

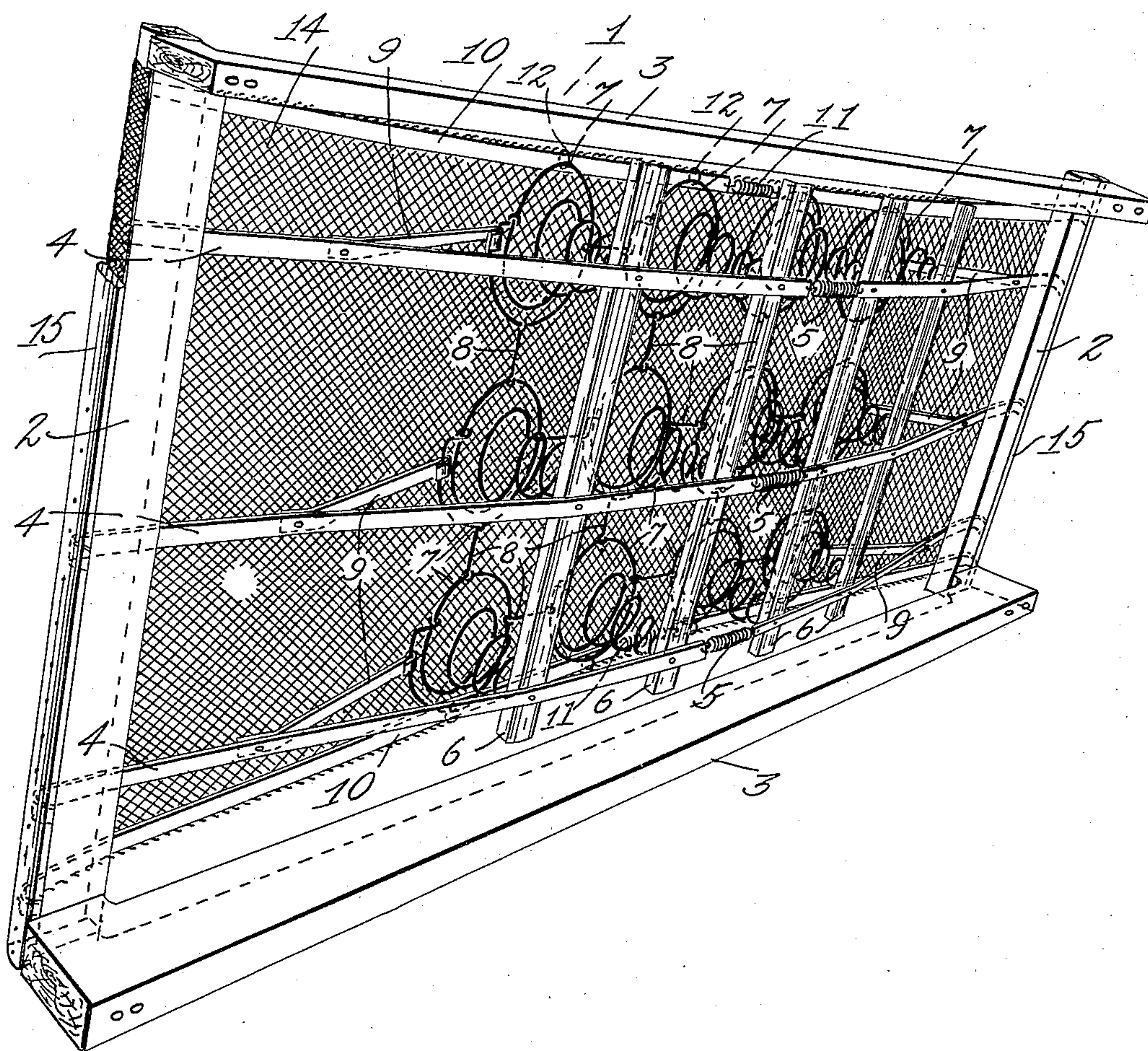
No. 768,791.

PATENTED AUG. 30, 1904.

J. W. EFAW.  
BED BOTTOM.

APPLICATION FILED JUNE 4, 1903.

NO MODEL.



WITNESSES:

*William H. Jewett*  
*Arleta Adams*

INVENTOR.

BY *John W. Efav*  
*Frank E. Adams*  
ATTORNEY.



# UNITED STATES PATENT OFFICE.

JOHN WESLEY EFAW, OF SEATTLE, WASHINGTON.

## BED-BOTTOM.

SPECIFICATION forming part of Letters Patent No. 768,791, dated August 30, 1904.

Application filed June 4, 1903. Serial No. 160,068. (No model.)

*To all whom it may concern:*

Be it known that I, JOHN WESLEY EFAW, a citizen of the United States of America, and a resident of the city of Seattle, in the county of King and State of Washington, have invented certain new and useful Improvements in Bed-Bottoms, of which the following is a specification.

My invention relates to improvements in bed-bottoms, and has special reference to a support of this class embodying a plurality of spiral bed-supporting springs.

Among numerous objects attained by this invention and readily understood from the following specification and accompanying drawing, included as a part thereof, is the production of a durable and efficient bed-support, embodying essential features of adaptability, utility, and resiliency, which insures a comfortable and easy bed and prolongs the usefulness of the support.

The above-mentioned and other desirable objects are attained by the constructions, combinations, and arrangements of parts as disclosed on the drawing, set forth in this specification, and succinctly pointed out in the appended claims.

With reference to the drawing filed herewith and bearing like reference characters for corresponding parts throughout the improved bed-support is disclosed in a single perspective view, which shows the support as viewed from the under side thereof, with a portion of one of the end cleats broken away.

This invention includes a frame of any design suitable to support the same and which may comprise a frame in a couch or cot or an ordinary rectangular frame, as 1, adapted to fit an ordinary bedstead. As now considered this frame is constructed in the well-known manner and comprises suitable end pieces, as 2, and side pieces, as 3, which are securely connected at the ends to the ends of the end pieces in the ordinary manner, as by bolts, screws, or the like. The support proper embodies a plurality of longitudinally-disposed supporting-bands 4, which are arranged parallel with each other at suitable separation

and in any desired multiplicity and are preferably composed of sections of thin flat bars of suitable resilient metal. Each of these bands is composed of two sections or bars equal in length and yieldingly connected together at their inner ends by a closed cylindrical or helical spring, as 5, formed of suitable resilient wire and conveniently engaged with the sections by passing the end portions of the wire through suitable transversely-disposed apertures formed in the inner end portions of the band-sections. In the present embodiment the end portions of the supporting-bands are extended across the upper side surfaces of the end pieces of the frame and bent downwardly across the side edges of these pieces, and suitable transversely-disposed apertures are formed in these end portions of the bands to receive screws or nails, by means of which the bands are conveniently secured to the end pieces of the frame, so as to normally rest at a slight downward curve or bend, with the yielding connections or springs between the the sections comprising the bands lying substantially midway the length of the bed-frame, so as to offer yielding support to the bed proper at the point at which the greatest weight is imposed when a body is resting thereon.

Upon the supporting-bands 4 are arranged a plurality of transversely-disposed slats or the like, as 6, which are formed of suitable length to rest freely between the side pieces of the frame 1 and are suitably held in place on the bands at the desired separation by means of screws or nails passed through transversely-disposed apertures formed in the bands at the points at which these slats rest thereon, and suitable vertically-disposed spiral springs, as 7, are seated upon these slats and preferably so disposed that one of these springs will lie directly over each point at which the slats rest upon the supporting-bands, and thereby render the structure more substantial. As now considered the springs 7 are formed conical, and they are placed in an inverted position relatively to their seats, so that the bases of the springs will be offered



as a seat for the bed proper, and each of these springs is connected or coupled at the base end to the base end of each adjacent spring by means of suitable independent links, as 8, each of which is preferably composed of a section of wire placed between adjacent coils and looped or bent at the ends about the outer or largest coils of the springs, so that all of the springs will be connected for mutual support against lateral play and still be free for limited independent movement when compressed.

Along the outer edge of each of the outer side rows of springs 7 is preferably arranged a marginal support consisting of a band 10, composed of two sections of thin resilient metal yieldingly connected together at the inner ends by a closed cylindrical or helical spring 11, which is suitably fastened to the sections in the manner heretofore described for connecting the sections and springs of the supporting-bands, and these marginal bands are connected to the end pieces of frame 1 in substantially the same manner as the supporting-bands are connected thereto, excepting that they are so disposed and secured that they normally lie substantially horizontal in the same plane with the upper ends of the springs 7. These marginal bands are preferably connected with each of the springs 7, which lie adjacent thereto, by means of suitable independent ties, as 12, which preferably consist of sections of small pliable wire passed through suitable transversely-disposed apertures formed in said bands and about the largest coils or convolutions of the springs and serve to connect the springs to the bands in a suitable manner to prevent inward lateral movement of the springs comprising the side rows.

The springs 7, comprising the end rows, are held from inward lateral movement by means of the independent ties, as 9, which are each preferably composed of sections of thin resilient metal bent at one end to form a suitable hook, by which the tie is engaged with the largest convolution of a respective spring at the outer edge, and these ties are rendered of suitable length to extend outwardly from the springs longitudinally of the frame 1 for a considerable distance and are preferably suitably secured at their outer ends to adjacent supporting-bands, as by means of rivets or bolts passed through suitable transversely-disposed apertures formed in the said ties and bands, so that the ties will move with the supporting-bands and retain their positions relatively to respective springs 7 for a more perfect action of the bed-support.

In the present embodiment a suitable woven-wire spring, as 14, is placed over the coiled springs 7 of the support and is secured at the ends to the end pieces of the frame 1 in the ordinary manner, as by cleats 15, which are placed upon the outer side edges of the end

pieces over marginal portions of the ends of the woven spring and fastened to said end pieces by nails or the like.

From the foregoing it will be seen that the support proper is self-contained, being simply attached to the frame 1 at the ends, and that the parts thereof are connected together in such a manner as to support each other, while permitting of limited independent action, and yet insuring coöperation in yieldingly supporting the body.

This bed-support is simple and inexpensive in construction, durable in use, and not likely to get out of order and affords a most comfortable and satisfactory support for the body when in use.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent of the United States of America, is—

1. In a bed-bottom, in combination with a frame comprising side and end rails, a plurality of longitudinally-disposed resilient supporting-bands, said bands being bent at points intermediate the frame end rails so as to lie below the same, resilient longitudinal bands normally extending in straight horizontal planes above the first-named bands and at points adjacent the frame side rails, slats carried by the first-named bands, helical springs mounted on said slats and being connected together and to the last-named bands, and independent ties secured to the first-named bands and to the upper portions of said springs.

2. In a bed-bottom, in combination with the frame, a plurality of longitudinal resilient bands having their major portions disposed below the upper face of the frame, transverse slats secured to said bands, helical springs secured on the upper faces of the slats, and ties connected to said bands and the upper portions of said springs.

3. In combination with the frame, a plurality of longitudinal resilient bands having their major portions disposed below the upper face of the frame, a plurality of bands normally disposed in straight planes above the first-named bands, springs connected together, means for connecting the outer springs to the last-named bands, and means independent of said last-named bands for connecting both the upper and lower portions of said springs to the first-named bands.

4. In combination with the frame, a plurality of longitudinal resilient bands, springs, means for supporting the springs on the bands, and ties independent of said springs and being formed of flat metal having their lower ends secured to said bands, and their upper ends hooked and connected to the upper portions of said springs.

5. In combination with a frame, two sets of resilient longitudinal bands carried thereby, one set having their major portions disposed

below the other set, springs connected together  
and being movable with the last set of bands,  
independent rigid connecting means engaging  
the opposite ends of said springs and being  
5 secured to said last-referred-to set of bands  
and independent connections between the  
outer of said springs and the other set of bands.

Signed at Seattle, Washington, this 25th day  
of April, 1903.

JOHN WESLEY EFAW.

Witnesses:

JAMES B. MURPHY,

ARLITA ADAMS.