than would otherwise be possible.

In order to lock the prop-joints so they will not break except when desired under lateral strain, I provide the spring locking plates 48 on their backs, with perforations near their free ends to receive the pins 49. The ends of the pins 49 are beveled toward the joint to make their locking engagement with the plate 48 automatic and the ends of the plate are bent up to assist in this automatic locking operation.

A horizontal brace-bar 50 is pivotally attached at one end to post 36 and is removably secured by any suitable means (not shown), to the opposite post 36. This bar 50 also has a prop-joint midway of its length, as shown, to allow it to be folded.

A brace-bar 51 is pivotally secured to one of the front diagonal braces 15 and is removably secured at its other end to the opposite one of said front diagonal braces 15 to increase the rigidity of the chair. I also provide flexible ties, here shown as chains, 53 from the outer ends of the lower diagonal braces 15 to the corresponding outer ends of the upper diagonal braces 31 and 34. I also provide diagonal ties 54 from the shoes 16 to the lower end of the post 14 to keep the braces 15 from spreading and to hold the post 14 in proper operative position.

Where the chair is to be used by heavy persons and additional strength to the back is required, I provide the chains 55 extending from the outer ends of braces 31 to the middle of the back posts 36. And to brace the rockers to keep them from spreading and turning, I provide stiff rods 56 which are hinged to the lower end of post 14 and are bent at their outer ends to form hooks which are inserted in sockets 57 on the inner sides of the vertical members 21 of the rockers.

In the modification shown in Fig. 13, a cord or tape 53 is used in place of the chain and it is automatically reeled when the chair is folded, upon a drum 59 in a case 58 by the action of spring 60 wound on spindle 61 and connected with the spindle and inner wall of the drum. This automatic reeling is capable of various modifications, all within the spirit of this invention.

In folding up the chair the first operation is to disengage and remove the flexible seat 33 and back 44. Then the back posts 36 and the several diagonal braces are folded over as their joints will permit into the shape shown in Fig. 11, the rockers 18 having been

previously disengaged. The rockers are folded together in the manner as shown in Fig. 12 and then if so desired all of the parts may be wrapped in the flexible seat and back of the chair.

Having thus fully described my invention what I claim as new and wish to secure by Letters Patent of the United States, is—

1. In a folding chair, a seat, a suspended post under the seat, downwardly oblique foot supports hinged at their upper ends to the post, lateral flanges terminating the lower ends of said foot supports, rockers, means for removably securing the shoes to said rockers, additional rocker supports extending from the rockers to the post, upwardly oblique seat supports hinged at their lower ends to the post and means for removably securing them to the seat.

2. In a folding chair, a seat, a post suspended above the floor under the seat, downwardly oblique foot supports hinged at their upper ends to the post, upwardly oblique seat supports hinged at their lower ends to the post, chair back posts hinged to the rear ones of said upwardly oblique seat supports, diagonal braces from the post under the seat to the chair back posts, and crossing the rear seat supports and pivoted to them and to the chair-back posts and to the post under the seat, said last braces, the chair back posts and said diagonal supports all being in a plurality of sections hinged together to permit folding, and means for bracing and tying said hinged and folding parts to increase the rigidity and strength of the chair.

3. In a folding chair, a chair seat, a suspended post, and a plurality of oblique supports for the seat hinged to the post, oblique post supports, shoes terminating said oblique post supports, rockers with concave upper faces having flanges to overlap portions of said shoes, and cams with oblique bearings having faces to engage the concave shoes, to complete the removable fastening of the shoes to the rocker.

4. The combination with a folding chair, of rockers, means for removably securing the rockers to the chair, said rockers being in a plurality of separable members, a U-shaped splicing plate attached to one member into which the end of a second member is inserted, said splicing plate having an inside lug and said second member having a detent in its upper edge to engage with said lug, a lower slide-bar holding means, and a bar slidingly mounted on said first member and adapted to engage said holding means on said second member.

In witness whereof, I, have hereunto set my hand and seal at Indianapolis, Indiana, this, 9th day of February, A. D. one thousand nine hundred and ten.

JOHN T. HAY. [L. S.]

Witnesses:
F. W. WOERNER,
L. B. WOERNER.