J. H. PALMER.

SPRING BED-BOTTOM.

No. 189,382. Patented April 10, 1877.

Fig. 1.

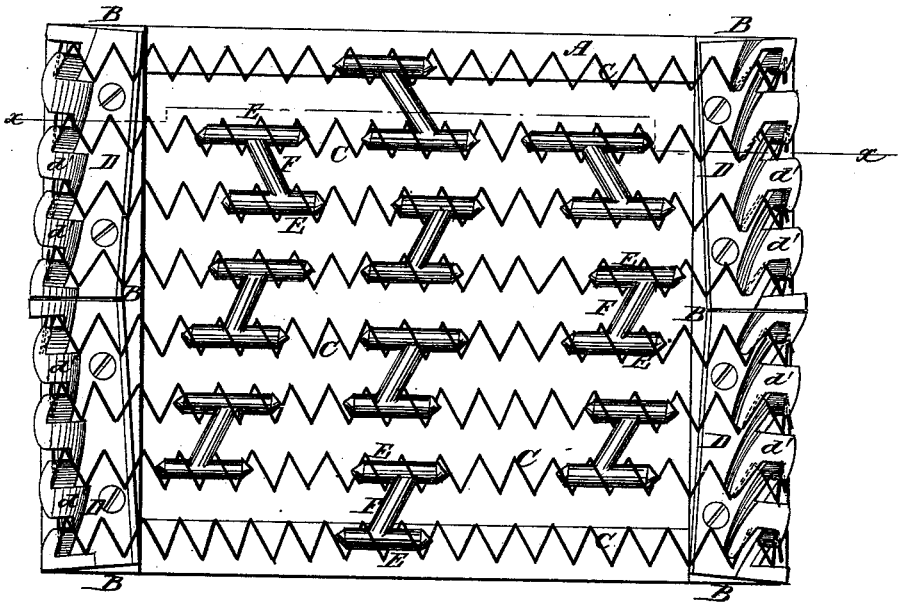
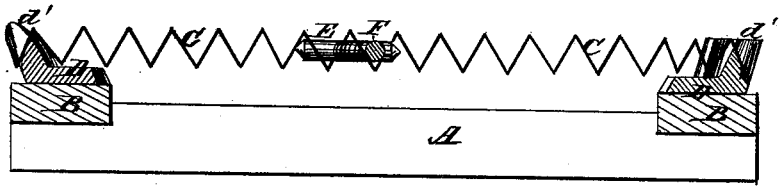


Fig. 2.



WITNESSES:

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UNITED STATES PATENT OFFICE.

JOHN H. PALMER, OF WARREN, PENNSYLVANIA.

IMPROVEMENT IN SPRING BED-BOTTOMS.

Specification forming part of Letters Patent No. **189,382**, dated April 10, 1877; application filed January 29, 1877.

To all whom it may concern:

Be it known that I, JOHN H. PALMER, of Warren, in the county of Warren and State of Pennsylvania, have invented a new and useful Improvement in Adjustable Spring Bed-Bottom, of which the following is a specification:

Figure 1 is a top view of my improved spring bed-bottom. Fig. 2 is a longitudinal section of the same, taken through the line *x x*, Fig. 1.

Similar letters of reference indicate corresponding parts.

The object of this invention is to furnish an improved spring bed-bottom which shall be so constructed that the springs may be conveniently adjusted according to the weight they may have to support, that the rails may be braced against the pull of the springs, and that the springs may be kept in proper position when under pressure, and which, at the same time, shall be simple in construction and convenient in use.

The invention consists in the plates provided with single or double notched flanges, and made in two parts, with their adjacent ends inclined to cause them to meet at an angle, in combination with the frame, and with the springs of a bed-bottom; and in the couplings formed of the two short rods, rigidly connected by an arm, in combination with the springs of a bed-bottom, as hereinafter fully described.

A are the side rails, and B are the end rails, of the frame of the bed-bottom. C are ordinary spiral springs, which are placed longitudinally of the frame A B. To the end rails B are secured iron plates D, which are made in two parts. The inner ends of the parts of the plates D are inclined, so that the said parts may meet at an obtuse angle when attached to the said rails B, and may thus act as an arch to brace the rails B against the pull of the springs C, and prevent them from being bowed inward by the action of said springs C. Upon the upper sides of the plates D are formed flanges *d'*, which have cross-notches formed in them to receive a coil of the springs C, and shoulders formed upon them for the other side of the said coil to rest against to lock the said springs in place. The springs are prevented from moving in an endwise direction out of the notches by flattening the ends of the springs, and causing said flattened ends to bear against the outside of the castings. The flanges *d'* may have a second notch formed in them at the side of the cross-notch to receive a second coil of the springs C, and thus form a double lock, as shown at the right-hand part of Figs. 1 and 2.

By this adjustment the springs can be readily raised out of the notches in the flanges *d'* of the plates D, and shortened or lengthened to increase or diminish their tension, according to the weight they may be required to sustain; or the springs upon one side may be shortened when two persons of unequal weight are to sleep in the same bed. This construction also enables the springs C to be detached and rolled together, for convenience in storage or transportation.

The plates D are secured to the rails B by screws or bolts, and may be further secured by having lugs formed upon their under sides to enter recesses formed in the said rails B to receive them. The springs C are connected laterally by the couplings E F, each of which consists of two short rods, E, of such a size as to enter and work freely in the cavity of the spiral springs C, and which are rigidly connected by an arm, F, of a length equal to the desired distance apart of the springs C.

I prefer to place the connecting-arm F in an inclined position, as it enables the coupling to better adjust itself to the coils of the springs.

By this construction, when the springs C are under light pressure, each spring will act independent of the others, but when under heavy pressure the couplings E F will keep them in proper relative position, and will also distribute the said pressure among the adjacent springs. This construction of the couplings E F also enables the springs C, when detached from the notched flanges of the plates D, to be rolled into a compact package for storage and transportation. The rods E and connecting-arm F of the couplings may be at right angles with each other, if desired.

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

1. The plates D, provided with single or double notched flanges *d'*, and made in two parts, with their adjacent ends inclined to cause them to meet at an angle, in combination with the frame A B and with the springs C of a bed-bottom, substantially as herein shown and described.

2. The couplings formed of the two short rods E, rigidly connected by an arm, F, in combination with the springs C of a bed-bottom, substantially as herein shown and described.

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Witnesses:
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