

(No Model.)

H. A. BIERLEY.  
BED BOTTOM.

No. 549,487.

Patented Nov. 12, 1895.

FIG. 1.

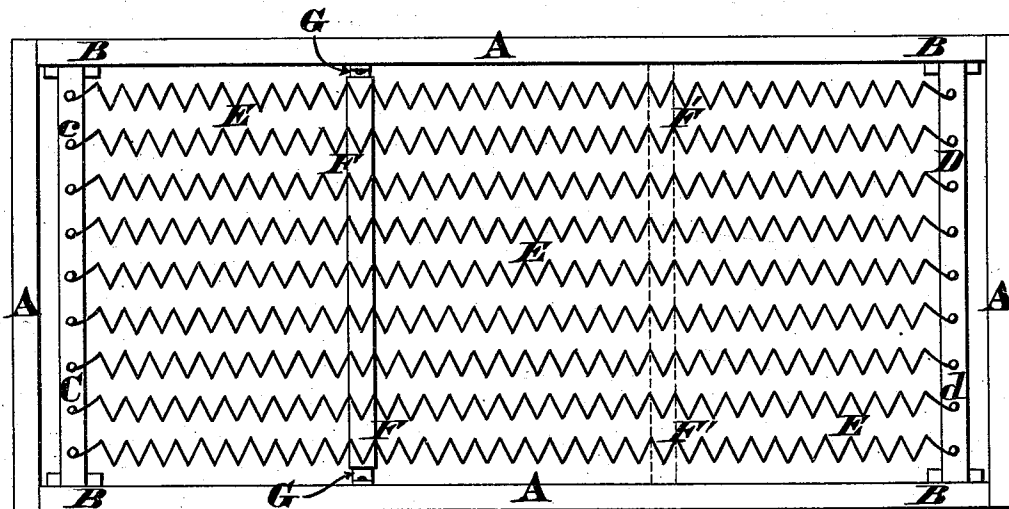


FIG. 2.

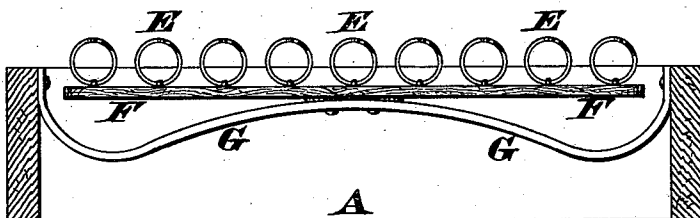


FIG. 3.

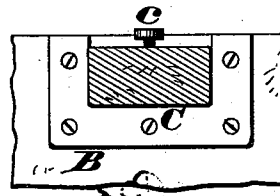
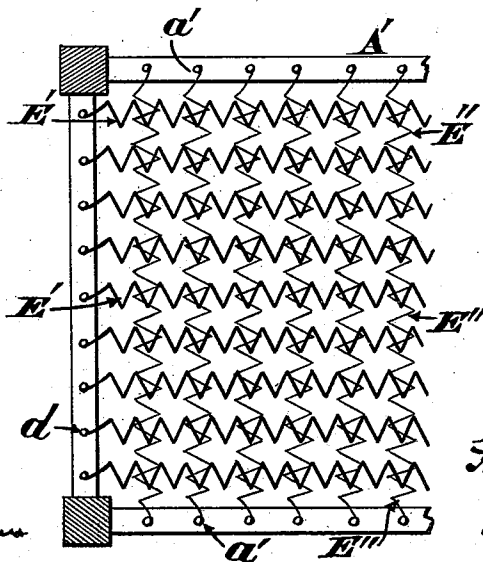


FIG. 4.



Attest.

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# UNITED STATES PATENT OFFICE.

HENRY A. BIERLEY, OF PORTSMOUTH, OHIO.

## BED-BOTTOM.

SPECIFICATION forming part of Letters Patent No. 549,487, dated November 12, 1895.

Application filed June 19, 1895. Serial No. 553,303. (No model.)

*To all whom it may concern:*

Be it known that I, HENRY A. BIERLEY, a citizen of the United States, residing at Portsmouth, in the county of Scioto and State of Ohio, have invented certain new and useful Improvements in Bed-Bottoms; and I do hereby declare the following to be a full, clear, and exact description of the invention, reference being had to the annexed drawings, which form a part of this specification.

This invention relates to those spring bed-bottoms which are supported upon a number of transverse slats carried by sets of lower springs; and my improvement comprises a specific combination and arrangement of devices that enables these cross-slats to play freely up and down, but prevents them having any very material end play, as hereinafter more fully described.

In the annexed drawings, Figure 1 is a plan of the more simple form of my bed-bottom. Fig. 2 is an enlarged transverse section of said bottom, taken in the plane of one of the spring-supported slats. Fig. 3 is an enlarged elevation of one of the keepers wherewith the head and foot rails of the bottom are secured to a mattress-frame. Fig. 4 is a plan of a portion of a complicated form of the bottom, composed of longitudinal and transverse spiral springs engaged with each other.

Referring to Fig. 1, A represents an ordinary mattress-frame, and B represents four metallic keepers secured within said frame and adapted to hold a head-rail C and foot-rail D, from which rails project vertically screws or headed pins *c d*. These pins have engaged with them the opposite ends of a series of longitudinally-arranged spiral springs E of any suitable diameter and thickness, and said springs are supported upon a transverse slat F, to which they are attached by staples or other fasteners. This slat is entirely disconnected from the mattress-frame A, so as to play freely up and down, and is carried by a plate-spring G, preferably shaped as seen in Fig. 2, the ends of said spring G being properly fastened to said frame. Slat F is preferably located about one-third of the distance from the head of the bed, and in most cases it is all the support the series of springs E will require; but, if desired, another similar slat

may be provided, as indicated by the dotted lines F'. Now, as the slat F is somewhat elastic, is of less length than the inner width of the frame A, and as it is yieldingly supported upon the spring G, it is evident the entire bed-bottom has a very easy motion imparted to it.

It will also be evident by referring to Fig. 2 that this slat is normally situated below the top of the mattress-frame A, and when the bed is occupied said slat is depressed still farther, owing to the yielding of its supporting-spring G. Consequently said slat is always inclosed by said frame, but is free to move up and down, any material end play of said slat being prevented by the side rails of the frame.

In the more complex arrangement (seen in Fig. 4) the mattress-frame is dispensed with and pins *a'* are driven into the bed-rails A' for the attachment of a set of longitudinally-arranged springs E' and a number of transversely-disposed springs E''. These springs E' E'' are so woven into each other as to be mutually supporting, and as a natural result there is no danger of the longitudinal springs sagging down at either side of the bed nor of the transverse springs shifting toward the head or foot of the same. This construction of bottom, like the one previously described, must be supported at suitable intervals upon one or more transverse slats carried by lower springs similar to the spring G. (Seen in Fig. 2.)

I am aware it is not new to support spring-bed-bottoms upon one or more transverse slats carried by other springs, as such a construction is seen in a number of patents. Therefore my claim is not to be construed broadly, but is expressly limited to the within-described specific combination of devices, which includes a mattress-frame, a series of coiled springs arranged longitudinally thereof, a transverse supporting-slat whose length is somewhat less than the inner width of said frame, and a single plate-spring whose elevated center carries said slat at a level below the top of said frame, while the elevated ends of said spring are attached to the inner sides of said frame.

I claim as my invention—

The within-described specific-combination

of bed-bottom, which combination includes  
the mattress-frame A, having end-rails C, D;  
the coiled-springs E, arranged in longitudinal  
series, and having their opposite ends at-  
5 tached to said rails C, D; a transverse-slat F,  
of less length than the inner width of said  
frame, and having said springs E secured upon  
it; and a single plate-spring G, arched in the  
center, then bent down, and finally upward  
10 at its ends, where it is secured to the inner  
side of said frame A; the elevated center of

said spring G carrying said slat F at a level  
normally below the top of said frame, so as to  
prevent any very material end-play of said  
slat, all as herein described and shown. 15

In testimony whereof I affix my signature  
in presence of two witnesses.

HENRY A. BIERLEY.

Witnesses:

JAMES H. LAYMAN,  
ARTHUR MOORE.