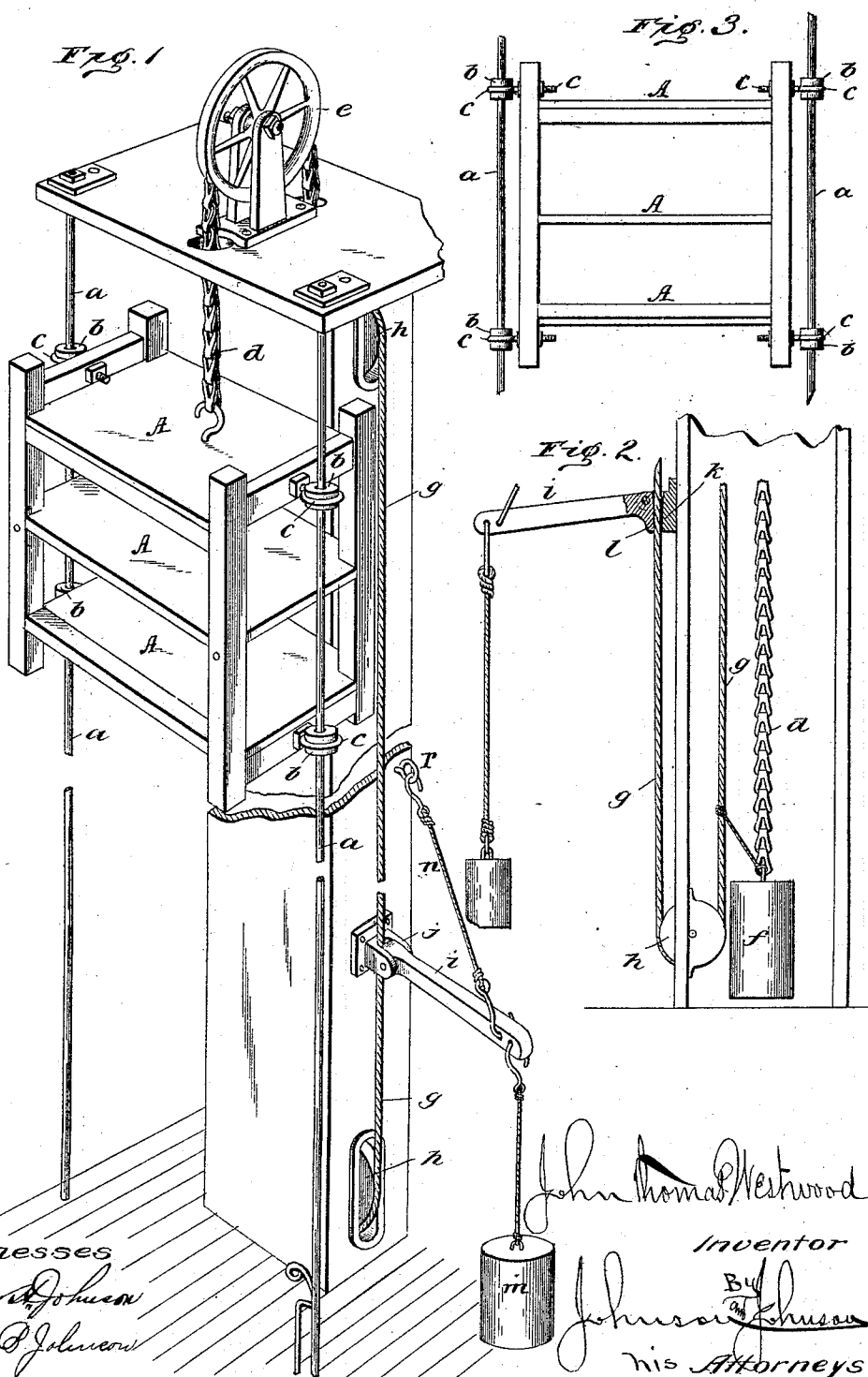


•(No Model.)

J. T. WESTWOOD.
DUMB WAITER.

No 490,462.

Patented Jan. 24, 1893.



Witnesses
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UNITED STATES PATENT OFFICE.

JOHN THOMAS WESTWOOD, OF WHEELING, WEST VIRGINIA, ASSIGNOR OF
ONE-HALF TO DAVID HENRY TAYLOR, OF SAME PLACE.

DUMB-WAITER.

SPECIFICATION forming part of Letters Patent No. 490,462, dated January 24, 1893.

Application filed October 31, 1892. Serial No. 450,480. (No model.)

To all whom it may concern:

Be it known that I, JOHN THOMAS WESTWOOD, a citizen of the United States, residing at Wheeling, in the county of Ohio and State of West Virginia, have invented certain new and useful Improvements in Dumb-Waiters, of which the following is a specification.

I have improved the "dumb-waiter" or elevator for dwellings and mercantile houses, in particulars of construction for operating it by hand and for effecting its retention above the floor for access to any particular shelf. An endless rope or chain on pulleys at one side of and independent of the waiter, is connected to a counterweight secured to the rope or chain by which the waiter is suspended and serves as the means for operating it and for holding it at the floors desired, by means of a brake applied to said endless rope and under the control of a person in the kitchen. By this provision the locking of the endless operating rope, locks the waiter, and the cook is thereby enabled to both raise and to lower the waiter and control its position, in serving food to the dining-room; or in hoisting goods in business houses. The brake or stop may be of any suitable construction so long as it provides a safe grip for the endless operating rope and is under control of a person at the first floor and independent of the waiter. The shelved waiter is suspended by a rope and counter-weight adapted to elevate the waiter when it is not loaded and the latter is moved up and down upon guide-rods through floor openings and requires no closet or casing to inclose it.

The drawings herewith show my improved dumb-waiter in perspective in Figure 1 in connection with its endless operating rope and controlling device fixed at the lower floor; and Fig. 2 is a rear elevation of the same, showing the operating rope attached to the weight of the waiter suspending rope; Fig. 3 shows the waiter and its adjustable guides on the two guide-rods.

The dumb-waiter is constructed with shelves A in the usual manner or it may be a hoisting platform, and I mount it for vertical movement upon two rods *a, a*, one at two of its opposite sides which extend from the lower floor

to the upper story or stories as may be desired for the working of the elevator.

The waiter or elevator is so mounted on the rods by guides preferably formed of graphite bearings *b b*, carried by eye-bolts *c, c*, fastened horizontally to the sides of the waiter or elevator frame at its top and at its bottom. These eye-bolts are made adjustable by nuts to give a perfect alignment of the guide-bearings on the rods and an easy movement to the waiter. The waiter or platform is suspended by a rope or chain *d*, which passes over a hoist-wheel *e* at the top and has a weight *f* adapted to elevate the waiter when it has no load.

An endless rope or chain *g* is placed upon pulleys *h, h*, suitably mounted at the upper and at the lower floors so that the rope will be at the rear of and at one side of the waiter and independent thereof. This endless rope is connected at one side to the weight *f* of the suspending rope and serves thereby to operate the waiter, either to raise it or to lower it from any one of the floors through the openings which it is constructed to move. This gives both the cook and persons in the dining-room full control over the waiter as the operating-rope being independent of the waiter is accessible from any of the floors and being attached to the weight of the suspending rope, will on raising the weight, release the waiter and allow it to descend of its own weight by taking hold of that side of the endless rope which is not attached to the weight and pulling it down with a safely controlled descent. When the waiter is loaded it may be lowered from the upper floors, by holding said rope and letting the waiter down gradually, the holding force serving to overcome the weight of the load, and this may be done by a person on any of the floors. To raise the loaded waiter the cook or person at the lower floor pulls up the endless rope *g*, to pull the weight down and it will be understood that for this purpose the endless operating rope is attached directly to the weight of the suspending-rope.

For holding the elevator down against the tendency of the weight to raise it, or for holding the loaded elevator at any of the upper floors I provide a brake or gripping de-

vice under control at the lower floor so that it can be conveniently applied and released from the other side of the endless rope by the cook or other person. As shown this brake device is a lever *i* pivoted to a bracket *j* which forms the fixed jaw *k*, the other jaw *l* being formed by the pivoted end of the lever *i* and between these jaws the endless rope passes and is clamped or gripped by the action of the jaw of the lever. For this purpose I provide the lever with a weight *m* to give the proper clamping force upon the rope. One or both the jaws may be faced with rubber to give increased friction, and to hold the brake out of action it is provided with a lift connection *n* to hook into an eye *r* suitably fixed to hold the weight end of the lever up and release its hold upon the rope. This enables the cook to elevate the loaded waiter and to hold it at the desired floor.

The brake is in convenient reach of the person on the lower floor and it will be understood that it is mounted in a suitable fixed bracket or support and that the pulleys for the endless cord may be mounted in suitable supports fixed at the back of the waiter.

The hoist-wheel *e* and the guide-rods *a*, *a*, can be supported in any suitable way that will leave the waiter and its connections uninclosed. I find that with a moderately weighted brake-lever, the endless rope is so firmly locked that it will hold the waiter with a considerable load, and by fastening the endless operating rope to the weight of the suspending rope, it is impossible for the endless rope to slip on its pulleys when the brake is applied to hold the loaded waiter.

It is important to notice that the endless operating rope must extend from the bottom to the top of the full movement of the waiter, because as the suspending and the operating ropes are connected together by the counterbalance weight the two must move together with the waiter so that the operating endless rope forms a part of the suspending rope and the weight is thereby made an attachment of both. It will also be understood that the

brake lever can be hooked up out of action and the waiter operated without it from any of the floors.

The mounting of the waiter by the four adjustable guides enables it to be set sidewise at the bottom and at the top upon the two guide-rods and thus give a true and easy movement of the waiter.

I claim as my improvement:

1. In a dumb-waiter or elevator, the combination with the waiter, having a suspending rope and a counterweight adapted to elevate it, of an endless operating rope having one side connected with said weight, for the purpose stated.

2. In a dumb-waiter or elevator, the combination with the waiter having a suspending rope and a counterweight adapted to elevate it, of an endless operating rope having one side connected with said weight and a suitable brake or stop device connected to the other side of said endless rope for the purpose stated.

3. In a dumb-waiter or elevator, the combination with the waiter having a suspending rope and a counterweight adapted to elevate it, of an endless operating rope connected with said weight, a suitable brake or stop device connected with said endless rope, and a device for holding said brake out of action for the purpose stated.

4. In a dumb-waiter or elevator, the combination with the waiter having a suspending rope and a counterweight adapted to elevate it, of an endless operating rope connected with said weight, and a brake consisting of a weighted-lever forming one member of a clamp or brake and suitable means for holding said brake out of action, substantially as described.

In testimony whereof I have hereunto signed this specification in the presence of witnesses.

JOHN THOMAS WESTWOOD.

Witnesses:

J. CRAIG MOORE,
W. L. GRAY.