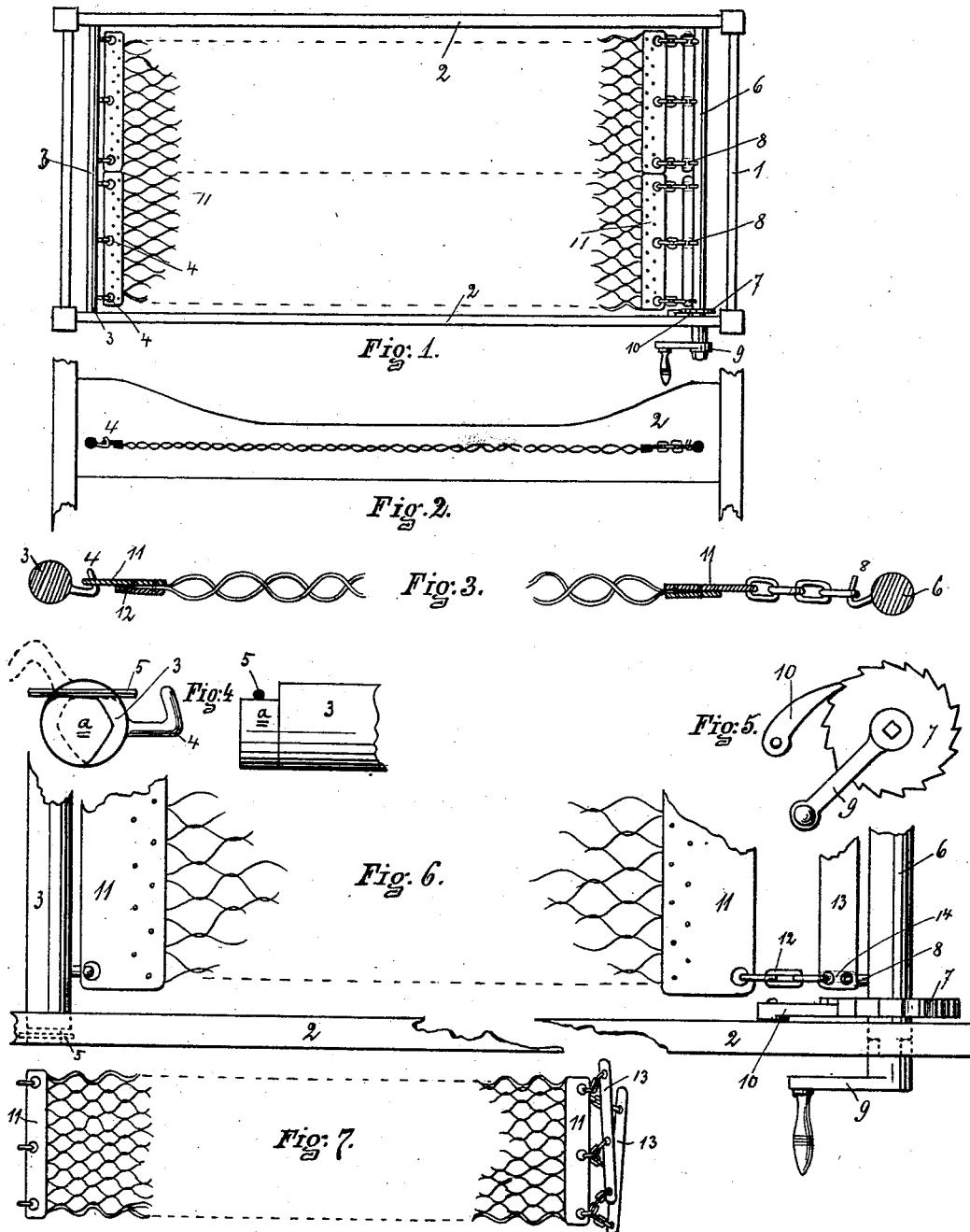


(No Model.)

J. H. BROTHERS.  
SPRING BED.

No. 454,027.

Patented June 16, 1891.



WITNESSES.

Rich. A. George.

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# UNITED STATES PATENT OFFICE.

JAMES H. BROTHERS, OF UTICA, NEW YORK.

## SPRING-BED.

SPECIFICATION forming part of Letters Patent No. 454,027, dated June 16, 1891.

Application filed February 24, 1891. Serial No. 382,408. (No model.)

*To all whom it may concern:*

Be it known that I, JAMES H. BROTHERS, 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 letters and figures 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 figures of reference refer to corresponding parts in the several figures, Figure 1 shows a plan view of my improved bed. Fig. 2 shows a longitudinal section of the bed. Fig. 3 shows an enlarged detail view of the construction of the bed-bottom and portion of the straining devices. Fig. 4 shows a side and end elevation of one of the bars upon which the bed-bottom is stretched or strained. Fig. 5 shows a crank, ratchet-wheel, and dog used on one of the rollers or bars on which the bed-bottom is strained. Fig. 6 shows, on an enlarged scale, details of construction. Fig. 7 shows the bed-bottom removed and folded lengthwise through the middle.

Referring more specifically to the reference letters and numerals marked on the drawings, 1 indicates an ordinary bedstead having side rails 2 2, in which bedstead is mounted foot straining-bar 3, provided with a series of hooks 4 4, &c. The end of the foot straining-bar 3 is made irregular in form, substantially as shown in the side and end view in Fig. 4, and against the irregular portion is adapted to engage pin 5, located in the wall of the side rail, permitting the straining-bar 3 to have a partial rotation, as from the position shown in the full lines in Fig. 4 to that shown in dotted lines. It will be understood that a portion of the round part of the cross-bar engages in the side rail, so that the cross-bar will readily rotate, as on a bearing, as heretofore stated.

In the opposite end of the bedstead is located a rotating straining-bar 6, mounted in

suitable bearings in the side rails and provided with a ratchet-wheel 7 and hooks 8 8, &c., having their projecting ends nearer to the straining-bar than the bend of the hook. The end of the bar 6 is provided with a square end adapted to receive a crank-wrench 9, and to the side rail is secured a pawl or dog 10, adapted to engage in ratchet-wheel 7 and secure the bar from rotation.

The wire fabric of the bed-bottom is secured between clamping-pieces 11 and 12, and the pieces 11 and 12 are preferably secured together by rivets. Four or more pieces, as 11, are provided for each bed-bottom, two being shown upon each end of the one shown in the drawings. This permits the bed-bottom to be folded lengthwise through the middle in convenient shape for transportation and independent and freed of all frames.

In each of the bars 11, at the foot of the bed-bottom, is provided a series of holes adapted to engage on the hooks 4 in the straining-bar 3.

At the head of the bed-bottom is provided a series of short chains 12, which connect the detachable eye-pieces 13 to the end of the bed-bottom fabric. The pieces 13 are of the same length as the pieces 11, secured on the end of the bed-bottom, respectively, and are provided with eyes 14, corresponding in number and position with the hooks 8 on the straining-bar. It is desirable to provide plates on the inner side of the said rails as bearings for the straining-bars 3 and 6, although this is not absolutely necessary.

The operation of the devices and mechanism heretofore described is substantially as follows: Starting with the fabric removed and folded as shown in Fig. 7 and the foot-roll with the hooks turned in the position shown in dotted lines in Fig. 4, in which they are out of the way and so as to not readily catch foreign substances or material, the hooks 4 are turned down to the position shown in full lines in Fig. 4, and the eyes at the foot of the cross-bars 11 are then placed upon the hooks 4. The eyes of the bars 13 are then secured upon the hooks 8, when by applying the wrench 9 the fabric is strained to any desired tension, in which it is secured by pawl 10. The bars 13 are preferably of a width not greater than the diameter of the roller 6, so that

they will readily pass around the roller as the chains are wound around it.

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

5 The combination of a single sheet of wire fabric having sectional end bars 11 secured to each end thereof, and provided with eyes for attaching the bottom to the straining devices, eye-bars 13 at one end of the bed-bot-  
10 tom, of equal length with the bars 11 and connected to bars 11 by short chains, straining-bar 6, provided with hooks 8 and ratchet,

pawl, and crank, and straining-bar 3, provided with hooks 4 and having an end *a* and pin 5 engaging thereon, whereby the bar 3 has a 15 partial rotation, all combined as and for the purposes set forth.

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

JAMES H. BROTHERS.

Witnesses:

M. E. ROBINSON,  
L. S. CLARKE.