

(No Model.)

O. S. FOSTER.
SPRING BED.

No. 493,581.

Patented Mar. 14, 1893.

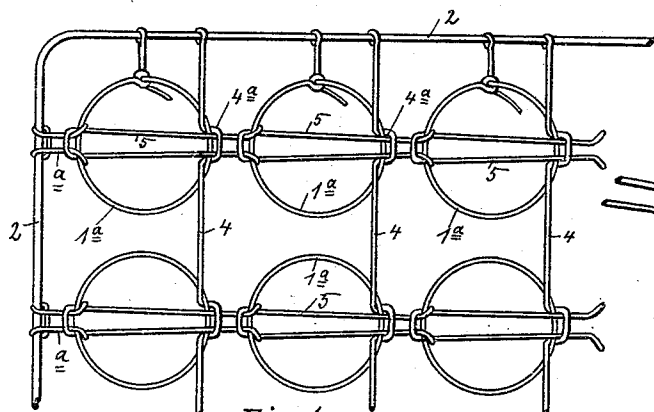


Fig. 1.

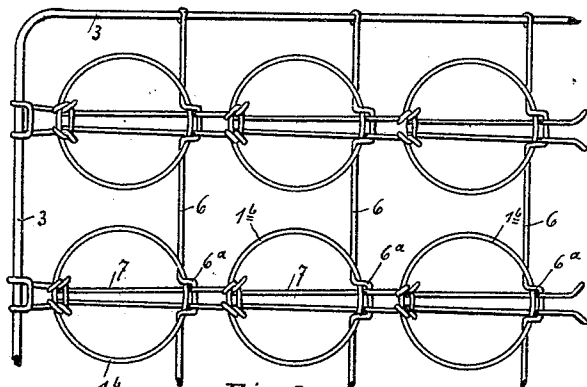


Fig. 2.

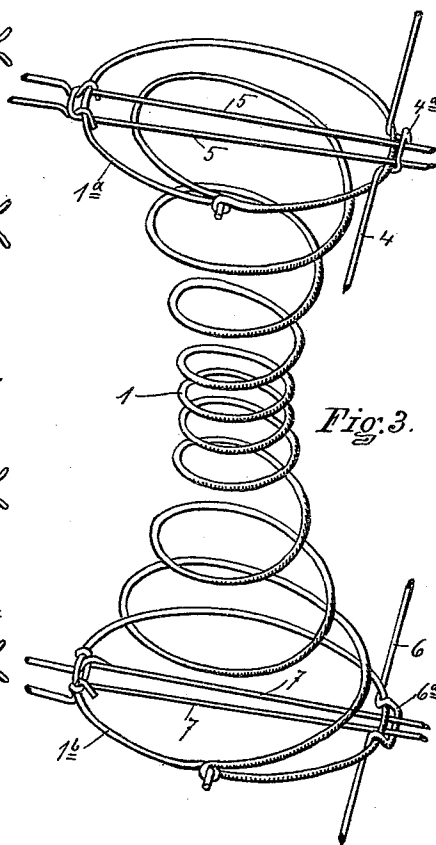


Fig. 3.

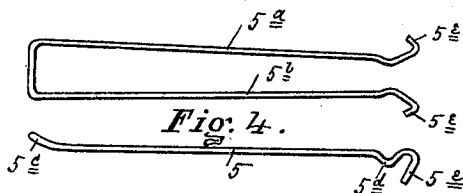


Fig. 4.

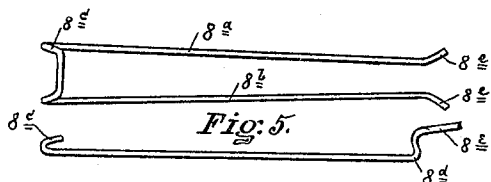


Fig. 5.

WITNESSES.
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OSCAR S. FOSTER, OF UTICA, NEW YORK.

SPRING-BED.

SPECIFICATION forming part of Letters Patent No. 493,581, dated March 14, 1893.

Application filed June 6, 1892. Serial No. 435,778. (No model.)

To all whom it may concern:

Be it known that I, OSCAR S. FOSTER, of Utica, in the county of Oneida and State of New York, have invented certain new and useful Improvements in Spring-Beds; and I do hereby 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, reference being had to the accompanying drawings, and to the numerals of reference marked thereon, which form part of this specification.

My invention relates to an improvement in spring beds.

In the drawings which accompany and form a part of this specification and in which similar letters and numerals of reference refer to corresponding parts of the several figures—

Figure 1, shows a plan view of the upper surface of my improved bed. Fig. 2, shows a plan view from the top of the under face of my improved bed. Fig. 3, shows in perspective one of the springs used in the bed in connection with the sections of the cross wires and stays of both the top and bottom faces of the bed. Fig. 4, shows in plan and side elevation one of the sections or links of the stay used in the upper surface of the bed. Fig. 5, shows in plan and side elevation one of the sections or links which form the stay on the under surface of the bed.

Referring more particularly to the reference letters and numerals marked on the drawings in a more particular description of the device, the bed consists of an assemblage of double conical springs 1, which terminate in substantial plan convolutions at each end, which convolutions form in part 1^a and 1^b a portion of the upper and under face of the bed. Surrounding the bed at the upper and under faces are border wires or frames 2 and 3, to which the cross wires and stays are connected. The transverse or cross wires 4 are secured at each end to the border frame 2 and pass transversely across the bed, being provided at each spring with a loop or offset 4^a adapted to engage the convolutions 1^a of the spring from the inside and partially surrounding the same as clearly shown in Fig. 3. Longitudinally across the bed extend stays 5, which consist of a piece of wire doubled to have parallel arms 5^a and 5^b, with an upwardly in-

clined bend as shown at 5^c on the double end and a depression 5^d and a hook 5^e on the ends of each of the arms 5^a and 5^b. The lengths of the links 5 are such that when one end is in engagement with the convolution 1^a of the spring, the opposite ends of the arms will extend diametrically across the spring and reach the next adjacent spring.

In starting from the border wire 3, a short or part link is used, as shown at *a*, this is attached to the next link and convolution of the spring by having its arms as 5^a and 5^b pass within the double of the link between the arms and thence over the convolution 1^a of the spring and having the extreme ends passing to the outside of the arms of the link adjacent to the double as shown. As before stated the link passes diametrically across the spring and secures the stay wire 4, by having the arms 5^a and 5^b pass over the convolution 1^a and under the double 4^a of the cross wire, and thence extending to the next spring where it is united to the spring and next section or link of the stay as before described. In this way a bed is formed having stays which unite the several springs and secure the cross wires, formed of duplicate pieces or sections of links which may be successively placed in order as described. The cross or stay wire 6, of the under face of the bed is formed the same as stay wire 4, with the double 6^a similar to 4^a. The stays 7, of the under surface of the bed are composed of links 8, similar to 5. The links 8, consist of a wire doubled as shown in Fig. 5, and having arms 8^a and 8^b, the double end being formed with a hook as shown at 8^c and the projecting ends of the arms being provided with a depression 8^d and a hook 8^e. The stays are placed together as described with reference to 5, except that the hook portion 8^c partially surrounds the convolution 1^b of the spring and the arms 8^a and 8^b passing on to the end face of the convolution receive the same within the depression 8^d and receive hook or loop 8^e of the adjacent link within the hooks 8^c on the ends of the arms. The arms 8^a pass through the loops 6^a of the cross wires and secure them in the upper face of the bed.

This construction besides having the advantage of economy in forming and assembling the parts in the bed, also possesses the

further advantage of having the stays form trusses at both the upper and lower faces of the bed, that is a weight placed on the upper surface of the bed and tending to depress one or more of the springs more than the adjacent springs a portion of the weight is communicated to the adjacent springs by the truss thus formed. It will be observed that by reason of the hook of the arms 5^a and 5^b passing under the double end of the link and thence over the convolution of the spring, the tendency is to form a stiff connection between the springs against downward pressure but a hinged connection against upward pressure. This same result is accomplished in the under surface of the bed by the arms 8^a passing under the convolution 1^b of the spring and thence upward and over the loop 8^c of the next adjacent link. Downward pressure exerted on the spring it will be observed tends to make the stay stiff as a single piece crosses the entire width of the bed, but pressure from the under side makes the joint act as a hinge. It is evident that changes in and from the construction described may be made without departing from the equivalents of my construction.

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

1. The combination with the springs of a mattress, of a stay consisting of links formed of doubled wire, the wire terminating at one end of the link in hooked arms which pass within the doubled end of the next link and engage with the convolution of the spring, substantially as set forth.

2. The combination of spiral springs forming a bed bottom and a stay consisting of links of doubled wire terminating at one end in a pair of hooked arms, the link passing diametrically across the spring and the doubled end of the link engaging on the under face of the convolution of the spring and hooked ends of the adjacent link passing within the doubled end and engaging over the convolution, substantially as set forth.

3. The combination in a bed bottom composed of several springs and cross wires engaging the several springs and having offsets

engaging each of the springs and a stay passing diametrically across the springs, composed of links, each link having at one of its ends hooks which engage the convolution of the spring, securing it, the link passing within the offset in the stay wire securing the same to the spring, substantially as set forth.

4. The combination in a bed bottom composed of several springs, of cross wires having offsets engaging each spring, stays consisting of links formed of parallel wires united at one end and having hooked arms at the other, the links passing through the offset on the cross wire, securing it and being secured together and to the convolution of the spring by the hooked arms thereof, passing around the convolution of the spring and within the doubled end of the link, substantially as set forth.

5. The combination in a spring bed bottom composed of a number of spiral springs, of a stay connecting springs and consisting of links formed of parallel wires united at one end and hooked at the other, the hooked end of the link engaging the convolution of the spring and passing thence through the doubled end of the next adjacent link on one side diametrically across the next adjacent spring and to the next link on the other side, substantially as set forth.

6. The combination in a spring bed bottom composed of several spiral springs, of a stay extending between the springs and consisting of links formed of parallel wires united and hooked at one end and independent and hooked at the other end, the hooked double end of the link engaging the convolution of a spring and passing thence diametrically across the spring and to the next adjacent spring where the free hooked ends engage the convolution of a spring and are hooked through the double end of the next adjacent spring, substantially as set forth.

In witness whereof I have affixed my signature in presence of two witnesses.

OSCAR S. FOSTER.

Witnesses:

GEORGE C. CARTER,
RICH. A. GEORGE.