

(Model.)

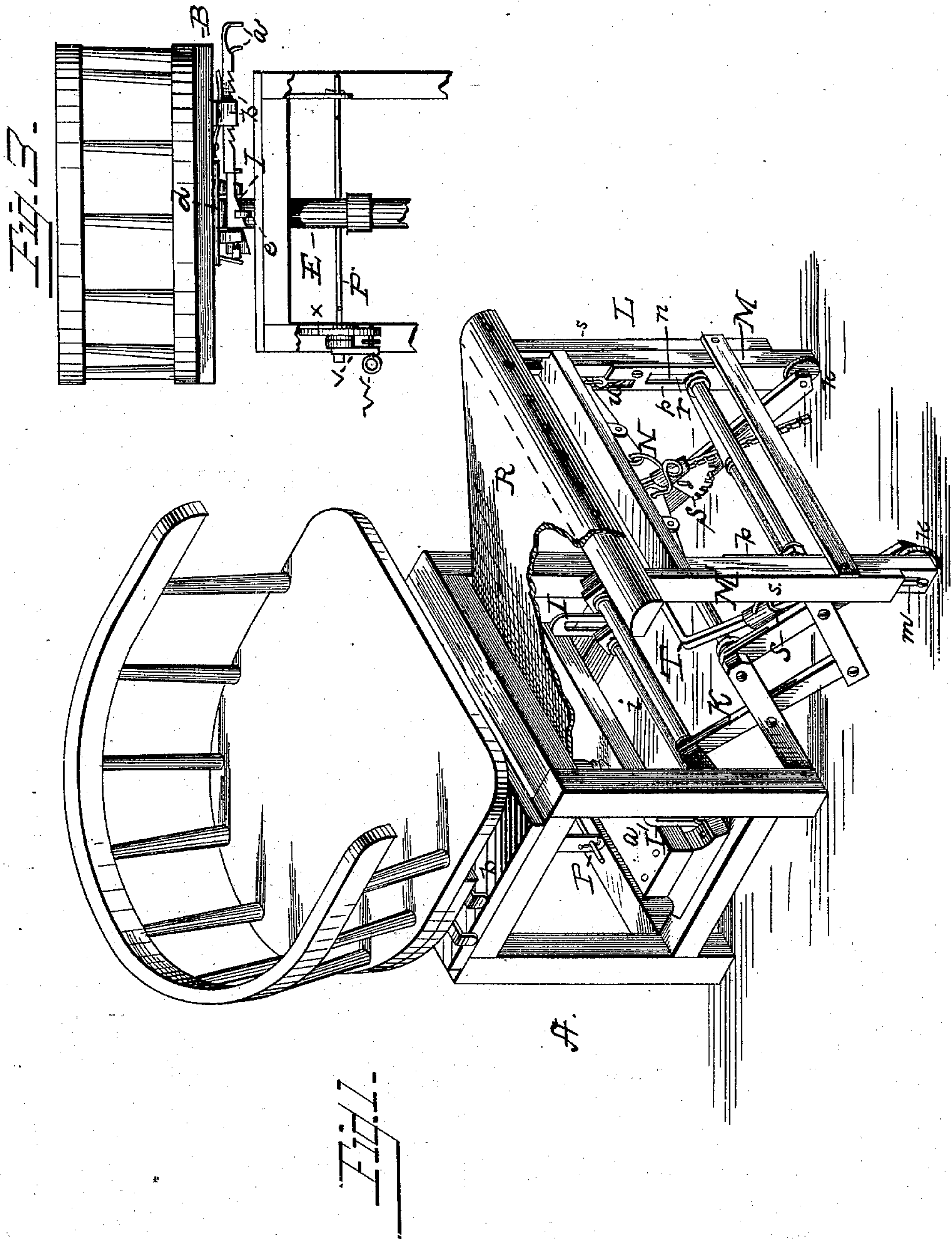
2 Sheets—Sheet 1.

H. A. ISBERG.

CHAIR.

No. 283,111.

Patented Aug. 14, 1883.



WITNESSES
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UNITED STATES PATENT OFFICE.

HANS A. ISBERG, OF LONG ISLAND CITY, NEW YORK.

CHAIR.

SPECIFICATION forming part of Letters Patent No. 283,111, dated August 14, 1883.

Application filed August 3, 1882. (Model.)

To all whom it may concern:

Be it known that I, H. A. ISBERG, a citizen of the United States, residing at Long Island City, in the county of Queens and State of New York, 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 ap-
10 pertains to make and use the same.

This invention has relation to improvements in tilting and revolving chairs, together with certain improvements in adjustable foot-rests; and the objects are to construct a substantial and durable chair of the class named, which is simple in construction, and which may be readily adjusted in height and tension, and which also may have the foot-rest correspondingly adjusted in height, and at the same
20 time may be extended or retracted to suit the desire of the occupant.

My invention consists in the novel organization and combination of parts, as will be hereinafter more fully set forth.

25 In the annexed drawings, forming a part of this specification, Figure 1 is a perspective view of my improved chair, showing some of the parts partially adjusted. Fig. 2 is a side view thereof, showing the relative arrangement of the parts. Fig. 3 is a back view, showing the arrangement of the wedges. Fig. 4 is a sectional view without the textile material. Fig. 5 is a vertical sectional view of the metallic tube and elevating-screw, showing the vertical spring with sleeve and stand-
35 ard; and Fig. 6 is a sectional view of the adjustable foot-rest.

The letter A is the chair-frame, constructed of substantial material, having suitably and
40 securely affixed on the lower side rails or rungs the cross-sill *a*, provided with a centrally-located screw-threaded hole to receive the elevating-screw of the chair, and also having similarly fixed on the top rails the board *b*,
45 provided with a centrally-located hole, through which the tube of the standard passes, and by which means it is held steadily in place.

To the under side of the chair-seat is secured a cross-piece, B, (see Fig. 3,) and to this cross-
50 piece is centrally secured the metallic plate C. This plate C is formed with depending side lugs provided with perforations to receive piv-

ot-pins *b'*, and has side walls, *d*, transversely arranged to the lugs, the space between the lugs and side walls being sufficient to admit the upper end of the metallic tube, hereinafter described. In the center of this metallic plate C is rigidly secured the upper end of the vertical plate-spring D, which is formed, preferably, with the upper half of its length
60 about twice the width of the lower half.

The letter E is a metallic tube, formed with its upper end a double incline, and provided with side lugs or ears, *e*, to serve as stops when tilting or rocking the chair-seat; also having
65 pivot-holes at the upper end to receive the pivots passing through the side ears of the metallic plate, by which means the tube is secured to the plate and the chair-seat is allowed to tilt and rock. The lower end of this metallic tube
70 fits over the upper end of the supporting-screw, and is fixed thereto by any suitable fastening means.

The letter F is the supporting or elevating screw, the upper end of which fits in the metallic tube E, and therein secured, as heretofore
75 stated. This screw is bored out to admit the metallic sleeve and rod hereinafter described, and is provided at the lower end with a metallic cap, *f*, secured by any suitable fasten-
80 ing means. As heretofore stated, the metallic tube E and elevating-screw F being united, the tube passes through the hole in the lower cross-piece.

The letter G is the metallic sleeve, formed
85 with a socket corresponding to the size of the lower part of the vertical spring D, and provided with a screw-threaded hole in the lower end, which extends a suitable distance up-
90 ward, for the purpose hereinafter set forth.

The letter H is a metallic rod, fitting loosely in the core of the elevating-screw, provided with screw-threads on the upper portion, *g*, which engages with the screw-threaded hole in the metallic sleeve, and at *h* is cut or otherwise formed an annulus-groove.
95

At *i* are two semicircular plates, fitting in the cap on the end of the screw, and each having a central half-circular notch cut therein, so that when the two are brought together
100 they will clasp the metallic rod about the annulus and hold it from vertical displacement, but admit of its being revolved. These semicircular plates are set about the annulus-

groove, and then the cap *f* is secured in place, which holds the plates and rod in proper position.

The letter I represents binding - wedges adapted to fit in the space between the side ears of the metallic tube, and actuated to suit an occasion by the handles *a'*, which are formed with ratchet-teeth engaging with a cross-plate in the loop *b'*, and are retained in any one place by means of springs fixed to the plate of the loop *b'*, and press the handle down on the cross-plate. To the other end of the wedges is attached a spiral spring, the one end of which is fixed to the cross-piece under the chair-seat, the purpose of which is that when the handles are freed from contact with the stop they will pull the wedges back. These wedges hold the seat in whatever position desired, or, when loosened, leave the seat free for swinging.

The letter I' represents two upright standards, slotted vertically, and secured by any suitable fastening means to the inside faces of the lower side rails or rungs of the chair.

The letter K represents lazy-tongs, the inner levers of which are pivotally secured together by means of the rod *i* and then arranged between the uprights and secured there by cap-headed screws or bolts, so as to slide up and down in the slots of the uprights. The outer lower ends of the levers of the lazy-tongs are pivotally attached to the lower ends of the standards of the foot-rest, and have arranged between them and the standards rollers *k* to facilitate the extension and retraction, and the upper outer ends of the levers of the lazy-tongs are provided with studs fitting and operating in vertical slots in the standards of the foot-rest.

The letter L is the foot-rest, consisting of the sections M and M'. The standards of the lower section, M, are formed with a central tongue, *m*, on their outer faces, and have a groove, *n*, cut or formed in the inner surfaces, and provided with the plates *p*, having vertical slots *r*, fitting over the grooves, and in which, by means of studs or pivots, the upper outer ends of the levers of the lazy-tongs are secured and move vertically. The upper section, M', of the foot-rest is made to fit over the lower section, and has the depending pieces *s*, formed with grooves in the inner sides, fitting the tongues on the standards of the lower section, and is also provided with a series of notches, *t*, in the inner faces of the depending pieces *s*, in which the pawls engage, and secure and retain the sliding section M' at any desired elevation.

The letter N is a pair of levers pivotally attached to the cross-piece of the lower section of the foot-rest, the outer ends being attached to the upper ends of the pawl *u*, arranged in slots in the uprights, and which engage with the ratchets cut in the standards of the sliding foot-rest. The arms of the levers N may reach together and be loosely riveted in the middle.

The letter P is a shaft, journaled by any suitable means to the under side of the side rails of the chair-frame, and provided at one end with an arm, *v*, fixed rigidly on the shaft, and having a stop-pin, *w*, therein, which engages with perforations in a circular disk, *x*, secured to the journal-standard, whereby the shaft may be stopped from turning, as desired.

The letter R is a piece of suitable textile material, having one end tacked or otherwise fastened to the cross-piece of the sliding section of the foot-rest, and the other end secured to or about the shaft P.

The letter S represents segmental racks loosely arranged on pins in the inner side of opposite levers in the lazy-tongs, with the racks engaging another pin, and formed with a sleeve provided with a link.

The letter T represents a metallic yoke, the arms of which are provided with notches on their inner sides, and fit in the sleeves of the segmental racks S, where they are held, and may be adjusted to any desired height by means of the links engaging with the notches in the arms. This bow or yoke is used as extra support to the textile material extending from the shaft under the chair to the foot-rest.

The letter U is the book-support, consisting of the attaching means 1, secured to the chair, the standard 2, and the rest 3. The attaching means consists of a plate, 4, secured to the chair-seat, and having a portion struck down and provided with a central perforation, and a pin, 5. To this struck-down part is pivotally attached the sleeve 6, to receive the post of the book-rest, and to this part 6 is hinged the perforated disk 7, the holes of which engage with the pin of the supporting-plate. In the sleeve 6 is loosely suspended the link 8, which engages with the racks in the post, and by which means the post is retained at any height desired. On the side of the book-rest is secured a plate, 8, hinged to a socket, 9, so that it may be moved in different directions. The socket is formed with notched end, intended to fit corresponding features in the sleeve, fitted down well over the end of the post or rod, and is provided with a pin, which engages with pin-holes in the segmental plate 10, hinged to the under side of the book-rest. One arm of the spring slips in a groove provided for that purpose in the under side of the book-rest, and the other arm reaches over the top of the rest, and is provided with cross-piece which sits over the book and holds it in position.

It will be observed that instead of the single vertical spring there may be employed or used a double or triple spring, according to the strain to which the chair is to be subjected; also that the sleeve in which the vertical spring is held should be large enough to admit of the free motion of the spring, it being readily seen that the action of the spring is not affected by being free in the sleeve. By means of the screw-connection of metallic sleeve and rod in the supporting-screw the

sleeve may be elevated or drawn back, thus regulating the tension of the spring of the chair.

The pawls for stopping and retaining the adjustable foot-rest should be formed and hung so as not to prevent or hinder the rest from elevation, but so as to readily engage the notches in the standards and secure it against retraction by pressure.

In practical use it is preferable to make the slots in the plates holding the inner ends of the lazy-tongs inclined backward, and at the bottom of the slots there may be a circular enlargement, the object being to prevent the foot-rest from tipping up when in use.

I reserve the right to vary the construction of the chair-frame and its adjuncts without departing from the spirit of the invention.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. In a chair with a supporting-base, a metallic tube pivotally attached to the bottom of the chair, in combination with an elevating-screw, an adjustable metallic sleeve, and a vertical depending spring rigidly attached to the bottom of the chair-seat and to the metallic sleeve, said parts being organized substantially as described.

2. In a chair, a supporting-base, in combination with a metallic tube provided or formed with side ears or lugs near its upper end, vertical spring connected with the chair-seat and the tube, a chair-seat hinged to the metallic tube, and provided with guide-loops, and the

adjustable wedges working in the guide-loops of the chair-seat and the side ears of the tube, substantially as and for the purpose set forth.

3. In a chair, a supporting-base, in combination with a metallic tube formed or provided with side lugs and pivotally connected to the bottom of the chair-seat, a chair-seat provided with guide-loops, vertical spring, the ratchet-bars provided with the wedge portions, as set forth, and springs for retaining the wedges and ratchet-bars in the adjusted positions, substantially as described.

4. The combination, with a chair-seat and its supporting-base and foot-rest, of connections, substantially as described, connecting the foot-rest to the supporting-base, whereby the foot-rest may be moved toward and from the base, and the shaft or roller located under the chair, and textile material attached to said foot-rest and roller, as set forth, and for the purpose stated.

5. The combination, with a chair-seat, its supporting-base and foot-rest, of the shaft or roller located in bearings in the base, with the textile material attached to the roller and to foot-rest, lazy-tongs connecting the foot-rest and the chair-base, and the yoke T, attached thereto, substantially as described.

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

HANS ABR. ISBERG.

Witnesses:

ALEXANDER MCGEE,
LUKE WARD.