

(No Model.)

A. F. PUREFOY.
SPRING BED BOTTOM.

No. 486,184.

Patented Nov. 15, 1892.

FIG. I -

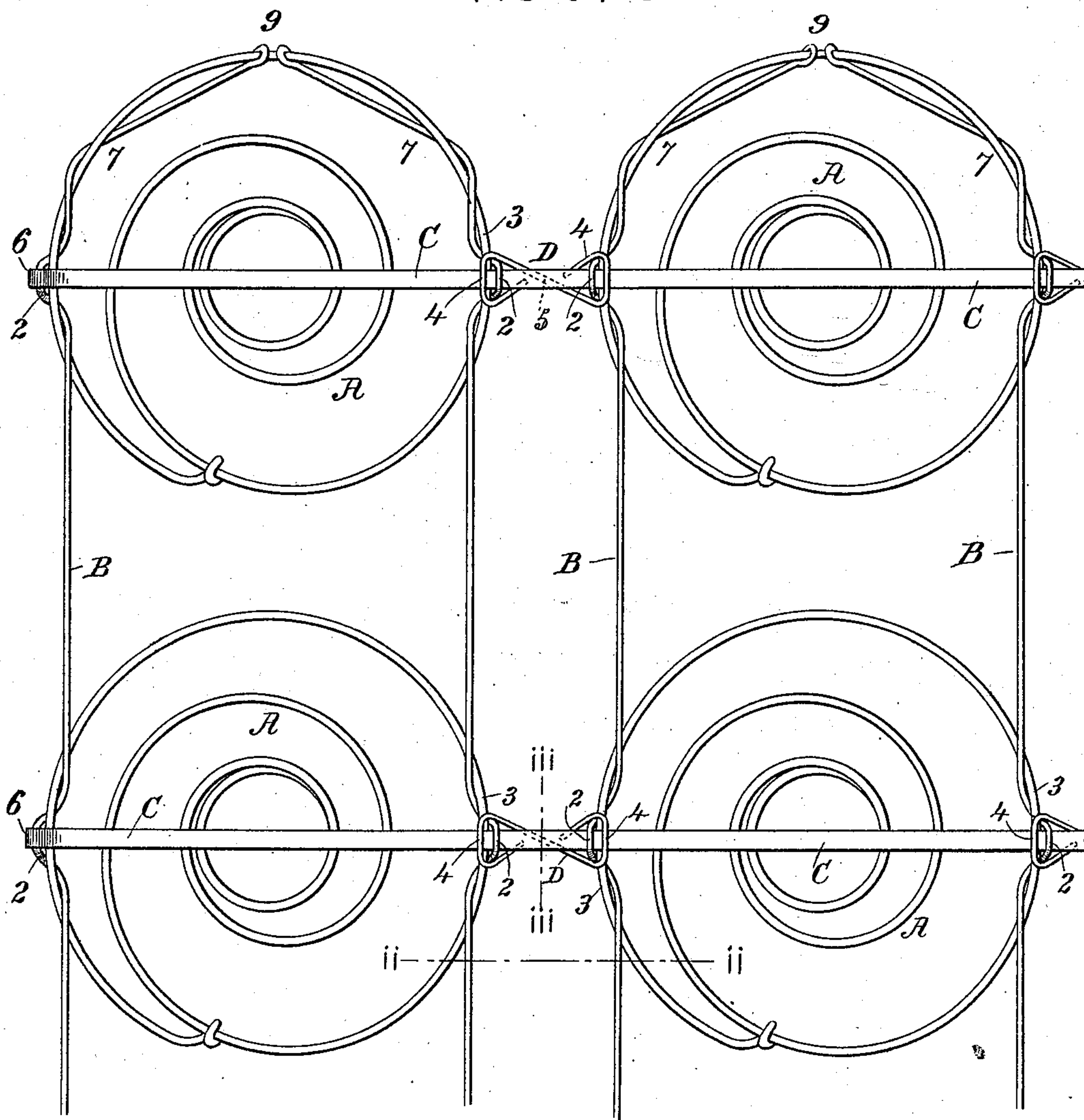


FIG. II -

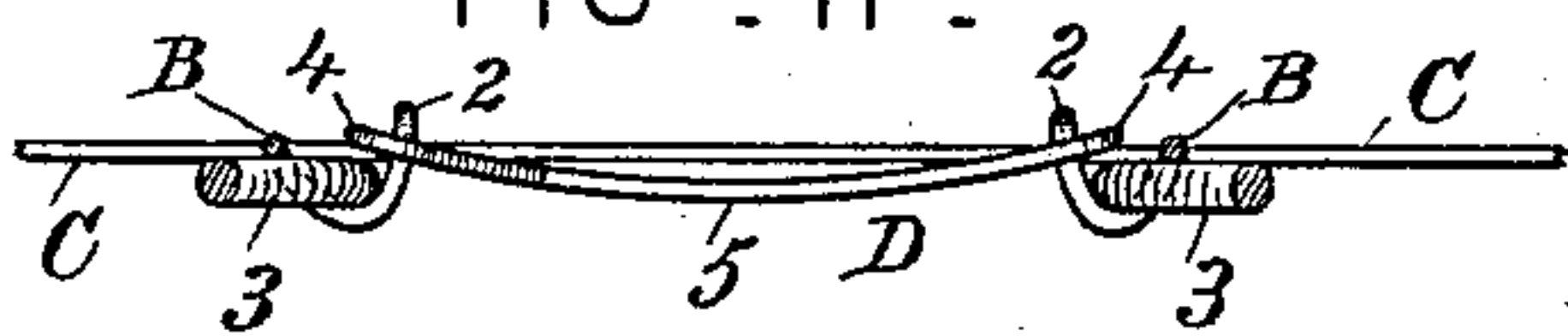
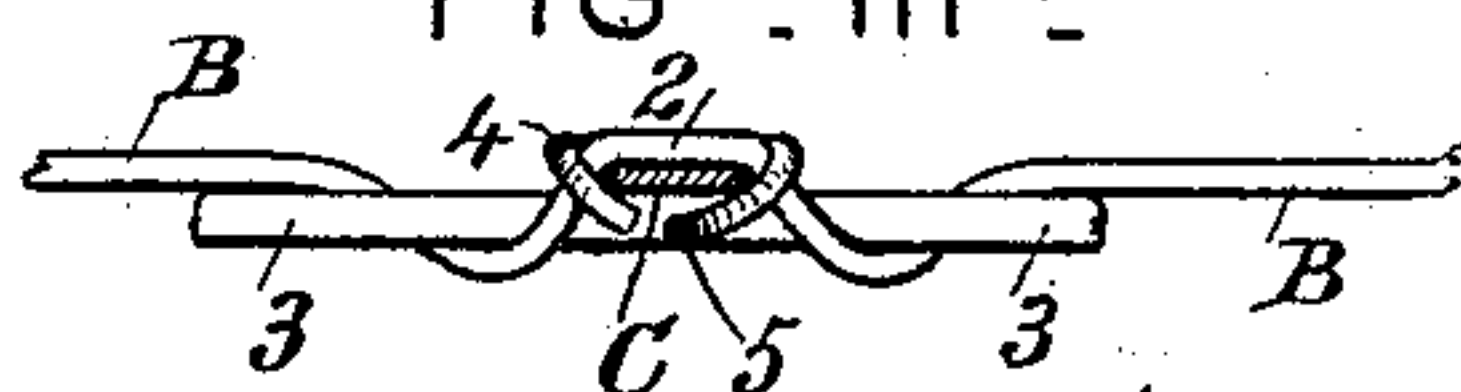


FIG. III -



Attest:
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by Chas. J. Hedrick
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UNITED STATES PATENT OFFICE.

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SPRING BED-BOTTOM.

SPECIFICATION forming part of Letters Patent No. 486,184, dated November 15, 1892.

Application filed November 2, 1891. Serial No. 410,701. (No model.)

To all whom it may concern:

Be it known that I, ADDISON F. PUREFOY, a citizen of the United States, residing at Wake Forest, in the county of Wake and State of North Carolina, have invented certain new and useful Improvements in Spring Bed-Bottoms, of which the following specification is a full, clear, and exact description.

This invention relates more particularly to the kind of bed-bottom described in patents granted to me November 11, 1890, and August 18, 1891, Nos. 440,324 and 458,067, respectively; but each of the improvements constituting the present invention is included for all the uses to which it may be adapted.

In accordance with the present invention a bed-bottom or like structure of coiled-wire springs is provided with two sets of long braces, which cross each other and extend over a number of springs, as from one edge of the bed-bottom or spring structure to the other, and also with shorter braces intermediate adjacent springs, parallel with braces of at least one set of the long braces. A special feature in this connection consists in a long brace with hooked ends, which engages the spring-wires, in combination with short braces, which act as struts between the springs, as will hereinafter be more fully explained.

In accordance with a further improvement the long braces are adapted to hold the short braces in position. The particular arrangement adopted in practice and constituting a special feature of invention is hereinafter fully explained.

In the accompanying drawings, Figure I is a plan of a portion of a bed-bottom constructed in accordance with the invention; and Figs. II and III, sections of the same in line *i i* and *i i i*, respectively.

The arrangement of braces of the present invention may be used at one or both ends of the springs A. It is shown at both ends. It comprises, as shown, two sets of long braces B and C, respectively, extending over a number of springs, and the short braces D between adjacent springs, parallel with the cross-braces C. The long longitudinal braces are arranged tangentially to the corresponding spring-coils and have lateral loops 2, which are wrapped about the spring-wires, and the long cross-braces C (preferably of flat wire, but

it may be round wire or wire of other cross-sections) are arranged diametrically and are threaded through the eyes formed by and between the ends of said lateral loops 2 and the corresponding spring-wires 3, as in my before-mentioned patents. The short braces D have loops or eyes 4 at the ends, and these loops or eyes are placed over the ends of loops 2 on adjacent springs, and the cross-braces C are threaded through the eyes or loops 4. The cross-braces C pass over the middle portions 5 of the short braces and serve to confine them, so that they will not slip off the ends of loops 2. These short braces can be easily made and quickly applied, the cross-braces C serving as keys to lock them in place. When secured, the short braces hold the springs in their relative positions by preventing their slipping lengthwise of the braces C. The cross-braces C being thus relieved of the duty of spacing the springs can be made more flexible and lighter, the diminution in weight tending to economy of manufacture and the increased flexibility to the comfort of using the bed-bottom. By adapting the short braces D to serve as struts between the springs the cross-braces C, whose ends are provided with hooks 6 to engage the lateral loops 2, are prevented from becoming disengaged even should the points of the hooks 6 not be closed against the body of the brace to form an eye from which the wire cannot escape, for in applying the cross-brace the sides of the springs are drawn together to allow the hooks 6 to be engaged, and the springs being then released force the lateral loops 2 onto the hooks 6, and since the springs are prevented from approaching each other by the action of braces D as struts the resiliency of the springs holds the loops 2 in place on the hooks 6. The short braces D could be made in a variety of forms and still be substantially such as hereinbefore described; but a brace of a single piece of wire bent at the ends in opposite directions into the general form of the figure 8 is the most simple and convenient. Braces of this form are light and are easily made. The middle portions 5 may be bent in the making of the braces preparatory to applying them to the springs. The ends of the longitudinal braces beyond the last lateral loops are wrapped a number of

turns, as at 7, closely about the spring-wires engaged by said last lateral loops, or, in other words, about the wires of the springs A at the edge of the bed-bottom. Said longitudinal
5 braces terminate in eyes 9, encircling the spring-wires. This wrapping, in connection with the eyes, gives a finish to the edge not apt to get loose or to tear the bed. It holds the brace tightly and is easily applied.

10 So far as I am aware it is new in general to combine short braces between adjacent springs with coiled-wire springs and long braces extending parallel with said short braces over the springs connected by said short
15 braces, and the first, third, and fourth clauses of claim following are therefore intended to extend generally to such a spring structure without being limited to the precise form of braces shown. The effect of the short braces
20 as struts in holding the springs so that their resiliency tends to keep the hooked ends 6 of brace C in engagement, as above set forth, would be the same if the hooked ends 6 of said brace engaged the spring-wire of the
25 outer spring directly instead of through the medium of the lateral loop 2, as shown, and the combination in general being new the second clause of claim following is intended to extend generally to the same.

30 I claim as my invention or discovery —

1. A spring structure comprising coiled-wire springs, in combination with two sets of long braces extending over a number of said
35 springs and short braces intermediate adjacent springs, the long braces of one set extending parallel with said short braces over springs connected by said short braces, so that said last-mentioned springs are joined
40 together in the direction of said short braces both by short braces between springs and by long braces extending between and over the same springs, substantially as described.

2. The combination, with a cross-brace with hooked ends and a row of coiled-wire springs

having provisions for engaging said hooked 45 ends, of short braces acting as struts between the springs, whereby the resiliency of the springs tends to hold the said hooked ends in engagement, substantially as described.

3. The combination, with the coiled-wire 50 springs, of short braces intermediate adjacent springs and diametrical long braces extending parallel with said short braces over springs connected by said short braces, so that said
55 springs are joined together in the direction of said short braces both by short braces between springs and by long braces extending between and diametrically across the same springs, substantially as described.

4. The combination, with coiled-wire springs 60 and short braces between adjacent springs, of diametrical long braces extending over a number of springs parallel with said short braces and adapted to hold the said short
65 braces in position, substantially as described.

5. The combination, with coiled-wire springs, 70 of tangential braces with lateral loops bent around the spring-wires, short braces with eyes or loops engaging the said lateral loops, and diametrical braces threaded through the lateral loops and adapted to hold the said short
braces in engagement with said lateral loops, substantially as described.

6. The combination, with coiled-wire springs, 75 of tangential braces with lateral loops bent around the spring-wires, short braces of the general form of the figure 8, with the eyes or loops engaging the said lateral loops, and diametrical braces threaded through the lateral
80 loops and adapted to hold the said short braces in engagement with said lateral loops, substantially as described.

In testimony whereof I have signed this specification in the presence of two witnesses.

ADDISON F. PUREFOY.

Witnesses:

W. W. ROBARDS,
HENRY J. YOUNG.