March 10, 1942. F. HIRSCH 2,275,527

AUXILIARY MOTORIZED BASE FOR RECIPROCATING AT WILL THE OBJECT HOLDER OF SLICING MACHINES

Filed July 27, 1939 2 Sheets-Sheet 1

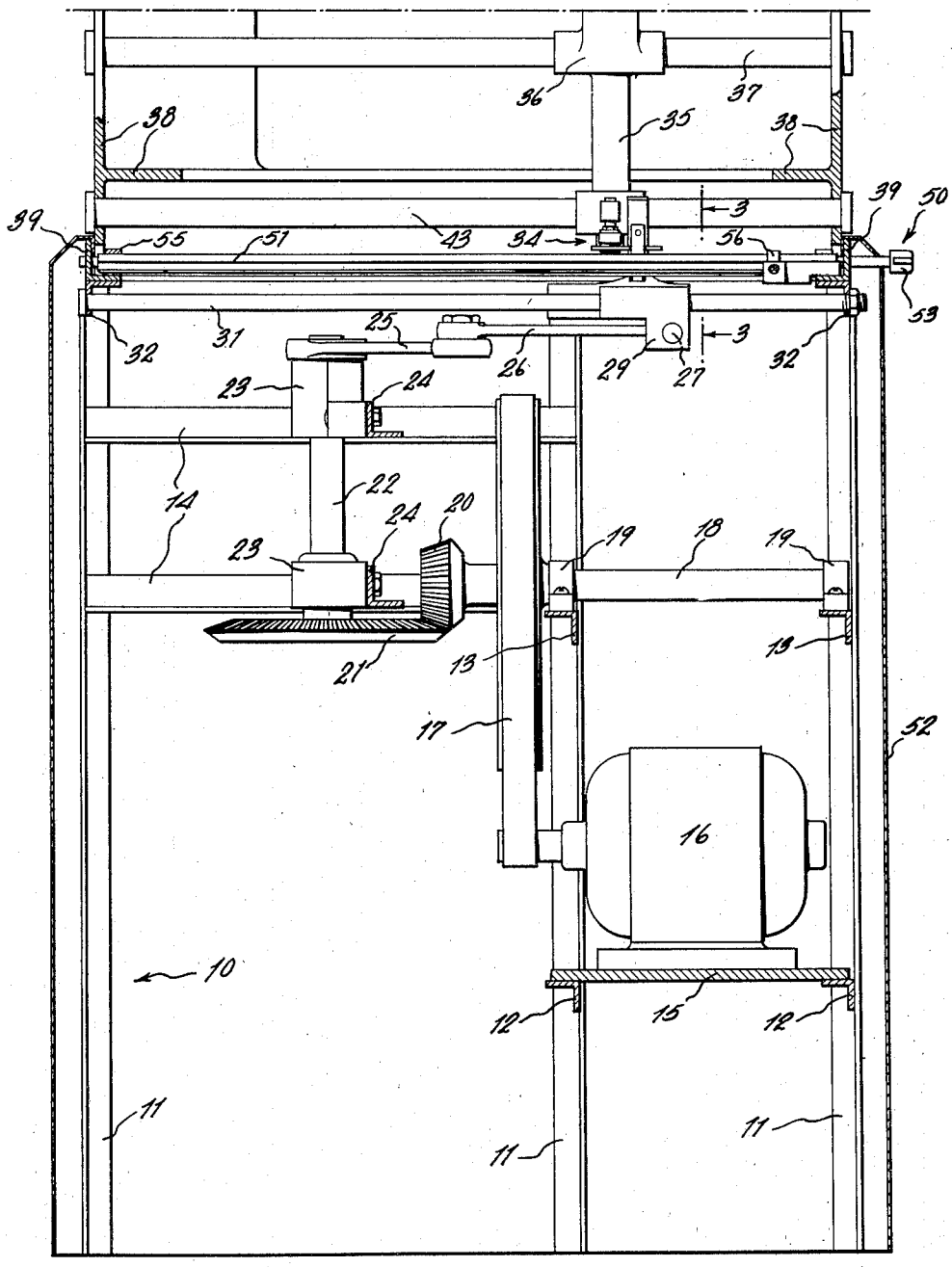


Fig. 1.

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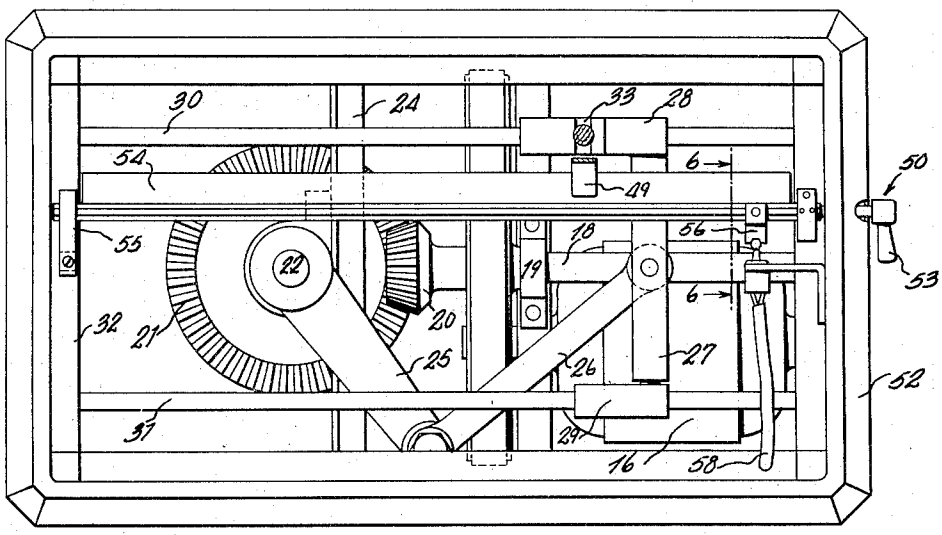


Fig. 2.

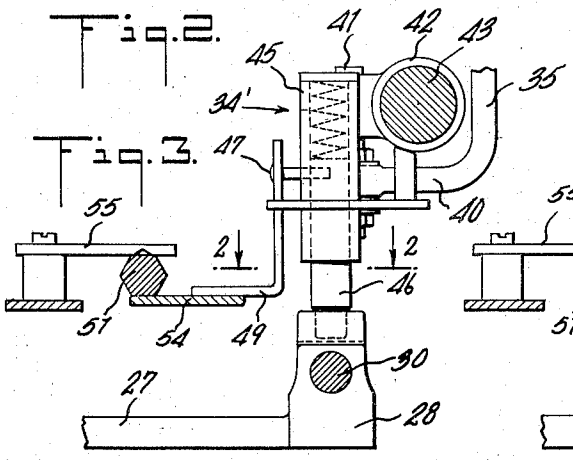


Fig. 3.

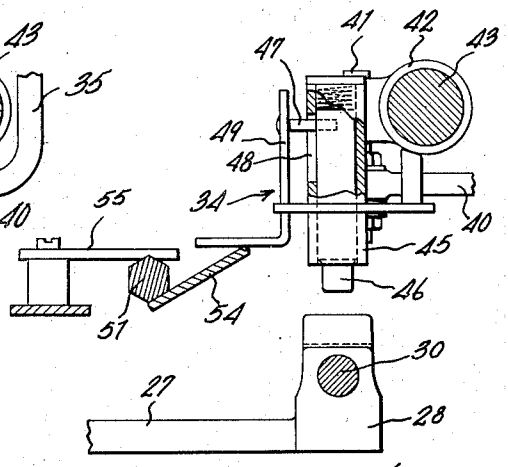


Fig. 4.

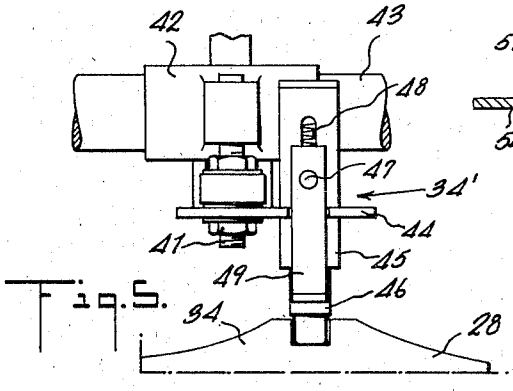


Fig. 5.

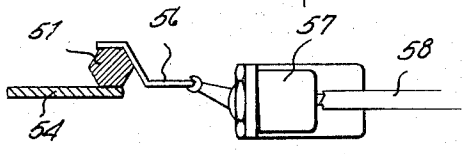


Fig. 6.

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2,275,527

UNITED STATES PATENT OFFICE

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AUXILIARY MOTORIZED BASE FOR RECIPROCATING AT WILL THE OBJECT HOLDER OF SLICING MACHINES

Fred Hirsch, Los Angeles, Calif., assignor to Globe Slicing Machine Company, Stamford, Conn., a corporation of New York

Application July 27, 1939, Serial No. 286,772

4 Claims. (Cl. 146—102)

This invention relates to attachments for slicing machines and has more particular reference to an attachment which has for its object to operate the reciprocating object holder of a slicing machine automatically.

The invention resides in particular in the provision of means for making a slicing machine adapted for either automatic power operation or for operation by hand.

In lunch places and the like, where during certain hours of the day, comparatively large quantities of sliced provisions are required, the time consumed in slicing operations can be considerably reduced, when providing a slicing machine which under pressing conditions can be made to operate automatically.

The object of the present invention is to provide a power driven mechanism which is adapted to operatively engage or disengage the reciprocating object holder of a slicing machine, so that the holder may either move automatically or be subject to hand operation.

A further object of the present invention is to provide suitable switching means for connecting or disconnecting the power drive attachment at any point held by the reciprocating object holder to, at the same moment, start or respectively stop the motor while operating said switching means.

These and other objects and advantages will appear from the following description and the appended claims.

In the drawings accompanying this specification one embodiment of the invention is illustrated, although it is understood that the same is merely for the purpose of affording a clear understanding of the underlying principle of this invention, so that those skilled in the art may readily understand it without, however, limiting the invention to the specific details shown therein.

Fig. 1 is a sectional front elevation of an encased stand or support with mechanisms provided and showing parts of a slicing machine attached to the top thereof.

Fig. 2 illustrates a plan view of the encased support of Fig. 1 showing none of those parts which are located above line 2—2, Fig. 3.

Fig. 3 shows a side view of a switching mechanism when engaged, and on lines 3—3, Fig. 1.

Fig. 4 shows the mechanism of Fig. 3 disengaged.

Fig. 5 is a front view of the mechanism of Fig. 3.

Fig. 6 illustrates a sideview of an electrical switch-operating device on line 6—6, Fig. 2.

Referring to the drawings and in particular to Figs. 1 and 2, the slicing machine support 10 comprises a frame made from a number of angular uprights 11, which are held together by horizontally located pairs of angular iron bars, 12, 13, 14.

This frame structure, which is preferably welded together, has secured to the two angle irons 12 a base plate 15 for supporting an electric motor 16 which is adapted to drive a large sized pulley 17 secured to a shaft 18. The latter is rotatable in bearing blocks 19 which are fast to the two angle irons 13.

An extended end portion of shaft 18 is provided with a bevelled pinion 20 engaging a bevel gear 21, which is fast to a vertical shaft 22, rotatable in bearing blocks 23. These blocks are secured to horizontally located angles 24 which in turn are fast to the angle irons 14.

The upper end portion of shaft 22 is provided with a crank 25 operatively associated with a connecting rod 26 which is movably held to an oscillatable rod member 27. This member is shown connected to and may be integral with two slide members 28, 29 movable on two respective horizontally held rods 30, 31 which are secured to two oppositely located iron angles 32.

The engageable or locking clutch member 28 is provided with a slot 33. Depending from the upper edge surfaces of this slot are two progressively declining engaging surfaces 34, Figs. 1 and 5, adapted to provide a means for readily engaging a clutch device 34', which is connected to an arm 35 forming a part of a slicing machine's conventional type object holder 36 (not shown in full).

This object holder or feed member 36 is slidable in part on a rod 37 held in the slicing machine's frame 38. The latter is seated against the inner wall surfaces of angles 39, which are secured to the top of and form a part with the frame structure 10.

A horizontal end portion 40 of the vertical arm 35, Fig. 3, is provided with a threaded stud 41 wherewith to engage a projection of a sleeve 42 slidable on a rail 43 secured to frame 38 and forming the second guide rod for the object holder 36.

Clutch device 34' comprises a holder plate 44 which is clamped to the arm portion 40. A vertical plunger housing 45 forming a part of said plate is provided with a closed top and has movable therein a spring-operated plunger 46 adapted to engage with its lower end portion, the slot 33 of clutch member 28. The upper part of the

plunger is provided with an extending connector pin 47 movable in a vertical slot 48 of the plunger housing and forming a part with a control arm or bracket 49 movable with the plunger and guided by the holder plate 44.

A control device 50, adapted to raise and to lower the plunger 46 by means of the bracket 49, comprises a control rod 51 which extends throughout the length of the frame 10 and is rotatably held in and between the frame angles 39.

The end of the control rod extends beyond the length of the frame and its accompanying sheet metal casing 52, and has fastened thereto a suitable operating or switch handle 53.

To control rod 51 is fastened a lift element 54 of substantially the same length as the rod. It is located underneath the bracket 49, so that a rotary movement of the rod will raise this bracket and disengage the plunger from the clutch member 28.

A locking member 56 in form of a flat spring or any other suitable arrangement serves the purpose to maintain the plunger in the disengaged position illustrated in Fig. 4.

In order to stop the motor from running while the clutch member 28 is in a disengaged condition, the control rod 51 has provided at one of its end portions an electric switch arm 56 adapted to operatively engage an encased electric switch 57 of suitable design and of which its wires 58 connect to the motor in a well known manner.

The mechanism shown and described provides therefore suitable mechanisms and switching means making it possible to either move the object holder automatically or by hand.

It will be noted that the control handle may be operated to start the motor under any conditions and regardless of the object holder's position relation to the clutch member 28. The inclined surfaces 34 will automatically raise the plunger until it is caused to drop into the slot of the clutch member as shown in Figs. 3 and 5.

Furthermore, the plunger 46 can be disengaged while the motor is running.

Having described my invention, what I claim by Letters Patent is:

1. A self contained auxiliary motorized base for mechanically reciprocating a manually operable object holder of a slicing machine independently of the cutting knife; combining with a slicing machine having a movable object holder arm; of locking means carried by the object holder arm and movable therewith; a motor independent of the slicing machine, reciprocating means operated by said motor adapted to engage with the locking means; mechanism to hold the locking means in inoperative position; a switch for the motor and means for concurrently operating the switch with the locking means.

2. A self contained auxiliary motorized base for mechanically reciprocating a manually operable object holder of a slicing machine independently of the cutting knife; combining with a slicing machine having a reciprocating object holder arm slidable on a guide rod; of a lock plunger carried by the object holder arm and movable therewith and also relatively thereto; mechanism including a movable strip extending the full length of the stroke of the holder forming a riding surface for holding the lock member in disengaged position, a motor independent of the slicing machine and reciprocating means operated by said motor adapted to engage with the lock plunger; a switch for the motor and means for concurrently operating the switch with the movement of the lock plunger.

3. A self contained auxiliary motorized base for mechanically reciprocating a manually operable object holder of a slicing machine independently of the cutting knife; combining with a slicing machine having a reciprocating object holder arm slidable on a guide rod; of a lock plunger carried by the object holder arm and movable back and forth therewith and also up and down with respect thereto, a bracket secured to the plunger; mechanism including a flat tiltable strip extending the full length of the stroke of the holder forming a riding surface when in tilted position to hold the bracket and lock member in disengaged position, a motor independent of the slicing machine and a reciprocating non-rotatable clutch member operated by the motor to receive the lock member when the latter is released by the movement of the movable strip, and a switch for starting and stopping the motor and means for concurrently operating the switch with the up and down movement of the lock plunger.

4. The combination of a self contained auxiliary motorized base with a slicing machine having means for manually effecting relative movement of object holder and knife, comprising a clutch element connected to and movable with a part of the slicing machine consisting of an object holder and knife which are arranged for relative movement, the clutch element having a predetermined translatory movement on each slicing stroke of the slicing machine, a motor which is idle during manual operation of the slicing machine, a second clutch element complementary to the first mentioned clutch element, therewith to constitute a clutch, a carriage for the second clutch element, driving connections from the motor to the carriage for moving the clutch element on the latter to position for interlockment with the first mentioned clutch element, interconnected means for controlling the motor and making and/or breaking of said clutch connections.

FRED HIRSCH.