(No Model.) 2 Sheets—Sheet 1.

J. BURNS.

APPARATUS FOR LOWERING CASKETS INTO GRAVES.

No. 305,736. Patented Sept. 30, 1884.

Fig. 1.

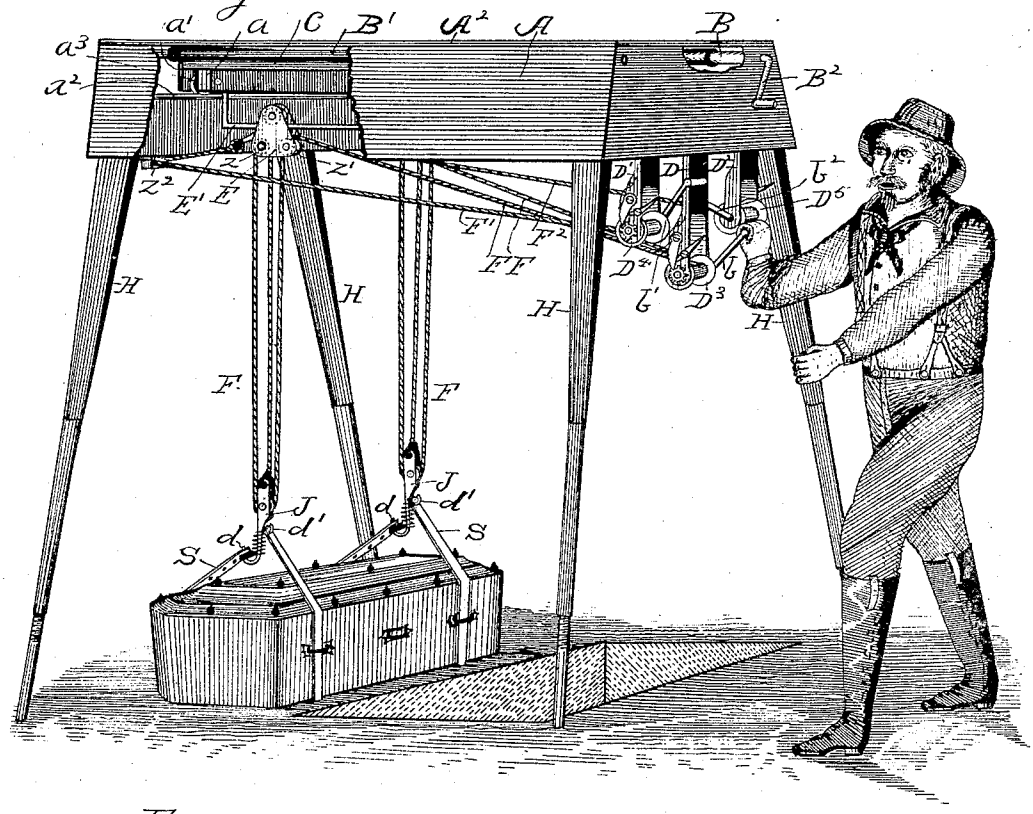


Fig. 2.

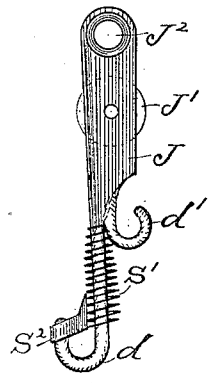


Fig. 3.

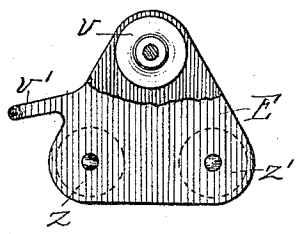
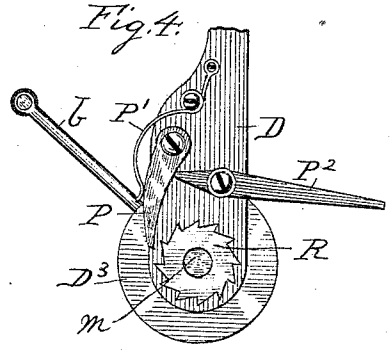


Fig. 4.



Witnesses.

Thos. H. Hutchins.

Wm. J. Hutchins.

Inventor.

James Burns.

N. PETERS. Photo-Lithographer, Washington, D. C.

(No Model.) 2 Sheets—Sheet 2.

J. BURNS.

APPARATUS FOR LOWERING CASKETS INTO GRAVES.

No. 305,736. Patented Sept. 30, 1884.

Fig. 5.

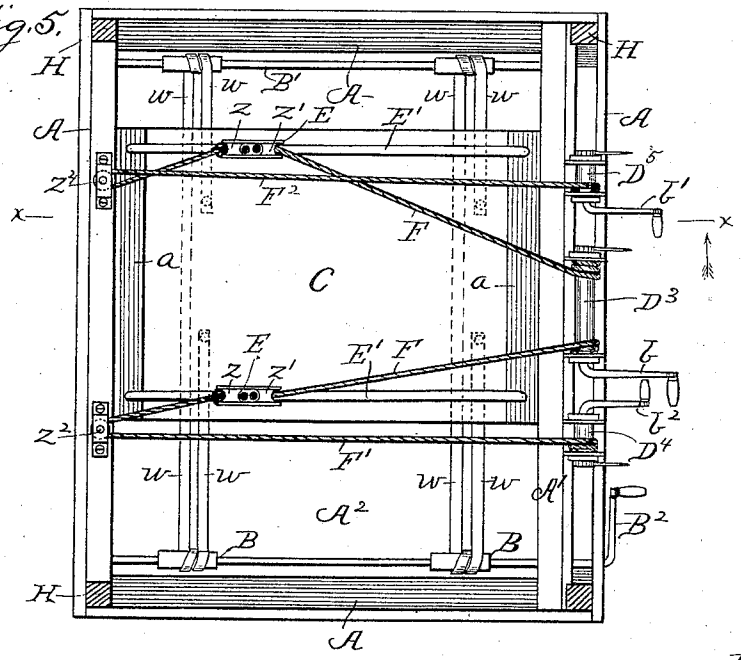


Fig. 6.

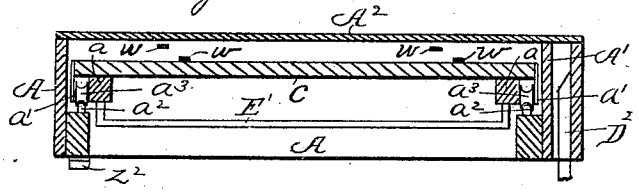
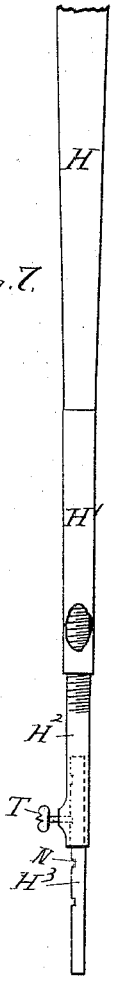


Fig. 7.



Witnesses,
Thos H. Hutchins,
Wm J. Hutchins.

Inventor.
James Burns.

N. PETERS. Photo-Lithographer, Washington, D. C.

UNITED STATES PATENT OFFICE.

JAMES BURNS, OF CHICAGO, ILLINOIS.

APPARATUS FOR LOWERING CASKETS INTO GRAVES.

SPECIFICATION forming part of Letters Patent No. 305,736, dated September 30, 1884.

Application filed June 30, 1884. (No model.)

To all whom it may concern:

Be it known that I, JAMES BURNS, a citizen of the United States of America, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in an Apparatus for Lowering Caskets into Graves, of which the following is a specification, reference being had therein to the accompanying drawings.

Figure 1 is a perspective view; Fig. 2, a side view of a combined hook and pulley-block; Fig. 3, a side view of a pulley-block having a portion broken away; Fig. 4, a side view of the pawl-and-ratchet mechanism to regulate the operation of the winding-drum; Fig. 5, a bottom plan view; Fig. 6, a cross-section of Fig. 5 on line *x*, looking in the direction of the arrow; and Fig. 7, a side elevation of one of the legs.

This invention relates to certain new and useful improvements in an apparatus for lowing burial-caskets into graves; and it consists in a rectangular frame arranged to be supported over a grave in such manner that its attachments may be readily applied to a burial-casket as it stands at one side of the grave, to raise the casket from the ground, swing it over the grave, and lower it into the grave by the operator, and as the casket is deposited in the bottom of the grave the attachments become automatically disengaged from the casket and withdrawn by the operator without entering or disturbing the grave.

Referring to the drawings, A represents a frame, rectangular in form, having a cover, A^2, and supported by the adjustable legs H.

C is a carriage supported within the frame A on the side tracks, a^2, by means of the traveling wheels a^3, between the flanges *a* and *a'*, and supports the suspended tracks E' by the flanges *a*. This carriage C is arranged to be moved endwise in either direction by means of the belts *w w*, which pass around the rollers B and B', respectively, and their ends connected with said carriage. The roller-shaft B is provided with a crank, B^2, at one end, and when it is desired by the operator to move said carriage he turns said crank, which in turn starts the belts *w w* in motion and moves said carriage as desired, as shown in Fig. 5.

E E are pulley-blocks suspended from the suspending-tracks E' on the traveling wheels V, and are connected with the movable pulleys J J by the hoisting-ropes F F in the following manner: The ropes F first attach to the movable pulleys J J through the eyes J^2, Fig. 2. They then pass up over wheel *z*, thence down and under wheels J', thence up and over wheels *z'*, each rope connecting each set of pulleys, respectively, and then each wind on drum D^3 in frame D. The movable pulleys J J have attached to their lower end the hooks *d* and *d'*, into which the straps S are hooked, as shown in Fig. 1. The hook *d* is provided with a slide, S^2, so arranged as to be held so that its upper surface will be about on the same plane of the nose of the hook by means of the coil-spring S' when the hook is not in actual use, as shown in Fig. 2; but when the straps S are applied to the casket and attached to the hooks *d* and *d'*, and the weight of the casket comes on the said straps, the slide S^2 on hook *d* is depressed, leaving the nose or point of said hook to protrude far enough to hold the strap, as shown in Fig. 1. As the straps S are released from the weight of the casket, the spring S' will force the straps S off the hooks, so that they may be withdrawn from under the casket. The rope F' attaches to the pulley E by means of the loop *v'*, Fig. 3. Thence it passes to and over the stationary pulley z^2, thence to the winding-drum D^4. Rope F^2 attaches to a pulley, E, in the same manner as rope F', and passes to and over the stationary pulley z^4, thence to the winding-drum D^5. These said ropes and drums and their operating mechanism, which will be hereinafter explained, are for the purpose of adjusting the pulleys E on the suspending-tracks E', and for holding them at any desired place thereon. The drums D^3, D^4, and D^5 are supported, respectively, by the hanger-frames D, D', and D^2, and are rotated by the cranks *b*, *b'*, and b^2, respectively, and are prevented from turning the wrong way by a pawl-and-ratchet system, as shown in Fig. 4. Each being the same, it is not necessary to show but one in detail. The drum D^3 is rigidly attached to shaft *m* within the frame D. The said shaft passes out through the frame D, and is provided with a winding-crank, *b*, at one end and a ratchet-wheel, R, at the other, both rigidly attached to said shaft.

Immediately above the ratchet-wheel R is a

pawl, P, pivoted at its upper end to the frame D, and held engaged with ratchet-wheel R by means of the spring P'.

At one side of the pawl P is a lever, P^2, fulcrumed near one end to the frame D in such manner that its short end may be brought to bear against the pawl P, to hold it disengaged from the ratchet-wheel R, as shown in Fig. 4, for the purpose of unwinding the accumulated rope from the drums when desired, or to loosen the rope on the drums D^4 and D^5, to adjust the pulley-blocks E E, to adjust the casket below.

When it is desired to operate this apparatus to lower a casket into a grave, it is placed over the grave so that the center of the frame A will be on a line at one side of the grave, to permit the frame A to extend over a casket placed on the ground at the side of the grave, as shown in Fig. 1. When this is done, the cranks *b* and b^2 are turned to wind the ropes F' and F^2 on the drums D^4 and D^5, to pull the pulley-blocks E E to one side of frame A over the casket, as shown in said figure, when the straps S S are applied to the casket, and the pawl disengaged from the ratchet-wheel on drum-shaft D^3, so that said drum may permit the ropes F F to unwind to lower the movable pulley-blocks J J, so that the straps S S may be attached to their hooks *d d d' d'*, when the casket is ready to be raised from the ground, which is done by winding up the ropes F F on the drum D^3. After the casket has been raised a short distance from the ground it is swung over the grave by disengaging the pawls from the ratchet-wheels on the drum-shafts D^4 and D^5, so that the said drums may unwind to loosen the ropes F' and F^2, to permit the pulley-blocks E E to move along on the track E' to bring the casket directly over the grave, which is caused by the tension on ropes F F as the ropes F' and F^2 are loosened. When the casket has reached such position, the pawls are again engaged with their ratchet-wheels, to hold the drums from unwinding more rope. The casket is then lowered into the grave by again disengaging the pawl from ratchet-wheel on drum-shaft D^3, permitting said drum to be turned backward to pay out its ropes F F.

The drums D^4 and D^5 are each capable of being operated independently to adjust either end of the casket, should it not be on a line parallel with the box in the grave; and, also, should the casket require adjustment endwise in either direction to properly enter the box in the grave, it may be done by turning the crank B^2, which will, by means of the roller-shafts B and B' and belts *w w*, move the carriage C as desired. When the casket has reached the bottom of the grave, its weight will of course be released from the apparatus and the straps S S. The springs S' will cause the slides S^2 to automatically disengage the said straps from the hooks *d d*, so that the operator may wind up the ropes F F on drum D^3 and remove the apparatus from the grave.

The legs H are constructed to be adjustable as to length, as shown in Fig. 7, for the purpose of adjusting the device to the configuration of the ground, and to regulate its height. The upper portion of the legs H are intended to be constructed of wood, having a tubular joint, H', telescopically attached to its lower end. The lower end of this joint H' is screw-threaded in its inner surface to receive the screw-threaded joint H^2. (Shown in Fig. 7.) This joint H^2 is also tubular, and arranged to receive the joint H^3 and hold said joint so that it may slide in or out and be held at any place by thumb-screw T and notches N. When but slight lengthening or shortening of the leg is required, the joint H^2 may be turned in either direction to screw it in or out of joint H'. By means of thus forming the legs into joints, as shown, they may be readily adjusted as to length, for the purpose stated.

The partition A' (shown in Figs. 5 and 6) is for the purpose of providing means to hold one side of the carriage C, so as not to interfere with the winding-frames and their operating mechanism; hence it will be seen that by this apparatus a burial-casket may be raised from the ground and placed in a grave with perfect ease and safety by a single operator, while in position to observe any slight movement of the casket, and without having to place the casket on skids over the open grave, and the apparatus may be set over a grave where the ground is rough or uneven, as well as where it is level, and still operate as shown.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is as follows, to wit:

1. In the apparatus described for lowering burial-caskets into graves, the carriage C, having the suspending-track E' fixed thereto and supported within the frame A, as shown, and arranged to carry the pulley-blocks E E and J J and ropes F F, in the manner substantially as set forth.

2. In the apparatus described for lowering burial-caskets into graves, the winding-drum D^3, having the crank *b* and ratchet-wheel R connected therewith, and supported within the frame D, having the spring-pawl P and lever P^2, and adapted to wind or unwind the ropes F F and operate the pulleys E E and J J, to raise or lower a casket by means of the hooks *d d'* and straps S S, in the manner substantially as set forth.

3. In the apparatus described for lowering burial-caskets into graves, the winding-drums D^4 and D^5, having the pawl-and-ratchet mechanism shown, adapted to be rotated to wind or unwind the ropes F' F^2, to adjust and hold adjusted the pulley-blocks E E, in the manner substantially as set forth.

4. In the apparatus described for lowering burial-caskets into graves, the legs H, adapted to be adjustable as to length, as shown, to hold frame A in proper position by means of the screw-threaded joints H' and H^2, notched joint H^3, and thumb-screw T, as set forth.

5. In the apparatus described for lowering

burial-caskets into graves, the carriage C, adapted to be moved in either direction on the track a^2 by means of the belts *w w*, roller-shafts B and B′, and crank B^2, as set forth.

6. The combination of the pulley-block J, having the hooks *d* and *d′*, slide S^2, and springs S′, adapted to operate as and for the purpose set forth.

7. In combination with the frame A, having the carriage C, and hoisting and adjusting pulleys, ropes, and drums, as described, the legs H, having the joints H′, H^2, and H^3 and thumb-screw T, as shown, for the purpose specified.

8. The combination of the frame A and adjustable carriage C, having the suspending-track E′, with the pulleys E E, pulleys J J, having the hooks *d d′*, hoisting-ropes F F, adjustment-ropes F′ and F^2, pulleys z^2 and z^1, winding-drums D^3, D^4, and D^5 and their operating mechanisms, and straps S S, as and for the purpose set forth.

JAMES BURNS.

Witnesses:
J. B. BURNS,
B. VAN BUREN.