H. T. Smith,

Bed Bottom,

No. 18,357. Patented Oct. 6, 1857.

Fig. 1.

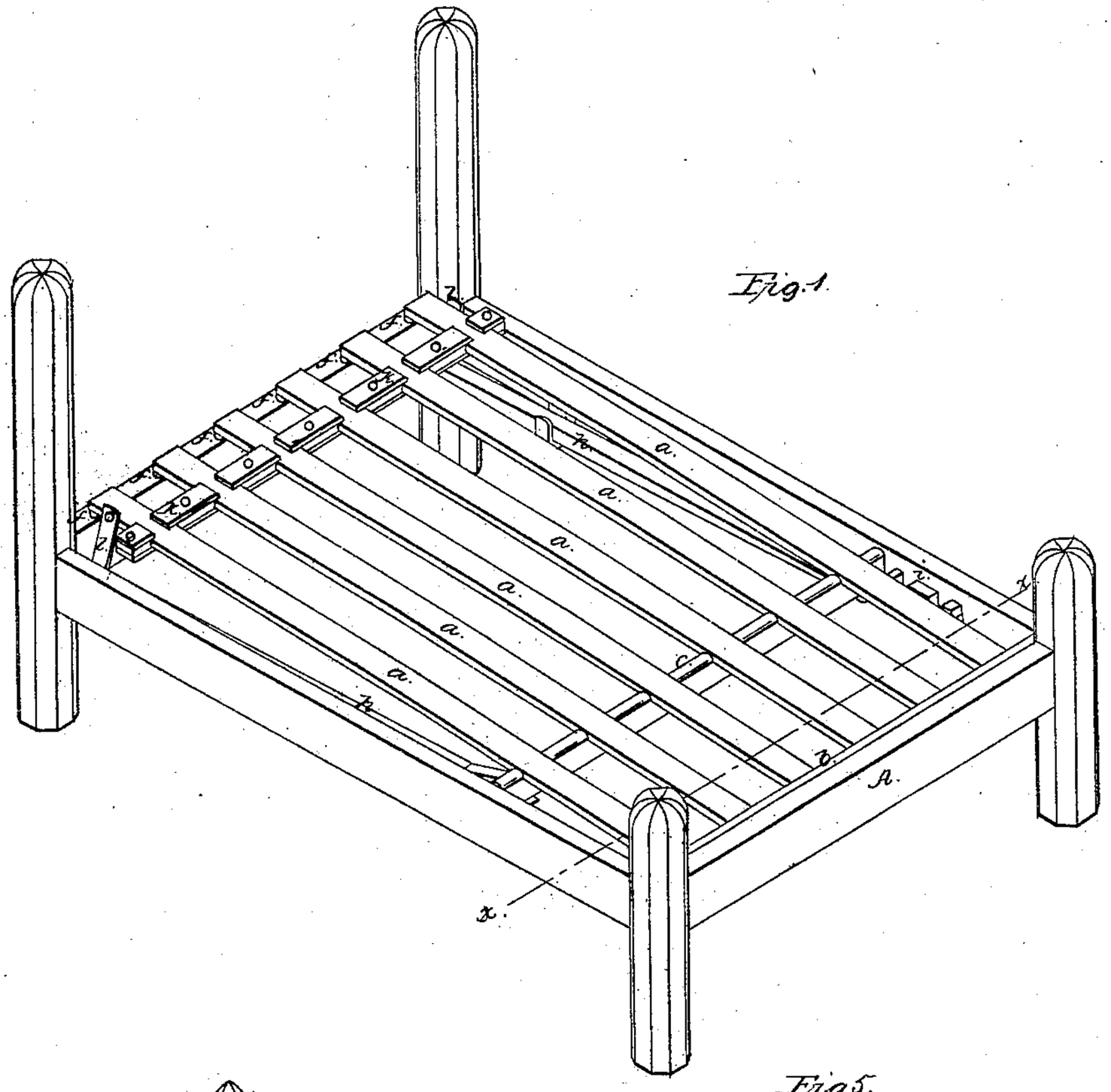


Fig. 5.

Fig. 2.

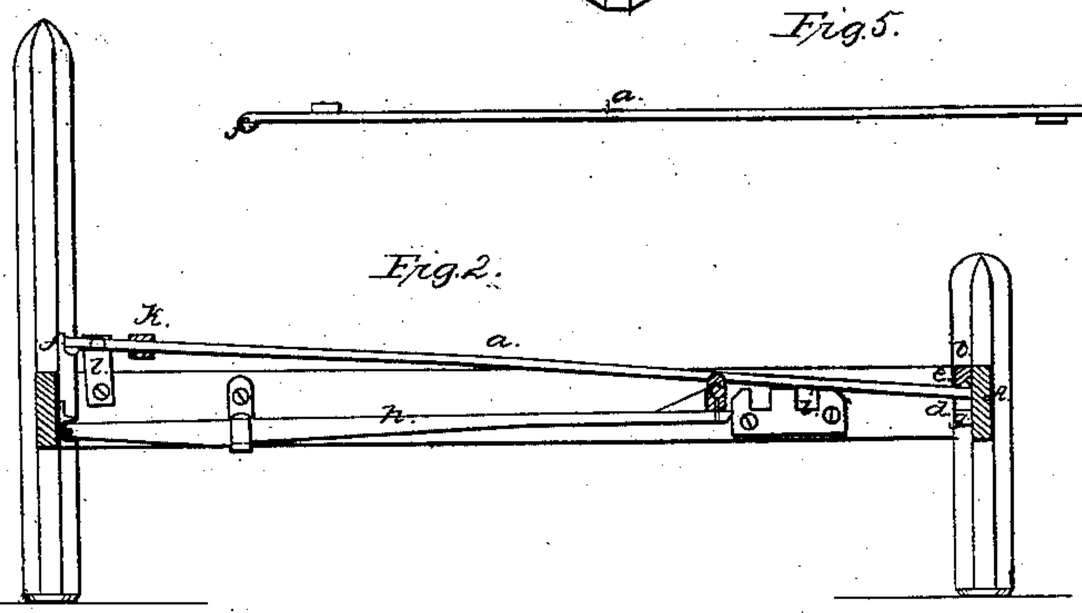


Fig. 3.

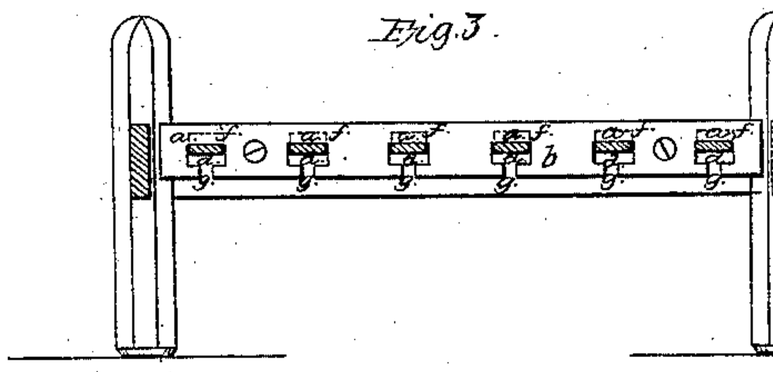
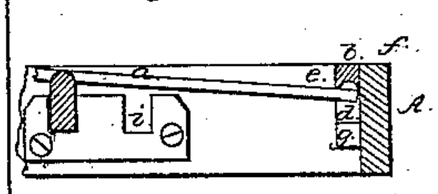


Fig. 4.



UNITED STATES PATENT OFFICE.

HENRY T. SMITH, OF WASHINGTON, DISTRICT OF COLUMBIA.

SPRING BED-BOTTOM.

Specification of Letters Patent No. 18,357, dated October 6, 1857.

To all whom it may concern:

Be it known that I, HENRY T. SMITH, of Washington city, in the District of Columbia, have invented certain new and useful Improvements in Spring-Bottoms for Bedsteads, of which the following is a full, clear, and exact description, reference being had to the accompanying drawing, making a part of this specification, and in which—

Figure 1 represents a perspective view of a bedstead, with my improvements attached thereto. Fig. 2 represents a vertical longitudinal section of the same showing the arrangement of the slats and the manner in which they are supported. Fig. 3 represents a transverse section of the same, in the line *x*, *x*, of Fig. 1, showing the socket rail. Fig. 4 represents a modification in the arrangement of one of the supports for the slats, and Fig. 5 represents one of the slats, detached.

My improvements in spring bottoms for bedsteads consist in sustaining the slats forming the bottom of the bedstead, at and near one end, upon either yielding or fixed supports and leaving the remainder of the length of the slat unsupported, by which they form a series of springs that yield uniformly to the weight thrown upon them, and thus form an elastic support for the bed.

In the accompanying drawing is shown a bedstead to which my improved spring bottom is applied. This bottom consists of a series of longitudinal slats (*a*) supported, at the foot of the bedstead, by a socket-rail (*b*), and, also, by a cross bar (*c*) a short distance from the foot-rail, leaving the remainder of the length of the slats unsupported, thus forming a series of elastic springs upon which the bed rests. The socket-rail (*b*) is attached to the foot rail (A) of the bedstead and has a series of rectangular sockets (*d*) in it, for the reception of one end of the slats (*d*). In the upper part of this socket is a curved recess (*e*) into which fits a projection (*f*) on the top and bottom at the end of the slats (*a*), thus holding them in place and preventing them from being drawn out by the vibrations of the bottom. These projections, being on both ends of the slat, admit of its being reversed, in order to prevent it from becoming permanently bent by being strained too long in one direction. An opening (*g*) is made through the bottom of the socket-rail in the under side of the socket, in order to increase the facility of cleaning it.

The cross-bar (*c*) is supported at its ends by two spring levers (*h*), one on each side of the bedstead, and the opposite ends of these levers are attached, in any convenient manner, to the head rail of the bedstead. They are also supported, a short distance from the head rail, by means of brackets attached to the side rails, by which means an elastic support is given to the cross-bar (*c*). Instead of giving a yielding support to this bar it may rest in brackets (*i*) attached to the side rails of the bedstead.

The socket-rail, instead of being confined to the foot rail, may move in guides on the foot-rail, and act upon a series of spiral, or other springs, placed above it, or it may be attached to the ends of spring levers extending from the head-rail, by which this point of support for the longitudinal slats is rendered elastic.

The upper ends of the longitudinal slats (*a*) are kept in place and connected with each other by a transverse slat (*k*) which prevents one side of the elastic bottom from sinking lower than the other when the weight on the sides of the bed is unequal. Straps (*l*), attached to each side of the spring bottom, and, also, to the side-rails of the bedstead prevent the bottom from springing up and becoming displaced when relieved from the weight of the bed.

It will be seen that the elasticity and the range of motion of this spring bottom is greater toward the head than at the foot of the bed, and in that part where it is most essential to those reclining upon it.

The cheapness and simplicity of this spring bottom, its slight liability to get out of order, the ease with which it can be taken apart to be cleaned and put together, and its adaptability to all kinds of bedsteads, present great advantages over the complicated and expensive spring bottoms in general use.

Having thus described my inprovements

in spring bottoms for bedsteads, what I claim as new and desire to secure by Letters Patent is—

Sustaining the slats forming the spring bottom at and near one end, leaving the remainder of the length of the slats unsupported, by which means they form a series of elastic springs for the support of the bed.

In testimony whereof, I have hereunto subscribed my name.

HENRY T. SMITH.

In presence of—
F. SOUTHGATE SMITH,
WM. H. BRERETON.