J. C. Gaston,

Bed Bottom.

No. 86,916. Patented Feb. 16. 1869.

Fig. 1.

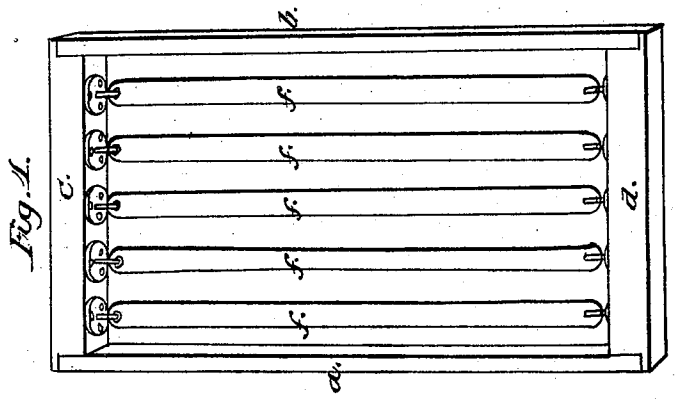
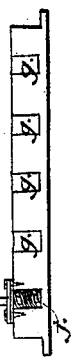


Fig. 3.

Fig. 4.

Fig. 2.



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J. C. GASTON, OF CINCINNATI, OHIO.

Letters Patent No. 86,916, *dated February* 16, 1869.

IMPROVED SPRING-BED BOTTOM.

The Schedule referred to in these Letters Patent and making part of the same.

To all whom it may concern:

Be it known that I, J. C. GASTON, of the city of Cincinnati, in Hamilton county, Ohio, have invented a new and useful Improvement in Spring-Bed Bottoms; and I do hereby declare that the following is a full and exact description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon.

Figure I represents a plan view of my improved spring-bed bottom.

Figure II represents a sectional view of one of the rails to which the slats are attached.

Figure III represents one of the hooks, with its shank and rivet-head.

Figure IV is one of the metal disks.

My invention consists in the construction and arrangement of a series of elastic slats or strips of metal, connected with yielding enclosed supports, in such a manner that the slats will yield laterally and vertically, in the manner hereinafter fully set forth.

In the accompanying drawings, *a b c d* denote a rectangular frame, in which the slats *f* are suspended.

The end-pieces of the frame *c d* are formed with orifices *g*, into which the devices to support the slats *f* are inserted, as represented in the drawings.

The slats *f* may be made of thin sheet-metal, so as to yield freely to unequal pressure or weight, and conform to such pressure; and each slat is perforated at the ends, for the purpose of inserting the hooks *h*, by which the slats are suspended.

These hooks are inserted through the metal disks *i*, and their shanks are provided with spiral springs *j*, which are held in position by means of the riveted heads *k*, as represented in Fig. III.

The shanks *i*, with their springs and rivet-heads, are inserted in the circular chambers formed in the frame-pieces *c d*, and the disks *l* are fastened, with screws, to the inner surface of these frame-pieces *c d*, which securely hold the slat-fastenings, consisting of the parts represented in Fig. II, in proper position.

The shanks *i* are of suitable dimensions to freely move in the central hole, made for their insertion, in disks *l*, and may be drawn outwardly to an extent which will compress and contract the spiral spring, and they also have the freedom of a swivel, to move in either direction axially.

By this construction, the several slats constituting the bed-bottom form a support for the bed, which will conform readily to any pressure, however unequal, as the slats themselves yield at all points throughout their entire length, and are suspended upon the swivel-spring hooks, as hereinbefore specified.

Bed-springs, as heretofore constructed, have furnished many hiding-places for the lodgment of insects, and as receptacles for dust.

These objections I have wholly overcome by enclosing the fastenings mainly within the cells or chambers of the frame, which I regard as a decided improvement in the structure of bed-bottoms.

I propose to use, in some instances, a wooden plug, as a substitute for the metal disk *l*, which plug, like the bung of a cask, may be inserted with the slat-fastening, in the orifice or mouth of the chamber, tightly, and be retained by brads, screws, pins, or nails, inserted or driven into the rails.

This use of hard-wood plugs will greatly cheapen the structure, and form a close joint, to prevent insects from lodging within the chambers enclosing the spiral spring and its connections.

The projecting hooks *h* will be so formed as to allow the slats to be attached and detached after the frame *a b c d* is fastened together, and thereby the structure may be easily taken apart for transportation, and with equal facility it may be put together for use.

My improved spring-bed bottom may be applied with equal success directly to the end-rails of a bedstead, as to a separate frame, as is represented in Fig. I of the drawings.

It is obvious that my invention is applicable to a variety of uses, such as seats, hammocks, &c.

It should not be omitted to remark that a continuous plate of metal or other material, suitably perforated for the hook-shanks and screws, may be substituted for the series of disks *l;* and the chambers into which the spring-fastenings are inserted, may be made in the rails *c d*, at an angle of forty-five degrees, more or less, to a horizontal line, and thereby allow a greater freedom of action to the fastening when pressure or weight is applied to the slats.

I am aware that spring-bed bottoms, constructed with slats attached to hooks passing entirely through the bedstead-rails, and supported by spiral springs, have been proposed, and therefore I do not desire to claim such a construction.

In the instance referred to, the spiral spring is placed within a metal socket, which is provided with arms, and the socket is inserted, with its spring and hook, through the bedstead-rail, and the arms rest upon the outside of the rail, to secure the socket in place.

My improvement consists in greatly simplifying and cheapening the article, by dispensing with the socket and its arms, and also improves the structure, by merely chambering, without cutting entirely through the rails, for inserting the shanks of the hooks and the springs.

By this modification I effectually avoid forming any lodging or hiding-places for insects, and also leave the outer side of the rails smooth.

By inserting my spring-hooks in chambers, formed at an angle to the horizontal line, of some degrees, even more than forty-five degrees, I insure their free and easy action, whereas, in the instances before cited, these spring-hooks, to which the slats are attached, are arranged to occupy a horizontal position, and con-

sequently the pressure upon the bed-bottom is always at right angles to the line of action of the hooks and springs.

Having fully described my invention,

What I claim, and desire to secure by Letters Patent, is—

The combination of the spring, enclosed in the sockets or chambers, and held by disks or plates, with the metal slats secured to swivel-hooks, whereby an axial movement is given to the slats, as shown and described.

In testimony whereof, I have hereunto set my hand, this 3d day of March, 1868.

J. C. GASTON.

Witnesses:

J. G. LUMNIS,

H. P. K. PECK.