(No Model.)

J. EDSON.

SPRING VIBRATING CHAIR.

No. 316,021. Patented Apr. 21, 1885.

Fig. 1.

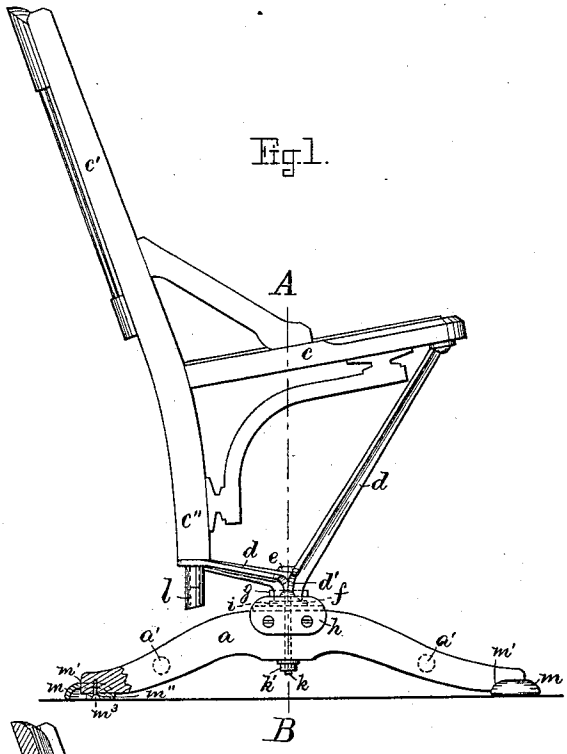


Fig. 3.

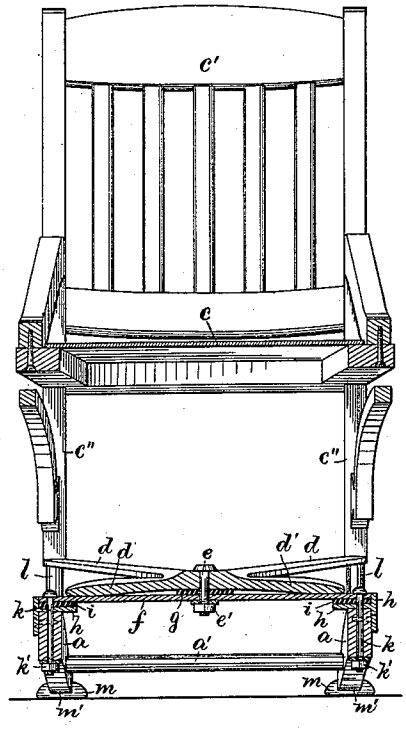


Fig. 2.

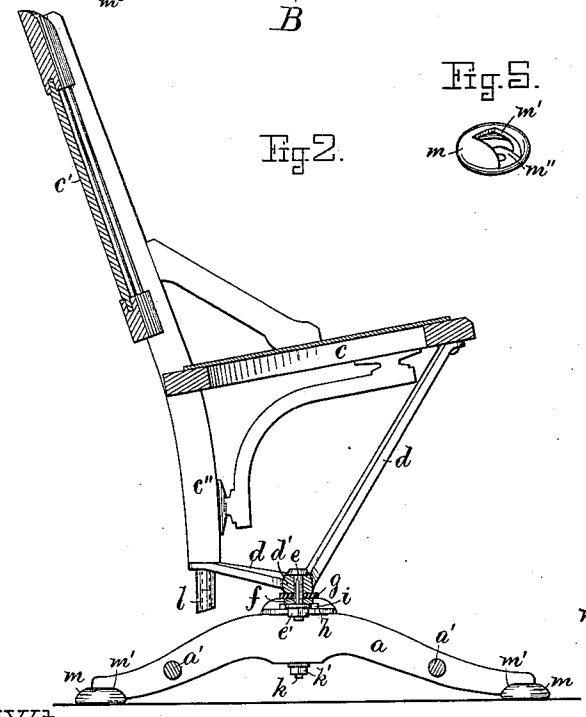
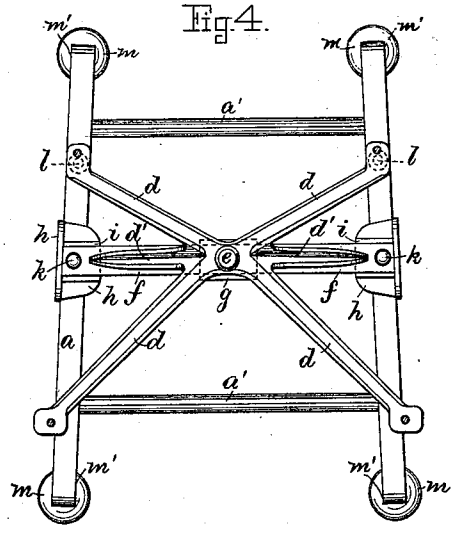


Fig. 5.

Fig. 4.



Witnesses

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John. H. Foster.

Inventor

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UNITED STATES PATENT OFFICE.

JACOB EDSON, OF BOSTON, MASSACHUSETTS.

SPRING VIBRATING CHAIR.

SPECIFICATION forming part of Letters Patent No. 316,021, dated April 21, 1885.

Application filed January 14, 1884. (No model.)

To all whom it may concern:

Be it known that I, JACOB EDSON, a citizen of the United States, residing at Boston, in the county of Suffolk and State of Massachusetts, have invented certain new and useful Improvements in Spring Vibrating Chairs; and I do hereby declare that the same are fully described in the following specification and illustrated in the accompanying drawings.

This invention relates to improvements in spring vibrating chairs; and it is carried out as follows, reference being had to the accompanying drawings, where—

Figure 1 represents a side elevation of the invention, and Fig. 2 represents a central longitudinal section. Fig. 3 represents a vertical section on the line A B, shown in Fig. 1. Fig. 4 represents a plan view of the improved chair, showing the seat as being removed; and Fig. 5 represents one of the metal feet attached to the ends of the base.

Similar letters refer to similar parts wherever they occur in the different parts of the drawings.

a a represent the base, as usual, with connecting stays or braces *a' a'* in the ordinary way. *c* is the seat, with its back *c'* having downwardly-projecting legs *c'' c''*, as shown.

To the under side of the seat *c* is secured the metal frame *d* by means of suitable screws or bolts. The lower part of the metal frame *d* terminates as a cross-bar, *d'*, through the middle of which passes a bolt, *e*, by means of which and its nut *e'* the said cross-bar *d'* is secured to the flat metal spring *f*, with an elastic packing-piece, *g*, interposed between them, as shown in Figs. 2 and 3, to prevent noise when the chair is vibrated, as well as to cushion it and to relieve the strain on bolt *e*, and prevent rigidity of the union between said cross-bar *d'* and flat metal spring *f*. The ends of flat spring *f* rest on horizontal parts of the angle-plates *h h*, with elastic packings *i i* interposed between the ends of flat spring *f* and the horizontal parts of the angle-plates *h h*, as shown in Fig. 3, and the ends of the spring *f* are secured to said packings *i i*, angle-plates *h h*, and the respective base parts *a a*, by means of suitable bolts, *k k*, and their nuts *k' k'*, as shown in the drawings. The elastic packings *i i* serve to prevent a too rigid connection between the ends of flat spring *f* and its angle-pieces or plates *h h*, as well as to prevent the breakage of said spring when chair is vibrated. The outer vertical part of each angle-plate *h* is secured by means of suitable screws to the outside of each base-piece *a*, and serves to cover up the joint between each end of the spring *f* and its packing, and thus to provide for a neat finish at such places. The ends of cross-bar *d'* are made in such a manner as to bear and rest upon the top of spring *f* at or near its ends, as shown in Figs. 3 and 4, and in this manner to transfer the weight of the chair and its occupant from the center of spring *f* to or near the ends of the latter, and also for the purpose of preventing an undue lateral side motion to the chair while in use. The bar *d'* may be rigid or elastic, as may be desired.

l l are elastic stops or bunters, made of india-rubber or in the form of metal or other springs, such elastic stops being attached either to lower ends of legs *c'' c''*, as shown in Figs. 1 and 2, or to base parts *a a*, such bunters serving as elastic stops to prevent the chair from being rocked or vibrated too far backward while in use.

The chair as constructed is very strong and durable, as well as an agreeable vibratory spring-chair. Having an elastic support on the flat spring *f*, it will give slightly in a vertical direction when in use, and also permit a vibratory motion of the seat forward and back by the torsion of the flat spring *f*, according to the position, inclination, or movements of the person occupying it.

To prevent the ends of base *a a* from injuring floors or carpet on which the chair may be used, I secure to the ends of such base enlarged metal feet *m*. (Shown in perspective in Fig. 5.) Each of such foot-pieces is preferably of a circular form, made of metal, hollow castings, with a cut-away portion at *m'* to receive the end of base *a*, and a lip, *m''*, below the opening or recess *m'*, as shown in Figs. 1 and 5, on which the lower part of the end of the base *a* is made to rest, and to which it is firmly secured by means of a suitable screw, m^3, that passes through a perforation in said lip *m''* and is screwed into the end of base *a*, as shown in Fig. 1.

By constructing a vibratory chair in the manner as shown and described, with a flat

spring, *f*, secured in its ends to a stationary base, *a a*, and midway to the bottom of the seat or to a frame projecting downward therefrom, as specified, and employing the torsion effect of such spring in the vibratory movements of the chair, I am able to produce a spring-rocker in which the full power of the energy, life, and activity of the spring is utilized, combining, as it does, a slight vertical elastic support with an agreeable forward and back and quickly-recovering vibratory motion.

What I wish to secure by Letters Patent and claim is—

1. In a spring vibrating chair, the combination, with chair-frame *c c' c''* and the rigid cross-bar *d'*, secured to it, of the flat spring *f*, secured midway to the bar *d'*, and in its ends to the base parts *a a*, substantially as and for the purpose set forth.

2. In a spring vibrating chair, the seat *c*, the cross-bar *d'*, secured to it, and the flat spring *f*, with its elastic packing *g* and holding-bolt *e e'*, in combination with the base parts *a a*, elastic packings *i i*, angle-plates *h h*, and holding-bolts *k k'*, all arranged and combined substantially as and for the purpose set forth.

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

JACOB EDSON.

Witnesses:
ALBAN ANDRÉN,
HENRY CHADBOURN.