(No Model.)

C. E. & H. C. REICHE.

LOWERING COFFINS.

No. 323,531. Patented Aug. 4, 1885.

Fig. 1.

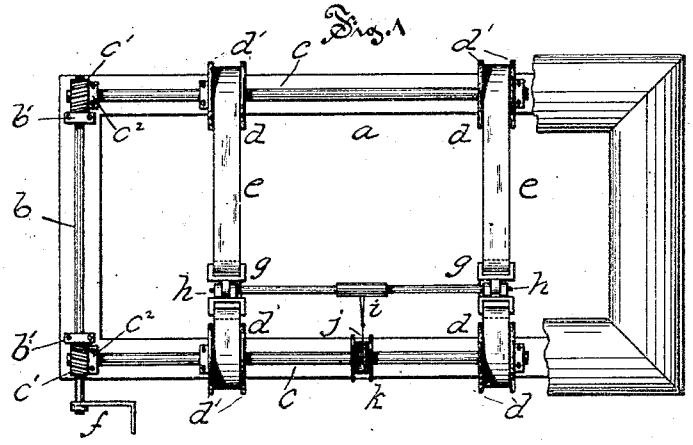


Fig. 2.

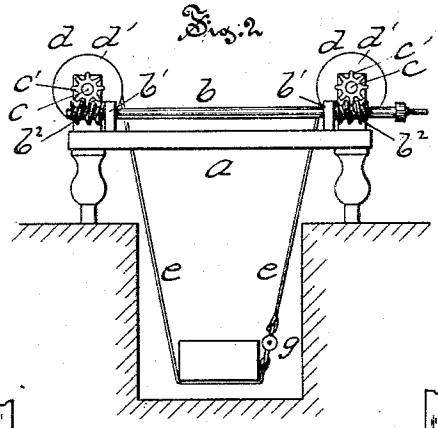


Fig. 3.

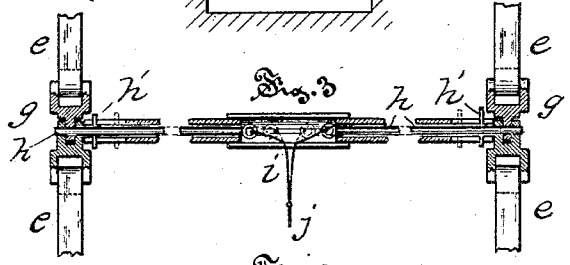
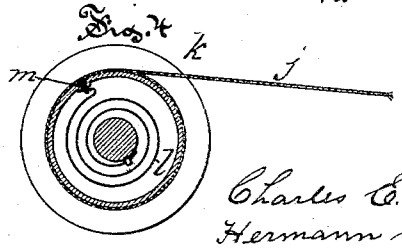


Fig. 4.



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UNITED STATES PATENT OFFICE.

CHARLES E. REICHE AND HERMANN C. REICHE, OF HARTFORD, CONN.

LOWERING COFFINS.

SPECIFICATION forming part of Letters Patent No. 323,531, dated August 4, 1885.

Application filed October 1, 1884. (No model.)

To all whom it may concern:

Be it known that we, CHARLES E. REICHE and HERMANN C. REICHE, both of the city and county of Hartford, and State of Connecticut, have invented certain new and useful Improvements in Devices for Lowering Coffins; and we do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, and the letters of reference marked thereon, where—

Figure 1 is a plan view of the device embodying our invention. Fig. 2 is an end view of the same, showing also section of a grave and method of using the device in lowering a coffin into the grave. Fig. 3 is a detail view in longitudinal section of the band-releasing mechanism. Fig. 4 is a detail cross-sectional view of the device for automatically operating the same.

Our invention is intended to remove the difficulty now experienced in lowering coffins and the like receptacles for dead bodies into graves. The common method is to lower the coffin by means of bands or straps paid out through the hands of the bearers, and these bands are then slipped from under the coffin as soon as it has reached the bottom of the grave. This method severely taxes the strength and skill of those who are called upon to do the work; and our invention removes all the difficulty and danger of accident attending the work.

It consists in a portable frame bearing means for taking up or paying out bands or ropes simultaneously from opposite sides of the frame and in means for automatically releasing the bands, as more particularly hereinafter described.

In the accompanying drawings, the letter *a* denotes a frame, preferably oblong in outline, and made of any convenient material, as wood or iron; *b*, a worm-shaft supported in bearings *b'* that are fast to the cross-bar at one end of the frame, and near each end of the shaft it bears worms b^2 that are, respectively, in mesh with the worm-gears *c'* that are fast to each of the pulley-shafts *c*. These latter shafts are supported in bearings c^2 fast to the longer sides of the frame, and are substantially parallel to each other. They bear the pulleys or drums *d*, having the side flanges or guards, *d'*, and on them the straps or bands *e* are wound. The pulleys are arranged in pairs opposite each other on the two shafts which rotate in opposite directions, so that the bands, of which there may be two or more, are unwound from the pulleys or wound upon them as the worm-shaft is rotated, as by means of the crank *f*. The opposite end of each strap is secured to a pulley on opposite sides of the frame; but at a certain point in its length a coupling device, *g*, is inserted, and the parts of this coupling that intermesh are held together by a bolt, *h*, that is thrust widthwise through the parts. A hollow rod joins the straps from coupling to coupling on one side of the frame, and the bolts *h* are arranged to slide in this rod, and each may be moved by means of the stud *h'* that projects through a slot in the rod or tube. A cord or wire, *i*, is fast to the inner end of each bolt, and is led through the side of the rod near its center, and is fastened to a cord, *j*, that is wound upon a drum or pulley, *k*, that is attached to the shaft on that side of the frame. By pulling upon this cord *j* the bolts are slipped back together, and the bands or straps separated at the couplings.

The operation of our device is as follows: The straps being each coupled together and stretched across the frame that is placed so that its open center is just over a grave, a coffin is placed upon the straps that by the rotation of the worm-shaft *b* are unwound from the pulleys and the coffin lowered to place. A pull upon cord *j* then draws the bolts and uncouples each strap, so that it may be withdrawn from under the coffin.

The drum *k* is made up of a barrel that contains a coiled spring, *l*, and the drum turns freely on the shaft, except that one end of the spring *l* is fastened to the shaft and the other end is upturned, so as to take against a pin or lug, *m*, on the inside of the rim of the barrel in such manner that the spring, after being wound up to a certain tension, will slip off the lug. This partly uncoils the spring and allows the drum to turn until the lug again catches and holds the end of the spring.

When the straps *e* are strained by the weight

placed upon them, the bolts *h* are firmly held from sliding out of the couplings by the shearing strain upon them; but as soon as the heavy object (as a coffin) strikes the bottom of the grave the strain is released and the recoil of the spring in drum *k* that has been coiled up by the pull upon the cord *j* as the straps were unwound is now of sufficient strength to pull the bolts and uncouple the straps.

The frame may be supported on legs at each corner or at other points where needed, and the mechanism may also be protected by a cover that may be ornamented to any desired extent.

We claim as our invention—

1. In combination, a portable frame bearing the lowering mechanism, whereby straps or bands are simultaneously wound up or unwound at their opposite ends from opposite sides of the frame, each strap bearing a coupling device, *g*, the hollow rod bearing bolts *h*, the cord *i* fast to the bolts, and to a cord, *j*, wound upon a drum or pulley, *k*, attached to one of the lowering-shafts, all substantially as described.

2. In combination, a portable frame, *a*, the rotary shafts *c*, connected by gears with the worm-shaft *b*, the pulleys *d d'*, fast to the shafts bearing the straps or bands *e*, the coupling device *g*, the rod extending between the straps and bearing bolts *h*, the latter connected by cords *i j* with a drum or pulley, *k*, rotarily connected to shaft *c* and bearing a spring, *l*, that holds the drum with a frictional grasp, all substantially as described.

3. In combination with a portable frame, a lowering mechanism consisting of the rotary shafts connected by gears, bands *e* wound upon pulleys on the shafts, an automatic coupling device consisting of the bolt-bearing bar, the coupling, and the cords connecting the bolt with a drum held against rotation on one of the shafts by the frictional grasp of the spring *l*, all substantially as described.

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