

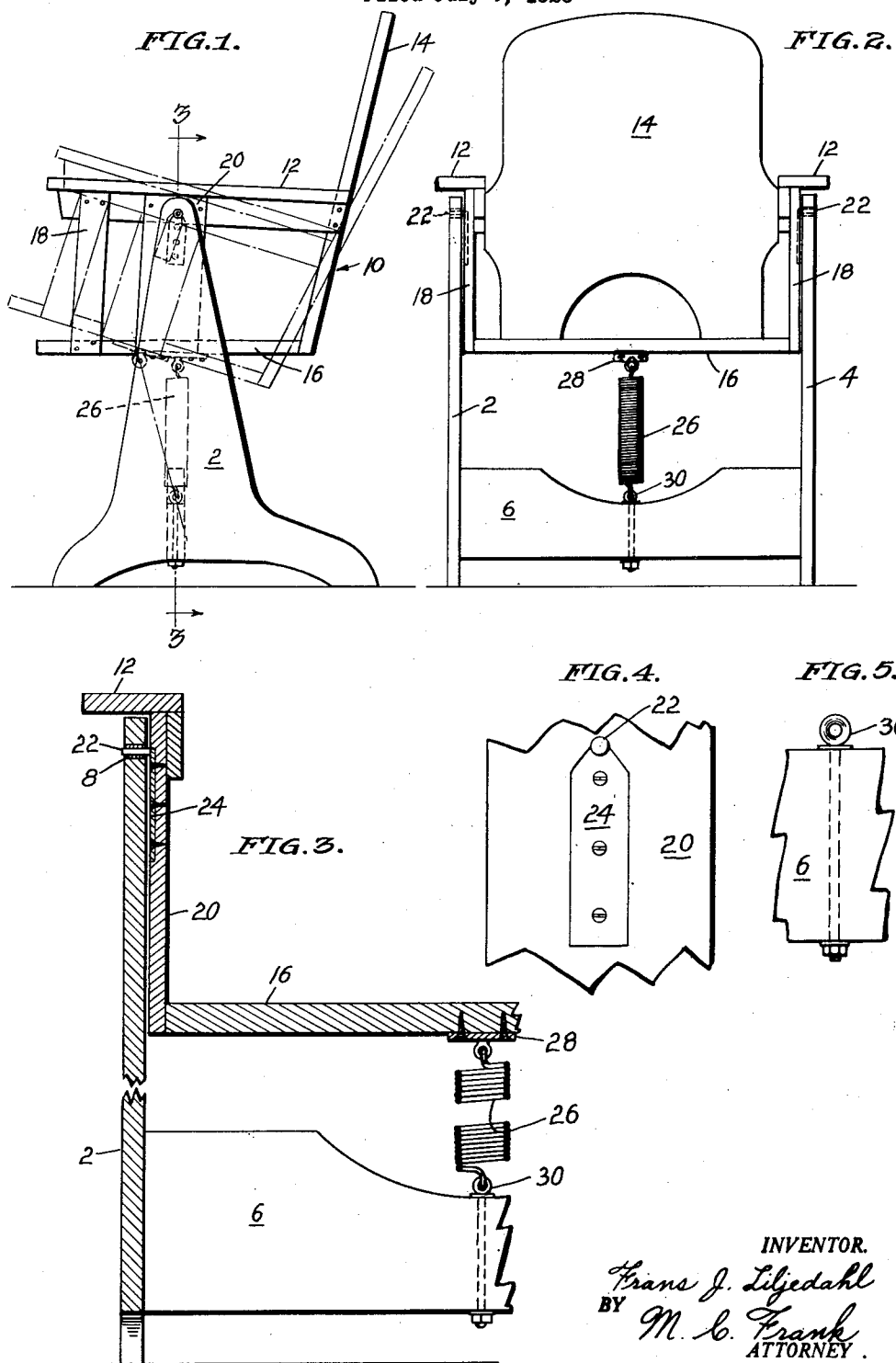
Oct. 23, 1928.

1,688,587

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ROCKING CHAIR

Filed July 8, 1926



UNITED STATES PATENT OFFICE.

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ROCKING-CHAIR.

Application filed July 8, 1926. Serial No. 121,095.

My invention relates to rocking chairs and is more especially directed to that type of rocking chair having a non-rocking floor pedestal for its support, and to a chair utilizing
5 spring means to stabilize the chair.

It is an object of my invention to provide a rocking chair of the described type in which a spring supplements the tendency of gravity, throughout the rocking range, to urge the
10 loaded chair to its central position of equilibrium.

It is a further object of my invention to provide a chair construction in which a single spring suffices to balance the chair.

15 It is further the object of my invention to provide a rocking chair having an unusually velvety action; that is, in which spring restraint increases in substantially more than direct proportion to the displacement of the
20 chair seat from its central normal position.

Other objects of my invention deal with the lightness and simplicity of construction made possible by my improved design, and together with further objects ancillary to and independent of the above listed objects, will become apparent in the specification.

Referring to the drawings:

30 Figure 1 is a side elevation of the chair of my invention. The dash lines represent the positions of the chair seat and of the spring axis when an occupant of the chair leans back.

Fig. 2 is a front elevation of the chair.

35 Fig. 3 is a fragmentary section through the pivotal axis of the chair, to disclose the spring and one of the two pivot pins. The plane of section is indicated by a line 3—3 in Fig. 1.

Fig. 4 is a detail side elevation of the pivot pin apart from its socket.

40 Fig. 5 is a detail of the eye-bolt which is used to attach the spring.

A forked pedestal consisting of uprights 2, 4, joined by a crosspiece 6, and having legs at its base, forms the supporting member for my rocking chair, and is adapted to rest immovably on the floor when in service.

The top portions of the uprights are apertured to receive the hollow bearing sleeves 8, by which the movable portion of the rocking chair is supported.

50 The movable portion 10, of the rocking chair, broadly termed the chair seat, includes the arms 12, the back 14, and the bottom 16, as well as the connecting braces 18 and 20.

Pivot pins 22 are provided for each side of
55 the chair, and are received by the hollow bear-

ing sleeves 8. These pins are attached by integral screw plates 24 to the center braces 20 at each side of the chair seat.

It is particularly pointed out, that the weight of the chair occupant is swung below the
60 axis about which the rocking part of the chair pivots. This underslung feature minimizes the tendency for the chair to tip too far, and permits the use of relatively light restraining means.

65 Resilient means are provided as an aid to gravity in keeping the chair righted. A coil spring 26 is attached at its upper end to the bottom of the chair seat by an eyebolt fitting 28, and at its lower end to the cross-piece 6 of the pedestal by an eyebolt 30. The parts
70 are so apportioned that when the chair is in normal position with the bottom of its seat substantially horizontal, the spring 26 is substantially vertical, is contracted to its fullest
75 extent, and has its axis intersecting the axis of the pivot pins 22. By this arrangement, a single spring suffices to restrain the chair against excessive motion in both directions. This single spring moreover, accomplishes its
80 purpose in a most efficient manner, since it offers little retardation for the first few degrees of angularity of the rocking of the chair seat from normal position, and increases thereafter substantially as the sine of this
85 angle. This trigonometric relation is not exact because the angularity of the spring itself must be taken into account, but it will be noted from Fig. 1, that the stretching imparted to the spring 26 is greater for a slight
90 rocking movement when the chair is tipped far back, than it is for the same amount of rocking movement when the chair is nearly horizontal. This construction makes for
95 velvety chair action as well as efficient spring utilization.

It will be appreciated that various modifications of my device come within the purview of my invention. For example, when "unitary spring means" are recited, the use of a pair of springs in tandem is not precluded. I desire to not be limited beyond the scope of the appended claims to my invention.

I claim:

105 1. A swinging chair comprising a seat portion and arm portions, a pedestal pivotally supporting said swinging chair at the arm portions thereof, and resilient means connected at one end to said pedestal and at its
110 opposite end to said seat portion, said latter

connection being in vertical alignment with the first named connection and the pivotal axis between the pedestal and arm portions when the chair is in normal position.

- 5 2. A swinging chair comprising a seat portion and arm portions, a pedestal pivotally supporting said swinging chair at the arm portions thereof, and a coil spring connected

at one end to said pedestal and at its opposite end to said seat portion, said latter connection being in vertical alignment with the first named connection and the pivotal axis between the pedestal and arm portions when the chair is in normal position. 10

In testimony whereof, I affix my signature.
FRANS J. LILJEDAH.