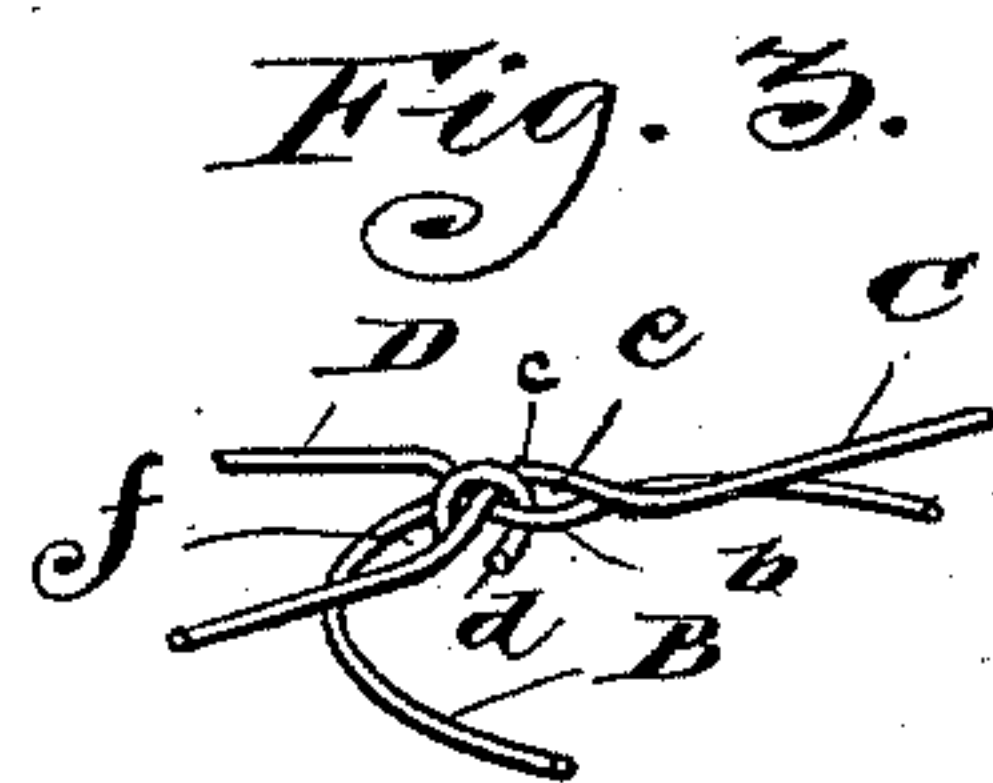
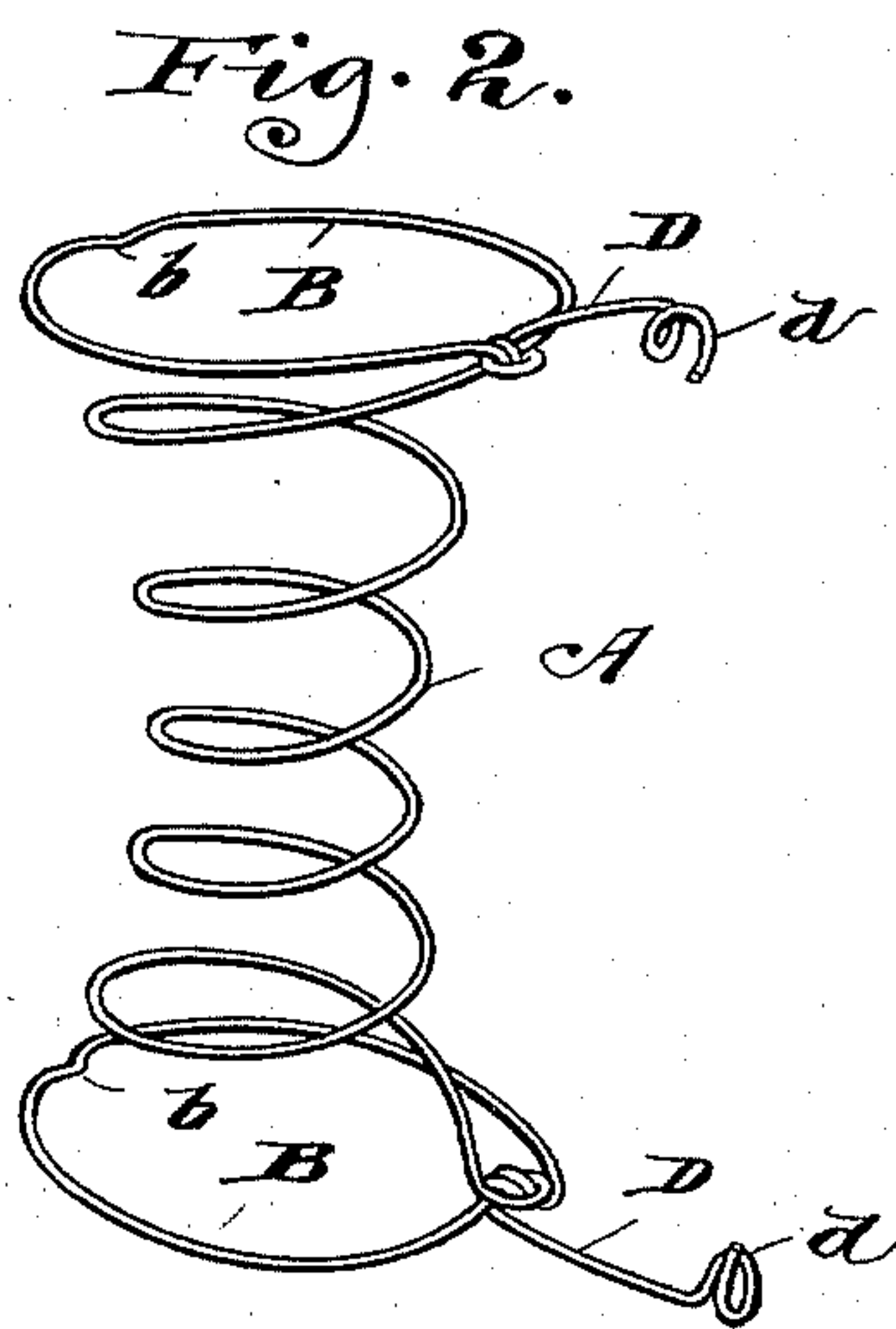
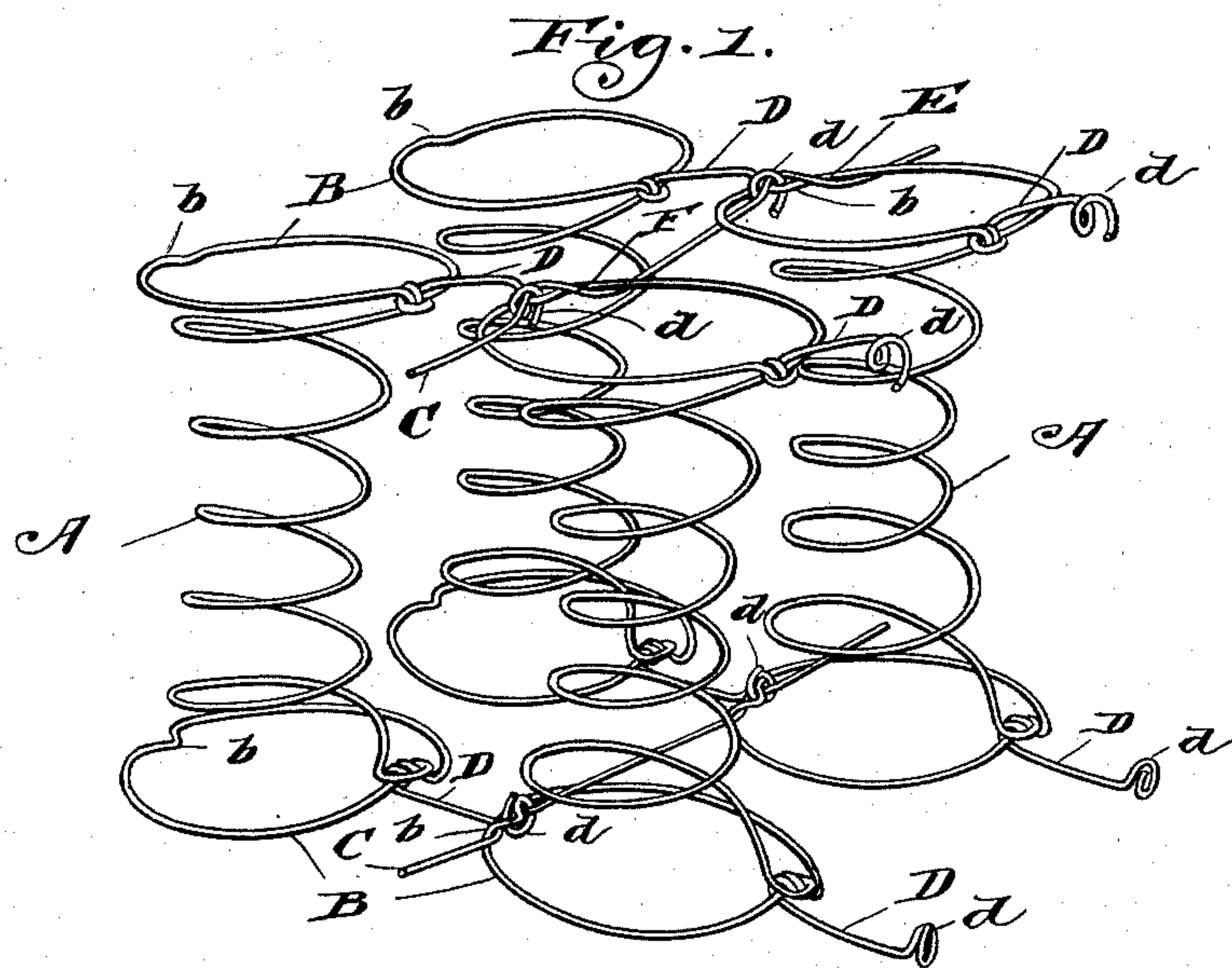


(No Model.)

T. W. KLIPFEL.
COILED WIRE BED BOTTOM.

No. 477,662.

Patented June 28, 1892.



Witnesses,

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UNITED STATES PATENT OFFICE.

THOMAS W. KLIPFEL, OF CHICAGO, ILLINOIS.

COILED-WIRE BED-BOTTOM.

SPECIFICATION forming part of Letters Patent No. 477,662, dated June 28, 1892.

Application filed May 11, 1891. Serial No. 392,292. (No model.)

To all whom it may concern:

Be it known that I, THOMAS W. KLIPFEL, a citizen of the United States, residing at Chicago, Illinois, have invented certain new and useful Improvements in Coiled-Wire Bed-Bottoms, of which the following is a specification.

My invention relates to a novel method of locking together in rows the individual spiral springs of a coiled-wire bed-bottom by means of a tie-wire extending across the bed-bottom parallel to the rows and connecting the several springs and spur-wires which project from the top coil of the several springs so as to interlock with an adjacent spring and with the tie-wires; and my invention consists in the novel method of interlocking the parts, as hereinafter described, and particularly pointed out in the claim.

In the accompanying drawings, Figure 1 is a perspective view showing four spiral springs locked together by means of a tie-wire and spurs from the several springs. Fig. 2 is a view of a single spring, showing the spur-wires; and Fig. 3 illustrates in detail one method of arranging the tie-wire and spring with reference to each other.

In carrying out my invention I prefer to construct the individual springs, the bodies of which are marked A, of double-conical spiral form—that is to say, the coils decrease in size from each end toward the middle. The end coils B are each provided with a lateral bend or kink *b*, and the tie-wires C have oppositely-projecting bends or kinks *c*. The spur-wires D project laterally from the end coils, substantially in the plane thereof, and have their ends formed into coils, the turns of the coils being perpendicular to the bed-bottom and substantially in the plane of the tie-wires, whereby they may be interlocked with the tie-wires by turning or screwing the coils into the apertures between the overlapped portions of the wires and springs.

In connecting the several springs the tie-wire has its kink passed through the top coil from below, as shown at E, Fig. 1; or the tie-wire may be passed through the top coil, so that said coil shall rest upon the tie-wire at one side of the kink and beneath the tie-wire

on the opposite side of the kink, as shown at F, Fig. 1; or the tie-wire may be simply laid upon the top of the spring, as shown in Fig. 3, with their kinks lapping by each other, or the tie-wire might be placed below the last coil of the spring with their kinks overlapping. The only essential is that the two oppositely-projecting bends or kinks shall lap by each other, so as to provide the openings *e* and *f*, Fig. 3, through which the end of the spur-wire may be turned. In joining these coils into a bed-bottom one of the individual spirals—such as shown in Fig. 3—will be taken in the hand and the point of the screw of the spur-wire will be inserted between the overlapped portions of the tie-wire and the spur-wire through the space *f*, and then by rotating the spiral in a vertical plane (supposing the bed-bottom to be lying horizontally) the point of the screw will be turned down through the space *e*, between the kinks of the tie-wire and the spring. The several spirals are interlocked in the same way, and each spur-wire thereof rigidly connects the two spirals, and the tie-wire being interlocked with one of said spirals is also engaged by the turns of the spur-wire in such manner as to prevent movement in the direction of the length of the tie-wire. The opposite ends of the springs are secured in the same manner, the character of the spring permitting sufficient flexure of its body to allow the screwing of its spur-wire into place. This latter feature is an important consideration which has not yet been provided for in the construction of bed-bottoms of this character, as far as I am aware. It makes the completed bed-bottom much more rigid laterally without impairing the vertical spring action.

I do not limit my invention to the particular manner of disposing of the tie-wire with reference to the spring, as it is evident from the foregoing explanation that the tie-wire may be placed on top of the spring or beneath it or passed through it.

I claim—

A bed-bottom composed of spiral springs, each having on their end coils lateral bends, in combination with tie-wires for connecting the springs in rows, said tie-wires having

bends opposing those of the springs and overlapping them, and spur-wires for connecting the rows of the springs, the spur-wires having their ends formed into coils the turns of
5 which are perpendicular to the plane of the bed-bottom and lie substantially in the plane of the tie-wires, whereby the tie-wires and springs may be interlocked by turning or

screwing the spur-wire coils into the apertures between the overlapped portion of the tie-wires and springs, substantially as described.

THOMAS W. KLIPFEL.

Witnesses:

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