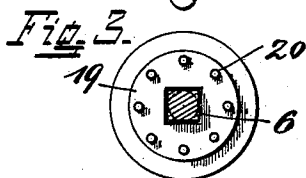
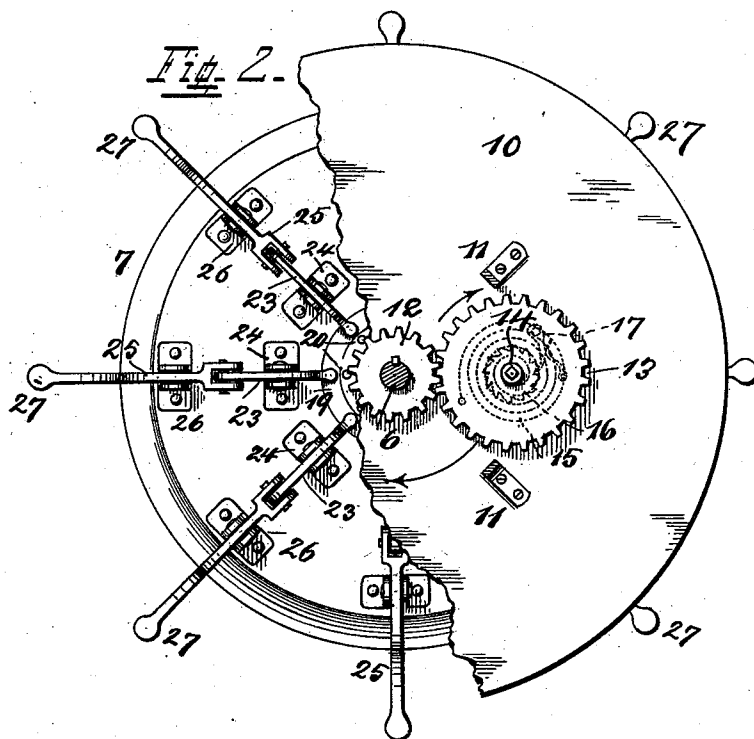
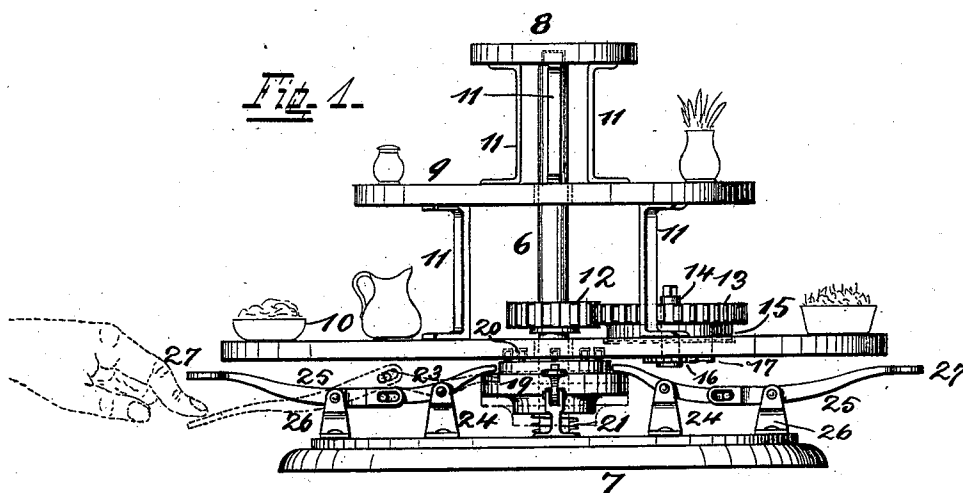


(No Model.)

J. BURHEN.
AUTOMATIC TABLE WAITER.

No. 534,423.

Patented Feb. 19, 1895.



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UNITED STATES PATENT OFFICE.

JACOB BURHEN, OF RIVERSIDE, OHIO.

AUTOMATIC TABLE-WAITER.

SPECIFICATION forming part of Letters Patent No. 534,423, dated February 19, 1895.

Application filed October 31, 1894. Serial No. 527,566. (No model.)

To all whom it may concern:

Be it known that I, JACOB BURHEN, a citizen of the United States, and a resident of Riverside, Hamilton county, State of Ohio, have invented a certain new and useful Automatic Table-Waiter; and I do 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, attention being called to the accompanying drawings, with the reference-numerals marked thereon, which form a part of this specification.

This invention relates to improvements in self-waiting carriers or shelves for dining-room or restaurant-tables, lunch-counters, &c. The object of such devices is to enable a diner to help himself to any certain plate or article without being compelled to ask other diners or to call for a waiter to pass such article within his reach.

The feature of my invention relates more particularly to the construction whereby the supports or shelves, carrying the eatables are caused to move to bring the latter within reach and whereby they, after having arrived at the desired position, are caused to stop.

In the following specification and particularly pointed out in the claims, is found a full description of my invention, its operation, parts, and construction, the latter being also illustrated in the accompanying drawings, in which—

Figure 1, is a side-elevation of the device complete. Fig. 2, is a top-view of the lower shelf, parts broken away, and Fig. 3, is a similar view of a part of the release and stop mechanism detached.

6, is an upright, or standard secured to and rising up from a base 7.

8, 9, and 10, are a number of shelves, preferably round, with increasing diameters from the upper to the lower one and serve to carry the different plates with eatables, spices, relishes, &c. The upper shelf has on its under side a socket into which the upper end of the standard loosely passes, to support it. The other shelves below have each an opening in its center through which standard 6, passes without being however in any way connected to them. The shelves are all connected to each other by brackets 11, reaching from one

to the other, so that if any one of them is rotated they all move together.

The motive mechanism may be located on any shelf but preferably the largest one is selected on account of the greater space it offers. This mechanism consists of a pinion 12, rigidly and immovably secured to the central standard 6. A cog-wheel 13, is loosely secured to an upright pin 14, pivotally fastened to shelf 10, and meshes into the pinion first mentioned. Below wheel 13, is a spiral spring 15, the inner end of which is secured to pin 14, while its outer end is secured to said wheel. Pin 14, projects through shelf 10, and carries on the under side of the latter a ratchet-wheel 16, which engages with a pawl 17, whereby it with pin 14 is kept from turning back during the winding of the spring and whereby also this latter is held wound.

The locking and releasing mechanism consists substantially of a loose collar 19, capable of sliding up and down on the lower part of standard 6, preferably between base 7 and the lower shelf. It is in any suitable manner prevented from turning either by a key or by making the center post square at this part. On its upper side, this collar carries a number of pins 20, which by a spring 21, bearing against the collar, are normally held in engagement with correspondingly situated holes in the under side of the lower shelf.

Spiral spring 15, is wound by means of a suitable key which is inserted into the upper square end of pin 14, which is then rotated until the spring has received the desired tension. By means of the pawl, and ratchet, the spring is now held and through the center pin, wheel 13, receives therefrom its active force and tendency to turn. If permitted to rotate it will also at once leave its position and start to circle around pinion 12, because this latter is incapable of turning. In this motion it will carry with it the shelf because the pivot about which wheel 13, revolves, is secured thereto. Normally such rotation of wheel 13 and the shelf is prevented however by the engagement of the latter with the pins on collar 19, which cannot turn, while at the same time immovable pinion 12, by its engagement with wheel 13, prevents spiral-spring 15, from running off at once. If shelf 10, is disengaged however from the pins of

collar 19, by a depression of the latter, wheel 13, is set free to rotate and under the active force of the unwinding spring 15, starts to circle around the pinion and takes the shelves with it.

Collar 19, is operated, that is depressed by a number of levers 23, resting with one end on top of it and pivoted at 24. Their other ends connect to levers 25, pivoted at 26, and terminating in key-bars 27. The pivotal supports of these levers are all secured to base 7 so as to have all parts together and complete in one. Of these levers and key-bars, the operation of any one of which has the same effect, a suitable number are provided which extend out radially all around from under the lower shelf so that the latter may be started from any side. After started, the particular key is held depressed to keep pins 20 out of engagement until the desired object passes within reach, when the key is released to permit the collar to carry the pins up again to engage with the shelf for the purpose of stopping the same. These pins may be omitted and the shelves be prevented from rotating by the mere frictional contact between said collar and the lower shelf.

Having described my invention, I claim as new—

1. In an automatic table-waiter, the combination of a stack of shelves, upwardly decreasing in diameter and all connected to each other by brackets 11, passing from one shelf to the next one, a base and an upright standard on it, the latter passing loosely through a central perforation in all the shelves and terminating below the uppermost one, which is imperforate and thereby supports the whole stack on the standard, a pinion 12 rigidly secured to the latter, a spring-driven cog-wheel carried by one of the shelves and in mesh with the pinion and a stop-mechanism normally in engagement with the shelves whereby their rotation may be started or terminated.

2. In an automatic table-waiter, the combination of a base, a central support or stand-

ard thereon, a series of shelves of which one rests on said standard and all of which are connected together so as to move as one, a pinion rigidly secured to the central support, a spring-actuated cog-wheel in mesh therewith and pivotally secured to the shelves and a stop-mechanism normally in engagement with the latter and which permits them to be started from any side exteriorly and to be stopped in any position after starting.

3. In an automatic table-waiter, the combination of a base, a central support or standard thereon, a series of shelves of which one rests on said standard and all of which are connected together so as to move as one, a motive mechanism for them, a vertically adjustable collar with pins 20, normally in engagement with the shelves and levers and key-bars to operate the collar.

4. In an automatic table-waiter, the combination of a base, a central support or standard thereon, a series of shelves of which one rests on said standard and all of which are connected together so as to move as one, a pinion rigidly secured to the central support, a spring-actuated cog-wheel in mesh therewith and pivotally secured to the shelves, a vertically adjustable collar with pins 20 normally in engagement with the shelves and levers and key-bars to operate the collar.

5. In an automatic table-waiter, the combination of a series of shelves capable of rotation about a central support, a pinion rigidly secured to the central support, a spring-actuated cog-wheel in mesh therewith and pivotally secured to the shelves, a vertically adjustable collar with pins 20, normally in engagement with the shelves and levers and key-bars to operate the collar.

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

JACOB BURHEN.

Witnesses:

C. SPENGEL,
WM. KRAMER.