M. & U. FEIG.

SPRING UPHOLSTERY DEVICE.

APPLICATION FILED APR. 11, 191[illegible].

1,008,895.

Patented Nov. 14, 1911.

2 SHEETS—SHEET 1.

Fig. 1

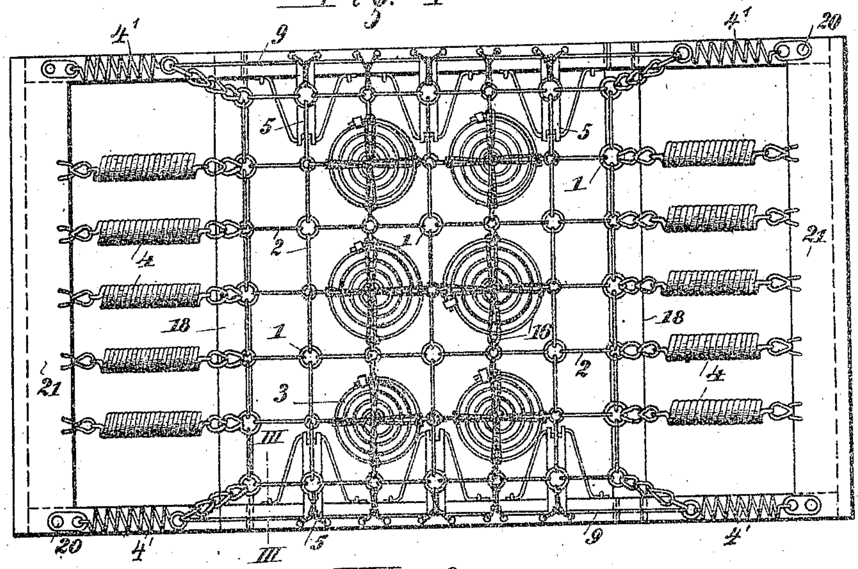


Fig. 2

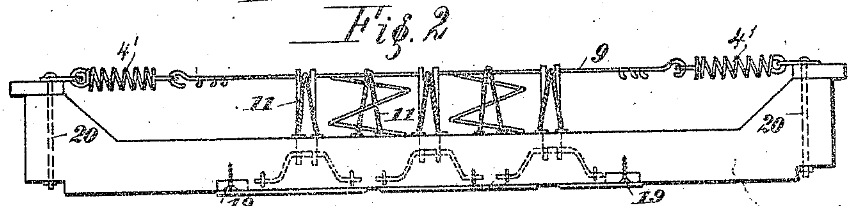


Fig. 3

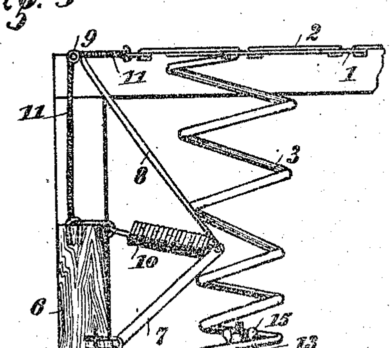
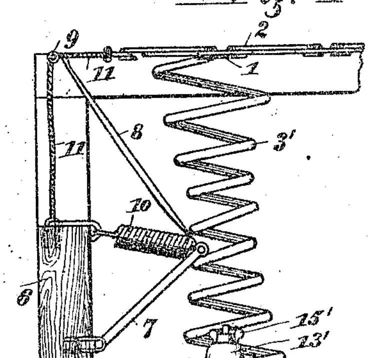


Fig. 4



Witnesses

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2 SHEETS—SHEET 2.

Fig. 5

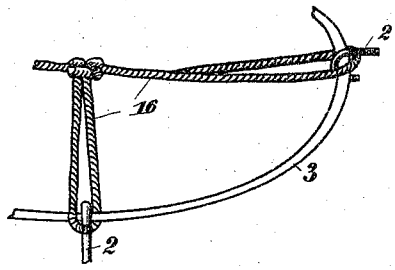


Fig. 8

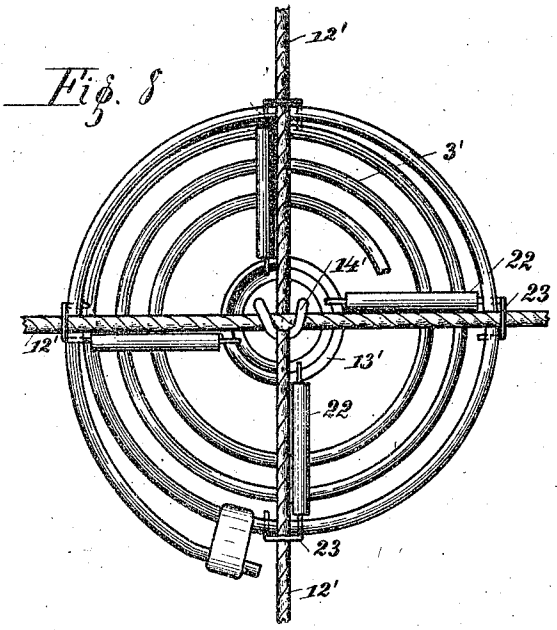


Fig. 6

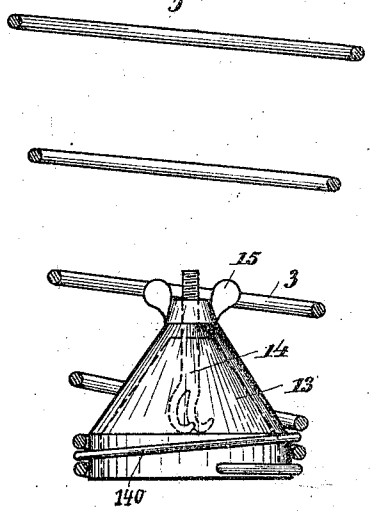
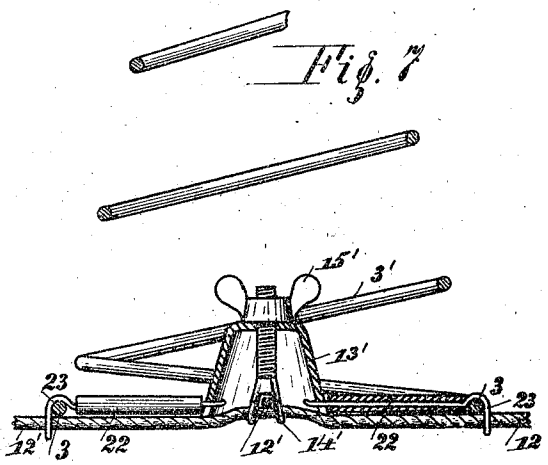


Fig. 7



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UNITED STATES PATENT OFFICE.

MAX FEIG AND ULRICH FEIG, OF BAD ELSTER, GERMANY.

SPRING UPHOLSTERY DEVICE.

1,008,895. Specification of Letters Patent. Patented Nov. 14, 1911.

Application filed April 11, 1910. Serial No. 554,845.

To all whom it may concern:

Be it known that we, MAX FEIG and ULRICH FEIG, subjects of the King of Saxony, residing at Bad Elster, Vogtland, in Germany, have invented a certain new and useful Improvement in Spring Upholstery Devices, of which the following is a specification.

This invention relates to spring upholstery.

One of its objects is to provide improved means for centering box-springs relatively to their points of engagement with the webbing or the like.

Another object is to provide, in combination with said spring-centering means, means for regulating the tension of the webbing.

The invention is illustrated in the accompanying drawings as applied to a spring-mattress.

Figure 1 is a plan view of the mattress, and Fig. 2 a side view thereof. Fig. 3 is a section of part of the mattress on the line III—III of Fig. 1, and on an enlarged scale, showing one of the box-springs with its centering and regulating device. Fig. 4 is a view similar to Fig. 3, but showing another form of the centering device. Fig. 5 is a perspective view showing part of one of the springs, with its attachment to the upper network of the mattress. Fig. 6 shows the centering and regulating device of Fig. 3, on a larger scale. Fig. 7 shows the centering and regulating device of Fig. 4 in section, and on a larger scale. Fig. 8 is a bottom plan view of Fig. 7.

The mattress shown in Figs. 1 and 2 comprises a kind of net formed of rings 1 connecting hooked rods or links 2, this net being supported by box-springs 3, and connected by coiled springs 4 to the head and foot rails 21 of a frame. One of the springs 3 is shown on a larger scale in Fig. 3, which also illustrates the means whereby the net is attached to the side rails of the frame. The device used for this purpose comprises a toggle-lever 7, 8 pivoted at its lower end to the rail 6, and engaged at its upper end with a wire 9 which is stretched along the side of the mattress, the ends of the wire 9 being connected to the head and foot rails by springs 4^1. Cords 11 attached to the lateral edges of the net pass over the wire 9 and are attached to the rail 6, and a spring 10 with one end connected to said rail is connected at its other end to the knuckle of the toggle-lever 7, 8. The member 8 of the toggle-lever is formed of two parallel strips of metal, bent at their ends to make eyes for engagement with the wire 9 and member 7 respectively. The springs 3 are supported by cords 12 which form a network attached to the sides and ends of the frame, the connection of the springs to this network being made by means of supports 13, one of which is shown in Fig. 6. This support 13 consists of a hollow truncated cone with a cylindrical extension at its base. A helical ridge or thread 140 is formed upon the cylindrical part of this support, for engaging it with the helical spring 3 as shown. A double hook 14 with screw-threaded shank is suspended in the cone, to which it is fixed by means of a wing-nut 15 screwed down upon the flat top of the support. The latter is placed at the point of intersection of two cords 12, and one of the latter is engaged with both the hook-members, the other cord 12 passing between these members over the engaged cord 12. The tension of the cords 12 can be regulated by screwing the nut 15, so that the hook is either pulled upward or lowered in the part 13. While the cords 12 are slack, but engaged with the hook, the support 13 can be easily adjusted so that it is exactly coaxial with the uppermost convolution of the spring 3. This adjustability is very important in regard to the efficiency and life of the springs 3. The latter are of the conical type, with convolutions increasing in diameter toward the top. The connection of the springs 3 to the rods 2 is made in known manner by means of strong hempen cords 16; by this means friction of metal on metal is avoided, and the action of the springs rendered noiseless. The cords 12 are fastened by screws 17 to the side rails 6 and transverse rails 18 of the frame; the rails 18 are dove-tailed to the rails 6, and fixed by screws 19. The axes of the screws 19 are outside the median lines of the rails 18, which prevents wabbling of the inwardly pulled rails. The side rails 6 are fixed to the head and foot rails by bolt 20, the frame being very rigid and not subject to distortion by the weight resting on the mattress.

In the modification shown in Figs. 4, 7 and 8 the support 13^1 is a hollow, truncated cone, without cylindrical extension, used in conjunction with a box-spring 3^1 which is flared both at top and bottom. The support

13^1 is connected to the spring 3^1 by radially projecting tempered steel hooks 23, the shanks of which are covered with sleeves 22 of rubber or equivalent material. Engagement with the cords 12^1 is made by means of a hook 14^1 adjustable by a wing-nut 15^1 as described with reference to Fig. 3, and the ends of the hooks 23 are bent so that they also engage the said cords and then curve back over the spring 3^1. The shanks of the hooks 23 are fitted into holes in the part 13^1, so that the hooks are normally slightly downwardly inclined, and are bent upward to engage the spring 3^1.

What we claim as our invention and desire to secure by Letters Patent of the United States is:—

1. In an upholstery cushioning device, the combination of a webbing, a plurality of box springs supported on said webbing, domed devices engaging said springs and having bearing on the webbing and means within said domed devices for applying tension to the webbing.

2. In an upholstery cushioning device the combination of a webbing, a plurality of box springs supported on said webbing, peripheral means engaging the lower ends of said springs and a hooked member adapted to be drawn upward within the periphery of said means for tensioning the webbing.

3. In an upholstery cushioning device the combination of a webbing composed of crossed cords, box springs located at the intersections of said cords domed devices peripherally engaging the springs, hooks adapted to engage the webbing at the points of intersecting and means for drawing said hooks into said domed devices to tension said webbing.

In witness whereof we have signed this specification in the presence of two witnesses.

MAX FEIG.
ULRICH FEIG.

Witnesses:
EDMUND BAER,
CARL MUNTZNER.