



# UNITED STATES PATENT OFFICE.

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## SPRING BED-BOTTOM.

SPECIFICATION forming part of Letters Patent No. 630,968, dated August 15, 1899.

Application filed October 3, 1898. Serial No. 692,531. (No model.)

*To all whom it may concern:*

Be it known that I, CHARLES D. BROUYETTE, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Spring Bed-Bottoms, of which the following is a specification.

My invention relates to improvements in spiral-spring bed-bottoms; and its objects are, first, to provide a readily-applied and effective system of links for the surface structure of this class of bed-springs; second, to provide against the danger of the spirals telescoping when compressed by use, and, third, to provide a free flexible joint between the surface coils of a spiral-spring bed-bottom. I attain these objects by the mechanism illustrated in the accompanying drawings, in which—

Figure 1 is an elevation of my simpler form of links as used upon the center coils of spiral-spring bed-bottoms. Fig. 2 is the same showing an additional bend to form a loop to engage border rods or braces. Fig. 3 is a plan of the same. Fig. 4 is a plan of two adjacent coils, showing the manner of applying these links. Fig. 5 is a side view of the upper coils of the same, showing the attachment of a border-link with two coils of the bed-bottom. Fig. 6 is the same showing links attached to center coils only; and Fig. 7 is a plan of a like connection of links with inner or body springs.

Similar letters refer to similar parts throughout the several views.

In constructing the links I take a piece of ordinary spring-wire and bend it to form two parallel bars A. The ordinary link has the bow end  $a''$  bent back so that its sides lie parallel with and under the side bars, as shown in Fig. 1, forming a hook or loop from the point  $a$ , so that it is capable of being bent around the surface coil of the spring to which it is applied, while the links that are constructed for use upon the border-coils are bent a second time, as at  $a'$ , so that after having been secured to the springs they may be made to engage and secure the border-wires to the springs, as indicated in Figs. 3 and 4. The opposite end, or rather ends, of these links are bent back upon the bars, as at  $A'$ , to form

hooks or loops and again bent back in the opposite direction, as at  $A^2$ , to form return-hooks for connecting the surface coils of adjacent springs by engaging the tie-rods C with the last-mentioned hooks and the coil of the spring with the other, as follows: The tie-rods C are first placed in position on the surface of the springs so that the offsets  $c$  will project below the coils, as shown in Figs. 4 and 5, so that the hooks  $A^2$  may be passed through the coil B and under the coil B' and the coil B and over the offsets  $c$  in the tie-rods, as indicated by the solid lines in Fig. 4, when the links are carried over to the position indicated by the dotted lines in Fig. 4 and by the solid lines in Fig. 5 and secured to the opposite side of the coil by means of the loop  $a$ , as hereinbefore set forth. When the border-wire D is used, the return-bend  $a'$  is made to engage it and lock it to place.

It will be readily seen that with the connection made by the return-hooks  $A'$  and  $A^2$  the joint between the two coils of the adjacent springs will produce a perfectly-pliable easily-adjusted connection, with nothing to prevent its free action to meet the vertical pressure on the springs by the occupant of the bed. By this means each individual occupying a bed affects only the springs immediately under him, thus greatly lessening the tendency of the bed to "roll" to the center, a difficulty that manufacturers have long endeavored to avert in spring-beds whose spiral-spring ends are faced or closed, which is done by the passing of the links over the surface of the coils of the springs, wholly preventing the springs from "telescoping," as the intermediate coils cannot possibly pass beyond the surface coils with the links applied in this way.

The tie-rods are indented with an offset  $c$ , and the border-rods are indented with a corresponding offset  $d$ , which said indentures are designed to extend downward below the surface coil of the springs to engage the connecting-hooks at the ends of the links, as hereinbefore suggested.

A careful study of the drawings (see Fig. 5) will disclose the fact that the bodies of the links pass over the surfaces of the springs. The hook  $A'$  passes over and around the coil



of the spring interiorly, under said coil, and back under the next adjacent coil and around the offset *c* of the tie-rods, while the hook at the other end of the links passas over the outer  
 5 coil of the spring exteriorly and back under and again bends to receive and secure the border-rods, except the center links, which are not required to secure the border-rods and simply encircle the coil of the spring, as  
 10 shown in Figs. 6 and 7.

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

1. In combination with a spiral-spring bed-  
 15 bottom, links bent at one end to form a main hook and a return-hook, said return-hook formed to engage the offsets in the tie-rods of the bed-bottom, and the main hooks formed to interiorly engage the surface coils of the  
 20 springs, and the opposite end bent to exteriorly engage the opposite side of the surface coil of the next adjacent spring, and a tie-rod

indented with offsets, substantially as and for the purpose set forth.

2. In combination with a spiral-spring bed- 25  
 bottom, links bent at one end to form double hooks or loops to interiorly engage the surface coil of one spring and the tie-rod on the next adjacent spring to form a flexible connection  
 30 between the springs, the other end of said link having a double bend, the one to exteriorly wrap the outer coil of the spring and the other to engage the border-rod and secure it to the springs, and a tie-rod and border-rod, each indented with offsets to receive 35  
 the connecting-hooks of the links, substantially as and for the purpose set forth.

Signed at Chicago, Cook county, Illinois,  
 September 21, 1898.

CHARLES D. BROUYETTE.

In presence of—

W. HUNTEMANN,

THOS. E. POLLARD.