No. 869,800. PATENTED OCT. 29, 1907.

R. H. PASCOE & F. L. BERGEN.

ELEVATOR.

APPLICATION FILED FEB. 1, 1907.

Fig. 1.

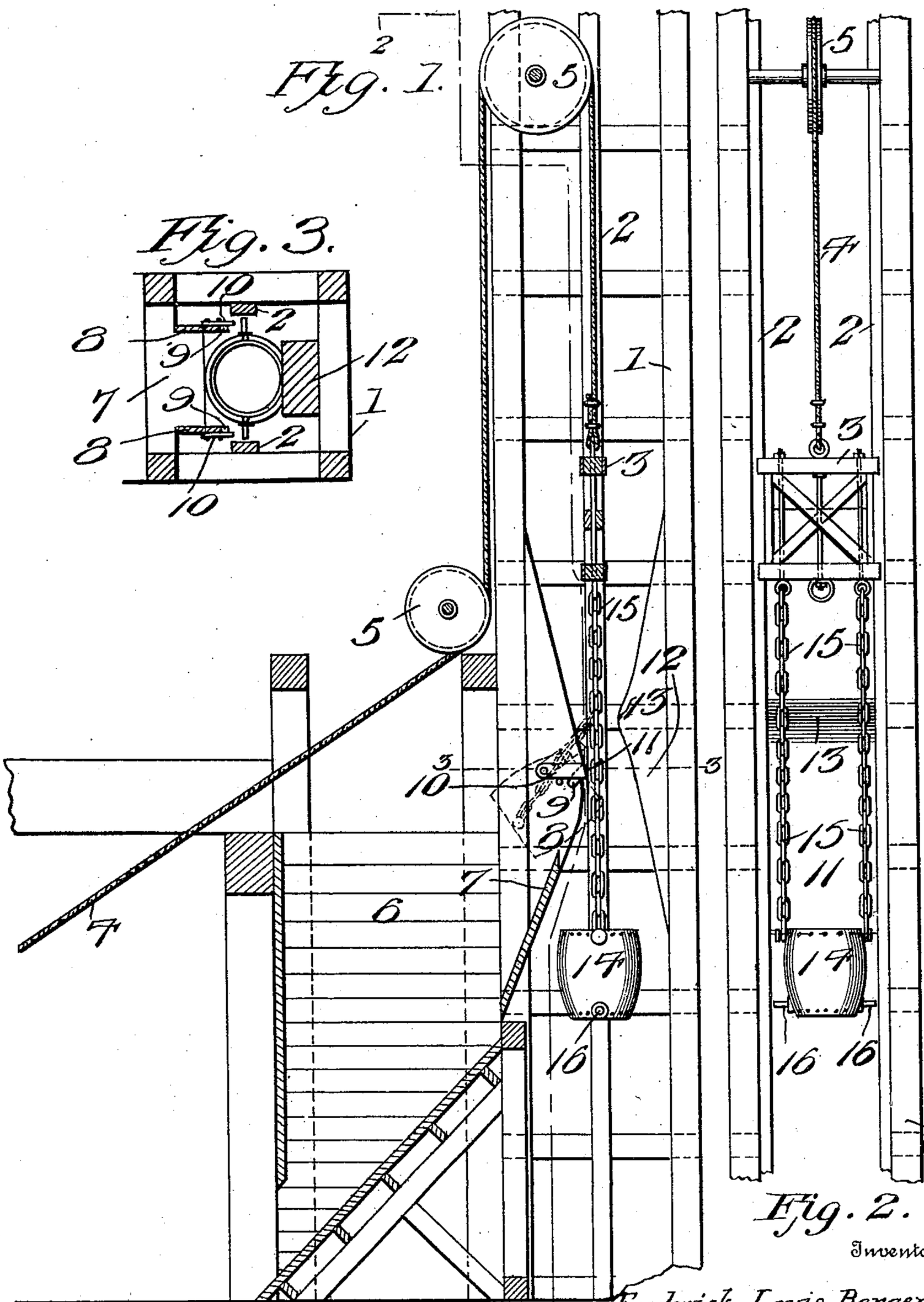

Fig. 3.

Fig. 2.

Witnesses

Frank B. Hoffman.

Wm. Bagger

Inventors

Frederick Louis Bergen,

Richard Harvey Pascoe.

By Victor J. Evans

Attorney

UNITED STATES PATENT OFFICE.

RICHARD HARVEY PASCOE AND FREDERICK BERGEN, OF MACE, IDAHO.

ELEVATOR.

No. 869,800. Specification of Letters Patent. Patented Oct. 29, 1907.

Application filed February 1, 1907. Serial No. 355,263.

To all whom it may concern:

Be it known that we, RICHARD HARVEY PASCOE and FREDERICK LOUIS BERGEN, citizens of the United States, residing at Mace, in the county of Shoshone and State of Idaho, have invented new and useful Improvements in Elevators, of which the following is a specification.

This invention relates to hoisting apparatus employed for the purpose of elevating ore, rock and similar material from mines and any other localities; and it has for its object to provide means whereby the bucket may be conveniently tilted or dumped automatically when it reaches the desired elevation.

Other objects of the invention are to simplify and improve the construction and operation of this class of devices.

With these and other ends in view which will readily appear as the nature of the invention is better understood, the same consists in the improved construction and novel arrangement and combination of parts which will be hereinafter fully described and particularly pointed out in the claims.

In the accompanying drawings has been illustrated a simple and preferred form of the invention and in said drawings:

Figure 1 is a sectional elevation of the hoisting apparatus embodying the invention. Fig. 2 is a vertical sectional view taken on the plane indicated by the line 2—2 of Fig. 1. Fig. 3 is a horizontal sectional view taken on the plane indicated by the line 3—3 in Fig. 1.

Corresponding parts in the figures are denoted by like characters of reference.

The main framework 1 of the improved hoisting apparatus is provided with vertical guides 2, 2 for a crosshead 3 which is connected with the flexible hoisting element 4, the latter being suitably guided over pulleys 5, 5 to operating means such as a hoisting drum which latter however is not shown as it does not constitute a part of the invention.

6 is the dumping chute having an apron 7 which is inclined in the direction of the guides 2, 2 of the hoisting frame.

Upon the one wall of the framework 1, above the apron 7 of the chute, there are secured skids 8 having notches 9 and provided with a pivotally supported yoke 10 constituting a trigger that is adapted to extend over the notches or recesses 9 and is provided with an inclined face 11. Upon the opposite wall of the framework, there is secured a deflector 12 having a hump 13 which extends in the direction of the skids 8, said hump being located a suitable distance from the notches in said skids. The hoisting bucket 14 is connected with the cross-head 3 by chains 15 or other suitable connecting means which will admit of the bucket being tilted; said bucket is provided near its lower end with laterally extending trunnions 16.

When the loaded bucket is elevated and its upper edge comes in contact with the hump 13 of the deflector 12, said hump will tilt the top of the bucket in the direction of the discharge chute. At about the same time, the trunnions 16 of the bucket will engage the projecting end of the yoke or trigger 10, and will tilt said trigger to the position indicated by dotted lines in Fig. 1 of the drawings, care being taken not to elevate the bucket until the trunnions 16 pass the trigger. When the parts are in this position, and the hoisting rope is slacked, the trunnions 16 will settle into the notches 9, and by continuing to slack the hoisting rope the bucket will be tilted to the discharging position shown by dotted lines in Fig. 1, the tilting being obviously effected by gravitation, the bucket having been thrown out of plumb by contact with the deflector 12. As the load is discharged, the bucket is hoisted until the trunnions 16 slip past the trigger 10 when the latter will gravitate to a position where it obstructs the recesses 9. When the bucket is lowered, the trunnions 16 will be guided over the inclined face 11 of the trigger without entering the recesses 9.

This device, as will be seen, is extremely simple and may be readily installed at a small expense. It operates automatically to tilt the bucket in order to discharge its contents, and consequently serves to save time and attention.

Having thus described the invention what is claimed is:

1. In a hoisting apparatus a frame having a discharge chute, skids located adjacent to the chute and having recesses, a yoke pivoted upon the skids and constituting a trigger, said yoke having an inclined face that projects beyond the skids, a hoisting bucket having laterally extending trunnions, means for elevating the bucket, and means for deflecting the upper end of the bucket in the direction of the chute.

2. In a hoisting apparatus a hoisting bucket having laterally extending trunnions, skids having trunnion engaging recesses, a yoke or trigger pivoted upon the skids and having an inclined face projecting beyond the latter, and a deflector disposed in the path of the bucket opposite to the skids and having a bucket engaging hump above the recesses of the skids.

In testimony whereof, we affix our signatures in presence of two witnesses.

RICHARD HARVEY PASCOE.
FRED. BERGEN.

Witnesses:
LEROY HOOPER,
LEWIS H. HAYS.