

(No Model.)

2 Sheets—Sheet 1.

F. G. GALE.
WOVEN WIRE BED BOTTOM.

No. 581,405.

Patented Apr. 27, 1897.

Fig. 1.

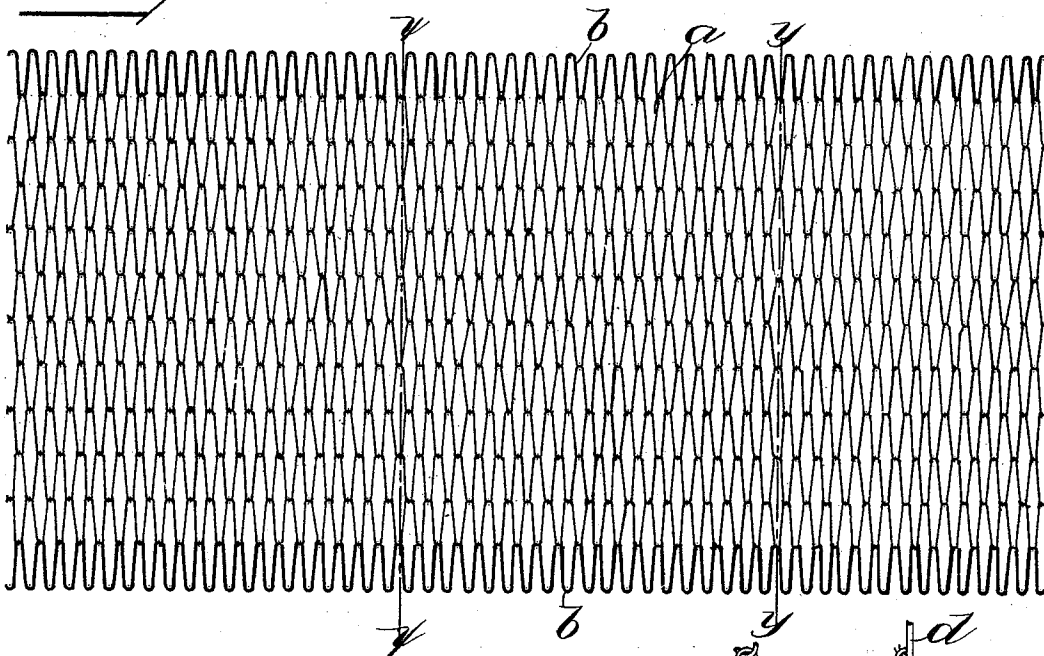


Fig. 2.

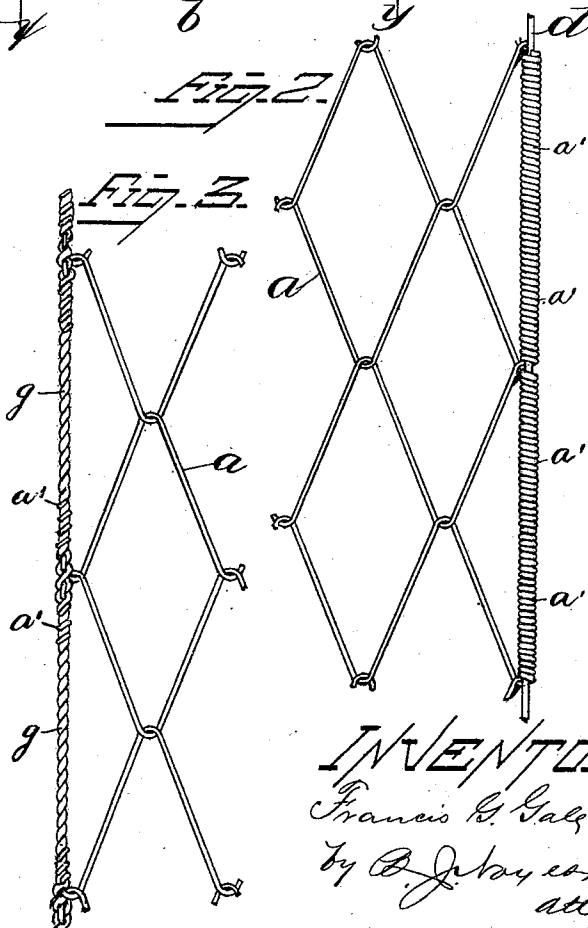
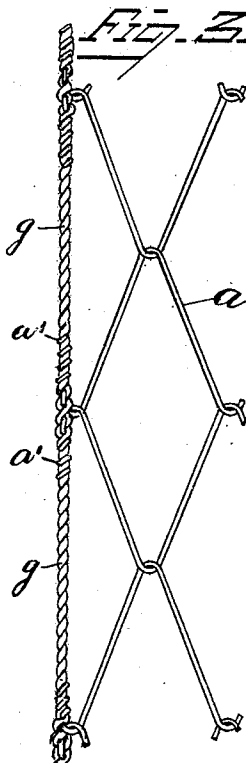


Fig. 3.



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INVENTOR.
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att'y.

(No Model.)

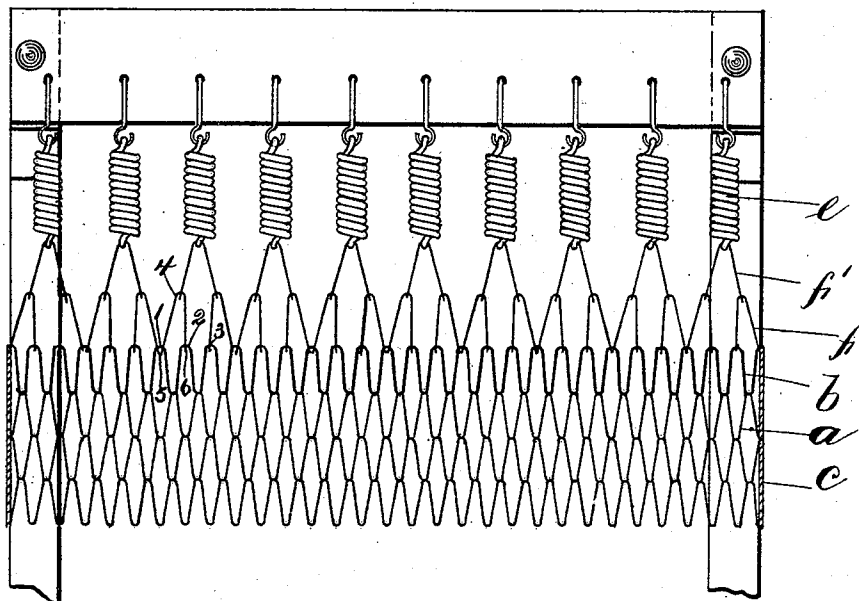
2 Sheets—Sheet 2.

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Fig. 4.



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UNITED STATES PATENT OFFICE.

FRANCIS G. GALE, OF WATERVILLE, CANADA.

WOVEN-WIRE BED-BOTTOM.

SPECIFICATION forming part of Letters Patent No. 581,405, dated April 27, 1897.

Application filed June 8, 1895. Serial No. 557,056. (No model.)

To all whom it may concern:

Be it known that I, FRANCIS G. GALE, of Waterville, Province of Quebec, Dominion of Canada, have invented an Improvement in Woven-Wire Bed-Bottoms, of which the following description, in connection with the accompanying drawings, is a specification, like letters and figures on the drawings representing like parts.

This invention has for its object to improve and cheapen the construction of bed-bottoms of that class having lozenge or V shaped links or meshes and which are connected to the end rails of a mattress-frame or to a bed-frame by strong spiral springs. Bed-bottoms of this class possess one advantage in particular over the ordinary woven-wire mattress—viz., a diagonal connection is formed from end to end of the frame to which the bed-bottom is connected.

In carrying out my invention I form the bed-bottom by weaving together several strands of wire extending lengthwise the web, said strands being cramped or bent into zigzag form, presenting sharp angles at the bends, and the weaving being accomplished by looping or linking these zigzag strands into one another, thereby presenting lozenge-shaped meshes. The edges of the web thus formed present a series of V-shaped links, those on one edge pointing in the opposite way to those on the other edge, and, if desired, the wire forming the edge of the web may be made considerably larger gage than the other wires for additional strength. The web thus formed is made of a width corresponding to the length desired for the bed-bottoms, and is subsequently cut up into sections of suitable widths for the bed-bottoms. The severed ends of the wires formed by cutting the web may be twisted around the finishing-strips. In connecting the bed-bottom thus formed with the mattress-frame or bed-frame the end tension or supporting springs are connected by links with the V-shaped links formed upon the sides of the web, which after the web is cut off will constitute the ends of the bed-bottom, or said end supporting-springs will be directly hooked into or connected with said V-shaped links without the interposition of such supplementary links, and if larger wires are employed for the sides

of the web it will be seen that very strong and durable end links may be presented to receive the supporting-springs or the links connecting said supporting-springs with the bed-bottom. As I prefer to make the lozenge-shaped meshes of the web quite small, the V-shaped links at the sides will be very close together, and hence the necessity of the supplementary links in order that large end supporting-springs may be employed.

Where two rows of supplementary links are employed at the ends of the bed-bottom, connecting thereto the supporting-springs, the links of that row adjoining the bed-bottom will be formed with one leg longer than the other.

Figure 1 shows in plan view a portion of the web embodying this invention; Fig. 2, a detail showing the severed ends of the wire twisted around a rod or bar; Fig. 3, a detail showing the severed ends of the wire clenched into and thereby connected with a two-strand cable; Fig. 4, a plan view of a completed bed-bottom connected to a frame by end supporting-springs and two rows of interposed supplementary links.

The web consists of several zigzag strands of wire *a*, extending lengthwise the web, the bends or angles being made quite sharp, and said zigzag strands are looped or linked together or into one another. The web thus formed presents lozenge-shaped meshes with V-shaped links *b* at the sides, which project in opposite ways. (See Fig. 1.)

If desired, the outer or side wire extending along each side of the web may be made of larger-gage wire than the other wires.

The web thus formed is cut up into sections of suitable widths desired for the bed-bottoms, as represented by dotted lines, Fig. 1. The severed ends *a'* of the wires formed by thus cutting off the sections are utilized in forming an edge for the bed-bottom of greater or less stiffness by twisting them around the finishing-strips—as, for instance, they may be twisted around a finishing-strip consisting of a rod or bar *d*, as represented in Fig. 2, or they may be clenched into a two-strand cable *g*, as represented in Fig. 3.

The bed-bottom thus formed may be connected with a mattress-frame or bed-frame by suitable end supports, which engage the

V-shaped links at the ends thereof, which links form the sides of the continuous web. For instance, I may employ strong spiral end springs *e*, which may be connected with said

5 V-shaped links by two rows of interposed supplementary V-shaped links *f f'*, having hooked ends, or a single row of such supplementary links may be employed, or the end springs may be connected directly with the

10 V-shaped links *b* of the bed-bottom, but as I make the lozenge-shaped meshes of the web quite small one or more rows of supplementary links are found to be necessary. When two rows of supplementary links *f f'* are

15 used, one leg of each link of the row marked *f* is shorter than the other leg—as, for instance, referring to Fig. 4, the points 1 2 3 are connected with each spring, and in the row of links *f* the legs 4 5 are longer than the

20 legs 4 6, as the links *f'* close up some under strain, making the distance longer from the spring to 5 than to 6; also there are two connections at the points 5. If the links *f'* were not made in this manner, one leg would, dis-

25 engaged under strain.

The bed-bottom constructed of a continuous web, which is provided at the sides with means for receiving the end supports, possesses many obvious advantages.

30 I claim—

1. A bed-bottom composed of a section cut off of a continuous web which consists of several strands of wire extending lengthwise of the web, bent into zigzag form and woven together at the bends, thereby presenting V-

35 shaped links at each side which project in opposite ways, and finishing-strips at the sides of the bed-bottom around which the severed

ends of the wire strands are twisted, substantially as described.

2. A bed-bottom composed of a section cut off of a continuous web which consists of several strands of wire extending lengthwise of the web, bent into zigzag form and woven together at the ends, thereby presenting V-

45 shaped links at each side which project in opposite ways, and twisted-wire finishing-strips at the opposite sides of said bed-bottom with which the severed ends of said wire strands are interwoven, substantially as described.

3. A bed-bottom having V-shaped links at the ends, a row of supplementary links *f'* at each end, one leg of each link being longer than the other leg thereof, for the purpose of preventing one of the legs being disengaged while the other is under strain, the supplementary row of links *f*, connecting the V-

55 shaped links with the links *f'*, and the spiral springs *e* connecting the links *f'* to the frame of the bed-bottom, substantially as described.

4. A bed-bottom having links at each end for the purpose of connecting it to the bed-bottom frame, each link having two legs, one leg of each of said links being longer than the other leg thereof, for the purpose of preventing one of the legs from being disengaged while the other leg is under strain, substantially as described.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

FRANCIS G. GALE.

Witnesses:

J. T. L. ARCHAMBAULT,
C. B. F. STEVENS.