

(No Model.)

P. B. ROONEY.
BED.

No. 563,210.

Patented June 30, 1896.

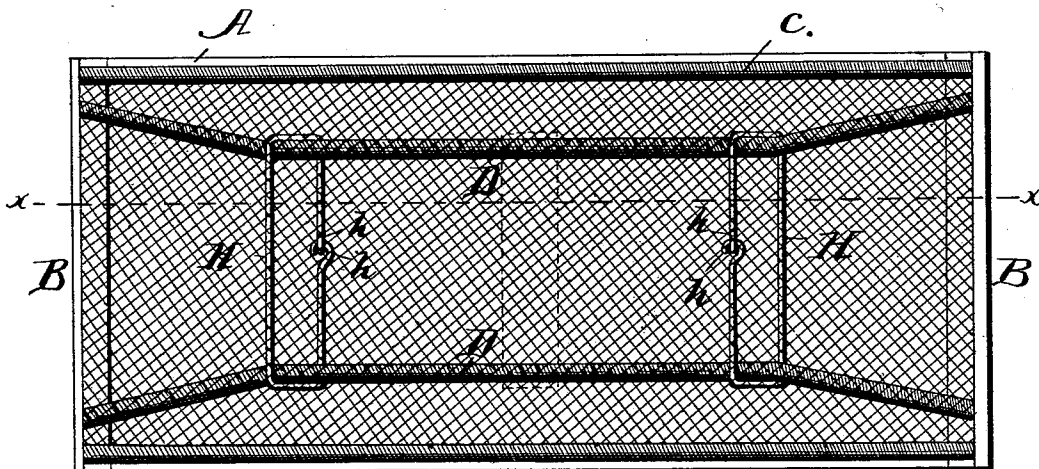


Fig. 1.

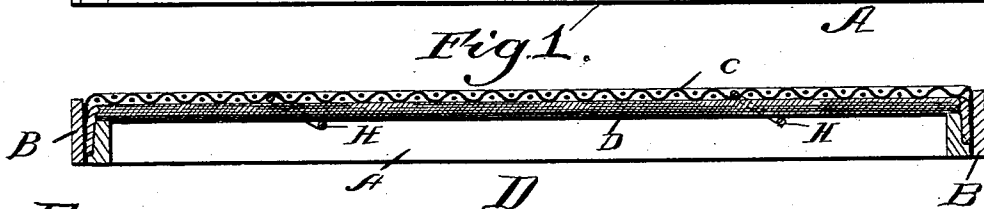


Fig. 2.

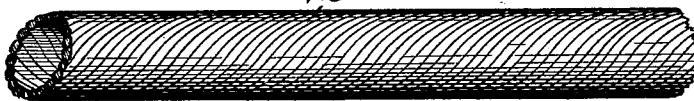


Fig. 3.

Witnesses:

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UNITED STATES PATENT OFFICE.

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BED.

SPECIFICATION forming part of Letters Patent No. 563,210, dated June 30, 1896.

Application filed November 30, 1895. Serial No. 570,631. (No model.)

To all whom it may concern:

Be it known that I, PATRICK B. ROONEY, a citizen of the United States, residing at New York, in the county of New York and State of New York, have invented certain new and useful Improvements in Beds, of which the following is a specification, reference being had therein to the accompanying drawings.

Figure 1 is a plan or top view of a bed containing my invention. Fig. 2 is a vertical section taken on line *x x*, Fig. 1. Fig. 3 is a detached view, enlarged, of a piece of one of the endwise-elastic cables.

One of the defects in a woven-wire bed as ordinarily constructed is the irregularity of stretching, and consequent sagging which is produced by the unequal distribution of both the weight to be supported and the holding up from below which is produced by the devices which are employed for that purpose.

One part of my improvement is designed to overcome that difficulty by the combination with the elastic fabric of a series of continuous endwise-elastic cables which are disposed below said fabric and in contact therewith or in close proximity thereto with transverse girths or ties, one or more, which maintain the desired tension of the cables by pulling them toward each other between their ends, as will be explained.

Having thus set forth the general nature of my improvement, I will describe one mode which I have adopted and found very desirable in carrying it into effect.

A A are the side rails, and *B B* the end rails or bars, of the frame.

C is the body of the woven-wire fabric; *c c*, the strands or selvages at the edges, which are usually made by weaving in an additional number of wires, all of which parts are or may be of any usual or approved construction.

D D are what I prefer to designate as "endwise-elastic cables," which, in the illustration here given of my invention, are made of rather fine wires, of sufficient resiliency, interwoven or intertwined with each other, the number of wires being preferably such that the convolutions are in close contact throughout the entire length of the cable, thus making practically a hollow cylinder, the number of wires

which can thus be intercoiled depending upon the pitch of the convolutions of each individual wire.

E E are cross-girths or transverse girths or ties, the number of which may be varied according to circumstances, and which serve two purposes; that is to say, they hold the endwise-elastic cables in a stretched condition, whereby their endwise tension is much greater than it was before they were drawn inward between their ends toward the center of the bed, so that the endwise tension of the cables can be increased at will by means of these transverse ties without changing any other part of the structure. These ties also serve to support, directly, the wire fabric at points intermediate of the cables, and at such number of places between the ends of the cables as may be thought desirable under the conditions in any particular case according to the proposed distribution of the weight to be supported by the elastic fabric or by the bed when the wire fabric is omitted.

It will be found desirable to apply the ties in such manner that they shall at their ends surround the cables in order to prevent any accidental change in the endwise tension of the cables which would necessarily result from the ties or either of them slipping endwise on the cables, and in the instance given I accomplish this result by passing the cables, one or both of them, through the loop-like ties, so that the ties, at their ends, surround the cables, the tension of the parts producing such frictional contact as will prevent accidental displacement of said ties.

A convenient way of making the ties is to take a piece of wire and bend it into rectangular form, connecting its ends by hooks *e e*, which, after engagement, may be closed down, forming closed eyes; or the ends may be twisted together.

The number of transverse girths or ties may be varied according to the conditions in each particular case.

The distance apart of the transverse lines of the wire may be varied, but I prefer them to be a few inches from each other that they may better support the fabric.

If the bed is to support an unusually heavy

weight, the number of cables may be increased as shall be considered necessary to meet the requirements.

In all the constructions the invention is to be so employed that the advantages of the endwise-elastic cables shall be made available, in that the length of wire of which its resiliency is called into play is so great that all liability of its being weakened or of its acquiring any set, during ordinary use, is avoided, while at the same time the elastic support is much more uniformly distributed throughout the entire surface of the bed, the cables and ties constituting, practically, an elastic skeleton-like support below and in immediate contact with the woven-wire fabric or other material which is designed to receive the mattress.

Whatever may be the character of the material next above the cables their support differs from that of beds as heretofore made in many respects. For instance, in some of the prior constructions the support consists of relatively long thin straps, which are flexible, but are not endwise extensible, combined with relatively short springs, made of wire which is many times the size in sectional area of that which I use for my cables, the inner ends of the short springs being connected by a tie of some sort. It is obvious that in such older constructions cross-ties cannot be employed in combination with relatively long flat straps at points intermediate between their ends and bending the straps inward at the points of engagement, because such straps

are practically rigid edgewise and non-extensible, whereas, with my cables, which are flexible in all directions and elastic endwise and in all directions transversely, I am enabled to construct an elastic skeleton platform-like truss adapted for the reception of either a woven-wire fabric, a canvas bottom, or a mattress of hair or similar material, the elastic upward support being much more uniformly distributed throughout the entire surface of the bed than was possible in said earlier construction.

What I claim is—

1. In a bed, the combination with the frame, of the continuous endwise-elastic cables which are elastic in all directions, and the cross tie or ties, which serve to pull the cables toward the center of the bed and produce an endwise tension in said cables; the cables and ties being disposed in plane, substantially as set forth.

2. In a bed, the combination with the frame and the fabric, of the endwise-elastic cables, and the adjustable transverse ties, whereby the tension of the cables may be varied by moving one or more of said ties toward or from the end of the bed, substantially as set forth.

In testimony whereof I affix my signature in presence of two witnesses.

PATRICK B. ROONEY.

Witnesses:

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