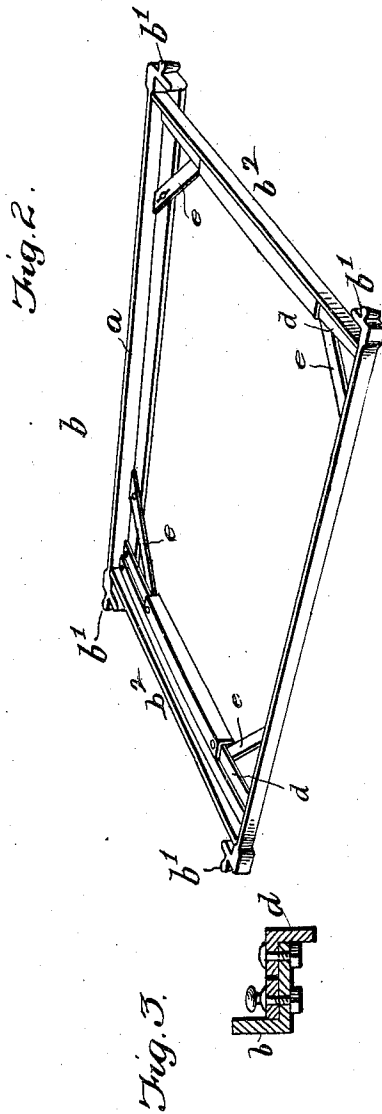
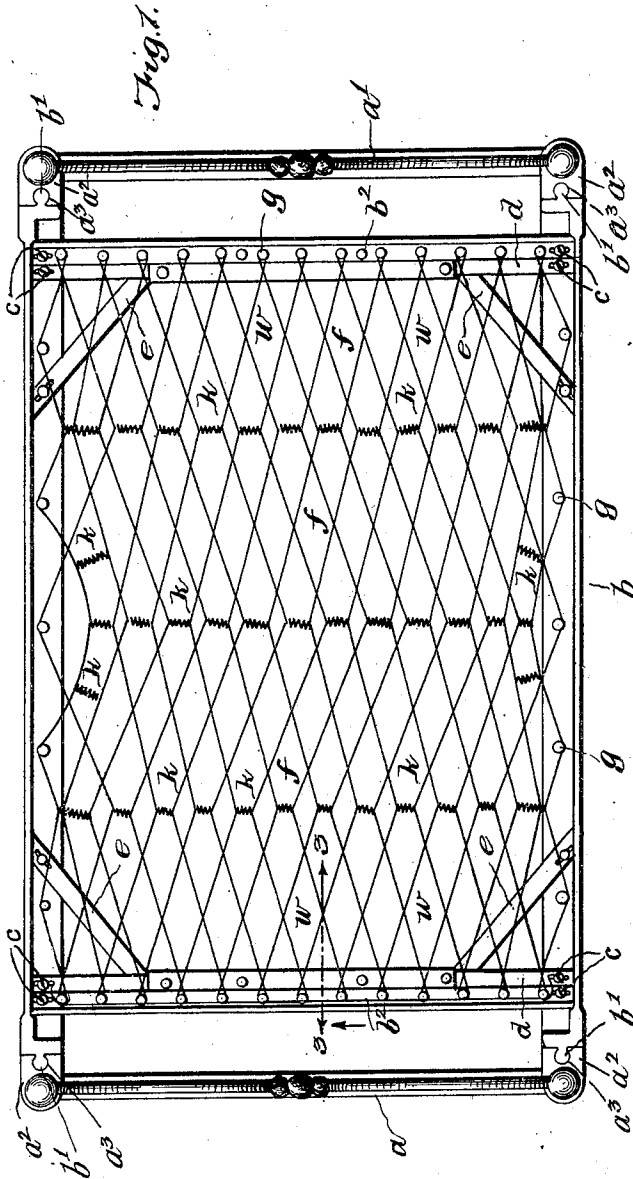


No. 790,720.

PATENTED MAY 23, 1905.

W. C. BURDETTE & H. H. MALONE.
BED.

APPLICATION FILED SEPT. 12, 1903.



WITNESSES

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UNITED STATES PATENT OFFICE.

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BED.

SPECIFICATION forming part of Letters Patent No. 790,720, dated May 23, 1905.

Application filed September 12, 1903. Serial No. 172,958.

To all whom it may concern:

Be it known that we, WILLIAM C. BURDETTE and HIRAM H. MALONE, citizens of the United States, and residents of Anderson, in the county of Madison and State of Indiana, have made a certain new and useful Invention in Beds; and we declare the following to be a full, clear, and exact description of the same, such as will enable others skilled in the art to which it ap-
 5 pertains to make and use the invention, reference being had to the accompanying drawings, and to letters of reference marked thereon, which form a part of this specification.

Figure 1 is a plan view. Fig. 2 is a perspective view of the frame portion. Fig. 3 is a detail view on line 3 3 of Fig. 1.

The invention relates to spring bed-bottoms; and it consists in the novel construction and combinations of parts, as hereinafter set forth.

In the accompanying drawings, the letters *a* and *a'* designate the head and foot sections of a bedstead having the joint-lugs *a''*, provided with the seats *a'''*. To these are connected the side rails *b b'* by means of the catch projections *b''* of their joint ends, which engage the seats *a'''*. These side rails are made of angular form in cross-section, and they are connected near their joint ends by means of the elastic steel cross-bars *b'' b'''*. These cross-bars are preferably of angle-steel and are of slightly-arched form, being about an inch higher in the center than at the ends. Their ends are slotted in order to facilitate their automatic adjustment when they are attached
 35 to the side rails by the bolts *c*. The arch of these elastic cross-bars is designed to give them a form which allows movement under the weight of persons sleeping thereon, the pressure bringing them into a more or less level position. It also serves to give a sort of crown or upward-rounded form to the bed when not in use, thereby adding to its appearance. The elasticity of the cross-bars may be aided and the bars, when made of thin steel, strengthened by attaching to them
 45 the short reinforcing-strips *d* of steel.

The cross-bars are braced in position relative to the side bars by the oblique corner brace-bars *e*. These brace-bars are attached to the cross-

bars by rivets and to the side rails by means of bolts, these bolts passing through longitudinal slots of the brace-bars, whereby they are allowed a small amount of motion on the bolts when there is pressure on the bed-bottom, causing the arched cross-bars to become
 55 depressed, as hereinbefore described.

The side rails and cross-bars are provided with series of upward-projecting pins or studs *g*, having rounded or oval heads. These studs are set back from the edges of the bars near
 60 the outer wall or flange and serve as bearings for the bends or loops of the wire *w*. This is a long single wire of strong Bessemer steel, which is secured by one end to a stud at one corner of the frame made by the side rails
 65 and cross-bars, is then passed backward and forward from end to end of the frame around the studs at the ends, and is finally secured to a pin at the corner of the frame on the opposite side. This wire is easily placed in position by using a supporting-frame about the
 70 height of the bed-bottom. After the ends of the wire are secured the branches of the longitudinal loops are drawn laterally and across each other in a regular zigzag fashion,
 75 whereby a triple bracing engagement is provided in the following manner: The branches of each loop are drawn laterally away from each other at one-quarter the length of the frame from each cross-bar and are then connected
 80 to the branches of the fourth loops in series at the sides thereof, crossing the branches of the two intermediate loops. Then the branches of the first loop are drawn reversely toward and across each other at the
 85 middle of the length of the frame, where they are connected to the branches of the adjacent loops on each side. In this way each longitudinal branch of the wire overlaps two adjacent longitudinal branches to form a series
 90 of mutually-supporting large diamond-form figures and centrally within the same a series of small diamond-form figures. These connections are made by means of the short transverse coil-springs (indicated at *h*) in such wise
 95 that there will be three series of such transverse coil-spring connections—one across the middle of the bed-bottom and one half-way

between this middle series and each end cross-
 bar. The transverse coil-springs connect the
 longitudinal wire branches at the bends of the
 small diamond-form figures aforesaid. The
 5 branches of the loops at the sides of the bed-
 bottom which are drawn toward the side rails
 are attached to the studs on the side rails. In
 this manner the disposition of the wire *w* is in
 a number of elongated diamond forms, these
 10 diamond forms overlapping in a triple man-
 ner on each side and providing a substantial
 spring bed-bottom, which, while it has suffi-
 cient elasticity laterally, is not apt to sag be-
 tween the ends. The elasticity is derived from
 15 lateral spring play rather than from yielding
 between the ends, so that the tendency to sag
 between the ends is very much reduced, and
 the zigzag branches being supported by each
 other in the triple manner involved in the
 overlapping diamond arrangement the bed-
 20 bottom is laterally, as well as longitudinally,
 braced by the wire itself and the transverse
 coil-springs are protected from a bending
 strain and kept in their plane of work.
 25 It will be understood from the above de-
 scription that the head and foot sections are
 connected by the bed-bottom section, consist-

ing of the side rails, braced cross-bars, and
 the wire.

Having described the invention, what we 30
 claim, and desire to secure by Letters Patent,
 is—

The bed-bottom consisting of the studded
 side rails, the studded cross-bars attached to
 said side rails, and the single wire embracing 35
 the studs of the side rails and cross-bars and
 arranged in longitudinal zigzag branches each
 said longitudinal branch overlapping two ad-
 jacent longitudinal branches to form a series
 of mutually-supporting large diamond-form 40
 figures and centrally within the same a series
 of small diamond-form figures, and transverse
 coil-springs connecting said branches at the
 lateral bends of said small central diamond-
 form figures, substantially as specified. 45

In testimony whereof we affix our signa-
 1903.

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 HIRAM H. MALONE.

Witnesses:

BELLE C. MOORE,
 D. C. CHIPMAN.