

No. 618,040.

Patented Jan. 17, 1899.

J. E. LEHRMAN.

DUMB WAITER.

(Application filed May 9, 1898.)

(No Model.)

FIG-2-

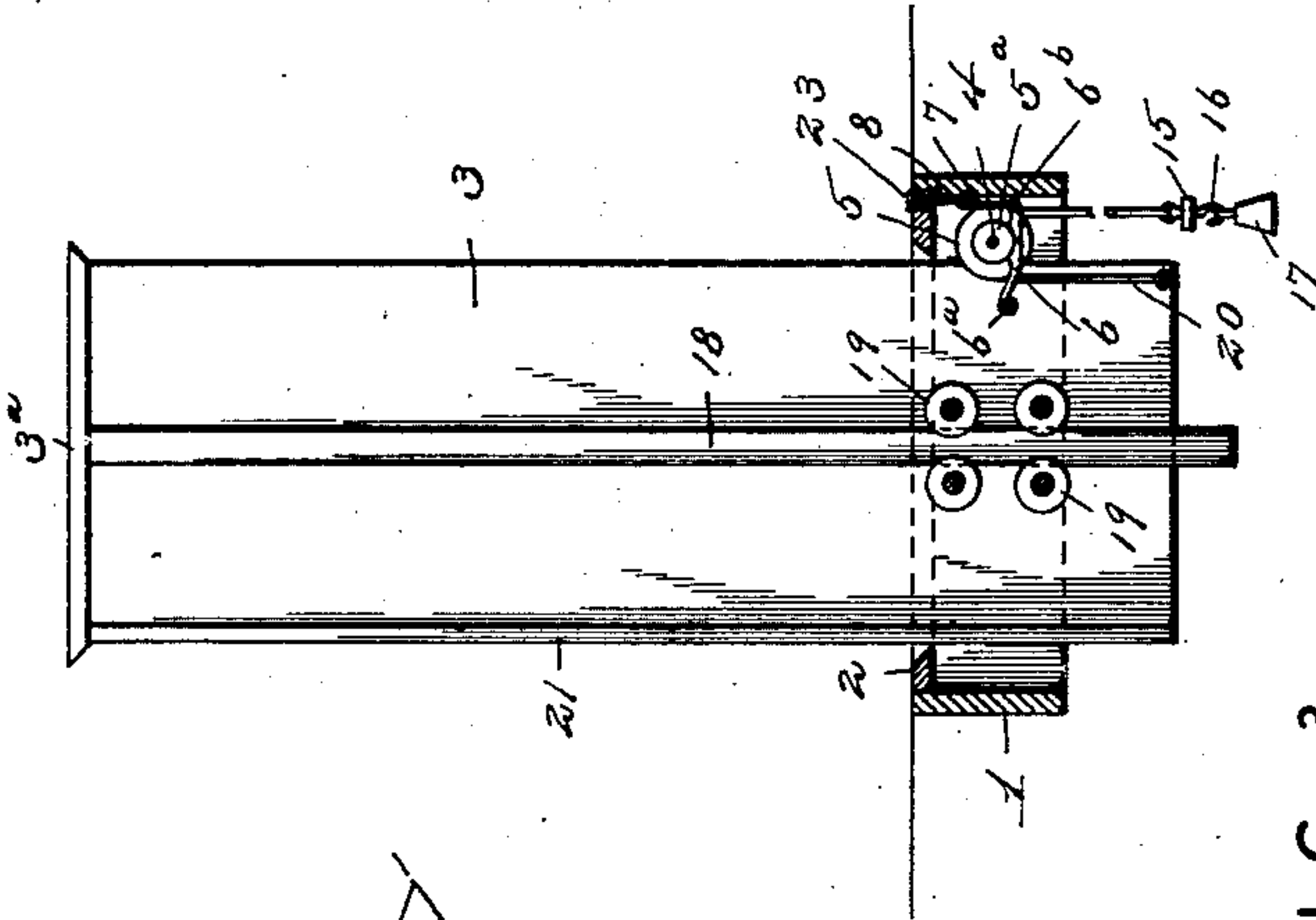


FIG-3-

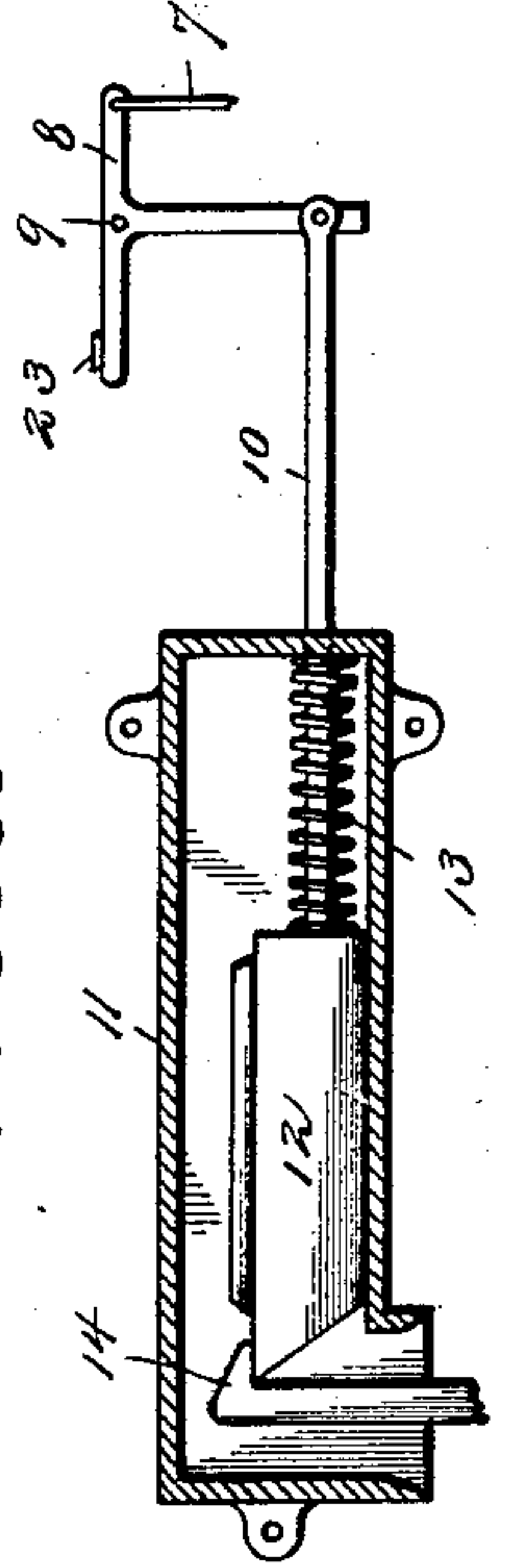


FIG-1-

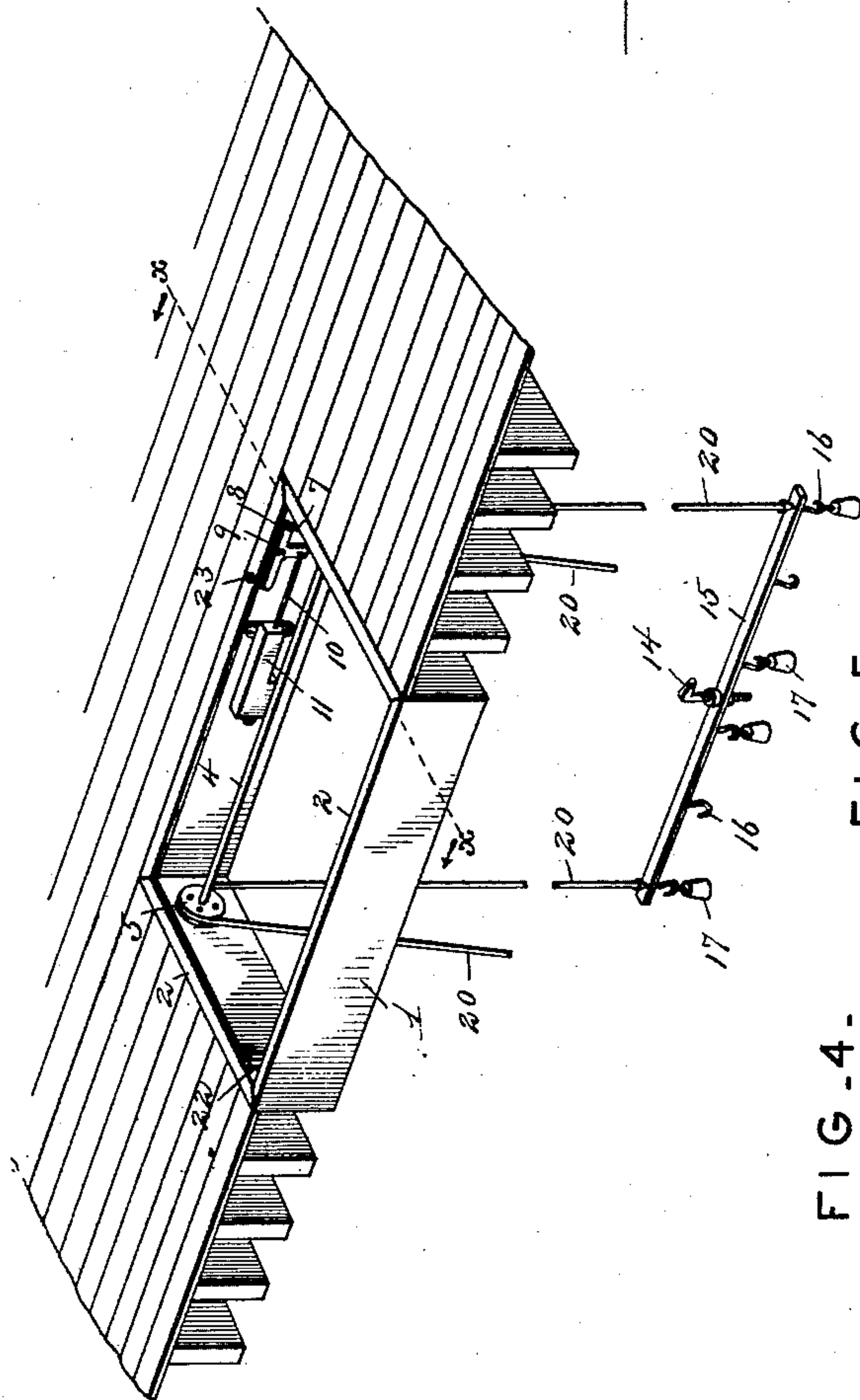


FIG-5-

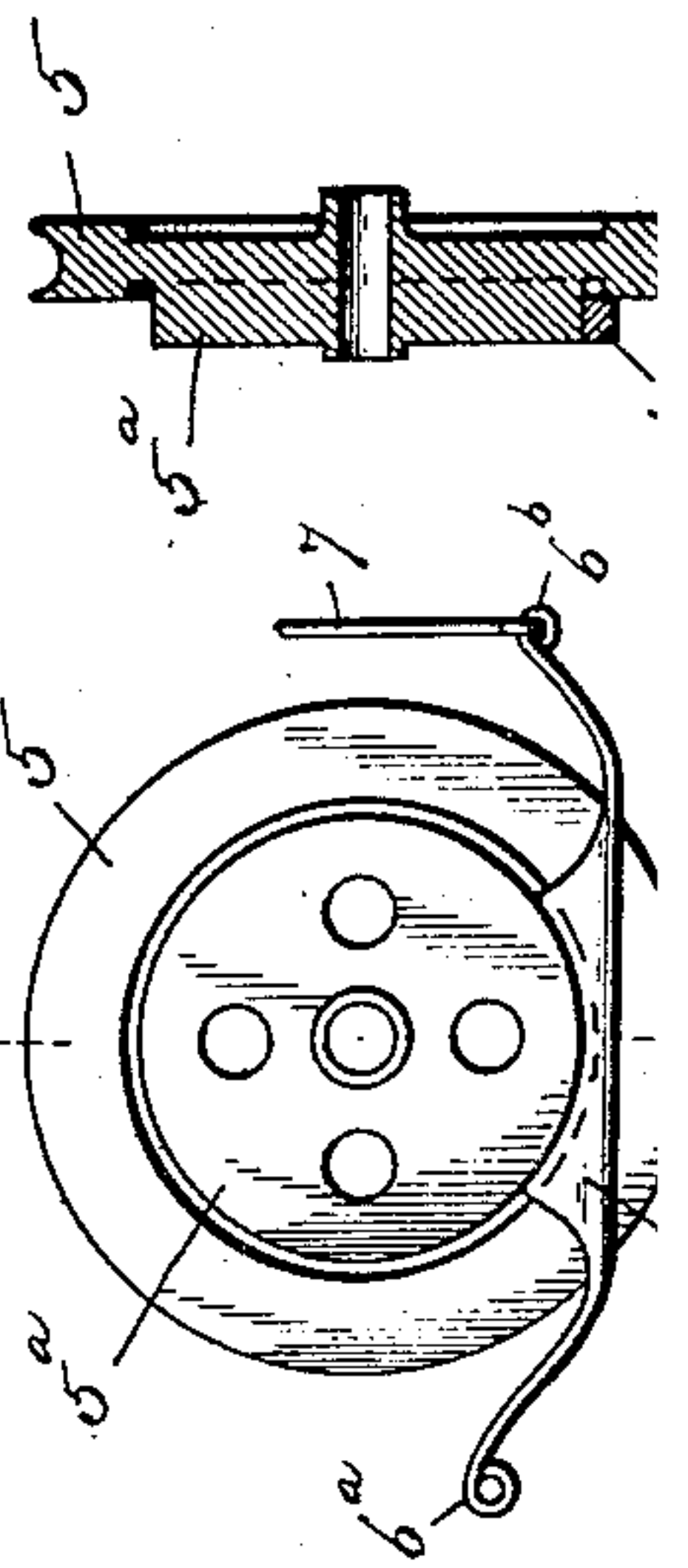
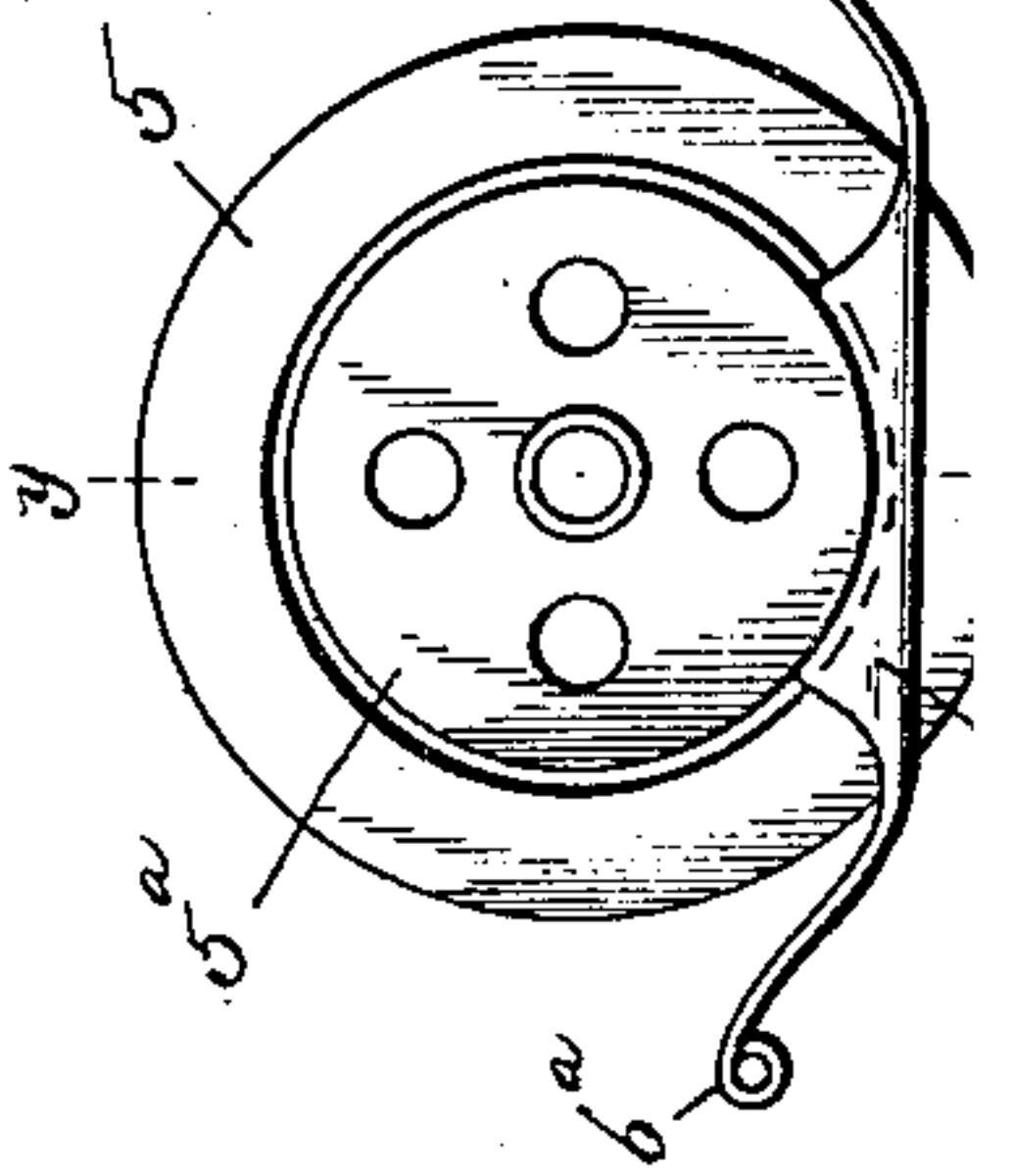


FIG-4-



Witnesses

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UNITED STATES PATENT OFFICE.

JAMES E. LEHRMAN, OF ALLENTOWN, PENNSYLVANIA, ASSIGNOR TO
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DUMB-WAITER.

SPECIFICATION forming part of Letters Patent No. 618,040, dated January 17, 1899.

Application filed May 9, 1898. Serial No. 680,197. (No model.)

To all whom it may concern:

Be it known that I, JAMES E. LEHRMAN, a citizen of the United States, residing at Allentown, in the county of Lehigh and State of Pennsylvania, have invented certain new and useful Improvements in Dumb-Waiters; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

The invention relates to that class of dumb-waiters designed to pass through an opening in the flooring and to have its top flush with and covering said opening when the waiter is not in use.

It consists in the arrangement of means for facilitating the operation of the waiter, for controlling the movements thereof, and for locking the waiter in its adjusted position, as hereinafter described and claimed.

In the accompanying drawings, Figure 1 represents in perspective the frame in a flooring for the passage of the dumb-waiter and the actuating devices, the waiter being removed to show the operating parts. Fig. 2 is a section on the line *xx* of Fig. 1, showing the waiter in side elevation and partly elevated. Fig. 3 is a section through the latch-casing, showing the adjacent operating parts in elevation. Fig. 4 is a side elevation of the brake-wheel and brake, and Fig. 5 is a vertical section through the same on the line *yy* of Fig. 4.

1 indicates a rectangular frame seated in an opening in a floor through which the waiter is designed to pass and provided on its upper edges with inwardly inclined or beveled faces (indicated at 2) designed to receive and snugly hold the beveled top 3^a of the waiter (indicated at 3, Fig. 2) for snugly closing the opening when the waiter is down, said top being designed to rest flush with the flooring and to form a part thereof.

4 indicates a shaft extending transversely across the opening in rear of the waiter and provided on each end with a grooved pulley or sheave 5, fast on said shaft, the sheave at one end being provided with a hub or disk 5^a on its side adjacent to the frame and with which the friction-shoe 6 engages for control-

ling the movement of the pulley to which said friction hub or disk 5^a is connected. The disk 5^a is preferably formed integral with the pulley 5, but may be made separate and united thereto in any suitable manner. The shoe 6 is provided with elastic arms, one of which is pivoted at 6^a and the other provided with an eye 6^b, from which a cord 7 extends upward to one arm of a T-shaped lever 8, pivoted at 9 to the rear wall of the casing. The pendent arm of the T-shaped lever 8 is connected with a rod 10, which extends through a perforation in the adjacent end wall of the latch-casing 11 and has its opposite end connected with a latch 12, which is adapted to slide within suitable guides within said casing. Intermediate the latch 12 and the end wall through which the rod 10 passes said rod is surrounded by a spiral spring 13, the tension of which is exerted to press the latch 12 away from said end wall and into engagement with a hook 14, having an inclined end conforming to the incline of the forward beveled end of the latch 12, so that as said hook rises it is adapted to crowd the latch 12 backward and to pass by the same, after which the tension of the spring 13 forces the latch 12 into engagement with the hook 14 for upholding it. The hook 14 is fast on a horizontal bar 15, being secured therein by means of a screw-threaded lower end and nuts which permit its adjustment relative to the bar 15 for adapting it to properly engage the latch 12 when the bar is elevated. The bar 15 is provided with a series of pendent hooks 16, from which are suspended weights 17 for counterbalancing the weight of the dumb-waiter.

The waiter is of rectangular form, adapting it to slide easily and smoothly through the frame 1, and is provided upon its opposite sides with upright cleats 18, arranged to move between friction-rollers 19, arranged in pairs and journaled to the end walls of the casing to engage the cleats 18 between them for guiding the latter and the dumb-waiter in its vertical movements.

The waiter 3 has cords 20 secured to its lower end; one upon each side, said cords passing thence up over the sheaves 5 and down to the weighted bar 15, the arrange-

ment being such that as vertical movement is imparted to the waiter 3 a corresponding movement in the reverse direction is imparted to the bar 15.

5 The waiter 3 is provided adjacent to its forward face with projecting lips or flanges 21, which move in grooves in cleats 22, adjacent to the forward ends of the frame, as indicated in Fig. 1, thereby serving further
10 to steady the movements of the waiter and preventing its rocking relative to the guide-rollers 19. The end of the T-shaped lever opposite that connected with the cord 7 is provided with a button 23, by pressure upon
15 which with the finger or foot the lever is rocked upon its pivot 9 for withdrawing the latch from the hook 14 and releasing the weighted bar 15 for allowing the waiter to be forced downward for closing the opening in
20 the flooring. As the button 23 is pressed it will be observed that the tension upon the cord or rod 7, connected with the brake-shoe 6, is increased so as to hold the dumb-waiter securely at the instant of release and until
25 the same is under the control of the operator.

The operation of the dumb-waiter will be readily understood from the foregoing description, and it will be apparent that it may be placed in the floor of a dining-room connected with a basement-kitchen or in the
30 floor of a kitchen connected with a cellar for carrying articles into the cellar for cooling or refrigerating purposes. It will also be apparent that the form and arrangement of the
35 several parts may be varied without departing from the invention as hereinbefore described.

Having thus described the invention, what is claimed as new, and sought to be secured
40 by Letters Patent, is—

1. The combination with a dumb-waiter, of a weighted bar carrying an upright hook, a spring-actuated latch for engaging said hook when the weighted bar is lifted, a lever connected with said latch to be actuated thereby, 45 and a brake-shoe connected to said lever and in frictional engagement with the hub or disk on the cord-sheave, substantially as described.

2. A cord sheave or pulley over which the cord for actuating the dumb-waiter passes, 50 provided with a hub or disk, a brake-shoe engaging said disk and provided with elastic or yielding arms one of which is pivoted to the frame through which the waiter passes, the opposite arm of said brake-shoe being 55 connected with a lever, and a spring-actuated latch also connected to said lever, to act upon said shoe, substantially as and for the purpose described.

3. The combination with a dumb-waiter, 60 of the weighted cords 20 connected at one end to said waiter, the weighted bar connected to the opposite ends of said cords, the grooved pulleys intermediate the waiter and said weighted bar fast upon a transverse shaft, 65 a hook adjustable on said weighted bar, a spring-actuated latch for engaging said hook, a lever connected to said spring-actuated latch, a brake-shoe engaging a disk fast on one of the rope-sheaves, and connections be- 70 tween said brake-shoe and the lever connected with the spring-actuated latch, substantially as described.

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

JAMES E. LEHRMAN.

Witnesses:

JOHN LEHRMAN,
JNO. W. SEPP.