No. 844,682. PATENTED FEB. 19, 1907.

H. E. LAUGHLIN.

BED BOTTOM FABRIC.

APPLICATION FILED AUG. 13, 1906.

2 SHEETS—SHEET 1.

Fig. 1.

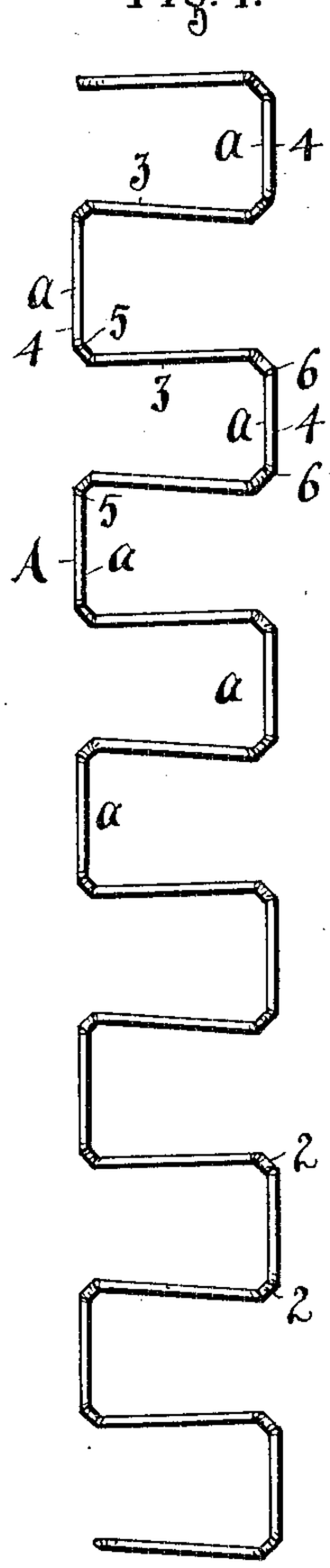


Fig. 2.

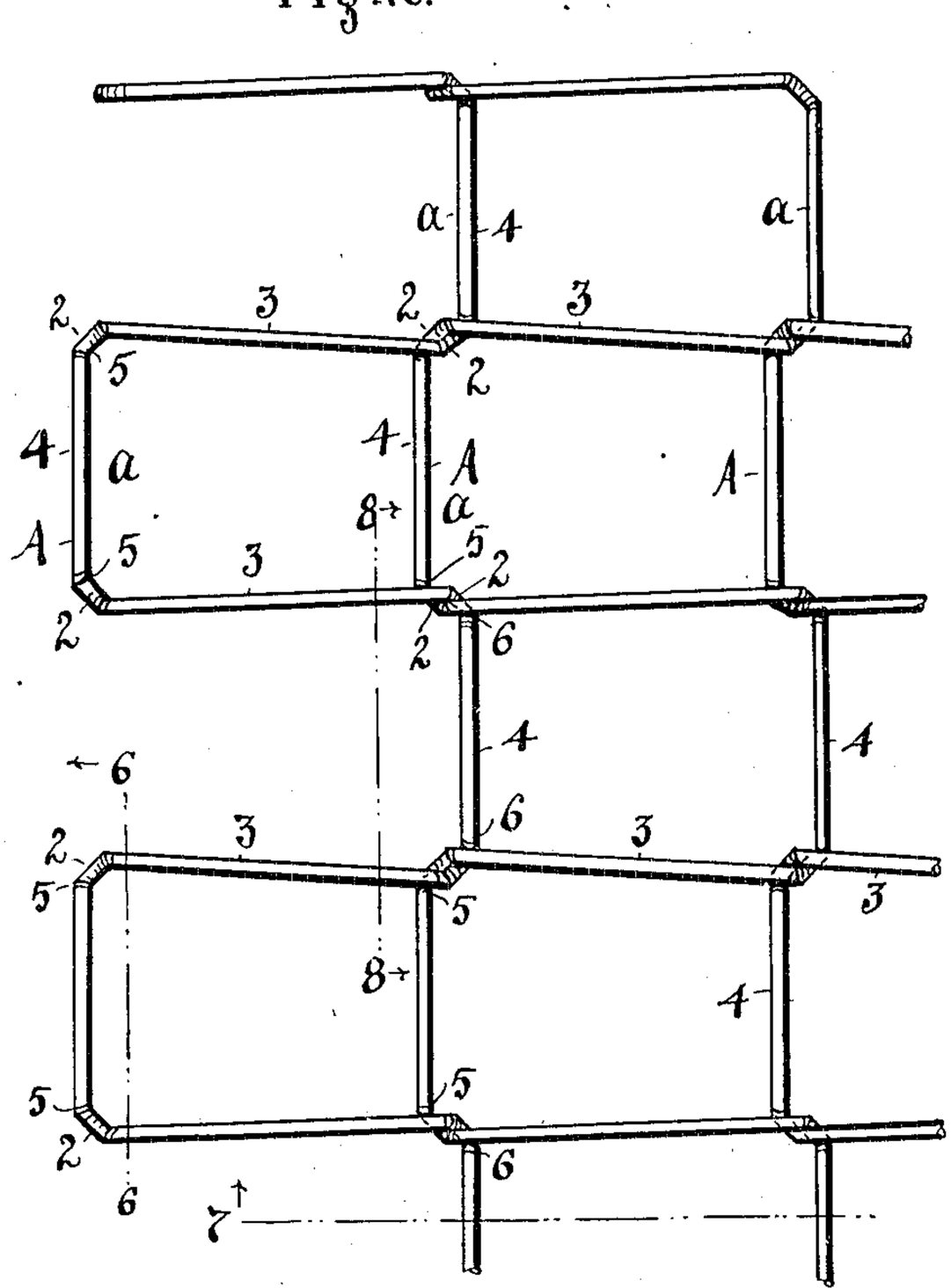


Fig. 3.

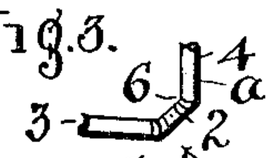


Fig. 4.

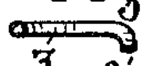


Fig. 5.

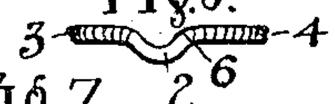


Fig. 6

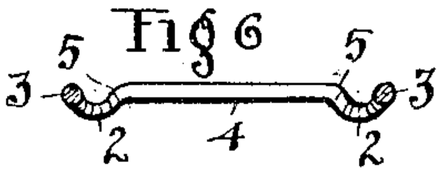


Fig. 7.

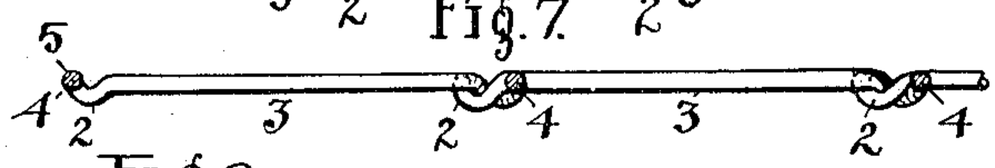
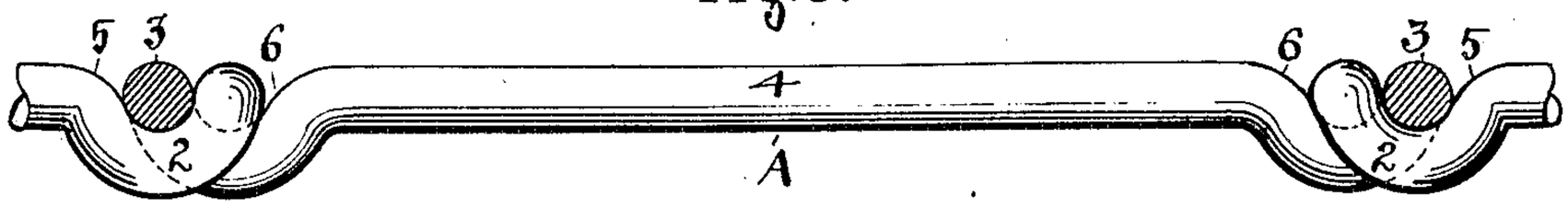


Fig. 8.



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No. 844,682. PATENTED FEB. 19, 1907.

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BED BOTTOM FABRIC.

APPLICATION FILED AUG. 13, 1906.

2 SHEETS—SHEET 2.

Fig. 9.

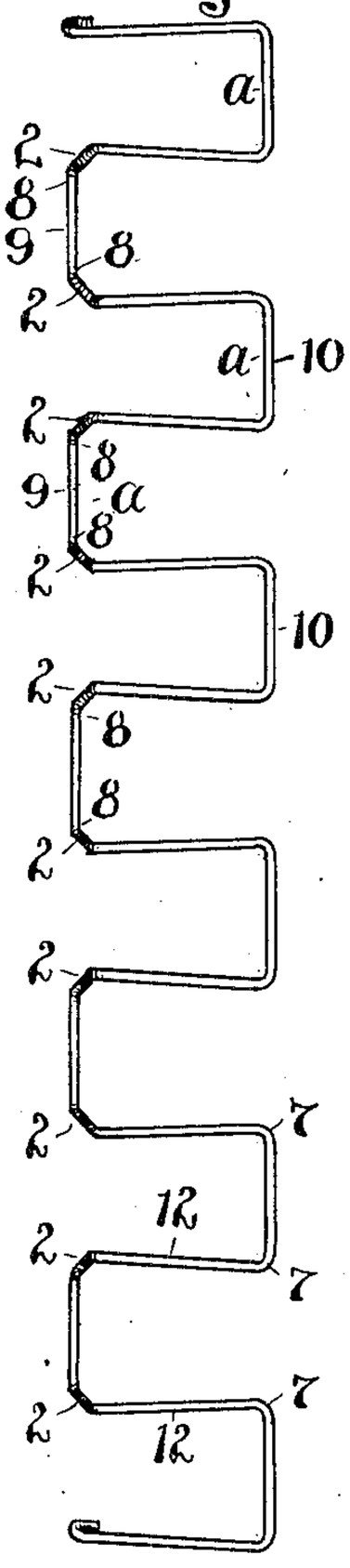


Fig. 10.

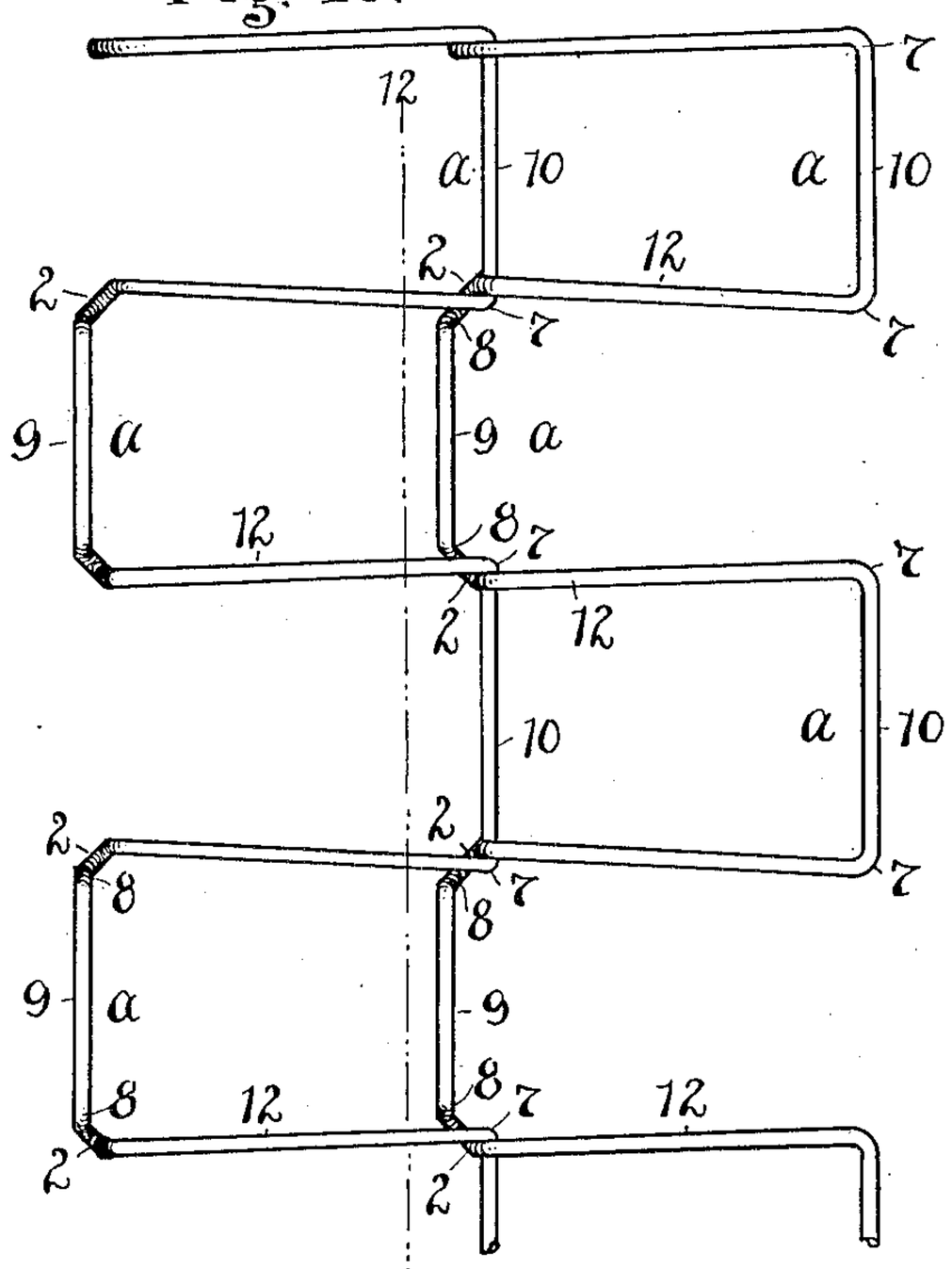


Fig. 11.

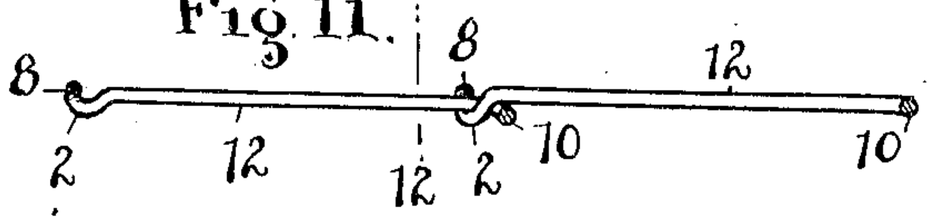
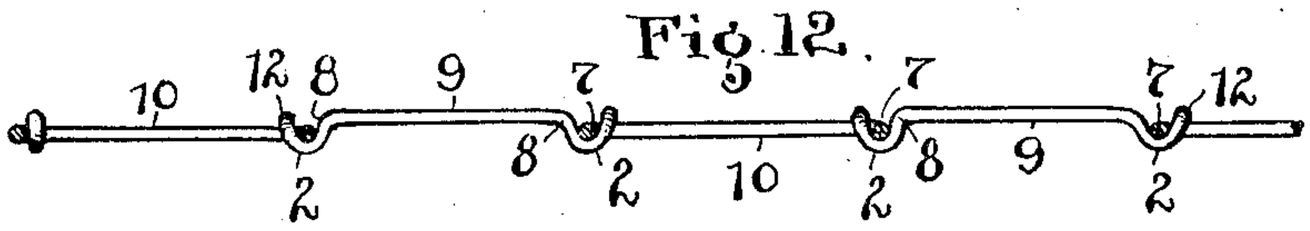


Fig. 12.



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UNITED STATES PATENT OFFICE.

HOWARD E. LAUGHLIN, OF CLEVELAND, OHIO.

BED-BOTTOM FABRIC.

No. 844,682. Specification of Letters Patent. Patented Feb. 19, 1907.

Application filed August 13, 1906. Serial No. 330,313.

To all whom it may concern:

Be it known that I, HOWARD E. LAUGHLIN, a citizen of the United States, residing at Cleveland, in the county of Cuyahoga and State of Ohio, have invented certain new and useful Improvements in Bed-Bottom Fabrics; and I do declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to wire fabric adapted to be used for bed-bottoms and the like, all substantially as shown and described and particularly pointed out in a plan view of a single strand of wire bent according to my invention and designed to run transversely of a bed-bottom.

Figure 1 is a plan view of a single strand of wire bent according to my invention. Fig. 2 is a plan view of a section of fabric embodying my invention. Fig. 3 is a plan view of one of the corners or angles of the wire as I make it; and Figs. 4 and 5 are edge and front views, respectively, of such corner. Fig. 6 is an edge view on line 6 6, Fig. 2, looking outward. Fig. 7 is a cross-section showing the wires interlocked; and Fig. 8 is a considerably-enlarged cross-section at the junction and shoulders of the wires, showing their interconnection transversely. Figs. 9, 10, 11, and 12 illustrate a modification of the invention, as hereinafter fully described.

The invention herein consists chiefly in the novel connection of the wires at their junctures one with another so as to form an effective interlocking engagement adapted to prevent lateral slipping of the wire or contracting of the bed-bottom laterally under the weight that comes upon it.

Two forms of the invention are shown, and in the first form, Figs. 1 to 8, I employ a series of wires A, which are bent to form successive loops *a* of substantially rectangular outline and extending alternately first to one side and then to the other and in the same horizontal plane. This leaves said loops open at one side, and they are preferably somewhat contracted or narrowed at said point, so as to bring them into the right relations for engaging within and through the wider portion of the loops with which they engage, as shown. Now in order to effect the lateral interlocking of the loops *a* one with another in adjacent or parallel wires I bend each corner or angle 2 of all the loops directly downward at right angles, so as to produce a practically U-shaped formation of each corner as viewed in elevation, Fig. 5. All the four corners of each loop are bent in like manner, which in plan shows in an angle of bend across the corner from the side 3 and cross-wire 4 of the loop of about forty-five degrees.

The wires being all formed in this way, they are brought together by extending the loops of the last added wire upward bodily through the loops of the preceding wire, Fig. 2, building to the left in said figure. This brings the side stems 3 of each wire next to the side stems of the preceding wire at one side of direct alinement therewith, but against the same in the angle of bend—that is, as the wires lie the sides of the various loops lie in close parallel lines, but not in the same line or plane; but straight lines at right angles to each will intersect centrally in all the corners of the loops, as shown.

By bringing one loop in its narrow portion into engaging relation with another loop in its wider portion and with the lateral brace wire or portion 4 between I am enabled to lock each wire against the shoulder of the opposite wire, and thus interlock the said wires and at the same time preserve a flush or even top working surface. This is seen plainly in Fig. 8, where each wire is shown as substantially filling the U-bend of the other wire, and the outer shoulders 5 and 6, respectively, of said wires form effective stops against lateral movement of one wire in respect to the other. In other words and practically, an interlocking joint or connection is thus formed between any two given loops at their meeting angles and each and every wire is locked four times or at four places in each of its many loops. This produces a bed-spring with a smooth top surface and which will necessarily hold its form and remain serviceable as at the beginning throughout a protracted use, as is obvious from its construction.

The respective depressions or bends 2 of the wires are about the depth of the thickness of the wires, and each bend lies within the projection of the sides and ends of the loops, so that the corners of the loops are foreshortened as viewed in plan in the proportion of the down-bends 2 taken therefrom.

In the modification of the invention, Figs. 9 to 12, only the corners of corresponding loops *a* are bent downward, as seen at the left in Fig. 9. Thus all the loops at the left

in this view have the bends 2 at their outer corners, while the inner corners or angles are straight or not bent. This principle of construction obtains in all the wires in this form of the invention or fabric, and it follows that all the straight angles (indicated by 7) lie in the U-bends of the meeting loops, and the shoulders 8 form effective locks against lateral siding of said straight corners. This brings the cross-wires 9 and 10 of the respective side series of loops on each wire into somewhat different horizontal planes, and the loops 2 have to be deep enough to allow the wires to dip beneath the side wires 12 at the angles. Otherwise and practically this form of the invention is substantially like that shown in Figs. 1 to 8, inclusive. In this connection reference is made to my application Serial No. 317,331, in which a wire fabric is shown formed with loops having inclined corners which project laterally from the sides of the loops in their bent portions, so that the loops are widest at their ends where said bends occur, and which adapts the loops to make connection with the next adjacent loops or corners, and thereby form engagement and a substantially flush surface.

What I claim is—

1. A wire fabric for bed-bottoms and the like having the wires formed each with a series of substantially square loops on opposite sides alternately, and each loop having corresponding corners bent downward at substantially right angles to the plane of the loop.

2. A wire fabric consisting of a series of wires formed each into oppositely-extending loops and each loop bent directly downward at different angles thereof, said bends being single and of substantially forty-five degrees to the sides and ends of the loops as viewed in plan and within the projections of said sides and ends.

3. A wire fabric composed of a series of wires provided each with a series of horizontally-disposed loops interlocked in their angles with other wires of the fabric, and corresponding corners of said loops bent downward at substantially right angles into substantially U shape and the said bends standing across said corners at approximately forty-five-degrees angle to the side of the loops.

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

HOWARD E. LAUGHLIN.

Witnesses:
RICHARD B. MOSER,
E. M. FISHER.