

Patented Feb. 28, 1865.



Inventor;
G W Mitchell

UNITED STATES PATENT OFFICE.

G. W. MITCHELL, OF ST. LOUIS, MISSOURI.

IMPROVED SPRING-MATTRESS.

Specification forming part of Letters Patent No. 46,573, dated February 28, 1865.

To all whom it may concern:

Be it known that I, G. W. MITCHELL, of St. Louis, in the county of St. Louis and State of Missouri, have invented a new and Improved Spring-Mattress; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to make and use the same, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 is a transverse vertical section of this invention, the line *xx*, Fig. 2, indicating the plane of section. Fig. 2 is a plan or top view of the same, partly in section.

Similar letters of reference indicate like parts.

This invention consists in the arrangement of a flexible connection between the caps and supporting-slat of each spring in such a manner that said spring is allowed to bend freely in either direction without allowing the caps to disengage from the supporting-slat.

It consists, also, in the use of a guide-cone, in combination with the flexible connection and spring, in such a manner that the top end of the spring is held in place, and its cap is not allowed to shift whatever the position of the spring.

It consists, further, in the arrangement of flexible connecting-pieces between the caps of the several springs in such a manner that each spring has a certain play, independent of the adjacent springs, allowing the several sections to fold up, and a mattress is produced of superior convenience and durability.

It consists, also, in the use of steady pins and bars, extending through loops in the under surface of the bottom slats, in such a manner that by said pins and bars the slats can be separated, and when the bars and pins are inserted the several pins and slats are firmly connected.

It consists, finally, in the use, in combination with the spring bed-bottom, of a mattress stuffed on the sides as well as on the top, in such a manner that the frame generally used in spring-mattresses can be dispensed with, and a bed is produced of superior softness, flexibility, and convenience.

A A A represent a series of springs, which are secured to bottom slats, B, and which support the caps C. I use by preference single-

cone springs, because I find that such springs are less liable to be crushed or bent over sideways than double-cone springs, generally used in spring beds, chairs, &c. The bottom slats, B, are connected by bars D, which are passed through loops *a*, inserted in the lower surfaces of said slats, and steady-pins *b*, passing through the ends of said bars and through the end slats, serve to keep the same firmly connected. By removing said pins the bars D can be withdrawn and the slats can be taken apart. The caps C consist of simple square or round plates of wood or any other suitable material. They are connected to the bottom slats by cords *c*, extending through the center of the springs, or instead of cords any other flexible connection might be used, and they (the caps) are also provided with guide-cones *d*, which project down in the upper ends of the springs, as clearly shown in the drawings. By means of these guide-cones the caps are prevented from being displaced, and still the springs are allowed to bend freely in either direction. By the combined action of the guide-cones and connecting-cords they are always returned to their upright position. The caps of the springs are connected by flexible pieces E, of leather or other suitable material, which are held in place by cords *e*, passing through suitable holes or eyes, as shown. By means of these flexible connections each spring of my mattress has a certain independent play, whereby the whole structure is rendered much more convenient and durable than a mattress of the ordinary construction. And, furthermore, by these flexible connections I am enabled to fold one-half of the mattress on the other, (when the bars D under the bottom slats are removed,) which is of great convenience in shipping the bed. The springs are covered by the mattress F, which is stuffed on the sides as well as on top, and forms a spring edge. No rigid frame is used, and thereby the bed is rendered softer and more convenient than a spring-bed of the usual construction.

My mattress is cheap and simple in its construction. It is very durable, and not liable to get out of order, and, when it does get out of order, it is easily repaired. Each spring can be readily removed without disturbing the adjacent springs and replaced by a new one whenever it is desirable. Furthermore, my mattress is easily handled, and it

can be packed up in a comparatively small compass. This arrangement is applicable to furniture of any kind, such as chairs, sofas, &c.

I claim as new and desire to secure by Letters Patent—

1. The guide-cones *d*, in combination with the springs A, caps C, and flexible connections *c*, applied substantially as and for the purpose described.

2. The flexible connecting-pieces E, in combination with the caps C of the springs, ap-

plied and operating substantially as and for the purpose specified.

3. The steady-pins *b* and locking-bars D, in combination with the preceding.

4. Stuffing the mattress on the sides as well as on the top, substantially as and in combination with the preceding.

G. W. MITCHELL.

Witnesses:

M. M. LIVINGSTON,

C. L. TOPLIFF.