M. BRIEL & J. G. KRIEGER.

Bed-Bottoms.

No. 146,227. Patented Jan. 6, 1874.

Fig. 1.

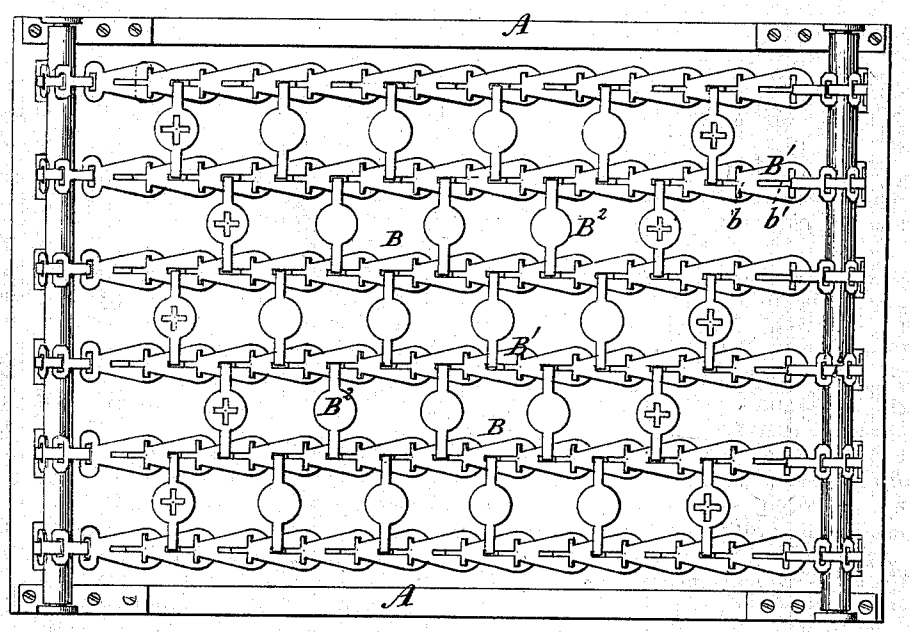


Fig. 2.

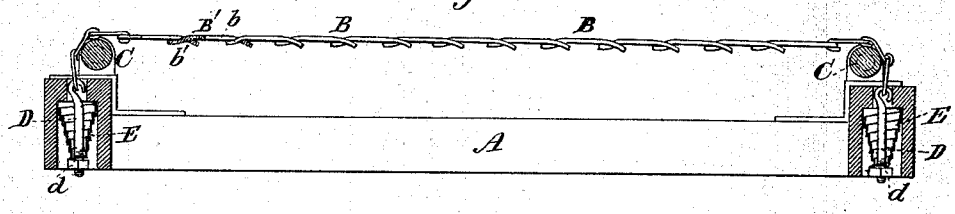
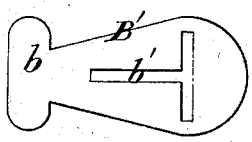


Fig. 3.



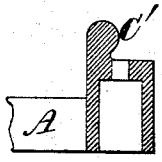


Fig. 4.

Witnesses.
A. Ruppert.
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Inventor.
by Edw. F. Eils
their Atty

UNITED STATES PATENT OFFICE.

MICHAEL BRIEL AND JOHN G. KRIEGER, OF WASHINGTON, D. C.

IMPROVEMENT IN BED-BOTTOMS.

Specification forming part of Letters Patent No. **146,227**, dated January 6, 1874; application filed December 10, 1873.

To all whom it may concern:

Be it known that we, MICHAEL BRIEL and JOHN G. KRIEGER, both of Washington, in the District of Columbia, have invented certain Improvements in Bed-Bottoms, of which the following is a full, clear, and exact specification:

The nature of our invention consists, first, in constructing a bed-bottom of parallel articulated bands of sheet metal, composed of links interlocked by T-heads and T-slots, formed at opposite ends of each, and suitably stretched upon a rectangular wooden frame, the several bands being connected together by transverse links to provide for a distribution of the strain; secondly, in adjustably securing the ends of the several bands to independent springs, so that the tension of the metallic web along different lines of its surface can be regulated at pleasure to suit the circumstances; thirdly, in stretching the metallic web over elevated rounded bars or rollers on the end rails of the frame, and fastening the several bands to separate volute-springs arranged in sockets in the under side of said end rails.

In the annexed drawings, Figure 1 is a plan view of our improved bed-bottom. Fig. 2 is a vertical longitudinal section. Fig. 3 illustrates one of the sheet-metal links on an enlarged scale. Fig. 4 shows, in section, a modification in the construction of the end rails of the frame.

The same letters of reference are used in all the figures in the designation of identical parts.

The bed-bottom is composed, in the main, of a rectangular wooden frame, A, braced at the corners by angle-irons, and a metallic web stretched upon the said frame. The metallic web is made up of parallel bands B, constructed of interlocked links B′, of sheet metal, forming flat chains, which, besides combining strength with flexibility, can be made very light, and at small cost, and can be readily repaired if a link be accidentally broken. Each link B^1 has at one end a T-head, *b*, and at the other end a T-slot, *b′*; and the bands or chains are formed by locking the T-head of one link in the T-slot of the next, as clearly illustrated in Figs. 1 and 2. The several bands or chains B are connected together by a number of transverse links, B^2, the ends of which are folded to hook into the slots in the links B^1. The metallic web thus made is stretched either over rollers C mounted in bearings on the end rails of the frame, or over a rounded bar, C′, formed on the end rails, as shown in Fig. 4; and the end links of the several bands or chains are attached to the hooks of bolts D, which pass through the inverted volute-springs E, and carry at their lower ends nuts *d*, which serve both as shoulders to form bearings for one end of the springs and as a means for regulating the tension of the springs. The latter are placed in sockets or recesses formed in the under side of the end rails of the frame. Each band or chain is thus secured separately to independent springs, so that the tension of any one or more of the chains can be increased or diminished without affecting that of the others. The stiffness of the web may, therefore, be readily so regulated on opposite sides as to support two persons of unequal weight without sinking lower on one side than on the other.

The links composing the web of the bed-bottom may be made of any suitable kind of thin metal; but, for the sake of cheapness, we prefer to use sheet-iron struck out by suitable dies, and either galvanized or nickel-plated.

Our invention is applicable to sofas, chairs, &c., although it is more especially designed for use in the construction of bed-bottoms, as hereinbefore explained.

What we claim as our invention, and desire to secure by Letters Patent, is—

1. A bed-bottom, the web of which consists of articulated bands or chains composed of links of sheet metal interlocked by T-heads and T-slots, in the manner substantially as specified.

2. The combination of the metallic articulated bands B of the web of the bed-bottom, rollers C, bolts D *d*, and springs E, substantially as and for the purpose specified.

In testimony whereof we have signed our names to the foregoing specification in the presence of two subscribing witnesses.

MICHAEL BRIEL.
JOHN G. KRIEGER.

Witnesses:
B. EDW. J. EILS.
ED. C. MUNCK.