W. SMITH & A. D. SHORNO.

Bed-Bottom.

No. 196,492. Patented Oct. 23, 1877.

Fig. 1.

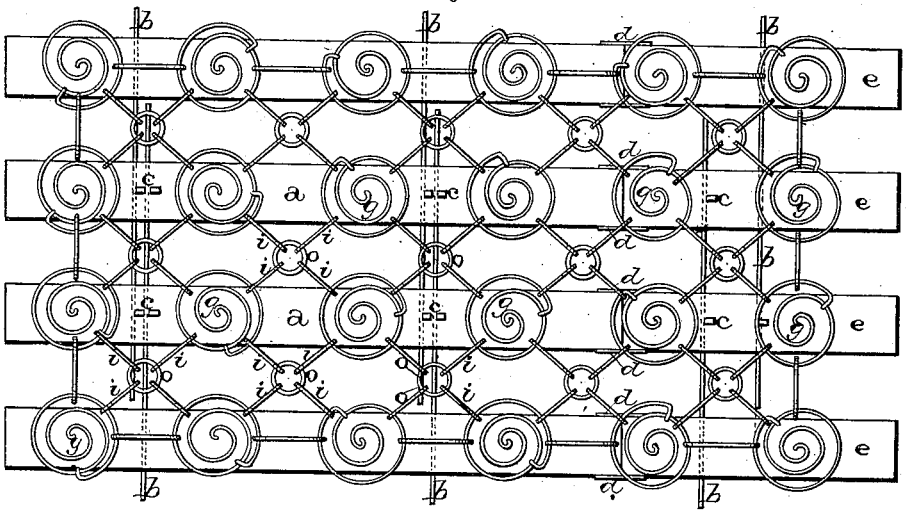

Fig. 2.

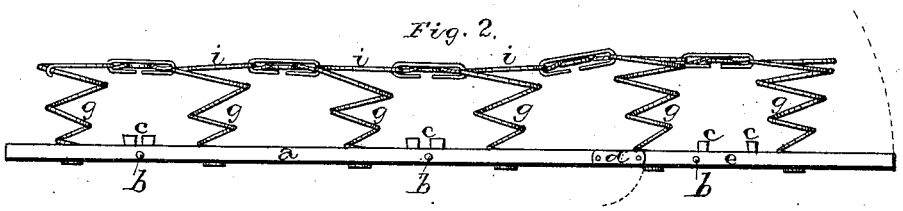

Fig. 3.

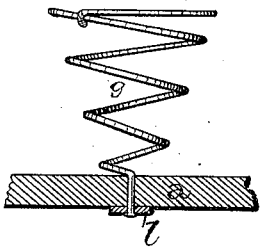

Fig. 4.

WITNESSES

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UNITED STATES PATENT OFFICE.

WILLIAM SMITH AND ANDREW D. SHORNO, OF BENTON HARBOR, MICH.

IMPROVEMENT IN BED-BOTTOMS.

Specification forming part of Letters Patent No. **196,492**, dated October 23, 1877; application filed August 3, 1877.

To all whom it may concern:

Be it known that we, WM. SMITH and ANDREW D. SHORNO, of Benton Harbor, in the county of Berrien and State of Michigan, have invented certain new and useful Improvements in Spring Bed-Bottoms; and we do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it pertains to make and use it, reference being had to the accompanying drawings, which form part of this specification.

Our invention relates to an improvement in spring bed-bottoms of that class wherein the mattress is supported by a number of inverted conical spiral springs fastened on long slats, and rings, with short wires fastened to both rings and springs, for joining the springs together; and it consists in the combination and arrangement of parts that will be more fully described hereinafter.

Figure 1 represents a plan view of our invention; Fig. 2, a side elevation of the same. Figs. 3 and 4 are detail views.

a represents ordinary bed-slats of any desired construction, and which are united together by means of any number of straight rods, *b*, which pass through them from side to side.

In order to prevent the slats from moving too readily upon these rods, holes are made down through the tops of the slats, so as to connect with the holes made by the rods in passing horizontally through their sides. Through the vertical holes made down through the tops of the slats are driven the tapering wedges *c*, which bear against the sides of the rods, and thus, by frictional contact, serve to prevent the slats from moving too readily on the rods. Should any one of the slats become loose at any time it will only be necessary to drive down the wedges a little deeper, when the slat will again be clamped to the rod. By means of these rods the slats can be adjusted laterally, so as to be moved close together, to fit a narrow bed, or drawn outward sufficiently far to fit beds of much greater width, and, by means of this adjustability, a single bed-bottom can be adjusted to beds of all sizes whenever it becomes necessary, and thus save the expense of having to buy an additional bottom for every separate bedstead. Pivoted to the inner ends of these slats by means of the plates or links *d* are the head-pieces *e*, which can be raised or lowered, as desired, and which are also adjustable back and forth, like the slats, upon any desired number of rods which pass horizontally through their sides. Upon the top of each slat and head *e* are placed the inverted conical spiral springs *g*, which are connected at their tops by means of metal links *i* and rings *o*. These links are formed, as shown, with elongated eyes, so as to allow the springs to be moved closely together when the slats are adjusted to fit a narrow bed, or to be moved widely apart when the slats are drawn apart to fit large beds.

It will be noticed that the springs upon the top of the slats and the springs upon the top of the head-pieces *e* are of different sizes, those upon the head-pieces being made considerably higher than upon the slats. The head-pieces can be raised upward to any desired distance without in any manner interfering with the springs on the slats. The lower end of each spring *g* is passed down through slat or head-piece, and through a washer, *l*, on their under side, and then the end of the spring is clinched, so that it cannot in any way accidentally come loose. By thus clinching the lower ends of the springs a very cheap, simple, and effective way of securing the springs in position is found.

The hinges by which the head-pieces *e* are connected to the slats consist of metal plates *d* of any suitable length, two of which are applied to each head-piece *e*. By means of these links or plates the ends of the head-pieces can sink down below the level of the tops of the slats, and thus the lower ends of the head-pieces will bear against the ends of the slats, and be supported to a great extent in position. Instead of the keys or wedges for the purpose of clamping the slats to the rods, which pass through their sides, a thumb-screw or any other suitable adjusting device may be used.

Having thus described our invention, we claim—

1. The combination of the slats *a*, head-pieces *e*, and connecting-plates *d*, whereby the inner ends of the head-pieces may sink below the level of the top of the slats, and be supported upon the slats, substantially as shown.

2. The combination of the slats *a* with the rods *b*, the rods being made to pass horizontally through the sides of the slats, and serve as a means of adjusting the slats back and forth, substantially as set forth.

3. The combination of slats *a*, rods *b*, and clamping device, whereby the rods and slats are clamped firmly together in any desired position, substantially as specified.

In testimony that we claim the foregoing we have hereunto set our hands this 18th day of July, 1877.

WILLIAM SMITH.
ANDREW D. SHORNO.

Witnesses:
A. PLUMMER,
ALFRED COALES.