

(No Model.)

G. WENZELL.
SPRING BED.

No. 277,639.

Patented May 15, 1883.

fig 1,

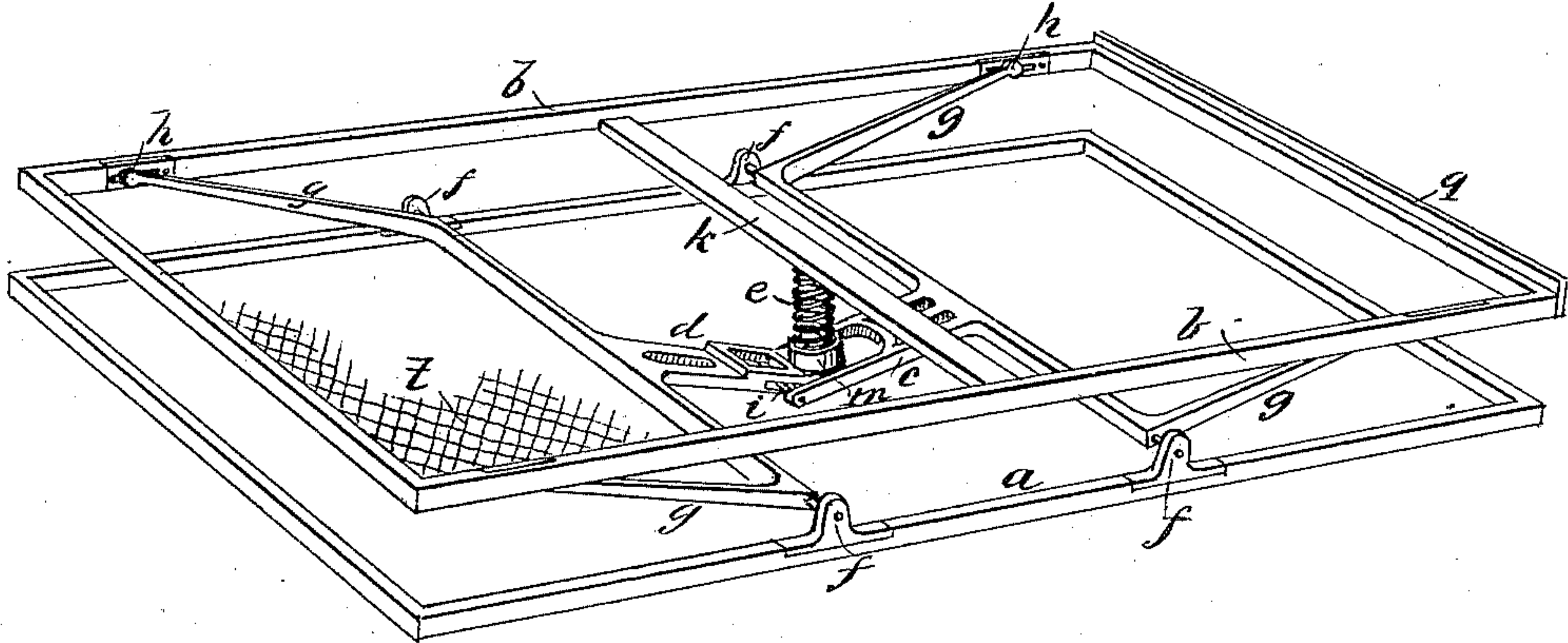


fig 2,

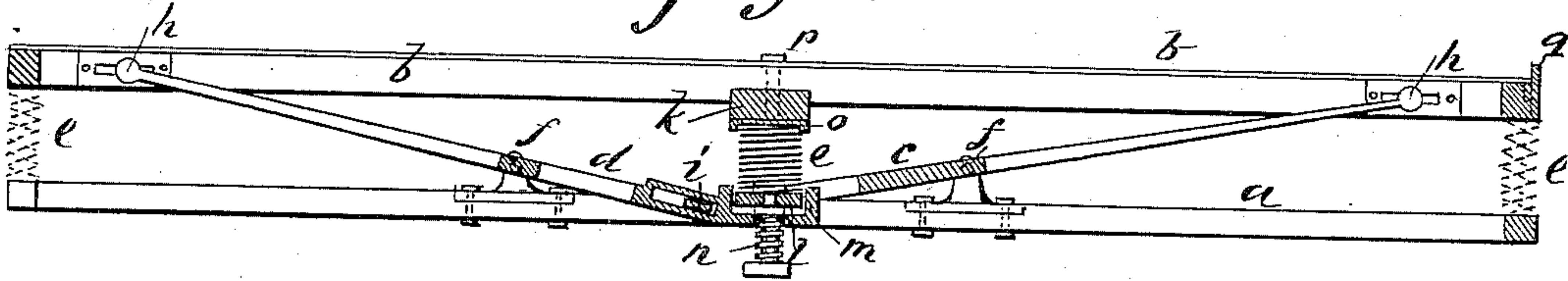


fig 3,

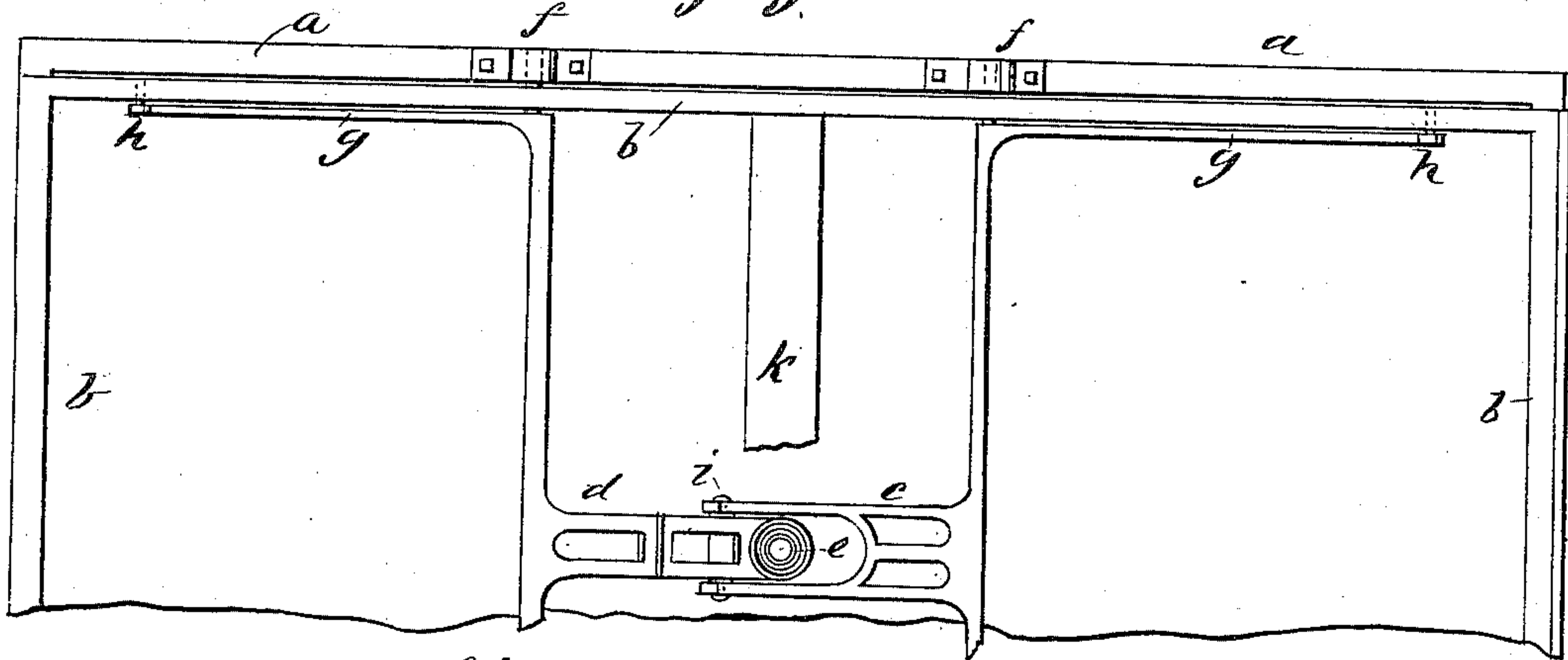
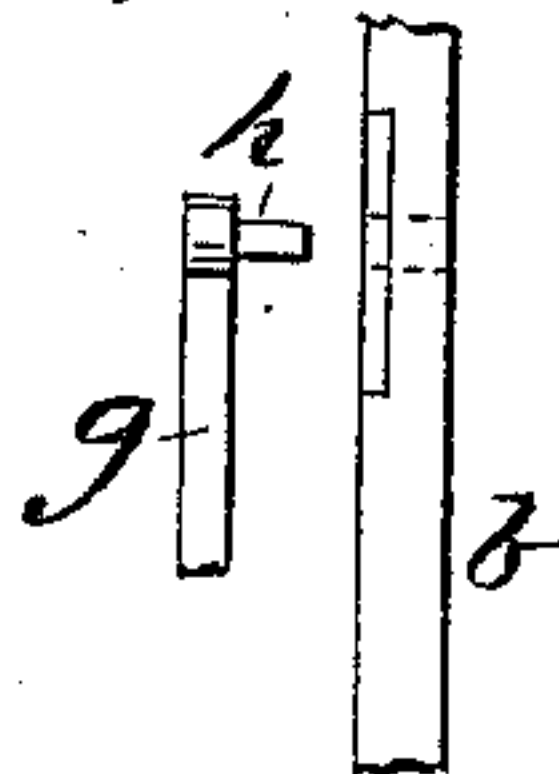
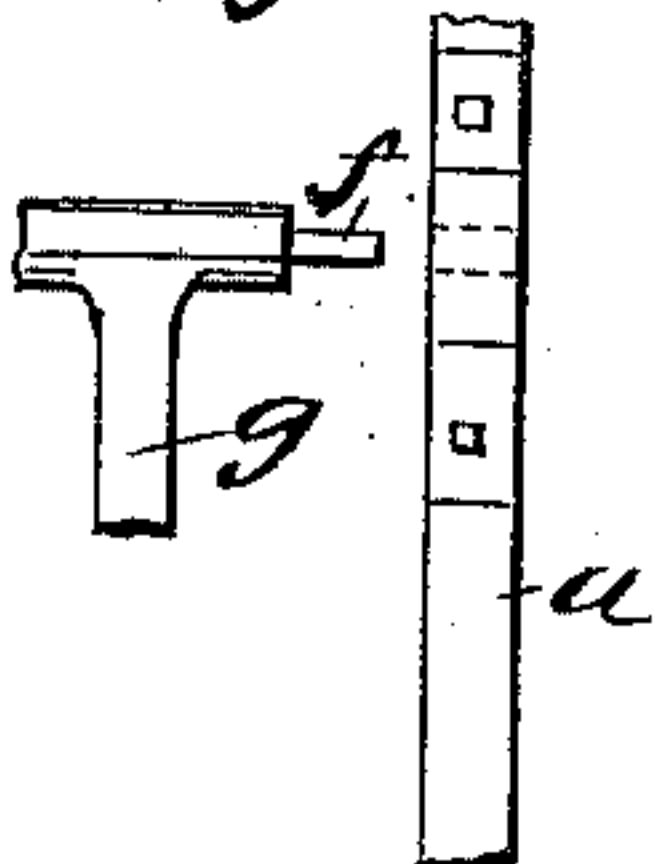


fig 4,

fig 5,

WITNESSES:

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UNITED STATES PATENT OFFICE.

GEORGE WENZELL, OF DETROIT, MICHIGAN, ASSIGNOR OF ONE-HALF TO
HENRY J. MEIER, OF SAME PLACE.

SPRING-BED.

SPECIFICATION forming part of Letters Patent No. 277,639, dated May 15, 1883.

Application filed November 20, 1882. (No model.)

To all whom it may concern:

Be it known that I, GEORGE WENZELL, of Detroit, Wayne county, Michigan, have invented a new and Improved Spring-Bed, of which the following is a full, clear, and exact description.

My improvement in spring-beds consists, essentially, of a contrivance whereby the bed will be depressed alike over all its surface by weight upon any part, thereby preserving the level of the bed, whether the occupant rest in the middle or side or end.

The contrivance of apparatus consists, essentially, of two frames connected by levers and a spring or springs, so that either frame may serve for the base, and will support the other, having the bed on it, by the spring or springs, which, together with the levers, preserve the level of the surface, while affording the required elasticity of the spring-bed, all as hereinafter fully described.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar letters of reference indicate corresponding parts in all the figures.

Figure 1 is a perspective view of my improved spring-bed. Fig. 2 is a longitudinal sectional elevation of the same. Fig. 3 is a plan view, and Figs. 4 and 5 are details.

I make two rectangular frames, *a* and *b*, corresponding in size and shape with the bedstead on which the spring-bed is to be used, said frames being of equal length and breadth, or frame *b* may be a little narrower than *a*, if desired, and I connect said frames together a suitable distance apart, one above another, by the levers *c d* and the spring *e*, as here shown, or in any equivalent way—that is to say, the levers having fulcrums at *f* on the frame *a*, and being connected by arms *g* and pivot-studs *h* with the frame *b*, and being connected together at *i*, where they support the strong spring *e*, on which frame *b* is supported by its cross-bar *k*. Stud *h* connect with frame *b* in slots, and the connection of the levers at *i* is by an adjusting-link contrivance, allowing the levers to vibrate freely as the weight upon the bed varies and the spring expands or contracts. The spring rests at one end on a follower, *l*, in

a cup-extension, *m*, of lever *d*, with which there is an adjusting-screw, *n*, by which the tension of the spring may be varied at will, and, if desired, the other end of the spring may bear in a cup, *o*, adjustable by a screw, *p*, in cross-bar *k* to regulate the tension thereat.

It will be seen that weight upon one end of the frame *b* will act alike on the other end to depress the bed by contracting the spring through the levers, thus maintaining the desired uniform level of the whole of the upper surface of the bed.

It will also be seen that, owing to the construction of the levers with side arms, *g*, pressure upon one side of the bed will depress the other side and both ends alike. It is obvious that the levers may be ranged crosswise of the bed instead of lengthwise, as here shown, if desired; and it is apparent that the spring-bed may be used either side up—that is to say, the frame *b* may be uppermost and have the webbing *t* for the support of the mattress attached to it, the frame *a* being supported on the bedstead; or frame *b* may rest on the bedstead, and frame *a* may have the webbing *t* for the mattress. Any form or contrivance of canvas, wire net-work, slats, or other suitable top may be employed for the purposes of the said webbing *t*.

The action of the contrivance is substantially the same whichever side up it is used—that is to say, wherever the weight is placed it causes the lever under it to compress the spring and at the same time to work the other lever, so as to effect uniform depression of the whole upper surface of the bed.

I do not limit myself to any particular contrivance of the fulcrums, pivots, and connecting devices of the levers, nor to the kind of spring, nor to number or arrangement of the spring or springs.

The upper frame may have a rib or rail, *q*, at one or both ends for retaining the mattress.

It is obvious that instead of using one spring *e* between the levers, one or more of such springs may be located between the frames *a b* at each end, as in dotted lines, Fig. 2, and I propose to construct the bed in that manner when preferred.

I do not mean to limit myself to the employment of a special lower frame when it may be preferred to utilize the bedstead therefor by mounting the fulcrums *f* on it in lieu of frame
5 *a*, and I include the bedstead in such case as the frame *a* or lower frame referred to herein, and in such case I may locate spring *e* under cup *m* of lever *d*, connecting it to any substantial cross-bar under the bedstead, so that it
10 will be extended by the weight on the bed, instead of being compressed, as herein shown.

It is to be understood that the fulcrums *f* and pivots *h* will remain as represented, and be reversed with the bed when it is reversed,
15 said fulcrums and pivots working alike either side up, and the same with the spring.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

1. The combination, in a spring-bed, of
20 frames *a b*, levers *c* and *d*, spring or springs *e*, and suitable fulcrums, pivots, and lever-connections, enabling the level of the surface of

the bed to be maintained, substantially as described.

2. The combination of levers *c d*, having connecting-joint *i* and arms *g*, with frames *a* and
25 *b* and spring *e*, substantially as described.

3. The levers *c d*, fulcrumed on frame *a*, pivoted to frame *b*, and connected together at *i*, in combination with spring *e*, supported on one
30 of said levers, and cross-bar *k*, supported on the springs, substantially as described.

4. The combination of follower *l*, cup *m*, and adjusting-screw *n* with levers *c* and *d*, spring
35 *e*, and the frames *a* and *b*, substantially as described.

5. The combination of cap *o* and screw *p* with spring *e*, frames *a* and *b*, and the levers
40 *c d*, substantially as described.

GEORGE WENZELL.

Witnesses:

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WILLIAM NOACK, Jr