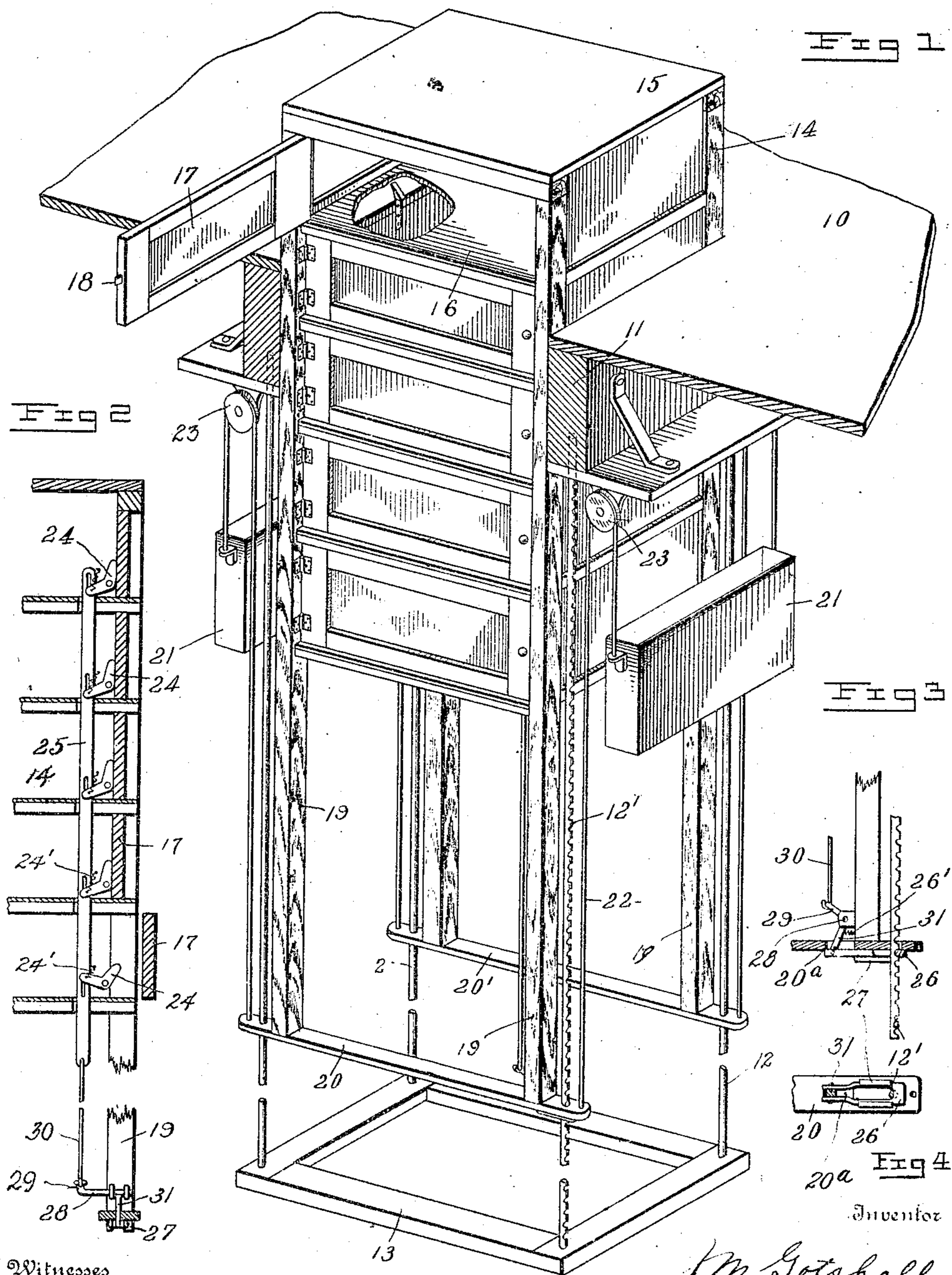


J. M. GOTSHALL.
DUMB WAITER.
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928,960.

Patented July 27, 1909.



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DUMB-WAITER.

No. 928,960.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, JAMES M. GOTSHALL, a citizen of the United States, residing at Pillow, in the county of Dauphin and State of Pennsylvania, have invented certain new and useful Improvements in Dumb-Waiters, of which the following is a specification.

This invention relates to dumb-waiters, and has particular reference to certain specific novel features of construction herein-after fully described and claimed, and illustrated in the accompanying drawings, in which—

Figure 1 is a perspective view of the invention; Fig. 2 is a detail in elevation, showing portions of the locking devices; Fig. 3 is a detail of a portion of the devices shown in Fig. 2, but at right angles thereto, and Fig. 4 is a bottom plan view of the parts shown in Fig. 3.

Throughout the following description and on the several figures of the drawings similar parts are referred to by like reference characters.

The type of elevating devices to which the present invention relates is the form of dumb-waiters designed for use in connection with kitchens or dining rooms and operative thereto from the cellar or basement. In this particular species of dumb-waiters it is customary for the top of the dumb-waiter cupboard to lie flush with the kitchen or dining room floor when said cupboard is in its normal down position, and the same is held in such position by any suitable form of catch. Again, in this form of dumb-waiters it is desirable and essential that the counterweights used in the elevation thereof shall be sufficiently heavier than the cupboard at its maximum load to insure that the cupboard will operate upward with precision. This being true, if the cupboard is empty or lightly loaded such overweights have a tendency to operate the cupboard so freely that it is practically impossible to hold the same at a position lower than its extreme upper limit of movement after being once released. To overcome this objection is the principal object of this invention.

In carrying out the invention there is shown at 10 a fragment of a kitchen or dining room floor having sills 11, and to which are connected a series of guiding rods 12 extending downward to the cellar or basement floor where they may be held in a substan-

tially rigid position by connection to a frame 13.

The dumb-waiter cage or cupboard 14 is provided with a top 15, adapted to lie flat with the floor 10, and is provided preferably upon three sides with inclosing walls so as to render the cupboard mouse-proof. The cupboard is provided with any suitable number of shelves 16, and in front of each shelf is a hinged door 17 having a latch 18. The corner posts 19 of the cupboard extend downwardly forming a frame, said post co-operating with the guiding rods 12. As a suitable means for effecting coöperation between said depending frame and guiding rods I employ a pair of cross bars 20 and 20', each secured to a pair of said posts and having holes receiving the rods. Counterweight boxes 21 are connected to said bars by means of flexible connections 22 passing over direction pulleys 23, in a well known manner. Said boxes are designed to carry sufficient weights to insure the prompt elevation of the cupboard with its maximum load.

A series of bell cranks 24 are pivoted upon the inner face of one of the side walls of the cupboard, one of the bell cranks being engageable by the inner face of each of the doors 17. The inner arms of all of the bell cranks have pin and slot connections with a vertically movable bar 25 extending downwardly through all of the shelves. A yoke 26 embraces one of the guiding rods 12 and is adapted to engage in any one of a series of notches 12' formed thereon. The yoke may be located at any suitable point and is shown as mounted against the bottom of the bar 20 and movable in guides 27. A rock shaft 28 is journaled in the adjacent corner post 19 and to the rock shaft is connected an arm 29 having connection as by a wire 30 with the member 25 and also an arm 31, extending downwardly through a slot 20^a in the bar 20, the latter arm having pin and slot connection with the yoke 26. A spring 26' operates to cause prompt release of the yoke 26 from the notched rod. Each of the bell cranks 24 is provided with a spring 24', having sufficient strength to lift the bar 25 and cause the yoke 26 to engage the notched rod against the tension of the spring 26', upon the opening of the door adjacent thereto. The bell cranks adjacent to any or all closed doors may remain in inactive position with respect to the bar 25, by virtue of the

slots in the bar. The normal position of the bar 25, when all of the doors are closed, is such that the pins of the bell cranks will be at the upper ends of the slots.

5 The bell cranks may be pivoted at any suitable points, but it is preferable to so position them that the ends thereof which cooperate with the doors will be directly opposite the door latches 18, whereby operation of the door to reset a bell crank against the tension of its spring 24' will not strain the door hinges. Furthermore, this arrangement also has the effect that the bell crank through its spring will cause the prompt opening of the door immediately upon the unlatching thereof. It will now be seen that upon the unlatching of any door of the cupboard, irrespective of the position or elevation of the cupboard, the locking mechanism will promptly cooperate with the guiding devices to prevent movement of the cupboard until the door is again closed.

The details of construction may be varied to a considerable extent and it is not my desire to be limited to the precise construction shown, except as may be necessitated by the state of the art.

I claim:

1. In a dumb-waiter, the combination of a cupboard having an outwardly swinging door thereon and a downwardly extending frame, stationary guiding means cooperating with said frame, and locking means cooperating with the inner face of said door and with said guiding means whereby when the door is open the locking means will engage the guiding means to prevent movement of the cupboard.

2. In a dumb-waiter, the combination of a cupboard having a plurality of doors, guiding means for the cupboard, and locking means cooperating with the cupboard and guiding means whereby upon the opening

of any one cupboard door the guiding means will be engaged to lock the cupboard from movement.

3. In a dumb-waiter, the combination of a cupboard having a door and a downwardly projecting frame, a series of stationary guide rods cooperating with the frame, and locking mechanism comprising a yoke movable with the cupboard and embracing one of said rods, a device engageable by the door, and connections between said device and said yoke whereby when the door is open the yoke will interlock with the embraced rod.

4. In a dumb-waiter, the combination of a cupboard having a door and a downwardly projecting frame, a series of stationary guide rods cooperating with the frame, one of said rods being notched, a yoke carried by the frame and cooperating with the notched rod, a device carried by the cupboard and engageable by the door, and connections between the said device and yoke whereby when the door is open the yoke will engage the notched rod to prevent movement of the cupboard.

5. In a dumb-waiter, the combination of a cupboard having doors, stationary guiding means for the cupboard, a series of bell cranks carried by the cupboard and cooperating with the respective doors, a locking member cooperating with the guiding means, and connections between the bell cranks and locking member whereby upon opening any cupboard door the said member will lock the cupboard from movement.

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

JAMES M. GOTSHALL.

Witnesses:

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