

No. 835,394.

PATENTED NOV. 6, 1906.

E. W. BURBRIDGE.
SPRING BED BOTTOM.
APPLICATION FILED DEC. 7, 1906.

Fig. 1.

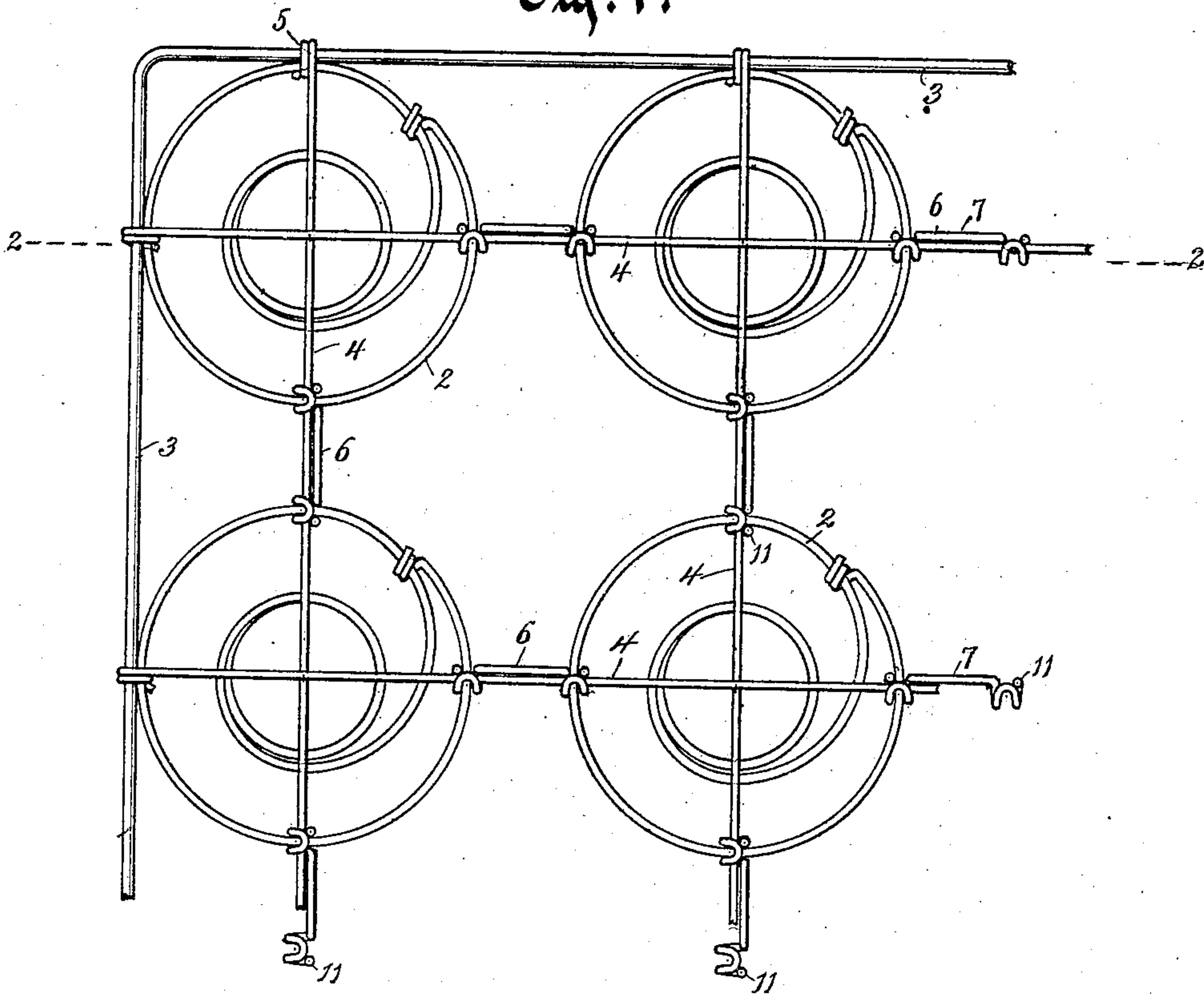


Fig. 2.

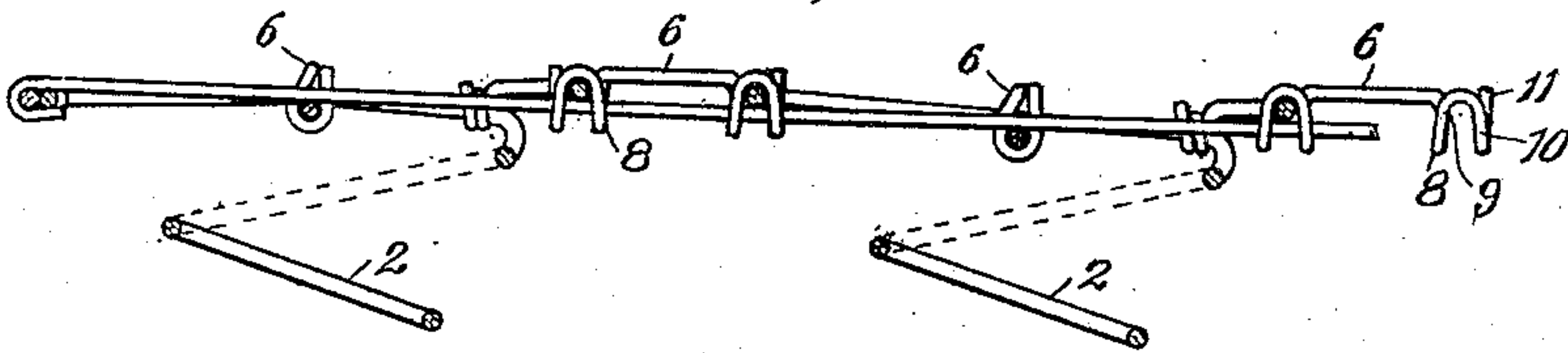
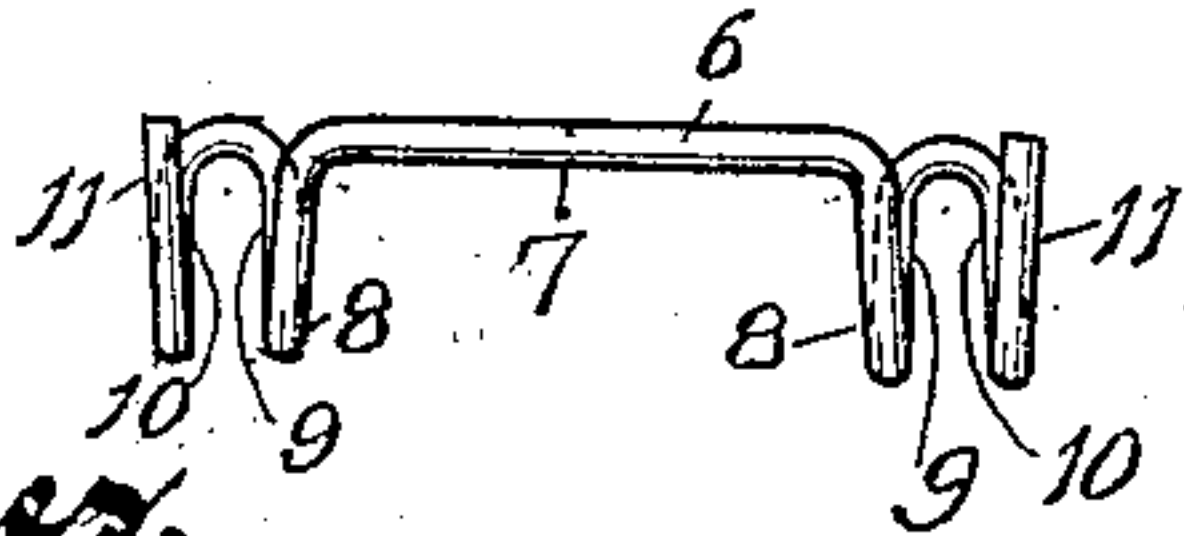


Fig. 3.



Witnesses.

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Fig. 4.



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UNITED STATES PATENT OFFICE.

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SPRING BED-BOTTOM.

No. 835,394.

Specification of Letters Patent.

Patented Nov. 6, 1906.

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To all whom it may concern:

Be it known that I, EDWIN W. BURBRIDGE, residing in Kenosha, in the county of Kenosha and State of Wisconsin, have invented
5 new and useful Improvements in Spring Bed-Bottoms, of which the following is a description, reference being had to the accompanying drawings, which are a part of this specification.

10 In spring bed-bottoms that are composed largely of coiled-wire springs, which coils are set up on end, it is desirable, and even necessary, that these coiled-wire springs should be
15 secured in place in the bed-bottom against displacement either accidentally or otherwise; and my invention relates to the improved means for securing the coiled-wire springs in place in the bed-bottom effectually and inexpensively.

20 The invention consists of the means for thus securing the coiled-wire springs in the bed-bottom and the combinations thereof, as herein described and claimed, or the equivalents thereof.

25 In the drawings, Figure 1 is a plan of a fragment of a bed-bottom at and including one corner thereof so far as the same would be seen in a plan view. Fig. 2 is a section on
30 line 2 2 of Fig. 1. Fig. 3 is a detail of a specific device employed by me as a chief part of the means used for securing or locking the coiled-wire springs in place, and Fig. 4 is an end view of the device shown in Fig. 3.

35 Spring bed-bottoms of the general character of those in which my invention may be used consist of a large number of coiled-wire springs set up on end and secured in place by framing of some kind, to which framing the
40 coiled-wire springs are secured, respectively, at their tops and at their lower ends or bases.

In the drawings, 2 indicates coiled-wire springs of a form in common use and of which only four springs are shown in Fig. 1, although a large number of such springs are
45 employed in each bed-bottom. With these springs a bed-bottom frame is required, and this may consist of a subframe at and above the top of the springs and a similar or duplicate subframe at the bottom of the springs,
50 which subframes may or may not be connected together otherwise than as connected by being attached to the interposed coiled-wire springs. For the purposes of this invention it has been deemed sufficient to show

merely a top view of these four springs and 55 of a fragment of the subframe located above the coiled-wire springs and forming a part of the complete frame required in the complete bed-bottom. In each of these subframes or
60 in each top and bottom member of the bed-bottom frame I employ a marginal rod or rail 3, which may be of steel wire of such size and stiffness as to adapt it for maintaining the form of the bed-bottom and for securing
65 the parts attached thereto in relative positions. In connection with this wire rod or rail 3 I also employ two sets of stay rods or wires 4, one set of which stay-rods extends transversely of the bed-bottom from one side
70 thereof to the other and the other set of which rods extends from the top or head end of the bed-bottom to the other or bottom end thereof. I employ as many of these stay-rods in each of these sets as there are rows,
75 longitudinally and transversely, of coiled-wire springs in the bed-bottom, and these rods are so disposed that one transverse rod passes across the end of each spring in each
80 transverse row of coiled-wire springs, and one longitudinal stay-rod passes across the end of each coiled-wire spring in each longitudinal row of springs in the bed-bottom, so that one
85 transverse stay-rod and one longitudinal stay-rod passes across the end of each spring in the bed-bottom, the stay-rods crossing each other centrally of the end of the coiled spring. The end of each of these stay rods
90 or wires is secured to the marginal rod 3 by coiling the end of the stay-rod wire about the marginal rod or rail, as shown at 5, the coiling of the stay-rod being also about the
95 wire of the spring in its terminal coil, so that the terminal coil of the spring which abuts against the marginal rod 3 is secured thereto wherever such coil of a spring abuts
100 against the marginal rod, and this occurs with all of the coiled-wire springs in the bed-bottom arranged around the margin of the bed-bottom, or, in other words, with all of the coiled-wire springs at the outer ends of all
105 the rows of springs. All the other springs in the bed-bottom are secured to these stay-rods solely by the means hereinafter described.

In bed-bottoms of this general character it 105 is usual and desirable to locate the coiled-wire springs at a little distance apart, so as to give entire freedom of movement of the

springs as springs, and these springs being thus located in the bed-bottom it is necessary to secure them in place against displacement either accidental or otherwise. For this purpose I provide a locking device 6. (Shown individually and detached in Fig. 3.) This locking device is made of a short piece of stiff steel wire and consists of a medially-elongated substantially straight body part 7, with double locking-hooks at each end thereof. Each of these terminal double locking-hooks is formed by bending, and thereby extending, the wire of the device from the body part laterally substantially at a right angle to the body part, forming a hook member 8, and then by a return-bend doubling the hook member back to its attachment to the body part, forming the hook member 9, and there the wire is again bent in the general direction of the length of the body part and then laterally in the plane of the member 9, forming the hook member 10, and this being extended to a length substantially equal to the length of the member 9 the wire is again doubled back to substantially the line of the extension of the body part 7, forming the hook member 11, with the end of which hook member the wire itself terminates.

It will be noted on looking at Fig. 3 that the hook members 8 and 9 form one wall of a socket, the other wall of which is formed by the hook members 10 and 11, located at a little distance therefrom, and which socket for convenience of nomenclature may be called a "transverse" socket, and on looking at Fig. 4 it will be seen that the hook members 8 and 11 at one side and the members 9 and 10 at the other side form the two walls of another socket or opening, which for convenience I call the "longitudinal" socket. It will also be observed that the members 8 and 9 and 10 and 11 are brought close to each other at those ends thereof that are adjacent to and substantially in the line of the prolongation of the body part 7, whereby the longitudinal socket is substantially closed at that end thereof. In shop practice this locking device is known as a "crimp."

In the manufacture of a spring bed-bottom of this character a sufficient number of these locking devices 6 are put on the wires of which the stay-rods 4 are to be made by thrusting the stay-rod wires through the closed longitudinal sockets of the locking devices, and then when the springs are placed in position in the bed-bottom and the stay-rods and the marginal rows of springs have been secured to the marginal rod 3 by the coiling of the ends of the stay-rods about the marginal rod and the abutting coils of the springs the springs both in the marginal rows and in the interior of the bed-bottom are secured together and in place by bringing these locking devices on the stay-rods to the locations of the nearest approach of each two

of the springs to each other and by rotating the locking devices about the stay-rod, bringing them down onto these wires of the springs, thus causing the wires to enter the transverse sockets in the locking devices in the manner shown in Figs. 1 and 2. As these sockets are made of a proper size to receive and fit on the stay-rods and the wires of the springs, it will be understood that when thus brought together and attached in this easy and ready manner the coiled-wire springs will be secured in place in the bed-bottom in a very suitable and most efficient way. These locking devices being advisably made of stiff steel wire are practically rigid, being substantially without elasticity and being first strung on the stay-rods by inserting the stay-rods through the sockets therefor in the hooks, and then by the rotating of the locking device and without any bending or flexing of the device or any part thereof the hooks are caused to engage and clamp the marginal rods and the outer coils of the wires of the springs, whereby the parts are secured in place, as described.

What I claim as my invention is—

1. A completely-formed and practically-rigid locking device for a spring bed-bottom adapted to be applied without bending or change of form, consisting of an elongated body part, and terminal socket members forming at each end of the body part a substantially closed longitudinal socket and an open transverse socket adapted to receive therein and to engage by application thereto a stay-rod and a spring-wire respectively.

2. A substantially rigid locking device for a spring bed-bottom, consisting of a wire formed into an elongated body part and terminal socket members, each terminal member comprising a plurality of complementary members extending laterally substantially at a right angle to the body part and forming respectively a substantially inclosed longitudinal socket and an open transverse socket.

3. In combination in a spring bed-bottom, coiled wire springs, a stay-rod passing on and across the ends of two adjacent springs, and a substantially rigid locking device secured to said springs and to said stay-rod, the locking device being composed of an elongated body part, and at each end thereof a complete double-socket terminal adapted to receive therein and be strung on the stay-rod and by rotation about the stay-rod to receive therein and clamp the wire of a spring.

4. In combination in a spring bed-bottom, coiled-wire springs, a stay-rod stretched across the ends of two adjacent springs, and a non-flexible wire-locking device secured to said springs and to said stay-rod at their crossings, the locking device being composed of an elongated body part and terminal hook members forming in each terminal hook member a substantially inclosed longitudinal

and an open transverse socket, the disposition of the hook members being such that being applied to the stay-rod and springs without flexing the bend of one hook member goes around above the upper crossing wire or rod and the other hook member goes around under the under crossing wire or rod.

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

EDWIN W. BURBRIDGE.

Witnesses:

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A. H. BLOOD.