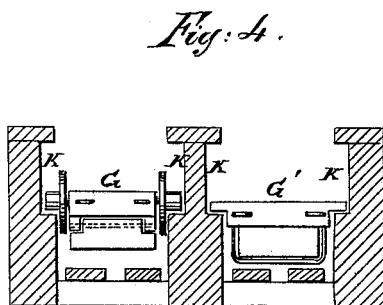
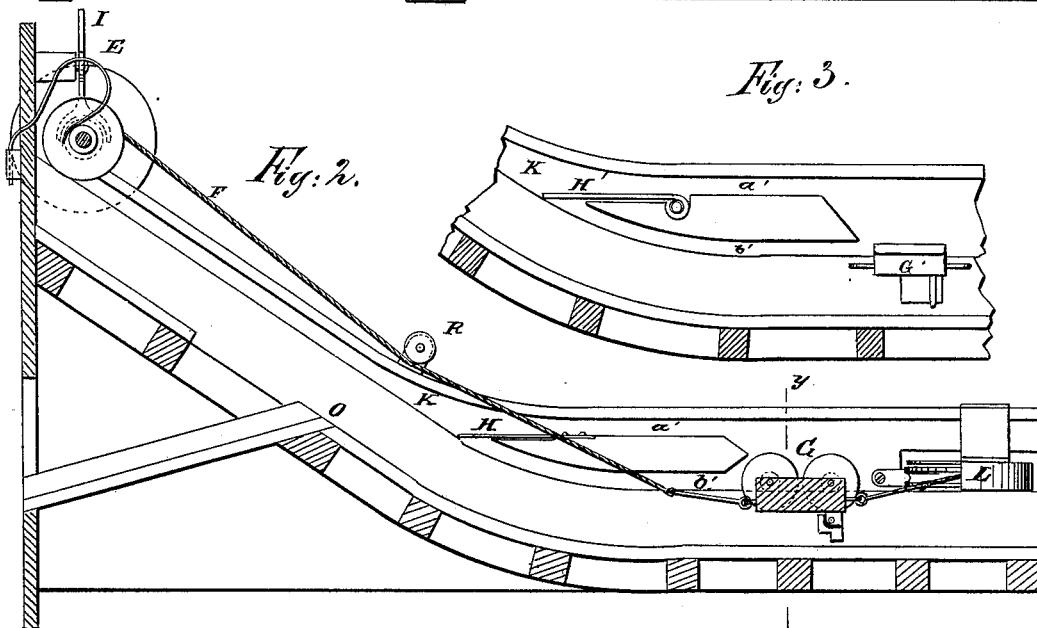
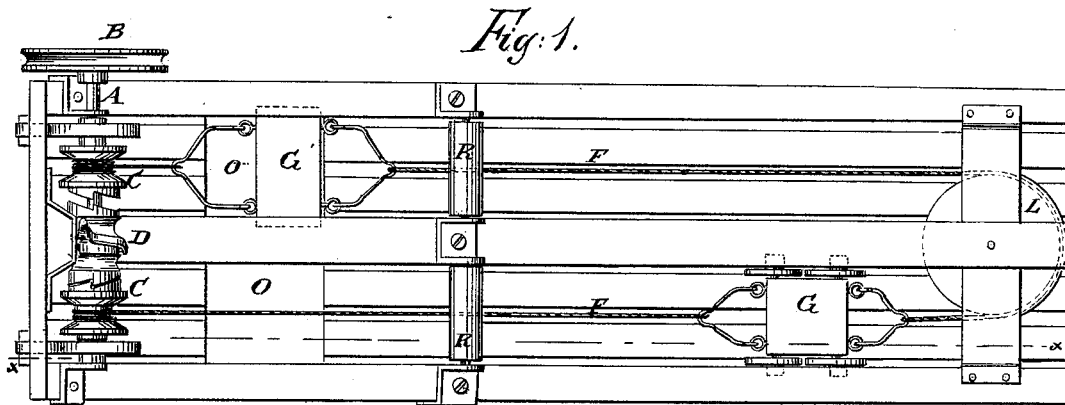


C. J. ATKINS.  
Ice-Elevator.

No. 220,564.

Patented Oct. 14, 1879.



WITNESSES:

*Chas. Nida.*  
*C. Sedgwick*

INVENTOR:

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BY *Mumford*  
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# UNITED STATES PATENT OFFICE.

CARROLL J. ATKINS, OF LOUISIANA, MISSOURI.

## IMPROVEMENT IN ICE-ELEVATORS.

Specification forming part of Letters Patent No. **220,564**, dated October 14, 1879; application filed February 25, 1879.

### *To all whom it may concern:*

Be it known that I, CARROLL J. ATKINS, of Louisiana, in the county of Pike and State of Missouri, have invented a new and Improved Ice-Elevator, of which the following is a specification.

Figure 1 is a plan of the elevator. Fig. 2 is a sectional elevation on line *x x*. Fig. 3 is a sectional elevation, showing the loose switch. Fig. 4 is a cross-section through *x x*.

Similar letters of reference indicate corresponding parts.

This invention has for its object an improved elevator for putting ice from water into a house.

The horizontal part of the elevator is to set into the water deep enough to allow the ice to be floated into it, while the inclined part extends up to the house to the height, or above it, at which the ice is to be packed.

The hoisting and lowering mechanism is at the top of the elevator, and consists of the shaft A, driven by pulley B, and carrying (one over each way) two loose pulleys or drums, C C, that are actuated by a sliding clutch, D, between them. This sliding clutch, or a V friction-clutch, or both together, may be used, according to the convenience or will of the operator. The spring-brakes E E complete this part of the mechanism.

Ropes or chains F F are wound around the drums C C, and attached to the carriages G and G', for the purpose of lowering and elevating them. Sometimes I prefer to employ one kind of carriage and sometimes the other. In both the front edge projects downward, forming a hook. In G this projection or hook is hinged, so that it may be bent or turned inward; in G' the hook is rigid. The carriage G also runs on wheels, while G', being unprovided with them, slides in the grooves K K of the elevator.

The carriages are moved up and down alternately, a loaded one being drawn up as an empty one moves down.

As a carriage goes down it slides into the upper groove, *a' a'*, and over the ice in the lower part of the elevator. When the hook has caught in the ice the clutch D is thrown into the drum controlling the carriage, and it (the carriage) is drawn up with its load along the lower groove, *b' b'*, to the opening O, or a

like opening at the required level. There the ice is discharged to be run into the house. At first the lower discharge-opening is used, and as the house fills up the next highest one, and so on in succession until the house is filled.

The downward route of the carriage G need not be confined to the upper groove all the way; on the contrary, one groove will suffice for it, as its wheels enable it to run over the ice, while its hinged hook will swing inward over any obstruction. The carriage G', however, without wheels and with a rigid hook, cannot ride over the obstructions offered by the inequalities of the ice, and hence must be switched into the upper groove, at the junction of the horizontal with the inclined part of the elevator, and be then raised above the ice for a distance until it can be dropped down behind that portion or those pieces of it which it is intended to secure.

In some instances, then, it must be apparent that it is of great advantage to divide the main groove into an upper and a lower one, as shown; and at times it is of no less importance to use carriages like G instead of those like G', though in many cases the single groove and the sliding carriages with rigid hook will suffice for the work.

In this double elevator both plans are given, as both are novel and practical, and the same may be said of the two switches, the spring-switch H and the loose switch H'. Switches are indispensable where the main groove divides into two, as shown in this instance, and either one or both of these styles may be used in the construction of the elevator.

It will be observed that by the use of the lever I, attached to the sliding clutch at the top or head of the elevator, either drum can be operated at will, or that by holding it stationary in the center neither drum will revolve.

The power is to be applied to the driving-wheel, and a man stationed by the lever to control the working of the machine.

The spring-brakes E E, that bear against the sleeves of the drums, are to prevent the running down of the one carriage faster than the other is drawn up.

At the lower end of the elevator the ropes F F pass around the pulley L. The rollers R

R serve to keep the ropes steady and the carriages down in the grooves.

I am aware that it is not new to elevate by a windlass mechanism suitable trucks, or to use a floating track hinged to a land-section, and to lower a carriage from one track to another, or to employ an ice-hook on an endless chain passing over pulleys, or to use a clutch mechanism for connecting drums with a rotary shaft; but

What I claim is—

The combination, with a windlass, brake, and clutch mechanism, substantially as described, of two carriages having a bottom hook and two tracks at a different elevation, said tracks being provided with spring-switches H, openings O, and grooves *a' b'*, as and for the purpose specified.

CARROLL J. ATKINS.

Witnesses:

D. A. BALL,  
J. M. LEWIS.