

(No Model.)

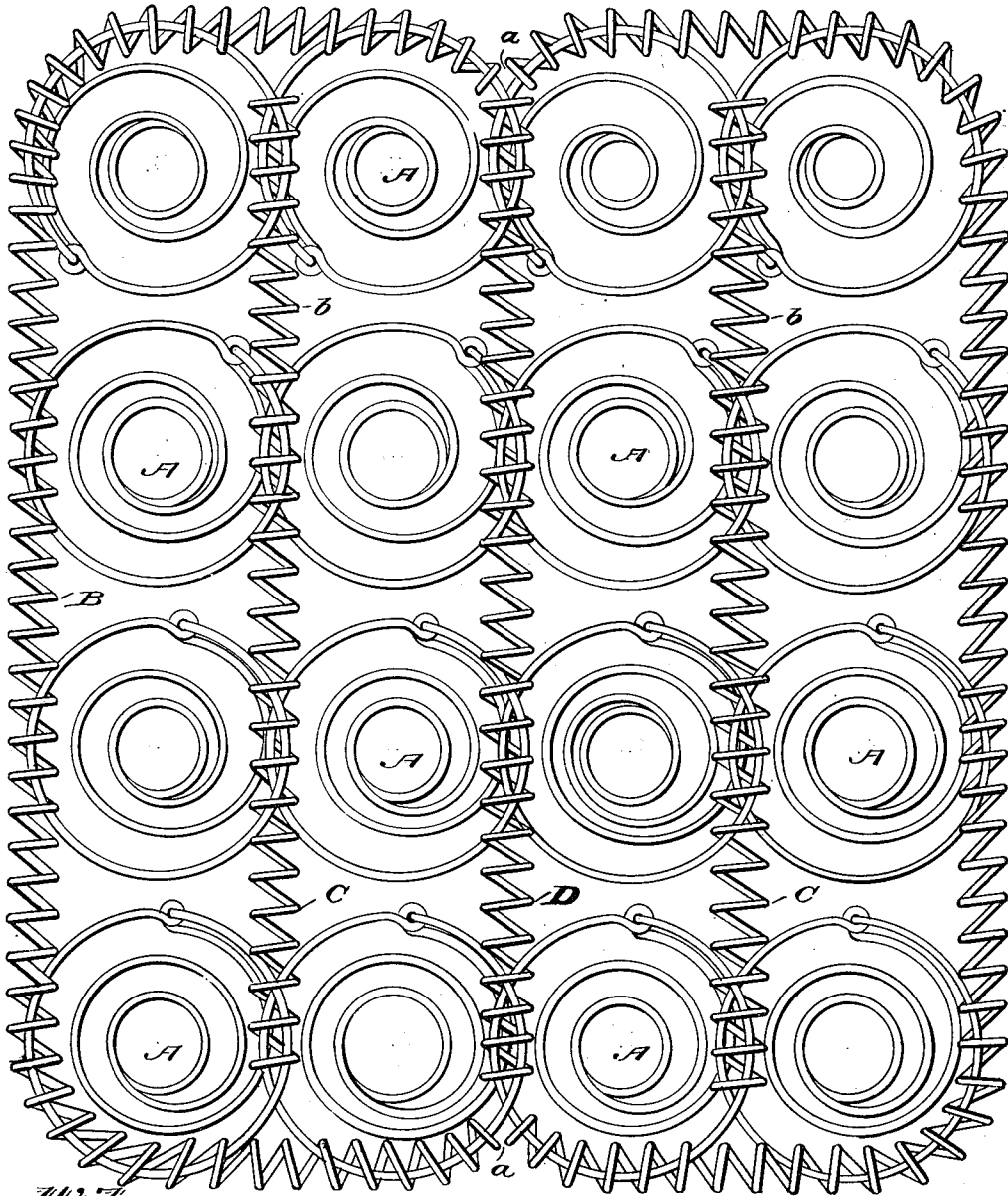
2 Sheets—Sheet 1.

E. M. BONNELL & J. S. LAMBING.  
BED SPRING.

No. 405,821.

Patented June 25, 1889.

Fig. 1.



Witnesses:

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*D. E. Duespin*

Inventor:  
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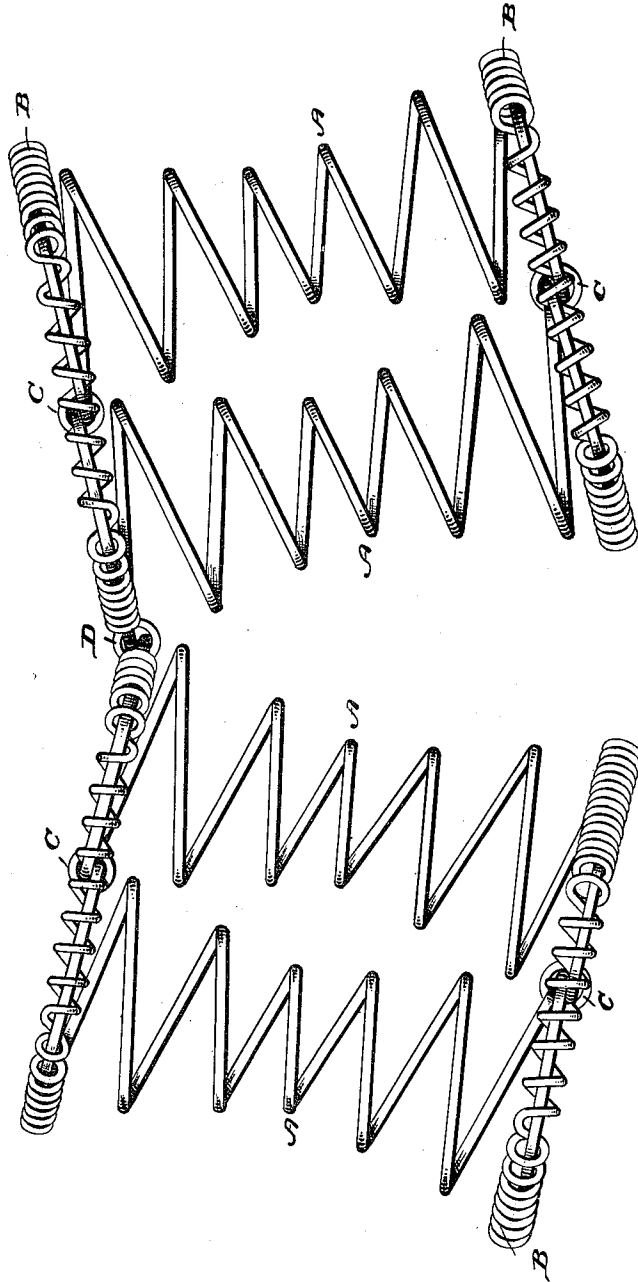
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2 Sheets—Sheet 2.

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*Fig. 2.*

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# UNITED STATES PATENT OFFICE.

ELLIOTT M. BONNELL AND JOHN S. LAMBING, OF CORRY, PENNSYLVANIA.

## BED-SPRING.

SPECIFICATION forming part of Letters Patent No. 405,821, dated June 25, 1889.

Application filed January 10, 1889. Serial No. 295,978. (No model.)

*To all whom it may concern:*

Be it known that we, ELLIOTT M. BONNELL and JOHN S. LAMBING, citizens of the United States, residing at Corry, in the county of Erie and State of Pennsylvania, have invented certain new and useful Improvements in Bed-Springs; and we do 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 appertains to make and use the same.

This invention relates to improvements in bed-bottoms composed of spiral or helical springs, and the novelty will be fully understood from the following description and claims, when taken in connection with the accompanying drawings, in which—

Figure 1 is a plan view of a bed-bottom constructed according to our invention; and Fig. 2 is a side view of the same, showing the bottom partly folded.

Referring by letter to the said drawings, A indicates helical springs, there being any suitable number employed, according to the size of the bed-bottom desired.

B indicates a coiled or spiral wire adapted to extend entirely around the margin of the bed-bottom. This marginal wire, which also serves as a connection for the outer springs, is coiled around the outer portion of the upper and lower whirls of the springs A, and at the corner springs this wire connection B is coiled around the whirls of said spring in a somewhat angular position.

In practice it is desirable to have the bottom so that it may fold, and in such cases, instead of carrying the marginal wire along the entire length and width of the bottom, such wire or spiral connection is severed, as shown at *a*, so that no interruption will be offered in folding the bottom, which will be virtually composed of two sections or more, as found necessary.

C indicates spiral wires which are arranged in parallel rows and wrapped around the inner portions or adjacent portions of the whirls at opposite ends of the springs A in a manner similar to the marginal wires. These spiral wires C, which yieldingly connect the springs A, also serve to partly fill the interspaces formed by the arrangement of four springs, as shown at *b*.

D indicates a spiral wire, which is of a construction substantially the same as the wires C, and is loosely carried around the adjacent portions of the top or bottom whirls of the springs A. In this construction it should be stated that when it is desirable to attain a hinge for the sections the spiral wire D should not be used at the opposite ends of the springs A at the same time, as better shown in Fig. 2 of the drawings, and it will also be observed that this spiral wire D, as well as serving the purposes of loosely and yieldingly connecting the springs A and presenting a spiral filling for the interspaces *b*, also serves as a hinge for the said springs.

While we have illustrated the bed-bottom with helical springs, yet in some cases it may be found desirable to employ conical or other forms of coil-springs.

We are aware that it is not new to connect the tops and bottoms of bed-springs with spiral wires, and therefore do not claim such, broadly.

We are also aware that springs have been provided with hinged connections.

Having described our invention, what we claim is—

1. A bed-bottom consisting of helical or other springs, a spiral marginal wire wrapped loosely around the outer portion of the top and bottom whirls of each spring, intermediate spiral parallel wires C, uniting the adjacent portions of the top and bottom whirls, and a similar spiral wire on but one side of the bed-bottom, serving the twofold function of connecting the sections of the springs and forming a hinge for said sections of the bed-bottom, substantially as specified.

2. A spring bed-bottom formed in sections and having the top whirls of springs at the adjacent ends of the sections united by a spiral wire wound loosely around them, so as to allow the sections to fold and yet afford a yielding connection, substantially as specified.

In testimony whereof we affix our signatures in presence of two witnesses.

ELLIOTT M. BONNELL.  
JOHN S. LAMBING.

Witnesses:

J. E. COLEGROVE,  
W. H. FINSON.