No. 759,515. PATENTED MAY 10, 1904.

W. C. GROSE.

SPRING BOTTOM FOR BEDS, &c.

APPLICATION FILED DEC. 2, 1903.

NO MODEL.

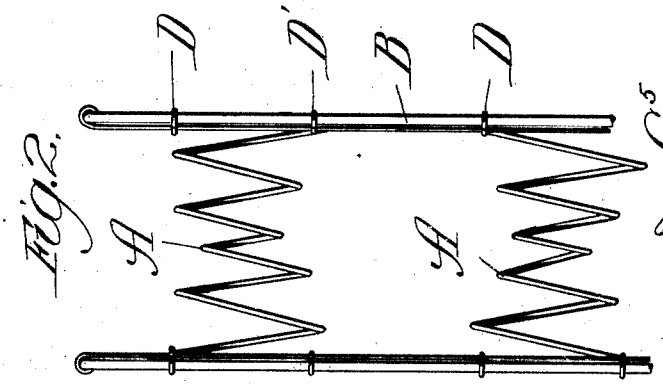


Fig. 2.

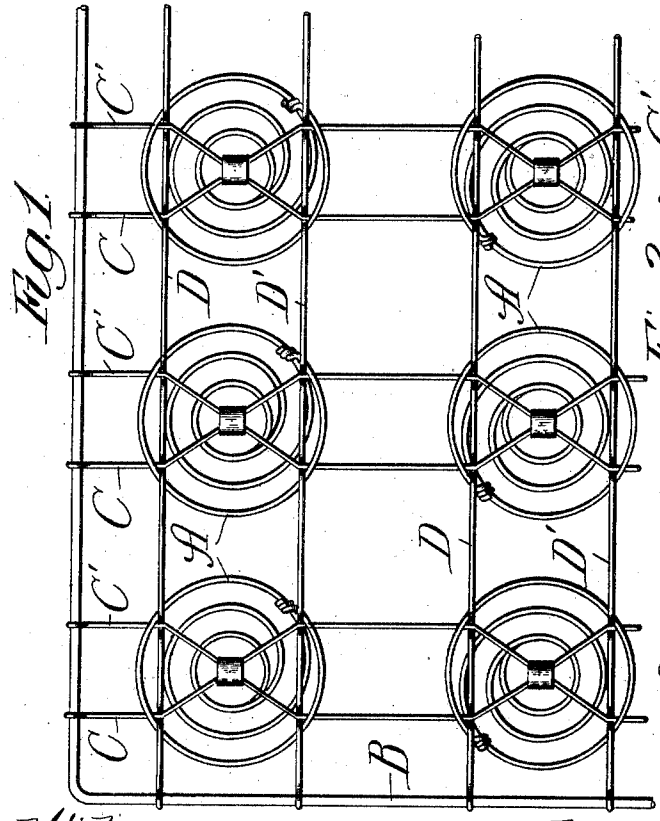


Fig. 1.

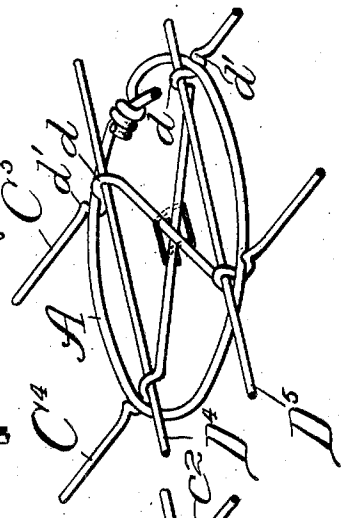




Fig. 3.

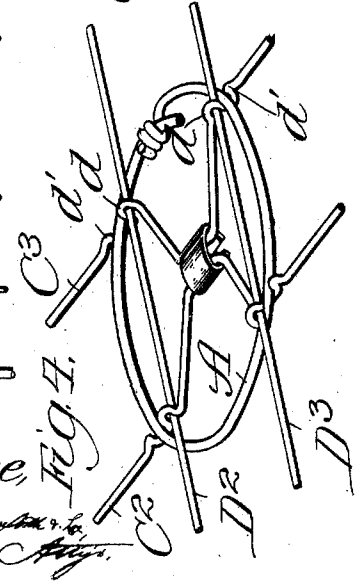


Fig. 4.

Witnesses

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THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

No. 759,515. Patented May 10, 1904.

UNITED STATES PATENT OFFICE.

WILLIAM C. GROSE, OF KENOSHA, WISCONSIN, ASSIGNOR, BY MESNE ASSIGNMENTS, TO SIMMONS MANUFACTURING COMPANY, OF KENOSHA, WISCONSIN, A CORPORATION OF WISCONSIN.

SPRING-BOTTOM FOR BEDS, &c.

SPECIFICATION forming part of Letters Patent No. 759,515, dated May 10, 1904.

Application filed December 2, 1903. Serial No. 183,521. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM C. GROSE, a citizen of the United States, residing at Kenosha, in the county of Kenosha and State of Wisconsin, have invented a new and useful Improvement in Spring-Bottoms for Beds, &c., of which the following is a specification.

My invention relates particularly to spring-bottoms for beds, though it will be understood that the invention may be employed in many analogous situations.

My primary object is to provide an improved spring-bottom for beds wherein the coiled springs comprised in the structure are effectively united by simple connections and protection is afforded to the mattress employed in connection with the spring-bottom and the springs themselves are guarded against breakage.

The invention is illustrated in the accompanying drawings, in which—

Figure 1 represents a broken plan view of a spring-bottom embodying my improvements; Fig. 2, a broken elevational view of the same; Fig. 3, a broken perspective view showing the connections at one of the coil-springs of the construction shown in Fig. 1, and Figs. 4 and 5 broken perspective views illustrating modifications.

In the preferred construction there are employed spring-coils A, arranged in longitudinal and transverse rows, a marginal frame-rod B, pairs of transversely-extending rods C C′, connected with the frame-rod and corresponding with the transverse rows of springs, and pairs of longitudinally-extending rods D D′, interlockingly connected with the end rings of the coil-springs and with the transverse rods at the points of intersection between the rods and the end rings of the coils.

In the preferred construction the rods and end rings of the coils are interlockingly connected, as shown in Fig. 3. In this construction the rods C C′ pass beneath the end ring of the coil and are provided with inward deflections *c*, which substantially meet at the center of the end ring and are connected thereat by a clip *c′*. The rods D D′ pass over the end ring and are provided with depressions or eyes *d*. Each of the rods D D′ has two offsets or eyes *d*, which project down through the end ring and lie adjacent to the end ring. The eyes *d* of the two rods are arranged at the four corners of a square within the end ring and receive the rods C C′ at bends c^2 thereof. In assembling, the rods C C′ are passed transversely through the coils beneath the end rings, and the rods D D′ are then passed longitudinally along the rows of springs and beneath the deflections *c* of the transverse rods, the deflections being turned upwardly through the end rings to permit this action. The ends of all the rods are joined to the frame-rod in the usual manner. When thus connected, it will be observed that the rods and end rings are firmly interlocked and that a good bearing-surface for the mattress is provided. Moreover, it is to be observed that the rods extending across the end rings form bearings, which prevent the wires of the coils from working upwardly through the end rings against the mattress when the spring sare compressed.

In the construction shown in Fig. 4 the rods C^2 C^3 correspond with the rods C C′ of the construction of Fig. 1, while the rods D^2 D^3 correspond with the rods D D′ of said construction. In this modification the rods C^2 C^3 are provided with upwardly-projecting eyes or loops *d*, which lie adjacent to the inner wall of the end ring and struck-up portions *d′*, which lie adjacent to the outer wall of the end ring. The rods D^2 D^3 act purely as key-rods and are without bends therein. In this construction, as in the one first described, the longitudinal rods, the transverse rods, and the end rings of the coils are interlockingly joined at the four points of intersection at each coil.

In the modification shown in Fig. 5 the cross-rods C^4 C^5 correspond with the rods C^2 C^3 of Fig. 4 and the rods D^4 D^5 correspond with the rods D^2 D^3 of Fig. 4. The construction is similar to the construction of Fig. 4, except that the rods C^4 C^5 cross each other at the center of the end ring, as indicated.

In each of the constructions shown there are two pairs of wires crossing each end ring and intersecting at four points within and adjacent to the ring, the rods and end rings being interlockingly joined. It thus appears that in each construction the corresponding end rings of the coils lying in a given plane are firmly joined together, and efficient means are provided for preventing the intermediate convolutions of the springs from working up through the upper end rings of the coils and injuring the mattress, or down through the lower end rings of the coils with consequent injury to or breakage of the springs, due to the so-called "telescoping" action thereof.

The deflections *c* may be smaller or of less depth than shown, in which case the link or clip *c'* will be correspondingly lengthened. The clips themselves may be of any suitable shape and material.

Changes in details of construction within the spirit of my invention are contemplated. Hence no undue limitation should be understood from the foregoing detailed description.

What I regard as new, and desire to secure by Letters Patent, is—

1. A spring-bottom, comprising coil-springs arranged in longitudinal and transverse rows and having corresponding end rings lying in a given plane, a pair of rods for each longitudinal row disposed along said end rings, and a pair of rods for each transverse row disposed along said end rings, the rods meeting and having interlocking engagement at four points of each end ring, the rods extending in one direction having diagonally-extending portions which substantially meet at the centers of the end rings, for the purpose set forth.

2. A spring-bottom, comprising coil-springs arranged in longitudinal and transverse rows and having corresponding end rings lying in a given plane, a pair of rods for each longitudinal row disposed along said end rings, and a pair of rods for each transverse row disposed along said end rings, the rods meeting and having interlocking engagement at four points of each end ring, the members of each pair of rods extending in one direction having deflections toward the centers of the end rings, and fastenings joining said members at said deflections, for the purpose set forth.

3. A spring-bottom, comprising coil-springs arranged in longitudinal and transverse rows and having corresponding end rings lying in a given plane, a pair of rods for each longitudinal row extending across and above the end rings and having struck-down eyes adjacent to the points where each rod crosses each end ring, a pair of rods for each transverse row passing across and beneath the end rings and having deflections in its members substantially meeting at the centers of the rings, and clips joining said deflections, the transverse rods passing through the eyes of the longitudinal rods, for the purpose set forth.

WILLIAM C. GROSE.

In presence of—
ELMER J. MITCHELL,
C. H. GAIL.