

No. 667,076.

Patented Jan. 29, 1901.

C. R. ENGELBRECHT.

CHAIR.

(Application filed Oct. 15, 1900.)

(No Model.)

2 Sheets—Sheet 1.

Fig. 1.

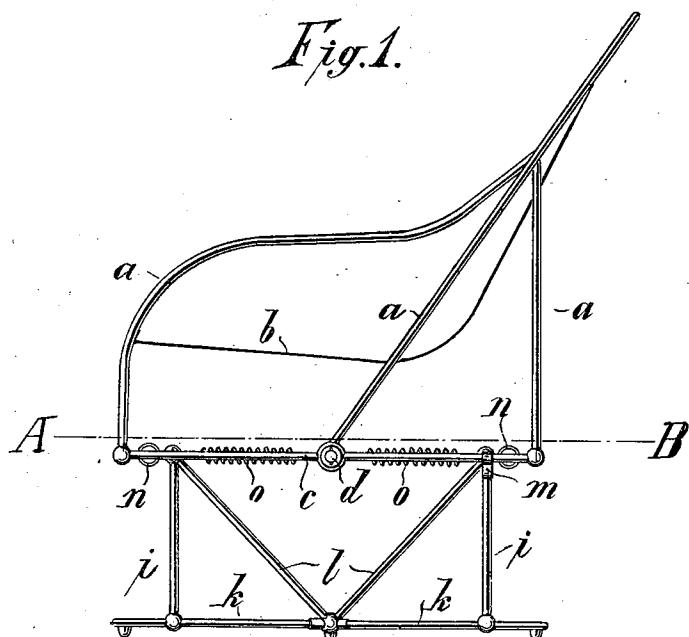
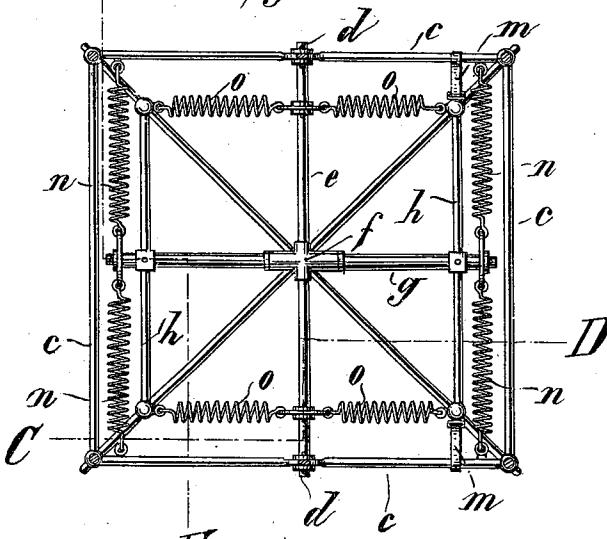


Fig. 2.



Witnesses
A. B. H. H. Lee Helms!

Inventor
Carl R. Engelbrecht
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Fig. 3.

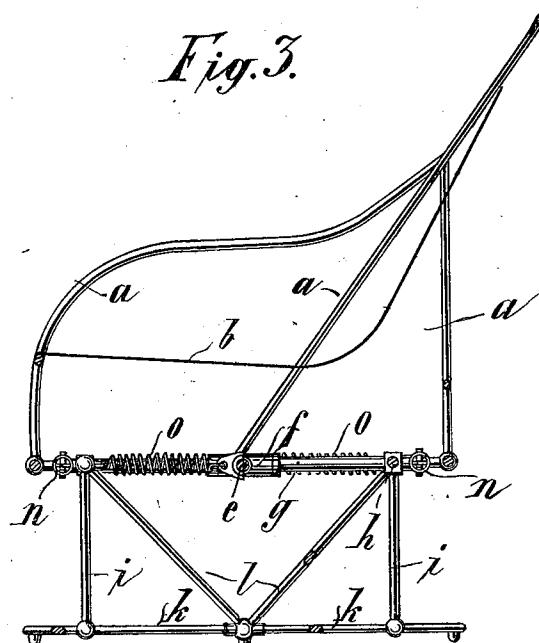
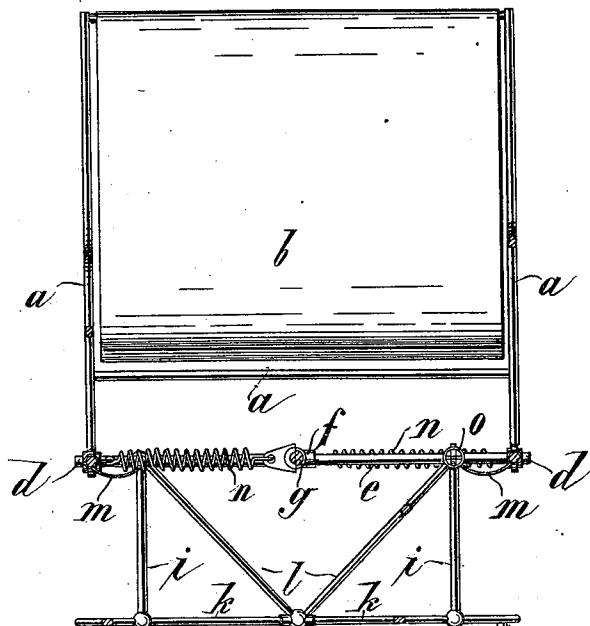


Fig. 4.



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UNITED STATES PATENT OFFICE.

CARL REINHOLD ENGELBRECHT, OF ESSEN, GERMANY.

CHAIR.

SPECIFICATION forming part of Letters Patent No. 667,076, dated January 29, 1901.

Application filed October 15, 1900. Serial No. 33,147. (No model.)

To all whom it may concern:

Be it known that I, CARL REINHOLD ENGELBRECHT, a subject of the King of Prussia, German Emperor, residing at Essen-on-the-5 Ruhr, in the Kingdom of Prussia and German Empire, have invented a certain new and useful Improvement in Chairs, of which the following is a specification.

My invention relates to a chair which especially is intended for use on board of ships, but which may also be found to be useful on land as a rocking-chair or as a common chair; and the object of my invention is to provide means for allowing the bottom or seat of the 15 chair to rock or oscillate in two directions transverse to each other, so that the chair when used on board a ship will give the passenger an opportunity for always having an approximately horizontal seat, notwithstanding 20 the "pitching" and "hauling" of the ship. The chair, therefore, is especially recommendable to passengers subject to seasickness. I attain the said object by the 25 mechanism illustrated in the accompanying drawings, in which—

Figure 1 is an elevation of a chair embodying the invention. Fig. 2 is a horizontal section on the line A B, Fig. 1. Fig. 3 is a vertical section on the line C D, Fig. 2; and Fig. 30 4, a similar section on the line E F, Fig. 2.

Similar letters refer to similar parts throughout the several views.

The mechanism shown in the drawings broadly comprises a bar or rod here called a 35 "shaft," on which the bottom or seat of the chair is mounted so as to rock freely thereon, and a rod horizontally disposed between and rigidly connected to the legs or the lower frame of the chair, said rod serving as a pivot 40 or fulcrum for the shaft rocking thereon in a plane transverse to the direction of motion of the bottom or seat rocking or oscillating on the said shaft. Hence the seat of the chair is free to rock in two directions trans- 45 verse to each other.

In the drawings the rods *a*, supporting the seat *b*, rest upon the frame *c*, loosely mounted on the pivots *d* of the rocking shaft *e*, so that the seat is free to rock about said pivots.

The shaft *e* preferably consists of two parts or arms connected to each other by means of a cross-pipe *f*, loosely mounted on the sta-

tionary axle or rod *g* in the manner of a sleeve, thus allowing the shaft or arms *e* to rock in a plane transverse to the direction in 55 which the frame *c*, carrying the seat of the chair, is free to rock on the pivots *d* of the shaft. The rod *g* is rigidly attached to the connecting-rods *h* of the legs *i*, carried by the diagonal base-rods *k*, and properly stayed by 60 the rods *l*, all said rods and legs forming the so-called "base-frame" of the chair.

It is obvious that the arrangement as above described constitutes a chair the seat of which will be free to rock both about the shaft and 65 together with the shaft—that is to say, in two directions transverse to each other.

The throw or amplitude of motion of the seat may be confined by the aid of a leather strap or by a couple of leather straps *m*, Fig. 70 4, detachably disposed so as to connect the frame *c* to the legs *i* or some other stationary part of the base-frame. For braking purposes—that is to say, to stop the seat of the chair within its amplitude determined by 75 the leather straps and in accordance with the amount of movement—the seat requires to come to a horizontal position. By preference suitable strong springs *n* and *o* may be used, the former, *n*, connecting the lateral rods of 80 the frame *c* to the stationary rod *g* and affording an efficient brake for the seat in so far as the movement of the seat about the rocking shaft *e* is concerned and the latter, *o*, connecting said shaft to the upper ends of the legs 85 *i* or some other part of the base-frame.

The arrangement described and illustrated in the drawings represents one of the several constructions embodying the invention. For instance, however, the pivotal connection between the stationary rod or axle and the shaft rocking thereon admits of a variety of 90 constructional modifications. Further, the braking-springs and the leather straps for confining the amplitude of the rocking motion of 95 the chair's seat allow of being substituted by equivalent means known to those skilled in the art without thereby departing from the spirit of the present invention, the essential feature of the latter consisting in the seat of 100 a chair mounted on a shaft so as to be free to rock thereon, whereas the said shaft in turn is adapted to rock in a plane transverse to the said rocking direction of the chair's seat.

Hence it follows that the seat allows of being rocked in two directions transverse to each other.

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

1. In a chair the combination with the seat thereof supported upon a shaft, of a rod connected to the base of the chair, and means for connecting said rod and shaft together and adapted to permit of the rocking of said shaft transversely to the direction of the rocking of the seat.
2. In a chair, the combination with the seat thereof supported upon a shaft so as to be free to rock thereon, of a horizontally-extending rod rigidly connected to the base of the chair, and a sleeve connecting the said rod and shaft together and adapted to permit of the rocking of said shaft transversely to the direction of the rocking of the seat.
3. The combination, in a chair, with a seat supported by a shaft so as to be free to rock thereon, of a device for supporting said shaft and allowing the shaft to rock transversely

to the direction in which the seat is free to rock on the shaft, and springs connecting the shaft and the frame supporting the seat to the base-frame and the stationary rod respectively for the purpose specified.

4. The combination in a chair, with a seat supported by a shaft so as to be free to rock thereon, of a device for supporting said shaft and allowing the shaft to rock transversely to the direction in which the seat is free to rock on the shaft, leather straps connecting the seat-supporting frame to the base-frame and springs connecting the shaft and the frame supporting the seat to the base-frame and the stationary rod respectively for the purpose specified.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

CARL REINHOLD ENGELBRECHT.

Witnesses:

WILLIAM ESSENWEIN,
LAURA LIEBER.