

E. N. HALLETT.
DUMB WAITER.
APPLICATION FILED FEB. 4, 1910.

6 SHEETS—SHEET 1.

WITNESSES

L. Blinquist.
E. B. Marshall

INVENTOR

INVENTOR
Edward H. Hallett
BY *Mum & Co.*
ATTORNEYS

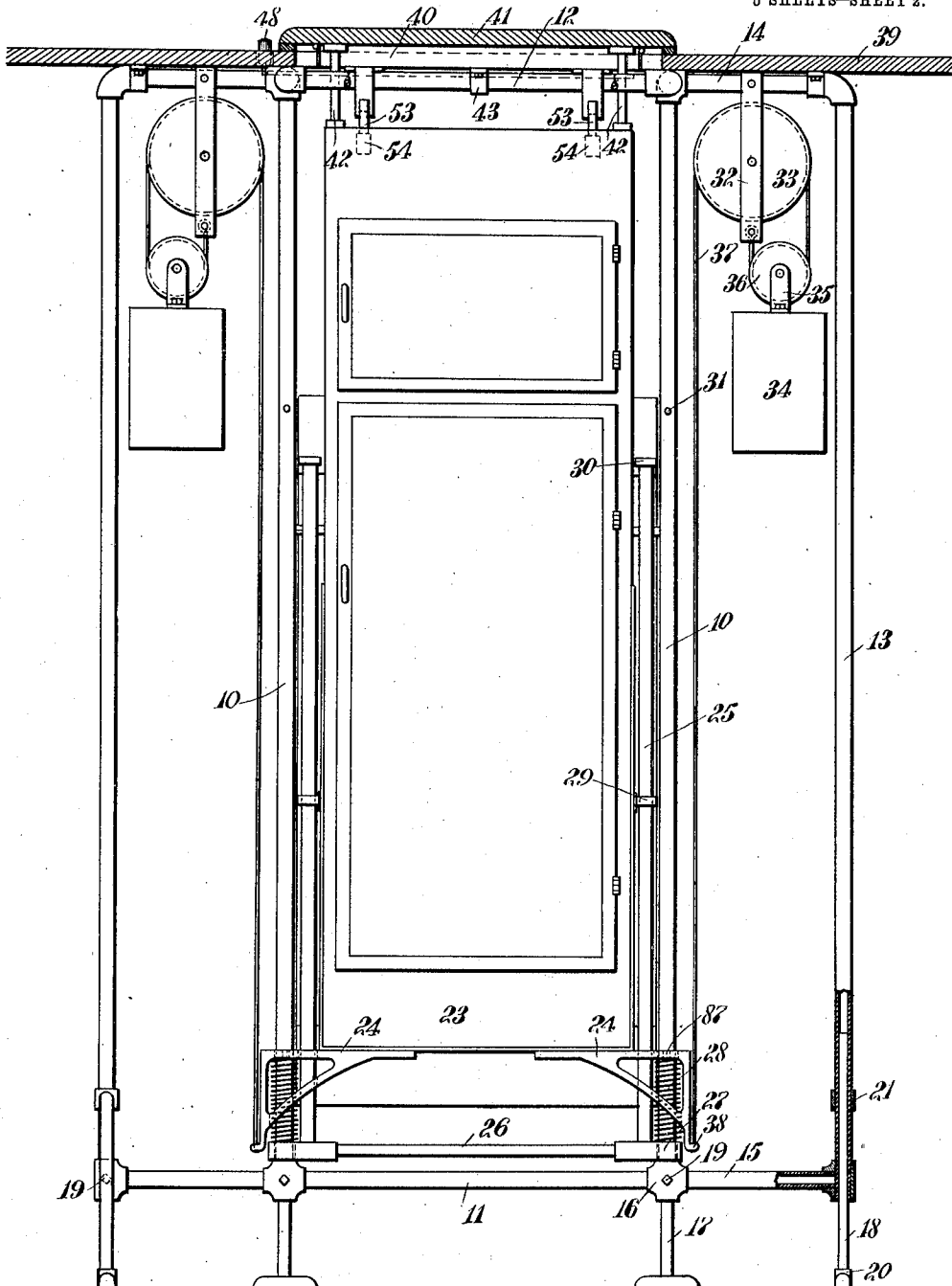
E. N. HALLETT.
DUMB WAITER.

APPLICATION FILED FEB. 4, 1910.

1,003,253.

Patented Sept. 12, 1911.

5 SHEETS-SHEET 2.



WITNESSES

L. Almqvist
E. B. Marshall

Fig. 2.

INVENTOR

Edward N. Hallett

BY

Mumford & Co.
ATTORNEYS

E. N. HALLETT.

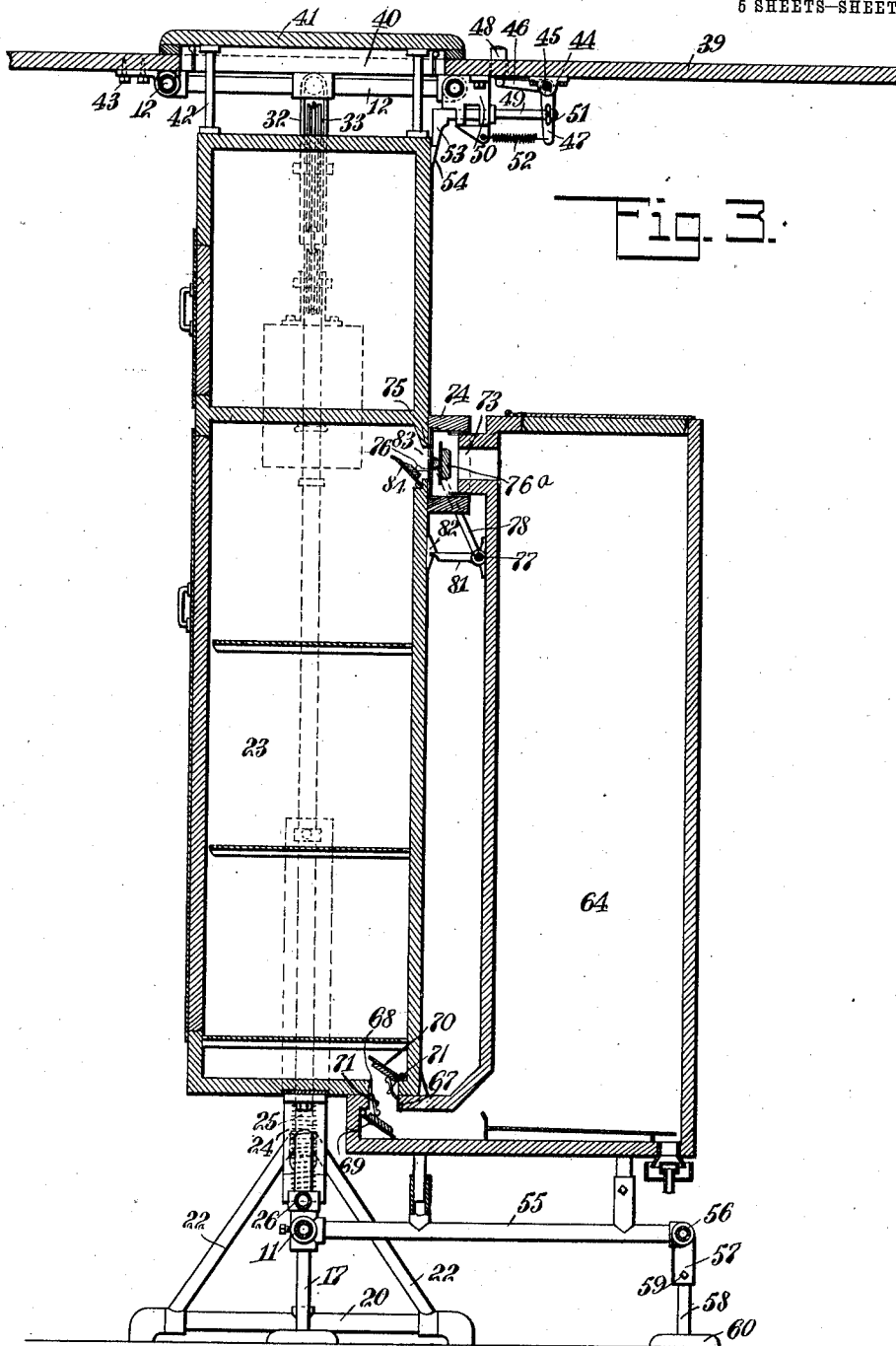
DUMB WAITER.

APPLICATION FILED FEB. 4, 1910.

Patented Sept. 12, 1911.

1,003,253.

5 SHEETS-SHEET 3.



WITNESSES

L. Almquist
E. B. Marshall

INVENTOR

Edward N. Hallett

BY

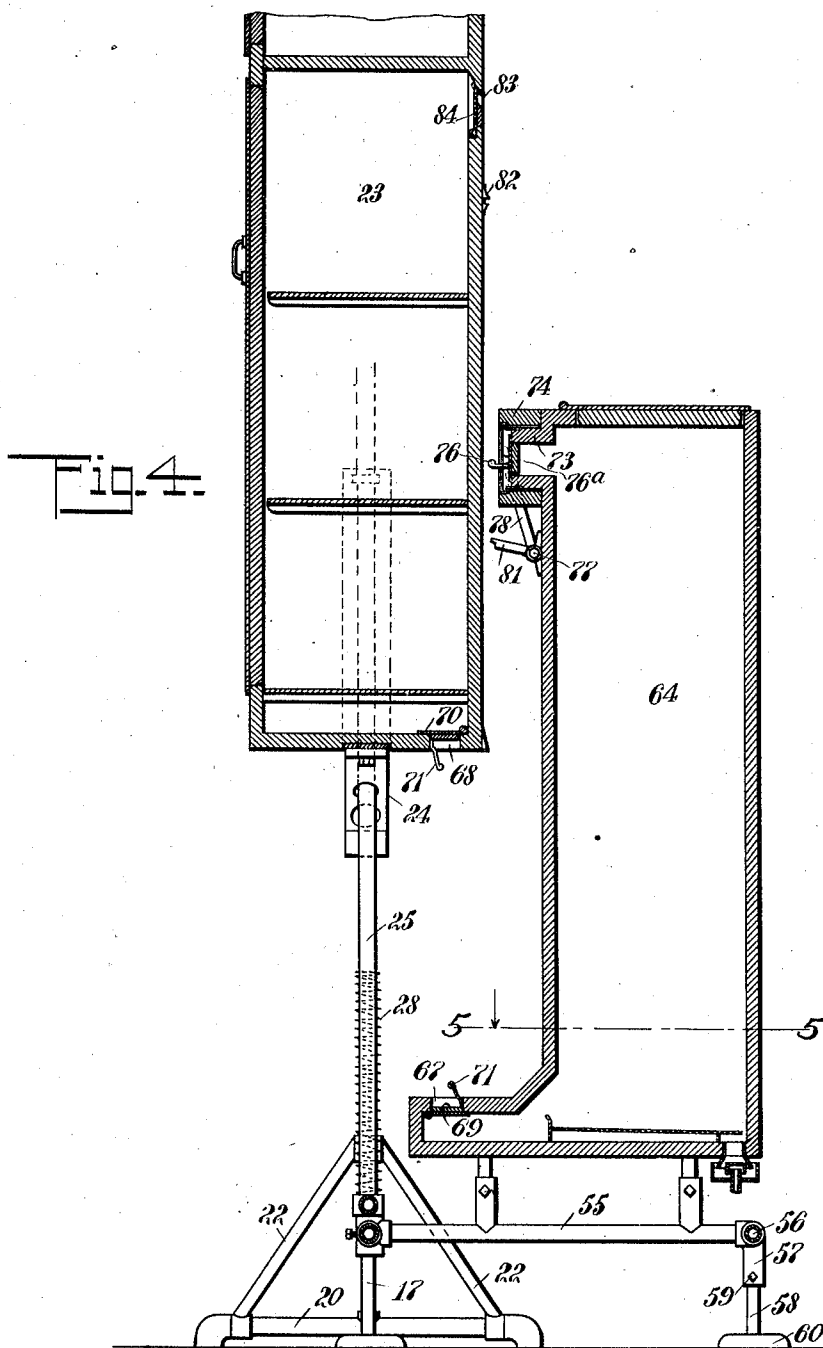
Mum & Co
ATTORNEYS

1,003,253.

E. N. HALLETT.
DUMB WAITER.
APPLICATION FILED FEB. 4, 1910.

Patented Sept. 12, 1911.

5 SHEETS—SHEET 4.



WITNESSES

L. Almqvist
E. B. Marshall

INVENTOR

Edward N. Hallett

BY

Mumford

ATTORNEYS

1,003,253.

E. N. HALLETT.
DUMB WAITER.
APPLICATION FILED FEB. 4, 1910.

Patented Sept. 12, 1911.

5 SHEETS—SHEET 5.

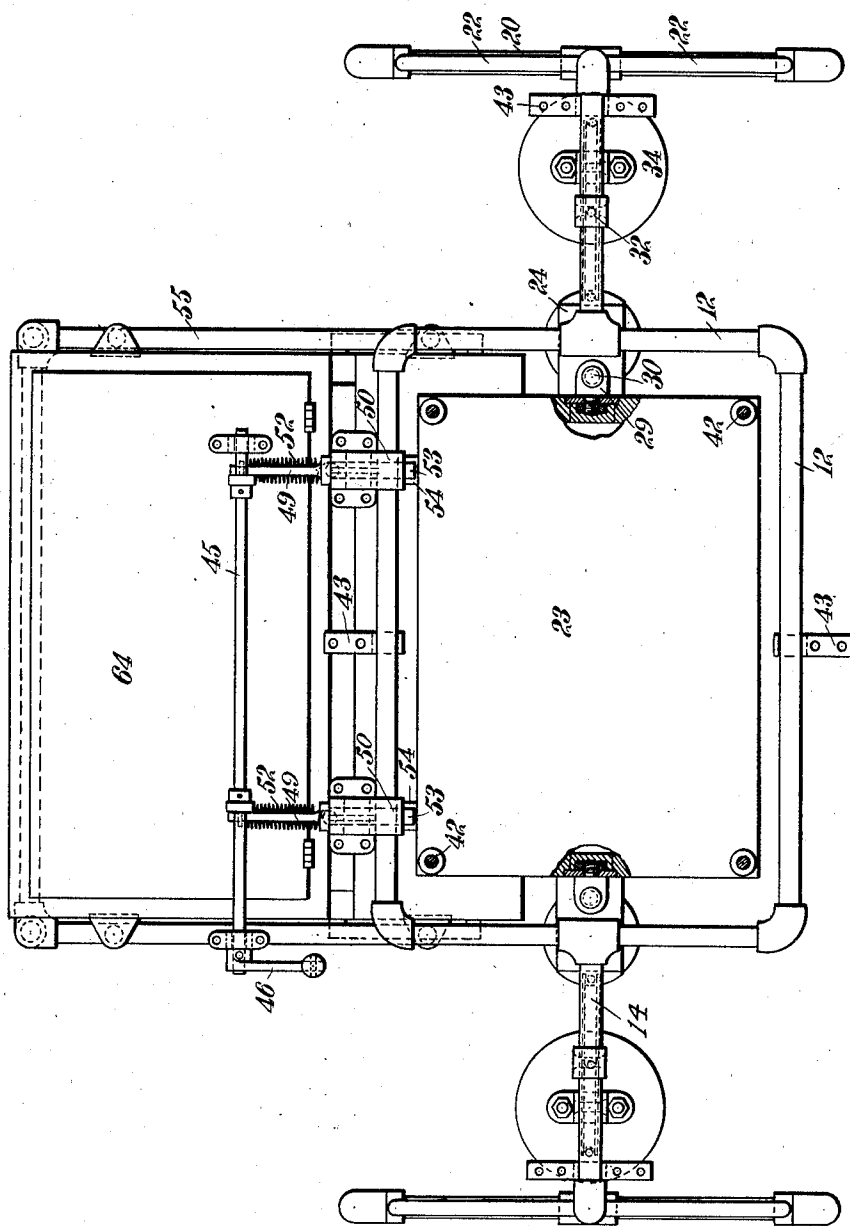


Fig. 5.

WITNESSES

L. Almqvist
E. B. Marshall

INVENTOR

Edward N. Hallett
BY *Mum Co*
ATTORNEYS

UNITED STATES PATENT OFFICE.

EDWARD NORTH HALLETT, OF CANTON, PENNSYLVANIA.

DUMB-WAITER.

1,003,253.

Specification of Letters Patent.

Patented Sept. 12, 1911.

Application filed February 4, 1910. Serial No. 542,060.

To all whom it may concern:

Be it known that I, EDWARD N. HALLETT, a citizen of the United States, and a resident of Canton, in the county of Bradford and State of Pennsylvania, have invented a new and Improved Dumb-Waiter, of which the following is a full, clear, and exact description.

My invention relates to dumb-waiters, and it has for its object to provide a pantry closet on a dumb-waiter so that when food is placed on the shelves of the closet the dumb-waiter may be lowered through an opening in the floor of the kitchen to the cool air of the cellar.

Another object of the invention is to construct a supporting frame on the dumb-waiter so that when the dumb-waiter is lowered with the frame, the working parts are disposed below the floor of the kitchen.

Another object of the invention is to provide a movable frame with which the closet is connected, the closet having a limited movement relatively to the frame, and the frame having a limited movement relatively to the standards, there being springs adapted for cushioning the closet against the frame at the termination of its movement in one direction relatively to the standards.

Still other objects of the invention will appear in the following complete description.

In this specification I will describe the preferred form of my invention, it being understood that the scope of the invention is defined in the appended claims.

Reference is to be had to the accompanying drawings forming a part of this specification in which similar characters of reference indicate corresponding parts in all the views.

Figure 1 is a front elevation of my invention with the closet raised through an opening in the floor of a kitchen; Fig. 2 is an enlarged view, similar to that shown in Fig. 1, with the closet lowered below the floor of the kitchen; Fig. 3 is a vertical sectional view of the same with the closet lowered and the valves of the closet and the ice chamber open to afford communication; Fig. 4 is a view similar to that shown in Fig. 3, but with the closet slightly raised a distance, the valves being closed; and Fig. 5 is an enlarged plan view showing the floor of the kitchen cut away.

By referring to the drawings it will be seen that standards 10 are provided, which are connected at their lower terminals by a rod 11, the standards 10 being connected to an open frame 12 at their upper terminals. The auxiliary standards 13 are disposed one at the outer side of each of the standards 10, these auxiliary standards being connected at their upper terminals with the open frame 12 by frame members 14, there being connecting frame members 15 at the lower terminals of the auxiliary standards 13, which connect the auxiliary standards 13 with coupling members 16 by which the standards 10 are connected to the rod 11. The standards 10 and 13 are hollow, and in them are disposed legs 17 and 18, these legs 17 and 18 being held in their proper positions relatively to the standards and auxiliary standards by set screws 19. The legs 18 have horizontal feet 20, which project at each side beyond the legs 18, these feet 20 being connected to sleeves 21 in which the auxiliary standards are disposed respectively by means of obliquely disposed rods 22.

A closet 23 is disposed between the standards 10, this closet having brackets 24, one projecting from each side, the brackets 24 having each two openings therein in which are disposed respectively standards 10 and bars 25. The bars 25 are connected at their bottom by a rod 26, and they also have lateral projections 27 with openings there-through in which are disposed the standards 10, coil springs 28 being wound around each of the standards 10 between the bracket 24 and the extensions 27.

To the sides of the closet 23 are secured loops or rings 29 in which the bars 25 are disposed, these bars 25 having stops or enlargements 30 at their upper terminals to prevent the loops or rings 29 from slipping off the top of the said bars.

Secured to the standards 10 at some distance from their lower terminals are studs 31, which are adapted to engage the springs 28, the brackets 24 having indentures at the side of the openings in which the standards 10 are disposed to permit the brackets to pass above the studs 31, the studs being adapted to engage the upper terminals of the springs 28 when the brackets are moved to the top of the standards 10.

Secured to the frame members 14 are

brackets 32 in which are journaled pulleys 33, there being counterweights 34 which have brackets 35 in which pulleys 36 are journaled. Cables 37 are provided which
 5 are secured to the brackets 32 and are disposed around the pulleys 33 and 36 respectively, and thence downwardly where they are secured to the brackets 24 at their lower terminals 38.

10 The floor of the kitchen is represented by the numeral 39, this floor having an opening 40 therein, through which the closet 23 is adapted to be moved, a hatch 41 being provided to cover this opening 40 in the
 15 floor, this hatch 41 being connected to the top of the closet 23 by supports 42 so that when the closet 23 is raised the hatch 41 is moved upwardly therewith, and when the closet 23 is lowered the hatch 41 is brought
 20 down around the opening 40 in the floor 39 closing it. The open frame 12 is secured to the under side of the floor 38 by means of clamps 43.

Secured to the under side of the floor 39
 25 in the rear of the opening 40 there is a bearing 44 in which is journaled a rock shaft 45, two arms 46 and 47 being secured to this rock shaft. To the arm 46 is pivoted a stud 48, which projects through a smaller
 30 opening in the floor 39. A bolt 49 is disposed in guides 50, the bolt 49 having a pin disposed in a slot 51 in the arm 47, the arm 47 being connected to the lower end of the guide 50 by means of a spring 52. The bolt
 35 49 has a head 53, which is adapted to engage the top of a cleat 54 secured to the closet 23 to prevent the upward movement of the closet.

On the frame members 55 is mounted
 40 means for supporting an ice chamber 64, which is provided with a valve seat 67, there being a second valve seat in the outer terminal of the collar 73, valves 69 and 76^a being provided for closing these valve seats,
 45 the valve 76^a being connected with the sleeve 74. The closet is provided with valve seats 68 and 83, which are adapted to be closed by valves 70 and 84. When the closet is lowered the arms 71 open the valves 69 and
 50 70, and the plate 82 engages the arm 81, to rock the shaft 77, to which the arm 78, which is articulated to the sleeve 74, is secured, thereby moving the sleeve 74 outwardly so that the member 76 will contact with and
 55 open the valve 84, the valve 76^a being moved to open the valve seat at the terminal of the collar 73. In this way the cold air in the ice chamber is permitted to circulate freely through the closet.

60 In using my invention, the operator by pressing on the stud 48 removes the head 53 of the bolt 49 from the cleat 54, and as this is done the springs 28 open to raise the closet slightly, the counterweights continuing this
 65 movement so that with very little help the

operator may raise the closet through the opening 40 through the floor 39 of the kitchen. As the closet moves upwardly the rings 29 engage the heads 30 of the bars 25, thereby carrying the bars 25 with them.
 70 The indentures 87 in the sides of the opening in the brackets 24 through which the standards 10 are disposed permit the brackets to move above the studs 31, the studs 31, however, engaging the upper terminals of the springs 28 to prevent the
 75 springs from passing thereabove. As the closet continues to move upwardly it assumes the position shown in Fig. 1 of the drawings, in which the brackets 24 are disposed just below the plane of the floor 39,
 80 the closet 23 being disposed above the floor, the bars 25 being disposed through the opening in the floor to serve as lateral supports for the closet 23 in its raised position, the springs 28 serving to cushion the termination of the upward movement of the bar
 85 25 inasmuch as the projections 27 engage the lower terminals of the springs 28, the upper terminals engaging the studs 31. When the operator has finished using the closet it may be pushed downwardly without difficulty, inasmuch as the counterweights 34 provide a very even balance,
 90 there being no necessity of carrying any ice or heavy bodies in the closet. As the closet 23 is pushed downwardly the brackets 24 again engage the upper terminals of the springs 28, the lower terminals of these springs engaging the projections 27 and
 95 forcing the bars 25 downwardly, the closet assuming the position shown in Fig. 2 of the drawings when it is disposed below the floor 39, the hatch 41 moving down with the closet 23 to cover the opening 40 in the
 105 floor.

Having thus described my invention, I claim as new and desire to secure by Letters Patent:

1. In a dumb waiter a standard, a frame
 110 adapted to move relatively to the standard, a closet having a sliding engagement with the frame, means for limiting the movement of the closet relatively to the frame, a spring on the standard supported by the frame, and
 115 means adapted to be engaged by the spring for checking the movement of the frame.

2. In a dumb waiter a standard, a frame having a bar adapted to move relatively to the standard, a closet having a guide which
 120 engages the bar, and a spring on the standard one end of which is engaged by the frame, the other end of the spring being adapted for engaging a member of the closet.

3. In a dumb waiter two standards, a
 125 frame having two bars and two openings in which the standards are disposed respectively, a closet, two brackets secured to the closet each bracket having two openings in which a standard and a bar are disposed re-
 130

spectively, and two guides secured to the closet, having a sliding engagement with the bars.

4. In combination with a floor member a frame adapted to be moved relatively to the floor member, a closet having a sliding engagement with the frame, a spring carried by the frame adapted to be engaged by a member of the closet, and an additional member for engaging the spring for checking the movement of the frame.

5. In combination with a floor member a frame adapted to be moved relatively thereto, a closet having a sliding engagement with the frame, springs carried by the frame adapted to be engaged by a member of the closet, an additional member for engaging the springs for checking the movement of the frame, and members on the frame for limiting the movement of the closet relatively thereto.

6. In a dumb-waiter, a guide way, the members of which are adapted for having a sliding engagement with each other, a closet adapted for having a sliding engagement with the guide way, and a spring on the guide way adapted for cushioning the closet when its limit of movement has been reached.

7. In a dumb-waiter, a guide way consisting of standards, a frame having bars adapted to move relatively to the standards, a closet having guides which engage said guide way, a spring on a standard, one end of which is engaged by the frame, the other end of the spring being adapted for engaging a member of the closet, and a projection on the standard which is also adapted to engage the spring.

8. In a dumb-waiter, a guide way consisting of standards, a frame having bars adapted to move relatively to the standards, a closet having guides which engage said guide way, a spring on a standard, one end of which is engaged by the frame, the other end of the spring being adapted for engaging a member of the closet, a projection on the standard which is also adapted to engage the spring, and means adapted for holding the closet yieldingly upward.

9. In a dumb waiter a standard, a frame having a bar and an opening in which the standard is disposed, and a closet having a bracket with two openings in which the bar and the standard are disposed respectively.

10. In a dumb-waiter, a standard, a frame having a bar and an opening in which the standard is disposed, a closet having a bracket with two openings in which the bar and the standard are disposed respectively, and a guide on the closet which has a sliding engagement with the bar.

11. In a dumb-waiter, two standards, a frame having two bars and two openings in which the standards are disposed respectively, a closet, two brackets secured to the

closet, each bracket having two openings in which a standard and a bar are disposed respectively, two guides secured to the closet and disposed at a distance above the brackets, which guides have a sliding engagement with the bars, and means adapted for limiting the movement of the guides in one direction relatively to the bars.

12. In a dumb-waiter, two standards, a frame having two bars and two openings in which the standards are disposed respectively, a closet, two brackets secured to the closet, each bracket having two openings in which a standard and a bar are disposed respectively, two guides secured to the closet and disposed at a distance above the brackets, which guides have a sliding engagement with the bars, means adapted for limiting the movement of the guides in one direction relatively to the bars, and means adapted for yieldingly raising the closet.

13. In a dumb-waiter, two standards, a frame having two bars and two openings in which the standards are disposed respectively, a closet, two brackets secured to the closet, each bracket having two openings in which a standard and a bar are disposed respectively, two guides secured to the closet and disposed at a distance above the brackets, which guides have a sliding engagement with the bars, means adapted for limiting the movement of the guides in one direction relatively to the bars, stops on the standards, and springs on the standards which are engaged by the frame at one set of ends and are adapted to engage the brackets and stops on the standards.

14. In a dumb-waiter, two standards, a frame having two bars and two openings in which the standards are disposed respectively, a closet, two brackets secured to the closet, each bracket having two openings in which a standard and a bar are disposed and disposed at a distance above the brackets, which guides have a sliding engagement with the bars, means adapted for limiting the movement of the guides in one direction relatively to the bars, means adapted for yieldingly raising the closet, stops on the standards, and springs on the standards which are engaged by the frame at one set of ends and are adapted to engage the brackets and the stops on the standards.

15. In a dumb waiter two standards, a frame having two bars and two openings in which the standards are disposed respectively, a closet, two brackets secured to the closet, each bracket having two openings in which a standard and a bar are disposed respectively, two guides secured to the closet having a sliding engagement with the bars, means adapted for yieldingly raising the closet, stops on the standards, and springs

on the standards which are engaged by the frame, at one set of ends and are adapted to engage the brackets and the stops.

16. In a dumb-waiter, two standards, a frame having two bars and two openings in which the standards are disposed respectively, a closet, two brackets secured to the closet, each bracket having two openings in which a standard and a bar are disposed respectively, two guides secured to the closet and disposed at a distance above the brackets, which guides have a sliding engagement with the bars, means adapted for limiting the movement of the guides in one direction relatively to the bars, a rock shaft secured in close proximity to the floor, an arm secured to the rock shaft, which has a member projecting through an opening in the floor, a bolt which is adapted for engaging an uneven surface of the closet, and a second arm on the rock shaft, the second arm being articulated to the bolt.

17. In a dumb-waiter, standards, a frame having a bar and an opening in which one of the standards is disposed, a closet having a bracket with two openings in which the bar and the said standard are disposed respectively, a rock shaft journaled in close proximity to the floor, an arm secured to the rock shaft, a bolt, which is adapted for engaging an uneven surface of the closet, and a second arm on the rock shaft, the second arm being articulated to the bolt.

18. In a dumb-waiter, a floor with an opening therethrough, two standards, an open frame, one standard being secured thereto at each side, means adapted for securing the frame around the opening in the floor, a frame member connecting the standards at a distance from the open frame, legs which support the standards and which are adjustable relatively thereto, and means to secure the legs to the standards in a predetermined position.

19. In a dumb-waiter, a floor with an opening therethrough, two standards, an open frame, one standard being secured thereto at each side, means adapted for securing the frame around the opening in the floor, a frame member connecting the standards at a distance from the open frame, legs which support the standards and which

are adjustable relatively thereto, means to secure the legs to the standards in a predetermined position, auxiliary standards with lateral members, which are connected with the open frame, legs for the auxiliary standards, which are adjustable relatively to the auxiliary standards, means to secure the legs to the auxiliary standards in predetermined positions, lateral extending members secured to the bottom of the legs, and sleeves secured to each pair of the said lateral members, the auxiliary standards being disposed in the sleeves respectively.

20. In a dumb waiter a standard, a frame having a bar and an opening in which the standard is disposed, a closet having a bracket with two openings in which the bar and the standard are disposed respectively, and a spring carried by the frame adapted to be engaged by the bracket.

21. In a dumb waiter a standard, a frame having a bar and an opening in which the standard is disposed, a closet having a bracket with two openings in which the bar and the standard are disposed respectively, a spring carried by the frame, and means for engaging the spring for checking the movement of the frame.

22. In combination with a floor having an opening, a standard, a frame having a sliding engagement with the standard, a closet having a sliding engagement with the frame, and a hatch for covering the opening in the floor, secured to the closet.

23. In combination with a floor having an opening, a frame adapted to be moved relatively to the floor, a closet having a sliding engagement therewith, a spring carried by the frame adapted to be engaged by a member of the closet, an additional member for engaging the spring and for checking the movement of the frame, and a hatch for closing the opening in the floor carried by the closet.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

EDWARD NORTH HALLETT.

Witnesses:

JAY G. BLAKEMEN,
HENRY N. HALLETT.