No. 817,918. PATENTED APR. 17, 1906.

C. H. JOHNSON.

WEIGHT SUPPORTING DEVICE FOR SPRING BEDS.

APPLICATION FILED JAN. 18, 1906.

2 SHEETS—SHEET 1.

Fig. 1.

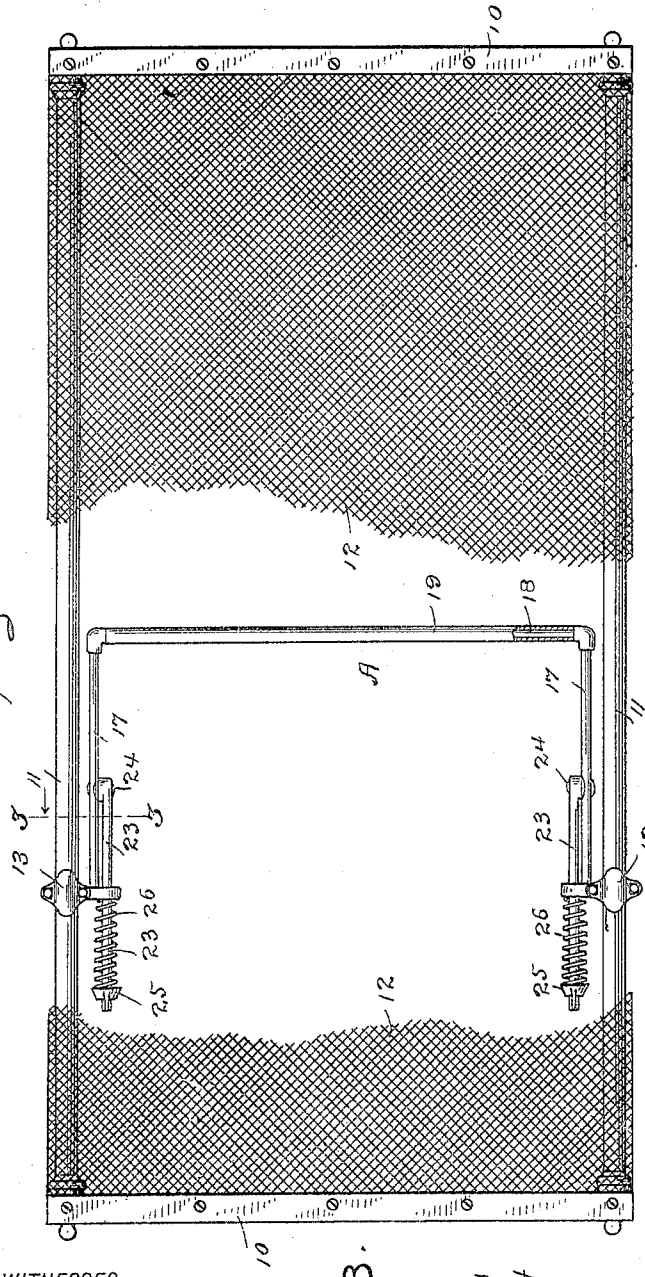


Fig. 2.

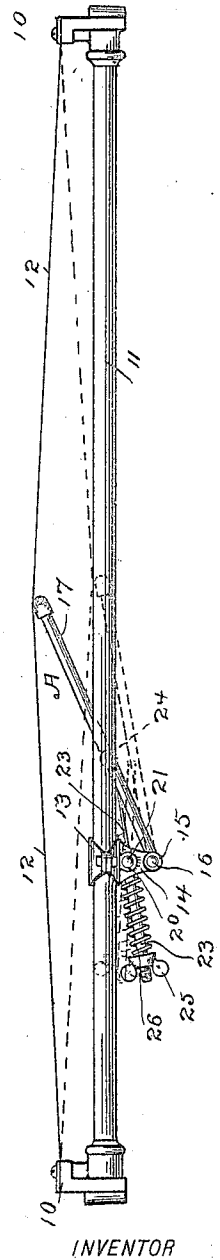
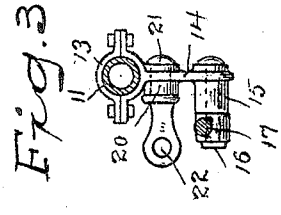


Fig. 3.



WITNESSES

H. A. Lamb.

Sue Atherton.

INVENTOR

Charles H. Johnson

BY

A. M. Wooster

ATTORNEY

No. 817,918. PATENTED APR. 17, 1906.

C. H. JOHNSON.

WEIGHT SUPPORTING DEVICE FOR SPRING BEDS.

APPLICATION FILED JAN. 18, 1906.

2 SHEETS—SHEET 2.

Fig. 4.

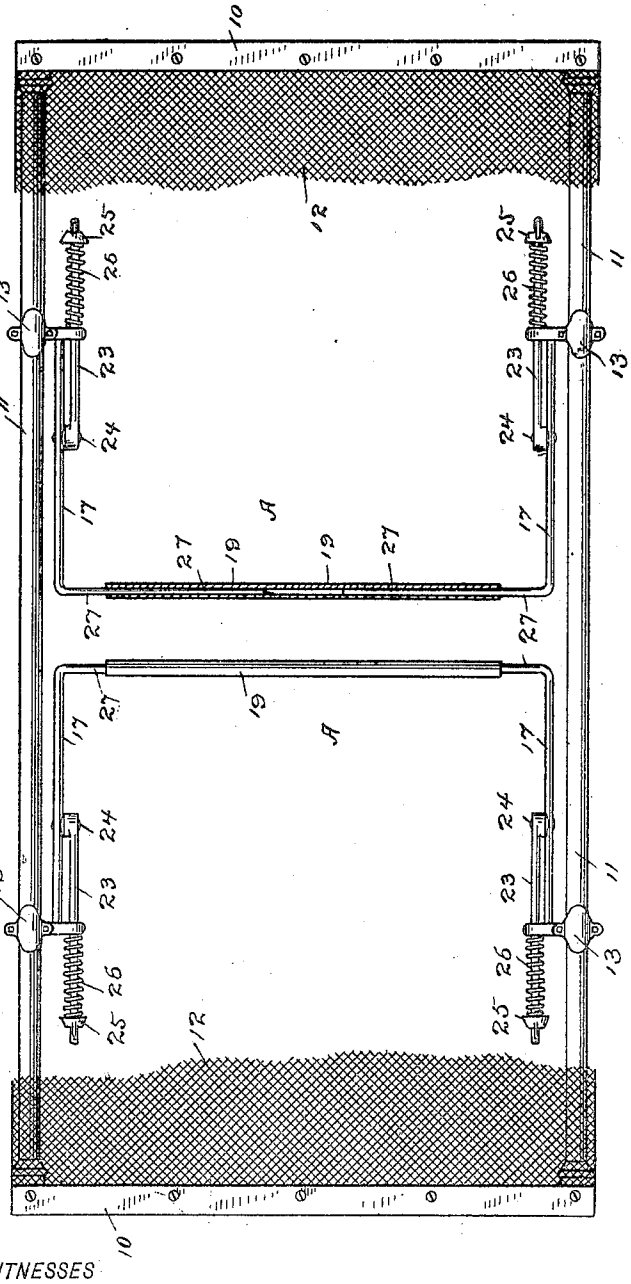
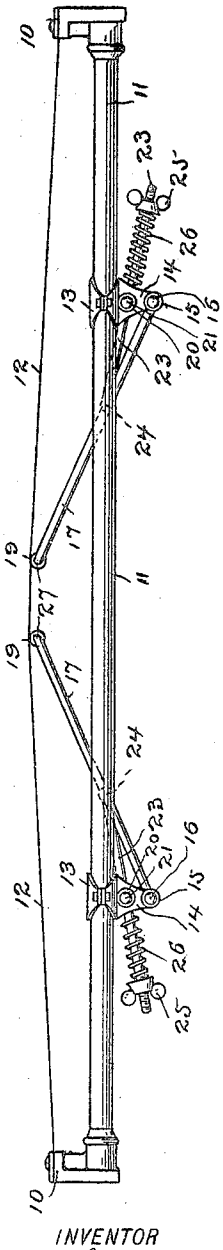


Fig. 5.



WITNESSES

H. A. Lamb.

S. W. Atherton

INVENTOR

Charles H. Johnson

BY

A. M. Wooster

ATTORNEY

UNITED STATES PATENT OFFICE.

CHARLES H. JOHNSON, OF SHELTON, CONNECTICUT.

WEIGHT-SUPPORTING DEVICE FOR SPRING-BEDS.

No. 817,918. Specification of Letters Patent. Patented April 17, 1906.

Application filed January 18, 1906. Serial No. 296,595.

To all whom it may concern:

Be it known that I, CHARLES H. JOHNSON, a citizen of the United States, residing at Shelton, county of Fairfield, State of Connecticut, have invented a new and useful Weight-Supporting Device for Spring-Beds, of which the following is a specification.

This invention has for its object to provide a simple and inexpensive weight-supporting device for application to the side rails of spring-beds which will support the weight placed upon the bed and prevent undue stretching of the spring-bottom thereof and which shall be adjustable to different widths of beds and also adjustable to different weights.

The device is not limited in its application to any special style of spring-bed, but is applicable to any style of bed in which the weight is carried by a horizontally-placed yielding weight-carrying element.

In practice I provide a support for the central portion of a bed which will carry the weight yieldingly, thus preventing any undue stretching of the spring-bottom, and thereby adding greatly to the comfort of the bed, and by preventing the usual stretch of use practically removing the limit to its usefulness and making it permanently serviceable.

With these and other objects in view I have devised the novel weight-supporting device for spring-beds which I will now describe, referring to the accompanying drawings, forming a part of this specification, and using reference characters to indicate the several parts.

Figure 1 is a plan view illustrating the application of one form of my novel supporting device which is especially applicable to relatively narrow beds and is not made adjustable to different widths of beds, but a single supporting device being applied in this instance; Fig. 2, a side elevation corresponding with Fig. 1; Fig. 3, a detail sectional view, on an enlarged scale, on the line 3 3 in Fig. 1 looking in the direction of the arrow, the slide-rod being removed; Fig. 4, a plan view illustrating a form of the invention that is made adjustable to beds of different widths, two of the weight-supporting devices being shown as applied thereto as is preferable for double beds; and Fig. 5 is a side elevation corresponding with Fig. 4.

In the drawings I have shown the application of my invention to an ordinary woven-wire bed, although, as already stated, the invention is applicable to any form of the class of spring-beds described, a single type of bed being deemed sufficient to illustrate the application of the invention.

10 denotes the end pieces of a spring-bed, 11 the side rails, and 12 the spring-bottom or bed proper—in the present instance a woven-wire bed.

A denotes my novel supporting device as a whole, which is shown as attached to the side rails by clips 13.

14 denotes an arm extending downward from the lower member of each clip. At the lower end of each arm is a hub 15, in which a stud 16 is pivoted. 17 denotes side rods which extend from these studs and which normally lie at an angle to the side rails, as clearly shown in Figs. 2 and 5. The outer ends of the side rods in the form illustrated in Fig. 1 are connected by a round cross-piece 18, carrying a roller 19, which in this form may be a piece of rubber tubing or a piece of metal tubing, as preferred. The roller fits the cross-rod loosely, so as to oscillate thereon slightly in use as the spring-bottom yields.

20 denotes hubs upon arms 14 near the intersection of the arms with the lower members of the clips, and 21 studs pivoted in hubs 20. Each stud 21 is provided with an eye 22, through which a slide-rod 23 passes loosely. One end of each slide-rod is pivoted to a side rod at approximately its mid-length, as at 24, the other end of each slide-rod being threaded and provided with a wing-nut 25. A spring 26, surrounding the slide-rod, bears against the nut and against the face of the eye. The tension of the springs may be adjusted at any time to provide for lighter or heavier weight upon the bed or to take up the stretch of the spring-bottom by turning up the nuts on the rods.

In the form illustrated in Figs. 4 and 5 two of my novel weight-supporting devices are shown as applied to a bed, the mode of application being the same as in the other form, the cross-pieces of the two supporting devices being placed at approximately the mid-length of the bed and at a short distance apart—for example, approximately as shown in Figs. 4 and 5. In this form I provide for the use of the supporting device upon different widths of beds by providing a two-part cross-piece comprising cross-rods 27, attached to or formed integral with the side pieces, re-

spectively, and extending inward toward each other. These cross-rods telescope in a roller 19, which in this form is preferably made of metal tubing, so as to give ample stiffness and rigidity to the cross-piece as a whole, leaving the rollers free to oscillate on the cross-rods. In use the springs are tightened up sufficiently to throw the side pieces and cross-rods upward against the spring-bottom, as clearly shown in Figs. 2 and 5. The weight of a person or persons occupying the bed will rest upon the spring-bottom, which will yield in the usual manner. As the spring-bottom yields, however, the strain thereon will be taken up by the weight-supporting device, so that serious strain cannot be placed upon the spring-bottom; but the severe strain of use will be taken up by the supporting device, the cross-rods and side pieces being pressed downward by the weight and the slide-rods being drawn inward through the eyes against the power of the springs, which take up the strain of weight tending to stretch the spring-bottom. I thus reinforce and strengthen the spring-bottom by a yielding support which is not noticeable in use, but which effectually prevents unequal stretching of the spring-bottom and any serious stretching of the spring-bottom as a whole.

Having thus described my invention, I claim—

1. In a bed, the combination with side rails and a spring-bottom, of a supporting device for the spring-bottom comprising a cross-piece, side rods to which the cross-piece is attached, pivoted studs to which the side rods are attached, slide-rods pivoted to the side rods, pivoted eyes through which the slide-rods pass, springs acting on the slide-rods to raise the cross-piece against the spring-bottom and means for attaching the supporting device to the side rails.

2. A weight-supporting device for spring-beds comprising a cross-piece, side rods to which the cross-piece is attached, pivoted studs to which the side rods are attached, slide-rods pivoted to the side rods, pivoted eyes through which the slide-rods pass, springs acting on the slide-rods to raise the side rods and cross-piece and means for attaching the device in place.

3. A weight-supporting device for spring-beds comprising a cross-piece, a roller thereon, for the purpose set forth, side rods to which the cross-piece is attached, pivoted studs to which the side rods are attached, slide-rods pivoted to the side rods, pivoted eyes through which the slide-rods pass, springs acting on the slide-rods to raise the side rods and cross-piece and means for attaching the device in place.

4. A weight-supporting device for spring-beds, comprising a cross-piece, side rods to which the cross-piece is attached, pivoted studs to which the side rods are attached, slide-rods pivoted to the side rods and threaded at their outer ends, pivoted eyes through which the slide-rods pass, nuts on the slide-rods, springs bearing against the nuts and the eyes to raise the side rods and cross-piece and means for attaching the device in place.

5. A weight-supporting device for spring-beds, comprising a cross-piece, side rods to which the cross-piece is attached, studs to which the side rods are attached, slide-rods pivoted to the side rods, eyes through which the slide-rods pass, an attaching-clip, arms depending therefrom in which the studs and eyes are pivoted and springs acting on the slide-rods to raise the side rods and cross-piece.

6. A weight-supporting device for spring-beds comprising a two-part cross-piece, a roller in which the parts of said cross-piece telescope, side rods to which the parts of the cross-piece are attached, pivoted studs to which the side rods are attached, slide-rods pivoted to the side rods, pivoted eyes through which the slide-rods pass, springs acting on the slide-rods to raise the side rods and cross-piece and means for attaching the device in place.

7. An adjustable weight-supporting device for spring-beds comprising a two-part cross-piece, a roller in which the parts of said cross-piece telescope, side rods to which the parts of the cross-piece are attached, pivoted studs to which the side rods are attached, slide-rods pivoted to the side rods and threaded at their outer ends, pivoted eyes through which the slide-rods pass, springs bearing on the nuts and the eyes for raising the side rods and cross-piece and means for attaching the device in place.

In testimony whereof I affix my signature in presence of two witnesses.

CHARLES H. JOHNSON.

Witnesses:
CHARLES N. DOWNS,
EDWARD W. BROADBENT.