T. B. SCHULTE.

DAVENPORT BED.

APPLICATION FILED JULY 29, 1911.

1,093,949. Patented Apr. 21, 1914.

2 SHEETS—SHEET 1.

FIG. 1.

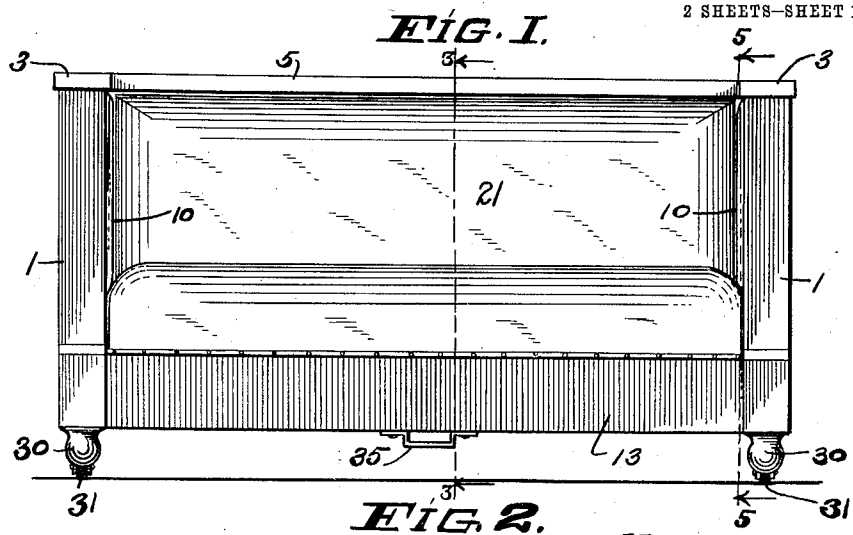


FIG. 2.

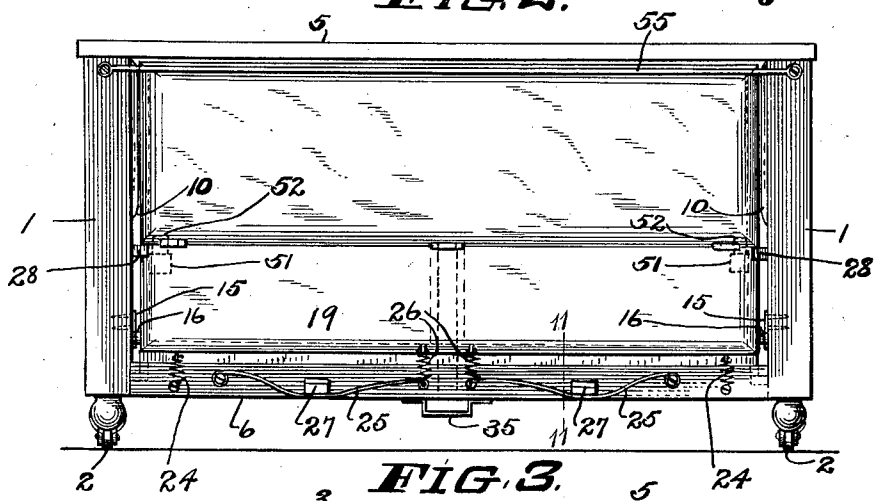
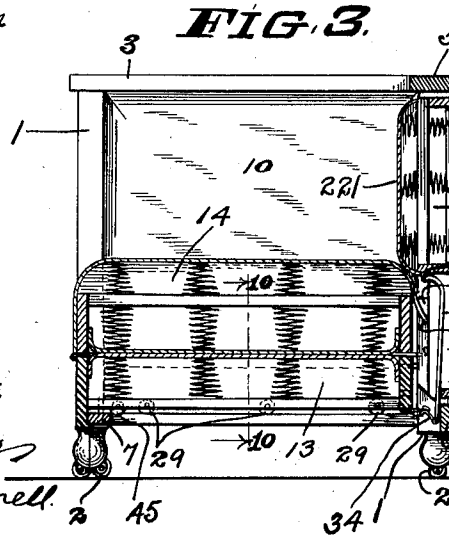


FIG. 3.



Witnesses.

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2 SHEETS—SHEET 2.

FIG. 13.

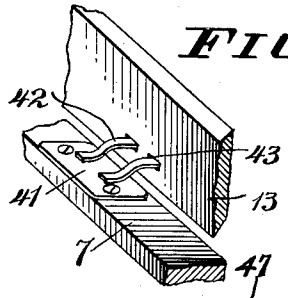


FIG. 4.

FIG. 7.

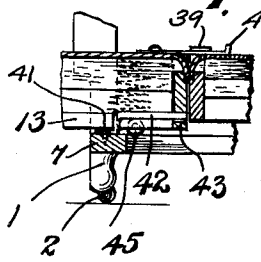


FIG. 5.

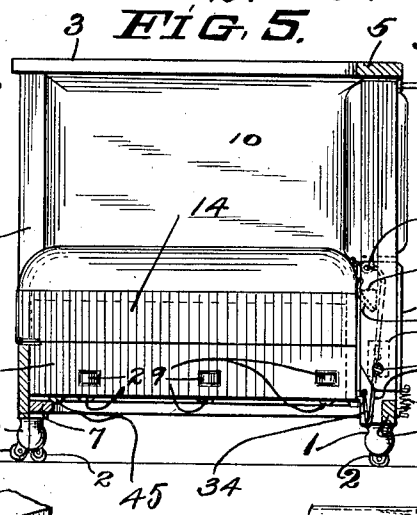


FIG. 6.

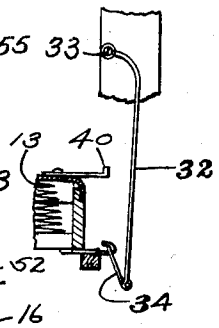


FIG. 8.

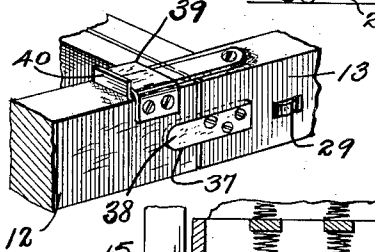


FIG. 9.

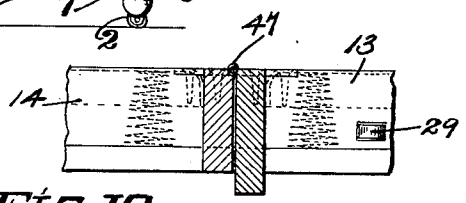


FIG. 10.



Witnesses.

J. C. Turner

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FIG. 11

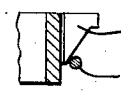
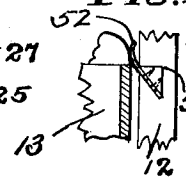


FIG. 12.



Inventor.

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UNITED STATES PATENT OFFICE.

THEODORE B. SCHULTE, OF CLEVELAND, OHIO.

DAVENPORT-BED.

1,093,949. Specification of Letters Patent. **Patented Apr. 21, 1914.**

Application filed July 29, 1911. Serial No. 641,281.

To all whom it may concern:

Be it known that I, THEODORE B. SCHULTE, a citizen of the United States of America, residing at Cleveland, in the county of Cuyahoga and State of Ohio, have invented certain new and useful Improvements in Davenport-Beds; and I hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it pertains to make and use the same.

This invention relates to new and useful improvements in davenport beds.

The object of this invention is to provide an article of the character indicated which will be very simple in construction, durable and easily operated.

A further object of my invention is to provide an article of this kind which will take up much less room than articles of this kind now on the market, and which will also have provision for taking care of the bed-covers and pillows when the article is used as a davenport so that they will be completely concealed while permitting them to be properly aired.

My invention also consists in the features of construction and combination of parts described in the specification, pointed out in the claims and illustrated in the accompanying drawings.

Referring to the drawings Figure 1 is a front elevation of a davenport embodying my invention. Fig. 2 is a rear elevation of the same. Fig. 3 is a section on line 3—3, Fig. 1. Fig. 4 is a central longitudinal section showing the bed portion extended as when in use. Fig. 5 is a section on line 5—5, Fig. 1. Fig. 6 is a detail view showing the arrangement of the lifting spring. Figs. 7 and 8 are detail views of the catch for holding the bed sections in their proper positions when extended. Fig. 9 is a detail view of the hinge connection of the two forward sections of the mattress. Fig. 10 is a section on line 10—10, Fig. 3. Fig. 11 is a detail section on line 11—11, Fig. 2.

Referring to the drawings it will be seen that the main frame comprises four uprights or posts 1 provided at their lower ends with suitable casters 2, a pair of top side bars 3 a pair of bottom side bars 4, a rear top bar 5, a rear bottom bar 6 and a front bottom bar 7. The sides of the frame are filled in with suitable upholstery, shown at 10, which is secured permanently in position. On each of the bottom side bars 4 is arranged a track 11, for supporting the mattress sections, as will be described later. The mattress itself is made in three sections, each section having a separate frame, shown at 12, 13 and 14. The section 12 is pivotally supported at its inner end between the rear posts of the main frame by means of hanger plates 15, each of which has a small trunnion 16 which enters a hole in the adjacent side of the frame of the said mattress section. The hanger plates are secured to the posts by means of screws and by simply adjusting the position of the plates backward or forward or up or down the mattress section can be readily adjusted to its proper position in the main frame. The section 12 is divided by a transverse bar 18 into two portions and the portion between the bar 18 and the pivoted end of the section is provided with a cover 19 of any suitable material so that a compartment 20 is formed and the portion between the bar 18 and the front or free end of the section is upholstered on both sides, as indicated at 21 and 22. The upholstering 21 is in the nature of a mattress and the upholstering 22 being in the nature of the usual upholstery for furniture. Now when the section 12 is in the position illustrated in Fig. 4 the said section forms the first or head section of the mattress, but when the said section is swung up to the vertical position, shown most clearly in Figs. 3 and 5, the said section forms the back of the davenport and the upholstered portion 22 forms the upholstery for the back of the davenport and the compartment 20 forms a place in which pillows and the like may be stored. In order to assist the lifting of the pivoted section 12 a pair of coil springs 24 are secured to the rear end of the said section and the said springs are also secured to the rear bottom bar 6 of the main frame. Between the springs 24 a pair of bow-springs 25 are arranged, one end of each bow-spring being secured to the bar 6 and the other end of each bow-spring being operatively connected with the rear end of the section 12 by means of a coil spring 26 and said springs 26 are made stronger than the springs 24. On the bar 6, just above each bow-spring 25, is arranged a small block 27 which has an upwardly and outwardly inclined face. The object of the blocks 27 is to cause an upward and outward movement of the bow-springs when the section 12 is lowered and

a downward and inward movement when the section is raised, and the movement of said springs swings out or in the lower ends of the connecting coil springs 26, so that said coil springs 26 remain vertical during the lowering and raising of said section. Now, when the pivoted section is brought to a horizontal position all the springs are put under tension and particularly the larger coil springs 26 connected with the bow-springs 25 and the tension of the springs is such that the said springs more than counterbalance the weight of the mattress section 12 and if the mattress section be not held down after being lowered to the horizontal position the front end will be swung up and held a distance of twelve or fourteen inches above the main frame. Then as the springs will still be under tension a very slight force will cause the section to swing up the rest of the way until it assumes a vertical position. Stops 28 are mounted on the rear posts of the main frame to prevent the section 12 from swinging too far back when raised.

The central mattress section 13 is adapted to rest on or be supported by the bottom bars of the main frame and the frame of the said section 13 is provided with a series of rollers 29 on the bottom and on the sides, which engage said tracks 11, before mentioned, so that the said section can be easily pulled out or shoved back on the said tracks. This section 13 is upholstered only on one side to form the mattress for the bed, and at its forward end said section 13 is provided with a pair of legs 30 having casters 31. When the said section 13 is pulled out the front end thereof is supported by the said legs while the rear end remains supported in the main frame.

The method of connecting the section 13 or the center section with the section 12 or first section is as follows: One end of an iron bar 32 is pivotally secured near the middle of the first section 12, as at 33, and to the opposite end of said bar 33 is secured one end of a small link 34, the other end of which is pivotally secured to the rear end of the section 13 at the center thereof. At the front of the section 13 is secured a pull handle 35. When the device is used as a davenport, the section 12 will be in a vertical position and the section 13 will be in a horizontal position and resting entirely on the main frame. If it is desired to place the sections in their proper position for using the device as a bed the section 13 is pulled forward by means of the handle 35 until only the inner end thereof rests on the main frame and while said section 13 is being drawn out it will pull down the section 12 by means of the bar 32 and connecting link 34, so that the said section 12 will swing down into the place formerly occupied by the section 13. Now, as before mentioned, the tension of the counterbalancing springs is sufficient to normally hold the front end of the section 12 a distance above the front of the main frame and in order to hold the said section down in a horizontal position the following means is provided: At each side at the front of the section 12 is arranged a groove 37 and at each side of the frame of the section 13 is secured a tongue 38. Now when the section 13 is pulled out it is pulled out a little farther than its regular position and is then pushed back while the section 12 is held down horizontally and the tongues 38 enter the grooves 37 and lock the said section 12 against upward movement. In order to further lock the two sections together I provide a pair of catches 39 on the section 12 and a pair of latches 40 on the section 13 which are adapted to engage the catches 39. Also in order to hold down the rear end of the section 13 when the section is in its outer position a pair of plates 41 is secured to the front bottom bar of the main frame and the plates 41 are provided with rearwardly extending prongs 42 which are adapted to enter openings 43 in the rear end of the section 13. When it is desired to put the sections 12 and 13 in the positions they occupy when the device is used as a davenport the latches 40 are disengaged from the catches 39 and the section 13 is pulled out a sufficient distance to liberate the tongues 38, and the section 12 will be immediately tilted up by the action of the counterbalancing springs. The section 13 is then pushed back and as it moves back it pushes the bar 32 backward causing the inner end of said bar to swing up thereby lifting the section 12 to a vertical position. Now in order to hold the section 13 in its inner position a small roller 45 is secured to the bottom of said section 13, near the front, in such a position that when the section is shoved back the said roller will slip down behind the front bottom bar 7 of the main frame thereby holding the said section against forward movement. When it is desired to draw out the section 13 the section is lifted far enough to permit the roller 45 to ride over the said bar 7. The end or foot section 14 is hinged at its rear end to the center section by means of hinges 47 of the usual construction so that the said section 14 can be folded over the top of the section 13. The side which is up when the section 14 is folded over on the section 13 is upholstered to form the seat of the davenport, and the opposite side is upholstered to form a mattress section. At its front end said section 14 is provided with a pair of legs 49 which are secured thereto by pivot pins so that when the said section 14 is folded back on the section 13 the said legs can be swung down out of view. In order that the section 14 may be utilized to brace the section 12

when the device is in its closed position and prevent any movement or shaking of the said section 12 a small block 51 having a beveled face is secured on each side of the section 12 and on the face of each block is secured a spring plate 52 which extends outwardly at an angle to the said section 12. Now, when the section 14 is folded over on the section 13 and both sections are shoved back in the main frame the frame of the section 14 will abut against the spring plates 52 and press the vertically arranged section 12 resiliently but firmly against the stops 28.

The operation of the device will be readily understood from the foregoing description. If the device has been in use as a davenport, as shown in Fig. 1, and it is desired to use it as a bed, as shown in Fig. 4, it is only necessary to take hold of the pull handle 35 and pull out the section 13 as far as it will come. As the section 13 moves out the section 12 will be swung down from its vertical position by the means before described, but will remain slightly tilted above the bottom of the main frame. The front end of the section 12 is then pressed down by the hand and the section 13 is pushed back so that the tongues 38 will enter the grooves 37 so that the section 12 is locked in a horizontal position. The section 14 is then swung down so as to form the end section of the bed. When it is desired to reconvert the device into a davenport the section 14 is folded over on the section 13 and the section 13 is pulled out sufficient to free the section 12, and the section 12 will be immediately tilted by the action of the springs, and the section 13 together with the section 14 is then pushed back on the main frame shoving back the section 12 until it assumes a vertical position. The bed coverings are then hung on a hanger bar 55 which extends across the main frame at the rear thereof and the pillows are stored in the compartment 20 in the section 12.

What I claim is,—

1. In a device of the character indicated, a main frame, a mattress section pivotally supported at its rear end at the rear end of said main frame and capable of being raised to a vertical position to form a seat back or lowered to a horizontal position to form a bed section and means for counterbalancing said section comprising a pair of bow springs, each bow spring being secured at one end to the rear of the main frame, and a coil spring secured at one end to the free end of each bow spring and at its other end to the rear end of the mattress section.

2. In a device of the character indicated, a main frame, a mattress section pivotally supported at its rear end at the rear end of said main frame and capable of being raised to a vertical position to form a seat back or lowered to a horizontal position to form a bed section and means for counterbalancing said section comprising a pair of bow springs, each bow spring being secured at one end to the rear of the main frame, a coil spring secured at one end to the free end of each bow spring and at its other end to the rear end of the mattress section and a block having an inclined face mounted on the main frame between the main frame and each bow spring at a point intermediate of the ends of said bow springs.

3. In a device of the character indicated, a main frame and a mattress section pivotally supported at its rear end at the rear end of said main frame and capable of being raised to a vertical position to form a seat back or lowered to a horizontal position to form a bed section, said mattress section being upholstered on both sides from a point intermediate of the front and rear ends to the front end and having a compartment extending from the upholstered portion to the rear end thereof.

4. In a device of the character indicated, the combination of a main frame, a mattress section pivotally supported at its rear end at the rear of said main frame and capable of occupying either a vertical or a horizontal position in said main frame, counterbalancing springs secured to the rear end of said pivoted section and to the main frame and adapted to normally hold the pivoted section in a position intermediate its horizontal position and its vertical position, a mattress section arranged horizontally at the bottom of said main frame and slidable therein, means for operatively connecting the slidable section and pivoted section so that the forward movement of the slidable section will draw down the pivoted section and the backward movement of the slidable section will swing up the pivoted section and means for locking the pivoted section in its lower position.

5. In a device of the character indicated, the combination of a main frame, a mattress section pivotally supported at its rear end at the rear of said main frame, counterbalancing means connected to the rear end of said pivoted section and adapted to hold said section in a position intermediate its vertical position and its horizontal position, a mattress section slidably mounted in the bottom of said frame and means for locking the two sections together when the pivoted section is in a horizontal position consisting of a pair of tongues secured to one section and a pair of grooves formed in the frame of the other section and adapted to receive the said tongues.

6. In a device of the character indicated, the combination of a main frame, a mattress section pivotally supported at its rear end at the rear of said main frame, means for counterbalancing said pivoted section, a

mattress section provided with rollers arranged horizontally at the bottom of said main frame, supports for the front end of said last mentioned mattress section and means for locking said last mentioned section against movement in said main frame, for the purpose set forth.

7. In a device of the character indicated, a main frame, a mattress section pivotally supported at its rear end at the rear end of said main frame, counterbalancing means connected to said pivoted section and adapted to hold said section in a position intermediate its vertical position and its horizontal position, a mattress section slidably mounted in the bottom of said frame, a mattress section hinged to the front end of said slidable section and capable of being either folded over on top of said slidable mattress section or folded down beyond said slidable mattress section so as to form a continuation of said slidable section, means for locking the front end of the pivoted section to the rear end of the slidable section when the pivoted section is in a horizontal position and means for rigidly holding said pivoted section in a vertical position consisting of a pair of stops arranged on the main frame at the rear of said pivoted section and a pair of spring plates secured on said section and adapted to be engaged by the inner side of the end section when the end section is folded over on top of the slidable section.

8. In a device of the character indicated, the combination of a main frame, a mattress section pivotally supported at its rear end at the rear of said main frame, counterbalancing springs secured to the rear end of said pivoted section and to the main frame and adapted to hold the pivoted section in a position intermediate its vertical position and its horizontal position, a mattress section provided with rollers arranged horizontally in the bottom of said main frame and adapted to slide in and out in said frame, a link secured to the rear end of said slidable section, a bar secured at one end to said link and at its other end to the pivoted section at the side that is down when said section is in a horizontal position, means for locking the front end of said pivoted section to the slidable section when the pivoted section is in a horizontal position and a mattress section hinged at the front end of said slidable section and capable of being folded over on top of said slidable section or being folded down to form a horizontal continuation of the same, substantially as described.

In testimony whereof, I sign the foregoing specification, in the presence of two witnesses.

THEODORE B. SCHULTE.

Witnesses:
VICTOR C. LYNCH,
N. L. MCDONNELL.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."