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TURNING DEVICE

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Fig. 1.

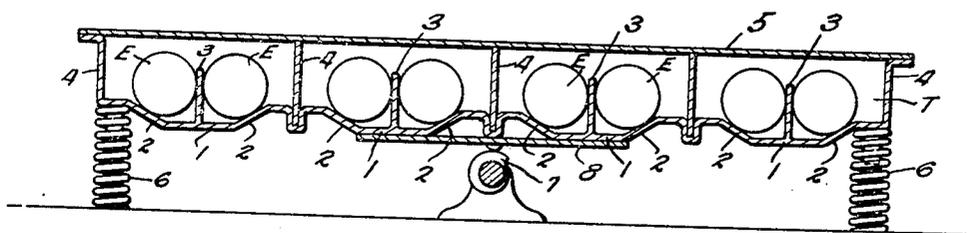
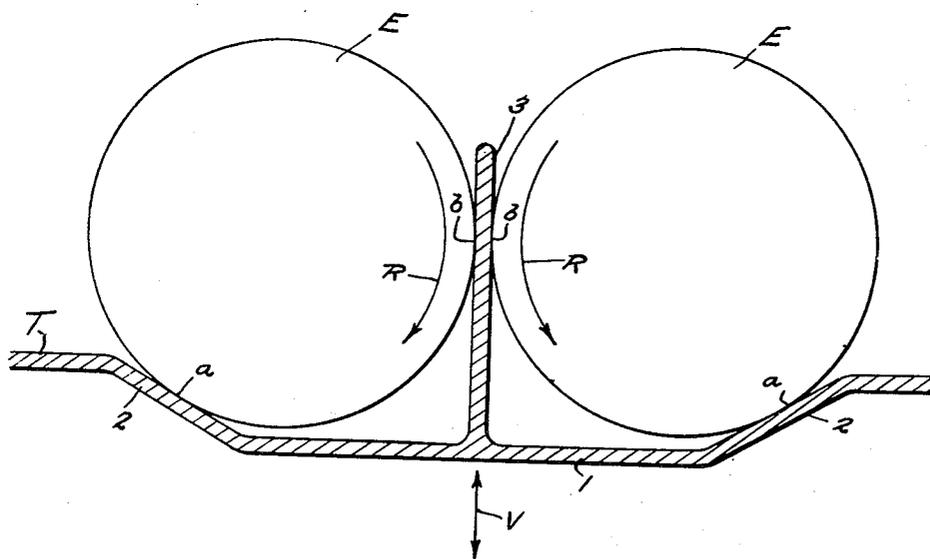


Fig. 2.



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# UNITED STATES PATENT OFFICE

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## TURNING DEVICE

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4 Claims. (Cl. 259—72)

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This invention relates to a method and apparatus for turning rounded objects such as ovals, spheres, cylindrical and conical bodies, and more particularly a device for turning or exercising eggs during incubation or while in storage.

The object of the invention is to provide an improved method and means by means of which such rounded objects can be turned by a succession of relatively short motions involving little shock or disturbance to the object, but lending itself to a rapidity effecting substantially the result of a continuous operation.

The invention consists in the method and means hereinafter more particularly described and claimed.

One sheet of drawings, largely diagrammatic, accompanies this specification as part thereof, in which like reference characters indicate like parts throughout.

Figure 1 is a vertical cross-section through a tray adapted to contain a plurality of eggs or other rounded objects, with means for vibrating the same to turn the eggs;

Figure 2 is a fragmentary cross-section similar to Figure 1 on a large scale, illustrating in more detail the mode of operation.

Referring to the drawings, T represents a tray having side walls 4 and a bottom formed with a plurality of parallel detents, each detent comprising a bottom portion 1 with lateral inclined side walls 2—2. Medial of each detent and extending longitudinally thereof is positioned a vertical baffle 3.

The detents of the bottom are proportioned in width and the medial baffles 3 are proportioned in height so as to accommodate in transverse alignment two eggs or other rounded objects E in such position that they are supported by two points of peripheral contact with the central baffle 3 and one of the inclined lateral walls 2 of the detent as at points a and b. As thus supported, it will be noted that the points of support a, b are less than a diameter apart but sufficiently spaced so that the center of gravity of the rounded object E is positioned between such points of contact.

When the tray is vibrated in a vertical direction, as indicated by the arrow V (Figure 2) as by a cam 7 or any other suitable mechanical or electrical device for producing rapid vibrations, the rounded objects E will be successively upon each vibration lifted from their points of contact a and b perpendicular to a line connecting the points a and b and will thereafter gravitate vertically to the small inclined surface 2, down which it will roll, thus creating the rotary motion.

The trays T can be arranged to contain a plurality of such depressions and may be, if desired, provided with intermediate partitions 4, a top 5 and resilient, supporting means 6 adapted

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to eliminate any sudden shock or jar by reason of the vibration of the tray.

Various other modifications will readily suggest themselves to those skilled in the art but within the scope of the present invention as claimed.

Having thus described my invention, I claim:

1. Device for rotating round objects each on its own axis, comprising a supporting frame having a vertical wall and an opposed nonvertical supporting surface between which the round object can be supported in substantially fixed situs with its center of gravity intermediate the points of support, with means for vibrating the frame vertically.

2. Device for rotating a round object on its own axis, comprising a supporting frame having two angularly opposed surfaces between which the object is to be supported in a substantially fixed situs, one of said surfaces being vertical and the other spaced therefrom a distance less than the diameter of the object, with means for vibrating the frame vertically.

3. Device for turning or exercising eggs, comprising a rack including a vertical wall with an inclined floor spaced therefrom, so arranged that eggs supported between said wall and floor will contact each, with the center of gravity of each egg intermediate the points of contact, with means for vibrating the rack in a vertical direction, whereby each egg is rotated on its own axis while retaining a substantially fixed situs.

4. Device for turning or exercising eggs, comprising a tray having a bottom formed with a plurality of spaced parallel depressed parts having inclined side walls with a longitudinally extending medial vertical baffle in each depression, the depression being of such width that eggs can be supported on each side of each of the baffles in contact with the baffle and adjacent side wall, with the center of gravity of each egg intermediate the supporting surfaces, with means for vibrating the tray in a vertical direction and means for cushioning the tray.

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