C. H. GUILES.

Elevator.

No. 160,183. Patented Feb. 23, 1875.

Fig. 1

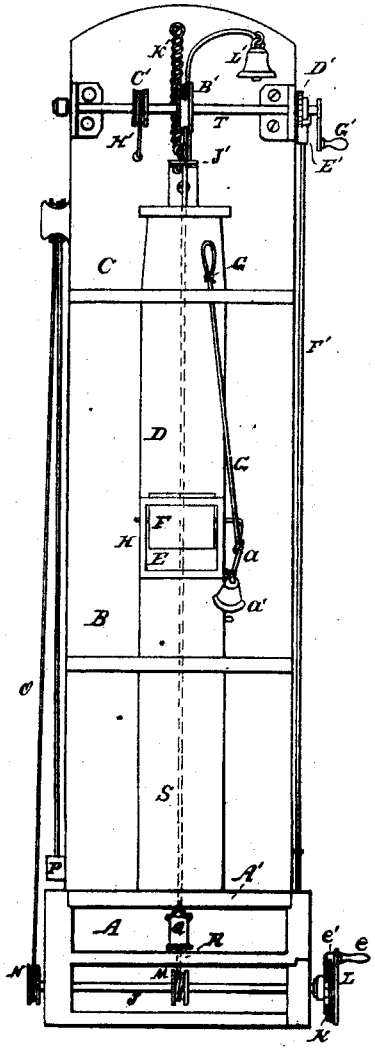
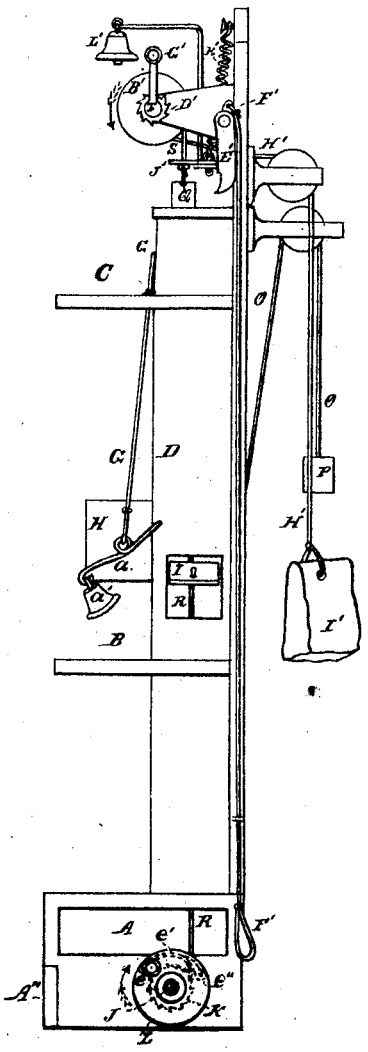


Fig. 2



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CHARLES H. GUILES, OF CHICAGO, ILLINOIS.

IMPROVEMENT IN ELEVATORS.

Specification forming part of Letters Patent No. **160,183**, dated February 23, 1875; application filed February 3, 1875.

To all whom it may concern:

Be it known that I, CHARLES H. GUILES, of Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Dumb-Waiters or Elevators, of which improvements the following is a full, clear, and exact description, which will enable others skilled in the art to which my invention appertains to make and use the said improvements, reference being had to the accompanying drawing forming a part hereof, and in which—

Figure 1 is a front elevation of my improved waiter, and Fig. 2 a side elevation of the same.

Like letters of reference indicate like parts.

My object is to improve the construction and operation of that class of dumb-waiters or elevators operated by hand and employed to convey small parcels or packages from one story of a building to another, or from one room to another; and my invention consists in certain novel features, substantially as hereinafter described, relating to the means employed for the purpose of accomplishing the objects above set forth.

In the drawing, A represents the lower receiving-box. This box may be arranged in the lower story of the building. A′ and A″ are slides or doors, opening into the box A. B represents the second story of the building, and C the third. D is a tubular way, entering the box A, and terminating in the upper story. E is an opening in one side of the way D. This opening is arranged in the second story, as shown. F is a tilting table or door, arranged in the opening E. One of the trunnions of this door is provided with a weighted lever or arm, *a*, by means of which the door is held in a position to close the opening. In the example shown, this door is in a vertical position when closed, thus leaving the way D unobstructed, and the arm *a* is weighted by means of a call-bell, *a′*, attached thereto. G is a cord attached to the arm *a*, and extending into the upper story. H is a receiving-box, arranged in the second story. I is a door, entering the way D from the second story. J is shaft, arranged in the lower part of the box A. K is a ratchet-wheel, rigidly mounted on the shaft J. L is a wheel or disk, loosely mounted on the shaft J, and provided with a crank-pin or handle, *e*. This wheel or disk is also provided with a pawl, *e′*, arranged to engage the teeth of the ratchet K, and held to its engagement therewith by means of a spring, *e″*. M and N are pulleys, rigidly attached to the shaft J. O is a cord, attached to and wound upon the pulley N, and passing over in the upper part of the building, as shown. P is a weight on the end of the cord O. Q is a bucket, arranged in the way D. R is a cord, attached to the lower end of the bucket and to the pulley M, being wound on the latter in a different direction from which the cord O is wound upon the pulley N. S is a cord, attached to the upper end of the bucket. T is a shaft in the upper part of the building. B′ and C′ are pulleys, rigidly mounted on the shaft T. D′ is a ratchet, rigidly attached to the shaft T. E′ is a pivoted stop-pawl, arranged to engage the ratchet D′. F′ is a cord, attached to the heel of the pawl E, and extending to the lower part of the building. G′ is a crank on the shaft T. The cord S is attached to and wound upon the pulley B′. H′ is a cord, attached to and wound upon the pulley C′, being wound on the latter in a different direction from which the cord S is wound upon the pulley B′. I′ is a weight upon the end of the cord H′. J′ is a downwardly-yielding leaf, hinged to the wall of the upper story, and K′ is a spring holding this leaf in a horizontal position. L′ is a call-bell, attached to the leaf J′. The cord S passes through an opening or hole in the leaf J′, and is knotted above the said opening. The weight I′ is sufficient to keep the empty bucket at the upper end of the way D, which is open at the top, as is also the bucket. The ratchet upon the shaft J prevents the latter from being turned, except in one direction, by means of the handle *e*. The weight P causes the cord S to be wound upon the pulley M when the bucket descends. The pawl E′ holds the bucket in any desired position.

When the bucket is at the upper story, and it is desired to send a parcel or package from the lower story to the upper one, the handle *e* is turned in the direction indicated by the arrow. This causes the descent of the bucket, the pawl E′ being released as soon as the downward movement of the bucket begins. By the the time the bucket reaches the lower story

the knot in the cord S strikes the leaf J′ and sounds the bell L′. The cord F′ is then drawn downward, thus throwing the pawl E into engagement with its ratchet, and preventing the ascent of the bucket until the proper time. When the bucket is loaded the attendant, called by the bell L′, releases the pawl E′ from its ratchet, and causes the bucket to ascend by turning the crank G′ in the direction indicated by the arrow there shown. The bucket may also be sent from the upper to the lower floor by turning the crank G′ in the opposite direction, and setting the pawl E′ when the bucket reaches its destination. The bucket, by striking the floor of the box A, will attract the attention of those engaged on the lower floor. When the bucket is filled a slight pull on the cord S will indicate that fact to the attendant on the upper floor, by sounding the bell L′, and the bucket may then be made to ascend in the manner described. The bucket may also be made to stop at the door I, and it may be sent from thence in either direction, either by grasping the cord S for that purpose, or in the manner described. A parcel or package may also be delivered from the upper to the next lower floor by drawing upward on the cord G, thus throwing the door F across the way D, at such an inclination as to conduct the parcel or package into the box H, it being understood that the parcel, in this case, is dropped into the upper end of the way D. The act of turning the door F also sounds the bell *a*′.

A slight modification in the arrangement of the parts now described will adapt the device to the purpose of sending parcels or packages from one room to another on the same floor. This result may be accomplished by arranging the parts, with the exception of the weights and bell L′, in a horizontal position; and in the latter case the door F will be inoperative for the purpose specified.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent. is—

1. The combination of the bucket Q, the cord R, the counter-weighted crank-shaft J, the cord S, the counter-weighted crank-shaft T, the ratchet-wheel D′, pawl E′, and cord F′, all arranged and operating together substantially as and for the purposes specified.

2. The combination of the bucket-cord and call-bell, substantially as specified, in connection with a dumb-waiter, and for the purpose set forth.

3. The combination and arrangement, in a dumb-waiter, of the way D, tilting table or door F, cord G, and bell *a*′, substantially as and for the purposes specified.

CHARLES H. GUILES.

Witnesses:

F. A. HERRING,

F. F. WARNER.