

No. 646,659.

Patented Apr. 3, 1900.

J. F. GAIL.  
SPRING BED BOTTOM.

(Application filed June 16, 1899.)

(No Model.)

Fig. 1.

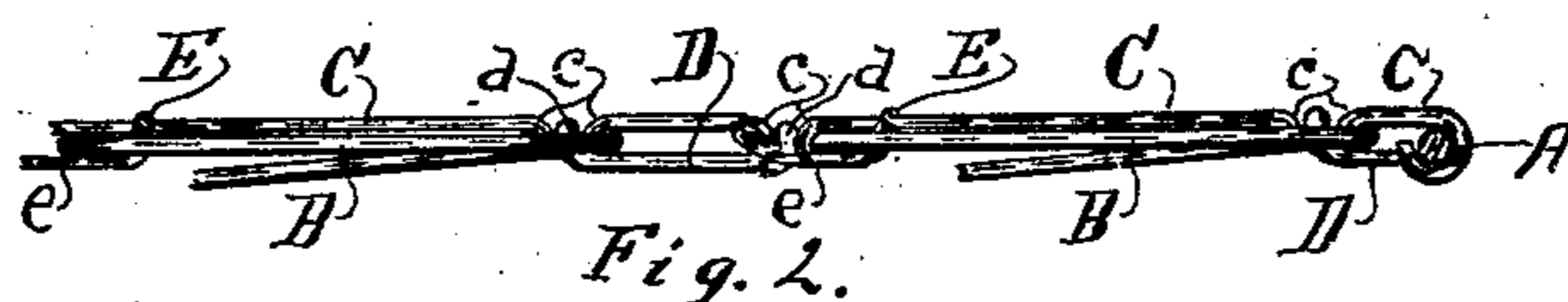
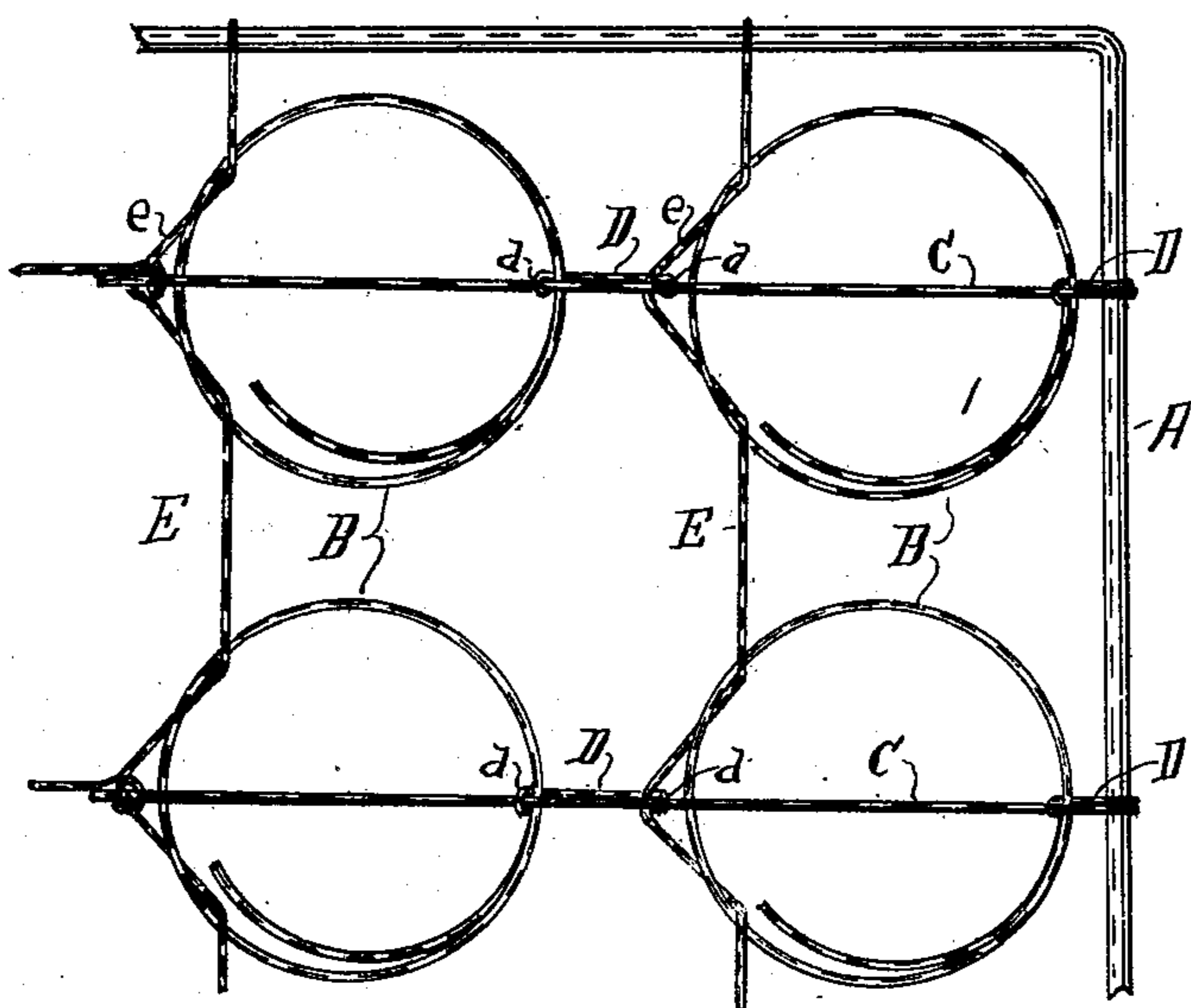


Fig. 3.



Witnesses.

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# UNITED STATES PATENT OFFICE.

JOHN F. GAIL, OF KENOSHA, WISCONSIN.

## SPRING BED-BOTTOM.

SPECIFICATION forming part of Letters Patent No. 646,659, dated April 3, 1900.

Application filed June 16, 1899. Serial No. 720,818. (No model.)

*To all whom it may concern:*

Be it known that I, JOHN F. GAIL, a citizen of the United States, residing at Kenosha, in the county of Kenosha and State of Wisconsin, have invented certain new and useful Improvements in Spring Bed-Bottoms, of which the following is a specification.

My invention relates to improvements in securing tie-rods in the surface of spiral-spring bed-bottoms; and its object is to so tie the surface coils of the springs that lateral motion is wholly averted without the movement of the entire surface of the structure. I attain this object by the mechanism illustrated in the accompanying drawings, in which—

Figure 1 is a plan of a section of a spring bed-bottom of the class hereinbefore mentioned. Fig. 2 is a sectional edge view of the upper surface coils of the springs and their tie-rods, and Fig. 3 shows a piece of one tie-rod detached from the bed-bottom.

Similar letters refer to similar parts throughout the several views.

In the accompanying drawings, A represents the ordinary border-wire.

B is the upper coil of the springs, and E is the longitudinal tie-rod in common use in the construction of this class of bed-bottoms.

My invention consists of the manner of securing the lateral tie-rods and their form and the manner of securing the links D. The tie-rods C are constructed with offsets *c* and are placed across the bed-bottom substantially over the centers of the coils B, with the offsets *c* so situated that one will be placed between the coil B and the offset *e* in the longitudinal tie-rod E, and the other will be just inside the coil of the next spring, continuing thus across the entire bottom. By this means I am enabled to pass the links D below the coils and the offsets *e* and to hook them to the tie-rods

C, one end passing under the coil and engaging the rod just inside and the other end passing under the offset *e* and engaging the tie-rod C between this offset and the coil of the adjacent spring. By this means I am enabled to tie the rods so securely that it is impossible to move the coils of the springs upon the tie-rods in either direction. The position of these links and the manner of securing them to the tie-rods are shown in Figs. 1 and 2, in which D represents the link, and *d d* represent the hooked ends of the links where they pass over and are secured to the tie-rods C.

The tie-rods C and E are both secured to the border-wires A of the bed-bottom, so that no one spring can be moved laterally without moving the entire surface of the bed-bottom.

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

In combination with the coils, border-wires, and longitudinal tie-rods of a spiral-spring bed-bottom, lateral tie-rods secured to the border-wires and passing over the coils and having offsets for the reception of the ends of the links, offsets in the longitudinal tie-rods and links secured at one end to an offset in the lateral tie-rod just within the upper coil, passing thence under the coil, and also under an offset in the longitudinal tie-rod and up between this offset and the coil of the adjacent spring and tied to another offset in the lateral tie-rod, substantially as and for the purpose set forth.

Signed at Kenosha, Wisconsin, this 3d day of June, 1899.

JOHN F. GAIL.

In presence of—

JAMES PENNEFEATHER,  
E. J. WYMAN.