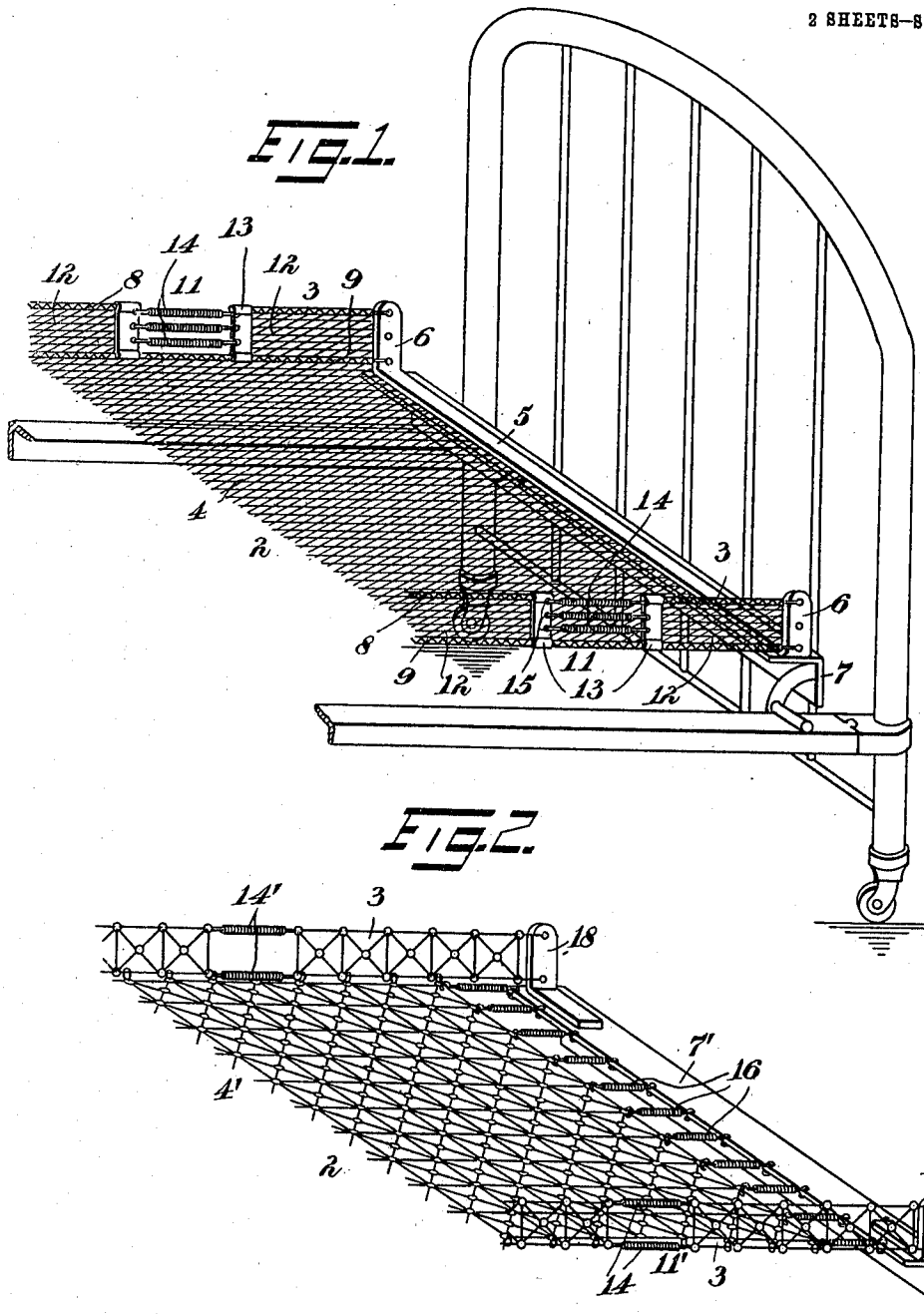


C. J. WITZEL.
METALLIC MATTRESS.
APPLICATION FILED AUG. 4, 1909.

989,316.

Patented Apr. 11, 1911.

2 SHEETS-SHEET 1.



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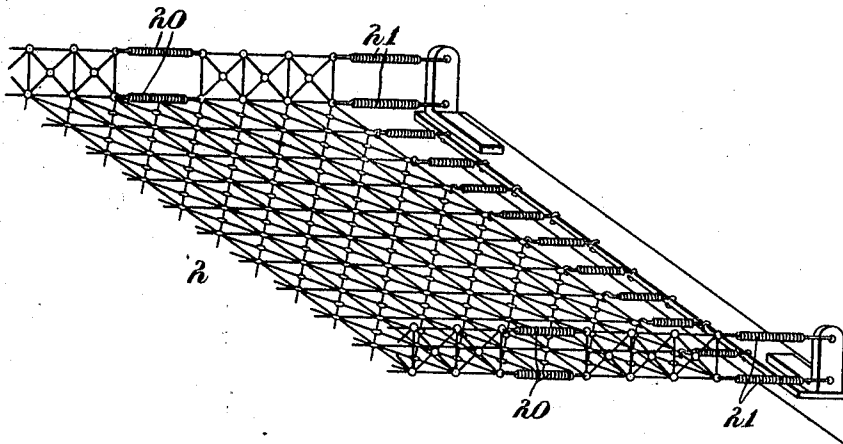
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2 SHEETS—SHEET 2.

FIG. 3.



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METALLIC MATTRESS.

989,316.

Specification of Letters Patent.

Patented Apr. 11, 1911.

Application filed August 4, 1909. Serial No. 511,127.

To all whom it may concern:

Be it known that I, CHARLES J. WITZEL, a citizen of the United States, residing in New York, borough of Brooklyn, in the county of Kings and State of New York, have invented certain new and useful Improvements in Metallic Mattresses, of which the following is a specification.

This invention relates to an improvement in metallic formed mattresses, the object of the invention being to provide an improved metallic formed mattress which will prevent the shifting or spreading of the hair or other stuffed mattress by locating and holding the same securely in position in an effective manner, and is in part an improvement upon the construction shown and described in my Reissue Patent No. 13,125, dated June 28, 1910. As stated in the said reissue application, one of the objections to the metallic mattresses in general use is that the hair or other stuffed mattresses which are placed thereon shift on the same from one side to the other or so spread in use that a very unsightly appearance is the result. The present improvement, therefore, consists of a wire mattress which is provided at each side thereof with improved longitudinal side guards attached to the mattress or bent up therefrom and which is comparatively simple in its construction and therefore inexpensive to produce.

In the drawings accompanying and forming part of this specification, Figure 1 is a perspective view of one portion of a bedstead illustrating one form of this improved spring mattress having an improved form of side guard, the mattress in this figure being illustrated as a woven wire mattress; Fig. 2 is a perspective view of one portion of a spring mattress illustrating a National fabric having these improved side guards attached thereto; and Fig. 3 is a perspective view of a portion of this improved spring mattress showing another form of side guard.

Similar characters of reference designate corresponding parts throughout the different figures of the drawings.

In Fig. 1 the spring mattress is shown as a woven wire mattress, while in Figs. 2 and 3 the mattress is shown as of that form which is generally known as a National fabric. Each of these mattresses 2 is provided with a side guard 3 attached thereto in an improved manner.

In the mattress shown in Fig. 1 the woven

wire bottom 4 is secured at its ends to a cross strip 5 having upwardly turned portions or projections 6, and between this cross strip and the ordinary angle iron cross bar 7 constituting the mattress frame the end of the woven wire mattress is usually secured. In this form of the improvement the woven wire mattress is provided with bent up side guards formed of the same material as is the bottom 4, each guard being provided along its lower and upper edges with a reinforced or thickened portion 8, 9. The ends of the guard are hooked to the upwardly turned projections of the cross strip in any suitable manner, the guard being severed intermediate its ends at some suitable point, as at 11, which may be at the middle of its length or adjacent to one end, as is most desirable in practice, and such severed portions spaced apart. Each severed portion 12 of the side guard is suitably bound or clamped by some suitable form of metallic binding or clamp, as 13, and between these severed ends one or more, preferably a plurality, spiral springs 14 are located to impart a tension to the side guards. These springs may be hooked into openings 15 formed in the metallic bindings of the side guards in any suitable manner.

In the form shown in Fig. 2 the National fabric bottom 4' is secured by helical springs 16 to the end or cross bar 7' of the mattress frame in the usual manner, but in this form the side guards, which are shown formed separately from the bottom but linked therealong its edges, are secured directly to the upwardly turned projections or angle plates 18, 19, riveted or otherwise fastened to the end of the cross bar. These side guards are likewise severed intermediate their ends, as at 11', and spaced apart for the reception of helical springs 14' which may be readily hooked to the links of the side guards. In this form of the improvement, as is also the case with that shown in Fig. 3, the side guards, being formed in the manner shown, require no metallic binding or clamping members at the several ends thereof, since the hooks of the helical springs may be readily connected to the links or coupling members of the fabric in a manner which will be readily understood.

In the form shown in Fig. 3 the side guards are bent up from the spring bottom and provided with two sets of helical springs, 20, 21, one set located between the end of

the guard and the upwardly turned projection secured to the end or cross bar of the mattress frame, and the other set located in a similar manner to that shown in Fig. 2.

By this improvement, especially when the side guard is formed separate from the spring or suspensively supported bottom, short lengths of guard may be used, while at the same time the tension springs may be located at points where the greatest flexibility would ordinarily occur, and so materially stiffen the side guard and prevent it from yielding improperly. Furthermore, by having the side guard formed separate from the bed bottom, when this side guard is made of either one continuous length or of short lengths as shown herein, the bed bottom may be under a different tension from that of the side guard. In other words, as the bed bottom receives the weight of the user and is usually first attached to the cross members or bars, it may be placed under considerable tension, while, as the side guard is not slept upon, the tension thereon may be less and the desired tension given thereto when it is attached subsequent to the attachment of the bottom fabric, so that the tension given to the bed bottom fabric does not necessarily have to be the same as that given to the side guards, so that, if desired, springs of different strength or size may be used respectively with the bed bottom and the side guards, as occasion may require. Furthermore, it will be observed that when the side guards are formed separately from the bed bottom they may, if desired for any reason, be removed from such bottom by disconnecting the same from the upstanding supporting brackets carried by the bottom and by disconnecting the same along the bottom edges thereof from the bottom at the points where such connection is made, and it will be observed that where the tension imparting means is located away from the ends of the side guards such side guards may be more easily disconnected from the upstanding projections than would be the case if the helical springs were located at the ends of the side guards, for the reason that it would be less difficult for the user to unhook the ends of the side guards from the upstanding projections than it would be to unhook the helical springs themselves, in view of the fact that those portions of the side guards between the springs and the upstanding projections could be more easily handled owing to their flexibility than could the springs themselves.

As the side guards in an ordinary spring mattress are of considerable length it is entirely practicable by the present improvement to provide any desired number of sets of springs between the ends of each side guard, as may be found desirable in order to stiffen the structure and maintain the same under permanent tension. By the provision

of these side guards the hair or other stuffed mattress will be maintained in position when the same is placed on the spring mattress so that the lateral shifting or spreading of such stuffed mattress is prevented.

The term "fabric" as used herein is intended to mean any suitable structure whether made up of links or criss-cross members or of relatively long lengthwise extending members connected by short links or members, or any structure which would serve the purpose of a woven fabric.

I claim as my invention:

1. A metallic formed mattress comprising a suspensively supported bottom stretched under tension, a metallic fabric mattress guard extending along each side edge of the bottom and means for holding said bottom and guards under independent tensions, the connections of the guards and bottom to their respective supporting means being such as to allow the tensioning of the guards independently of the bottom.

2. A metallic formed mattress comprising a suspensively supported bottom stretched under tension, a metallic fabric mattress guard formed independently of the bottom but connected thereto at each side edge thereof, supporting means for said bottom and guards, said guards being also stretched and maintained under tension, the connections of the guard and bottom to their respective supporting means being such as to allow the tensioning of the guard independently of the bottom, and helical springs for imparting tension to the guards.

3. A metallic formed mattress comprising a suspensively supported bottom stretched under tension, a metallic fabric mattress guard extending along each side edge of the bottom, supporting means for the bottom and supporting means for the guards and effective to maintain the latter in upright positions, and tensioning means forming a continuation of each guard, the connections of the guards and bottom to their respective supporting means being such as to allow the tensioning of the guards independently of the bottom.

4. A metallic formed mattress comprising a suspensively supported bottom stretched under tension, a metallic fabric mattress guard extending along each side edge of the bottom, supporting means for the bottom and supporting means for the guards and effective to maintain the latter in upright positions, and tensioning means forming a continuation of each guard and running lengthwise relatively to such guard and comprising helical springs, the connections of the guards and bottom to their respective supporting means being such as to allow the tensioning of the guards independently of the bottom.

5. A metallic formed mattress comprising

a supporting frame, a suspensively supported bottom stretched under tension, metallic fabric side guards located along the sides of such bottom each being stretched under longitudinal tension, and means for imparting tension to such guards and maintaining such tension, the connections of the guards and bottom to their respective supporting means being such as to allow the tensioning of the guards independently of the bottom.

6. A metallic formed mattress comprising a supporting frame, a suspensively supported bottom connected thereto and stretched under tension, side guard supporting means for supporting side guards in an upright position relatively to the bottom, and metal fabric side guards each consisting of long lengthwise extending members connected by short links or members and formed independently of the bottom and stretched under tension along the longitudinal edges of the bottom and removably connected to said side guard supporting means.

7. A metallic formed mattress comprising a supporting frame, a suspensively supported bottom connected thereto and stretched under tension, side guard supporting means for supporting side guards in an upright position relatively to the bottom, metallic fabric side guards formed independently of the bottom and stretched under tension along the longitudinal edges of the bottom and removably connected to said side guard supporting means, and tensioning means for the side guards, the connections of the guards and bottom to their respective supporting means being such as to allow the tensioning of the guards independently of the bottom.

8. A metallic formed mattress comprising a suspensively supported bottom stretched under tension, a metal fabric side guard extending along each of the side edges of the bottom and consisting of long lengthwise members connected by short links or members, supporting means for said bottom and guards, and tensioning means for the guards, the connections of the guards and bottom to their respective supporting means being such as to allow the tensioning of the guards independently of the bottom.

9. A metallic formed mattress comprising a suspensively supported bottom stretched under tension, metallic fabric side guards extending along the side edges of the bottom, supporting means for said bottom and guards, and tensioning means for each of the guards and located between the ends of the guard, the connections of the guards and bottom to their respective supporting means being such as to allow the tensioning of the guards independently of the bottom.

10. A metallic formed mattress comprising a suspensively supported bottom stretched under tension and having adjacent to its

corners upstanding projections, side guards secured to said projections and each formed of a plurality of alined lengths each shorter than the distance between such projections and spaced apart between their opposing ends, and tension imparting means spanning the spaces between the lengths of the side guards and connecting such spaced apart ends and maintaining the guards under longitudinal tension, the connections of the guards and bottom to their respective supporting means being such as to allow the tensioning of the guards independently of the bottom.

11. A metallic formed mattress comprising a suspensively supported bottom stretched under tension and having adjacent to its corners upstanding projections, side guards secured to said projections and each formed of a plurality of alined lengths of metallic fabric each shorter than the distance between such projections and spaced apart between their opposing ends, and helical springs spanning the spaces between the lengths of the side guards and connecting such spaced apart ends for maintaining the guards under tension, the connections of the guards and bottom to their respective supporting means being such as to allow the tensioning of the guards independently of the bottom.

12. A metallic formed mattress comprising a suspensively supported bottom stretched under tension and having adjacent to its corners upstanding projections, side guards running lengthwise of such bottom and secured to said projections each formed of a plurality of alined lengths of metal fabric consisting of long lengthwise extending members connected by short links or members each shorter than the distance between such projections and spaced apart between their opposed ends, and means spanning such space and connecting such spaced apart ends for maintaining the guards under tension.

13. A metallic formed mattress having a suspensively supported bottom stretched under tension and having adjacent to its corners upstanding projections, side guards running lengthwise of such bottom and secured to said projections, each formed of a plurality of alined lengths of metallic fabric each shorter than the length of the bottom and spaced apart between their opposed ends, and tension imparting means spanning such space and connecting such spaced apart ends for maintaining the guards under tension.

14. A metallic formed mattress having a suspensively supported bottom stretched under tension and having adjacent to its corners upstanding projections, side guards running lengthwise of such bottom and secured to said projections, each formed of a plurality of alined lengths of metallic fabric

each shorter than the length of the bottom and spaced apart between their opposed ends, and tension imparting means spanning such space and connecting such spaced apart ends for maintaining the guards under tension, each of said side guards being connected at its lower edge with the suspensively supported bottom.

15. A metallic formed mattress comprising a suspensively supported bottom stretched under tension and having upstanding projections at its corners, side guards for said bottom each running lengthwise thereof, helical springs between the outer ends of said side guards and the upstanding projections, each of said side guards formed of a plurality of alined lengths of metallic fabric each shorter than the distance between the projections and spaced apart between their opposed ends, and helical springs spanning such space and connecting the spaced apart ends of the side guards for maintaining the guards under tension.

16. In spring mattress construction, a metallic fabric bottom, a metallic fabric mattress guard independent of said bottom but connected thereto at intervals, supporting members for said bottom and guard, tensioning means for the bottom and tensioning means for the guard, the connections of the guard to the bottom and of the guard and bottom to their respective supporting mem-

bers being such as to allow the tensioning of the guard independently of the bottom.

17. In spring mattress constructions, a metallic fabric bottom, a metallic fabric mattress guard, supporting means for said bottom and guard, tensioning means for the bottom and independent tensioning means for the guard, the connections of the guard and bottom to their respective supporting means being such as to allow the tensioning of the guard independently of the bottom.

18. A metallic formed mattress comprising a supporting frame, a suspensively supported bottom connected thereto and stretched under tension, upstanding brackets or pedestals supported at substantially the four corners of the frame, vertical side guards located in proximity to the lateral edges of the bottom and extending longitudinally thereof, each composed of a metallic fabric and formed independently of the bottom, and connecting elements secured to the side guards and received within or projecting into said brackets or pedestals, the connections of the guards and bottom to their respective supporting means being such as to allow the tensioning of the guards independently of the bottom.

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Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."