W. A. Le ROW & W. A. V. PORTER.

SPRING BED-BOTTOM.

No. 185,245. Patented Dec. 12, 1876.

Fig. 1.

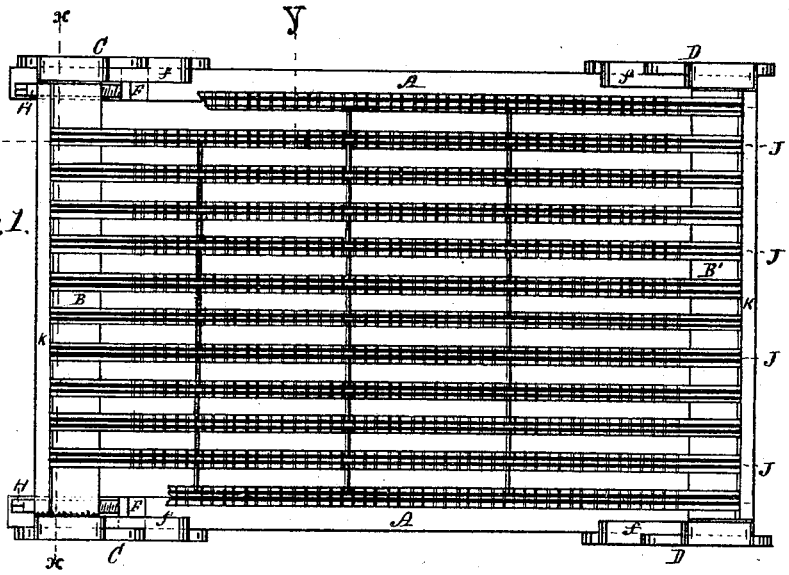


Fig. 2.

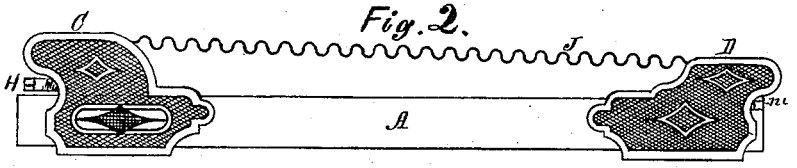


Fig. 3.

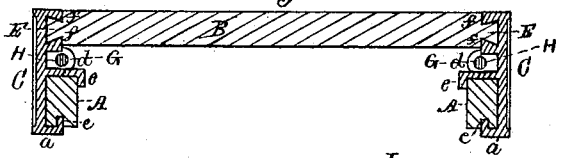
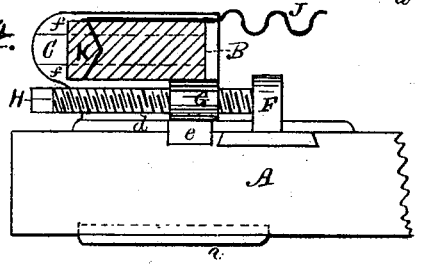


Fig. 4.



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UNITED STATES PATENT OFFICE.

WILLIAM A. LE ROW AND WILLIAM A. V. PORTER, OF CHICAGO, ILLINOIS; SAID PORTER ASSIGNOR TO SAID LE ROW.

IMPROVEMENT IN SPRING BED-BOTTOMS.

Specification forming part of Letters Patent No. **185,245**, dated December 12, 1876; application filed March 29, 1876.

To all whom it may concern:

Be it known that we, WILLIAM A. LE ROW and WILLIAM A. V. PORTER, of Chicago, in the county of Cook and State of Illinois, have invented new and useful Improvements in Bed-Bottoms; and we do hereby declare the following to be a full, clear, and exact description thereof, which will enable others skilled in the art to which our invention appertains to make and use the same, reference being had to the accompanying drawing, forming part of this specification, in which—

Figure 1 represents a general plan or top view of a bed-bottom embodying our invention. Fig. 2 represents a side elevation of the same. Fig. 3 represents a vertical transverse section of the same, taken on the line *x x*, drawn across Fig. 1; and Fig. 4 represents an enlarged longitudinal detail section, taken on the line *y y*, drawn through Fig. 1.

Like letters of reference indicate like parts.

Our invention relates to that class of bed-bottoms employing longitudinal spring-slats, on which the mattress is supported; and consists in the novel construction of the slats, and in the means employed in securing them to the cross-bars of the frame; also, in the novel arrangement of the corner-pieces uniting the cross-bars to the side pieces of the frame, all of which will be more fully understood from the following description.

In the drawing, A A represent the side pieces of the frame, and B B′ the cross-bars, all of which are made of the necessary size to resist the strain to which they are subjected, and of the proper length to fit loosely between the end and side rails of the bedstead. C C and D D are cast-metal corner-plates, for connecting the cross-bars to the side pieces of the frame, and each is provided on its lower edge with an inwardly-projecting flange, *a*, having upon its upper surface a rib, *c*, adapted to enter a longitudinal groove, formed in the lower edge of the side pieces, and at a point near the center, with a like flange, *d*, extending inward over the upper edge of the side piece, and provided on its inner edge with a depending lip, *e*, adapted to bear against the inner side of the side piece, as shown in Fig. 3. The arrangement of these flanges is such as to firmly connect the plates to the outer side of the side pieces laterally, and at the same time allow the plates to move freely on the side pieces in the direction of their length. These plates are also provided on the inner side, at their upper edge, with inwardly-projecting parallel flanges *f f*, which are so beveled on their approximate faces as to form a dovetail groove, into which the ends of the cross-bars are firmly fitted, as shown at E E, Fig. 3, by which means the cross-bars and side pieces are connected together, forming the frame. F F are stop-brackets, rigidly secured to the upper edge of the side pieces A A at a point near cross-bar B, and extending upward to a point slightly below the plane of the lower edge of the same. G G are lugs formed on the inner side of the respective corner-plates C C, centrally between the lower side of the cross-bar and upper edge of the side pieces of the frame, as shown in Figs. 3 and 4. H H are the adjusting screw-bolts, which pass centrally through the lugs in planes parallel with the inner sides of the plates and upper edge of the side pieces, and bear against their respective brackets, F, which form the resisting-points of the bolts. The arrangement of these parts is such as to move the plates longitudinally on the side pieces when force is applied to the bolts, causing them to be tightened against the brackets, thereby moving the cross-bar B from cross-bar B′, and so increasing the space between them as to produce the requisite tension of the slats J, on which the mattress is supported.

The slats are formed of narrow strips of sheet metal, preferably of steel, and are corrugated longitudinally and laterally their entire length, as shown in Fig. 2, the object being to increase their elasticity and bearing capacity. The ends of the slats are bent in proper shape to fit into a V-shaped groove, formed in the outer edge of the cross-bars B B′, as shown in Fig. 4, and are firmly secured therein by a V-shaped cleat, K, secured within the groove by suitable bolts or screws, and so adjusted as to compress the ends of the slats between its beveled surface and the walls of the groove. The slats are secured in position parallel with each other by transverse

connecting-wires *n* passing through them at equal distances one from the other, as shown in Fig. 1. The corner-plates D D are each provided with a depending flange, *m*, on the outer end, adapted to bear against the end of the side pieces of the frame, by which means the plates and cross-bar B′ are prevented from being moved toward cross-bar B by the tension of the slats.

With the arrangement of corner-plates, as aforesaid, we are enabled to construct a bed-bottom frame without employing bolts or screws to connect the side and end pieces of the frame, consequently rendering the adjustment of the cross-bars to produce the required tension of the slats more readily and easily accomplished.

Having thus described our invention, what we claim as new, and desire to secure by Letters Patent, is—

1. The combination, with the cross-bars B B′, of the longitudinal and laterally-corrugated sheet-metal slats J, as and for the purpose specified.

2. The combination, with the cross-bars B B′, provided with the V-shaped groove, to receive the ends of the slats, of the V-shaped cleat K, adapted to compress the ends of the slats between the beveled surface of the cleat and the walls of the groove, as and for the purpose specified.

3. The corner-plates C C and D D, having the flanges *a* and *d*, provided with the ribs *c c*, one of said ribs *c* being adapted to bear against the inner face of the side pieces, and the other rib *c* being adapted to enter the grooves in the lower edge of the side pieces, whereby the corner-pieces are connected to the side pieces A A, substantially as and for the purpose specified.

4. The corner-plates C C and D D, having the flanges *a* and *d*, provided with the ribs *c c*, as described, and the parallel flanges *f f*, forming the dovetail grooves, to receive the ends of the cross-bars B B′, substantially as specified.

5. The combination, with the side pieces A A, cross-bar B, and corner-plates C C, arranged as described, and provided with the lugs G G, of the brackets F F and adjusting-screws H H, substantially as and for the purpose specified.

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