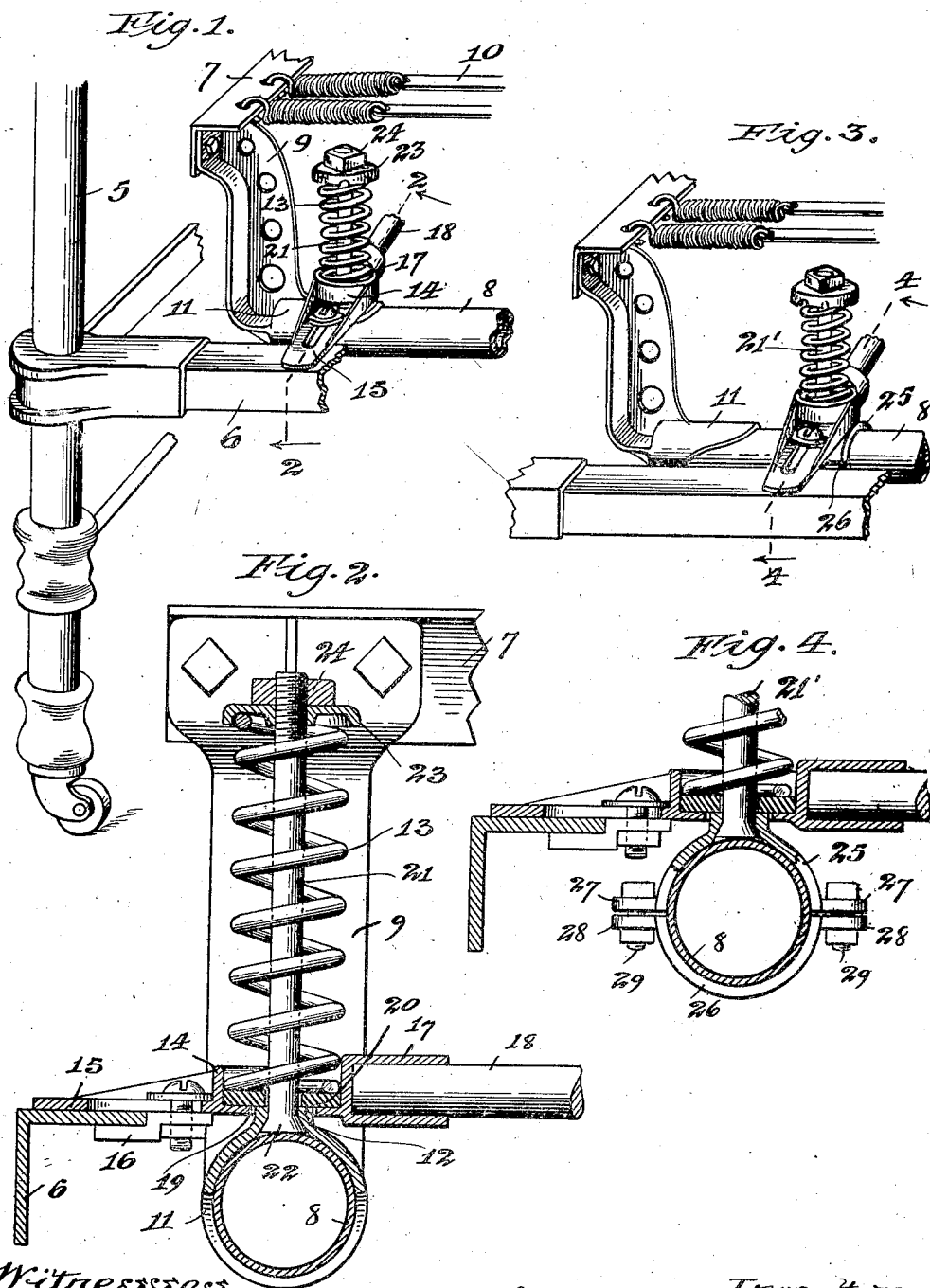


W. J. GROTENHUIS.
BED CONSTRUCTION.
APPLICATION FILED DEC. 11, 1912.

1,060,079.

Patented Apr. 29, 1913.



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UNITED STATES PATENT OFFICE.

WILLIAM J. GROTENHUIS, OF CHICAGO, ILLINOIS.

BED CONSTRUCTION.

1,060,079.

Specification of Letters Patent.

Patented Apr. 29, 1913.

Application filed December 11, 1912. Serial No. 736,151.

To all whom it may concern:

Be it known that I, WILLIAM J. GROTENHUIS, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Bed Constructions, of which the following is a specification.

This invention relates to the art of bed structures, and has reference more particularly to that type of bed structures wherein a rectangular bed-spring frame is supported at or adjacent to its four corners through the agency of cushion springs upon the side rails of a bedstead frame.

Among the leading objects of the invention are, to simplify and cheapen structures of this type, to provide a practically noiseless structure, to provide a construction wherein the cushion springs may be readily adjusted as to tension, and, in one form of the invention, to provide a cushion corner structure readily capable of application to standard makes of bed-spring frames.

In the accompanying drawings I have illustrated two simple and approved embodiments of my invention; and referring thereto—Figure 1 is a perspective elevation of cooperating corner portions of the bedstead and bed-spring frames, illustrating the application of my invention to a construction wherein an integral sleeve on the lower end of the corner bracket of the bed-spring frame, which receives one end of a side-rail of the bedstead frame, is utilized for the connection of the tension bolt through which the stresses are transmitted to the cushion spring. Fig. 2 is an enlarged cross-sectional view taken on the line 2—2 of Fig. 1. Fig. 3 is a view similar to Fig. 1, illustrating an embodiment of my invention wherein the tension-bolt is connected to a sleeve other than the integral sleeve of the corner bracket and which is adjustable lengthwise of the side-rail of the bedstead frame. Fig. 4 is a view corresponding with Fig. 2 on the line 4—4 of Fig. 3.

Referring first to Figs. 1 and 2, 5 designates a corner post of the bedstead frame, and 6 a side-rail thereof, this latter being of the angle-iron form extensively employed for the side-rails of metal beds. 7 designates an end-bar, 8 a tubular side-bar, and 9 a connecting corner bracket of the bed-spring frame, a fragment of the mattress-supporting surface thereof being shown at

10. The lower end of the corner bracket 9 is formed with an integral horizontal sleeve or socket member 11, within which telescopes the adjacent end of the side-bar 8 of the bed-spring frame. On the upper side of the sleeve 11 is formed an apertured boss 12 countersunk on its under side for a purpose hereinafter explained.

The bed-spring frame is resiliently supported at its corners upon coiled cushion springs 13, the lower end of each of which rests in a cup-shaped seat 14 formed on a transverse supporting member that extends between and is stepped upon the side-rails 6 of the bedstead frame. This transverse supporting member, as herein shown, consists of a pair of metal end castings each comprising an outer substantially flat portion 15, stepped directly upon the side-rails 6 and secured thereto by a clamp 16, the intermediate cup-shaped portion 14 forming the spring seat, and an inner tubular shank portion 17, with an intermediate bar 18 rigidly connected to and extending between the shank portions 17 of the end castings. The bottom of the cup-shaped seat 14 is formed with an aperture 19 of slightly larger diameter than the outside diameter of the boss 12, and adapted to register with the latter. Within the cup-shaped seat 14, and resting on the bottom thereof, is a centrally apertured fiber washer 20 on which the lower end of the spring 13 is stepped. Through the registering apertures of the boss 12, spring seat bottom, and fiber washer is passed a tension-bolt 21, the headed lower end 22 of which fits the countersink of the boss 12, and is confined therein by the tubular side-bar 8 that telescopes snugly within the sleeve 11. The bolt 21 extends axially through the spring 13 and at its upper end is provided with spring-confining means herein shown as a suitable cap or washer 23 and nut 24. By turning down the nut 24 the tension of the spring can be adjusted within the limits of the threaded portion of the bolt 21.

When the parts are assembled and the bed-spring frame not under load, the upper end of the boss 12 lies against and in contact with the washer 20. Heretofore in somewhat similar constructions the tension-bolt has extended through the tubular side-bar 8, as well as through the sleeve surrounding the same; also, when the bed-spring frame was suddenly relieved of load, an objection-

able noise was created by the striking of the side-bars of the bed-spring frame against the lower side of the spring supports. My invention obviates the necessity of drilling the side-bar 8 for the reception of the tension-bolt, also enabling the latter to be made shorter, with no sacrifice of strength and efficiency. The countersunk boss 12 not only accommodates the head of the bolt and enables the latter to be rigidly confined by the side-bar 8 but, on the rebound of the spring, it strikes against the non-metallic washer 20 with no perceptible noise, thus preventing the objectionable metallic sound heretofore resulting from a sudden release of the spring from its load.

In the slightly modified form of the invention shown in Figs. 3 and 4 the described construction is adhered to, with the exception that the tension bolt 21', through which the load is transmitted to the spring, is connected at its lower end to a sleeve that is clamped to, and adjustable longitudinally upon the side-bar 8 of the bed spring frame, in lieu of being connected to the sleeve 11 that is integral with the corner bracket. This adjustable sleeve is conveniently made in mating upper and lower halves 25 and 26 provided with lateral ears 27 and 28, respectively, through which they are united and tightly clamped on the side-bar 8 by bolts 29. This construction has one advantage over the construction of Figs. 1 and 2 in that it renders the improvement readily applicable to any standard makes of bed-bottom frame of the type herein shown without requiring any alteration or modification of the bed frame structure. Also, it enables the cushion springs to be positioned nearer to or farther from the corners, according to the preference or taste of the individual user of the structure.

In so far as the disclosure herein relates to the adjustment of the load-carrying capacity of the supporting springs, I do not claim the same as my invention, having adopted this idea from Louis H. Manson, who filed an application covering the subject-matter thereof on December 26, 1912, Serial Number 738,774, said application being for an improvement in beds.

I claim—

1. In a bed construction, the combination with a bed-bottom frame having suitably connected end and side bars of a bedstead frame, an apertured spring rest supported by said bedstead frame, a sleeve on said side-bar formed with an apertured boss on

its upper side adapted to register with the aperture of said spring rest, a tension bolt extending through the apertures of said boss and spring rest, a cushion spring surrounding said bolt and at its lower end supported by said spring rest, and spring-confining means on the upper end of said bolt.

2. In a bed construction, the combination with a bed-bottom frame having suitably connected end and side-bars of a bedstead frame, a spring rest supported on the side-rails of said bedstead frame and formed with a centrally apertured spring seat, a sleeve on said side-bar formed with an apertured boss on its upper side adapted to register with the aperture of said spring seat, a centrally apertured washer fitted within said spring seat, a tension bolt extending through the apertures of said boss, spring rest and washer, a cushion spring surrounding said bolt and at its lower end stepped on said washer, and spring-confining means on the upper end of said bolt.

3. In a bed construction, the combination with a bed-bottom frame having suitably connected end and side-bars of a bedstead frame, a spring rest supported on the side-rails of said bedstead frame and formed with a centrally apertured spring seat, a sleeve adjustably clamped on said side-bar and formed with a countersunk apertured boss on its upper side adapted to register with the aperture of said spring seat, a centrally apertured washer fitted within said spring seat, a tension bolt extending through the apertures of said boss, spring rest and washer with its head fitted to the countersink of said boss, a cushion spring surrounding said bolt and at its lower end stepped on said washer, and spring-confining means on the upper end of said bolt.

4. In a bed construction, the combination with a bed bottom frame having suitably connected end and side-bars, of a bedstead frame, an apertured spring-rest supported by said bedstead frame, a sleeve on said side-bar, a cushion spring stepped at its lower end on said spring-rest, and a tension-bolt surrounded by said cushion spring, said bolt at its upper end engaging the upper end of said cushion spring and at its lower end extending through said apertured spring-rest and connected to said sleeve.

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