

A. S. BURNHAM.  
Spring Bed-Bottom.

No. 212,656.

Patented Feb. 25, 1879.

Fig. 1.

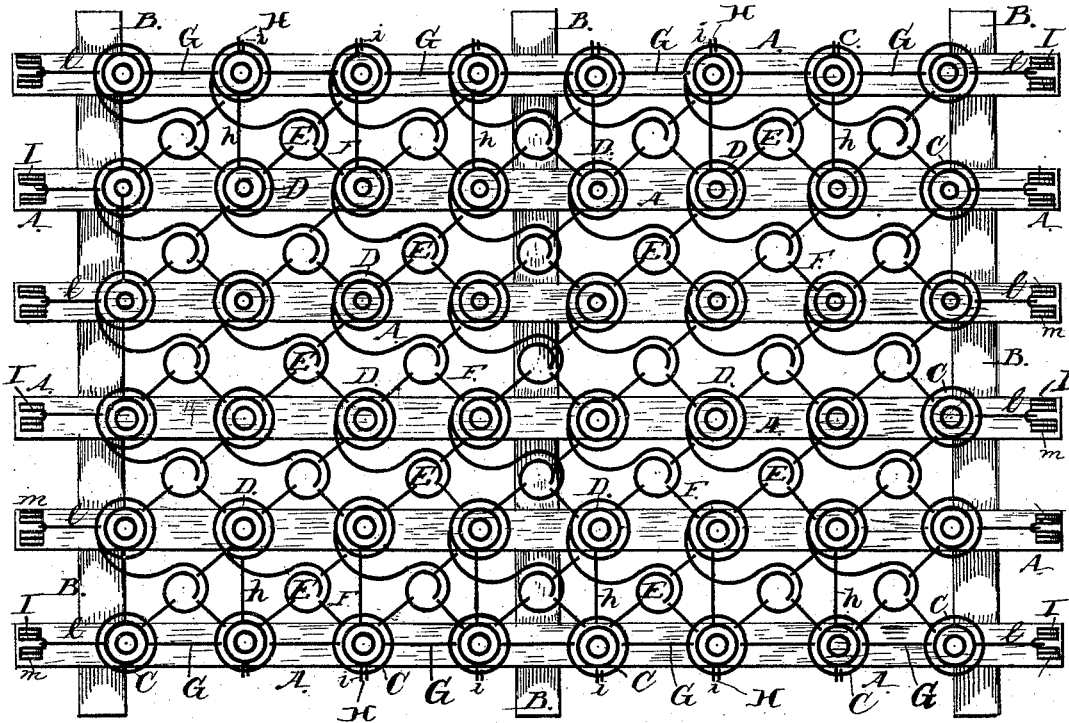


Fig. 2.

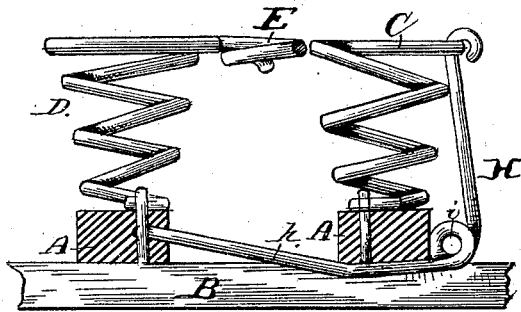
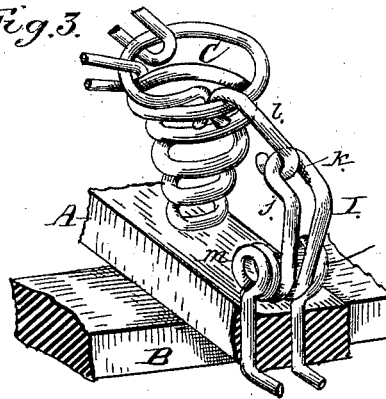


Fig. 3.



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# UNITED STATES PATENT OFFICE

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## IMPROVEMENT IN SPRING BED-BOTTOMS.

Specification forming part of Letters Patent No. 212,656, dated February 25, 1879; application filed December 20, 1878.

*To all whom it may concern:*

Be it known that I, A. S. BURNHAM, of Parkersburg, in the county of Butler and State of Iowa, have invented certain new and useful Improvements in Spring Bed-Bottoms; and I do 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, reference being had to the accompanying drawings, which form a part of this specification.

Figure 1 is a plan view of my improved spring bed-bottom. Fig. 2 is a detail view, representing one of the spring-stays employed at the sides of the bed; and Fig. 3 shows one of the spring-stays used at the ends of the bed.

Corresponding parts in the several figures are indicated by like letters of reference.

This invention relates to spring bed-bottoms; and it consists in the improvements in the construction thereof which will be hereinafter more fully described, and particularly pointed out in the claims.

Referring to the drawings, A represents the longitudinal parallel bottom slats, which are arranged upon and suitably secured to the cross-slats B. Ordinary coiled springs C C are arranged in a single row at one side and one end of the frame, as shown. The springs D, embodying the principal feature of my invention, are arranged upon the slats A A, as close together as may be found convenient. The body of each of these springs is constructed like an ordinary coiled spring; but, instead of fastening the end of the wire forming the upper coil to the coil next below, as is usually practiced, I twist it in a direction opposite to the winding of the coil, and wind it spirally, as shown at E, so that the upper coil of the spring and the spiral E together will represent substantially the outline of the letter S. The spirals E project diagonally from the springs D over the spaces between the slats A. One spiral, E, thus occupies the space between each section of four springs, D C, it being connected to each of three of these by a link, F, and constituting an integral part of the fourth.

The springs C and D at the sides of the bed

are connected with each other by links or connecting-rods G G. They are also braced by the spring-stays H, consisting of rods *h*, secured in the slats A next to the outer ones, extending under and beyond the outer slats, coiled at *i*, extending upward and hooked over the upper coils of the springs.

It will be observed that while the coil *i* gives lateral tension to the stay, the fact that the stay-rod *h* passes under the outer slat, A, without being secured thereto insures freedom of motion vertically to the edge springs, C D—in other words, the stays H do not obstruct the working of said springs.

The springs C D at the ends of the bed-bottom are each provided with a spring-stay, I, consisting of a rod or wire, *j*, doubled and bent to form a loop, *k*, connected by a link, *l*, with the upper coil of the spring. Double spring-coils *m* are formed upon the doubled rod *j*, and the ends of the latter are passed through the slats A, and clinched to hold it in place.

The principal and most important advantage of my improved spring-bed is this, that each individual spring may work freely and without the stiffness and rigidity which are usual in bed-bottoms where the springs are connected together. This is partly due to the construction of the spring-stays, as already described, but especially to the spirals E, which form the principal connections between the springs, and which, being free and elastic, give perfect elasticity of motion. Besides, my improved spring bed-bottom is simple and durable, and may be manufactured at a small expense.

Having thus described my invention, I claim and desire to secure by Letters Patent of the United States—

1. The coiled spring D, provided with a spiral, E, formed by winding a continuation of the upper coil in a direction opposite to the winding of the spring, said spiral forming the base of a free and elastic connection between spring D and adjoining springs, substantially as herein shown and specified.

2. The combination, in a spring bed-bottom, of the springs D, having spirals E, with the links F, connecting the spiral E with the three springs adjoining the one of which it forms

part, substantially as and for the purpose herein set forth.

3. In a bed-bottom, the combination of ordinary coiled springs C, arranged in single rows at one side and one end of the bed-frame, with the springs D, having spirals E, extending diagonally and occupying the space between each section of four springs, and the connecting-links F, all arranged and operating substantially as and for the purpose herein shown and specified.

4. The improved bed-bottom herein described, consisting, essentially, of the frame

A B, coiled springs C, springs D, having spirals E, links F, and spring-stays H, so arranged as to give the springs to which they are connected perfect freedom of motion, all arranged and operating substantially as and for the purpose herein shown and specified.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in presence of two witnesses.

ALFRED S. BURNHAM.

Witnesses:

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