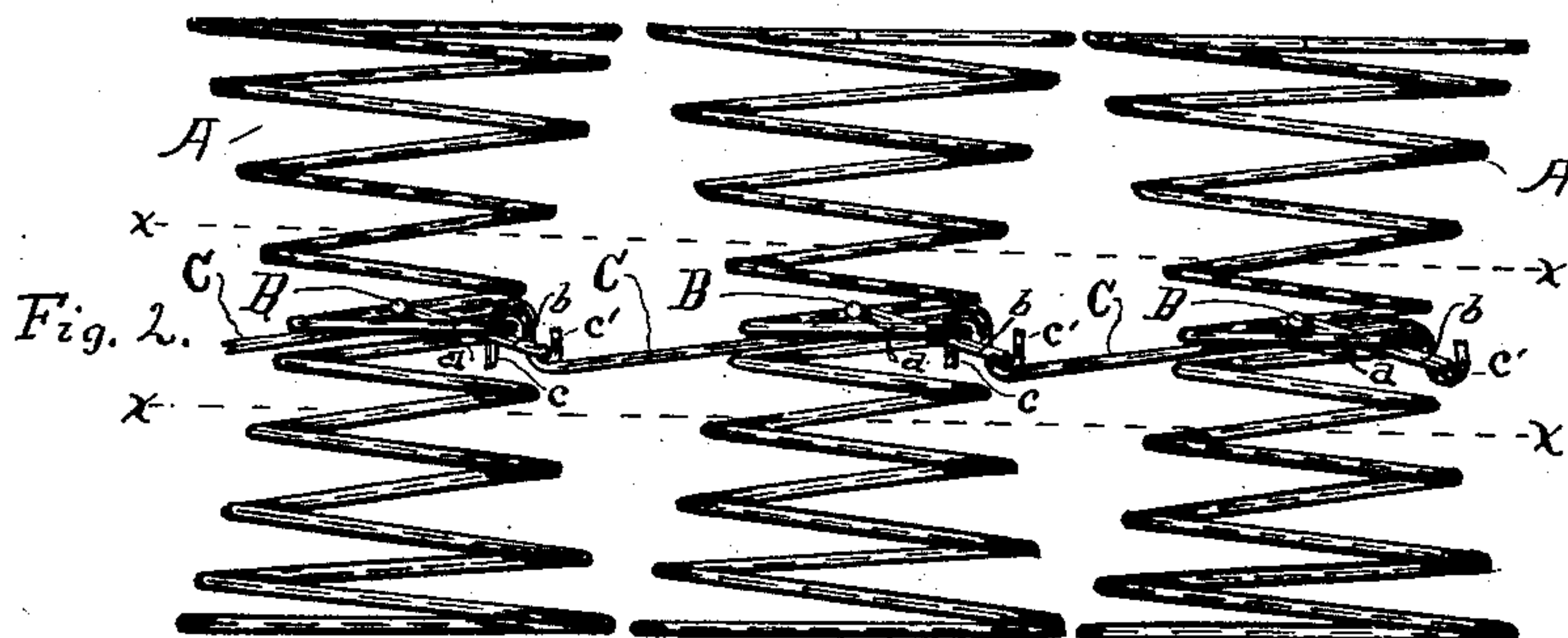
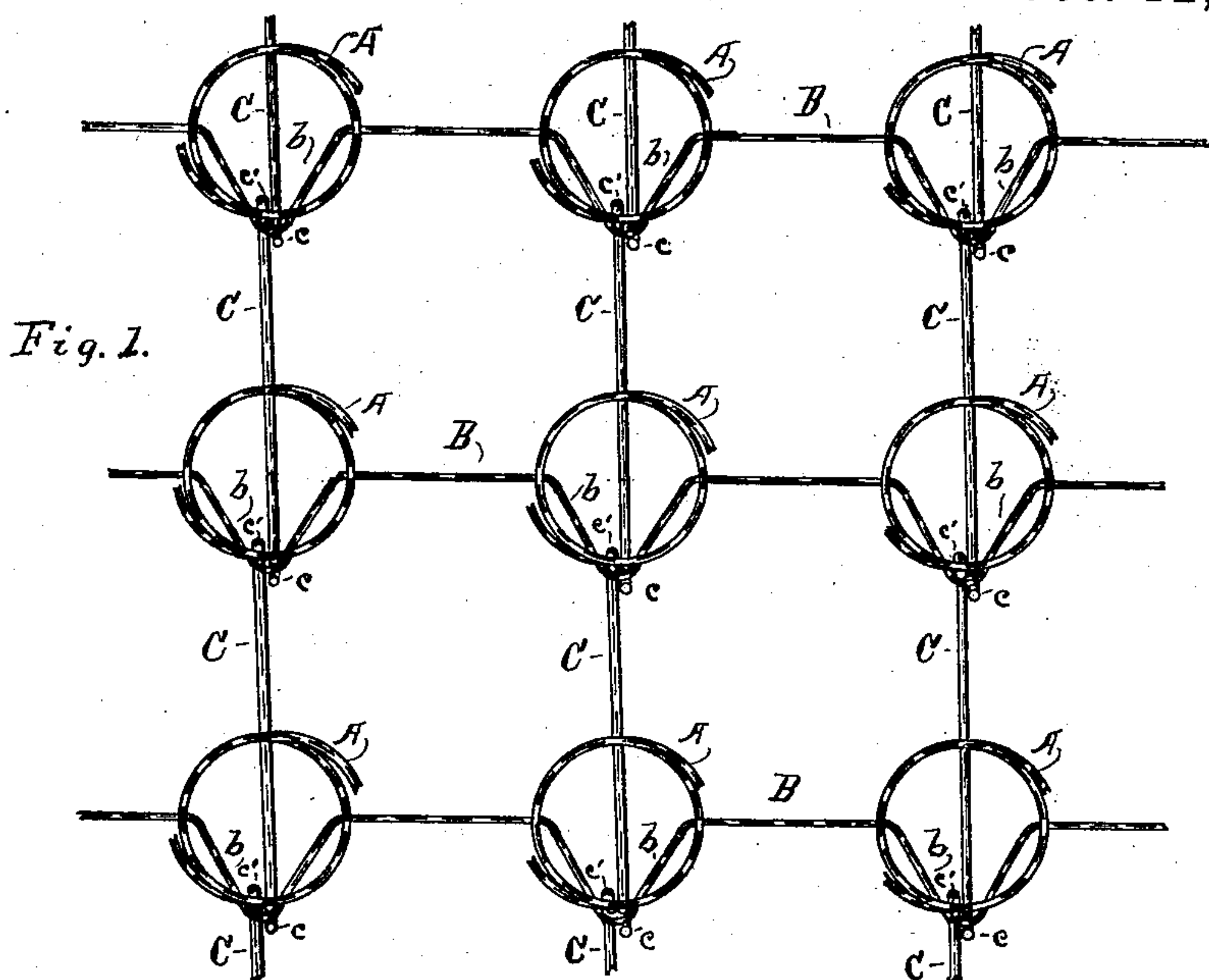


(No Model.)

J. A. GACKELER.
SPRING BED.

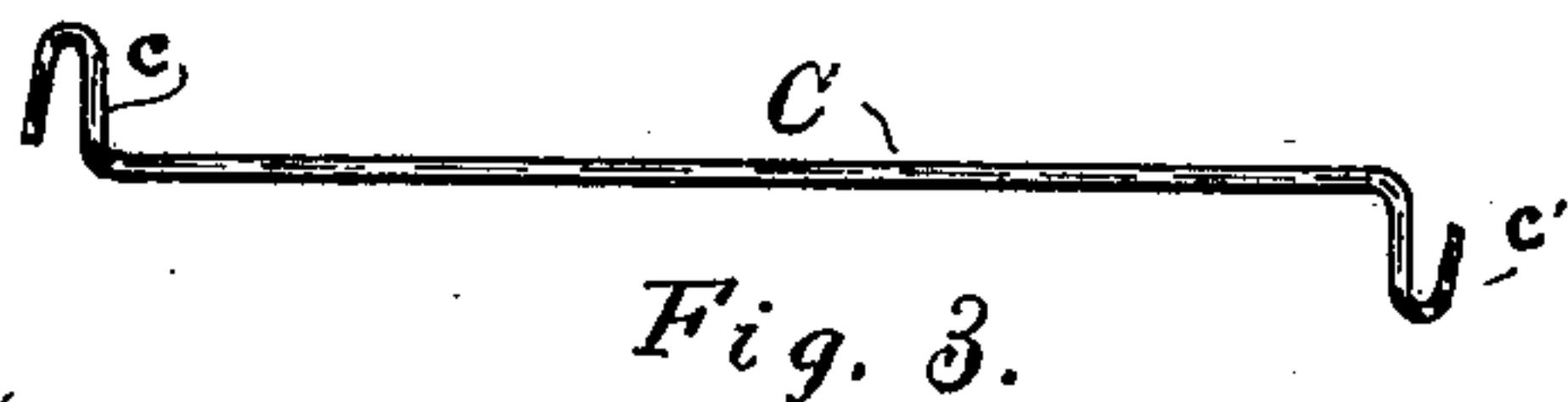
No. 591,464.

Patented Oct. 12, 1897.



Witnesses.

W. A. Camp
G. E. Wiley



Inventor.

John A. Gackeler
By *Thos. J. Wiley*
Attorney.

UNITED STATES PATENT OFFICE.

JOHN A. GACKELER, OF GRAND RAPIDS, MICHIGAN, ASSIGNOR, BY MESNE ASSIGNMENTS, OF ONE-HALF TO FRANCIS KARR, OF CHICAGO, ILLINOIS.

SPRING-BED.

SPECIFICATION forming part of Letters Patent No. 591,464, dated October 12, 1897.

Application filed December 2, 1896. Serial No. 614,229. (No model.)

To all whom it may concern.

Be it known that I, JOHN A. GACKELER, a citizen of the United States, residing at Grand Rapids, in the county of Kent and State of Michigan, have invented certain new and useful Improvements in Spring-Beds, of which the following is a specification.

My invention relates to improvements in the means of bracing the centers of so-called "double-decked spiral-spring bed-bottoms;" and its objects are, first, to provide a brace that may be readily attached and removed, and, second, to provide a brace that will effectually tie the centers of the springs and prevent them from sagging. I attain these objects by the mechanism illustrated in the accompanying drawings, in which—

Figure 1 is a plan of a bed-spring cut off on the lines $x x$ of Fig. 2. Fig. 2 is a side elevation of the same, and Fig. 3 is an elevation of the link portion of my invention.

Similar letters refer to similar parts throughout the several views.

My brace consists of a longitudinal wire or crimp rod B, provided with a series of offsets b , one of which is in position to engage with each spring A in the bed-bottom on the line of each rod. This offset is of sufficient degree to extend from near the center line of the coil of the spring at the small part to and through outside of the coil far enough to allow the hooks on the ends of the link C to pass under the end of the offset and over the coil of the spring. I construct the links with a hook at each end, as shown in Fig. 3, one of which is bent in one direction and the other in the opposite direction, so that one hook, as c , may pass under the end or loop of the offset b and thence up over the coil a of the spring, and the other, as c' , may pass over

the coil a of the spring and thence down under the loop b , so that the series will form a continuous line across the entire width of the bed-bottom and will be so securely locked together that, in combination with the crimp-rods, they will thoroughly brace the springs, as and for the purpose hereinbefore stated.

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

The combination, with a double-deck spiral-spring bed-bottom, of longitudinal crimp-rods placed on the line of the lateral center of the circle of the spring and extending the entire length of the bed-bottom, an offset at each spring so situated that the main rod will rest on top of a coil of the spring and the offset will pass out at one side under the same coil and form a loop, and short cross-links having a hook at each end bent in opposite directions, one of said hooks engaging with the loop of the offsets of the crimp-rod outside of the coil of the spring, thence over the coil of the spring, thence across the center of the spring at right angles with the crimp-rods and under the same coil of the spring, thence to the next spring under the loop and over the coil, each loop and coil being engaged by the opposite ends of different links so that all are locked together in such a manner that the springs are held to operate in a direct vertical and lateral plane, substantially as set forth.

Signed at Grand Rapids, Michigan, November 25, 1896.

JOHN A. GACKELER.

In presence of—

ITHIEL J. CILLEY,
ARY METZELAAR.