(No Model.)

S. H. OWENS.

TELEPHER.

No. 322,392. Patented July 14, 1885.

Fig. 1.

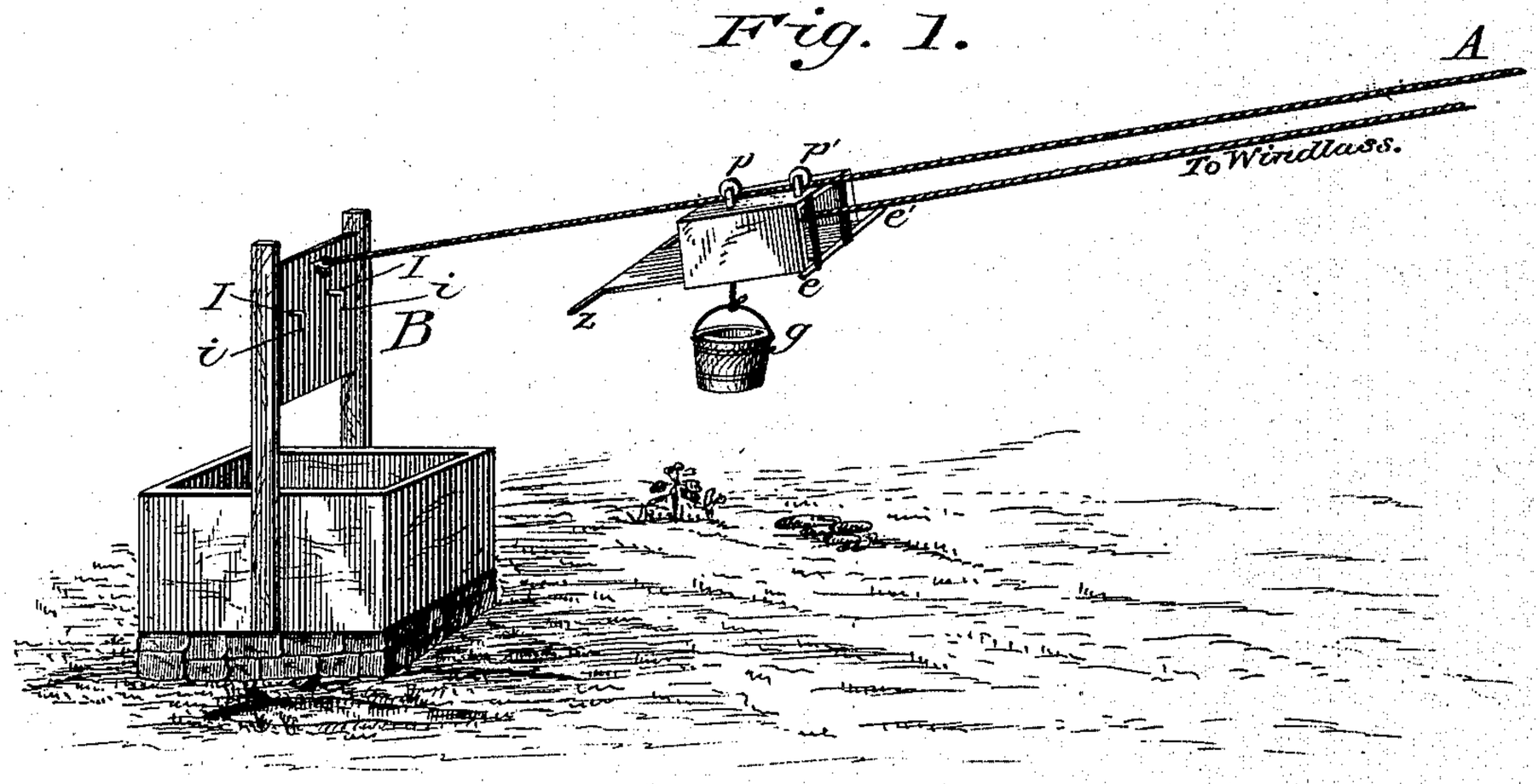

Fig. 2.

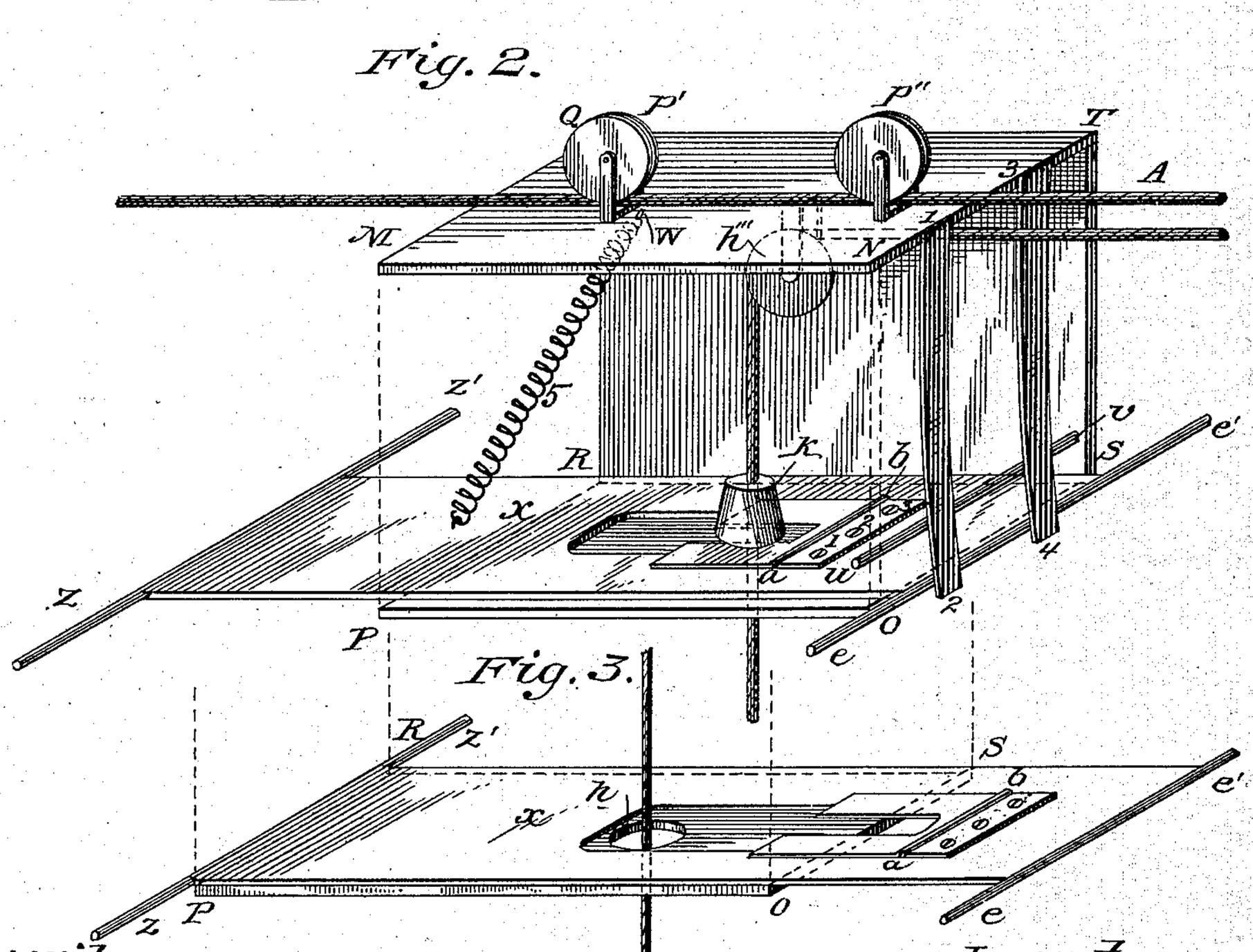

Fig. 3.

Witnesses:

Sam'l Coates
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Inventor:

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UNITED STATES PATENT OFFICE.

SIDNEY H. OWENS, OF CHURCHLAND, VIRGINIA.

TELEPHER.

SPECIFICATION forming part of Letters Patent No. 322,392, dated July 14, 1885.

Application filed December 22, 1884. (No model.)

To all whom it may concern:

Be it known that I, SIDNEY H. OWENS, a citizen of the United States, residing at Churchland, in the county of Norfolk and State of Virginia, have invented certain new and useful Improvements in Telephers, of which the following is a specification, reference being had therein to the accompanying drawings.

This invention relates to that class of elevators which aim to elevate vertically, and then over an incline, and are so constructed that a person can by their use convey a bucket or other receptacle some distance, then let it descend to receive its load, then elevate it, and then bring it back to its original starting-point; and the invention consists in certain novel features of construction and combination of parts, which will be hereinafter explained fully. I propose to call my device a "telepher."

Figure 1 shows the vehicle carrying a vessel between the point of delivery and a point vertically above the place of supply, the standard over the water, the wire supporting the vehicle, and the rope running from the bucket and connecting it with the power at the point of delivery. Fig. 2 shows the position of parts while the vessel is supported by the vehicle. Fig. 3 shows the position of parts immediately after impact on the standard, but before tilting of vibrating plate has taken place by action of coiled-wire spring. This position releases the vessel, which may then be lowered to the burden.

Similar letters of reference indicate like parts in all the figures.

Fig. 1 shows a wire attached at one end to an abutment, hereinafter to be described, at a point which is substantially vertically above the water or burden, and at its opposite end to some suitable support at the point of delivery. This wire is inclined so that the vehicle will be moved by gravity toward the abutment.

p p' are grooved pulleys traversing the wire and connected to the vehicle, which is suspended below the wire. Under some circumstances I propose to use two wires side by side, at a short distance apart, in which case four grooved wheels will be used, two on one side of the vehicle and two on the other.

The vehicle is a box consisting of two side boards, a top, and a bottom. This box is supported upon the wire by the grooved wheels *p p'*. Within this box and to the top is fastened a grooved wheel, *h'''*. In the bottom of the box is a circular hole, *h*, so placed relatively to the grooved wheel above it that the rope which runs from the windlass to the bucket, Fig. 3, will play through that hole just below the left side of the grooved wheel. The frustum of a cone, *k*, securely fastened to the rope, so as not to slip either up nor down on the rope, is just large enough to pass easily through hole *h*.

u v is a rod running across the box at the right-hand end and near the bottom. On the bottom of this box is laid a sliding and vibrating plate, *x*, attached to the bars *z z' e e'*. *z z'* is a cross-bar attached at the forward end of this sliding and vibrating plate, the ends of the cross-bar projecting some distance beyond the sides of the vehicle. At the other end of the sliding and vibrating plate is another cross-bar, *e e'*. This sliding and vibrating plate is longer than the box, so that when pushed forward it projects, as in Fig. 2, and when pushed backward it takes the position seen in Fig. 3. This sliding and vibrating plate has a hole in it whose breadth is the diameter of the hole *h*, but whose length is such that no part of the sliding and vibrating plate can cover any part of the hole *h*, whether the sliding and vibrating plate be pushed forward or backward. Over the right-hand half of this opening in the sliding and vibrating plate is laid a slotted metal trap hinged in the line *a b* and screwed to the sliding and vibrating plate.

1 2 3 4 are strap-springs which press the sliding and vibrating plate forward.

w x is a coiled-wire spring, fastened to the sliding and vibrating plate *x*, and at *w* to the inside of the top of the vehicle, carriage, or box. When the sliding and vibrating plate is relieved of the weight of the bucket, this coiled-wire spring tilts up the forward end of the sliding and vibrating plate, the rear end being kept down by the cross-bar *u v*. The rod *e e'* restricts the forward play of the sliding and vibrating plate, and the rod *z z'* restricts its backward movement, and also serves, when this plate is tilted up, to lock

the plate, and so the vehicle or carriage, to the hooks I, seen on standard in Fig. 1.

The two hooks in standard or abutment, Fig. 1, are so placed that the vehicle may enter between them, and that the forward end of the vibrating and sliding plate may impinge on the standard on a line just below the tips of the vertically-depressed hooks, the locking bar or rod *z z'* just clearing these tips *i* in approaching to and in receding from the standard or abutment B.

Fig. 1 shows the position of the bucket, and Fig. 2 shows the position of the vehicle and appurtenances, while the vehicle is traversing the wire, carrying the vessel or bucket suspended.

The momentum acquired by gravitation down the inclined wire carries the vehicle toward the standard B, and when it has approached near enough to the standard to bring the front end of the sliding plate in contact with the standard B the forward movement of the said plate is arrested, while the vehicle continues to move on until the sliding and vibrating plate has taken, in relation to the bottom of the vehicle, carriage, or box, the position shown in Fig. 2. The frustum of the cone, before this resting on the metal trap, and so supporting the bucket, being carried forward and off the metal trap, falls through hole *h*, and the weight of the vessel or bucket is thrown on the wheel *h'*. The tension of the rope causes the vehicle to recede from the standard, the sliding and vibrating plate is tilted at its forward end by action of the coiled-wire spring *w x*, the bar *z z'* is thrown up under the hooks *i i*, and the vehicle is thereby locked to the standard B. The vessel or bucket *g* is now lowered to the burden by paying out rope from the windlass. After the vessel has received its burden, the operator winds up the rope on the windlass, the vessel ascends until the frustum of the cone enters the hole *h*, lifts the metal-hinged trap, and arrests the further winding of the rope by refusing to pass the wheel *p'''*. The operator relaxes the rope, the frustum of the cone *k* falls and is arrested by the metal trap, the weight of vessel and contents pulls down the tilted slide, the locking-bar *z z'* is released from the hooks *i i*, and the operator resumes the winding of the rope which draws the vehicle and vessel to the point of delivery.

The excellence, practical utility, and value of my device is due to the fact that only one point of impact is required for accomplishing two necessary things—viz., the unlocking of the vessel and the locking of the vehicle; that the locking of the vehicle is the inevitable result of the unlocking of the vessel; that the locking of the vessel to the vehicle inevitably unlocks the vehicle, and, consequently, miscarriage is impossible.

What I claim is—

1. The combination of a rectangular frame, grooved wheels secured upon the top thereof, transverse bar *u v*, secured to the sides of said frame, and flat metal springs 1 2 3 4, with the sliding plate *x*, having end bar, *z z'*, and coiled spring 5, adapted to elevate one end of said sliding plate, substantially as and for the purpose described.

2. The combination of a rectangular frame, grooved wheels secured upon the top thereof, and springs secured at one end to said frame, with the sliding plate *x*, having laterally-projecting bar *z z'*, the slotted trap hinged upon said plate, the coiled spring 5, secured to the sliding plate and to the top plate of frame, and the standard B, having hooks I thereon pointing downward, substantially as and for the purpose described.

In testimony whereof I affix my signature in presence of two witnesses.

SIDNEY H. OWENS.

Witnesses:

J. N. WILLIS,

LEWIS PURYEAR.