

H. W. LADD.  
SPRING BED-BOTTOM.

No. 191,244.

Patented May 29, 1877.

Fig. 1.

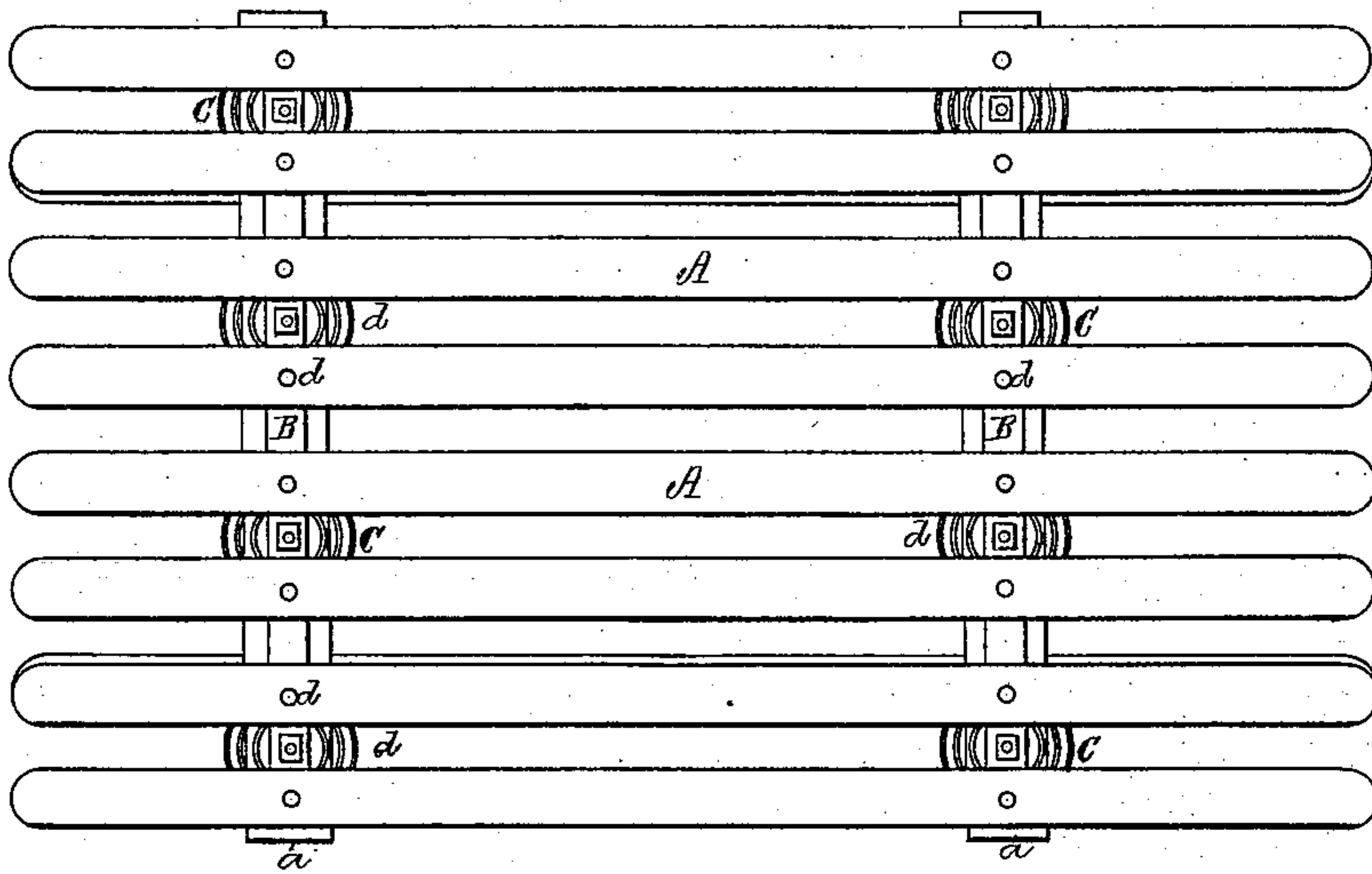


Fig. 2.

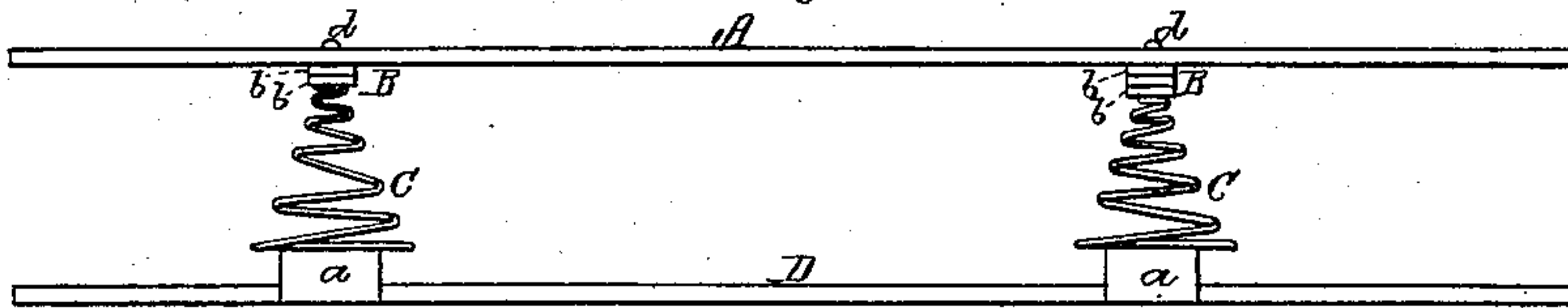


Fig. 3.

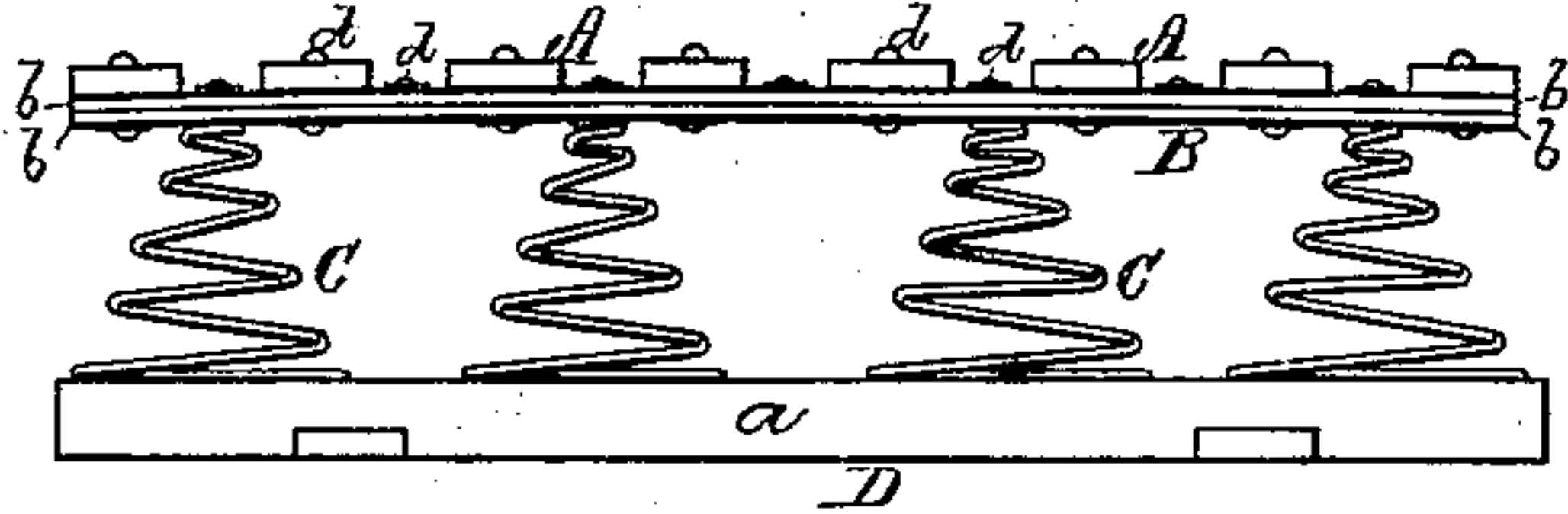
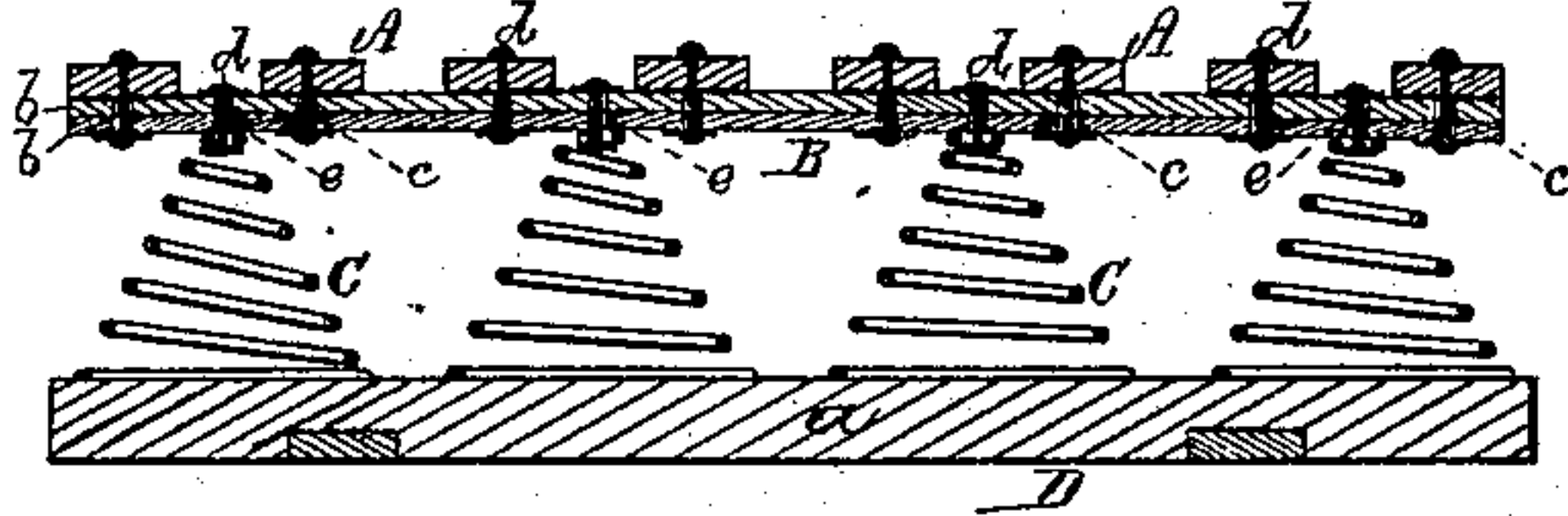


Fig. 4.



Witnesses.

S. M. Piper  
L. M. Miller

Inventor.

Herron W. Ladd.

by his attorney

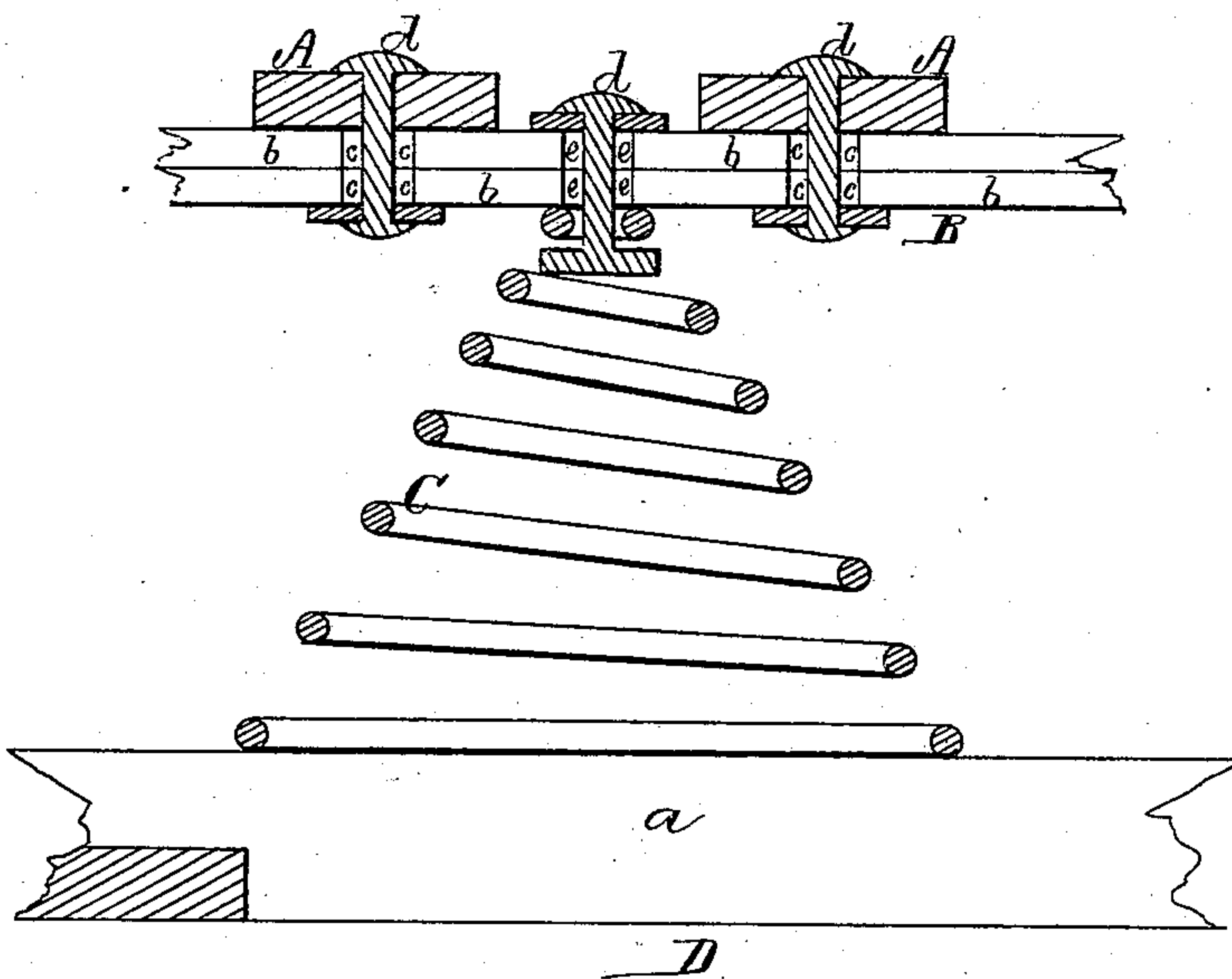
R. H. Eddy

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Fig. 5.



Witnesses.

L. W. Miller.  
John R. Snow.

Inventor.  
Herman W. Ladd.

by his attorney.  
R. H. Eddy

# UNITED STATES PATENT OFFICE.

HERMON W. LADD, OF CHELSEA, MASSACHUSETTS.

## IMPROVEMENT IN SPRING BED-BOTTOMS.

Specification forming part of Letters Patent No. **191,244**, dated May 29, 1877; application filed February 27, 1877.

*To all whom it may concern:*

Be it known that I, HERMON W. LADD, of Chelsea, of the county of Suffolk and State of Massachusetts, have invented a new and useful Improvement in Bed-Bottoms; and do hereby declare the same to be described in the following specification and represented in the accompanying drawings, of which—

Figure 1 is a top view, Fig. 2 a side elevation, Fig. 3 an end view, and Fig. 4 a transverse section, of a bed-bottom of my improved kind. Fig. 5 is a section, on an enlarged scale, of one of the springs and the compound bar thereof, to be hereafter explained.

When the slats of a bed-bottom are supported on thin bars of steel resting on helical springs, such bars, while in use, are liable to become oxidated or rusty and soil the mattress or bedding. It is therefore desirable to dispense with them and use wood instead, if possible. A single bar of wood of a sufficient size and strength, when substituted for the steel bar, is too rigid, or does not usually afford the necessary elasticity. So a strip of leather or banding is too flexible and not sufficiently elastic, or does not properly support the springs.

In carrying out my invention I employ, in combination with the series of slats and each range of their supporting helical springs, a series of two or more thin bars of wood, placed one over another, and so connected as to enable each to bend or spring independently of that next to it, whereby I not only obtain the necessary strength to the compound bar, but avoid the rigidity of a solid bar of like thickness, and gain the desired elasticity.

In the drawings, A A A denote a series of slats, arranged parallel to each other, and at equal distances apart, and upon two compound bars, B B, each of which is disposed upon, and is sustained by, a series of conico-helical springs, C C C C, resting on, and fastened to, one of the cross-bars *aa* of a frame, D.

Each compound bar B is composed of two or more thin bars or strips, *b b*, of wood, laid one upon another, as shown, and having their bolt-holes *c c c c* sufficiently larger in diameter than their confining-bolts *d d d*, to allow each bar or strip *b* to bend or spring independently of that or those next to it. The spring-connecting holes *e e e* of such bars *b* are also to be sufficiently larger in diameter than the parts *d d d* of the springs passing through them, to admit of each bar *b* bending or springing independently of that or those next to it.

In this way proper elasticity and strength are secured in the compound bars with reference to their supporting-springs and the slats.

What, therefore, I claim in the improved bed-bottom, is—

The combination of the slats A and each range of supporting helical springs C, with a compound bar, B, substantially as described, disposed between them, and so connected to them as to admit of each of its bars *b* bending and moving independently of, or lengthwise upon, that or those next to it, all being essentially as and for the purpose explained.

HERMON W. LADD.

Witnesses:

R. H. EDDY,  
S. N. PIPER.