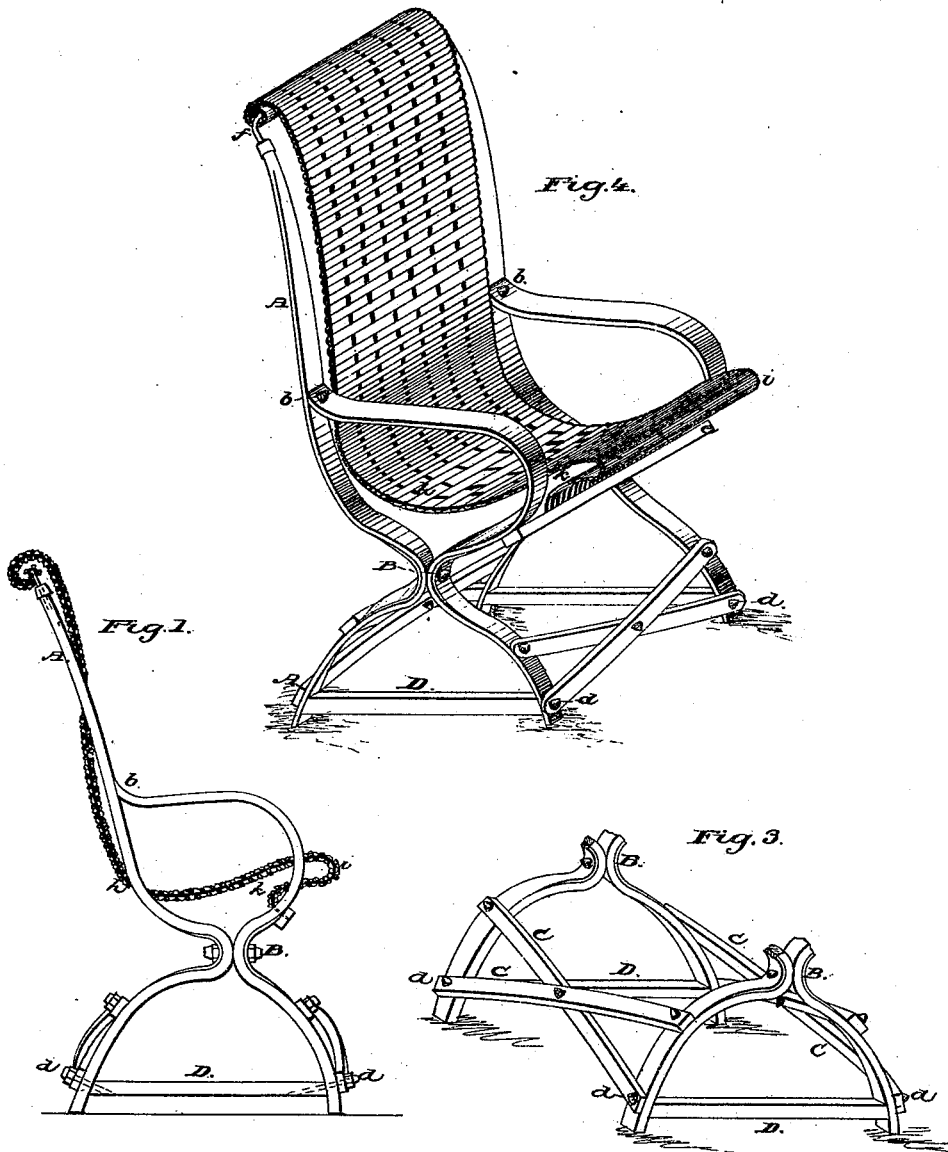


T. TOSTEVIN.  
CHAIR.

No. 190,388.

Patented May 1, 1877.



Attest:

Thomas Bonville  
Not. Public

Inventor:

Thomas Tostevin

# UNITED STATES PATENT OFFICE.

THOMAS TOSTEVIN, OF COUNCIL BLUFFS, IOWA.

## IMPROVEMENT IN CHAIRS.

Specification forming part of Letters Patent No. **190,388**, dated May 1, 1877; application filed April 25, 1877.

*To all whom it may concern:*

Be it known that I, THOMAS TOSTEVIN, of Council Bluffs, Iowa, have invented certain Improvements in Chairs, of which the following is a specification:

The object of my invention is to provide a chair which shall be of graceful proportions, afford a perfect support for the body, yielding easily to impact, and which shall be of simple construction, durable material, and moderate cost. It consists in the construction and combination of parts hereinafter described and pointed out in the claims.

In the drawings, Figure 1 shows a side elevation of my chair. Fig. 2 is a detail view of detached parts. Fig. 3 is a detail view of the base-frame, and Fig. 4 is a view in perspective of the entire chair.

A in the drawing indicates the frame of the chair. This may be made of any tough elastic material, well-seasoned ash or hickory being preferable, although I may use metal. The side posts and hind legs are each made in one piece, bent inwardly, as shown at B, at which point they are each united to the front legs. The front legs, also, and the arm-rests, are formed out of a single strip, as shown in Fig. 1, the upper end of the arm-piece being secured to the posts of the back at *b*, Fig. 1. Although I prefer this form of construction, yet a modified form may be made by omitting the arm-rests, as seen in Fig. 4.

The strips forming the frame of the chair are somewhat thickened at B, the point where the rear and front supports are united. This is done in order to provide additional strength, and to compensate for the weakening of the parts caused by cutting the hole for the bolt which unites them; also, to secure the necessary degree of elasticity.

The lower part of the frame or skeleton is rigidly bound together by braces, as in Fig. 3. In front and rear cross-braces C C are bolted to the outside of the legs, and the front and back legs are connected by the side horizontal braces D D. The latter abut at their ends squarely against the inner faces of the legs, and are secured thereto at each end by the bolts or screws *d d*, which also unite the lower ends of the cross-braces to the same legs. The

advantage of this construction is obvious, since it enables the fastening of both the front and side braces by means of the same screw, thus economizing material, and securing a rigid attachment of the braces, without weakening the frame by cutting a number of screw-holes. The fastenings I intend shall consist of a nut and bolt. The head of the bolt may be made of ornamental form, and nickel-plated, and the nut is made of a corresponding shape, and also plated, giving a highly-ornamental appearance to the chair when it is finished.

The entire back and seat of my chair is made of an unbroken piece of material. The kind I prefer is that patented to me October 19, 1875, No. 169,064. This fabric is composed of a spring-wire warp, interwoven with a weft of any fibrous material. At one end it is secured to a piece of elastic wire, *f*, which connects the upper extremities of the side posts. This wire is set at its ends into the ends of the posts, and there secured by a ferrule. It is slightly bowed upward to give additional strength and elasticity to any downward strain upon the fabric of the back. The latter is bent around the wire, and may be secured in such manner that it shall project somewhat forward, as at *g*, Fig. 1. It then drops in nearly a vertical line till, at the proper point, it is bent at an angle with the back, and brought forward to form the seat. This fabric, after being once bent into this form, retains it, by reason of the strength of the wires forming the warp.

The method of forming the seat and fastening it to the frame is an important feature of my invention. The fabric, after being bent at *g* and *h*, as described, is carried forward until it passes the arm-pieces. It is again bent upon itself, as at *i*, and then carried backward to *k*, where it is again bent at about a right angle, and the wires of the warp are passed through the bar or brace *e*, which is fastened to the front of the frame.

By this construction I obtain the highest degree of elasticity and resiliency of all the parts. The fabric of the back and seat being highly elastic, in itself, by reason of the numerous spring-wires composing its warp, will not only yield to and fit the form of the person

sitting in the chair, but will afford, of itself, a soft spring-support, which will receive all jolts or sudden motions. By bending it upon itself at *i* and *k* its elastic power is greatly increased, and thus, instead of a sharp, rigid, unyielding ridge at the front of the chair, I provide a soft, flexible, rounding surface, *i*, which readily yields to pressure, and furnishes a most agreeable support for the thighs of the person occupying the chair.

The elasticity of the frame is mainly located at B, the point of junction of the front and rear legs, and it may be seen that the form of the parts is such as will most readily yield to weight and at the same time furnish the necessary elasticity with the least possible strain and wear of the parts.

I propose to make a modified form of this chair by omitting the arm-pieces. This form is shown in Fig. 4. The arm-rest, which in Fig. 1 is carried up and united to the side-posts of the back at *b*, is, in this form, cut off squarely, and the bar *e* is attached to the extremity of the front legs, as seen in Fig. 4.

It should be observed that the wire *f*, to which the top of the back is fastened, as already described, is capable of an elastic motion, horizontally as well as vertically. Furthermore, the seat and back being in one unbroken strip of my patented fabric, every portion of the chair is adapted to yield with perfect elasticity to the strain put on it, the elastic strength of each part being nearly proportioned to the degree of strain to which it must be subjected.

I do not propose to claim in this application the fabric of the seat and back, that being already patented to me; nor do I propose to claim in this particular case anything which is claimed by me in an application filed by myself, October 26, 1876, and ordered to issue March 14, 1876, for an improvement in chairs. The latter being now in interference, this present application is made to cover the matter not involved in said interference.

Having fully described my invention, what I desire to claim, and secure by Letters Patent, is—

1. In a chair having supporting side posts

or standards, a continuous elastic back and seat, as and for the purpose described.

2. A chair having an elastic supporting-frame, combined with a suspended elastic back and seat, formed in one piece, as set forth.

3. A chair formed of a wooden or metallic frame, the posts and rear legs and the arms and front legs being each formed in one piece, bent inwardly, and united beneath the seat, as and for the purpose set forth.

4. A chair having the spring-connection *f*, uniting the extremities of the side posts, with or without the suspended back and seat formed in one piece, as and for the purpose set forth.

5. The legs B, having a re-enforce at their point of junction, to distribute the elasticity over the upper and lower parts of the chair-frame, as set forth.

6. In combination with the leg-frame, the cross-braces C C, and side braces D D, said braces being fastened to each other at the point *m*, and their lower ends connected with the legs at *d*, by the bolt which enters and secures the side braces, as set forth.

7. In combination with the frame F and F', the spring-support *f*, and bar *e*, adapted to the furnish the supports for the fabric of the back and seat, substantially as specified.

8. A chair composed of the elastic frame F F', spring-bar *f*, and supporting-bar *e*, secured to the extremities of the part F', as and for the purpose set forth.

9. A chair having a seat composed of an elastic fabric, doubled upon itself at *i*, and bent, as shown at *k*, to adapt it to be secured to the frame, as and for the purpose set forth.

10. A chair having an elastic supporting-frame, consisting of the elastic side posts, bent forward and brought under the seat, with the arm-pieces and front legs formed in a similar manner, the two being united at B, in the manner and for the purpose shown and described.

THOS. TOSTEVIN.

Witnesses:

WM. DIXON,

E. F. M. FAEHTZ.