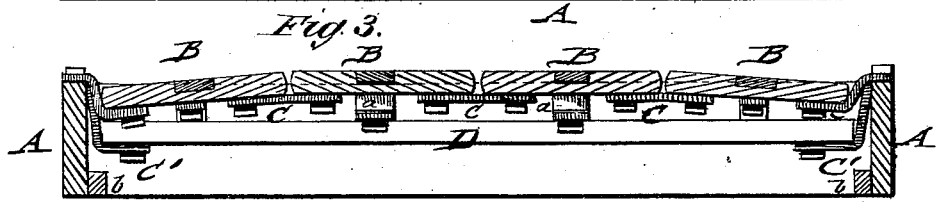
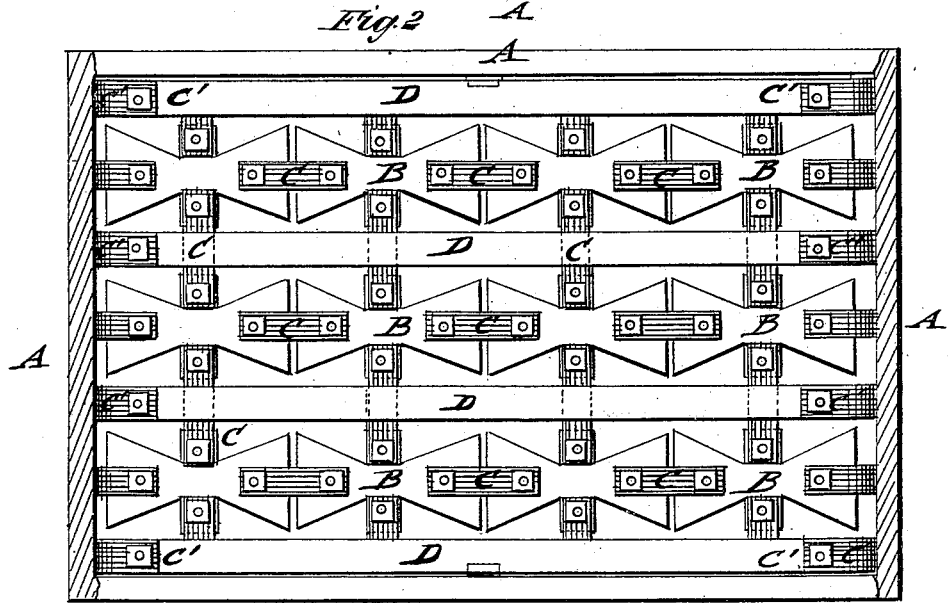
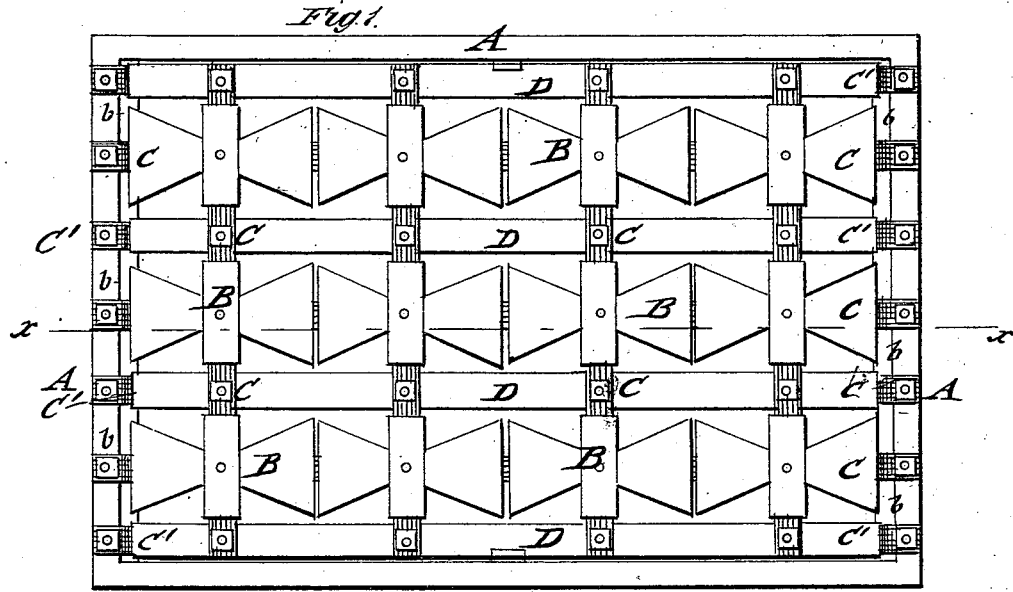


H. S. CATE.
Bed-Bottom.

No. 208,294.

Patented Sept. 24, 1878.



WITNESSES:
Francis M. Wells.
C. Sedgwick

INVENTOR:
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UNITED STATES PATENT OFFICE.

HENRY S. CATE, OF MILLERSTOWN, PENNSYLVANIA.

IMPROVEMENT IN BED-BOTTOMS.

Specification forming part of Letters Patent No. **208,294**, dated September 24, 1878; application filed August 20, 1878.

To all whom it may concern:

Be it known that I, HENRY S. CATE, of Millerstown, (Barnhart's Mills P. O.), in the county of Butler and State of Pennsylvania, have invented a new and Improved Bed-Bottom, of which the following is a specification:

In the accompanying drawings, Figure 1 represents a top view, Fig. 2 a bottom view, and Fig. 3 a vertical longitudinal section on line *x x*, Fig. 1, of my improved bed-bottom.

Similar letters of reference indicate corresponding parts.

This invention relates to such improvements in the bed-bottom for which Letters Patent have been granted to me under date of April 9, 1878, and numbered 202,149, that all parts of the same have a uniform elasticity or spring, and that sagging in the center is fully prevented; and the invention consists of an outer frame and of a number of intermediate cross-shaped pieces or links, that are connected longitudinally and transversely by elastic strips with each other, with the frame, and with longitudinal rods or slats interposed between the cross-pieces. The cross-pieces are raised by means of wood or leather blocks placed between them and the supporting-strips, so as to raise them above the slats. End cross-strips of the outer frame serve as guards in case of breakage.

Referring to the drawings, A represents the outer frame of my improved bed-bottom, and B a number of intermediate pieces or links, made of cross or other shape, and wood or other material. The cross-pieces are connected longitudinally, by rubber strips C, with each other and with the frame A, and transversely, by similar elastic strips, with the frame A at its end, and to the longitudinal rods or slats D. The slats D are interposed between the cross pieces or links B, and hung at the ends, by rubber strips C', to the frame A. The longitudinally-connecting strips C are attached to the bottom of the cross pieces or links B, while the transversely-connecting strips are attached to the bottom of the cross-pieces and the tops of the longitudinal slats or rods.

Either some of the middle cross-pieces or all of them are raised above the frame by means of small pieces of sole-leather *a*, Fig. 3, or, in case of larger bed-bottoms, by means of blocks

of wood, that are interposed between the under side of the cross-pieces and the elastic strips. By using thicker strips or blocks in the center and thinner ones at the outside the middle portion of the bed-bottom is raised above the outer part or ends, so as to assist better the increased weight exerted on the middle portion of the bottom. The cross-pieces are thereby raised sufficiently to prevent their coming down below the level of the slats, which act, by their suspension-strips, in connection with the cross-pieces, to increase the elasticity of the bed, and make, really, a double-spring bed. The slats spring at every movement of the body, while the cross-pieces accommodate themselves to the different parts of the body, according to their position therein.

The elastic strips that support the intermediate slats are made longer and stronger than those connecting the cross-pieces, so as to resist more effectually the strain therein.

The outer frame, A, is provided with projecting shoulders or cross-strips *b* at the lower parts of its end pieces, for the purpose of stopping the slats and preventing the breaking of the upper strips in case they are extended too much by a too heavy weight exerted upon the slats. The cross-pieces will not be pressed down as much as the slats, owing to the mattress placed thereon. The end strips *b* of the frame act thus in the nature of stops, which relieve the elastic strips of the bed-bottom of too great a strain and prevent their breaking. The bed-bottom resists, therefore, with increased efficacy the strain exerted thereon, and furnishes a uniformly yielding and elastic support for the mattress, at less cost than the high-priced steel-spring bottoms.

Having thus fully described my invention, I claim as new and desire to secure by Letters Patent—

1. The combination, with frame A, of intermediate cross pieces or links B, which are connected longitudinally and transversely by elastic strips C with each other and to each end of the frame, and with interposed longitudinal slats or rods D, hung by elastic strips C' to the frame, substantially as and for the purpose set forth.

2. The combination, with the outer frame, A, of intermediate cross pieces or links B, that

are connected by elastic strips with each other and with the ends of the frame and with intermediate longitudinal spring-slats D, and raised above the slats D by interposed pieces or blocks, substantially as described, and for the purpose specified.

3. The combination of frame A, having end stops, with longitudinal slats, suspended by

elastic strips, and with cross pieces or links, that are connected with each other to the ends of the frame and the slats by elastic strips, substantially as specified.

HENRY S. CATE.

Witnesses:

WM. B. HOWELL,
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