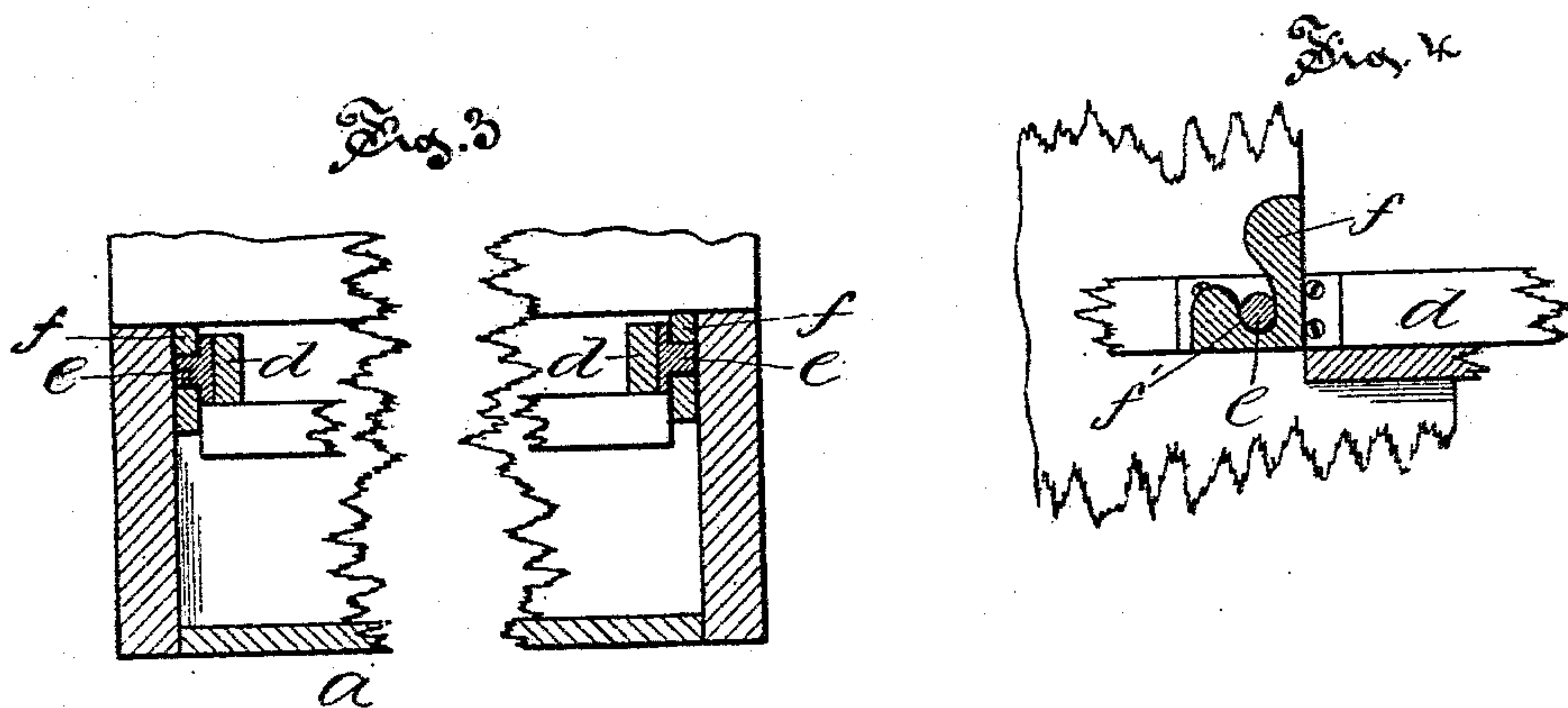
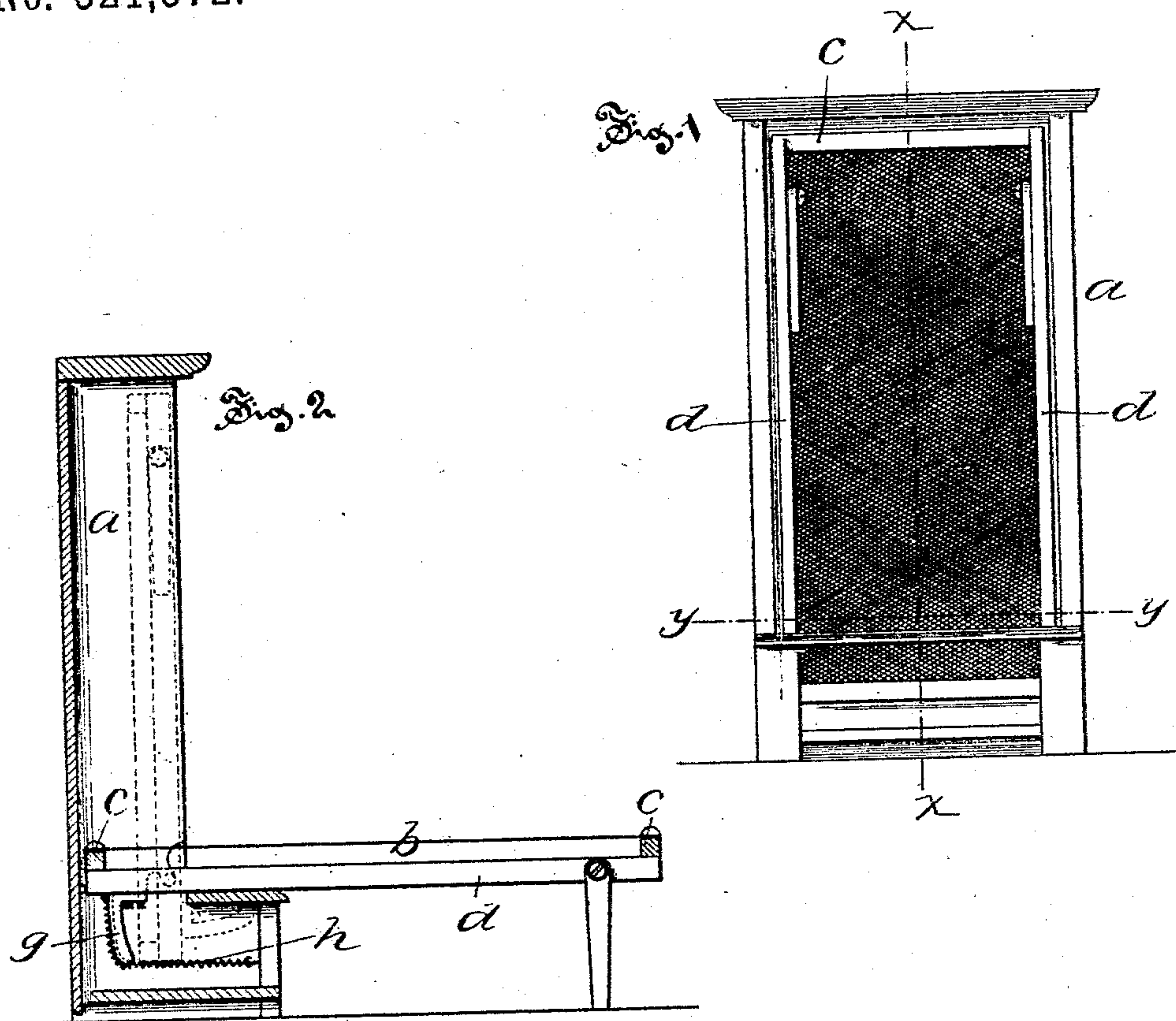


(No Model.)

S. H. BINGHAM.
FOLDING BED.

No. 321,572.

Patented July 7, 1885.



Witnesses

Wm. J. Porter

Edwin J. Dimock.

Inventor

Samuel H. Bingham,

By Simonds & Boudette

Attys.

UNITED STATES PATENT OFFICE.

SAMUEL H. BINGHAM, OF HARTFORD, CONNECTICUT.

FOLDING BED.

SPECIFICATION forming part of Letters Patent No. 321,572, dated July 7, 1885.

Application filed July 14, 1884. (No model.)

To all whom it may concern:

Be it known that I, SAMUEL H. BINGHAM, of Hartford, in the county of Hartford and State of Connecticut, have invented certain new and useful Improvements in Folding Beds; and I do hereby declare that the following is a full, clear, and exact description thereof, whereby a person skilled in the art can make and use the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon.

Like letters in the figures indicate the same parts.

Figure 1 is a front view of my improved device, showing the bed folded within the case. Fig. 2 is a detail view in cross-section on plane denoted by line *x x* of Fig. 1, through the case and bed, showing the bed lowered in position for use in full lines, and in a raised position in dotted lines. Fig. 3 is a detail cross-sectional view through the pivots and socket-pieces on plane denoted by line *y y* of Fig. 1. Fig. 4 is a detail side view of the socket-piece and a part of the side rail of the bed, showing the pivot.

My improvement relates more particularly to the class of folding beds known as "wardrobe-beds;" and it consists in certain details of construction of the counterpoise adjustment to the frame, as more particularly hereinafter described.

My improvements are as applicable to the smaller size of beds (as cot-beds) as to the larger sizes, and the improvements are particularly applicable to, and enable me to use the well-known form of spring known as "woven-wire mattress."

In the accompanying drawings, the letter *a* denotes a wardrobe or case of any desirable material, as wood, and of any convenient form, usually made, however, in a close imitation of a book-case or wardrobe.

The letter *b* denotes a bed-frame of a size that will enable it to fit readily within the upright portion of the case; *c*, the end rails; *d*, the side rails, the latter provided near the lower end of the frame, as shown in Fig. 3, with the outwardly-projecting pivots *e*.

Upon the inner side of the case, near the lower part of the upright portion, pivot-sock-

ets *f'* are provided in the socket-pieces *f*, fast to the case. These sockets open toward the inside of the case, and in them the pivots *e* fit and operate in such manner that the bed swings on these pivots in a vertical plane.

Upon the under side of each of the side rails, back of the pivot and near what is usually the head of the bed, is secured a curved bracket, *g*; and a spiral spring, *h*, is secured by one end to the inner side of the case or wardrobe and by the other is removably attachable to the lower end of the side rail. A part of the spring lies against the curved face of the bracket, that may be grooved to prevent lateral displacement of the spring as it is extended and contracted by the swinging of the bed between its vertical and horizontal positions, and the spring is secured as described in order to get a sufficient length of spring to operate well in the comparatively limited space afforded in the bottom of the case.

The object of the bracket is of course to keep the length of the short arm of the lever in such relation to the change in weight as the bed is swung between the upper and lower limits of its play that the counterbalance pull of the spring shall also change and be of sufficient effect when the bed is in its horizontal position to require but little added lifting force to raise the bed.

The case and bed-frame in my improved device having been constructed substantially as shown as to the respective parts, the head or lower end of the frame is inserted in the case above the socket-pieces, the frame being held in a nearly vertical position, and the pivots are slipped into their respective sockets. Each spring is then attached to the case and to the frame, and the latter is ready for use so far as the raising and lowering of the bed is concerned.

I am aware that wardrobe-bedsteads have been made with the bedstead pivotally supported in the case, and having a system of connected springs to counterpoise the weight of the bed in opening and closing, as set forth in Patents to A. Orthleib, No. 254,501, and T. Saxton, No. 253,768; and the combination of a counterpoising spring with the folding bed-

stead I do not broadly claim, the main feature of my improvement residing in the peculiar combination of the parts, as above described, whereby simplicity of construction and a great
5 efficiency in the great length of spring is gained by the introduction of the bracket to change the direction of the pull of the spring.

I claim as my invention—

In combination, a bed-supporting case and
o a bed-frame pivotally suspended in the case,

the frame bearing the curved bracket in the plane of motion of the frame, and the spring attached to both the case and the bed-frame and with part of its length lying against the curved side of the bracket when the bed-frame
15 is horizontal, all substantially as described.

SAMUEL H. BINGHAM.

Witnesses:

CHAS. L. BURDETT,
E. F. DIMOCK.