No. 676,804. Patented June 18, 1901.

J. M. VAIL.

CASKET LOWERING DEVICE.

(No Model.) (Application filed Oct. 29, 1900.)

2 Sheets—Sheet 1.

Fig. 1.

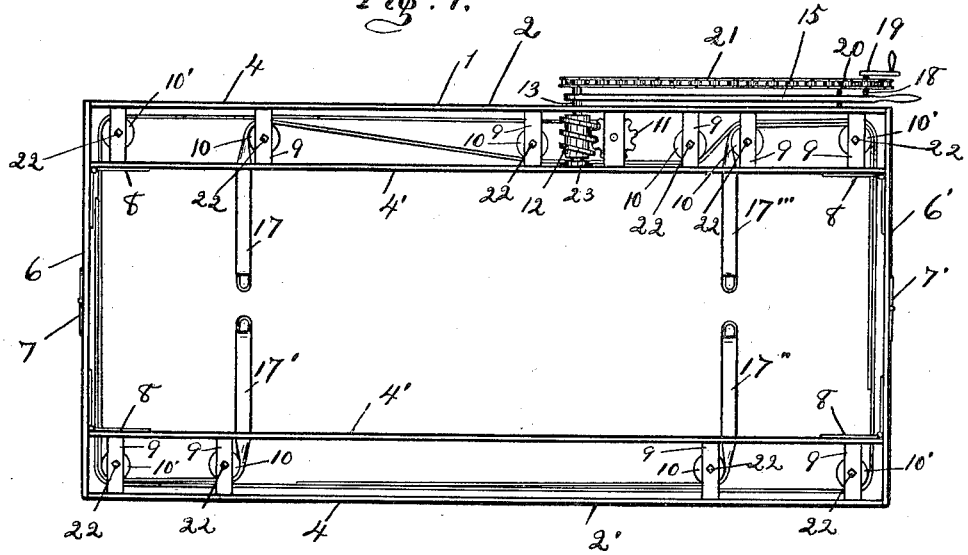
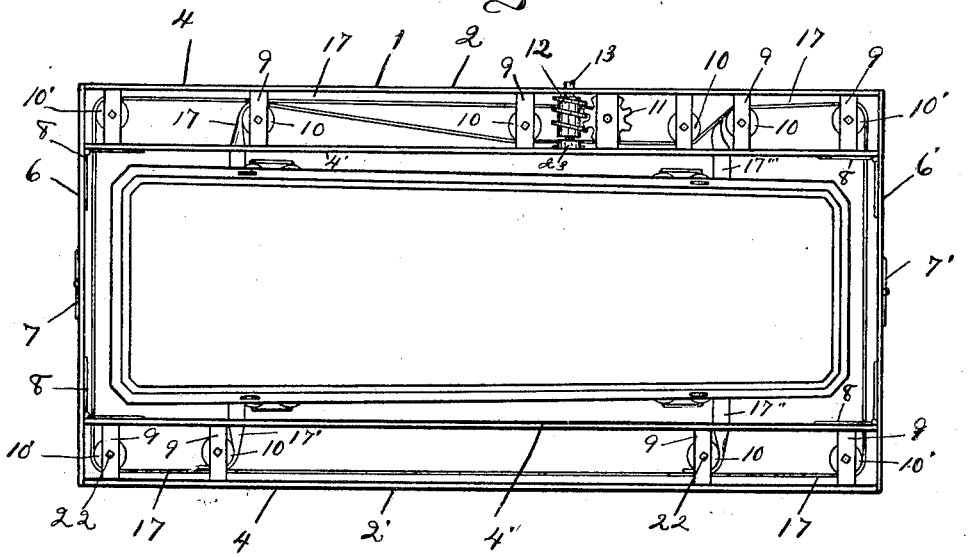


Fig. 2.



WITNESSES:

Adelaide Kearns.

Alice Kearns.

Joseph M. Vail INVENTOR

BY Chapin & Denny

His ATTORNEYS.

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Fig. 3.

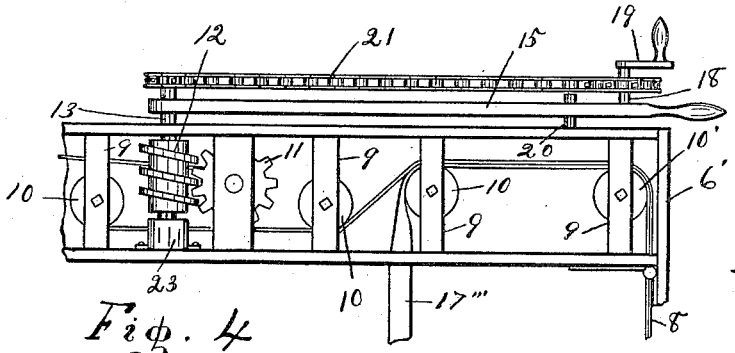


Fig. 4

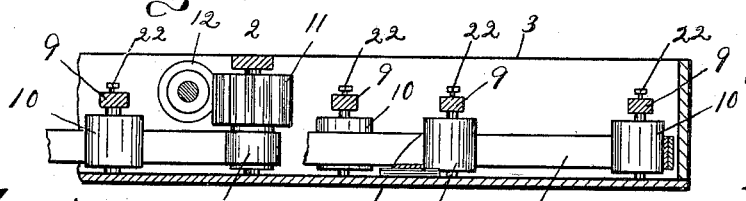


Fig. 5.

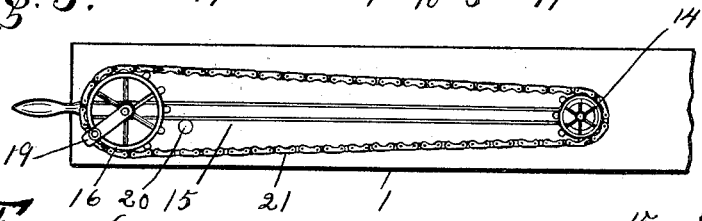


Fig. 6.

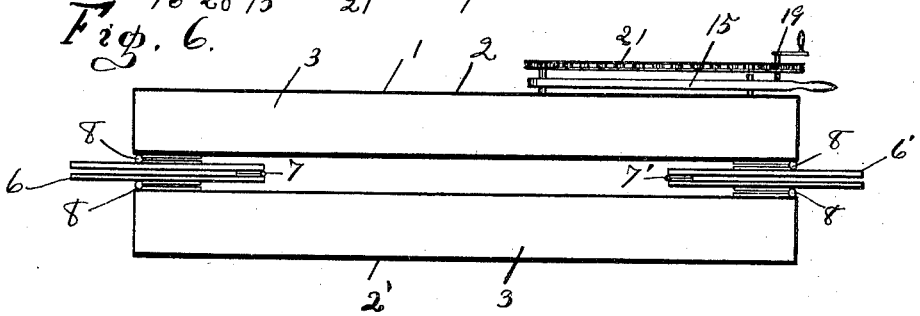


Fig. 7.

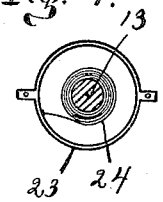
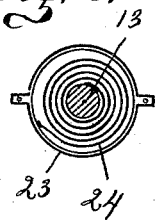


Fig. 8.



WITNESSES:

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Alice Kearns.

Joseph M. Vail INVENTOR

BY Chapin & Denny

His ATTORNEYS.

UNITED STATES PATENT OFFICE.

JOSEPH M. VAIL, OF OSSIAN, INDIANA, ASSIGNOR OF ONE-HALF TO JOHN H. HOOVER, OF SAME PLACE.

CASKET-LOWERING DEVICE.

SPECIFICATION forming part of Letters Patent No. 676,804, dated June 18, 1901.

Application filed October 29, 1900. Serial No. 34,702. (No model.)

To all whom it may concern:

Be it known that I, JOSEPH M. VAIL, a citizen of the United States, residing at Ossian, in the county of Wells, in the State of Indiana, have invented certain new and useful Improvements in Casket-Lowering Devices; and I do hereby declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, which form part of this specification.

My invention relates to improvements in a casket-lowering device for safely and conveniently depositing burial-caskets in graves.

The object of my improvements is to provide a suitable lowering device that is inexpensive, simple in construction, and that can be conveniently folded into a compact form for storage and transportation and that in use will avoid accidents at the grave. I attain these objects by the apparatus described in the following specification and illustrated by the accompanying drawings, in which—

Figure 1 is a plan view of the apparatus with the cover to the side boxes removed, and thereby showing the mechanical construction and arrangement of the operating part of the apparatus. Fig. 2 is a detail plan view with the covers of the side boxes removed, thereby showing the relative position of the supporting-straps when the casket has been lowered by the supporting-straps to its final resting-place in the grave. Fig. 3 is a plan detail of Fig. 1, illustrating the mechanism of the gearing apparatus. Fig. 4 is a side view of detail Fig. 3. Fig. 5 is a side view of the sprocket-wheels, operating-crank, and connecting-chain of Fig. 3; and Fig. 6 is a top plan view of the device folded for transportation. Fig. 7 is an end view of a coiled spring adapted to be unwound as the casket is lowered in the grave; and Fig. 8 is a detail end view the same as Fig. 7, illustrating the use of the spring.

Similar reference-numerals indicate like parts throughout the several views.

The device has a rectangular hollow frame 1 of sufficient length and width to be supported upon the soil at the sides and ends of the grave, with a central opening sufficient to permit the casket to be freely lowered through it into the grave. Longitudinally the frame is in two equal sections counterparts of each other and having duplicate mechanical apparatus except the gearing by which the apparatus is operated and which is connected with and operated in one part alone. The sides of the frame form boxes 2 and 2′, having covers 3, sides 4 and 4′, and bottom pieces 5 for inclosing the mechanism. Each of the end pieces 6 and 6′ is in two parts of equal length connected at the adjoining inner ends by hinges 7 and 7′ and to the inner sides of the boxes 2 and 2′ by suitable hinges 8 and adapted to fold longitudinally against each other, as shown in Fig. 6.

Referring to Fig. 1, the numerals 4′ represent the inner sides of the box-frame, having slotted openings for the supporting-straps 17, 17′, 17″, and 17‴.

Within the boxes 2 and 2′ are pulleys 10 and 10′, mounted upon bolts 22, removably secured in the bottom pieces 5 and the cross-pieces 9. Mounted in one of the boxes 2 is a pinion 11, which meshes in a worm gear-wheel 12, mounted upon a horizontal shaft 13. Upon the outer end of the shaft 13 is mounted a sprocket-wheel 14. An adjustable handle-bar 15 is loosely mounted upon the shaft 13 between the sides of the box and the sprocket-wheel 14 and which when in its normal position is supported at the other end by the pin 20. Near the handle end of the bar 15 is revolubly mounted in said bar a shaft 18, having at its outer end a crank-arm 19, and between the crank and the bar 15 is also mounted a a sprocket-wheel 16, connected with the sprocket-wheel 14 by the driving-chain 21. While the shaft 18 is revolubly mounted in the bar 15, and the sprocket-wheel 16 is revolved by turning the shaft 18, it is obvious that this arrangement may be changed without changing the character of my invention. For instance, the supporting-shaft 18 may be rigidly secured in the bar 15 and the sprocket revolubly mounted upon it, with a crank-handle attached to the side of the sprocket-wheel near its periphery. To the shaft of the pinion 11 is attached a strap 17, which is extended past the outer side of the end pulley

of the box 2 at the left-hand side of Fig. 1, and then across the end into the box 2′ and around the outer side of the end pulley, then above the pulley at the outer end of the frame, and then upon the outer side of the pulley 10′ and the inner side of the pulleys adjacent to the pinion, and thence around the outer side of the pulleys 10, and from thence through the adjacent slot of the inner side and terminating as a supporting-strap for the casket. Straps 17′, 17″, and 17‴ are secured to the strap 17 and passing around the pulleys and through the slotted sides terminate as supporting-straps, as shown in Fig. 1. The adjacent inner ends of the supporting-straps may be connected by any suitable means. A hollow cylinder 23 incloses one end of the shaft 13 and is secured by bolts or in any other suitable manner to the side of the box 2, as shown in Fig. 3. Within this cylinder is a coiled spring 24, secured at its outer end to the inner wall of the cylinder and at its inner end to the shaft 13, as shown in Figs. 7 and 8. The spring in normal position is coiled tightly upon shaft 13, as shown in Fig. 7. As the casket is lowered into the grave the tension of the spring aids the operation of the mechanism, and when the casket reaches the bottom of the grave the spring is unwound, as shown in Fig. 8.

The mode of operation is as follows: The frame having been placed over the open grave and the supporting-straps connected and the casket placed upon them, the operator raises the bar 15 by its handle to a convenient height and turning the crank the strap 17 is unwound from the shaft 12, and the casket by its gravity as the supporting-straps are loosened is lowered into the grave.

Having thus described my invention, what I claim is as follows:

1. In an apparatus of the character described, the rectangular frame in two sections, adapted to fold together; the operating-gear comprising a sprocket-wheel mounted upon an adjustable bar 15, and connected by a driving-chain with another sprocket-wheel mounted upon a revoluble shaft 13, having a worm-gear 12 located within one of said sections, a pinion 11 adapted to mesh with the said worm-gear, a supporting-strap 17 secured to the shaft of said pinion and adapted to wind and unwind upon the said shaft when the same is operated, and the supporting-straps 17′, 17″ and 17‴ arranged as described and secured to said strap 17 for the purpose stated.

2. In an apparatus of the character described, the adjustable handle-bar 15, mounted upon the shaft 13 and the shaft of the driving sprocket-wheel 16 mounted upon the adjustable shaft 15 in combination with the gearing-pulleys and supporting-strap as arranged and described.

Signed by me at Fort Wayne, Allen county, State of Indiana, this 23d day of October, A. D. 1900.

JOSEPH M. VAIL.

Witnesses:
ADELAIDE KEARNS,
AUGUSTA VIBERG.