No. 634,030. Patented Oct. 3, 1899.

H. J. RITTER.

SWINGING CHAIR.

(Application filed Nov. 4, 1898.)

(No Model.) 2 Sheets—Sheet 1.

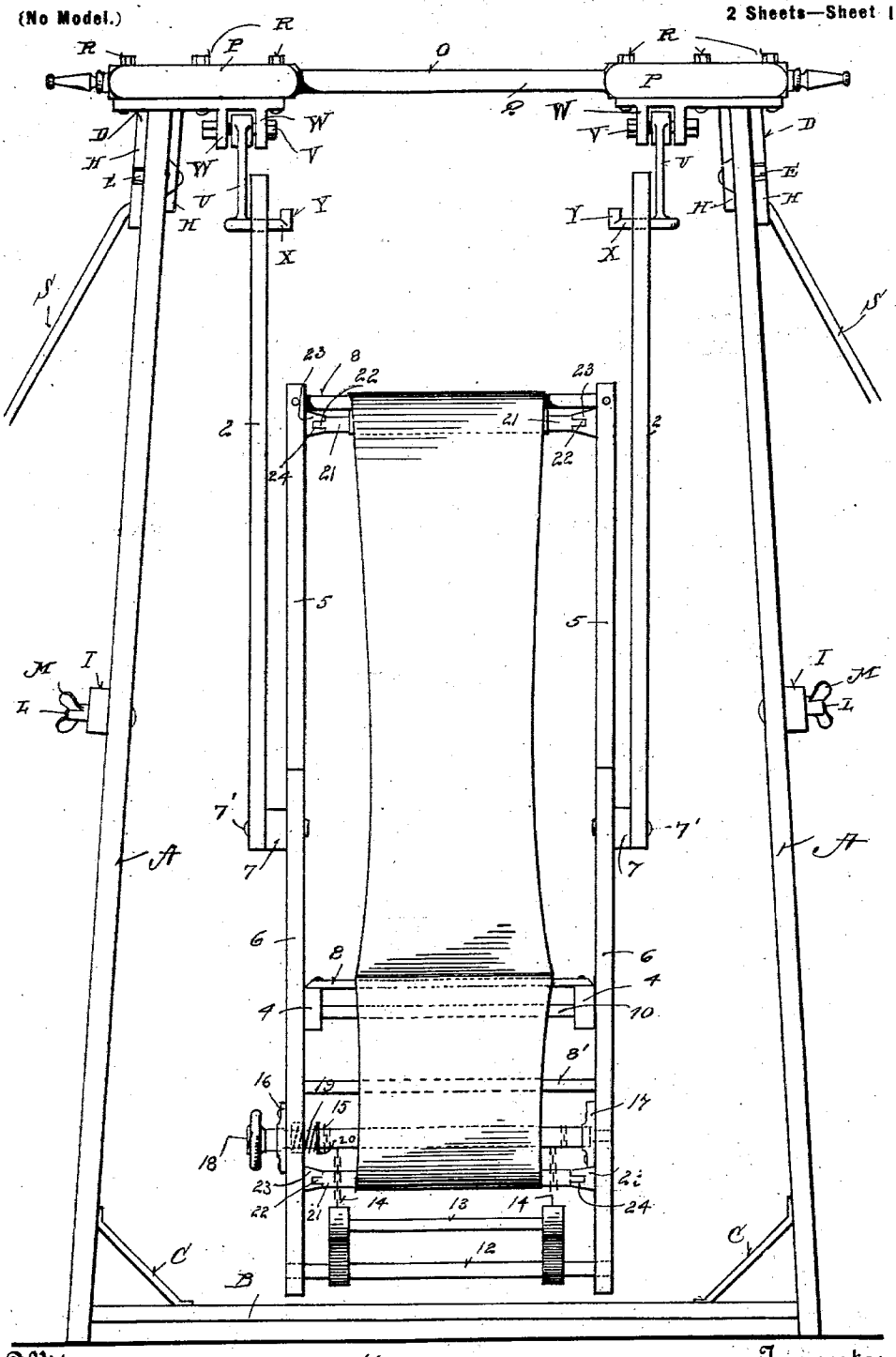


Fig. 1.

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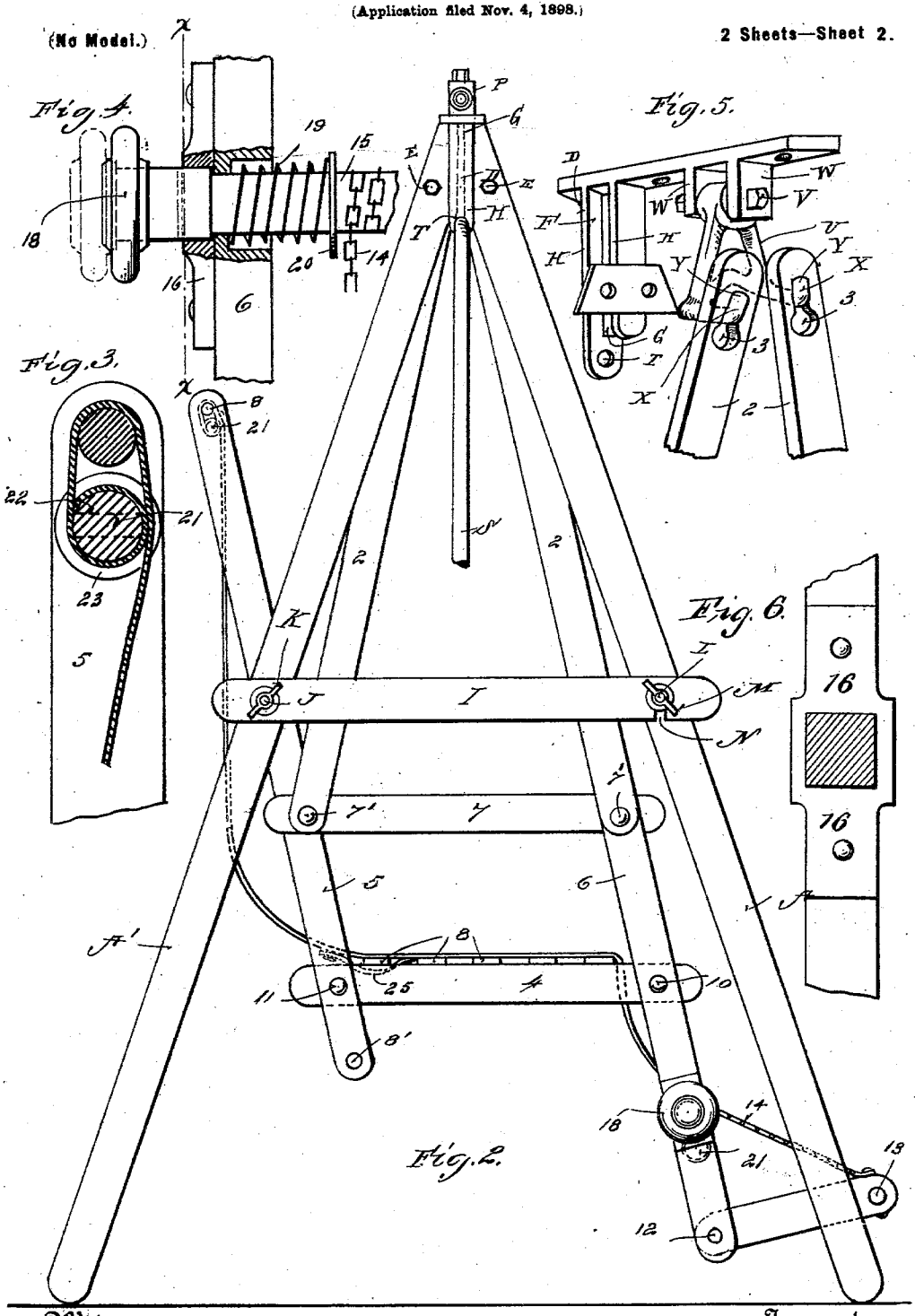
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UNITED STATES PATENT OFFICE.

HENRY J. RITTER, OF TIPPECANOE CITY, OHIO.

SWINGING CHAIR.

SPECIFICATION forming part of Letters Patent No. 634,030, dated October 3, 1899.

Application filed November 4, 1898. Serial No. 695,471. (No model.)

To all whom it may concern:

Be it known that I, HENRY J. RITTER, a citizen of the United States, residing at Tippecanoe City, in the county of Miami and State of Ohio, have invented certain new and useful Improvements in Swinging Chairs, of which the following is a specification, reference being had therein to the accompanying drawings.

This invention relates to certain new and useful improvements in a swinging chair.

The general object of my invention is to provide a suitable frame structure which may be utilized to support a chair-swing and which when such swing is removed (which may be quickly accomplished) may be used for a horizontal bar.

A further object of my invention is to provide a chair-swing with a cloth or canvas seat and back which may be tightened and loosened, according to the desired inclination of the back of the chair, and which may also be quickly removed and rolled up and carried into the house to prevent its becoming wet with dew or rain.

Another object of my invention is to provide suitable brackets for connecting the uprights of the sides of the frame structure and the horizontal or cross bar together in such a manner that when the frame structure is in its normal position it will be perfectly rigid, but which at the same time may be folded into small compass for shipping, &c.

A still further object of my invention is to provide suitable means for raising and lowering the foot-rest and which will also hold such foot-rest in whatever position it may be given.

My invention also relates to details of construction hereinafter appearing, and particularly pointed out in the claims.

In the accompanying drawings, on which like reference characters indicate corresponding parts, Figure 1 is a front elevation of my improved swinging chair and horizontal bar; Fig. 2, a side elevation of the same; Fig. 3, a detail view of one of the rolls for the cloth forming the seat-back, and also showing one of the roll-sockets for holding one end of said roll, the roll being shown in section, as also one of the cross-rods of the chair; Fig. 4, a detail view showing a portion of a drum for raising and lowering the foot-rest and the manner in which it is prevented from unwinding; Fig. 5, a detail view of one of the brackets for connecting the horizontal bar and uprights together and also showing a hanger pivotally connected thereto and the manner in which the chair-swing is connected therewith; and Fig. 6, a detail view showing the squared end of the drum and the socket in which it fits, such squared end of the drum being in section, taken on the line $x\,x$ of Fig. 4 and looking in the direction of the arrows.

The letters A A′ represent suitable side bars or supports, each set of which is connected together by means of a cross-bar B near their lower ends. Braces C stiffen the connection between these side bars and cross-bars, while at their upper ends these side bars are pivoted to brackets D by means of bolts or rivets E and are cut diagonally, so as to fit snugly within a recess F on each side of the bracket and against a central partition, as shown at G by dotted lines in Fig. 2. Thus it will be observed that the sides H of the bracket constitute braces or stiffeners, which impart to the swing lateral rigidity. In order to stiffen it in a longitudinal direction, I provide a bar I, pivoted to one of the supporting-bars A′ by means of a bolt J, having a thumb-screw K. The other end of the bar is connected to one of the supporting-bars A by means of a bolt L, which may be tightened or loosened by means of a thumb-nut M. When it is desired to fold the frame structure, composed of the supporting-bars A A′, the thumb-nut M is loosened and the bar I swung up out of engagement with the nut L by reason of a notch N in such bar. The opposite side of the frame structure is similarly constructed. Hence this description will answer for either side. In order to connect these sides together, I have provided a suitable bar O, which near its ends is squared, as shown at P, while between the squared ends it is turned round, as shown at Q. The squared ends rest upon the brackets D and are secured to them by means of bolts R. The rounded portion Q of the bar O is used for a horizontal bar when the chair-swing is removed, as will hereinafter appear. In order to hold the frame structure perfectly rigid

and especially when the horizontal bar is being used, I preferably employ ropes S, which at one end extend through a hole T in the lower end of each of the brackets and at their other end are secured to a stake in the ground in any desirable manner.

I will now refer to my improved chair and the manner in which it is connected with the supporting-frame. It will be seen that to each of the brackets I have pivoted hangers U by means of bolts V, which extend through ears or lugs W, projecting from the brackets. Each of these hangers has two lugs or projections X, extending outward therefrom, preferably at right angles, and are turned at their ends, as shown at Y, to prevent the supporting-bars of the chair from readily disengaging therewith, as will hereinafter appear. These supporting-bars are indicated by the numeral 2. At or near their upper ends they are provided with a hole or opening, which is somewhat elongated, as indicated at 3, and which will readily permit of placing the supporting-bars over the extensions X of the hangers and removing them. Thus it will be seen that my swinging chair may be readily disengaged from the frame structure and as readily engaged therewith.

Referring now to the chair-swing itself, it will be seen that it is composed of seat-supporting bars 4, back bars 5, and front bars 6, the latter being pivotally connected with the seat-bars. A bar 7, which constitutes an arm-rest, is of the same length as the seat-bar and runs parallel a short distance above it. This arm-rest is also pivoted to the front and back bars 6 and 5 by means of bolts 7, which also extend through the lower ends of the respective bars 2 in a manner to permit the bars to pivot about them. The opposite end or side of the chair is constructed in a similar manner and the various parts are lettered accordingly. These parts are interconnected by means of seat-slats 8 and connecting-spindles 8′, 9, 10, 11, and 12. To the lower end of the front bar 6, which projects some distance below the seat, is connected a foot-rest 13 by being pivoted to the cross-bar 12, and to the outer ends of the foot-rest are attached chains 14, connected with a drum 15, mounted in the front bars, as shown at A′ in Figs. 1 and 2. On the outside of one of the bars A is secured a socket 16, while on the inside of the opposite bar is secured a similar socket 17. These sockets have a square or other suitably-shaped opening to receive a similarly-shaped portion carried by the drum close to each of the sockets. A little hand-wheel 18 is mounted at one end of said drum, by which it may be rotated when the drum is moved far enough longitudinally in order that the angularly-shaped portions may be disengaged from the sockets, so that the foot-rest may thereby be raised or lowered at pleasure. When such foot-rest has been adjusted the required amount, a spring 19, coiled about the drum, acts between a shoulder 20 on the drum and one of the side or front bars 6, which causes the drum to move longitudinally in its bearings, when the enlarged or angular portion will enter the sockets in the plates 16 and 17 and hold the drum from rotating. This adjustment of the foot-rest is for the accommodation of tall or short persons.

Referring now to the canvas forming a seat and back, it will be seen that I have provided a pair of rollers 21, one at each end of the canvas, which are fastened thereto and are adapted to roll up the canvas. At each end of these rollers is formed a tenon 22, which fits in a socket 23, secured to each of the back bars 5 and front bars 6. These sockets have a slot 24, the length of which is about or slightly longer than the width of the tenons 22 and are open at one end, so that the rollers may be readily removed to wind up or let out the canvas—as, for instance, when removing it from the swinging chair and placing it on the chair or changing its length to permit the inclination of the back to vary, as will more fully appear.

From the foregoing description it will be understood that the chair-swing is adapted to be inclined to any desired angle, but this is only when the canvas is of sufficient length. Should it be too short to permit the back to swing to its rearmost position in a manner well known, the weight of the person on the canvas where it runs over the slatted seat will cause the canvas to pull on the back and hold it against the back of the person in the chair, thus affording an ample support for his back in a sitting or more or less reclining position. When it is desired to throw the chair-swing to a horizontal position, or nearly so, the canvas is given the proper amount of slack and the person using the chair places his feet on the foot-support and throws his weight more toward the back, when the back of the chair will assume a nearly horizontal or reclining position, according to what inclination he may desire. His weight will act to keep the canvas taut and the chair will readily retain any inclination given it without any effort on the part of the user, which is a source of much pleasure and comfort.

In order to prevent the wind from blowing the canvas out before a person can seat himself, I provide a strap or straps 25, which may be secured at one end to the canvas and buttoned thereto at the other end and which passes under one of the seat-slats, the button being for the purpose of quickly unfastening it, so that the canvas may be removed; but this strap may or may not be used. It will also be understood that this strap is long enough to permit more or less movement of the canvas back and forth over the seat-slats.

It will have been observed that my invention possesses great durability, and as there are but few parts it is cheaply manufactured. It is also adapted to be folded together in small compass, which is of great practical and commercial importance.

Referring again to the chair-swing proper, it will be observed that the cross-rod 8′ is adapted to come in contact with the seat-bars when the back is in its rearmost or substantially horizontal position. This prevents the back from dropping down too far should the canvas be too loose.

It will be understood, of course, that what I mean by "horizontal bar" is a bar used for gymnastic exercise, and I wish to be understood as clearly distinguishing between such a bar and a mere head-block or head-piece, which is not adapted for such purpose.

Having thus fully described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. In a swinging chair, a bracket having two arms, a pair of lugs extending from one arm and a cross-piece having a pair of holes therein cast or otherwise secured to the other arm of said bracket, and said second arm having a pair of recesses therein, with a partition between them, substantially as shown and described.

2. In a swinging chair, a bracket having two arms, one of which has a pair of recesses with a partition between them, a cross-piece extending across the inner face of said arm and having a pair of holes therein, while the outer face of said arm has a hole or opening for the reception of a guy-rope, and a pair of lugs projecting downward from the other arm of said bracket, substantially as shown and described.

3. In a swinging chair, the combination with a chair proper having a pair of front bars, a foot-rest pivotally mounted between said bars, a drum carried by said bars and one or more chains connecting said drum and said foot-rest together, said chains or chain adapted to be wound on said drum, and means to hold said drum against turning, substantially as shown and described.

4. In a swinging chair, the combination with a chair proper, having a pair of front bars with a foot-rest pivotally mounted between them, a rotatable drum carried by said bars, a pair of chains connecting said drum and foot-rest together and adapted to be wound on said drum, means for moving said drum longitudinally whereby it may be rotated, and a spring for returning said drum to its normal position, and means for engaging with said drum when moved to its normal position to prevent its rotation, substantially as shown and described.

5. In a swinging chair, the combination with a chair proper, having a pair of front bars, a foot-rest pivoted between said bars near their lower ends, a drum carried by said bars, a pair of sockets located on the same side of the respective front bars, angular portions on said drum adapted to fit within said sockets when the drum is in its normal position and prevent its rotation, means for moving said drum longitudinally out of its normal position, whereby it may be rotated, chains connecting said foot-rest and said drum together and adapted to wind on said drum, and a spring acting between one of said front bars and a shoulder on said drum and adapted to return said drum to its normal position, substantially as shown and described.

6. In a swinging chair, the combination with a chair proper having a slatted seat and a pair of back bars and a pair of front bars, a slotted socket secured to each of said bars, a pair of rollers having tenons thereon adapted to fit within the slot within each of said sockets, a canvas connected at its ends with said rollers, said rollers being adapted to roll up said canvas when out of engagement with said sockets, a strip or strips secured at one end of said canvas and adapted to pass around a slat of the seat of said chair and be detachably secured to said canvas at its other end, substantially as shown and described.

7. In a swinging chair, a pivoted hanger having a transverse hole or opening therein and a pair of legs, a lug or projection extending from the corresponding side of each of said legs, said lugs forming lateral pintles for swing-supporting bars, being bent at their outer ends, such turned ends and also the lugs standing in line with each other, and a cross-piece connecting said legs near their lower ends, substantially as shown and described.

In testimony whereof I affix my signature in presence of two witnesses.

HENRY J. RITTER.

Witnesses:
WILL H. LONG,
PHILLIP MILLER.