(No Model.) 2 Sheets—Sheet 1.

L. P. NELSON.

WOVEN CORD FURNITURE.

No. 342,836. Patented June 1, 1886.

Fig. 1.

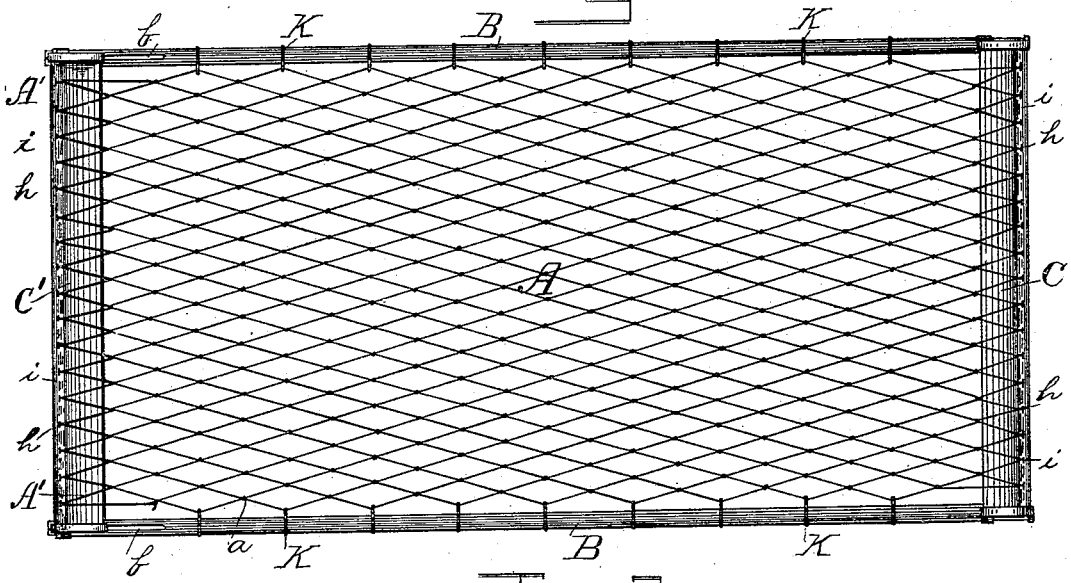


Fig. 2.

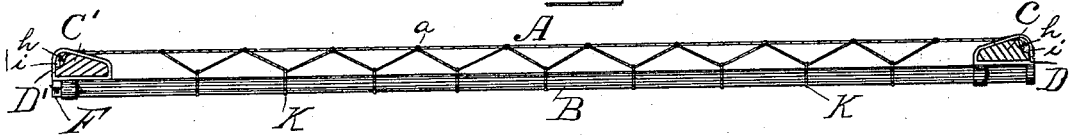


Fig. 3.

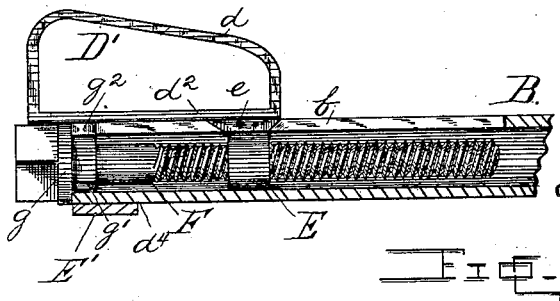


Fig. 4.

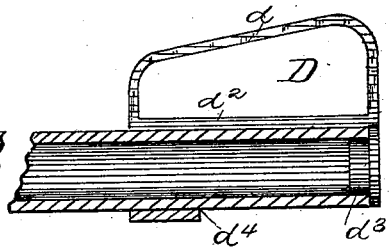
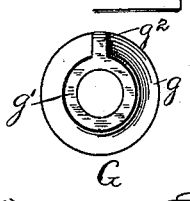


Fig. 5.



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(No Model.) 2 Sheets—Sheet 2.

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WOVEN CORD FURNITURE.

No. 342,836. Patented June 1, 1886.

Fig. 6.

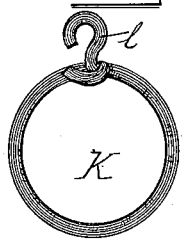


Fig. 7.

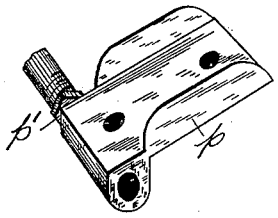
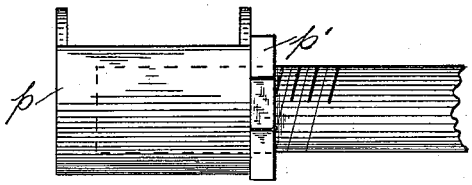


Fig. 8.



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UNITED STATES PATENT OFFICE.

LARS P. NELSON, OF CHICAGO, ILLINOIS.

WOVEN-CORD FURNITURE.

SPECIFICATION forming part of Letters Patent No. 342,836, dated June 1, 1886.

Application filed September 15, 1885. Serial No. 177,205. (No model.)

To all whom it may concern:

Be it known that I, LARS P. NELSON, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Woven-Cord Furniture; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters or figures of reference marked thereon, which form a part of this specification.

My invention relates to bed-bottoms and cord furniture; and it consists in certain improvements on the Patent No. 326,064, granted to James Springer September 8, 1885. In that patent a structure is described and claimed suitable for bed-bottoms, sofas, cots, and similar articles, consisting of a netting in which the meshes are made or drawn in an elongated form, and rigidly held as formed, a frame on which the netting is drawn taut over holders placed in grooves in the side and end pieces of the frame, and a lacing-cord inserted through a portion of said meshes for the purpose of tightening the netting upon the frame. Other details of construction are there described—such as larger meshes or loops at the ends and sides of the netting for convenience of attaching the same to the frame, corner-straps for holding the side and end pieces together—whereby a knockdown frame is constructed, and an end rail tapering from the center to the ends to aid in raising the netting higher at the center than at the sides.

My improvements are illustrated in the accompanying drawings, in which Figure 1 is a plan view; Fig. 2, a longitudinal sectional view; and Figs. 3, 4, 5, 6, 7, and 8 views in detail, the last two mentioned figures a modification.

In the drawings, A is the netting already referred to, made of cotton cord or other suitable material, the meshes of which are elongated and held as formed by knots *a*, as shown, or by other means which will prevent any possible slipping of the cords or meshes apart.

A′ is a lacing-cord, also above referred to.

B B are the side rails of the frame, and instead of being wood and grooved on the sides for holders, as shown in said patent, are metal, and preferably tubular, as shown.

At one end each of the side rails, B, is provided with a slot, *b*, for the purpose hereinafter described.

In the place of the end rails shown in the Springer patent I use end rails, C C′, which, although made of wood and placed on the side rails and grooved, as in said patent, to receive holders *h*, yet differ therefrom by having their upper faces beveled inwardly. This beveling permits the knots or closed ends of the meshes to be borne down, when the netting is pressed upon, without coming in contact with the frame at the ends, and at the same time to afford as a bearing to the end meshes the outside edges of the end rails, thereby giving to the body of the bed greater length and elasticity without increasing in length of frame.

My frame is also a knockdown frame; but instead of the corner-straps employed by Springer for uniting the side and end pieces, I employ straps of another form to accommodate the tubular side rails. On the rail C, for example, I use metal straps D, each consisting of the over-piece *d*, bent to conform to the contour of the end cross-rail and the under cross-piece, d^2. One end of this strap terminates in a boss, d^3, and the other end in an eye, d^4.

The opposite end rail C′ is provided with the straps D′, similar in form to the straps D, except that the under cross-piece is provided at its inner end with a small internally screw-threaded eye, E, mounted on a narrow shank, *e*, and near the opposite end with a large open eye, E′.

F is a screw-bolt passing through a washer, G, and engaging with the eye E. The washer G rests on the shank of the screw-bolt, and is provided with a head, *g*, a neck *g′*, and a rib, g^2.

To put the side tubular rails in place, and secure them to the end rails, one end of the side rail is passed through the eye d^4 on the end rail C and over the boss d^3, and the opposite slotted end is put over the screw-bolt through the eye E′. The neck *g′* of the washer G being inserted in the end of the tubular rail, the rib g^2 passes into the slot *b* of the rail, whereby the washer and the tube are held from

turning with the screw-bolt, and the washer forms a firm and stationary bearing for the bolt. The end rail C′ of the frame can thus be drawn toward or from the end rail C to the full extent of the slot *b* in the side rails by turning the screw-bolts, as desired, which I prefer to do by means of a small wrench, for the purpose of tightening or loosening the netting.

The frame, when the netting is not in place, can be knocked down by simply pulling the end rails off the side rails.

The end rails are provided with holders *h* in grooves *i*, and the side rails with sliding ring-holders K having hooks *l*.

On putting the side and end rails together, as above described, the netting is applied by placing the meshes at one end over the holders *h* in the end pieces, and then tightening it moderately by the lacing-cord A′ at the opposite end. The side loops are then engaged with the hooks *l* on the rings K on the side rails.

The tendency of the tension of the netting given by the lacing-cord is to pull the movable end rail C′ toward the stationary end rail C which it would do if the former were not held in place by the screw-bolts. The netting may then be given any additional and desired tension by turning the screw-bolts F so as to draw the movable end rail C′ from the stationary end rail C.

In the Springer patent the tightening of the netting endwise is produced alone by the use of the lacing-cord, and the exercise of great power is sometimes necessary for that purpose; but with my device a preliminary stretching only is given by the lacing-cord, while the main tightening and stretching of the netting are accomplished by operating the screws. In fact by my invention, and with frames for which the netting is made of a corresponding size, the lacing-cord may be dispensed with entirely, and the stretching be done by means of the screws alone.

By the employment of the tubular side rails, instead of the wide or flat wooden ones, much space for the spring bottom is saved without making the frame wider, and by the employments of the sliding holders and hooks all the netting within the edges of the frame is utilized, and thus occupants of the bed can sleep with comfort much nearer the edge of the bed, and all the advantages of a wider bed with the same width of frame are obtained. Again, by the use of the sliding holders and hooks, which can be placed and engaged with the meshes exactly as wanted, the side meshes may be drawn crosswise, with their knotted ends and open centers always directly in a line with each other, thus more efficiently producing a uniform tension.

The side tubular rails, instead of being of metal, may be made of wood bored out, or varieties of the bamboo and similar natural tubular woods may be used.

In Figs. 7 and 8 I have shown a modification of the frame.

Instead of using the screw-bolt, the ends of the side rails are screw-threaded and passed through straps *p*, to which the end rails are bolted, and a nut, *p′*, employed to move farther apart the end pieces, and thus stretch the cord. By this construction the side rails might be solid instead of tubular; but I prefer the tubular form for lightness and strength.

An important feature of my invention is the tightening and stretching of the corded netting longitudinally by drawing one end rail apart from the other, and I have shown two ways of doing this; but there may be other equivalent means employed.

I have described and shown my improvements as especially adapted to cord-netting bed-bottoms, such as is shown in the Springer patent, above mentioned; but it is evident that they are applicable to other forms of bottoms which require to be stretched upon a frame, and which are adapted to engage with the side and end rails and holders herein described.

What I claim is this:

1. In a structure for bed-bottoms and other articles, a bottom made of netting, in combination with a knockdown frame on which the bottom is stretched, said frame composed of side and end rails, the end rails beveled inwardly, and one of which is slid on the side rails to and from the opposite end rail to tighten the bottom, the end rails being provided with stationary holders and the side rails with movable holders for the bottom, substantially as described.

2. The netting bottom, in combination with a knockdown frame composed of inflexible end and side rails, the side rails being tubular and the end rails provided with metal straps to connect with and slide on said side rails, the screw-bolts for drawing the movable end rail to and from the opposite stationary end rail, the washers through which the bolts are passed, and which washers are provided with a neck and rib to engage with the slotted tubular rails to prevent the washer and rail from turning with the screw-bolt, and side and end holders on the frame for the netting, substantially as described.

3. In combination with the netting and the side and end rails, the stationary netting holders in the end rails, and the sliding hook-rings K on the side rails, whereby the ends of the meshes of the netting and their open centers are drawn directly in a line with each other, substantially as described.

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

LARS P. NELSON.

Witnesses:
JAS. H. BLACKWOOD,
H. A. HALL.