

H. BENEDICT.
Bed-Bottoms.

No. 140,571.

Patented July 8, 1873.

FIG. 1

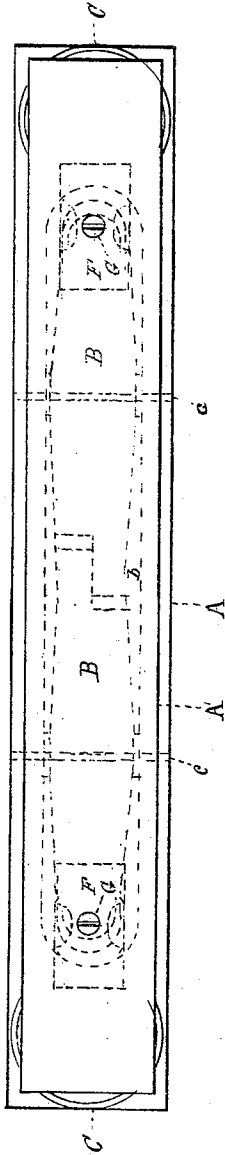


FIG. 2

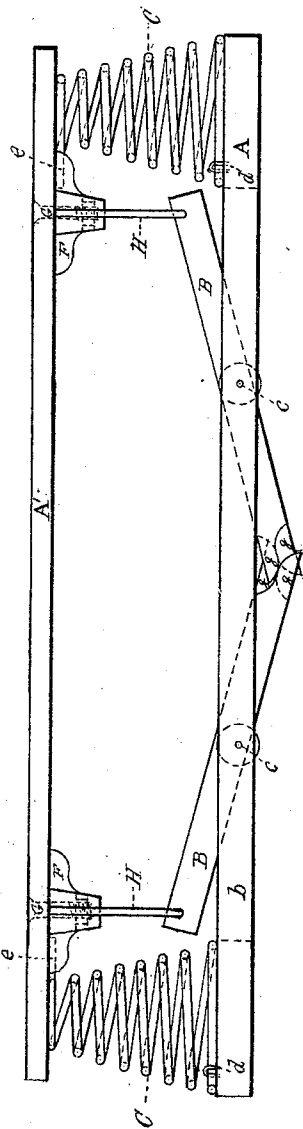


FIG. 3

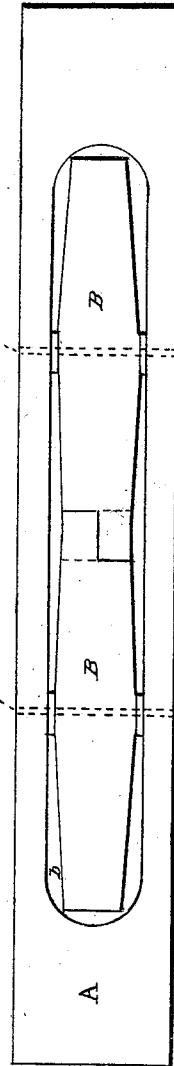
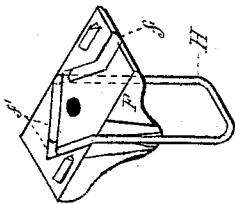


FIG. 4



Witnesses
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UNITED STATES PATENT OFFICE.

HARMON BENEDICT, OF PHILADELPHIA, PENNSYLVANIA.

IMPROVEMENT IN BED-BOTTOMS.

Specification forming part of Letters Patent No. **140,571**, dated July 8, 1873; application filed March 18, 1873.

To all whom it may concern:

Be it known that I, HARMON BENEDICT, of the city of Philadelphia and State of Pennsylvania, have invented certain Improvements in Spring Bed-Bottoms, of which the following is a specification:

My invention is an improvement on my patent for spring bed-bottoms, dated January 16, 1872, No. 122,698; and consists in the combination of hinged levers with upper and lower slats provided with springs by which they are connected, the bed-bottom with the present improvement being constructed as follows:

Figure 1 is a plan view of a pair of slats, A and A', with the improvement attached. Fig. 2 is a side elevation of the same. Fig. 3 is a plan view of a slat, A, and levers B B. Fig. 4 is an isometrical view of one of the clasp-blocks F, and a link, H.

Like letters in all the figures indicate the same parts.

A and A' are bottom and top slats. B B are levers hung in the longitudinal slot *b* of the lower slat A, on the fulcrum-pins *c c*. There are spiral springs C C, shown more clearly in Fig. 2, which connect the ends of the slats A and A', the base of the springs being fastened to the lower slat A by means of wire staples *d*, or in any other convenient manner. The extreme upper end *e* of each spring is bent inward, and held securely in the groove *f* of the contiguous clasp-block F, against the under side of the slat A', the blocks being fastened to the slat by means of the bolts G, as seen in Fig. 2. One of the clasp-blocks is represented in detail in Fig. 4. The free ends of the levers B B are combined with the slat A' by means of the links H H, the lower ends of which are held in suitable openings in the ends of the levers, as seen in Fig. 2, and the upper ends in the grooves *f' f'* of the clasp-blocks F F, as represented in Fig. 4. I make the links of wire, as represented, for the purpose of yielding laterally in the up-and-down movements of the levers, to prevent lateral strain as the ends of the levers in changing their position, describing an arc of a circle, or else make them thin and flat, to cause them to yield readily to lateral pressure. They have, how-

ever, a rigid connection with the blocks F F, to prevent lateral motion of the upper slat A to any objectionable extent. Instead of connecting the upper ends of the links with the blocks F F, as described, they may be secured thereto in casting the blocks, or otherwise permanently fastened. The inner ends of the levers B B are interlocked in such a manner as to admit of a free up-and-down movement, by the double reversed projections *g g* of each lever lapping upon those of its fellow, as seen more clearly in Figs. 2 and 3. These projections are rounded off at their end to insure a rolling motion of one upon its fellow to give movement to the joint, and it is preferable to make them of ogee form, as represented in the drawings. The projections *g g* of each lever are made fuller at their connections than at their outer edges, so as to cause a central binding, and thus prevent an unequal strain upon the levers. If desired, when the bottoms are made for double beds, the slots *b* in the bottom slats A may be duplicated, so as to have two pairs of levers in connection with each of said slats to connect with independent top slats A', these slats only running from each end to about the middle of the lower slat A, the slots being in line with each other, or at opposite edges of the slat A.

In my patent above mentioned, there is a combination of the slats A and A', levers B B, and springs C C. The inner ends of the levers are, however, connected by means of a slip-joint, which is not so cheaply made as that of the interlocking joint, above described, and is less durable; and the outer ends of the levers are connected with the upper slat by means of wooden posts and wire straps.

The present arrangement of connecting them together by means of links is much more simple and quite as effectual. The links perform double functions. In their direct action upon the levers they force the latter downward; but as each lever acts upon its fellow, the link of the latter draws the opposite end of the slat A' downward, so as to preserve a parallelism of the upper and lower slats. Instead of connecting the upper ends of the links H H with the upper slat A', I may make a rigid connection with the slat in any other convenient manner.

I claim as my invention—

1. The combination of the links H H and springs C C with the slats A and A', the links being flexible at their lower ends, and having a rigid connection at their upper ends by means of the blocks F F, substantially in the manner and for the purpose above described.
2. The connection of the levers B B at their inner ends by means of ogee projections g, substantially as and for the purpose set forth.

HARMON BENEDICT.

Witnesses:

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