(No Model.) 2 Sheets—Sheet 1.

J. P. LEGGETT.

SPRING BED BOTTOM.

No. 434,794. Patented Aug. 19, 1890.

Fig. 1.

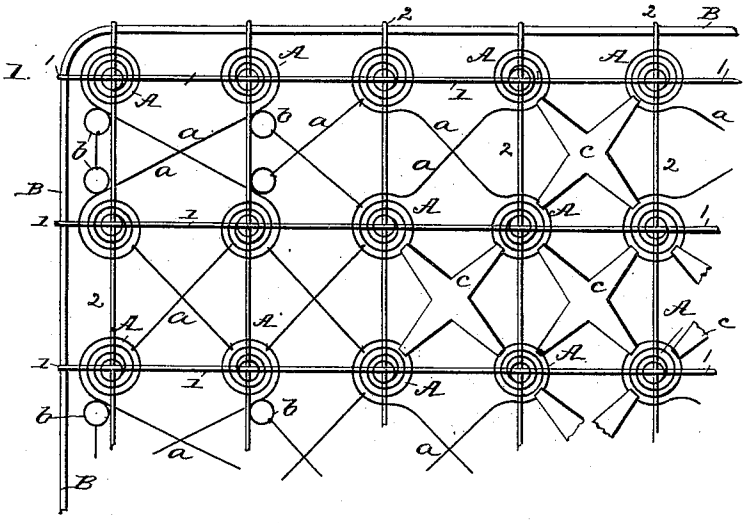


Fig. 2

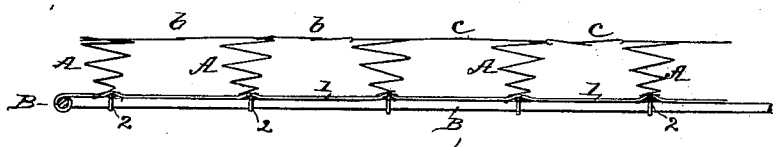
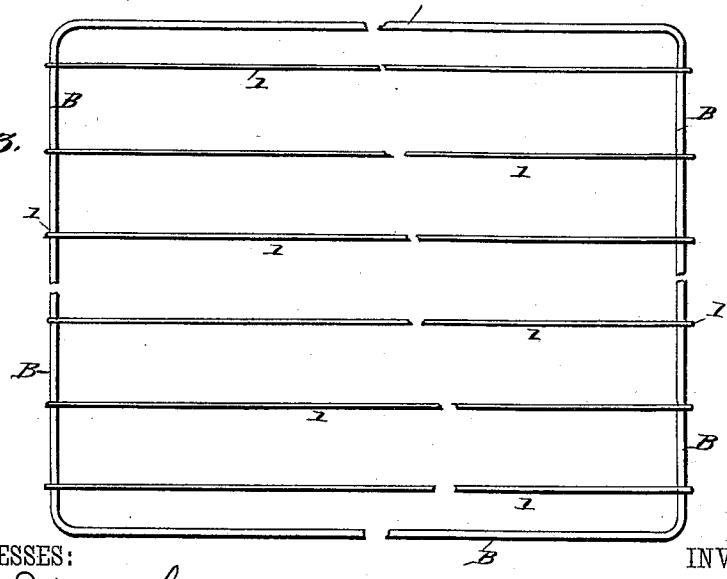


Fig. 3.



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(No Model.) 2 Sheets—Sheet 2.

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Fig. 8.

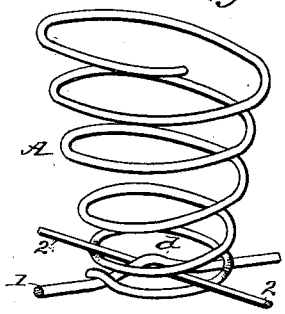


Fig. 9.

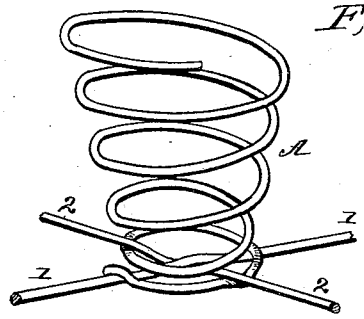


Fig. 4.

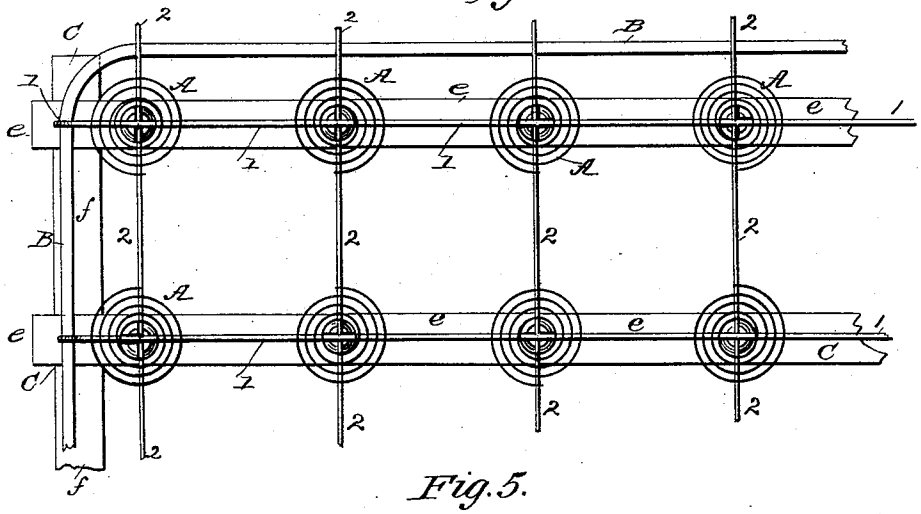


Fig. 5.

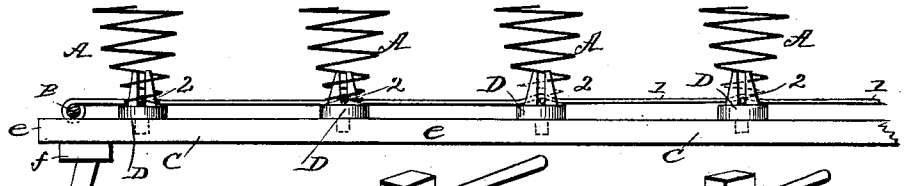


Fig. 6.

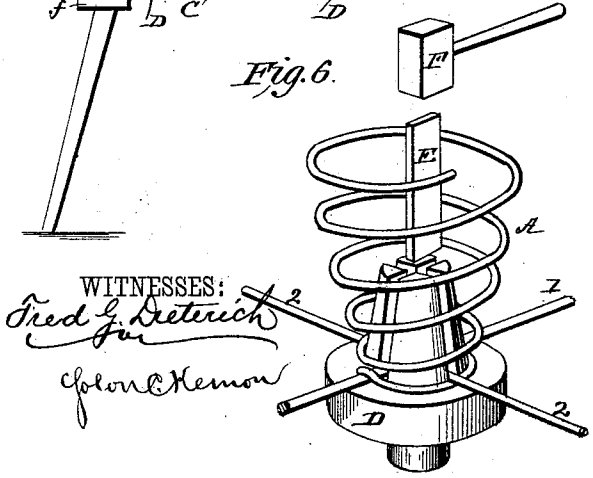
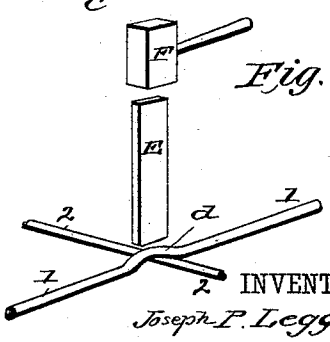


Fig. 7.



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UNITED STATES PATENT OFFICE.

JOSEPH PALMER LEGGETT, OF CARTHAGE, MISSOURI.

SPRING BED-BOTTOM.

SPECIFICATION forming part of Letters Patent No. 434,794, dated August 19, 1890.

Application filed April 4, 1889. Serial No. 306,001. (No model.)

To all whom it may concern:

Be it known that I, JOSEPH PALMER LEGGETT, of Carthage, in the county of Jasper and State of Missouri, have invented a new and Improved Spring Bed-Bottom, of which the following is a specification.

My invention is an improvement in the class of bed-bottoms in which coiled-wire springs are supported upon and attached to crossed wires that form the base of the bed-bottoms.

In the accompanying drawings, Figure 1 is a plan view of a portion of my improved bed-bottom. Fig. 2 is a longitudinal section of the same. Fig. 3 is a plan view of the iron frame to which the spiral springs are fastened. Fig. 4 is a plan view of such frame and springs set on an anvil-supporting bench. Fig. 5 is a side view of the parts shown in Fig. 4. Fig. 6 is a perspective view of the crossed wires, setting-tool, and hammer in position for setting one wire on the other; and Fig. 7 is a perspective view further illustrating the setting operation. Fig. 8 is a perspective view of a spring arranged in the required position on the crossed wires prior to the setting operation. Fig. 9 is a perspective view of the same parts after the setting operation has been completed.

As shown in Figs. 1 and 2, the base or foundation to which the coiled springs A are secured is composed of the following parts: a rectangular oblong frame B, formed of a stout steel rod, a series of stout or thick wires 1, which are arranged equidistantly parallel to the sides of said frame and attached to the end portions thereof by bending or looping the ends of said wires around the latter, and, thirdly, a series of smaller or thinner parallel wires 2, which are arranged crosswise or at right angles to the longitudinal wires 1. At every point where such wires 1 2 cross each other a spring A is located and secured. The springs are preferably connected in pairs, as shown, both members of a pair being formed of a single wire, and the straight connecting portion *a* being led off directly from the side of each spring or first coiled into small rings *b*, both of which constructions are illustrated in Fig. 1. As a means for tying together such springs A as are unconnected by the wire *b*, I propose to use a cruciform metal piece *c*, whose extremities are looped around the top coils of the springs, as shown.

I will now describe the method of securing the springs A to these wires 1 2. First, it is to be noted that the thick wire 1 is made of soft-metal—such as iron or soft steel—as distinguished from hard or elastic metal, so that the same will tend to retain any bend or shape that may be given to it. The thin wire 2, on the other hand, is made of hard metal—such as spring-steel—so that it may have a necessary degree of elasticity. Before the thick longitudinal wires 1 are attached to the frame A a series of slight upward bends *d*, Figs. 7 and 8, are formed in them by any suitable means, the same being located at the distance apart the springs A are required to be secured. The springs A are then placed on the wires 1, as indicated in Figs. 1 and 4, their location and distance apart being determined by the bends or kinks *d*, and the steel cross-wires 2 are next passed (see Figs. 7 and 8) over the lower coils of the springs and under the bends *d* of wires 1. Then the said bends *d* are set or forced down by means of any suitable tool or tools, so that the lower wire 2 is bent downward at such points, Fig. 9, and held thus under tension by the wire 1, whose lack of elasticity causes it to retain the set thus given to it instead of reassuming its original kinked form. These are the main steps of the operation of securing the springs to the wires 1 2.

I will now describe the operation more in detail. I employ the bench or table C (shown in Figs. 4 and 5) and the slotted anvil D, the punch or setting-tool E, and a hammer F, Figs. 6 and 7. The said bench is formed of a series of separated parallel beams *e*, laid and supported on cross-bars *f*, having legs *g*. Each anvil D consists of an upper portion having slots that cross at right angles, a flat middle portion or base, and a vertical shank, which is aligned with the upper part. Such shank is adapted to fit in any of the sockets formed in the beams *e* of bench C, and the sockets are arranged at the same distance apart as the springs A should be. The slotted or upper portion of each anvil D is made of less diameter than the narrowest coil of the springs A, so that the latter may pass easily over it.

The anvils D having been all put in place on the bench C, the frame B, with the heavier or soft-iron wires 1 attached, as shown in Fig. 3, is laid on the bench, the kinks *d* in said wires coinciding with the slots of the anvils, as shown. Then the springs A are put in position, one over the slotted portion of each anvil D. Next the thin spring-wires 2 are passed through the cross-slots of the anvils over the lower coils of the springs and under the bends or kinks *d* of the wire 1, one such wire 2 being used for each row of springs arranged transversely of the base-frame B.

The final operation consists in placing the punch E on each bend *d* in the slot of each anvil D and striking the said tool with a hammer F, thus forcing the bend *d* down, or setting it, so that it will hold the spring-wire 2 under tension, causing it to press down on the lower coil of each spring B. Such clamping action tends to secure the springs A firmly in place. To the same end I provide the lower coils of the springs with a bend or kink at one side and at the end, as shown in Figs. 8 and 9, for the purpose of receiving the thick wire 1. The operation being completed by giving the set, as last described, the frame B, with the attached wires and springs, is lifted off the bench C, and the bed-bottom is then completed by looping and clamping the ends of the steel wires 2 about the sides of frame A and connecting the springs by the cruciform pieces *c*, so that it presents the appearance shown in Fig. 1.

What I claim is—

The combination of the spring-steel cross-wires 2 with the iron or inelastic longitudinal wires 1, having crimps or bends *d*, and the coiled bed-springs A, the said spring-wires 2 passing under the inelastic wires 1 and over the lower convolution of the bed-springs, and being held bent downward or crimped by said inelastic wires, and thereby constantly exerting an elastic pressure against them, all as shown and described.

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Witnesses:
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