(No Model.)

B. A. HAM.

SPRING BED BOTTOM.

No. 296,953. Patented Apr. 15, 1884.

Fig. 1

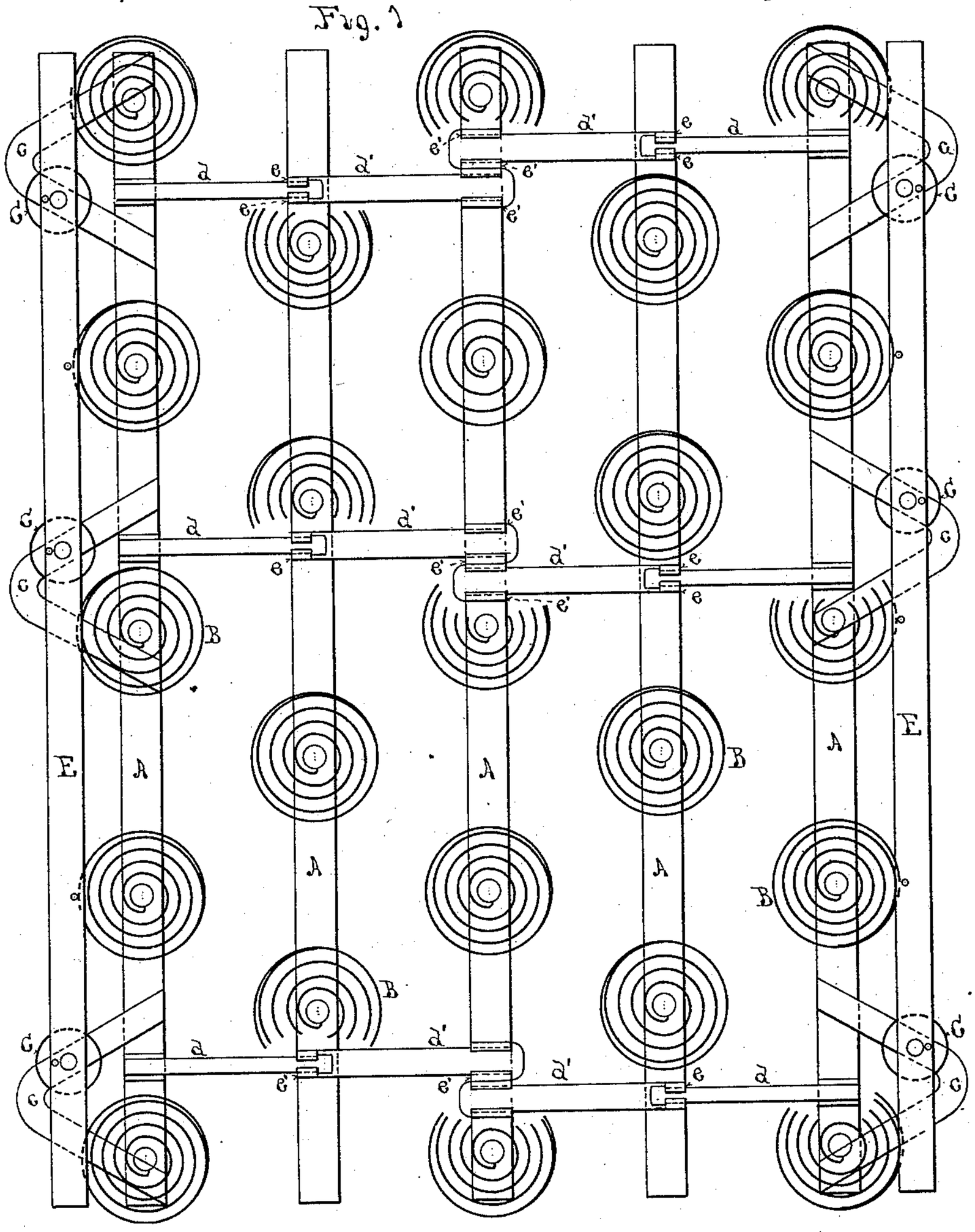
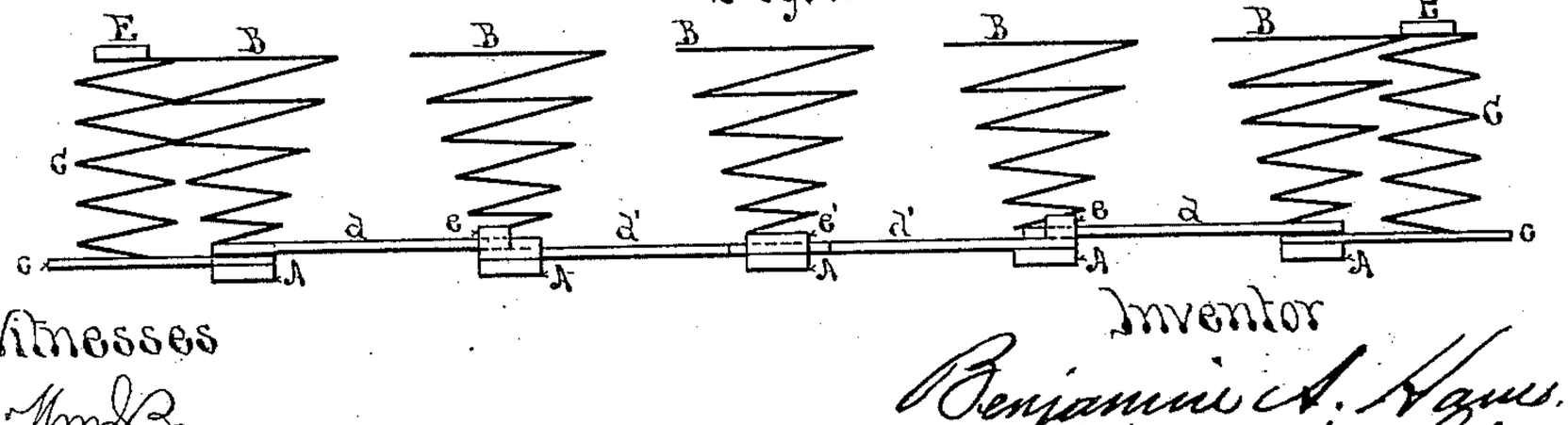


Fig. 2



Witnesses

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BENJAMIN A. HAM, OF BOSTON, MASSACHUSETTS.

SPRING BED-BOTTOM.

SPECIFICATION forming part of Letters Patent No. 296,953, dated April 15, 1884.

Application filed September 15, 1883. (No model.)

To all whom it may concern:

Be it known that I, BENJAMIN A. HAM, of Boston, in the county of Suffolk and State of Massachusetts, have invented a new and useful Improvement in Spring-Beds, of which the following is a specification.

My improvement relates to spring-beds; and it consists in so constructing the bed that it can be adjusted to any width whatever between its full size and when closed entirely for shipping; and it further consists in a simple and durable method of supporting the top side slats of the bed on auxiliary springs, all substantially as hereinafter described.

In the drawings, Figure 1 is a top plan view of the bed when expanded, with a portion of some of the springs represented as broken away to show the connecting parts. Fig. 2 is an end elevation of Fig. 1.

A A are the bottom slats, extending longitudinally of the bed and carrying the springs B B, on which the mattress is to rest. The slats A are connected by cross-bars *d d'*, of sufficient length to just overlap on two slats when the bed is expanded. These bars *d d'* are connected to a slat rigidly at one end, and have their other ends passing through clips *e e'*, so placed that the bars *d* shall slide on top of the bars *d'* in contracting or expanding the slats A A to close up or widen the bed. In order that the bars *d* may allow the slats A to be brought snugly against each other, the clip *e* is placed directly over and secured to the end of the bar *d'*, which is made fast to slat A, and the clip *e'*, through which the bar *d'* works, is made with a slot through its top surface wide enough to receive the end of the bar *d* and allow it to slide through this slot. I am thus enabled to close the slats A A entirely together and to occupy as little space as possible with the bars *d d'*, and thus place more springs on the slats A A than if the bars occupied more space. The clips *e e'*, being open at the top, are easily and cheaply constructed of a single piece of metal bent over as shown, to receive the bars sliding in them, and riveted by a single rivet passing through their bottoms to the slats A. In order to prevent the bars *d d'* from being drawn out of the clips *e e'*, I provide a shouldered end or head upon each bar wider than the clip which holds the bar to slat A and allows it to slide through it. Thus, when any two slats have been expanded to their widest capacity, the heads on the ends of the bars attached to one of them come against their clips attached to the other one, and thus hold the bed together by pairs of its slats A. This adjustment is simple and enables all the slats to be adjusted to equal distances while apart, if desired, while the entire bed is capable of being adjusted to any breadth of bedstead whatever between its greatest expansion and its breadth when the slats A A abut against each other, and it is entirely closed up for shipping. On the other hand, any two of the slats may be brought closer together independently of the others, and thus bring more spring tension under the mattress at any desired portion of its length without affecting the remainder. By this arrangement of the bars *d d'*, I am not only enabled to contract the bed for shipment, so as to have no projecting or folding cross-bars, and without any adjustment or manipulation of these bars, but I am also able to get a much wider bed when it is expanded than could otherwise be produced, and at whatever point the expansion is stopped the slats and bars are always in position for immediate use without the aid of pins or fastening of any kind to prevent their getting out of order.

On the outside slats, A A, of the bed I attach curved pieces or supports *c*, which project outward underneath the top side slats, E, which are secured to the outer edges of the row of springs, respectively, on each of these outer slats, A; and on the supports *c*, I place small auxiliary spiral springs directly underneath the top side slats, E E, to prevent their rolling or turning over when used in the bedstead. By this construction the outer top slats, E, are sustained by their auxiliary springs entirely upon the lower outer slats, A, respectively, at whatever breadth the bed may be used, without the necessity of connecting the auxiliary supporting-springs under the top slats, E, with one of the inside bottom slats, A, and necessarily providing the means of adjusting it on such inner bottom slats when the bed is contracted or expanded, as has heretofore been done. By this means the closing and opening of the bed does not

affect the position of the auxiliary springs C upon the bottom slats.

What I claim as new and of my invention is—

1. The slats A A and the springs B, in combination with the cross-bars *d d'* and clips *e e'*, attached to the slats, substantially as described, whereby the bars may slide at right angles to the slats in the clips *e e'*, substantially as set forth.

2. In combination with the slats A A of the bed and connecting-bars, supported springs B, the bracket-pieces *c c*, the top side slat, E, and the auxiliary spring C, placed directly beneath said top slat and upon the bracket-pieces *c c*, substantially as described.

BENJAMIN A. HAM.

Witnesses:

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