

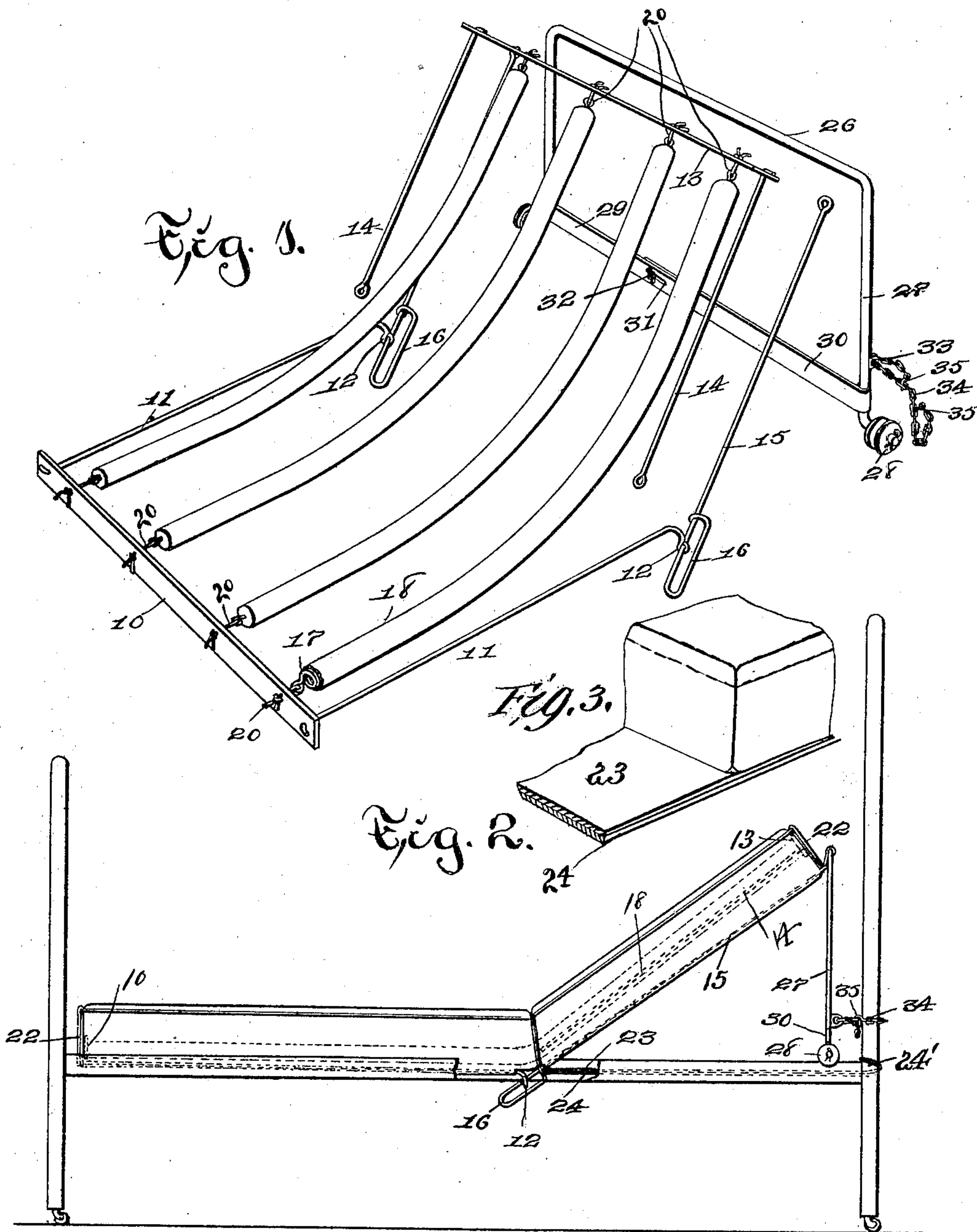
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Patented Apr. 1, 1902.

M. DAMBRUN.
ADJUSTABLE INVALID MATTRESS.

(Application filed June 7, 1901.)

(No Model.)



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UNITED STATES PATENT OFFICE.

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ADJUSTABLE INVALID-MATTRESS.

SPECIFICATION forming part of Letters Patent No. 696,802, dated April 1, 1902.

Application filed June 7, 1901. Serial No. 63,502. (No model.)

To all whom it may concern:

Be it known that I, MAGGIE DAMBRUN, a citizen of the United States, residing at Des Moines, in the county of Polk and State of Iowa, have invented a new and useful Adjustable Invalid-Mattress, of which the following is a specification.

The objects of my invention are to provide a two-part mattress divided transversely near its central portion, the head portion of the mattress being provided with a frame which may be supported in an elevated position; and in this connection it is my object more specifically to provide improved means of simple, durable, and inexpensive construction for supporting the head-section of the mattress and permanently attached to the mattress and capable of adjustment to fit any ordinary bed-frame.

A further object is to provide a two-part mattress of this class with means of simple, durable, and inexpensive construction whereby the parts are drawn firmly together by springs, so that when the head portion is raised and lowered there can be no opening between the parts of the mattress, as would be the case if these parts were not connected by springs.

A further object is to provide means for protecting the springs and mattress, so that the mattress-filler will not become entangled with the springs, and, further, to provide means whereby the bed-springs upon which the mattress is placed cannot enter between the parts of the mattress.

My invention consists in certain details in the construction, arrangement, and combination of the various parts of the mattress, whereby the objects contemplated are attained, as hereinafter more fully set forth, pointed out in my claims, and illustrated in the accompanying drawings, in which—

Figure 1 shows in perspective the mattress frames, their connecting-springs, and the adjustable support detached from the mattress; and Fig. 2 shows a side elevation of the complete mattress supported upon a bed-frame and showing position of parts of the frame within the mattress by dotted lines. Fig. 3 shows an enlarged detail perspective view illustrating a portion of the foot-section of the mattress and showing the manner in

which the flap is attached to the under forward surface thereof.

Referring to the accompanying drawings, I have used the reference-numeral 10 to indicate a flat metal cross-piece to be secured on the interior of the foot-section of the mattress and to extend transversely thereof. Fixed to the end portions of the part 10 are the rods 11, having their forward ends inclined downwardly to provide loops 12, said loops projecting through the end portion of said foot-section.

On the interior of the head-section of the mattress is a flat metal cross-piece 13, and attached thereto are the rods 14 to project toward the other end of the said head-section, the parts 13 and 14 being contained within the head-section of the mattress near its top. Within the head-section and beneath the rods 14 are two rods 15, secured in position preferably by being sewed to the mattress at one end and each having an elongated loop 16 at its other end passed through the loops 12, so that the said rods 15 may slide relative to the rods 11.

A number of contractile springs 17 are placed within the mattress and extend longitudinally thereof from points near the cross-piece 10 to points near the cross-piece 13. Each of the springs is inclosed in a flexible tube 18, and openings are provided at the inner or meeting ends of the mattress-sections to permit the said springs to pass through from one section to the other. At each end of each spring is a flexible rope or wire 20, and these ropes or wires project through openings in the pieces 10 and 13 and also through openings in the ends of the mattress. It is obvious that the tension of the springs may be quickly and easily regulated by drawing the ropes through openings and then tying knots in the ropes. At the outer end of each section is a flap 22, fixed at its top edge to the end of the mattress to overlap the said ropes and hide them from view.

On the under surface of the foot-section of the mattress, at the inner end thereof, is a flexible flap 23, secured to the inner surface of the foot-section to extend under the head-section, and on the under surface of this flap is a metal plate 24, and secured to the other end of said flap is a number of ropes or cords

24', by which the said flap may be tied to a portion of the bed springs or frame. In use with this portion of the device it is obvious that the mattress may be used in a horizontal position in exactly the same manner as the old mattresses, and none of the parts of the mattress-frame will be felt by a person using the mattress. The meeting ends of the mattresses are both inclined slightly in a direction from the top downwardly and toward the head of the mattress for the purpose of providing a tight joint between the mattresses when the head-section is elevated, because when in this position the head-section will slightly overlap the foot-section and be inclined, as before described. The top corner of the head-mattress slightly overlaps the top corner of the foot-mattress and forms a continuous support at the meeting edges of the mattress-sections.

Assuming that it is desired to elevate the head of the mattress, so that the person occupying the bed assumes a sitting position, the head portion is raised, in a manner hereinafter described, and supported in its elevated position. The said springs will obviously hold the two portions of the mattress firmly together, so that there can be no opening at their meeting ends. When the head portion is elevated, the rods 11 and 15 will slide relative to each other by means of the loops 12 and 16. Then when the head portion of the mattress is again lowered the flap 23 and the plate 24 will obviously prevent the bed-springs or other parts from entering between the sections of the mattress, so that the springs may draw the parts of the mattress firmly together, and by means of the ropes 20 the tension of the springs may be so adjusted as to firmly hold the parts of the mattress together under all conditions. Furthermore, the flexible tubes surrounding the springs will prevent the springs from becoming entangled with the mattress-filler.

I have also provided means for supporting the head-section of the mattress at any point of elevation, as follows: At the outer end of the head-section, near the undersurface thereof, I have placed a cross-piece 26, and formed on or fixed to the cross-piece 26 are the arms 27 at right angles to the cross-piece and provided with flanged rollers 28 at their ends. The said arms 27 are connected by means of a cross-piece composed of two parts 29 and 30, each of said parts being attached to one of the arms 27 and having their inner ends overlapping. In the part 29 is a slot 31, and in the other cross-piece is a set-screw 32 to pass through said slot, so that the position of the cross-pieces may be adjusted relative to each other and the flanged rollers thereby adjusted to fit the side rails of the bed to which the mattress is applied. Near the lower end of each arm 27 is a loop or eye 33, and a chain 34 is passed through each loop and provided with hooks 35 at each end. One end of each chain is connected with the head-post of the

bed by having the chain passed around the head-post and the hook attached to the chain, and the other end of the chain is passed through the loop or eye 33 and the hook then connected with one of the links of the chain. In practical use with this portion of the device and assuming that it is desired to elevate the head portion of the mattress the operator detaches the hooks 35 from their connection with the chains, and then by pulling upon the chains the arms 27 are turned to an upright position until they support the head-section of the mattress in the desired position. Then the hooks are again connected with the links of the chains at the desired point, and obviously the head-section will be firmly supported in its elevated position. To lower the head-section, the operator need only detach the hooks 35, whereupon the head-section will drop and the arms 27 will assume a position parallel with the mattress and the mattress will lie flat in the horizontal position.

My improved mattress is especially advantageous, because the parts are all permanently attached to the mattress, and so long as the mattress is in a horizontal position none of the parts can be seen and they will not interfere with the use of the mattress for all ordinary purposes, and yet when desired the head-section may be readily and quickly elevated and securely supported in its elevated position. Furthermore, the sections of the mattress cannot work apart, and there will be no opening in the section when in any position.

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

1. In an improved mattress, the combination of independent head and foot mattress-sections, and one or more contractile coil-springs passed longitudinally through both sections, each spring having one end connected with the head-section and the other connected with the foot-section, for the purposes stated.

2. In an improved mattress the combination of independent head and foot mattress-sections, and one or more contractile coil-springs passed longitudinally through both sections, and a flexible tube for inclosing each spring, each spring having one end connected with the head-section and the other connected with the foot-section, for the purposes stated.

3. In an improved mattress the combination of head and foot mattress-sections, a cross-piece on the interior of each section, one or more contractile coil-springs passed through both sections in a direction longitudinally of the mattress, flexible ropes attached to the ends of the springs and passed through said cross-pieces to the exterior of the mattress whereby the tension of the springs may be adjusted.

4. An improved mattress, comprising in combination, independent head and foot mattress-sections, a cross-piece at the outer end

of each section, springs connected with both of the cross-pieces and passed longitudinally through the sections, rods in the interior of the foot-section having loops or eyes projecting through the section at its inner corners, rods on the interior of the head-section having elongated loops projecting through the inner corners thereof and slidingly connected with the aforesaid loops, for the purposes stated.

5. An improved mattress, comprising in combination, independent head and foot mattress-sections, a cross-piece at the outer end of each section, springs connected with both of the cross-pieces and passed longitudinally through the sections, rods in the interior of the foot-section having loops or eyes projecting through the section at its inner corners, rods on the interior of the head-section having elongated loops projecting through the inner corners thereof and slidingly connected with the aforesaid loops, and means for adjustably supporting the head-section at different points of elevation relative to the foot-section.

6. The combination with a two-part mattress divided transversely near its central portion, the arms pivotally connected with the

outer corners of the head-section, flanged wheels at the lower ends of the said arms and chains having hooks in their ends connected with the lower end portions of said arms, said hooks being designed to engage the links of the chains.

7. The combination with a two-part mattress divided transversely near its central portion, the arms pivotally connected with the outer corners of the head-section, flanged wheels at the lower ends of the said arms and chains having hooks in their ends connected with the lower end portions of said arms, said hooks being designed to engage the links of the chains, and a longitudinally-adjustable cross-piece connecting said arms at their lower portions.

8. The combination with a two-part mattress divided transversely near its central portion, of a flap secured to the inner end portion of the foot-section and means for attaching the forward end of said flap to a part of the bed-frame.

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Witnesses:

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