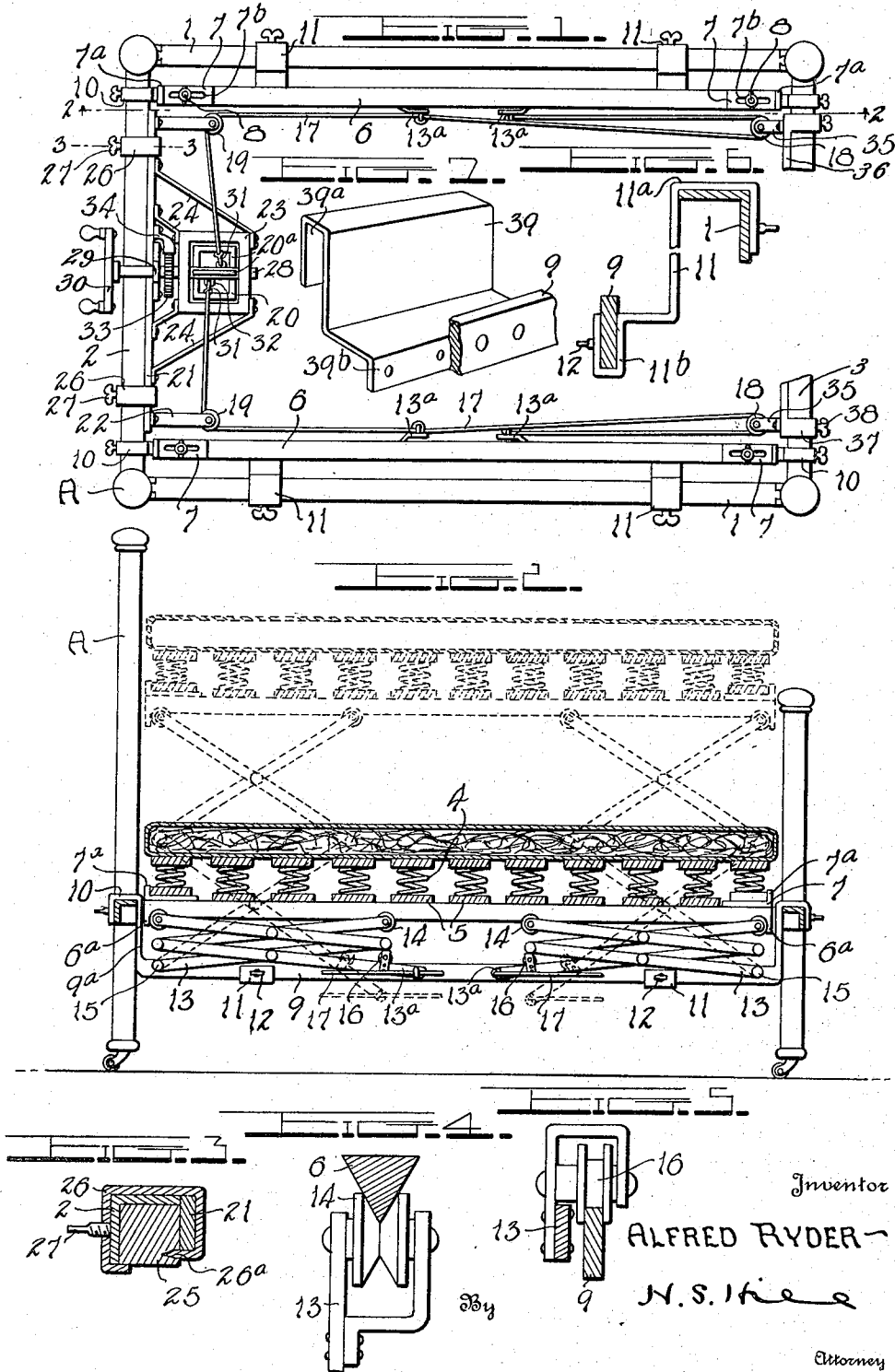


A. RYDER.  
 BED SPRING ELEVATOR.  
 APPLICATION FILED OCT. 13, 1915.

1,201,635.

Patented Oct. 17, 1916.



Inventor

ALFRED RYDER

*N.S. Ives*

Attorney

# UNITED STATES PATENT OFFICE.

ALFRED RYDER, OF LAGRANGE, GEORGIA.

BED-SPRING ELEVATOR.

1,201,635.

Specification of Letters Patent.

Patented Oct. 17, 1916.

Application filed October 13, 1915. Serial No. 55,732.

*To all whom it may concern:*

Be it known that I, ALFRED RYDER, a citizen of the United States, residing at Lagrange, in the county of Troup, State of Georgia, have invented a new and useful Bed-Spring Elevator; and I do 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 appertains to make and use the same.

The present invention relates to a bed spring elevator, and has for its object to provide a device of this character which embodies novel features of construction whereby it can be readily applied as an attachment to an ordinary bed and will admit of the springs and mattress being easily elevated for the purpose of cleaning the floor under the bed, or tilted to admit of the mattress being easily turned.

Further objects of the invention are to provide a bed spring elevator which is comparatively simple and inexpensive in its construction, which can be easily operated, which is invisible when not in use, and which will admit of the floor under the bed being easily and thoroughly cleaned.

With these and other objects in view, the invention consists in certain novel combinations and arrangements of the parts as will more fully appear as the description proceeds, the novel features thereof being pointed out in the appended claims.

For a full understanding of the invention, reference is to be had to the following description and accompanying drawing, in which:—

Figure 1 is a top plan view of an iron bed having a bed spring elevator constructed in accordance with the invention applied thereto. Fig. 2 is a longitudinal sectional view through the same, taken on the line 2—2 of Fig. 1, the bed spring elevating mechanism being shown in inoperative position by solid lines and in operative position by dotted lines. Fig. 3 is a transverse sectional view through the head rail and head rail bar supporting clip, taken on the line 3—3 of Fig. 1. Fig. 4 is a detail view of one of the rollers at the upper end of the lazy tongs. Fig. 5 is a detail view of the track engaging rollers at the lower end of the lazy tongs. Fig. 6 is an enlarged detail view of one of the track supporting clips used in connection with an iron bed. Fig. 7 is a detail perspective view of a track

supporting clip adapted to be used in connection with wooden beds.

Corresponding and like parts are referred to in the following description and indicated in all the views of the drawing by the same reference characters.

Referring to the drawings, the numerals 1 designate the side rails of an ordinary iron bedstead A, and 2 and 3 the head rail and foot rail, respectively, all of said parts being of the usual and conventional construction. The bed springs 4 may rest upon the slats 5 and be supported in the usual manner by the side rails 1.

Arranged under each side of the bed springs 4 is a longitudinally extending elevator bar 6, said bars preferably being substantially triangular in cross section and having flat upper faces which engage the slats 5 and sharp lower faces. The extremities of the elevator bars 6 may be bent downwardly at 6<sup>a</sup>, and extensions 7 are adjustably mounted upon the ends of the elevator bars. These extensions 7 terminate in upwardly projecting fingers 7<sup>a</sup> adapted to engage the ends of the bed springs 4 and prevent longitudinal displacement thereof, and clamping screws 8 which pass through slots 7<sup>b</sup> in the extensions provide a means for locking the extensions in an adjusted position.

Arranged under each of the elevator bars 6 is a horizontal track 9 which is shown as offset inwardly from the side rail 1 and arranged at a lower elevation than the same. The extremities of the horizontal tracks 9 are bent upwardly at 9<sup>a</sup> and terminate in hooks 10 adapted to engage the head and foot rails 2 and 3, respectively. The horizontal tracks 9 are also connected at points adjacent their ends to the side rails 1 by substantially Z shaped brackets 11, the upper ends of the brackets 11 being hooked at 11<sup>a</sup> to engage the side rail 1, while the lower ends thereof are hooked at 11<sup>b</sup> to engage the track 9, the hooked portions 11<sup>b</sup> being provided with set screws 12 which enable the horizontal tracks 9 to be securely gripped.

The end portions of the elevator bars 6 and horizontal tracks 9 on opposite sides of the bed are connected by the lazy tongs 13. The upper ends of the said lazy tongs are provided with grooved rollers 14 adapted to engage the lower faces of the elevator bars 6. One of the lower ends of

each of the lazy tongs 13 is pivotally connected at 15 to the horizontal track 9, while the opposite end thereof is provided with a roller 16 adapted to travel upon the track.

5 Those of the lower ends of the lazy tongs which are provided with the rollers 16 are also extended downwardly at 13<sup>a</sup> and connected to the operating cables 17. One of these cables 17 is arranged upon each side of the bed, one end thereof being connected to the lazy tong extension 13<sup>a</sup> at the foot of the bed and then carried around a pulley 18 at the foot of the bed. After passing around the pulley 18 the cable is carried forwardly and connected to the lazy tong extension 13<sup>a</sup> at the head of the bed before passing around a pulley 19 at the head of the bed and being carried laterally to a winding reel 20. The lazy tongs normally permit the bed springs to drop into proper position upon the bed by the action of gravity, although when the operating cables 17 are wound upon the reel 20 the extensions 13<sup>a</sup> are moved in such a manner as to expand the lazy tongs and cause the elevator bars 6 to be moved vertically upward, carrying the bed springs and mattress with them.

Fitted upon the intermediate portion of the head rail 2 is a bar 21 which is provided at the ends thereof with suitable brackets 22 within which the pulleys 19 are journaled, and has a substantially rectangular bearing frame 23 rigidly secured to the middle portion thereof by means of braces 24.

35 A wooden strip 25 having substantially the same length as the iron bar 21 may be fitted within the angular recesses of the head rail 2, and U-shaped clamps 26 are provided for securing the bar 21 and strip 25 in position. One end of each of the U-shaped clamps 26 terminates in a sharp prong 26<sup>a</sup> adapted to bite into the wooden strip 25, while the opposite arm thereof is provided with a clamping screw 27 adapted to be tightened against the head rail 2 to lock the parts in operative position. The ends of the frame 23 are provided with bearings within which an operating shaft 28 is journaled, said shaft also passing through bearings 29 upon the bar 21 and having a suitable operating handle 30 applied to the extremity thereof. The reel 20 is applied to the shaft 28 so as to rotate within the frame 23, and comprises a pair of intersecting frames 20<sup>a</sup> projecting radially from the shaft and adapted to have the operating cables 17 wound upon the same. The extremities of the said cables 17 are provided with hook members 31 adapted to detachably engage eyes 32 upon the shaft so that one of the cables can be disconnected from the shaft when it is merely desired to elevate one side of the bed springs and tilt the same for the purpose of turning the mattress.

65 A ratchet wheel 33 is applied to the oper-

ating shaft 28 between the bar 21 and the bearing frame 23, and a pawl 34 is mounted upon the bar 21 for engagement with the ratchet wheel to lock the same against backward rotation. With this construction it will be obvious that by manipulating the handle 30 and rotating the shaft 28 the cables 17 can be wound upon the reel 20 so as to expand the lazy tongs 13 and cause the elevator bars 6 to be raised, carrying the springs and mattress with them. Access can then be had to the portion of the floor under the bed for cleaning the same, and there is no necessity to move the bed each time the floor is swept. In order to again lower the springs and mattress into position the pawl 34 is disengaged from the ratchet 33 and the springs permitted to drop easily into position by the action of gravity.

The pulleys 18 at the foot end of the bed may be journaled within brackets 35 projecting from a transverse bar 36 having hook members 37 at the ends thereof adapted to fit over the foot rail 3. If desired, these hook members 37 may be provided with set screws 38 for clamping the bar rigidly in position. The parts of the elevator are all constructed so that it can be applied as an attachment to an ordinary bed, and the device is concealed when not in use. It may also be mentioned that the reel and operating handle may be placed at either the head or the foot of the bed, as may be found most convenient, since this is immaterial so far as the invention is concerned.

When the device is applied to wooden beds, the brackets 39, shown by Fig. 7, may be applied to the side pieces to provide a support upon which the elevator can be mounted. These brackets are provided with channel portions 39<sup>a</sup> adapted to engage the wooden side bars, and strips 39<sup>b</sup> which can be used in substantially the same manner as the rails of iron beds.

Having thus described the invention, what I claim as new and desire to secure by Letters Patent, is:—

1. A bed spring elevator, including a bedstead, an elevator bar adapted to extend under the bed springs, a track arranged under the elevator bar and mounted upon the bedstead, lazy tongs interposed between the corresponding ends of the track and elevator bar and operatively engaging the same, the lower ends of the lazy tongs being provided with extensions, pulleys at the ends of the bedstead, an operating cable engaging the extensions of the lazy tongs and passing around the pulleys, and means for winding up the cable to expand the lazy tongs and raise the elevator bar.

2. A bed spring elevator, including a bedstead, an elevator bar adapted to extend under one side of the bed springs, a track arranged under the elevator bar and detach-

ably mounted upon the bedstead, lazy tongs interposed between the corresponding ends of the elevator bar and track and operatively engaging the same, the lower ends of the lazy tongs being provided with extensions, transverse bars fitted to the head and foot rails of the bedstead, pulleys carried by the transverse bars, an operating cable connected to the extensions of the lazy tongs and passing around the pulleys, and a reel carried by one of the cross bars upon which the cable is adapted to be wound to expand the lazy tongs and lift the elevator bar.

3. A bed spring elevator, including a bedstead, elevator bars adapted to extend under the bed springs at opposite sides thereof, tracks arranged under the elevator bars and mounted upon opposite sides of the bedstead, lazy tongs interposed between the ends of the corresponding elevator bars and tracks and operatively engaging the same, the lower ends of the lazy tongs being pro-

vided with extensions, a cross bar applied to one end of the bedstead and provided toward opposite ends thereof with pulleys, a cross bar applied to the opposite end of the bedstead and provided toward opposite ends thereof with pulleys, a bearing frame mounted upon the intermediate portion of the second cross bar, an operating shaft journaled upon the bearing frame, a reel carried by the operating shaft, and cables passing around the pulleys and connecting the extensions of the lazy tongs to the reel so that by winding the cables upon the reel the lazy tongs can be expanded and the elevator bars raised.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

ALFRED RYDER.

Witnesses:

E. B. EDMONDSON,  
DUKE DAVIS.

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