J. BEIERSDORF & W. I. BUNKER.

Elastic Attachments to Rocking-Chairs.

No. 214,871. Patented April 29, 1879.

Fig: 1.

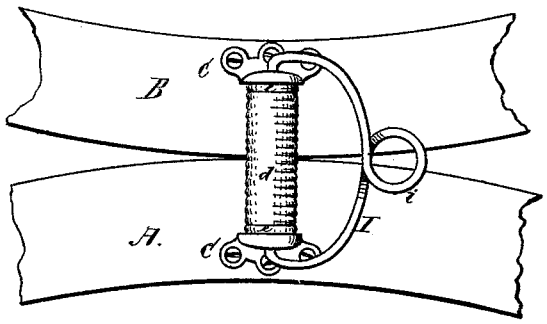
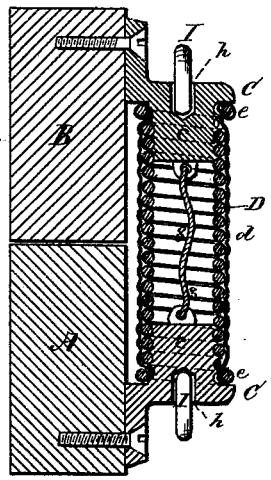


Fig: 2.



Witnesses.

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JACOB BEIERSDORF AND WILLIAM I. BUNKER, OF CHICAGO, ILLINOIS.

IMPROVEMENT IN ELASTIC ATTACHMENTS TO ROCKING-CHAIRS.

Specification forming part of Letters Patent No. **214,871**, dated April 29, 1879; application filed February 24, 1879.

To all whom it may concern:

Be it known that we, JACOB BEIERSDORF and WILLIAM I. BUNKER, both of Chicago, in the county of Cook and State of Illinois, have invented a new and Improved Elastic Attachment to Rocking-Chairs; and that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, forming part of this specification.

This invention relates to an attachment for that class of chairs in which the rocking-frame rests upon a base or supporting frame; and it is our object to provide such an attachment which will not only hold the rocker centrally on its base, but also will yield to and facilitate the rocking movements of the chair.

Our invention therein consists in inclosing the spring in a rubber tube of the same length as the spring, and presenting a smooth surface when the spring is not extended; in a spring-connection consisting of the foregoing elements and a cord within the spring secured to the bosses of the brackets; and, further, in the combination, with the brackets and spring, of an auxiliary **C**-spring connecting the brackets, for adjustably resisting and controlling the rocking movements of the chair, all as fully hereinafter explained.

In the drawings, Figure 1 represents an elevation of our improved spring as attached to the rocker and base of a chair, and Fig. 2 represents a transverse vertical section of the same.

Like letters in the several figures of the drawings indicate like parts.

A designates a portion of the base-frame, and B of the rocking-frame of a chair, both of which are constructed in the usual manner.

C C are the brackets or fixtures, shaped exactly alike, one of which, with wood-screws, is secured against the inward face of the base, and the other against the inward face of the rocker. Each bracket C consists of a plate having a flange rectangular therewith, by which it is secured against the base or rocker, and a boss, *c*, which is provided with a spiral half-round groove on its exterior surface, corresponding with the internal diameter and the spiral coils of spring D, so as to be screwed into the ends of the same, and form a stiff and rigid connection therewith. This spring D is made of steel or brass wire, wound upon a cylindrical mandrel in such a manner that its several coils will be successively in close proximity with each other, and a piece of rubber hose or tubing, *d*, is placed over this spring, with its ends sufficiently projecting over the ends of said spring to be bound and concealed by rubber rings *e*. Heretofore, in attachments for a like purpose, the spiral springs have been pivotally connected by having a loop or hook formed to each end, and therefore only were adapted for longitudinal yield, and not for holding the rocker centrally upon its base, allowing the same to slide back and forward with each rocking motion, and necessitating an additional contrivance as a preventive for such slip.

With our above-described device for securing the ends of such springs rigidly upon the brackets each rocking movement of the chair will not only expand the springs longitudinally, but will also deflect the same more or less, so as to attain a curved form in the direction toward which the chair reclines, and thus by its flexible elasticity resists deviation of the rocker from its central position.

The rubber covering, without impeding the elastic properties of the spring, will protect the same from external influences, such as promote corrosion, and will make the actions of the spring noiseless.

As a provision against injury to the springs D by too great expansion, we connect the two brackets C C with a slack wire cord or chain, *g*, secured with its ends in any suitable manner to the bosses *c*, so as to be concealed in the spring, and receiving the strain after the limit of such safe expansion has been reached.

Each bracket C may be provided with a socket, *h*, for receiving the ends of a **C**-shaped wire spring, I, having one or several coils, *i*, formed to its middle. This spring, by being placed over the brackets C, will furnish additional resistance to the longitudinal expansion of spring D and to its lateral movement, so as to allow the chair to rock only in the direction toward the said spring I, which may be turned to point to either end of the chair, and thus

furnish the means for controlling the rocking movements of the same, to be more or less on the recline in either direction.

Besides the advantages of our elastic attachment already pointed out, on account of its great simplicity, it is cheap to manufacture, is durable, and complete in itself, ready to be secured to the chair and base.

We do not wish to be confined to the device herein described of securing the ends of the spring to the brackets by providing the latter with spirally-grooved bosses, as any other device of fastening which will bring about a stiff and rigid connection will answer the same purpose.

What we claim as our invention is—

1. The combination, with the base and rocker of a chair, of a spiral spring secured at its ends to said base and rocker, and a flexible rubber tube inclosing the spring, the said tube being of the same length as the spring, being extended with the spring, and presenting a smooth surface when the spring is not extended, substantially as described and shown.

2. The combination, with the base A and rocker B of a rocking-chair provided with brackets C, having spirally-grooved bosses *c*, of the spiral spring D, turned onto the said bosses, the inclosing rubber tube *d*, and the cord *g*, connecting the bosses, substantially as described and shown.

3. In combination with the elastic attachment to a rocking-chair composed of brackets C and spring D, substantially in the manner set forth, the auxiliary spring I, constructed as described, and operating as and for the purpose specified.

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