Oct. 17, 1950 W. J. BRYAN ET AL 2,526,536

CONVEYER MEAL ORDER DEVICE

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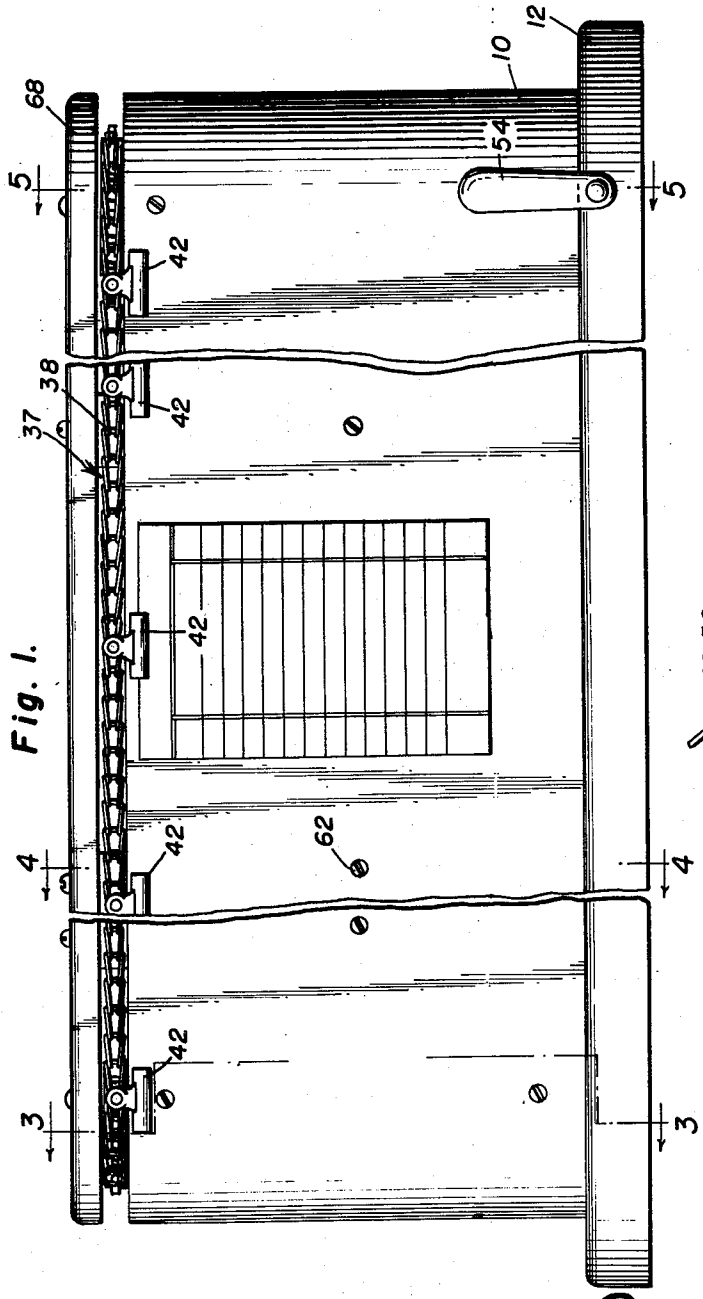


Fig. 1.

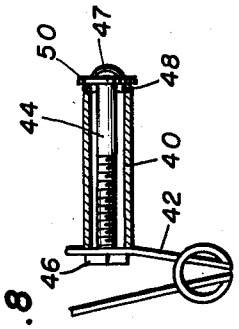


Fig. 8

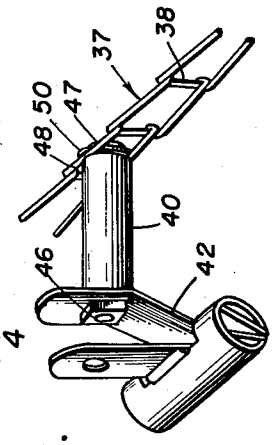


Fig. 7.

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CONVEYER MEAL ORDER DEVICE

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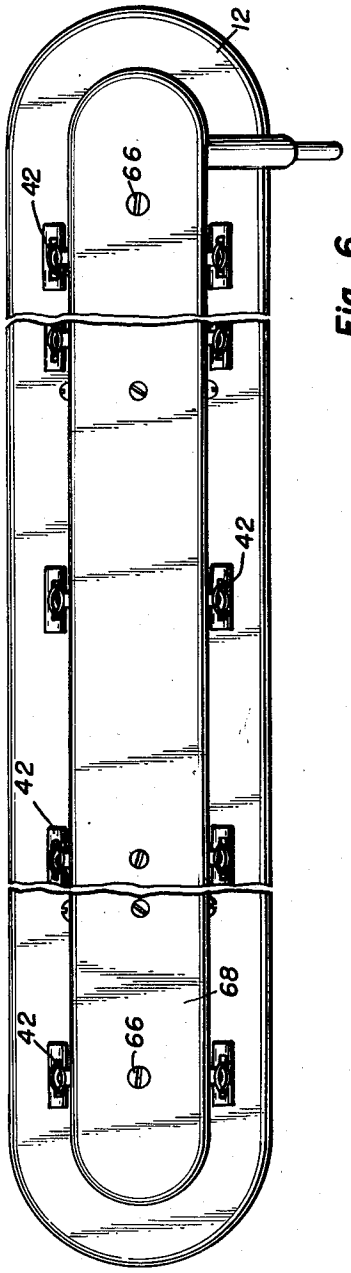


Fig.2.

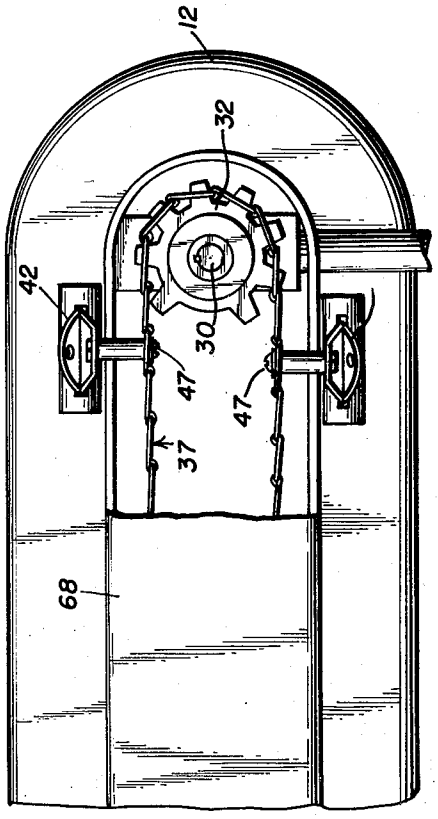


Fig. 6.

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Fig. 5.

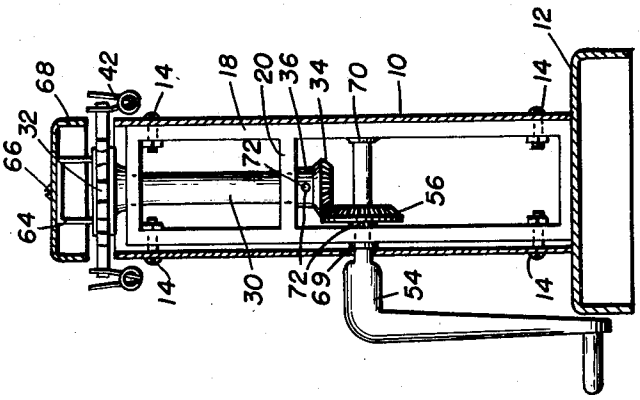


Fig. 4.

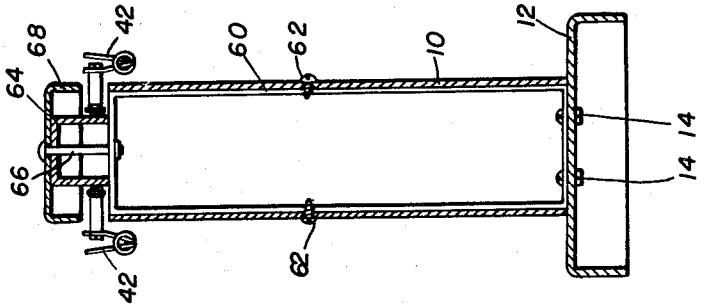
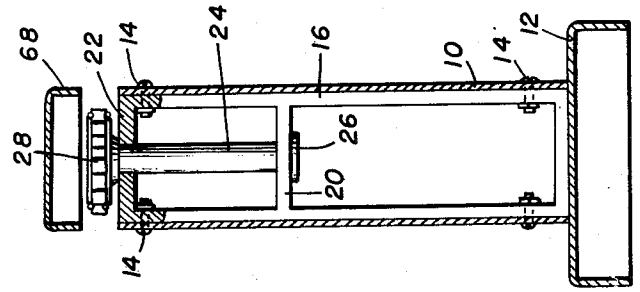


Fig. 3.



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UNITED STATES PATENT OFFICE

2,526,536

CONVEYER MEAL ORDER DEVICE

William J. Bryan and Joe E. Vrla, Dallas, Tex.

Application March 20, 1947, Serial No. 735,906

3 Claims. (Cl. 40—97)

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This invention relates to novel and improved devices of the endless conveyor type for receiving and conveying meals, drinks and the like orders in a closed path of travel.

A further object of this invention is to provide resilient means for clipping said indicia bearing cards to said endless conveyor means.

A still further object of this invention is to provide an actuating means for said journalling means.

Another object of this invention is to provide a mechanically simple device of the character described which is convenient in use and efficient in operation.

Ancillary objects and features of novelty shall become apparent to those skilled in the art, as well as those specifically mentioned herein above, in following the description of the illustrated preferred embodiment of the present invention, depicted in the accompanying drawings, wherein:

Figure 1 is a broken side elevational view of the preferred embodiment of the present invention;

Figure 2 is a plan view of the invention disclosed in Figure 1;

Figure 3 is a transverse sectional view of the invention disclosed in Figure 1 taken substantially on the line 3—3 thereof and in the direction of the arrows;

Figure 4 is another transverse sectional view of the invention disclosed in Figure 1 and taken substantially on the line 4—4 thereof and in the direction of the arrows;

Figure 5 is a transverse sectional view of the invention disclosed in Figure 1 and taken substantially on the line 5—5 thereof and in the direction of the arrows, the handle or crank actuating means shown in elevation for convenience;

Figure 6 is a broken plan view of the invention disclosed in Figure 1 with parts broken away to illustrate details of construction;

Figure 7 is a perspective view of the preferred form of resilient clipping means adapted to be used in conjunction with the present invention, and

Figure 8 is a transverse sectional view, with parts shown in elevation of the clipping means disclosed in Figure 7.

Referring now in detail to the illustrated preferred embodiment of the present invention, like reference characters are used throughout to indicate similar elements.

It is within the purview of this invention to

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provide a device adapted to be utilized in restaurants, hotels, homes, night clubs and the like. Usually, the kitchen is disconnected from the dining rooms in these above mentioned establishments and usually, a plurality of waiters or waitresses discharge their duties in the dining rooms. It is customary to have an aperture in the wall separting the dining rooms from the kitchen and it is further customary for waiters and/or waitresses to submit indicia bearing cards to the cook in ordering meals, drinks and the like. Accordingly, the preferred embodiment of the present invention may be placed in this usual aperture and the waiters may place this card or cards on a selected one of the resilient clip means. The cook (or waiter) may rotate the actuating means for pulling the indicia bearing cards from the dining room to the kitchen for subsequent filling of the same. It is noted that by the use of the present invention, there is no danger of any one order being taken out of turn.

A suitable, preferably metallic housing 10 is provided of substantially rectangular configuration.

A base member 12 may be provided thereon to act as a base. It will be noted that any suitable securing means may be used in connection with holding the base to the said housing 10, as illustrated in Figure 4, showing conventional screws and bolts 14.

A pair of frame members 16 and 18 respectively are provided at alternate ends of the said housing 10 and are received in fixed relation therewith by suitable conventional securing means such as the bolts 14. The said frame members 16 and 18 respectively are provided with cross members 20. Aligned apertures are provided through the intermediate cross members 20 and through the upper cross members 22. A first shaft 24 is rotatably journaled in the apertures in said cross members and a suitable limiting collar 26 is provided at one end thereof. A discontinuous or mutilated gear 28 is provided at the opposite end of said shaft 24, said gear having a suitable collar thereon adapted to abut the upper cross members 22 thereby providing a thrust bearing. A second shaft 30 is rotatably journaled in the apertures in the said cross members of frame 18 and a gear 32 is provided at one end thereof, identical to the described gear 28. A beveled gear 34 having a collar 36 integral therewith is provided on the opposite end thereof of the said shaft 30. The collar 36 is adapted to engage the lower or intermediate cross members 20 thereby acting as a thrust bearing.

Chain means 37 extends around the said gears 28 and 32 respectively and the said chain means 37 is of the endless variety. In the construction of said chain means there is a plurality of lug members 38 adapted to engage the addendum and dedendum of each gear tooth. This construction is obviously similar to the chain-sprocket construction commonly used in many arts. It will be noted from an inspection of Figure 6, that the gears 28 and 32 are splined and pinned to the respective shaft associated therewith and that a gear tooth is missing therefrom, rendering said gears discontinuous.

Means for resiliently retaining indicia bearing cards are provided at predetermined spaced intervals on the said chain means. The said resilient retaining means is composed of a plurality of conventional elements coacting to provide an extremely satisfactory and serviceable device. A sleeve 40 has a conventional resilient clip 42 secured to one end thereof by means of a suitable bolt 44 and the usual complemental nut 46. It is apparent from an inspection of Figures 7 and 8 that the said bolt 44 extends through the bore of the sleeve 40 holding the clip 42 at one end thereof and the head 47 of the said bolt engages a selected link 48 of the said chain means 37. It will be further noted that a washer 50 may interposed between the link 48 and head 47 if so desired, or preferably, the head 47 of said bolt 44 may be provided with an extension therearound to act as a washer. A purpose of having the gears 28 and 32 discontinuous is now deemed quite apparent and particularly upon inspection of Figure 6, it will be seen that the head 47 extends through one of the spaces normally occupied by gear teeth. By use of discontinuous gears no undue amount of extortion or interference takes place in actuation of the chain means.

In order to set the invention in motion, a crank 54 is rotatably received in the said frame 18 and a gear, preferably a bevel gear 56 is adjustably secured to said crank. This gear 56 cooperates with the above mentioned gear 34. Upon rotation of the said crank 54 it will be obvious that the gear 56 rotates the gear 34 which in turn rotates the shaft 30 and consequently the chain means 37.

In the central portion of the housing 10, that is between the frames 16 and 18, there is a second housing 60 adapted to be used as a spacer. This housing 60 may be secured within the said housing 10 by conventional friction securing means such as sheet metal screws 62. A channel member 64 is provided at the top portion of the said inner housing 60 and is secured thereto by studs 66. Received on the said channel 64 is a second, larger channel 68 adapted to substantially cover the chain means 37 and other mechanical features. It will be noted that the frame 18 is spaced from a selected wall of the housing 10 and a bearing 69 is secured therebetween. Further, a perch 70 is provided on a selected wall of the said frame 18 to assist in journalling the said

crank 54. To compensate for wear, the said gears 56 and 34 are preferably adjustably secured to their respective journalling members by some suitable conventional means such as set screws 72.

There has been described a device capable of performing all of the specifically mentioned objects as well as ancillary objects of this invention. However, it is apparent to those skilled in the art, that various changes including omissions, additions, variations as to size, shape and rearrangement of elements, may be made herein without departing from the spirit of the invention. Acordingly, limitation is sought only in accordance with the scope of the following claims.

Having thus described this invention what is claimed as new and desired to be secured by Letters Patent is:

1. A display device comprising a stand, a pair of gears carried by said stand each of said gears having teeth with a blank space between teeth of both gears, an endless conveyor member mounted on said gears, means disposed at spaced intervals on said conveyor member for supporting cards, and said means being so spaced that upon operation of said gears and said member the card supporting means is disposed in the blank spaces.

2. A display device comprising a stand, a pair of mutilated gears mounted for rotation on said stand, an endless chain enmeshed with both of said gears and means carried by said stand for operating one of said gears thereby actuating said chain, means carried by said chain at spaced intervals for supporting cards, said means being spaced so that said card supporting means is substantially in alignment with the peripheral portions of the gears having no teeth while said chain is being actuated.

3. A display device comprising a stand, a pair of mutilated gears mounted for rotation on said stand, an endless chain enmeshed with both of said gears and means carried by said stand for operating one of said gears thereby actuating said chain, means carried by said chain at spaced intervals for supporting cards, said means being spaced so that said card supporting means is substantially in alignment with the peripheral portions of the gears having no teeth while said chain is being actuated, a cover for said chain carried by said stand, and said card supporting means projecting between said cover and said stand.

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JOE E. VRLA.

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