N. J. Willis.

Bed Bottom,

No. 52,937, Patented Feb. 27, 1866.

Fig 1.

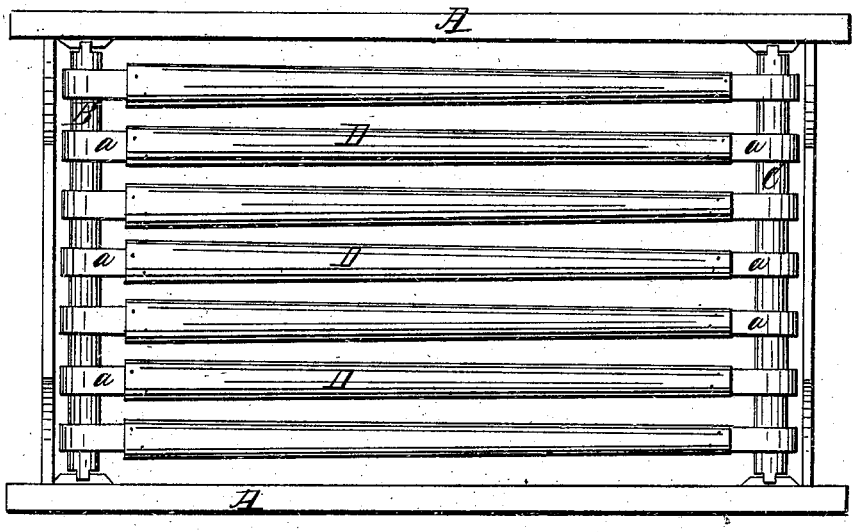
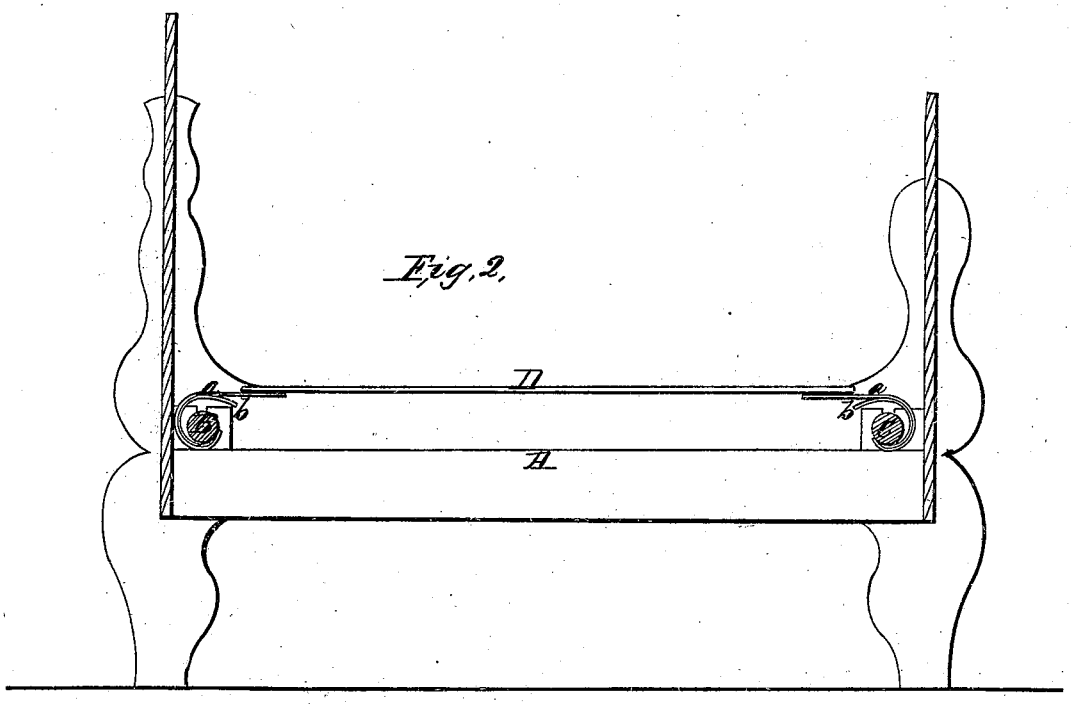


Fig. 2.



Witnesses,
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UNITED STATES PATENT OFFICE.

NEWIL J. WILLIS, OF BOSTON, MASSACHUSETTS, ASSIGNOR TO HIMSELF AND AMMI BROWN, OF SAME PLACE.

SPRING BED-BOTTOM.

Specification forming part of Letters Patent No. **52,937**, dated February 27, 1866.

To all whom it may concern:

Be it known that I, NEWIL J. WILLIS, of Boston, of the county of Suffolk and State of Massachusetts, have invented a new and useful Improvement in Spring-Bottoms for Bedsteads; and I do hereby declare the same to be fully described in the following specification and represented in the accompanying drawings, of which—

Figure 1 is a top view, and Fig. 2 a longitudinal section, of a bedstead provided with my invention.

In such drawings A denotes the bedstead-frame as having two cylindrical or round rails, B C, extending across it, one of them being arranged near its head and the other near its foot, as represented. Between the said two rails B C is a series of slats, D D, &c., each of which tapers from its upper to its lower end, it being widest at its upper extremity. These slats are to be arranged at, or about at, equal distances apart, and each of them is to have straps *a a* fastened to two ends, or to it near the said ends. Each of these straps lies on and extends over and beyond a curved spring, *b*, which is fastened to the next adjacent rail, B or C, such spring being also secured at one end to the said rail, the whole being arranged as represented in the drawings.

When a pressure is exerted by the strap on the spring it will tend to wind the spring more or less about the bar which supports both the spring and the strap. In consequence of the peculiar action of the strap such strap and the bar will not only operate to protect the spring from being broken, but cause the active part of it to be shortened as the pressure may increase. This enables a very light and thin spring to be employed and to operate with great resisting elasticity. It also renders the bed-bottom very easy to a person when reposing on a mattress or bed laid thereon. The tapering of the slats also serves to prevent the bottom from sagging at the head, or dropping more at or near the head than at its foot, for the center of gravity of the weight of a person when on the bed is not usually at the center or middle of it, but is between the same and the head or upper end of the bed. Therefore by tapering each slat, so as to render it more elastic at or near its lower, than at or near its upper, end, the depression of the slat by an individual may be caused to closely approximate to uniformity throughout its length, particularly when its foot-spring has an elasticity proportionally or properly less than that of the head-spring.

I claim—

In the above-described bed-bottom, the combination and arrangement of the round bars B C, the springs *b*, and their straps *a*, such being affixed to the frame A, and the slats D, substantially as described.

NEWIL J. WILLIS.

Witnesses:

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