

UNITED STATES PATENT OFFICE.

JOSEPH ROSE, OF MEMPHIS, TENNESSEE.

BED-SPRING.

SPECIFICATION forming part of Letters Patent No. 465,539, dated December 22, 1891.

Application filed July 16, 1891. Serial No. 399,721. (No model.)

To all whom it may concern:

Be it known that I, JOSEPH ROSE, a citizen of the United States, residing at Memphis, in the county of Shelby and State of Tennessee, have invented a new and useful Bed-Spring, of which the following is a specification.

My invention relates to improvements in spring bed-bottoms, being designed as an improvement of the patent issued to me in this class of invention bearing date January 14, 1890, and numbered 419,218; and it has for its object to counteract the defect in having the facing-hooks connecting the pairs of coil-springs together from standing too high above the plane of the top coil of the springs, and to avoid a rough-surface bed, and to provide a spring bed-bottom in which the whole upper and under surfaces of the springs will be on the same plane, and to overcome the objection of having sharp projecting ends or corners, and also to so connect the springs so that the same shall retain their proper shape and elasticity; and with these objects in view the invention consists of the improved construction of springs and the manner in which the same are connected to attain the objects aimed for, which will be hereinafter more fully described, illustrated in the accompanying drawings, and specifically pointed out in the appended claim.

In the accompanying drawings, Figure 1 is a top view of a spring bed-bottom constructed in accordance with my invention. Fig. 2 is a detail in perspective showing a section of the same and a portion of the adjacent frame.

Referring to the accompanying drawings, the frame A, between which and to which the springs comprising the bed-bottom are connected, is composed of the two rectangular wire frames *a*, formed to the proper size and shape by bending and connected together at their meeting ends in any suitable manner. The coiled springs B, located within said frame, are of the ordinary "duplex" type in which the coils taper from both ends to the center, and are each constructed and provided with the same details, the bottom and top coils C of the springs also being similarly constructed in order that the bottom surface will be similar to the top, and thus provide a reversible spring bed-bottom. At the point at which the top and bottom coils C of the

springs are to be locked the same are provided with the vertical shoulders or offsets D, around which shoulders or offsets the ends of the upper and lower coils are passed from the outside and up over the top, forming a loop E, which provides a lock or joint for the bottom and top coil, which serves to retain the springs in the proper shape and prevent the same from collapsing or spreading. From the loop E, where the top coil passes over the said offsets or shoulders, the same then passes outward in a horizontal direction, the bottom and top coils being parallel, and both forming the arms F, at the outer ends of which are formed the double hooks G, provided with the inwardly-facing hooks *g* and the outwardly-facing hooks *g'*.

Both the bottom and top coils of each spring are further provided directly opposite the vertical offsets or shoulders previously mentioned with the inward depression H. In arranging the springs within the rectangular frames inclosing the same the two outer longitudinal rows are first placed in position, while the intermediate and central rows are subsequently secured to said outer rows and to each other. The double hooks at the terminals of the horizontally-extending arms F of the two outside rows are first clinched over the sides of the rectangular frames *a*, comprising the bed-bottom frame, while the intermediate rows of springs are secured to the rows of springs adjacent thereto by means of the outwardly-facing hooks *g'* of the double hook G, located at the terminal of the horizontally-extending arms F, engaging over the bottom edge of the depression H in the top and bottom coils of each spring, while the inwardly-facing hook *g* projects into and within the space formed by said depression in the wire, and thus throws the said arms all on the same plane as the top of the springs which they engage and those from which they protrude. After the requisite rows of springs have been placed within the frame to complete the bed-bottom of the desired size the two central rows are then connected and joined together, the rows of springs being arranged from the outside of the frame inward, as stated. The central depression in the top and bottom coils of the central pairs of springs are therefore directly opposite to each other,

and the same are connected together by means of the connecting-clips I, provided with the inwardly-facing hooks *i* and the outwardly-facing hooks *i'*, which engage over the bottom edge of said depressions in the top and bottom coils of the springs, while the inwardly-facing hooks project into and within the depressions in the same manner as the double hooks at the terminals of the horizontally-extending arms, as described.

To securely retain the hooks and springs in connection with each other and to form a rigidly-constructed bed-bottom, binding-wires K are next passed longitudinally from one end of the frame to the other. The said wires are first attached to the end of the frame and are next passed under the top coils and over the bottom coils of the adjacent springs. Each binding-wire being provided with a horizontal depression *h*, that engages the inwardly-facing hooks of both the arms F and the connecting-clips I and project into and within the space formed by the depressions in the top and bottom coils of each spring, and passing on through each adjacent spring and having the same connection with the top and bottom coils and the double-faced hooks, as described, the free terminal of the said wires are secured to the opposite ends of the frame, and thus completes a bed-bottom the top and bottom surfaces of which are unbroken horizontal planes, all the connections and joints being seated and located beneath the planes of the top and bottom coils of each spring. By this construction, as previously stated, sharp projecting ends or corners are avoided and an exceedingly elastic and comfortable bed-bottom produced.

The construction of the improvement is now

thought to be apparent without further description.

Having thus described my invention, what I claim, and desire to secure by Letters Patent, is—

In a bed-bottom, the springs, the top and bottom coils of which are provided with an inwardly-depressed portion, and vertical offsets or shoulders around which the ends of the coils are looped and extend out therefrom in a horizontal direction and terminate in the inwardly and outwardly facing hooks, which latter engage the bottom edge of the depression of the next adjacent springs, and which former project within the same, center connecting-clips having the inwardly and outwardly facing double hooks joining the bottom edges of the facing depressions of the central rows of springs and seated within said depressions, and the longitudinal binding-wires passing under the top coils and over the bottom coils of each spring, and each wire being provided with a horizontal offset or depression engaging the inner hook of said double hooks and projecting within the depressions in the top and bottom coils of the springs, said depressions serving to hold or inclose all of said fastenings in the same or a lower plane than the plane of the top and bottom coils of the spring, substantially as set forth.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in presence of two witnesses.

JOSEPH ROSE.

Witnesses:

T. A. RYAN,
JNO. E. KELLY.