V. M. BROUN.

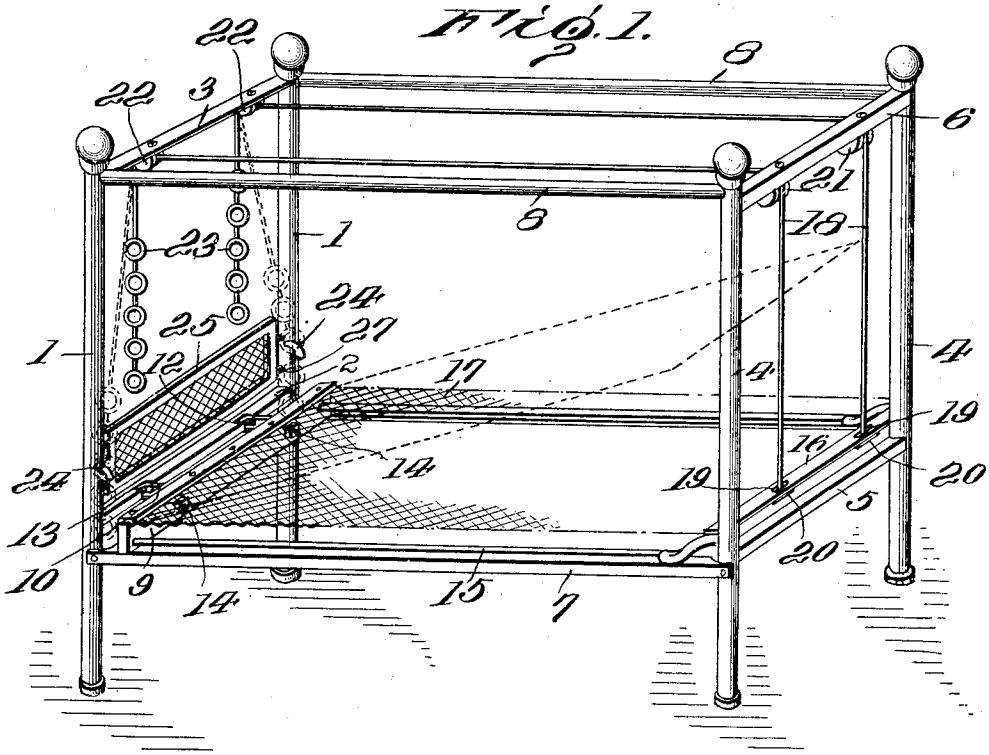
ADJUSTABLE INCLINED BED.

APPLICATION FILED DEC. 19, 1919.

1,348,779.

Patented Aug. 3, 1920.

Fig. 1.



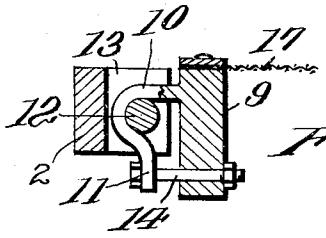


Fig. 2.

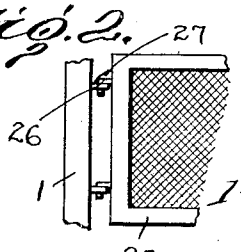


FIG. 5

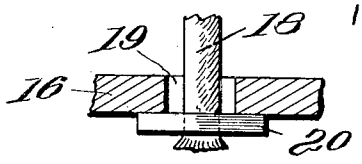


Fig. 3.

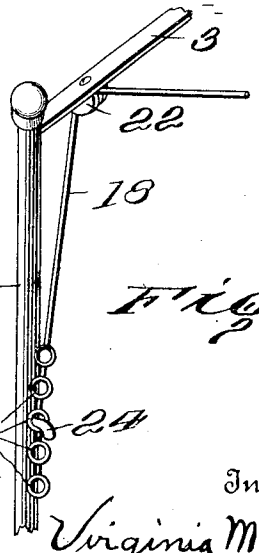


Fig. 4.

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UNITED STATES PATENT OFFICE.

VIRGINIA M. BROUN, OF WASHINGTON, DISTRICT OF COLUMBIA.

ADJUSTABLE INCLINED BED.

1,348,779. Specification of Letters Patent. Patented Aug. 3, 1920.

Application filed December 19, 1919. Serial No. 345,941.

To all whom it may concern:

Be it known that I, VIRGINIA M. BROUN, a citizen of the United States, residing at Washington, District of Columbia, have invented certain new and useful Improvements in Adjustable Inclined Beds, of which the following is a description, reference being had to the accompanying drawing and to the figures of reference marked thereon.

The invention relates to new and useful improvements in beds, and more particularly to a bed wherein the supporting frame for the springs may be adjusted for inclining the same.

An object of the invention is to provide a bed to be used for physical culture and in taking massage in the home and in massage establishments, which bed is provided with a spring frame carrying springs, with means whereby said spring frame may be swung to an inclined position by means self-contained within the bed frame so that the bed may be moved readily from one position to another, which means is capable of being operated by a person occupying the bed.

A further object of the invention is to provide an adjustable bed frame of the above character wherein the spring frame is adjusted to different angular positions by means of a rope or ropes running over suitable devices carried by the bed frame, which rope or ropes are provided with a series of weighted devices, which in whole or in part, counterbalance the weight of the spring frame and springs, and which weighted devices may be utilized as a fastening means for securing the bed frame in its several adjusted positions.

A still further object of the invention is to provide an adjustable bed of the above character wherein the movable spring frame is mounted for pivotal movement about an axis at the head of the bed, and wherein said spring frame is formed of heavy metal adjacent said axis, and wherein the side frames and the other end of the spring frame are formed of lighter metal to facilitate the ready adjustment of the spring frame.

Still another object of the invention is to provide a bed of the above character with removable head board.

These and other objects will in part be obvious and will in part be hereinafter more fully disclosed.

In the drawings which show by way of illustration one embodiment of the invention:—

Figure 1 is a perspective view showing the bed embodying my improvements, and in dotted lines, the spring frame swung to one of its adjustable inclined positions;

Fig. 2 is a sectional view through one of the pivotal supporting means for the spring frame;

Fig. 3 is a sectional view showing the way of securing the ends of the ropes to the spring frame; and

Fig. 4 is a detail in perspective showing one of the head posts and a ring attached to a knob carried thereby.

Fig. 5 is a detail view showing the manner of supporting the head board of the bed frame.

The invention in its broadest aspect is directed to an adjustable inclined bed which consists preferably of a metal frame having upwardly extending head and foot frames which are joined by said frames at their upper ends, thus forming a very rigid rectangular frame structure. Pivotally supported at the head end of the frame structure is a spring frame on which are mounted, in any suitable way, springs. This spring frame is preferably formed of heavy metal adjacent the pivotal connection of the spring frame with the head of the bed, and with lighter metal side frames and foot frame. The frame is adapted to be adjusted to different inclined positions about the pivotal connection with the head frame of the bed, and this is brought about by means of a rope or ropes, preferably of metal, which are attached to the foot of the spring frame and run over suitable supporting and guiding pulleys on the foot frame and head frame with the free ends adjacent the head of the bed. These free ends are provided with weighted devices, preferably ring-shaped, which may be utilized for holding the spring frame in adjusted positions. The head board is removably connected to the head frame.

Referring more in detail to the drawings, my improved adjustable bed comprises a head frame formed of corner posts 1, 1, a cross frame 2 to which the springs are attached, and a cross frame 3 at the upper end of the corner posts. The foot frame consists of corner posts 4, 4 which are joined by a connecting frame 5 substantially on a level

with the cross frame 2 at the head of the bed, and a cross frame 6 at the upper ends of the posts 4, 4, which is likewise substantially on a level with the cross frame 3. The corner posts 1 and 4 are connected by side frames 7, 7 which may be of the ordinary construction and are located in substantially the same plane as the cross frames 2 and 5. The corner posts 1 and 4 are likewise connected by side frames 8, 8 which are disposed adjacent the upper ends of the corner posts. These corner posts are extended so that the cross frames 3 and 6 and the side frames 8, 8 are well above the spring frame and give ample head room for one sitting upon the bed frame. In other words, the general frame structure of the bed is similar to that of the old-fashioned four-posted bed. The spring frame of my improved adjustable bed consists of a comparatively heavy metal cross frame 9 at the head of the bed. This cross frame is preferably formed of iron and is so constructed as to have laterally extending integral arms 10 which are bent downwardly as indicated at 11 (see Fig. 2). These arms 10, 10 are adapted to extend over rods 12. The cross frame 2 at the head of the bed is formed with recesses 13, and these rods 12 are located within the recesses and serve as a pivoted support for the arms 10. The downwardly projecting parts 11 of the arms 10 are formed with a suitable bolt hole through which a bolt 14 extends, and this bolt also extends through an opening in the frame 9 and serves as a means for retaining the springs on the pivot rods. It will readily be seen that this forms a hinge or pivotal connection between the frame member 9 of the springs and the cross frame 2 at the head of the bed, around which the spring frame may swing, and in order that this may be easily accomplished, the rods 12 are round and smooth and may be kept well lubricated.

The spring frame also includes side members 15, 15 which are preferably formed of aluminum or some other light metal. These side members are connected by a cross frame 16 at the foot of the bed which is likewise of aluminum or other light metal, and the springs indicated at 17 are suitably attached to the end frame 9 and the cross frame 16. The spring frame at the foot is supported by the bed frame in the usual way. As shown in the drawings, I have provided two ropes 18, 18 which may be utilized for shifting the spring frame to different inclined positions. These ropes are preferably of metal and extend through suitable openings 19, 19, respectively, in the cross frame 16. Each rope is attached to a cross piece 20 which may be turned in a direction substantially parallel with the length of the rope for inserting the same through the opening 19, after which it is turned into the position at right angles to the length of the rope so as to serve as a means for firmly securing the ends of the ropes to the cross frame 16. The ropes 18, 18 pass over supporting and guiding pulleys 21, 21, respectively, which are secured in any desired way to the cross frame 6 and also over supporting and guiding pulleys 22, 22 which are carried by the cross frame 3. The free ends of the ropes hang vertically from these guiding and supporting pulleys 22 and are provided with a series of weighted rings 23, 23. As herein shown, there are five rings. It is understood of course, that this number may be varied. These rings are formed of metal and are of considerable weight so that the five weighted rings on each rope will serve to fully or in part counterbalance the weight of the movable parts of the spring frame and springs. On each head post there is a projecting knob 24 which is turned downwardly slightly, and each of the rings is adapted to be placed on the turned down knobs. At the head of the bed there is a removable head board 25 which is formed with suitable projecting L-shaped members 27, 27 adapted to engage eyes 26, 26 on the corner posts so that the head board may be lifted vertically and quickly removed from the head frame, thus giving an attendant free access to the bed, if desired.

It will be noted that the ropes are run over the guiding and sustaining pulleys 22, then over the pulleys 21, and then extended through the openings in the foot frame after which the cross pieces on the ends of the ropes are turned for securing the ropes to the spring frame. This forms a very ready means for detaching the ropes without removing the weights.

From the above it will be apparent that a person lying on the bed may readily reach the weights at the ends of the ropes and by pulling on these ropes swing the spring frame to an inclined position, such as shown for example in dotted lines in Fig. 1, and when the spring has been brought to this inclined position, the rings may be placed over the knobs and the spring frame thus held in such inclined position. The inclination of the spring frame may be readily and quickly varied by the person on the bed, and any other pair of the rings engaged with the knobs for holding it in its adjusted position. From certain more specific aspects of the invention, and particularly the raising and lowering means, it will be understood that the manner of supporting the ropes and the position of the same, may be varied considerably.

It is obvious that minor changes in the details of construction may be made without departing from the spirit of the invention as set forth in the appended claims.

Having thus described the invention,

what I claim as new and desire to secure by Letters-Patent is:—

1. The combination of a bed frame including corner posts, a cross frame connecting the upper ends of the corner posts respectively at the foot and head of the bed, a spring frame pivotally connected at the head of the bed, supporting means carried by the cross frames, flexible devices connected to the free end of the spring frame and running over said supporting means and having their free ends located between the corner posts at the head of the bed whereby they are accessible to a person lying upon the spring frame for adjusting said spring frame while lying thereon, and means whereby the ends of said flexible members may be secured for holding the spring frame in various adjusted positions.

2. The combination of a bed frame; of a spring frame pivotally connected thereto at the head of the bed, said bed frame having cross frames and side frames arranged above the spring frame, guiding and supporting pulleys carried by said cross frames, ropes attached to the spring frame at the foot end thereof and running over said guiding and supporting pulleys and having their free ends adjacent the head end of the bed whereby the same are readily accessible to a person in the bed.

3. The combination of a bed frame; of a spring frame pivotally connected thereto at the head of the bed, said bed frame having cross frames and side frames arranged above the spring frame, guiding and supporting pulleys carried by said cross frames, ropes attached to the spring frame at the foot end thereof, and running over said guiding and supporting pulleys and having their free ends adjacent the head end of the bed whereby the same are readily accessible to a person in the bed, the free ends of said ropes being provided with weighted rings to facilitate the adjustment of the spring frame, and said bed frame having downwardly turned knobs adapted to be engaged by said rings whereby the springs may be held in various adjusted positions.

4. The combination of a bed frame; of a spring frame pivotally supported by the bed frame at the head thereof, said bed frame having parts thereof extending above the spring frame, guiding and sustaining pulleys carried by the frame at points above the spring frame, two spaced ropes attached to the foot of the spring frame and running over said pulleys, spaced weighted rings carried by said ropes, and downturned knobs carried by the bed frame over which the rings may be placed for holding the spring frame in various inclined positions.

In testimony whereof, I affix my signature.

VIRGINIA M. BROUN.

Corrections in Letters Patent No. 1,348,779.

It is hereby certified that in Letters Patent No. 1,348,779, granted August 3, 1920, upon the application of Virginia M. Broun, of Washington, District of Columbia, for an improvement in "Adjustable Inclined Beds," errors appear in the printed specification requiring correction as follows: Page 1, line 53, before the word "removable" insert the article *a;* same page, line 80, for the word "said" read *side;* page 2, line 30, for the word "pivoted" read *pivotal;* and that the said Letters Patent should be read with these corrections therein that the same may conform to the record of the case in the Patent Office.

Signed and sealed this 31st day of August, A. D., 1920.

[SEAL.]

M. H. COULSTON,

Acting Commissioner of Patents.

Cl. 5—12.