

[54] **AUTOMATIC JAR SHAKER**

[75] Inventor: **Henry A. Pagano**, Syracuse, N.Y.

[73] Assignee: **The Raymond Lee Organization, Inc.**, New York, N.Y.

[22] Filed: **Nov. 23, 1971**

[21] Appl. No.: **201,326**

[52] U.S. Cl. **259/72**

[51] Int. Cl. **B01f 11/00**

[58] Field of Search **259/72, 59, 91, 75**

[56] **References Cited**

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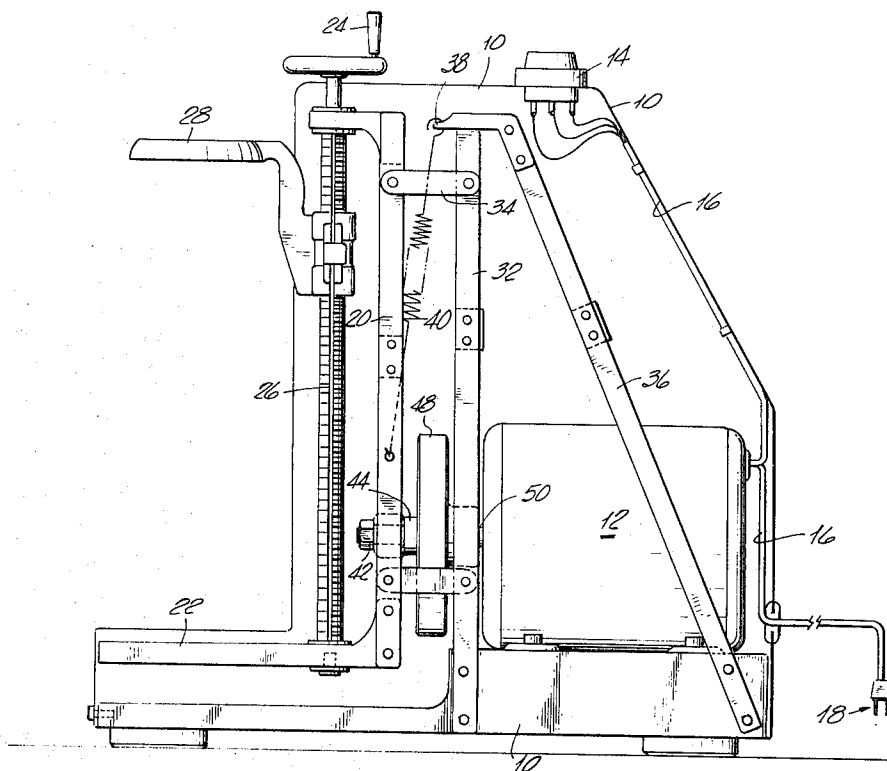
Primary Examiner—Robert Jenkins

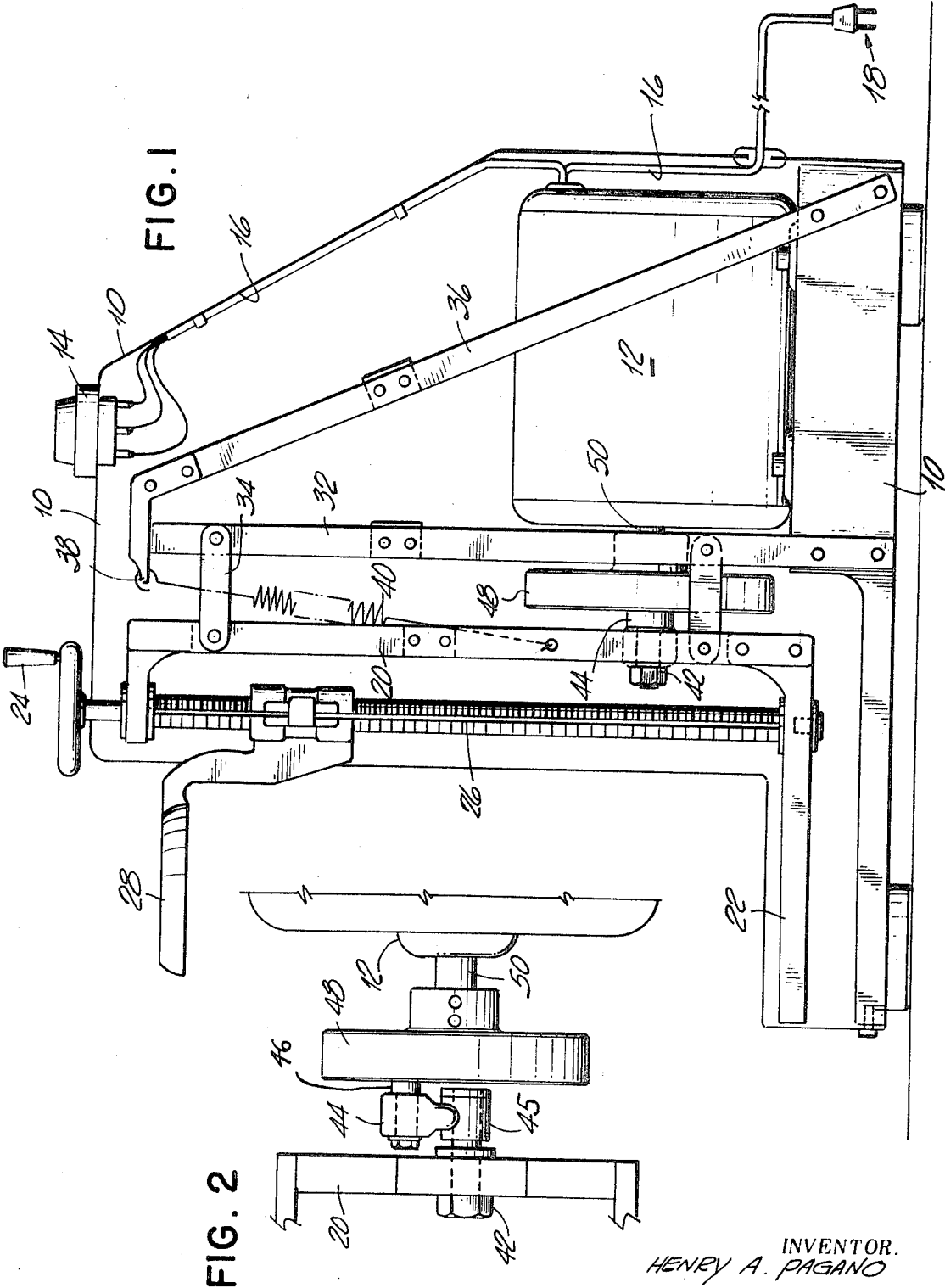
Attorney—Richard S. Shreve, Jr.

[57] **ABSTRACT**

An electric motor drives a flywheel connected by an offset crank to a jar receiving structure free to move within the housing within limits defined by a restraining spring. The structure is adjustable to receive and hold different sizes of jars. A timer controls duration of motion action.

1 Claim, 2 Drawing Figures





AUTOMATIC JAR SHAKER**FIELD OF THE INVENTION**

It is often necessary, in the course of food preparation, to mix a variety of ingredients together in a common container, as for example, salad dressings and the like. In order to avoid the necessity of vigorous and prolonged manual shaking of containers, I provide apparatus for automatically shaking closed or even sealed jars to provide proper mixing of ingredients therein.

SUMMARY

To this end, I provide an electric motor which, under the control of a manually adjustable timer, will operate for selected time intervals. The motor, when it operates, rotates a flywheel secured to its shaft.

The jar to be mixed is detachably secured, by means adjustable manually to accommodate different size jars, to a jar receiving structure. This structure is movably in a fixed housing and, by virtue of spring retaining means connected between the housing and the structure will move only within fixed limits. The structure is secured by an offset crank to the flywheel.

Consequently, as the motor turns, the structure is vibrated to and fro, and the vibration motion produces the desired shaking and mixture of ingredients.

BRIEF DESCRIPTION OF THE DRAWINGS

In the drawings:

FIG. 1 is a side elevation of one form of my invention;

FIG. 2 is a detail of a portion of the structure of FIG. 1.

DETAILED DESCRIPTION OF PREFERRED EMBODIMENTS

Referring now to FIGS. 1 and 2, a rigid hollow housing 10 supports an electric motor 12 and a manually adjustable timer 14. Cabling 16 connects the motor and timer to a plug 18 adapted for connection to a mains source or other alternating voltage source.

A frame 20 supports a bottom plate 22, a manually

rotatable crank 24 secured to vertical worm 26 and a movable jaw 28 moved up and down along the worm by crank rotation. A jar is detachably securable between plate and jaw.

A vertical structure 32 secured to the housing is secured by pivot linkage 34 to frame 20. An inclined structure 36 secured at one end to the housing and at the other end to structure 32 has a loop 38 at this other end. Retaining spring means 40 interconnects loop and frame 20.

A bearing 45 in frame 20 rotatably supports one end of crank 44. The other end of the crank is secured rotatably to a point 46 on flywheel 48 offset from the center. The flywheel is centered on the shaft 50 of motor 12 and is rotated therewith.

The shaking action can then be produced in the manner previously described.

While I have described my invention with particular reference to the drawings, such is not to be considered as limiting its actual scope.

I claim:

1. Apparatus for shaking or mixing materials in closed jars comprising:
 - a hollow fixed housing;
 - a jar supporting frame movable within said housing comprising a bottom plate;
 - a vertical worm extending up from said bottom plate;
 - a movable jaw mounted on said vertical worm;
 - a crank on said worm above said movable jaw;
 - a vertical structure on said housing;
 - a pivoted linkage connecting said jar frame to said vertical structure;
 - retaining spring means connecting an upper portion of said structure to a lower portion of said jar supporting frame;
 - an electric motor;
 - a flywheel rotatable by the motor and disposed on the motor shaft; and
 - an offset crank connected between a point on the wheel offset from the motor shaft and said frame.

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