No. 639,931. Patented Dec. 26, 1899.

F. A. PALMER.

BED SPRING.

(Application filed Mar. 11, 1899.)

(No Model.)

Fig. 1.

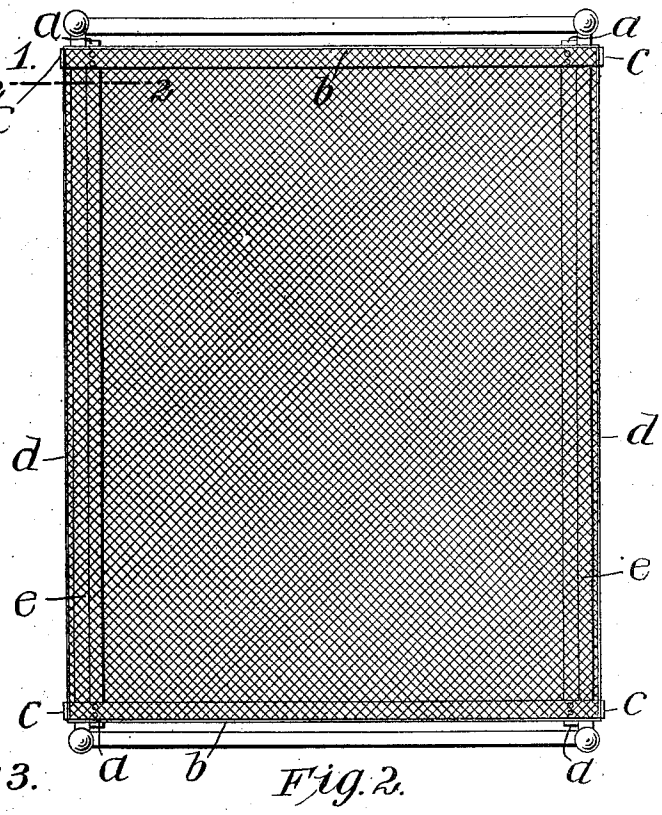
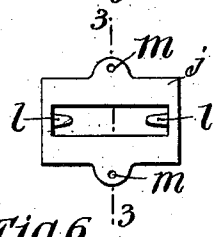


Fig. 2.

Fig. 3.



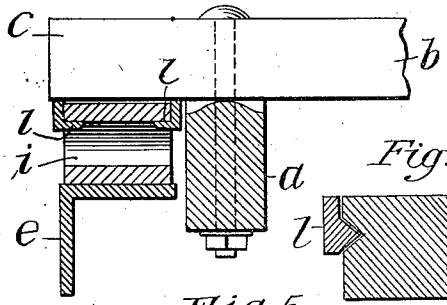


Fig. 4.

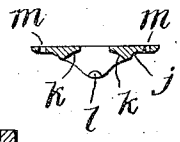
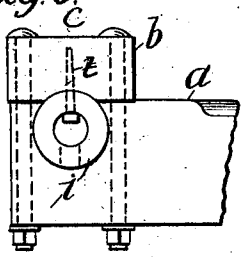
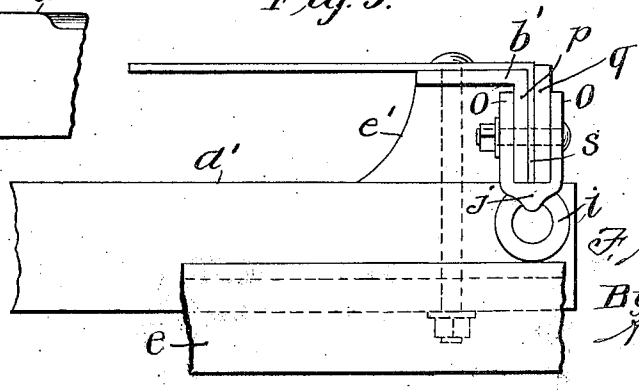


Fig. 7.

Fig. 5.

Fig. 6.





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UNITED STATES PATENT OFFICE.

FREDERICK A. PALMER, OF NEW YORK, N. Y.

BED-SPRING.

SPECIFICATION forming part of Letters Patent No. 639,931, dated December 26, 1899.

Application filed March 11, 1899. Serial No. 708,633. (No model.)

To all whom it may concern:

Be it known that I, FREDERICK A. PALMER, a citizen of the United States of America, and a resident of New York, (Bay Side,) county of Queens, and State of New York, have invented certain new and useful Improvements in Bed-Springs, of which the following is a specification.

My invention relates to bed-springs known in the trade as "overhang" bed-springs, also to "rabbet-edge" springs, both of which overhang the side rails of the bedstead. In the overhang construction, to which the invention is more particularly designed, the web-supporting frame has its end bars attached to the upper sides of the side bars to support the web at a higher level than the level of the said upper sides of the side bars and projecting beyond the outsides of the side bars to carry a wire web with margins overhanging the frame, which is a desirable form of construction, affording wider beds with a given width of bedsteads, said extensions of the end bars being also utilized for the bearing-points of the bed-springs on the side rails of the bedstead; and my invention consists of improvements in spring-bearings of such bed-spring frames to rest on the side rails of the bedsteads for greater elasticity of the bed, preventing noise, and especially to prevent marring, scratching, and disfiguring the enamel or other finish of the side rails of the bedstead, all as hereinafter described, reference being made to the accompanying drawings, in which—

Figure 1 is a plan view of a bed-spring of the character for which my invention is designed. Fig. 2 is a detail in sectional elevation, on a larger scale, the line of the section being approximately at 2 2, Fig. 1. Fig. 3 is a plan view of a clip for connecting a spring to the end bar of the bed-spring frame. Fig. 4 is a transverse section of the clip on line 3 3, Fig. 3. Fig. 5 is a detail in side elevation, showing a modification of the clip for attaching the springs to angle-iron end bars of the bed-spring frame; and Fig. 6 is a detail showing a manner of connecting the spring without the clip. Fig. 7 is a longitudinal section of the spring and clip, showing a solid spring with a recess in each end to receive the prongs of the holder.

The frames of the overhang bed-springs, for which my improved bearing-spring is intended, are commonly made of wood bars, as the side bars *a* and the end bars *b*, said end bars being bolted to the upper sides of the side bars, as represented in Fig. 2, and projecting outward of the side bars, as at *c*, to support margins *d* of the wire web overhanging the side bars *a* and the side rails *e* of the bedstead also; but they are sometimes made of angle-iron bars *a'* and *b'*, a bracket *e'* or some equivalent device being employed in connecting the side bars and end bars together, the bracket being secured to the side bar, and the end bar *b'* being bolted or riveted to the bracket. As these overhang bed-springs are now made the projecting ends *c* of the end bars rest directly on the side rails *e* of the bedstead, which is injurious to the enamel or other finish of the side rails by scratching and marring it. It is also objectionable for being creaky and noisy, and the bed-spring sets lower than is desirable for the proper height of the wire web above the side rails of the bedstead. To avoid these objections and also to make the bed more springy, I apply rubber cushion-springs to the under sides of these projecting end portions *c* of the end bars, which I prefer to make of short sections *i* of elastic-rubber tubing of comparatively thick and rigid web, which I apply sidewise to the under sides of said projections and will secure in any approved way, as by a nail *t* driven through the upper part of the web of the spring, the lower part of the web being perforated to admit the head of the nail through it; but the way that I prefer to apply them consists in the employment of a metallic clip comprising a base-plate *j*, having a suitable concave seat *k* in one side adapted to the contour of a section of the side surface of the spring, with a prong *l* at the ends of the seat, respectively, said prongs pointing inward of the ends of the base-plate to hook into the openings of the ends of the spring to retain the spring on the seat, the said plate having the flat base (represented in Figs. 2, 3, and 4) to be fastened on the end portion *c* of

a bar *b* by screws inserted through holes *m* or parallel flanges *o*, adapted to receive between them the vertical flange *p* of the angle-iron end bar *b'* and the binding-strip *q*, employed to secure the turned-down margin *s* of the wire web and be riveted thereto, as shown in Fig. 5.

To enter the springs in their seats in the attaching-plates, they are powerfully compressed lengthwise, as in the jaws of a vise, being inserted a little more than half their diameter between said jaws and so shortened by the compression that the spring will enter between the points of the prongs into the seat, the plate being placed on the spring while so compressed. Then as the pressure is relaxed the spring expands into the hooks and is thus effectually secured.

The springs are not necessarily tubular. They may be practically solid and either cylindrical or of other form, with a recess in each end to receive the prongs of the holder, as shown in Fig. 7, or the indentures of the prongs in the ends of the compressed springs of solid form may serve.

The spring and attaching-plate may be sold separately from the bed-springs, as they can be attached to any overhang or rabbet-edge bed-spring already in use by any one capable of screwing the attaching-plates to the end bars of the bed-spring.

It will be seen that the special feature of my invention is a very simple contrivance of the cushion-spring, whereby it can be attached directly to the under side of the projecting end portion of the end bar of the bed-spring frame, so as to avoid the necessity of a special bracket attached to the bed-spring frame for carrying the cushion-spring, as in the Schlesinger patent, No. 583,266.

What I claim as my invention is—

1. A cushion-spring for "overhang" or "rabbet-edge" bed-springs consisting of an elastic pad and a base-plate, said base-plate having one side adapted to be attached directly to the under side of the overhanging part of the bed-spring, a bearing-seat on the other side for receiving the elastic pad, and a hook-prong at each end of said seat, said prongs pointing toward each other and adapted to engage the ends of the pad respectively and securely hold it in its seat in the base-plate.

2. The combination with a bed-spring having "overhang" extensions of the sides at the ends to rest on the side bars of the bedstead, of cushion-springs attached directly to the under sides of said overhang extensions of the bed-spring, said cushion-springs consisting of an elastic pad, a base-plate, said base-plate having one side adapted to be attached to said overhang extensions, a bearing-seat on the other side for receiving the said elastic pad, and a hook-prong at each end of said seat, said prongs pointing toward each other and adapted to engage the ends of the pad respectively, and securely hold it in its seat in the base-plate.

Signed by me at New York, N. Y., this 20th day of March, 1899.

FREDK. A. PALMER.

Witnesses:
C. SEDGWICK,
A. P. THAYER.