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F. CASPARY.

WIRE MATTRESS.

APPLICATION FILED AUG. 19, 1903.

NO MODEL.

Fig. 1.

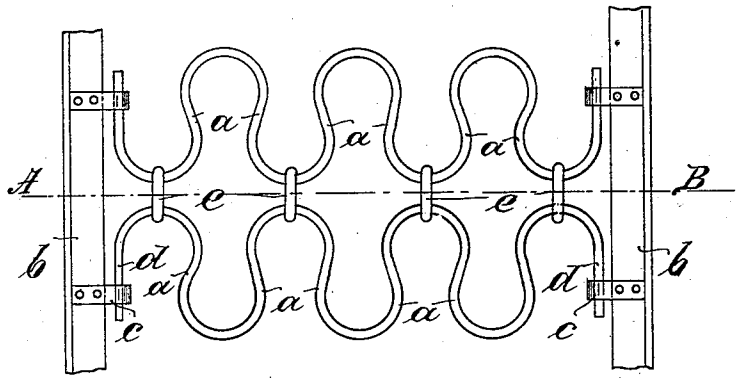
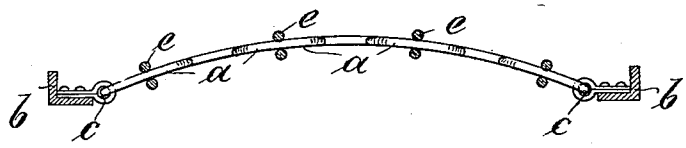


Fig. 2.



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THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

No. 751,147. Patented February 2, 1904.

UNITED STATES PATENT OFFICE.

FRITZ CASPARY, OF BERLIN, GERMANY.

WIRE MATTRESS.

SPECIFICATION forming part of Letters Patent No. 751,147, dated February 2, 1904.

Application filed August 19, 1903. Serial No. 170,052. (No model.)

To all whom it may concern:

Be it known that I, FRITZ CASPARY, a subject of the King of Prussia, German Emperor, and a resident of 57 Lessingstrasse, Berlin, Kingdom of Prussia, German Empire, have invented certain new and useful Improvements in Wire Mattresses, of which the following is an exact specification.

My invention relates to improvements in wire mattresses, and more especially to the construction of wire springs for forming such mattresses; and it has for its purpose to provide a spring by means of which a great elasticity of the whole mattress or bed-bottom is obtained and which acts with tensile strain as well as with compressive strain.

In order to make my invention more clear, I refer to the accompanying drawings, in which—

Figure 1 shows part of a mattress constructed according to my invention. Fig. 2 is a section on line A B of Fig. 1.

The mattress consists of springs *a*, consisting of wire bent in serpentine or zigzag form. As will be seen from Fig. 2, the springs are curved upward.

b is the frame of the mattress. To the frame *b* small bearings *c* are fixed, in which the ends *d* of the springs *a* are journaled. The single springs are connected to each other by means of links *e* or the like.

If the mattress is loaded, the springs *a* on account of being curved upward act in the manner of springs with compressive strain. If the load resting upon the mattress surpasses certain limits, the springs *a* act in the manner of springs with tensile strain. On account of the ends of the springs *a* being journaled in the bearings *c* these springs can more easily bend downward, and a breaking of the same, which could easily occur on account of the twisting of the ends *b* in case these ends would be rigidly fixed to the frame *b*, is avoided. On account of the springs *a* being curved in their normal state before these springs are fixed in the frame *b* these springs will after the load being removed from the mattress always return to their normal position. (Shown in Fig. 2.) This is a very important feature of my invention, as in case the springs would not be curved before fixing the same in the frame—that is to say, they would only be curved on account of the longitudinal compression of the springs—these springs after being bent downward by means of the load resting upon the same would not return to their normal position after the removal of the load.

A further important feature of my invention consists in the ends of the springs being journaled in small bearings, so as to allow a turning of the same. In case the ends of the springs would be rigidly fixed to the frame the whole spring could not be pressed downward by a load situated in the middle of the same, so as to form an equal curve—that is to say, in case the springs would be rigidly fixed to the frame and the load would rest upon the middle part of the springs the springs would form a curve situated upward at the ends and downward in the middle part. By the springs being journaled in the frame it is attained that in case the springs are loaded they form a downward curve, beginning immediately at the bearings. Furthermore, by the ends being journaled in the bearings a twisting of these ends is avoided.

Having thus fully described the nature of this invention, what I desire to secure by Letters Patent of the United States is—

1. In a wire-bottom mattress the combination of the frame having journaled bearings projecting inwardly and secured to said frame, bent section of springs forming curved bottom provided integrally with free ends adapted to work freely in said journaled bearings, the said section arranged to form convex bottoms, substantially as described.

2. In a wire mattress, the combination of the mattress-frame provided with bearings fixed to the frame and serpentine-formed wire springs journaled in said bearings said springs being curved in their normal state previously to fixing the same in the frame, and links for holding the springs together, the parts being arranged to form in the unloaded state a convex bed-bottom substantially as described.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

FRITZ CASPARY.

Witnesses:
WOLDEMAR HAUPT,
HENRY HASPER.