

No. 622,062.

Patented Mar. 28, 1899.

S. N. McCLOUD.

CHAIR.

(Application filed Aug. 19, 1898.)

(No Model.)

Fig. 1.

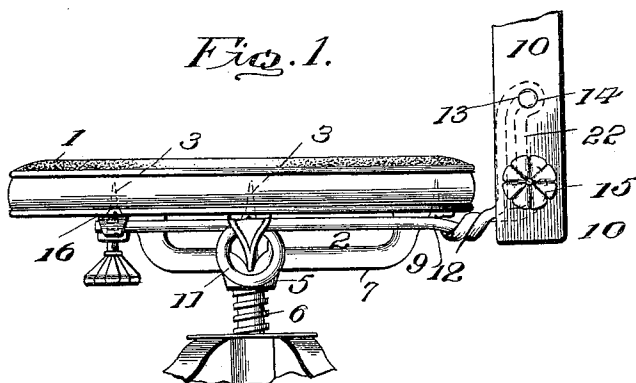


Fig. 2.

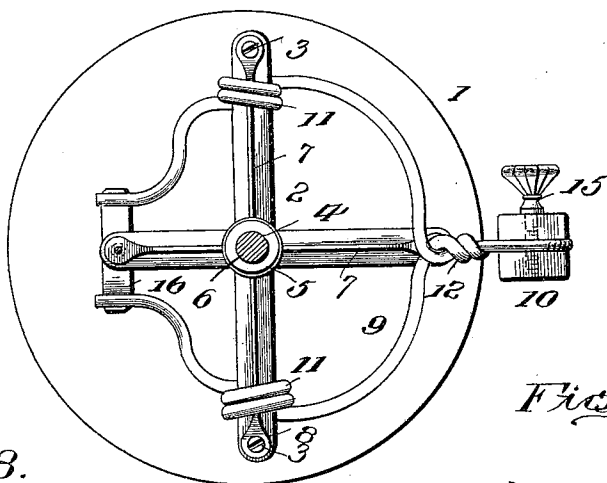


Fig. 3.

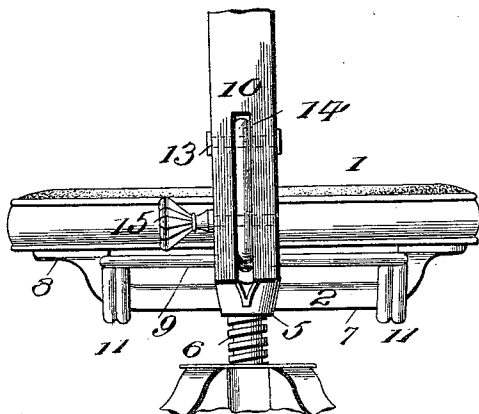
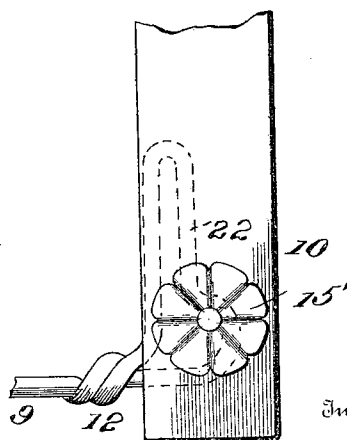


Fig. 4.



Witnesses

J. W. Gould
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Inventor

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UNITED STATES PATENT OFFICE.

SMITH N. McCLOUD, OF MARYSVILLE, OHIO, ASSIGNOR TO THE DAVIS
CHAIR COMPANY, OF SAME PLACE.

CHAIR.

SPECIFICATION forming part of Letters Patent No. 622,062, dated March 28, 1899.

Application filed August 19, 1898. Serial No. 688,999. (No model.)

To all whom it may concern:

Be it known that I, SMITH N. McCLOUD, a resident of Marysville, in the county of Union and State of Ohio, have invented certain new and useful Improvements in Chairs; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it pertains to make and use the same.

The invention relates to chairs having backs adapted to tilt, and more particularly to those in which the back tilts independently of the seat; and its object is to increase the simplicity, efficiency, and economy of the spring tilting mechanism.

The invention consists in the construction hereinafter described and pointed out.

In the accompanying drawings, Figure 1 is a partial side elevation showing the improvement applied. Fig. 2 is a bottom plan of the same. Fig. 3 is a rear elevation of a detail, and Fig. 4 is an elevation of a modified detail.

Numeral 1 indicates a chair-seat, which may be of any desired style and construction.

2 denotes the seat or seat-frame support, which in the case illustrated has four arms fixed to the seat by screws 3. It is by preference made of iron, either cast or malleable.

4 denotes a screw-threaded socket at the junction or hub 5 of the arms of the spider-frame 2, and 6 is a screw adapted to run in the socket. This screw is fixed to the seat, which may be raised or lowered thereby in usual manner. The spider-arms are preferably strengthened by webs 7 and finished, as indicated at 8, to receive the screws 3.

9 denotes a strong spring made of steel or other suitable metal, preferably of wire, in one piece, which spring connects the back-standard 10 to the seat-supporting spider 2. For this purpose each of the two limbs of the spring is coiled at 11 about a spider-arm, as shown, and extended backwardly in a curve to near the rear edge of the seat, where they are connected by a twist or coiling, as indicated at 12. The two limbs of the spring are continued back of their junction 12 and upwardly together, forming a loop or extension 22. This rear extension 22 is situated in the forked foot or lower end of the back-supporting standard, each limb being separately

curved and disposed, as indicated, to receive a bolt at 14 and set-screw at 15.

13 denotes a bolt or the like held in the bend 14 of the spring and straddled by the standard-fork, being thereby adapted to support the standard and back. This bolt not only forms a pivot for the back standard or support, but strengthens its forked foot and defends it against splitting if made of wood.

15' denotes a set-screw adapted to compress the members of the standard-fork (best seen in Fig. 3) upon the loop or spring extension 22 and hold the standard and back under any desired adjustment. By this construction the chair-back can be adjusted to any desired angle with respect to the seat by simply loosening the set-screw 15 and tilting the back on the bolt as a pivot. When adjusted to the desired angle, the back is fixed by tightening the screw, the spring connection with the seat being unaffected.

Obviously a set-screw might be used as the back-standard pivot and the pivot-bolt dispensed with, as indicated in Fig. 4, but such construction is not preferred. The tension of this spring connection is made adjustable by a screw engaging a bar 16, connected to the front ends of the spring near the outer end of the spider-arm opposite the back-standard. This bar receives the spring ends at 17.

18 denotes a set-screw passing through the bar 16 and bearing on the head of a spider-fastening screw 3. The tension of the spring is varied by manipulating said screw 18.

Some of the advantages of the spring-support are independent of particular means of connecting the same to the standard.

The use of every desired material known to be suitable for the several parts of the construction is contemplated and also every desired style of back or of seat.

I am aware that coiled springs have been combined with tilting seats and with a tension-regulating screw, and such device is not herein claimed.

Having described my invention, I claim—

1. The seat and back supports and the spring comprising two members twisted together and formed into a loop whereby it is connected to the back-support, said back-support having a forked end to receive the loop,

and a set-screw to compress the fork members upon the loop, substantially as described.

2. The seat and back supporting standard and the spring comprising two members twisted together and formed into a loop
5 whereby it is connected to the back-support, said back-support having a forked end to receive the loop, and a back-supporting pivot passing through the standard and loop, substantially as described.
10

3. The seat and back supporting standard and the spring comprising two members twisted together and formed into a loop whereby it is connected to the back-support,
15 said back-support having a forked end to receive the loop, and a set-screw to compress the fork members upon the loop, and a back-supporting pivot passing through the standard and loop, substantially as described.
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4. In a chair, the seat, the seat-support comprising a spider-frame, the back-support, the spring coiled about arms of the spider and having a vertical rear portion fixed directly

to the back-support and constituting the sole connection between the seat and back, a bar
25 to receive the free front ends of the spring, and means for operating said bar to adjust the tension of the coils, substantially as described.

5. In a chair, the seat, the seat-support comprising a spider-frame, the back-support, a spring coiled about arms of the spider and having a vertical rear portion fixed directly to the back-support and constituting the sole connection between the seat and back, a bar
30 to receive the free front ends of the spring, and a set-screw passing through the bar and bearing on the seat to adjust the tension of the spring-coils, substantially as described.
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In testimony whereof I have signed this
40 specification in the presence of two subscribing witnesses.

SMITH N. McCLOUD.

Witnesses:

NELLE G. McCLOUD,
L. PIPER.