

J. B. HENION, dec'd.  
 G. J. HENION, Adm'r.  
 Bed-Bottoms.

No. 161,960.

Patented April 13, 1875.

Fig 1

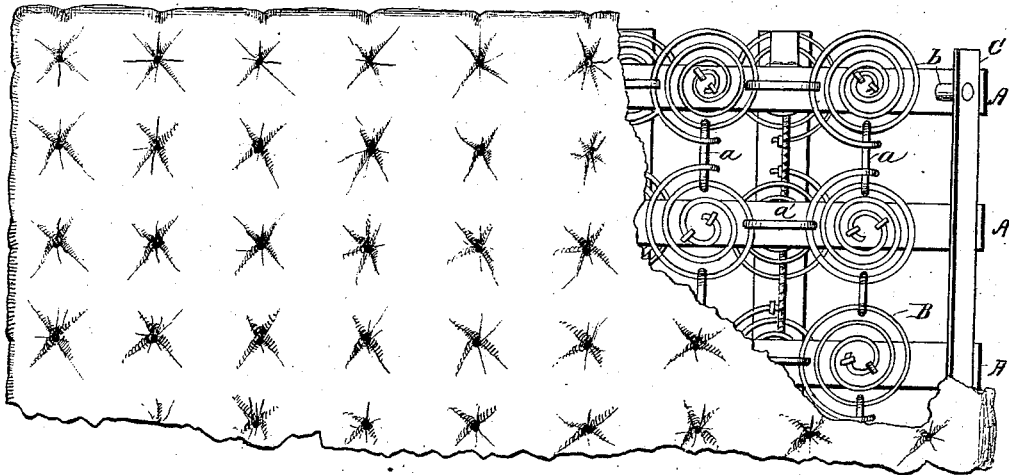


Fig 2.

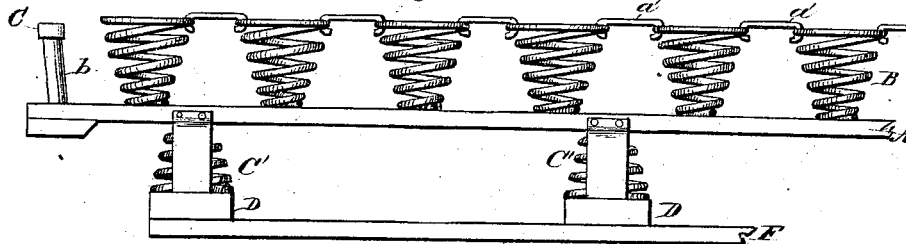
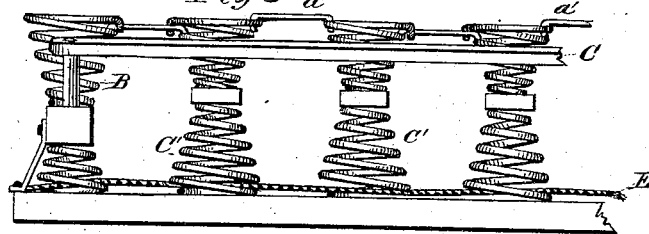


Fig 3



Witnesses

H. C. Clark  
 H. C. Matthews

J. W. Adams  
 Geo. J. Henion Secy  
 Administrator.

By H. W. Beader & Co. Attys

# UNITED STATES PATENT OFFICE.

GEORGE J. HENION, OF DUBUQUE, IOWA, ADMINISTRATOR OF JOHN B. HENION, DECEASED; SAID ADMINISTRATOR ASSIGNOR TO GEORGE J. HENION AND MONROE M. CADY, OF SAME PLACE.

## IMPROVEMENT IN BED-BOTTOMS.

Specification forming part of Letters Patent No. 161,960, dated April 13, 1875; application filed October 13, 1874.

*To all whom it may concern:*

Be it known that JOHN B. HENION, of Dubuque, Dubuque county, Iowa, in his lifetime did invent certain Improvements in Bed-Bottoms, of which the following is a full and exact description, reference being had to the accompanying drawings, and to the letters of reference marked thereon.

The object of the invention of JOHN B. HENION was such a construction of a spring bed-bottom as would make it more elastic, and at the same time regular and uniform, in its movements under pressure upon any part of it; and the invention therein consists in the construction and combination of its several parts.

In the drawings, making a part of this specification, Figure 1 represents a top view of the device; Fig. 2, a side view of a portion of the same, and Fig. 3 an end view of a portion of the same.

Like letters denote similar parts in each figure.

A represents a series of bars arranged longitudinally, upon which are secured, in any convenient way, a suitable number of conical springs, B, arranged with their bases uppermost, and tied together transversely at such bases by loops *a*, so arranged that the hooked ends of the contiguous springs pass over the opposite ends of such loops, and thereby prevent such springs from becoming uncoiled, while the loops themselves are secured upon the coil of the spring next below the upper coil. The springs are connected together longitudinally by ordinary loops *a'*. The two outside bars A have secured to them head and foot rails C C, placed upon standards *b*, inserted in such bars, and of a length to permit such rails to rise nearly to the height of the springs B when no pressure is upon them. By this means the top of the device is protected against lateral expansion. To the under side of each bar A are secured three conical springs, C', two only being shown, (see Fig. 2,) arranged with the base downward, one spring being at the center and the others near the ends of

such bar. These springs are stronger and more rigid than the springs B, and rest upon and are secured to three transverse bars, D. A cord, E, extends centrally along each of said bars, and secured to the ends thereof by passing alternately over the lower portion of each spring and under that portion on the opposite side of the same next higher than the other series, to equalize the pressure of such springs. A couple of longitudinal bars, F, secured to the under side of the bars D, prevent such bars from lateral or longitudinal movement, and complete the device.

The advantages claimed for this device are its elasticity under all conditions of use, its cheapness, simplicity, durability, and uniformity of action, as, by its peculiar construction and combination and arrangement of parts, it is free from the inclination of bed-bottoms to yield too much at the point where one or more persons may happen to lie.

A special advantage also is obtained by the peculiar arrangement of the transverse securing-loops *a a*, which are themselves hooked over the second coil of the springs, and have the hooked end of the coil caught over them, whenever the arrangement of the springs renders this possible, so that the parts are reciprocally tied together.

Having thus described this device, what I claim as new therein, and the invention of the said JOHN B. HENION, is—

1. The combination of the loops *a a* with the springs B B, the parts being tied together, as described.

2. The combination of the lower frame, the intermediate springs C' C', and the independent bars A, united by the bars C, interlocked springs, and loops, as described.

This specification signed and witnessed this 23d day of March, 1874.

GEO. J. HENION,  
*Administrator.*

Witnesses:

B. B. RICHARDS,  
MONROE M. CADY.