

B. F. ALLEN.  
Bed-Bottom.

No. 205,332.

Patented June 25, 1878.

Fig. 1.

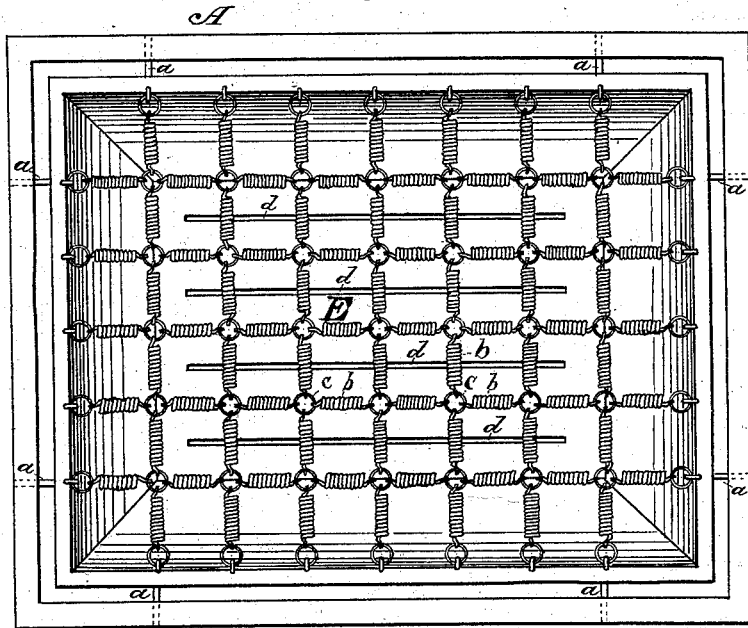


Fig. 2.

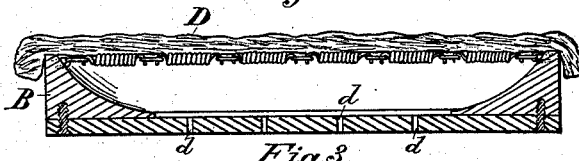


Fig. 3.

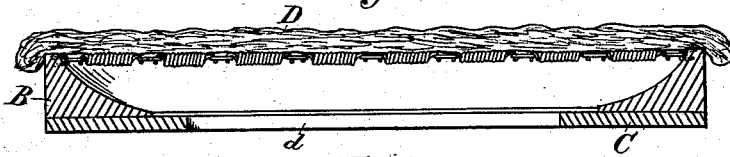
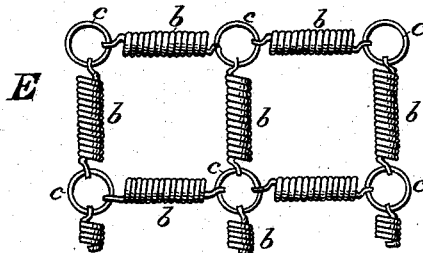


Fig. 4.



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# UNITED STATES PATENT OFFICE.

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## IMPROVEMENT IN BED-BOTTOMS.

Specification forming part of Letters Patent No. **205,332**, dated June 25, 1878; application filed October 22, 1877.

*To all whom it may concern:*

Be it known that I, BENJAMIN F. ALLEN, of the city of Boston, county of Suffolk, and State of Massachusetts, have invented certain new and useful Improvements in Spring-Beds for Invalids, of which the following is such a full and exact description as will enable others to construct and use the same, reference being had to the accompanying drawings, forming a part of this specification, and to the letters of reference thereon, similar letters indicating corresponding parts in the different figures.

The object of this invention is to relieve invalids from the great inconvenience experienced by them from the use of beds as heretofore constructed, and presents the following advantages, among others, viz: the capacity for perfect cleansing; further, it does not require to be shaken up or turned over, and the very sick are always as comfortable as it is possible for them to be while in bed. Those persons who are confirmed invalids and obliged to remain in bed continually can be kept cool, and do not suffer from the heat of the bed, or from abrasions of the skin upon various parts of the body; and, further, the bed is capable of perfect ventilation, and can be easily regulated to suit the necessities of any special case; and, lastly, a bed possessing the above-named qualities will not be less beneficial to those in health, affording rest and comfort, enabling the occupant to be cool in summer and to sleep warm in winter.

In connection with this spring-bed I use knitted blankets, as a blanket thus made is elastic, and when placed on the springs will not wrinkle or lie in folds, but will always remain smooth. They are also more porous than woven blankets, and when several are placed upon the springs they form a bed that is lighter and more elastic than any mattress.

The invention consists, first, in coiled or other springs placed in a horizontal position, and fastened at short intervals to fixed rings, so arranged that when weight is placed upon any part of the bed the part yields, but is supported by the part adjacent; secondly, in the peculiar construction of the frame, which admits of its being easily taken to pieces and packed for transportation; thirdly, in the slatted bottom of the spring-frame, so constructed

that proper ventilation is given to the bed, as well as support to the springs when overburdened; and the invention consists, lastly, in the combination, with the slotted bottom and springs, of the knitted blankets used in place of the ordinary mattress.

In the drawings, Figure 1 is a plan showing the springs and slotted bottom. Fig. 2 is a cross-section; Fig. 3, a longitudinal section of the bottom springs and blankets in place. Fig. 4 shows the arrangement of the springs and their connection-rings.

The outer frame A may be the bedstead in common use, the springs and their supporting-frame being carried by the pins *a*, inserted as shown in Fig. 1, or by any other suitable means, if the construction of the bedstead is such as to prevent the use of the pins. The frame B is formed of four pieces of wood or metal, securely united at the corners, and of a cross-section similar to that shown in the drawing. To this frame, near its upper edge, is attached the spring-bottom E, composed of the metallic spirally-coiled springs *b*, secured to the frame by means of the rings *c* and suitable staples. The springs, being made in short sections and connected by the rings *c*, form a web extending over the whole surface, of great elasticity and sustaining power.

To the under side of the frame B is secured, by screws or otherwise, the slotted bottom C. The slots *d* in this bottom extend nearly the whole length of the bed, and furnish a passage for air, which thoroughly ventilates the bedding, while the bottom C affords a substantial support to the frame B against the draft of the springs when they are pressed down by the weight of the occupant of the bed.

It will be apparent that these several parts may be readily separated for the purpose of cleaning or transportation, and as readily reunited when required for use.

Instead of a mattress I prefer to use blankets of thick knitted material, which are very porous and elastic, consequently forming a more comfortable bed in warm weather. These blankets D are folded and laid upon the springs in several thicknesses, as shown in Figs. 2 and 3 of the drawing.

The whole forms a perfect bed for warm

climates, and at the same time is equally suitable for colder regions.

Having thus described my invention, I claim as new, and desire to secure by Letters Patent of the United States, the following:

1. In a spring-bed, a spring-supporting frame, B, constructed as herein shown and described, in combination with the bottom C, for giving additional powers of resistance to the frame B, and provided with slots *d*, for the purpose of ventilating the bed, as specified.

2. The improved bed-bottom herein de-

scribed, consisting of the frame composed of the part B and bottom board C, slotted, as described, and the springs and rings *b c*, said springs and rings forming the entire surface upon which the bedding is placed, as specified.

In testimony that I claim the foregoing as of my own invention I affix my signature in presence of two witnesses.

BENJAMIN F. ALLEN.

Witnesses:

F. WOODSIDE,

JOHN G. JACKSON.