(No Model.)

J. T. COWLEY.

SEAT OR CUSHION.

No. 593,739. Patented Nov. 16, 1897.

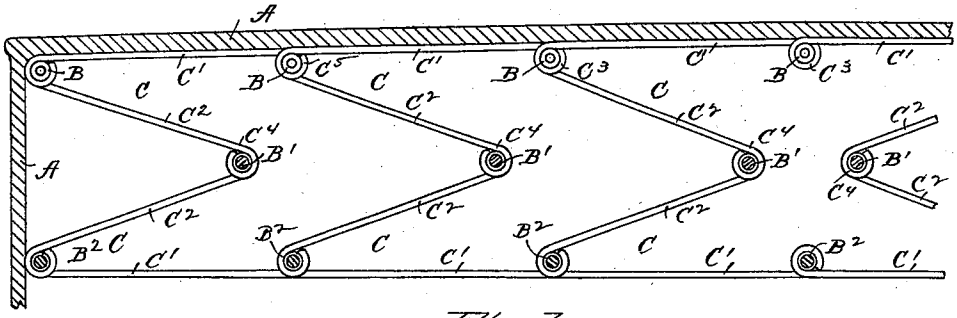


Fig. 1.

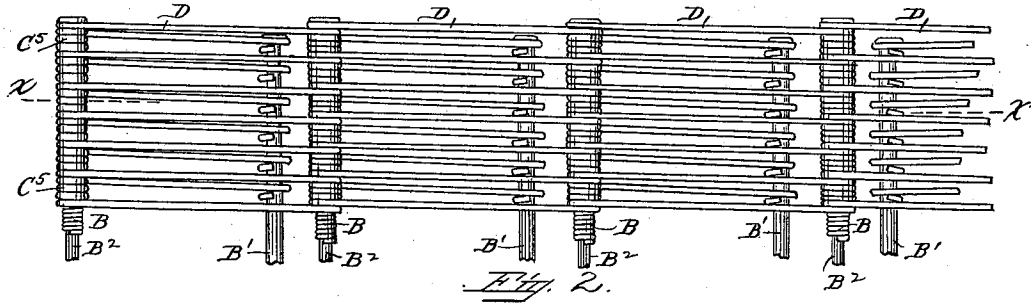


Fig. 2.

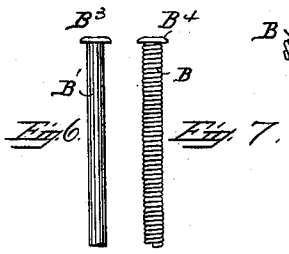


Fig. 6. Fig. 7.

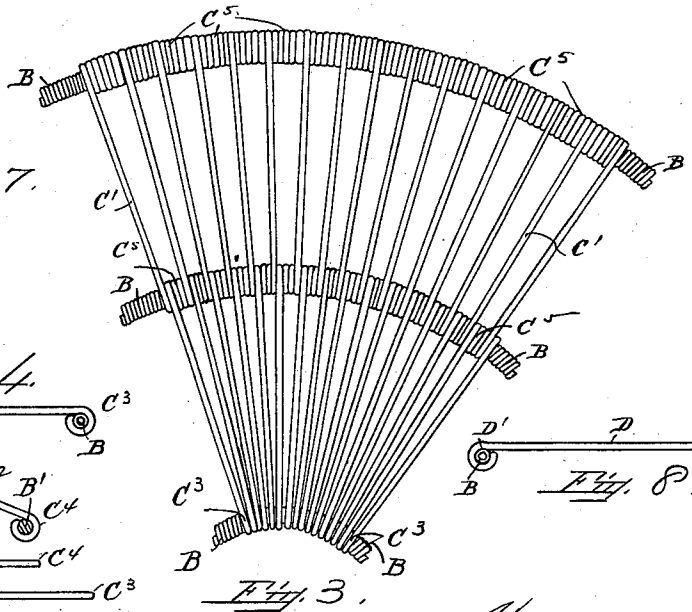


Fig. 3.

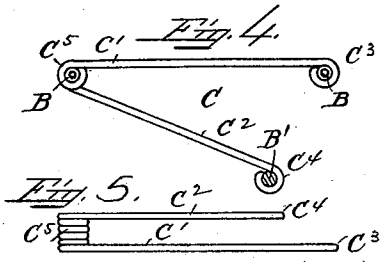


Fig. 4. Fig. 5.

Fig. 8.

Witnesses:
E. L. Harlow.
L. A. Brown.

Inventor:
Jas. T. Cowley
By J. L. Rusk
Atty

THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

JAMES T. COWLEY, OF LOWELL, MASSACHUSETTS, ASSIGNOR, BY MESNE ASSIGNMENTS, TO THE AMERICAN METALLIC CUSHION COMPANY, OF WEST VIRGINIA.

SEAT OR CUSHION.

SPECIFICATION forming part of Letters Patent No. 593,739, dated November 16, 1897.

Application filed March 2, 1896. Serial No. 581,462. (No model.)

To all whom it may concern:

Be it known that I, JAMES T. COWLEY, of Lowell, county of Middlesex, and State of Massachusetts, have invented new and useful Improvements in Seats or Cushions; and I hereby declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to the construction of a cushion or bed in which spring-wires are used instead of the usual spiral springs or hair, and it is adapted to be used in connection with furniture—such as, for instance, beds, settees, chairs, &c.—also carriages and other articles in which a flexible or pliable cushion or seat is required, and the cushion herein described and shown is especially well adapted for the construction of beds.

My invention consists of certain novel features hereinafter described, and particularly pointed out in the claims.

In the drawings which illustrate my invention, Figure 1 is a longitudinal sectional view taken on the line *x x*, Fig. 2. Fig. 2 is a partial top plan view of Fig. 1 with the covering of the cushion removed. Fig. 3 is a top plan view of a part of the seat-cushion made of a circular form. Figs. 4 and 5 represent, respectively, side elevation and plan views of the two-armed springs used in the improved cushion or seat. Figs. 6 and 7 are detail views of the supporting-rods and coiled springs of which the seat is composed. Fig. 8 is a modification hereinafter referred to.

Like letters of reference refer to like parts throughout the several views.

Within the covering A there is arranged a series of springs C, having two arms C′ and C^2 and eyes C^3 and C^4 at the ends thereof, and between said ends there is provided a spring-coil C^5. As shown in Fig. 1, the spring-coil C^5 and the eye C^3 are located around the flexible supports B, and the lower eye C^4 is arranged around a support B′.

Within the casing A there are arranged a series of supports B, preferably of flexible material, and at the bottom of said seat or cushion there is another series of supports B^2, and between said supports B and B^2 there is a series of intermediate supports B′, and around these supports a series of two-armed springs C are adapted to be located. These springs consist of two arms C′ and C^2, each having an eye C^3 and C^4, and between said eyes there is provided a spring-coil C^5, through which the supports B and B^2 are passed. The eyes C^3 and C^4 of the upper series of springs are located around the supports B′ and B′, and the eyes C^3 and C^4 of the lower series of springs are located around the supports B′ and B^2. The upper and lower series of springs are identical in form and are simply reversed in position. By this construction each of the series of springs is joined together and forms a continuous surface on the top and bottom, which may be extended as long as desired. In order to form the opposite side of the seat of a construction similar to that shown in Fig. 1, the springs may be reversed in position, as shown on the extreme right hand of Fig. 1, while the eyes C^3 and C^4 are joined together at the top and bottom on the same supports B and B^2 and form a continuous flexible top and bottom surface.

When weight is applied to the top of the cushion, the spring-coils C^5 will yield under pressure, the arms C′ and C^2 will approach each other, and the flexible supports B will bend and allow the seat to conform to the weight applied thereto, and when the weight is removed the springs resume their original position owing to the tension of the coils C^5. Where it is desired to construct a seat or cushion of a circular form, the wires may be arranged as shown in Fig. 3, the eyes C^3 and C^4 and coils C^5 being supported by the supports B, B′, and B^2, the same as described in Fig. 1. The ends of the supports B, B′, and B^2 are provided with washers or collars B^3 and B^4, Figs. 6 and 7, which are firmly secured thereto and are adapted to hold the eyes C^3 and C^4 and the coils C^5 of the springs C in position. The outer edge of the seat shown in Fig. 2 is provided with a series of links D, having eyes D′, which pass arounds the supports B and B^2, as shown in Fig. 8, the object of which is to fill up the outer edge of the cushion owing to the space left on one side of the cushion by the coils C^5 of the springs.

It will be seen from Figs. 1 and 2 of the

drawings that the seat or cushion is composed of a number of sections of springs arranged in series across the seat or cushion and that the sections are connected together by suitable supporting-frames, upon which the springs are arranged. For instance, the eyes C^3 of the first section of springs are mounted upon the second support B, upon which the coils C^5 of the second section of springs are mounted, and the eyes C^3 of the second section of springs are mounted upon the next support B, which carries the coils C^5 of the third section of springs, and so on for the rest of the cushion, and a like arrangement is provided on the under side of the cushion.

I do not limit myself to the arrangement and construction shown, as the same may be varied without departing from the spirit of my invention.

Having thus ascertained the nature of my invention and set forth a construction embodying the same, what I claim as new, and desire to secure by Letters Patent, is—

1. In a seat or cushion, the combination of the upper, lower and intermediate flexible supporting-rods respectively arranged in planes substantially parallel, the upper and lower series of two-armed springs, each of said springs having an eye formed in each end and a coil in the bifurcation of the same, said springs arranged so that one arm of each in the upper set is in a plane substantially the same as the face of the cushion with the eye in the end of the same engaging with one upper supporting-rod and the coil in the bifurcation engaging with another upper supporting-rod, and so that the other arm extends to one of the intermediate supporting-rods and has the eye in the end of the same engaging with said rod to have a sliding hinged connection therewith, and the springs of the lower set arranged so that one arm of each of the springs thereof is in a plane substantially the same as the back of the cushion with the eye in the end of said arm engaging with one of the lower supporting-rods and the coil in the bifurcation engaging with another of said lower supporting-arms, and the other arm extended to an intermediate supporting-rod and having a sliding hinged engagement therewith.

2. A seat or cushion composed of two sets of two-armed springs having an eye in each end and a coil intermediate of said eyes, said springs arranged so that an arm of each of the springs of one set is in the plane substantially the same as the face of the cushion and so that an arm of each of the springs of the other set is in a plane substantially the same as the back of the cushion, the upper supporting-rods passing through the eyes and coils of the arms in the face of the cushion, the lower supporting-rods passing through the eyes and coils of the arms in the back of the cushion, the intermediate supporting-rods passing through the eyes of the inner arms of the springs and hinging said arms together, and the links extending along the outer edges of the face and back of the cushion and connecting the supporting-rods in said face and back respectively.

In testimony whereof I have signed my name to this specification, in the presence of two subscribing witnesses, on this 13th day of December, 1895.

JAMES T. COWLEY.

Witnesses:
FRANK COBURN,
A. E. HUMPHREYS.