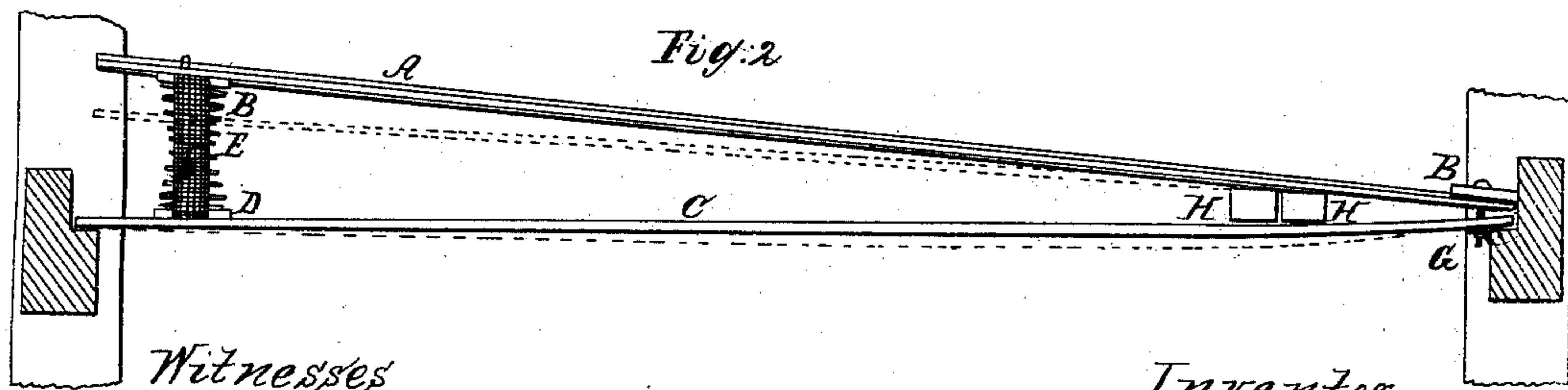
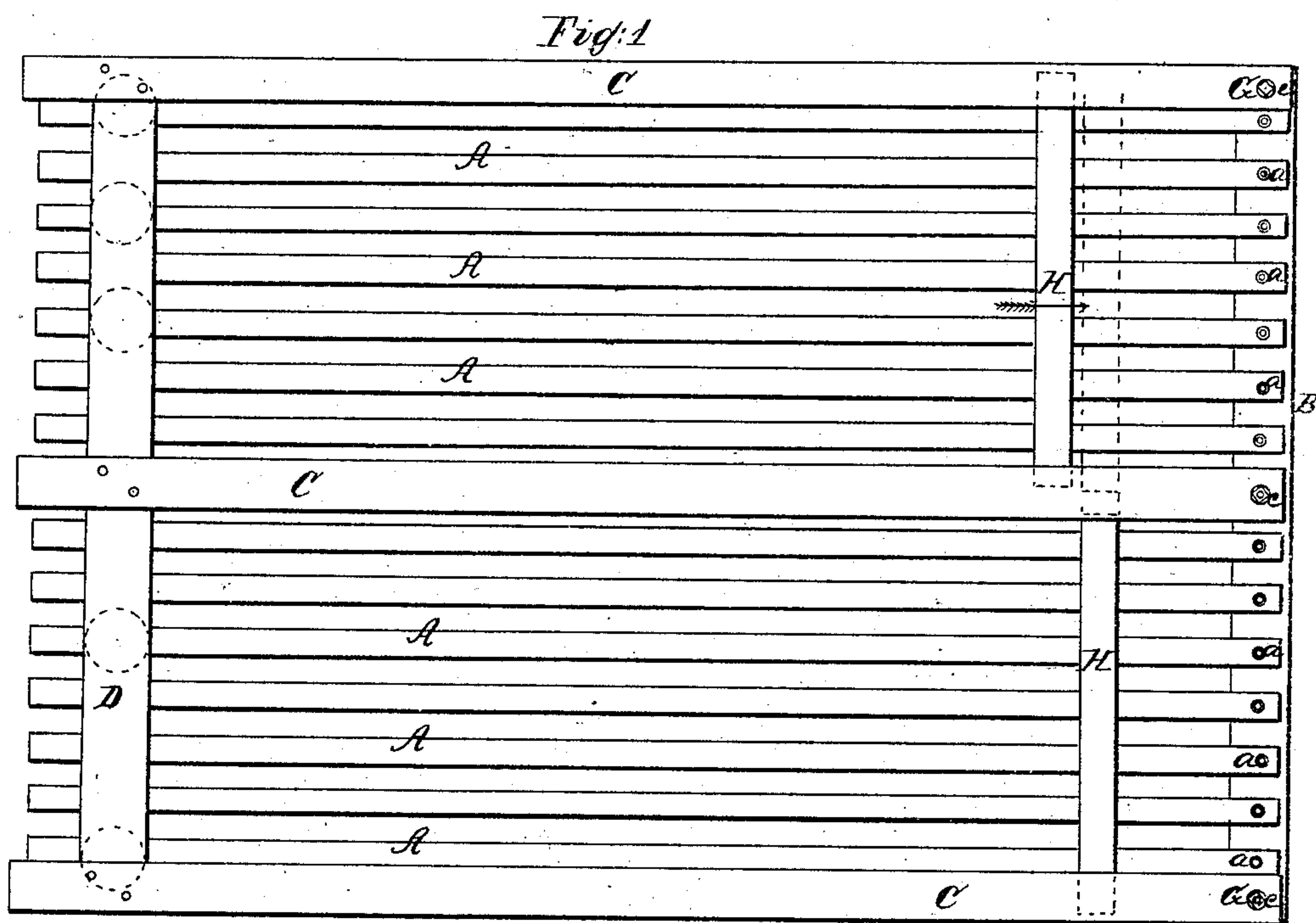


J. P. Knowles

Bed Bottom.

N^o 35,763.

Patented July, 1862.



Witnesses
R. F. Osgood.
D. C. Johnson.

Inventor
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UNITED STATES PATENT OFFICE.

J. P. KNOWLES, OF LOCKPORT, ASSIGNOR TO HIMSELF, AND H. F. WARREN, OF SOUTH PEKIN, NEW YORK.

IMPROVED SPRING BED-BOTTOM.

Specification forming part of Letters Patent No. 35,763, dated July 1, 1862.

To all whom it may concern:

Be it known that I, J. P. KNOWLES, of Lockport, in the county of Niagara and State of New York, have invented certain new and useful Improvements in Spring Bed-Bottoms; and I do hereby declare that the following is a full and exact description thereof, reference being had to the accompanying drawings, making a part of this specification—

Figure 1 being a plan of the under side of my improved spring bed-bottom; and Fig. 2, an edge view of the same, showing, also, a portion of the bedstead to which it is applied.

Like letters designate corresponding parts in both figures.

My improvements relate to the bottom on which the mattress rests; and the object of the invention is to produce a more perfect and equalized elasticity in the same, and also to arrange it so that it may be adjusted and adapted to the occupancy of two persons of unequal weight without being depressed on one side more than on the other, or, in other words, so that it shall always preserve the desired plane surface in all conditions.

The upper surface of the bed-bottom is composed of the ordinary longitudinal slats, A A A, which are connected at the opposite ends by cross pieces or cleats B B, that at the foot being usually on the top of the slats, which are secured to it loosely by pins *a a*.

Under the slats at each side and in the middle, and intermediately, if desired, are respectively situated longitudinal strips C C C, usually made of wood, extending from head to foot, of suitable size for the purpose designed, and forming springs of sufficient elasticity to allow considerable action, as will presently be described. At the head of the bed-bottom these strips are connected by a cross-cleat, D, between which and the cleat of the slats are situated a suitable number of volute coiled springs, E E E, the slats and strips being situated at a proper distance apart, as represented, to secure the desired effect. The ends of the two head-cleats are connected by strips of cloth, *b b*, in the usual manner. The ends of the strips C C C converge with the slats at the foot of the bed-bottom, (the extremities thereof meeting,) to the cleat of which they are respectively secured by screw-bolts G G, passing through both, being

of sufficient length to allow some adjustment of the ends of the strips and having nuts *c c* turning thereon, by which the parts are held and adjusted.

In the angle formed by the ends of the slats and strips at the foot of the bed-bottom, and at a suitable distance from the end, are situated two sliding and adjusting blocks, H H, substantially of the shape represented—that is, of a length reaching transversely of the bed-bottom from the center strip to the outside one—on which the ends respectively rest, and of a thickness filling the space in which they rest between the slats and strips. The blocks slide forward and backward, as indicated by the arrow, Fig. 1, for the purpose of adjustment, as will presently be described.

Instead of being arranged as above described, the whole block being movable forward or back, the inner ends may be pivoted to the center strip, the outer ends only being movable, or, with a similar effect, a single block only may be used, extending entirely across the bed-bottom, and the desired adjustment accomplished by inclining it diagonally or obliquely to a suitable extent.

The following are some of the useful effects resulting from my improved arrangement above described: The bed-bottom has a compound elasticity or spring—viz., that produced by means of the coiled spring E E E at the head and that of the slats A A themselves, which are sufficiently thin for the purpose, and that produced through the elastic strips C C C, which support the slats. In this action the sliding blocks H H serve as fulcras, over which the slats, acting as levers, rest. When weight is applied to the slats, the force transferred to the fulcras causes the strips C C C to spring and the parts assume the position indicated by red lines in Fig. 2.

The great elasticity and ease of a bed-bottom constructed in this manner is apparent. By its use the stiffness and unyielding action of ordinary spring bed-bottoms is avoided.

The sliding blocks H H, by being movable forward and back in the angle, give a greater or less degree of rigidity or tautness to the slats by having a tendency to straighten them longitudinally, and thus by moving either one of them the corresponding side of the bed-bot-

tom is adjusted to greater or less stiffness, as may be desired, independently of the other side. The effect thus accomplished is of great importance where persons of unequal weight occupy the same bed, the inclining of the bed or the unequal sagging being thus obviated.

By means of the screw-bolt G the ends of the slats and the elastic strips may be separated to a greater or less extent, thus increasing or lessening the angles between them, as may be desirable. This adjustment is necessary in long use to keep the blocks in proper position relative to the other parts.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. The elastic strips C C C, in combination with the slats A A A, coiled springs E E E, and adjusting-blocks H H, the whole arranged and operating substantially as herein set forth.

2. In combination with the above, the screw-bolts G G, for adjusting the ends of the slats and strips, arranged substantially as specified.

In witness whereof I have hereunto signed my name in the presence of two subscribing witnesses.

J. P. KNOWLES.

Witnesses:

A. H. EASTMAN,
ORRIN ADAMS.