

(No Model.)

S. KNOWLES.  
SPRING BED BOTTOM.

No. 268,500.

Patented Dec. 5, 1882.

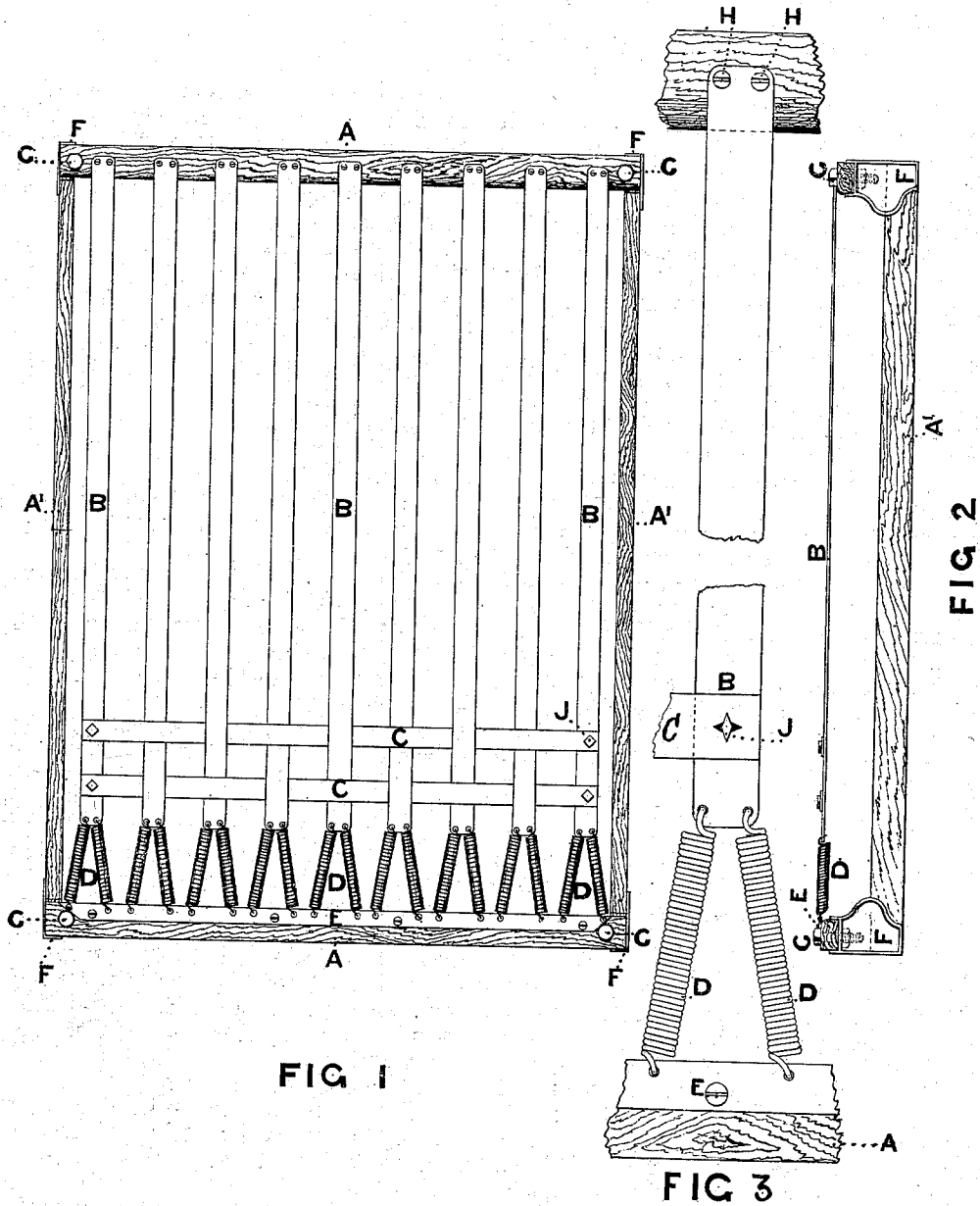


FIG 1

FIG 2

FIG 3

Witnesses  
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# UNITED STATES PATENT OFFICE.

SMITH KNOWLES, OF MANCHESTER, COUNTY OF LANCASTER, ENGLAND.

## SPRING BED-BOTTOM.

SPECIFICATION forming part of Letters Patent No. 268,500, dated December 5, 1882.

Application filed September 7, 1881. (No model.) Patented in England August 12, 1881, No. 3,495.

*To all whom it may concern:*

Be it known that I, SMITH KNOWLES, of Manchester, in the county of Lancaster, England, a citizen of Great Britain, have invented a certain new and useful Improvement in Spring-Mattresses, Spring-Beds, and Spring-Seats, for which I am now obtaining Letters Patent from the government of Great Britain, the said Letters Patent (when granted) being dated the 12th day of August, 1881; and I do hereby declare that the following is a full, clear, and exact description of the said invention, which will enable others skilled in the art to which it appertains to make and use the same.

The object of my invention is to produce a spring-mattress, spring bed-bottom, and spring-seat applicable to bedsteads, ships' sleeping-berths, couches, chairs, railway and road vehicles, and the like purposes.

This invention consists essentially of a combination of laths and metallic springs suspended lengthwise (in hammock fashion) between the head and foot of the bedstead, (couch, ship's berth, or the like, to which it is applied,) and free from and above the sides thereof, being carried by a frame which is independent of the bedstead, and which is higher at the ends than the sides, or carried by bars or supports which are part of or fitted to the head and foot of the bedstead above the sides thereof, the said longitudinal laths being preserved in position or bound together by transverse laths, or laths and springs combined, similar to those above specified.

In carrying into effect my invention in a simple form as a spring-mattress I construct a rectangular frame, (of wood or metal, or wood and metal combined,) the head and foot or ends of which are above the sides, which I place on or fit into the ordinary frame of the bedstead, and to one end of this frame—say the foot—I attach a series of coiled springs, and to these springs and the other end of the said frame (the head) I attach ordinary metallic laths, (or laths of wood or metal and wood combined.) Across these laths I interlace transverse laths to preserve the said longitudinal laths in position, and bind them together, the said transverse laths being free from the sides of the frame.

It is obvious that the longitudinal laths may

have springs at both ends, or at the head only; but I find in practice that springs at the foot only answer the purpose, and are efficient.

The improved spring-mattress is illustrated by the drawings, of which the following is a description.

Figure 1 is a plan and Fig. 2 is a side view of a spring-mattress constructed according to my invention as made for a bedstead four feet six inches wide by six feet long.

A A A' A' is a frame.

B B B are longitudinal laths or "bands," (of which there are nine.)

C C are transverse laths.

D D are coiled springs in pairs, (of which there are nine pairs.)

E is a strip of iron pierced with nine pairs of holes to receive the ends of the nine pairs of springs.

F F F F are four corner castings, which tie the frame together.

G G G G are bolts which secure the top and bottom rails, A A, of the frame together.

Fig. 3 is an enlarged view, in plan, of one longitudinal lath B and pair of springs D D, with their support E, as attached to the head and foot rails A A of the frame, and showing the connection of a transverse lath, C, with the said longitudinal lath B. The head and foot rails A A of the frame, to which the plate E and the laths B are attached, are above the side rails, A', of the frame, to insure the free action of the laths and springs, which are thus suspended in hammock fashion, and are free from the side rails, A' A'. The transverse laths C C are interlaced alternately under and over the longitudinal laths B B, to bind the longitudinal laths together and prevent their lateral movement.

H H are studs or screws.

J J are diamond-shaped buttons capable of turning one-fourth part of a revolution to secure the transverse lath C in position.

The frame A A A' A' is fitted or fixed to the bedstead, and the longitudinal laths B B are secured to the studs or screws H H. The springs D D are then secured to the laths B B and the plate E, as shown in Figs. 1 and 3. The transverse laths C C are then interlaced over and under the longitudinal laths B B, and secured to the two outer laths by the buttons

J J being passed through the diamond-shaped holes. The said buttons are then turned one-fourth part of a revolution, by which the transverse laths are firmly secured.

5 It is obvious that the rails A A may be part of the bedstead, being above the side frames thereof, and my improved arrangement of laths and springs be secured thereto in a similar or ordinary manner.

10 It is obvious that the longitudinal laths B B may be of wood, and the transverse laths be of webbing; but I prefer to make the longitudinal and transverse laths of Bessemer steel, and I prefer to make the longitudinal laths B

15 wider than they are ordinarily made.

By my improvements a paillasse or top mattress can be dispensed with by simply spreading a piece of cloth over the laths.

20 It is obvious that instead of two springs, as shown and described, one spring only can be employed with each lath B; but I prefer to use two, and secure them as shown.

I am aware that the construction of mattresses, &c., with laths and coiled springs in certain combinations is not new, and I therefore disclaim their use otherwise than as herein specified. 25

Having fully described my invention, what I desire to claim and secure by Letters Patent is— 30

In a bed-bottom, a series of longitudinal slats, in combination with a connected series of transverse slats free from the sides of the frame, a series of springs whereby the longitudinal slats are individually attached at one 35 end to the frame, and a bar forming part of said frame, to which the longitudinal slats are attached at the other end thereof, substantially as set forth.

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Witnesses:

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