

R. E. TAYLOR.

BED.

APPLICATION FILED MAY 13, 1911.

1,004,104.

Patented Sept. 26, 1911.

2 SHEETS-SHEET 1.

Fig. 1.

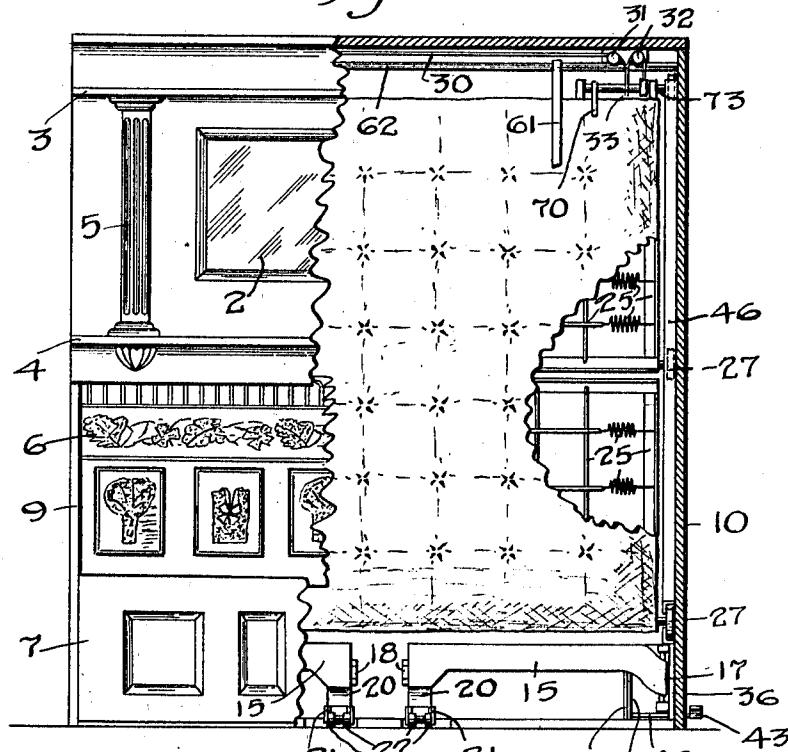


Fig. 8.

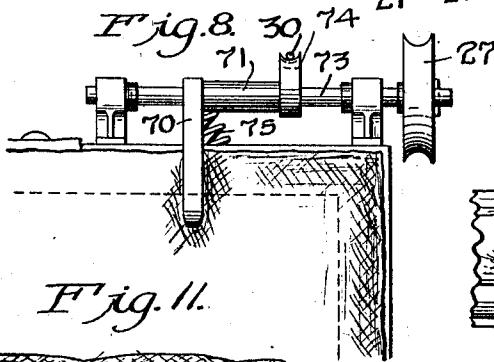


Fig. 9.

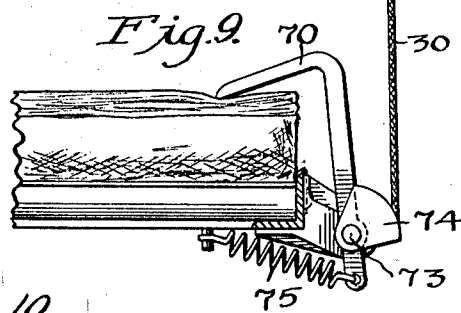


Fig. 11.

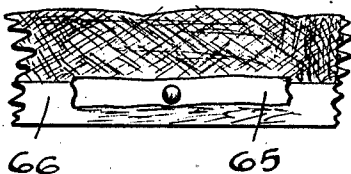
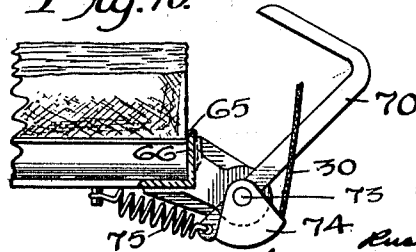


Fig. 10.



Witnesses:
Geo. A. Lewis
Grace T. Allen

Inventor
R. E. Taylor
By his Attorney

R. E. TAYLOR.

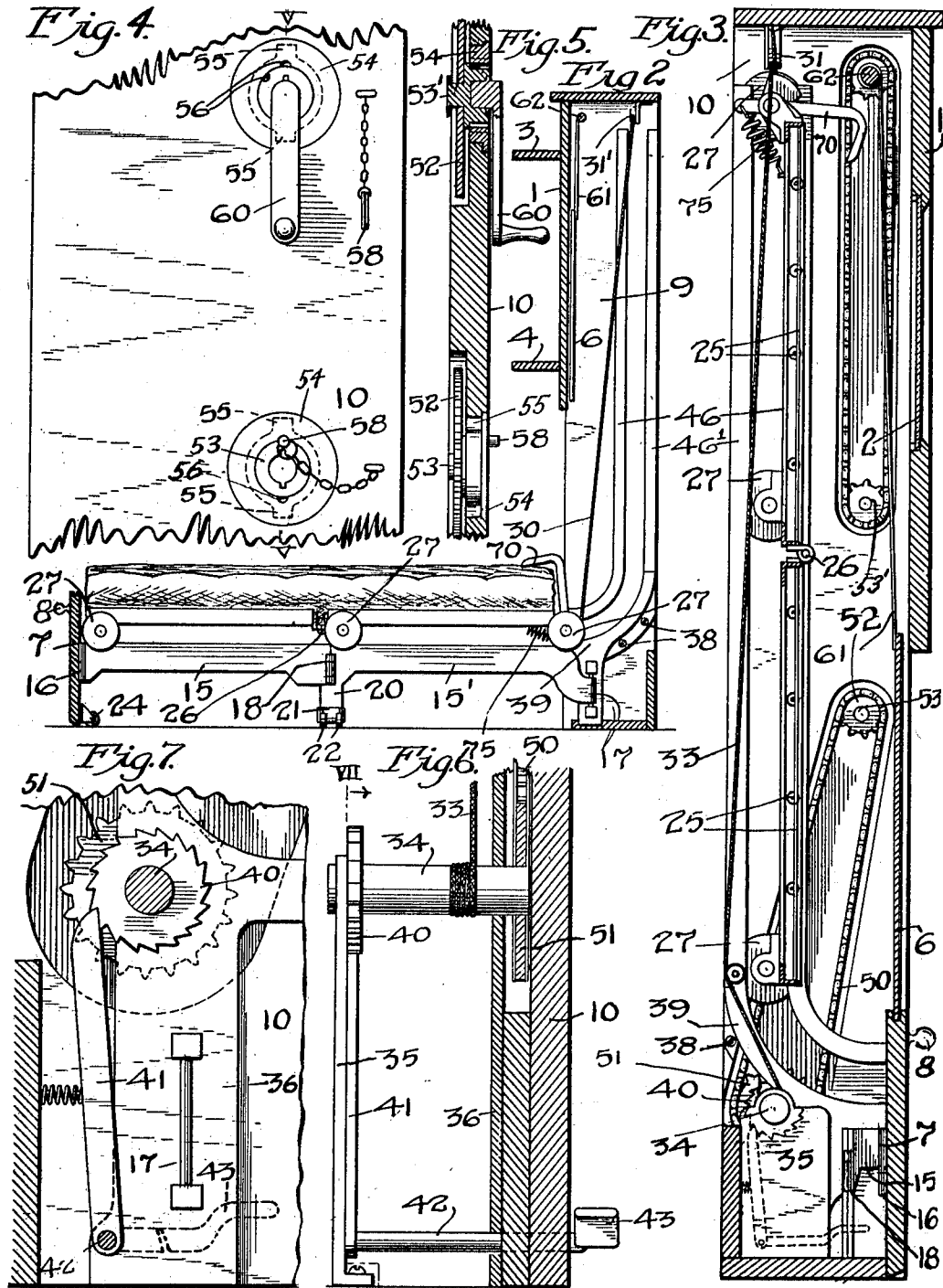
BED.

APPLICATION FILED MAY 13, 1911.

Patented Sept. 26, 1911.

2 SHEETS—SHEET 2.

1,004,104.



Witnesses:
Geo. A. Linn
Frank T. McLean

Inventor
Russell E. Taylor
 By his Attorney
[Signature]

UNITED STATES PATENT OFFICE

RUSSELL E. TAYLOR, OF NEW YORK, N. Y.

BED.

1,004,104.

Specification of Letters Patent. Patented Sept. 26, 1911.

Application filed May 13, 1911. Serial No. 627,065.

To all whom it may concern:

Be it known that I, RUSSELL E. TAYLOR, a citizen of the United States, residing at New York, in the county of New York, in the State of New York, have invented a new and useful Improvement in Beds, of which the following is a specification.

This invention relates to a bed, and particularly to the type of a bed which can be folded or housed compactly against the wall.

The object of the invention is primarily to obtain a housing for the bed which is exceedingly flat against the wall, projecting only slightly therefrom, and which is so compact in this respect as to lend itself readily to any system of wall decoration, and further in which by reason of the form of the housing and the manner in which the bed enters and is withdrawn therefrom, the main portion of the front or face of the housing is a fixed permanent or immovable partition which may be fitted with a mirror or any type of mantelpiece and the usual pillars and cabinet decorations used in conjunction with mantel-pieces. All this main portion of the housing may be plastered and wall-papered like the rest of the walls of the room. The lower part of the front or face of the bed housing is a movable board constituting a side of the bed, and intermediate this board and the permanent top face first described, I have designed a movable panel. The lower board or bed-side and also the movable panel lend themselves readily to various schemes of decoration whether the bed housing is a fixed and permanent part of the wall, being built therein, or attached as a temporary fixture or article of movable furniture.

The bed itself presents various features of construction and combination by reason of which various objects are attained.

One of the objects of the invention in respect to the bed, is to have the lower movable board of the housing constitute a support for the side of the bed, serving the purpose of the legs or bed-posts, also furnishing an ornamental part behind which the bedclothes may be neatly tucked, and also furnishing a secure partition on this side in the use of the bed.

It is further an object to provide guides for this lower movable board which are light in weight and positive in action, and which

furthermore constitute tracks on which the bed-springs run; which furnish ample support for the bed-springs against breaking or sagging, and which are simple, compact, cheap to construct and durable.

It is furthermore an object of the invention to provide a means for raising and lowering the bed into and out of its housing by the simple manipulation of a crank which turns easily enough to be readily operatable by a delicate woman, not requiring any such exercise of strength and agility as characterize the operations of all folding-beds now in use, as far as I am aware.

It is further an object to provide such safety devices as will preclude accident, and generally render the operation wholly controllable by light operating hand-cranks accessible for use without stooping.

In all these respects therefore, it is my object to overcome many or all of the evils which now characterize movable, folding or cabinet beds, and to render the beds attractive to builders and occupants of apartment houses in which the space occupied by a number of beds and particularly spare beds, is a matter of considerable rent expenditure.

With the foregoing in view, the invention consists in the improved bed and housing as hereinafter set forth.

In the drawings,—Figure 1, is a front elevation partly in section of an improved bed and housing embodying the principles of my invention; Fig. 2, is a vertical section of the same showing a bed lowered into the position of use; Fig. 3, is a similar enlarged section showing the bed elevated into the housing, the section of Fig. 3 being viewed from the opposite side of the housing to that of Fig. 2. Fig. 4, is a detail side elevation of part of the housing; Fig. 5, is a vertical sectional view of the same on the line V—V of Fig. 4; Fig. 6, is an enlarged detail sectional view of the mechanism at the lower right hand corner of Fig. 1; Fig. 7, is a partial section on the line VII—VII of Fig. 6, looking in the direction of the arrow. Fig. 8, is a detail plan view of one of the bed-springs with a mattress, and a hook for holding the mattress and bedclothes on the bed spring; Fig. 9, is a side elevation of the same; Fig. 10, is a similar view showing the hook in its open

position; Fig. 11, is a detail front view showing a flap by which the mattress may be buttoned to the bed-spring.

The invention will include a housing with
 5 an upper permanently inclosed pocket 1, the front face or wall of which may carry any permanent fixtures or decorations suiting the general scheme of wall decoration or ornament of the room. For example if the
 10 inclosed portion 1 is built into the wall five or six inches it will project perhaps four inches at the front beyond the face of the wall and will carry a mirror 2 and mantel-pieces 3 and 4 with pillars 5 similar to
 15 mantel-piece decorations now in use.

6 denotes a movable panel which is best made of thin material ornamented as desired and having the lightness compared with stiffness which may be obtained in this material.
 20

7 denotes the lower movable side board above referred to and which will ordinarily be of wood.

8 denotes a knob with which to draw out
 25 the lower movable side board 7 and which may also be provided with locking attachments of known form for securing the lower movable side board normally in its place. The side walls 9 and 10 of the housing will
 30 be made of rigid material in the best constructions and will serve as frames for certain mechanical parts later described.

15 denotes side board holding tracks, the purpose of which is to guide and hold the
 35 lower movable side board 7 at its inner and outer limits of movement and at all intermediate positions. The tracks 15 furthermore control the movement of the bed-springs and furnish adequate support for
 40 the same against breaking down or sagging.

In the best constructions embodying the invention, the side-board-holding-tracks 15 will include metallic plates hinged to the boards 7 at 16, and to the housing sides 9
 45 and 10 at 17, and to one another at about the middle point 18, the character of the hinges permitting the tracks 15 to buckle inward toward one another like toggle-joints. Beneath the hinge 18 and forming part of the
 50 innermost tracks 15¹ there are posts 20 with carriages 21 at the lower end having rollers 22 of which a plurality are best provided so as to keep the posts 20 vertical regardless of the stiffness afforded by the track 15¹. The
 55 plane of rotation of the rollers 22 will be such as to permit each track 15¹ to swing about its hinge 17. The lower movable side board will also have rollers 24 in planes to accommodate its particular movement. By
 60 the foregoing arrangement the lower movable side board 7 is absolutely guided and held in its outer and inner limits of movement, being fixed parallel to the face of the housing at the outer limit of movement and
 65 centered to enter the housing at its inner

limit of movement. This centering is absolutely accurate, it being impossible to make the lower movable side board 7 miss its proper opening when it is pushed inward. At the same time the tracks 15, 15¹ are very
 70 rigid and strong and move into alinement with one another so as to constitute parallel tracks. The legs 20 under these circumstances are so located as to absolutely prevent any breaking down or sagging of the
 75 tracks.

The bed will have a plurality of bed-springs 25, and in the best constructions embodying the invention there will be two bed springs having a length equal to the separation of the tracks 15 and a width equal to the length of the track sections 15, 15¹. These two sections will be hinged together at 26 and will have grooved rollers 27 adapted to run on the tracks 15. Means will be
 80 provided for raising and lowering the bed-springs and I have provided an arrangement by which the entire raising and lowering is done by a crank.
 85

30 denotes cords or wire cables attached to
 90 the inner bed-springs 25 near each end thereof and guided over a system of pulleys 31¹, 31 and 32, after which the two cables 30 are joined together, or in other words merge into a unit cable 33 which runs downward
 95 into the back part of the bed-housing to a drum or axle 34.

35 denotes an inner bearing for the axle 34, and 36 denotes an outer bearing. The outer bearing 36 will in the best constructions embodying the invention be a metal plate or casting secured to the adjacent bed-housing side 10 by suitable screws 38. This casting also carries the hinge 17 previously referred to and has a portion 39 forming
 100 part of a track for the bed-springs under certain circumstances as presently described. The inner bearing 35 is a mere bracket of suitable description.
 105

40 denotes a ratchet wheel on the axle 34, 110 and 41 a pawl pivoted on an axle 42 and cooperating with the ratchet wheel 40. The axle 42 of the pawl is carried through the adjacent bed-housing side 10 and has a treadle 43 which can be elevated by the toe
 115 of the foot at will to release the pawl and thereby the ratchet wheel 40. Under these circumstances the cable 33 is free to unwind and the bed-springs will slide downward.

In sliding downward the bed-springs are
 120 guided by a vertical track composed of two parallel channel irons or rails 46, 46¹, secured to the respective bed-housing sides 9 and 10. The rail 46 is curved at its lower end and the rail 46¹ merges into the curved
 125 track section 39 formed on the frame piece or bearing 36. The tracks 15 swing into alinement with one another and at the same time the inner sections 15¹ swing into alinement with the curved tracks 39. The bed 130

bottom may then be drawn in or out as may be desired by rotating the axle 34.

The drum or axle 34 may be rotated in any suitable manner, but in my improved construction I employ a sprocket chain 50 running from a sprocket wheel 51 of the axle 34 to a sprocket wheel 52 on a level for convenient hand manipulation. The sprocket wheel 52 has a shaft 53 in a bearing 54 and this bearing has lugs 55 by which it is firmly supported in the wood work and given additional strength.

56 denotes holes which are so drilled between the lugs 55 and axle 53 as to register in certain positions of the axle.

58 denotes a pin which may be thrust into the holes under these circumstances and thereby lock the axle against turning.

60 designates a crank of any suitable description which may be made removable from the axle.

In accordance with the most perfect arrangement embodying my invention, the movable panel 6 will also be raised and lowered by a crank. For this purpose I provide a cord or cords 61 joined to a drum 62 driven from a sprocket chain or axle 53¹ of general arrangement similar to that of the axle 53 already described. The axle 53¹ has a sprocket wheel 52 and a construction of journal or bearing precisely like that of the axle 53, and these similar parts are accordingly denoted by like reference characters in Figs. 4 and 5. The crank 60 may be used at will on either the axle 53 or 53¹ to raise or lower the panel 6 or to raise or lower the bed-springs.

In the foregoing description I have not referred to mattresses or bedclothes, and it is evident that some provision must be made for supporting these in order to have the entire appliance without defect. I propose to have a mattress with a flap 65 which may be buttoned over the upper edge 66 of the bed-spring 25. Also I provide hooks 70 forming part of sleeves 71 on axles 73, the sleeves 71 further having grooved segments 74 to which the cables 30 already described are secured, this constituting the attachment of the said cables with the bed springs.

75 denotes springs which normally hold the hooks retracted. When tension is put on the cables 30 to elevate the bed-spring the first effect is to swing the hooks 70 around the fixed axle 73 until they engage the bedclothes and mattresses, and the holding force will be sufficient to retain the bed clothes regardless of any insecurity in the way they may be tucked in place.

It is evident in a variety of details which I have described, that I am merely explaining a practical way of carrying out the invention so as to secure a bed which will not have any serious defect in use. It is of course apparent that many of the devices

may be modified or omitted, their function or service being correspondingly dispensed with. But in its main action and principles the operation of the bed will be unchanged.

What I claim is,

1. In a housed bed, the combination of a housing, a bed bottom and supporting side guided by the floor, tracks extensible from the housing, legs supporting an intermediate portion of the tracks, rollers on said bed bottom running on the tracks, and means connected to the inner side of the bed bottom for elevating it upward into the housing in a vertical position.

2. In a housed bed, the combination of a housing having an upper pocket with a permanent or immovable front face, a bed moving into and out of said pocket, a lower movable side board for part of the bed constituting a closure for the lower portion of said pocket, a movable panel intermediate said front face and said side board, and side board holding tracks guiding said bed and said side board, said tracks being hinged to fold at their middle portions toward one another, substantially as described.

3. In a housed bed, the combination of a housing having side walls, vertical tracks fixed to the interior of said side walls, and a bed bottom having rollers running on said tracks, said bed bottom comprising two rigid frames hinged together to flex or hinge upwardly with respect to one another, rollers at the outer corners of said frames, and rollers at an intermediate position of one of said frames, said rollers running on said tracks.

4. In a housed bed, a housing having vertical tracks, horizontal tracks extensible from said housing, curved track sections joining said vertical and horizontal tracks, and a bed bottom guided by said tracks.

5. In a housed bed, a housing having vertical tracks, horizontal tracks extensible from said housing, curved track sections joining said vertical and horizontal tracks, a bed bottom guided by said tracks, and means for elevating and lowering said bed bottom into and out of the housing.

6. In a housed bed, a housing having vertical tracks, horizontal tracks extensible from said housing, curved track sections joining said vertical and horizontal tracks, a bed bottom guided by said tracks, a crank at the side of the housing, and means operated by said crank for elevating and lowering the bed bottom into and out of the housing.

7. In a housed bed, the combination of a housing having an upper pocket with a permanent or immovable front face, a bed bottom moving into and out of said pocket, a lower movable side board for part of the bed bottom constituting a closure for the lower portion of said pocket, a movable

panel intermediate said front face and side board, two crank axles at the side of said housing, and means operated by said crank axles for raising and lowering said panel
5 and raising and lowering the bed bottom.

8. In a housed bed, cables attached to the bed and hooks swinging into engagement with the bed clothing and constituting the means of attachment of the cables to the
10 bed, said hooks being swung into engagement with the bed clothing by the tension of the cables.

9. In a housed bed, a mattress having a flap secured to the bed, cables attached to

the bed, and hooks swinging into engage- 15
ment with the bed clothing and constituting the means of attachment of the cables to the bed, said hooks being swung into engage-
ment with the bed clothing by the tension of the cables. 20

In testimony whereof, I have hereunto set my hand, in the presence of two subscribing witnesses.

RUSSELL E. TAYLOR.

Witnesses:

FRED MULKIN,

OSCAR DE ROCHEMONT.

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