

BED SPRING.

1,063,367.

Patented June 3, 1913.

2 SHEETS—SHEET 1.

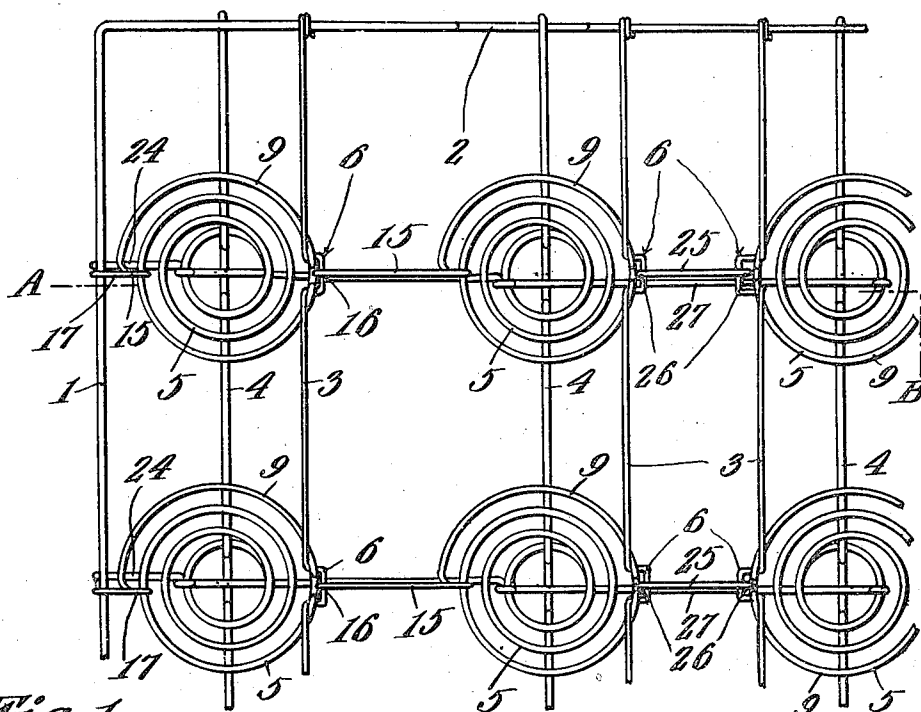
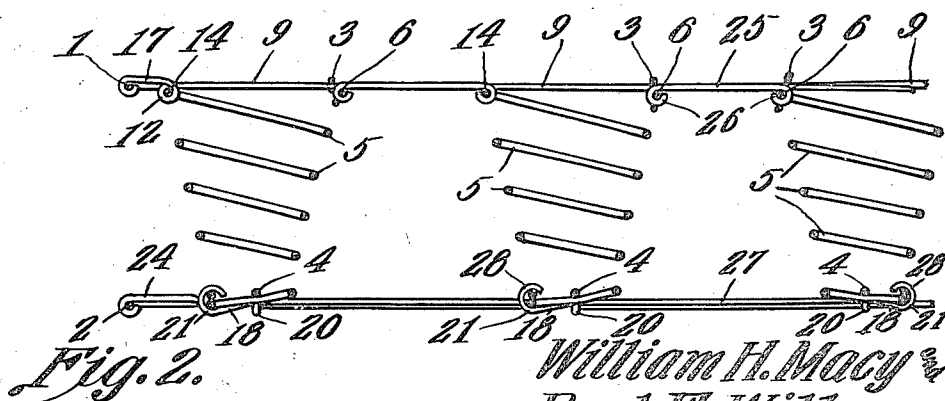


Fig. 1.



Witnesses

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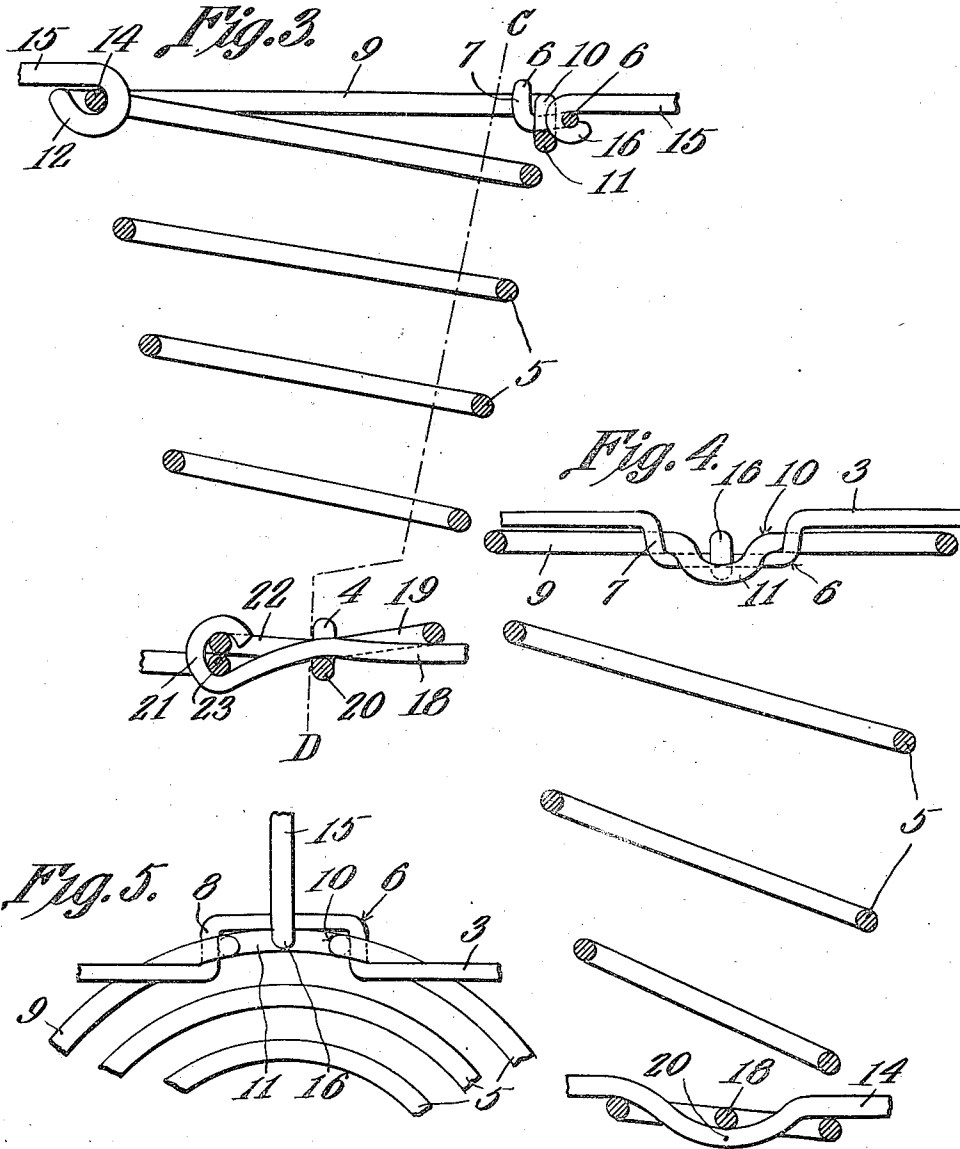
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BED SPRING.

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2 SHEETS-SHEET 2.



Witnesses

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UNITED STATES PATENT OFFICE.

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BED-SPRING.

1,063,367.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that we, WILLIAM H. MACY and BERT E. WILBUR, citizens of the United States, residing at Miami, in the county of Ottawa, State of Oklahoma, have invented a new and useful Bed-Spring, of which the following is a specification.

The objects of the present invention are, to provide a bed, the springs of which are so constructed at their upper ends, as to form a hinge, whereby one spring, or an associated group of springs, may yield independently of adjacent springs, under a superposed weight, thus giving the bed a greater resiliency than is possible when the springs are rigidly connected at their upper ends.

A further object of the invention is to provide a union between a bed spring and a guy wire, the union being of such a nature that when the guy wire is crimped and assembled with the spring, the union will be maintained, before the guy wire is attached to an adjoining spring.

Another object of the invention is to provide novel forms of interlocking bends or crimps in the guy wire and in one convolution of the spring of a bed.

The invention further aims to provide a bed consisting of two banks of connected springs, each bank comprising approximately one-half of the bed, and to connect these banks by a series of links which are pivoted to both banks, so that either bank may yield under a superposed weight, independently of the other bank, the construction being such that when one bank, supporting a relatively heavy weight, yields, such bank will not unduly distend the other bank, supporting a lighter weight.

A further object of the invention is to provide a spring bed in which all of the unions between parts of the structure, adjacent the top of the bed, lie in a common plane, thus giving a flush surface to the upper face of the bed.

The invention also contemplates the provision of a construction whereby the lower portion of one spring may be connected with the lower portion of an adjoining spring, without the use of tools.

Another object of the invention is to provide a spring bed in which creeping and lateral motion of the springs will be reduced to a minimum.

In the accompanying drawings,—Figure 1 shows the invention in fragmental top

plan; Fig. 2 is a fragmental longitudinal section upon the line A—B of Fig. 1; Fig. 3 is a sectional detail enlarged from Fig. 2; Fig. 4 is a section upon the line C—D of Fig. 3; and Fig. 5 is a fragmental top plan showing the means whereby the springs and the guy wires are interlocked.

In carrying out the invention there is provided a top frame 1 and a bottom frame 2, opposite portions of the top frame 1 being connected by transverse guys 3, opposite portions of the bottom frame 2 being connected by transverse guys 4. The invention further includes a plurality of springs, denoted generally by the numeral 5. Of these springs 5, there may be any number, and the specific form given to the springs may be varied, and altered from the showing of the drawings, without departing from the spirit of the invention, or jeopardizing the utility of the structure in which the invention is embodied. The top guys 3 are equipped intermediate their ends, with a plurality of bends 6, there being a bend 6 for each of the springs 5. The bends 6 are depressed, as shown at 7, and are carried laterally, as shown at 8. The upper convolution 9 of the spring 5 is extended beneath the guy 3, and across the top of the laterally extended portion 8 of the bend 6 in the guy. The upper convolution 9 of the spring 5 is provided with a bend 10, which is depressed as shown at 11, to fit into the bend 6 of the guy wire 3, at right angles to the plane of the laterally extended portion 8 of the bend 6. As shown at 12, the upper convolution 9 is carried around the next lower convolution 14 of the spring 5, the free end of the convolution 9 terminating in a finger 15, equipped at its end with a hook 16, the hook 16 engaging with the bend 6 of the next adjoining guy 3, upon the outside of the bend 10 of the corresponding spring. The fingers of the outside spring of the bed are engaged with the top frame 1, as indicated at 17, and as shown most clearly in Fig. 2.

There is a radially extended finger 18, forming a part of the lower convolution of the spring 5, the finger 18 fitting in a depressed bend 20 formed in the lower guy 4, each lower guy 4 being extended across the upper edge of the lower convolution 19. The finger 18 terminates in a hook 21 which engages the lower convolution 19 of an adjoining spring, the hook 21 engaging, also, the next, upper convolution 22, as shown most clearly in figure 3. As denoted by the

numeral 23, those portions of the convolutions 19 and 22 which are engaged in the hook 21, are alined, transversely of the mouth of the hook. The lower fingers of the outside springs of the bed are engaged with the bottom frame 2, as shown at 24, and as seen most clearly in Fig. 2.

The bed comprises two banks, the springs of which are united in the manner hereinbefore set forth. Links are provided, as seen to best advantage in Figs. 1 and 2, these links 25 terminating in hooks 26, adapted to engage pivotally with the bends 6 of the upper guys 3 which define the boundaries of the two banks of springs, adjacent the center of the bed. The separate banks of springs are connected at the bottom of the bed, by links 27, fitting in the depressed bends 20 of the lower guys 4, along the transverse center line of the bed, the links 27 terminating in hooks 28 which engage the alined portions 23 of the convolutions 19 and 21 of those springs 5 which lie adjacent the transverse center of the bed, and constitute the terminal springs of each bank.

Owing to the manner in which the bends 10 of the springs 5, fit down into the bends 6 of the upper guys 3, the springs 5 will be held assembled with the guys 3, securely, before the hooks 16 of the fingers 15 are engaged with the bends 6. The operation of setting up the springs, is thereby facilitated. Moreover, as will be evident from Fig. 4, when the hooks 16 are engaged with the bends 6, the bends 10 of the springs will be positively and securely locked in the bends 6 of the guys. Owing to the fact that the hooks 16 engage pivotally with the bends 6 of the guys 3, the spring 5 is pivotally connected with the next adjoining guy 3, and thus, the spring 5 may yield, to a considerable extent, without distorting the next adjoining spring, and without drawing the bed out of shape. Owing to the fact that the lower convolutions 19 and 22 are alined, as shown at 23, where the convolutions are engaged with the hooks 21 of the fingers 18, the convolutions 19 and 22 may be inserted readily into the mouth of the hook 21, whereupon, if the spring 5 be rotated, into the position shown in Fig. 3, the convolutions 19 and 22, in their alined portions 23, will be turned crosswise of the mouth of the hook 21, the lower end of the spring being thus secured in the hook 21, the finger 18 of the spring which is thus secured, outstanding horizontally, to receive the portions 23 of the convolutions 19 and 22 of the next adjoining spring 5. Owing to the fact that the two banks of springs are pivotally connected by the elements 26 of the links 25, each bank of springs may yield individually, without exerting an undue tension upon the

other bank, the construction desirable, when the weights which the banks support, are different.

Generally considered, the device is so constructed that the one portion of the structure will brace another portion, lateral motion of the springs being avoided. Moreover, as will be evident from an inspection of Fig. 2, the bed, considered as an entity, presents a smooth upper surface, well adapted to receive the mattress, without tearing or distorting the same.

Having thus described the invention, what is claimed is:—

1. In a spring bed, a guy wire having a depressed, laterally extended bend in its intermediate portion; a spring having one of its convolutions extended beneath the guy and across the top of the bend, the said convolution having a depressed bend fitting into the bend of the guy, the bends constituting the sole-interengaging elements for preventing a rotation of the spring upon the guy, the bend of the spring abutting against the bend of the guy to reinforce the latter; the free end of the said convolution constituting the sole connection with the corresponding convolution of an adjoining spring, and terminating in a hook engaged through the bend of an adjoining guy at right angles thereto, and abutting against the bend of the said adjoining spring.

2. In a bed, a spring, the lower end of which terminates in a finger, provided with a hook; and a similar spring resting upon the finger and having a plurality of its lower convolutions engaged in the hook, those portions of the convolutions which are engaged in the hook, being alined, transversely of the mouth of the hook to prevent a disengagement of the convolution from the hook.

3. In a bed, a spring, the lower convolution of which terminates in a finger, provided with a hook; a similar spring resting upon the finger and having a plurality of its lower convolutions engaged in the hook, said convolutions being alined, whereby the same may be inserted into the mouth of the hook, a rotation of the spring serving to dispose the alined convolutions, transversely of the mouth of the hook; and a guy extended across the top of the lower convolution of the spring, the guy having a bend, engaging beneath the finger.

In testimony that we claim the foregoing as our own, we have hereto affixed our signatures in the presence of two witnesses.

WILLIAM H. MACY.
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Witnesses:

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