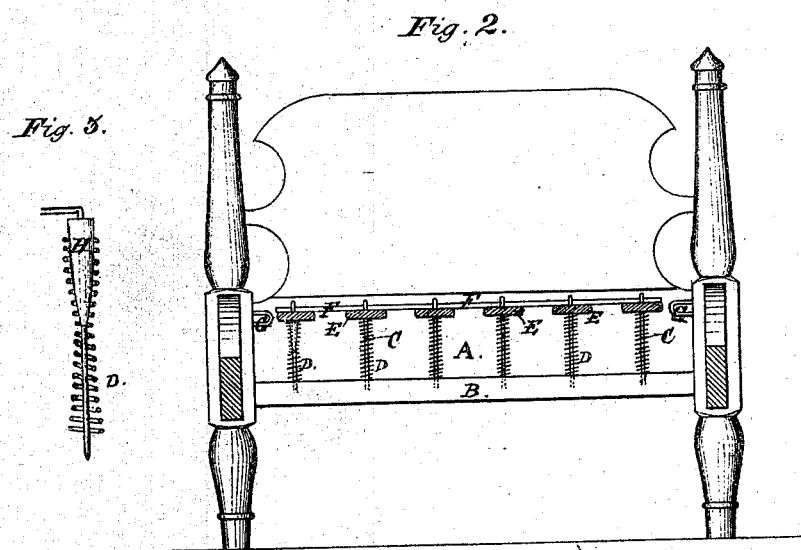
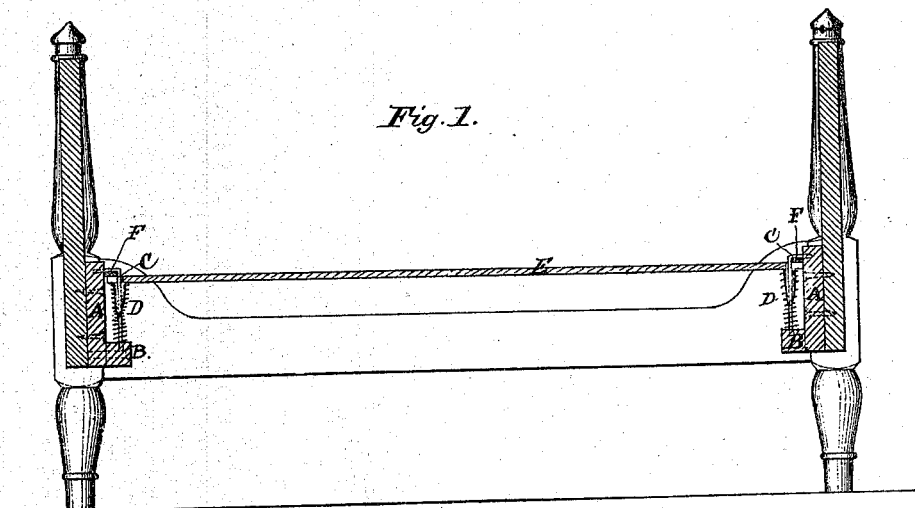


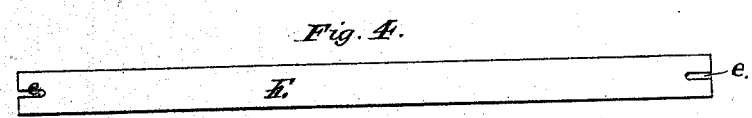
*A. Cole,*  
*Bed Bottom.*

*No. 112,323.*

*Patented Mar. 7. 1871.*



*Fig. 3.*



*Witnesses:*

*W. Bradford—  
P. Halsted—*

*Alexander Cole Inventor  
by John J. Halsted,  
his Attorney*

# United States Patent Office.

ALEXANDER COLE, OF MANAMUSKIN, NEW JERSEY.

Letters Patent No. 112,323, dated March 7, 1871

## IMPROVEMENT IN SPRING BED-BOTTOMS.

The Schedule referred to in these Letters Patent and making part of the same.

*To all whom it may concern:*

Be it known that I, ALEXANDER COLE, of Manamuskine, in the county of Cumberland and State of New Jersey, have invented certain Improvements in Spring Bed-Bottoms; and I do hereby declare that the following, taken in connection with the drawing which accompanies and forms part of this specification, is a description of my invention sufficient to enable those skilled in the art to practice it.

My invention is an improvement on my patent No. 56,373, and the novel features relate to certain details of construction hereinafter fully described.

Figure 1 is a longitudinal section of a bedstead having my improvements thereon;

Figure 2, a cross-section, the feature represented in fig. 3 being shown in only one of the springs;

Figure 3, a detail view; and

Figure 4, a plan view of one of the longitudinal slats.

A is a board for sustaining the rods and springs hereinafter mentioned, of sufficient breadth for that purpose, and of a length such as to reach across the bedstead, one being used for the head and one for the foot.

To this board, at its bottom, I attach, by screws or otherwise, a strip, B, as shown, having a series of holes to receive the lower ends of a series of wire rods, C, the upper bent ends of such wires being bent from a vertical to a horizontal position, and the ends of their horizontal parts entering corresponding holes in the board A, as shown.

The part composed of A and B I attach to the head and foot-rails of any common bedstead, by screws or otherwise, and it may thus be readily applied or removed whenever desired for any purpose. It may, in some cases, be applied to other parts than the rail, dependent upon the particular construction of the bedstead.

Around each guide-rod or wire C I place a coiled spring, resting at its lower end upon the part B, and more particularly described hereafter.

E E, &c., are longitudinal strips of wood, each having at both ends an open-ended slot or notch, e, as shown, which admits of its being readily put to place, so that its slotted end shall span the wire rod, and also admit of its being as readily removed for any purpose; or when it is broken that another may replace it.

The slots e extend just far enough from the end of the slat to prevent such end from ever reaching to and chafing against the board A, the wire rod serving to limit its end play, and to hold it steady against too much movement and consequent noise.

The series of slats being placed as shown, each above the coiled springs, a steadying-strip, F, is next intro-

duced beneath the bent top of the wire rods and the slats, as shown. This strip F may be made of wood, band-iron, wire, twine, leather, or other appropriate material, which will serve to arrest, equalize, and steady the slats in their upward movements under the pressure of their springs.

When, however, flexible material is used instead of the rigid strips, I tie or secure its ends to hooks or staples G, which may be inserted in the side rails or at any convenient place in the bedstead.

H is a conical plug or washer, of wood, adapted to lie within the upper half of each spiral spring, such upper half being preferably, for that purpose, coiled to a somewhat conical or tapering shape from the top. The washers are bored that they may be placed upon the guide-rods, and with their larger ends upward; they are thus held to place by the tapering coil and the rod, but are yet perfectly free in the movements of the spring, under pressure or recoil, to move with it without getting displaced. These washers thus serve to prevent the spiral springs from chafing the guide-rods, and hence to prevent all unpleasant noise arising therefrom. They also serve to steady the spring, and contribute largely toward keeping it in proper shape and consequent efficiency.

The guide-rods are preferably made of rod-iron of about a quarter of an inch in diameter, and of about six inches in length in the vertical part and two inches in the horizontal part outside the wood. This horizontal part, it will be seen, acts of itself as a stop to the upward movement of all the other parts which are upon the rods, and I am thus enabled to dispense with a special fixed cap-piece at the top of the rods, such as is shown in my patent above referred to, and which would not admit of taking the bedstead apart, as I can do in my present construction.

I also dispense with the metallic hangers shown in said patent as attached to the ends of each slat.

The spiral springs may be made of brass or steel wire, and about four and one-half inches in length of coil when not compressed.

The slats I make about five-eighths of an inch thick and about two inches wide.

The prominent advantages of my present improvements are, the very slight liability to get out of order; the simplicity, durability, and cheapness of the construction; the facility with which they can be applied to an ordinary bedstead, and by any person of ordinary skill; and the ease with which the whole can be taken apart and repaired in case any part becomes broken or out of order, or with which a slat can be replaced or reversed, or any two of them may change places without removing any other part.

I claim—

1. The combination of the vertical strip A, having

and inwardly-projecting seat, B, the fixed guide-rods D, bent, as shown, and secured in the said strip and seat, and coiled springs surrounding the guide-rods, as and for the purpose set forth.

2. The same, combined with slats E when the latter are made with notches or slots open at their ends, as shown and described, and permitting the removal and insertion of the slats without moving the rods.

3. The combination, with the fixed rods, the springs, and slats, of the removable strip, cord, or strap F, inserted between the upper face of the slats and the

horizontal part of the guide-rods, as and for the purpose described.

4. The combination, with the bent-wire rods C, and with the spiral springs, tapering from the top toward the middle, of the tubular conical pieces H, as and for the purpose set forth.

ALEXANDER COLE.

Witnesses:

D. McANANEY,  
S. B. S. BARTH.