L. HULL.

Bed-Bottom.

No. 165,166. Patented July 6, 1875.

Fig. 1.

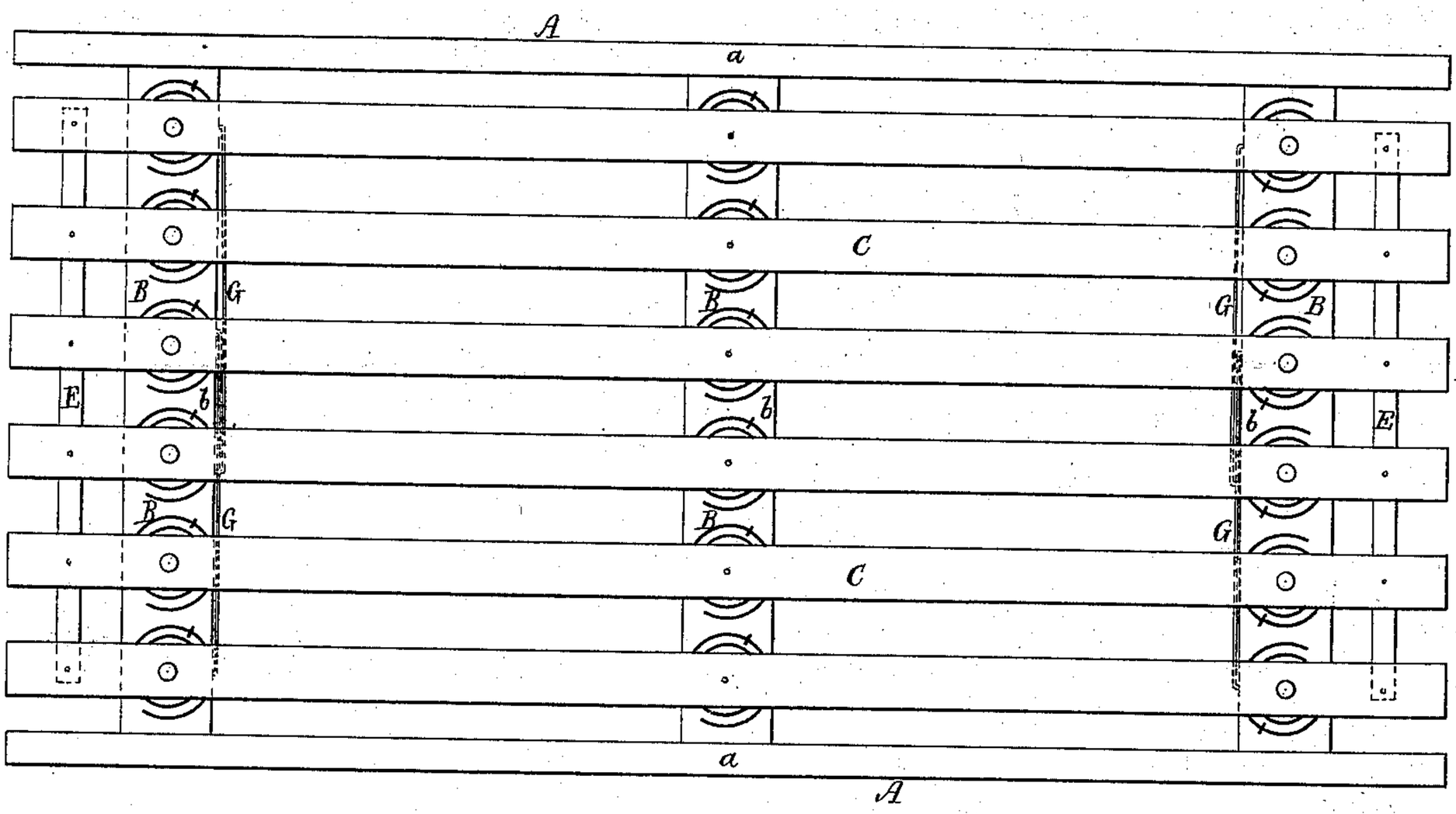


Fig. 2.

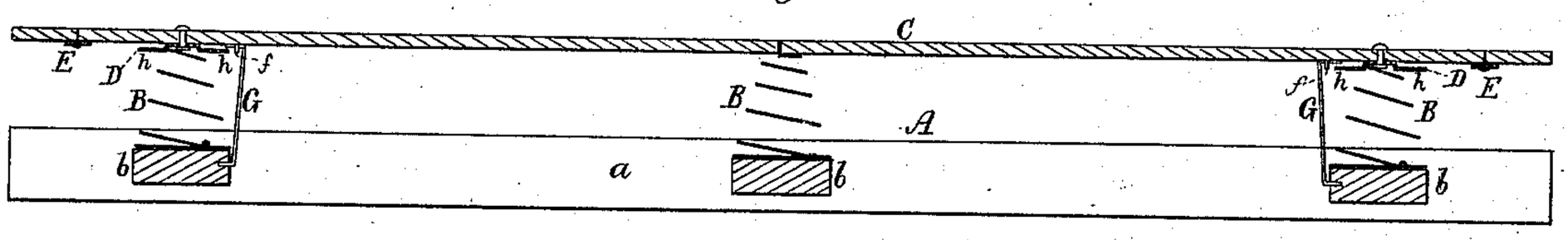


Fig. 3.

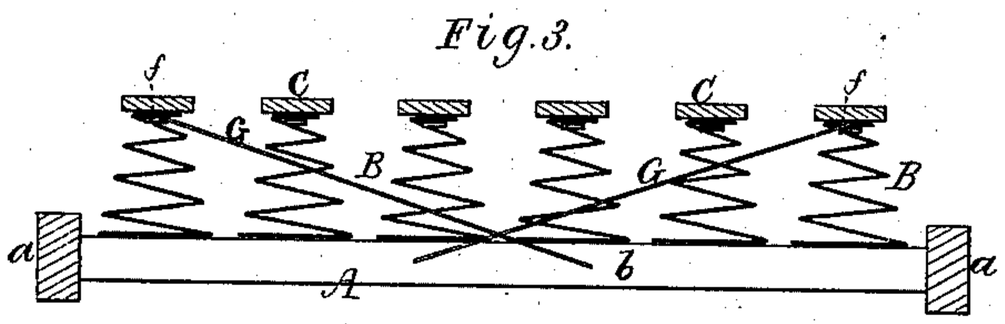


Fig. 4.

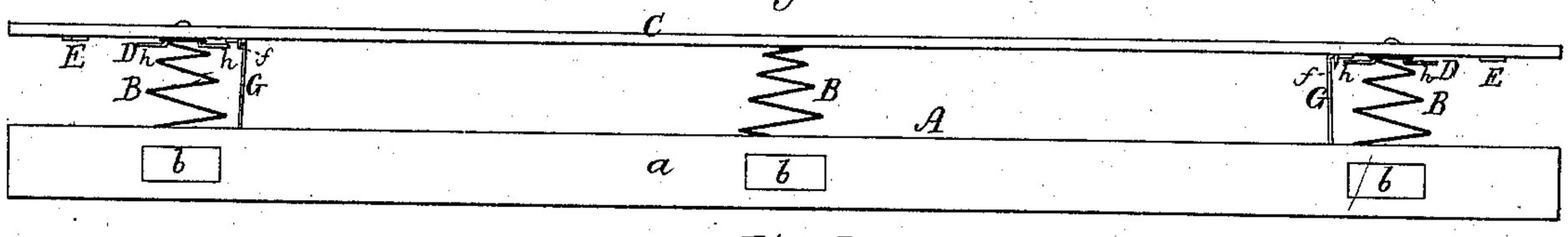


Fig. 5.

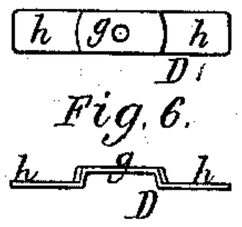
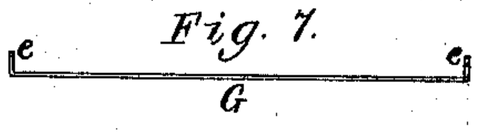


Fig. 6.

Fig. 7.



Witnesses.

S. N. Piper.

L. N. Fuller.

Liverus Hull,

by his attorney.

R. H. Eddy

UNITED STATES PATENT OFFICE.

LIVERUS HULL, OF BOSTON, MASSACHUSETTS.

IMPROVEMENT IN BED-BOTTOMS.

Specification forming part of Letters Patent No. **165,166**, dated July 6, 1875; application filed January 20, 1875.

To all whom it may concern:

Be it known that I, LIVERUS HULL, of Boston, 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 fully described in the following specification and represented in the accompanying drawings, of which—

Figure 1 denotes a top view, Fig. 2 a longitudinal section, Fig. 3 a transverse section, and Fig. 4 a side elevation, of a bed-bottom with my improvement. Fig. 5 is a top view, and Fig. 6 an edge view, of one of the lever or duplex latches used in connecting the springs to the slats.

My invention has reference to devices for connecting the helical or spiral springs to the slats of a bed-bottom; also, to means of preventing lateral sway of the slats and their supporting-springs.

In such drawings, A denotes a frame composed of two side bars, *a a*, and three connection-bars, *b b b*, arranged as shown, each of the said bars *b* being tenoned into the bars *a a*. A series of conico-spiral or helical springs, B, have their base-coils arranged on, and fixed to, each of the bars *b*. Each of such springs, at its upper coil, supports one of a series of slats, C, arranged as represented, and said coil is held up against, and confined to, the slat by means of a duplex latch-lever, D, formed as shown in the drawings, and pivoted at its middle to that side of the slat against which the end coil of the spring is to bear. By hooking the coil about the middle part *g* of the latch-lever and revolving the lever in the coil, the latter will be drawn hard up to the slat by the two arms *h h*, the detachment of the coil and slat being effected by turning the latch-lever in the opposite way the necessary extent. These latch-levers I usually apply only to the two outer ranges of springs, the inner range having portions of their upper coils bent up and extended into the slats. Furthermore, the several slats I connect by two flexible bands, E E, extending transversely underneath them, near their outer ends, and nailed to them. To prevent lateral sway of the series of slats and the springs, I employ with them two pairs of long brace-rods, G G, connected with the two outer slats, and with the two outer cross-bars *b b*. There is a pair of the said brace-rods to each of the said outer cross-bars *b b*, a top view of one of said rods being represented in Fig. 7, wherein it is shown as bent at a right angle near each end, as represented at *e e*. The two rods of each pair cross each other, as shown in Fig. 3, and are at their inner ends driven into the bar *b*. At their other ends such rods hook into staples *f f*, extending from the two outer slats.

A bed-bottom constructed in the above-described manner can easily be taken apart and packed in a small compass for transportation, and it can as easily be set up or put together.

I claim—

1. In the bed-bottom, the rotary duplex latch D, pivoted at its middle to the side of the slat C, against which the end coil of the helical spring B is to rest or bear, and applied to such coil, all substantially as shown and described.

2. In the bed-bottom, the two pairs of brace-rods G G, arranged and combined with the base-frame A, the sets of spiral springs B, the series of slats C, and their connection-bands E E, all substantially as specified.

LIVERUS HULL.

Witnesses:

R. H. EDDY,

J. R. SNOW.