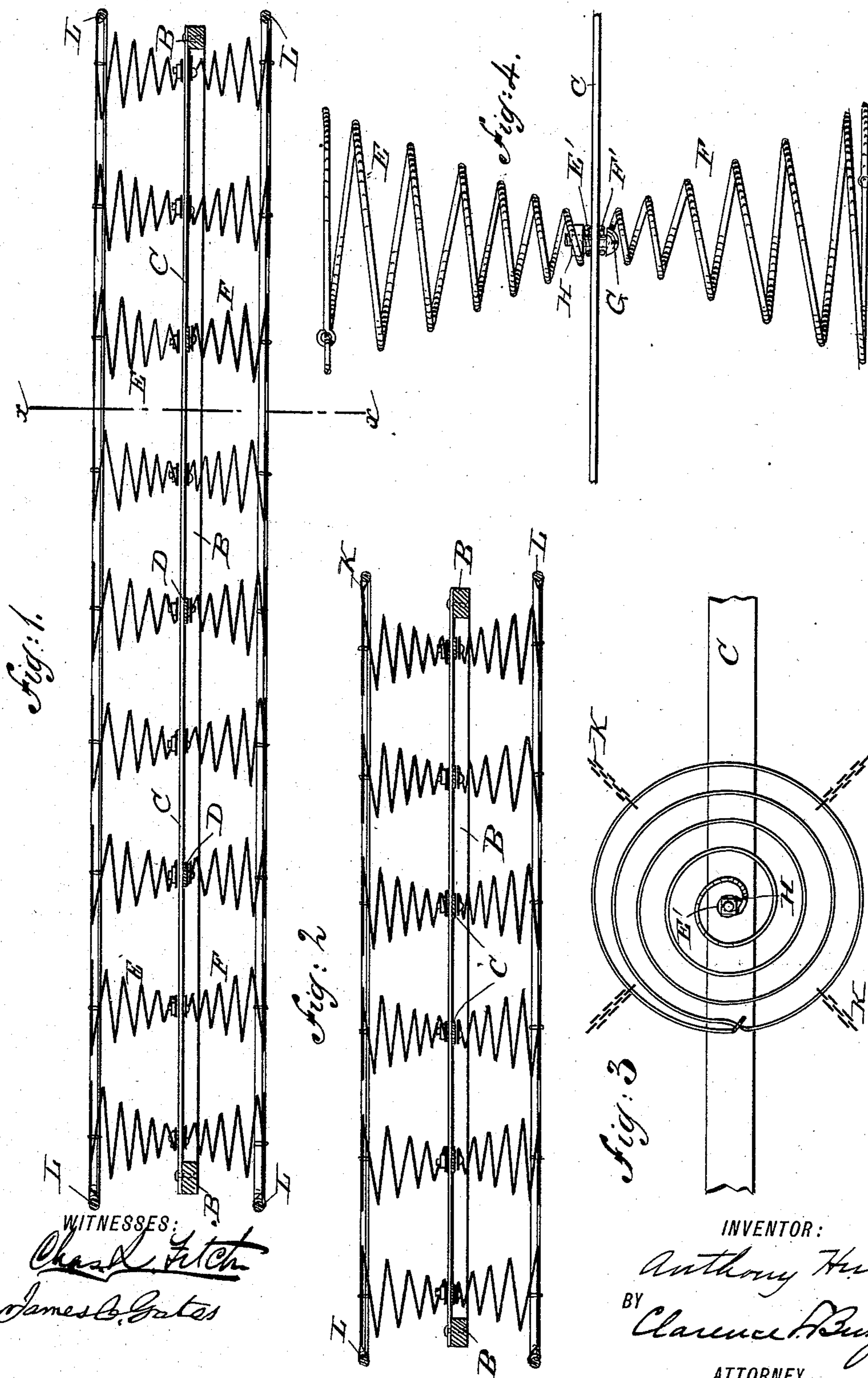


(No Model.)

A. HUBER.
SPRING BED BOTTOM.

No. 412,506.

Patented Oct. 8, 1889.



WITNESSES:
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ANTHONY HUBER, OF NEW YORK, N. Y.

SPRING BED-BOTTOM.

SPECIFICATION forming part of Letters Patent No. 412,506, dated October 8, 1889.

Application filed September 19, 1888. Serial No. 285,790. (No model.)

To all whom it may concern:

Be it known that I, ANTHONY HUBER, of the city, county, and State of New York, have invented a new and useful Improvement in Spring Bed-Bottoms, of which the following is a specification.

This invention relates, principally, to the reversible spring-bottoms of beds, lounges, and the like, wherein a horizontal frame is provided with sets of springs projecting both upward and downward therefrom, so that either side of the spring-bottom can be used as the upper or supporting side at will. The springs in spring-bottoms of this kind have generally heretofore been of the double cone or hour-glass class, and been attached at their necks to a fabric webbing connecting the opposite members of the frame, which webbing would sag under weight and rapidly wear out.

The main object of my invention is to obviate these objections and to provide for the ready renewal of any spring when broken or disabled, without disturbing the other parts of the spring-bottom.

To this end the invention comprises various novel features of construction and arrangement, which, in order that they may be fully understood, will first be described in detail in connection with a spring bed-bottom embodying the invention, and then distinctly pointed out in the claim.

Reference is to be had to the accompanying drawings, forming part of this specification, in which—

Figure 1 is a longitudinal sectional view of a reversible spring bed-bottom constructed according to my invention. Fig. 2 is a transverse sectional view of the same on the line X X, Fig. 1. Fig. 3 is an enlarged plan view of a part of the same. Fig. 4 is an enlarged side view of a part of the same.

The reversible spring bed-bottom to which my invention has been applied in the manner thus illustrated, is provided with a rigid medial frame B, the opposite end members of which are connected by a series of flat metallic longitudinal cross-strips C, securely attached to said end members, and the opposite side members, by preference, by a number of, in this instance, three transverse metallic cross-strips D, which are riveted to the

longitudinal cross-strips C at their intersection therewith. On opposite sides of each cross-strip C are arranged corresponding series of single-cone springs E F, forming pairs, the opposite ones of each of which are axially aligned and placed apex to apex against the respective sides of the cross-strip C, and, being formed at their apices into flat eyes E' F', are rigidly connected together, and to the strip C by a headed bolt G, which is passed through both of said eyes E' F' and the interposed strip C, and is tightened by a nut H. Three of the transverse series of springs E F are in this instance placed at the intersections of the longitudinal strips C and the transverse strips D, and the corresponding bolts G are passed through the opposite eyes E' F' and both interposed strips C D. With this construction any of the single-cone springs may be readily removed and replaced at will without disturbing the remainder. The metallic cross-strips C D, being attached at their ends to the rigid frame B, will not sag under a load, and are extremely durable, while with the metallic coupling described they connect the opposite single-cone springs as rigidly as if each were a continuous double-cone spring. The heads of the opposite series of springs E and F are in this instance connected by light chains K, the outer series of springs E and F being connected by like chains to light bordering-frames L, after a common mode.

I am aware that substantially double-cone springs have heretofore in spring bed-bottoms been formed of two single-cone springs placed apex to apex and their apices riveted or bolted together; but I am not aware that between such single-cone springs composing the double-cone springs the metallic cross-strips connecting the opposite members of the bed-bottom frame have before been interposed, and the apices of the opposite single-cone springs rigidly but detachably fastened to each other and to the interposed metallic strip by a bolt. By this construction, in case any of the single-cone springs composing the double-cone springs is weakened or injured or otherwise defective, I am enabled to readily detach and remove said defective single-cone spring and replace it by

a perfect one without disturbing the opposite component spring or affecting the efficiency of the reverse side of the bed-bottom, as the metallic strip serves meanwhile to securely
5 retain the remaining members in place.

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

A reversible spring bed-bottom composed, as herein described, of a rectangular frame,
10 metallic cross-strips, and substantially double-cone springs, wherein the said double-cone

springs are each really made of two separate single-cone springs placed apex to apex on opposite sides of the said metallic cross-strips, and the apices of the opposite springs rigidly
15 but detachably fastened to each other and to the interposed metallic strips by bolts, as and for the purpose specified.

ANTHONY HUBER.

Witnesses:

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