E. W. MAXSON.

Bed-Bottom.

No. 206,256. Patented July 23, 1878.

fig. 1

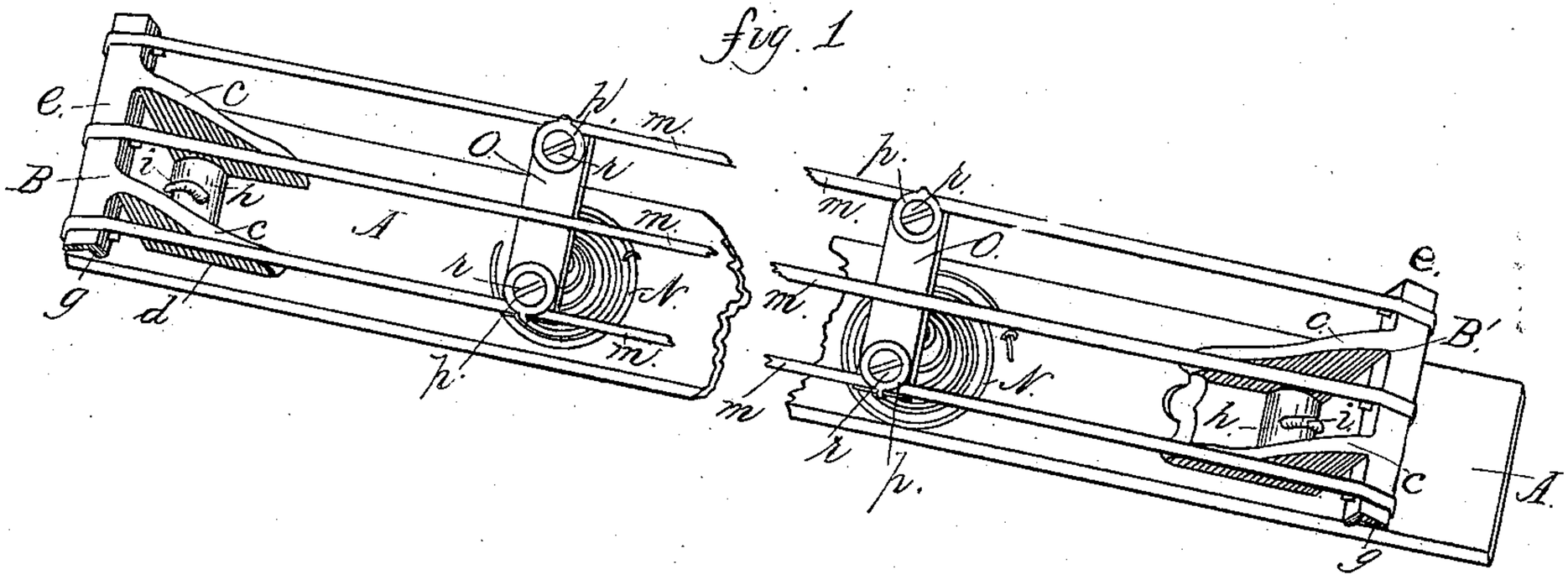


fig. 2.

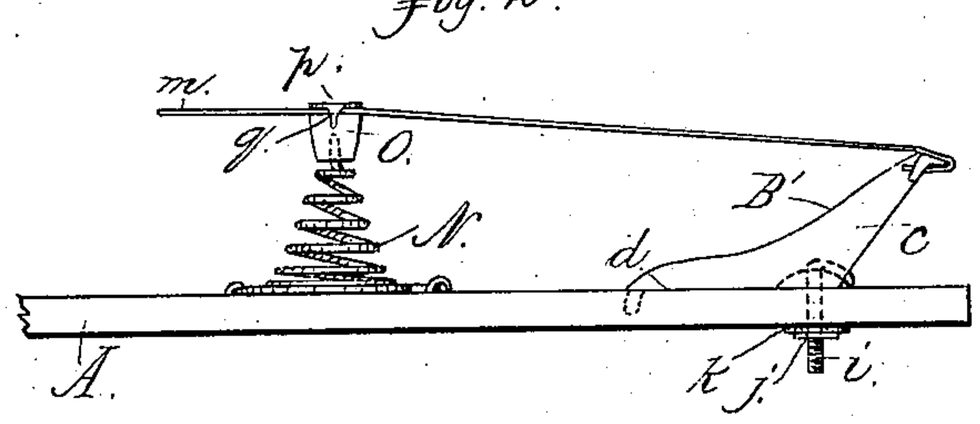
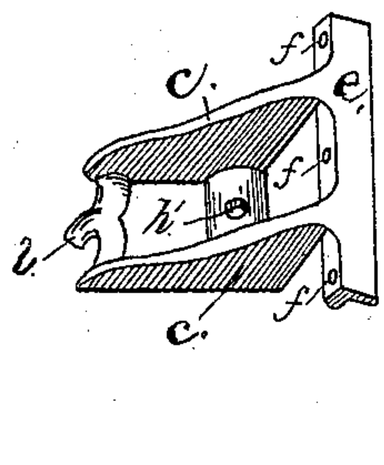


fig. 3.



Witnesses:

Geo. T. Smallwood Jr.

Pennington Halsted

Inventor:

Erwin W. Maxson.

By John J. Halstead

Atty.

UNITED STATES PATENT OFFICE.

ERWIN W. MAXSON, OF WEST LENOX, PENNSYLVANIA.

IMPROVEMENT IN BED-BOTTOMS.

Specification forming part of Letters Patent No. **206,256,** dated July 23, 1878; application filed November 26, 1877.

To all whom it may concern:

Be it known that I, ERWIN WILLIAMS MAXSON, of West Lenox, in the county of Susquehanna and State of Pennsylvania, have invented certain new and useful Improvements in Bed-Springs; and I do hereby declare that the following is a full, clear, and exact description thereof, 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 letters of reference marked thereon, which form a part of this specification.

My improvements relate to a special construction of spring bed-bottoms; and consists, primarily, in a peculiar combination and arrangement of spiral springs with adjustable metallic tension straps or springs, and in certain details of construction incident thereto.

In the drawings I have shown only one section of a bed-bottom, that being sufficient to illustrate my invention, it being understood that a complete bed-bottom would be made up of a series of such sections, the number depending upon the width of the bed, and I place these sections lengthwise of the bedstead, with their ends resting on boards or slats placed crosswise of the same at its head and foot, and hold them to place in any suitable manner—as, for instance, by blocks nailed to the cross-slats between the sections.

Figure 1 is a perspective view, the central portion being broken away; Fig. 2, a partial elevation, and Fig. 3 a perspective view of one of the spring-supporting uprights or brackets.

A is a wooden slat, affording a support for my novel devices, which I will now proceed to describe, as also their functions and operation. B B′ are frames or upright brackets secured firmly but adjustably to the slat A, and they are peculiarly constructed as follows: They are made with side pieces *c c*, having long bases *d* where they rest upon the slats, and they incline backward, as seen, and at top are provided with a horizontal or crossing part or bar, *e*, having holes *f f f*, and having a flange, *g*. The sides *c c* are connected at the base by a web or crossing part, *h*, through which is an opening, *h′*, to receive a bolt, *i*, which passes through it and through the slat, and is there secured and adjusted to the required degree of tightness by a nut, *j*. *k* is a washer, which may be interposed between the nut and the bottom of the slat. I make one of the frames or brackets, B′, with a downward projecting prong, *d*, adapted to enter a hole in the slat, though both may be so made, if desired.

Passing from each hole *f* in either of the brackets B B′ to the corresponding hole in the other bracket is a metal strap, *m*, of hoop-iron or equivalent material. The ends of these straps are severally passed over the top of flange *g*, over the back edge of the same, and then retroverted and inserted in one of the holes *f*, which serves as a sufficient fastening to resist the strain and tension.

In order properly to sustain these yielding straps between their points of suspension, and to give and preserve to them the requisite elasticity, and also to hold them in an upward-bowing position, I employ spiral springs N N, (two or more, as may be preferred,) secured at their bottoms to the slat and at their tops to cross-bars O O. These spirals are preferably conical, their base being connected to the slat, and the tip being connected to the cross-bar by simply inserting the end of the wire composing the spiral in a central hole in the under side of the cross-bar.

The middle strap need not be in any way fastened to the cross-bars, but may simply rest loosely thereon; but the two outer straps which rest on the extreme ends of these bars I prefer to secure against being slipped or forced off the bars by means of a button, *p*, provided with a clasping-hook, *q*, this button being adjustably secured to the cross-bar by means of a screw, *r*, and its hook grasping and holding the strap at its outer edge, as shown. By this means it will be seen that while the bars O O hold up and sustain the straps, the latter also steady and support the ends of the bars, and prevent their being violently pressed down at either of their ends, and also serve, through such bars, to preserve the upright position of the spiral springs and to preserve them from lateral distortion or damage. The height of the spiral springs is such as to elevate the yielding straps *m* above their points of suspension, so as to give a slight upward or convex bow or arch to the whole of these straps.

In practice, the foot-bracket B should be

bolted rigidly to the wooden slat A, and ample means for adjusting the tension of the straps *m* will be afforded by means of the bolt and nut of the bracket B′, which I prefer to place at the head end of the slat, the turning or tightening of the nut on the bolt of this bracket serving to increase the tension to any required degree.

The strain and tension of the straps *m* are sustained by the slats A, and the tendency of the strain is to very gradually and ultimately draw the slat into a downwardly-bowing shape, which in time might exhaust the capacity of the thread on the head-bracket bolt. In such a contingency I reverse the slat—that is, take it off and turn the bowing side inward and upward, and reconnect to the brackets as before; or, instead of this, additional washers may be inserted between the nuts and slats.

I claim—

1. The spring supports or brackets B, constructed as described—that is, with the side arms or pieces *c c*, cross-piece *e*, holes *f*, and hole *h′*, substantially as and for the purpose set forth.

2. In combination with a wooden slat, and with the series of metal straps *m*, the brackets B B′, and the cross blocks or bars O, the clasps or buttons *p q*, applied to the block, as shown, and serving to hold the outer straps to position.

3. In combination with the wooden slats, the brackets B B′, constructed as described, and applied to the slats by means of the hook-bolts *i* and nuts *j*, as shown and set forth.

4. In combination, the slat A, brackets B B′, spiral springs N, cross-pieces O, and metal straps *m*, the combination being substantially as and for the purposes set forth.

ERWIN WILLIAMS MAXSON.

Witnesses:
L. W. KELLUM,
E. A. KELLUM.