To all whom it may concern:

Be it known that I, CLARENCE H. CLOSTERMAN, a citizen of the United States of America, and a resident of Cincinnati, in the county of Hamilton and State of Ohio, have invented certain new and useful Improvements in Spring-Wire Mattresses, of which the following is a specification.

The object of my invention is a spring-mattress in which, while the coils are held securely in place they are not knotted, and each coil is crossed by only two tie-rods, which cross each other at the center of the coil, the coils being held in place upon the tie-rods by links, which are of a construction such that they may be fastened in place simply and quickly. This object is attained by the means described in the annexed specification and illustrated in the accompanying drawings, in which—

Figure 1 is a plan view of a corner of a mattress embodying my invention. Fig. 2 is a longitudinal sectional view taken through the center of one of the coils, the lower end of the coil being broken off and the tie-rod being shown in elevation. Fig. 3 is a perspective view of two coils upon a tie-rod connected by a link. Fig. 4 is a detail view, upon an enlarged scale, of the link shown in Fig. 1. Fig. 5 is a slightly-modified form of link. Fig. 6 shows the link in Fig. 5 in use.

Referring to the parts, frame A is of the ordinary construction and is to be used in combination with a similar lower frame, as is customary. The tie-rods and links will be described as connected at the top of the coils, it being understood that they are to be connected at the bottom in a similar manner, as is likewise customary. The upper and the lower end b and b' of coils B are free—that is, are not twisted about a loop of the coil—that is, they are not knotted coils. Tie-rods C pass under the top loop b' of each coil and have for each coil two double curves, the downturned bends c of which seat said upper loop, the upper turn being the loop. These tie-rods run longitudinally and transversely across the frame of the mattress at right angles to each other and cross the coils upon their diameters. Links D connect the coils, adjacent on the tie-rods, to one another. Each link has a U-shaped loop at each end, which fits into the upturned bend c of the tie-rod and thence passes over the top of loop b' of the coil to the next coil, passing over its top loop and into the next bend c of the rod. The U-loops are themselves bent down at an angle to the rest of the link, so as to pass readily over the top of loops b'. In the form shown in Fig. 1 these U-loops upon a link are turned in opposite directions, and between the coils the link is brought underneath the tie-rod.

In the form shown in Fig. 6 these loops are upon the same side of the link, and between the coils the link runs parallel to the tie-rod. It is seen that with this construction the clamping action where the coil, the tie-rod, and the link meet is of so firm a nature that there is no tendency to slip or slide in their seats or bends c', that therefore the coils need not be knotted, and that they are held in fixed relation to one another on the rods.

The method of putting the parts together is as follows: One of the U-loops of each link has its end left straight, as shown in dotted lines, Figs. 4 and 5. One coil having been placed in the bends c of the tie-rod, the U-loop with the downturned end is slipped into the bend c' adjacent to said bend c. The next coil is then placed on the tie-rod in the next bend c', the straight end of the U-loop of the said link is slipped through the next bend c', and said straight end is then bent down with an instrument, so that in securing a link in place the only point at which any bending or the use of an instrument is necessary is this one finishing step of turning down the straight end of one U-loop—a simple operation, which may be quickly done.

What I claim is—

1. In a spring-mattress in combination tie-rods having a series of double curves each consisting of a downturned and an upturned bend the downturned bends to seat the loops of the coils of the mattress, and links between the coils adjacent to the tie-rods and whose ends are bent to pass over said loops of the coils and to seat in the upturned bends of the double curves, substantially as shown and described.

2. In a spring-mattress the combination of a series of coils, tie-rods running diametrically across the coils at right angles to each other beneath the top loops of the coils and having a series of double curves consisting of
an upturned and a downward bend the latter to seat said loops, and links between the coils adjacent to the tie-rods and having U-loops at their ends to pass over the loops of the coils and seat in the upturned bends of the tie-rods, substantially as shown and described.

3. In a spring-mattress the combination of a series of coils, tie-rods having a series of double curves each consisting of an upturned and a downturned bend running diametrically across the coils at right angles to each other beneath the top loop of the coils so that the loops seat in the downturned bends and the upturned bends come within the loops, and links between the coils adjacent to the tie-rods and having U-loops at each end one of which has its end left straight so that the completed U-loop having been slipped into one of the upturned bends of one of said coils double curves the straight end may be pushed through the next of said bends and secured in place at one operation, substantially as shown and described.

CLARENCE H. CLOSTERMAN.
Witnesses:
W. F. MURRAY,
GEO. J. MURRAY.