Feb. 7, 1956 J. H. MILLER ET AL 2,733,528

SLEEP INDUCING MACHINE

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Fig. 1.

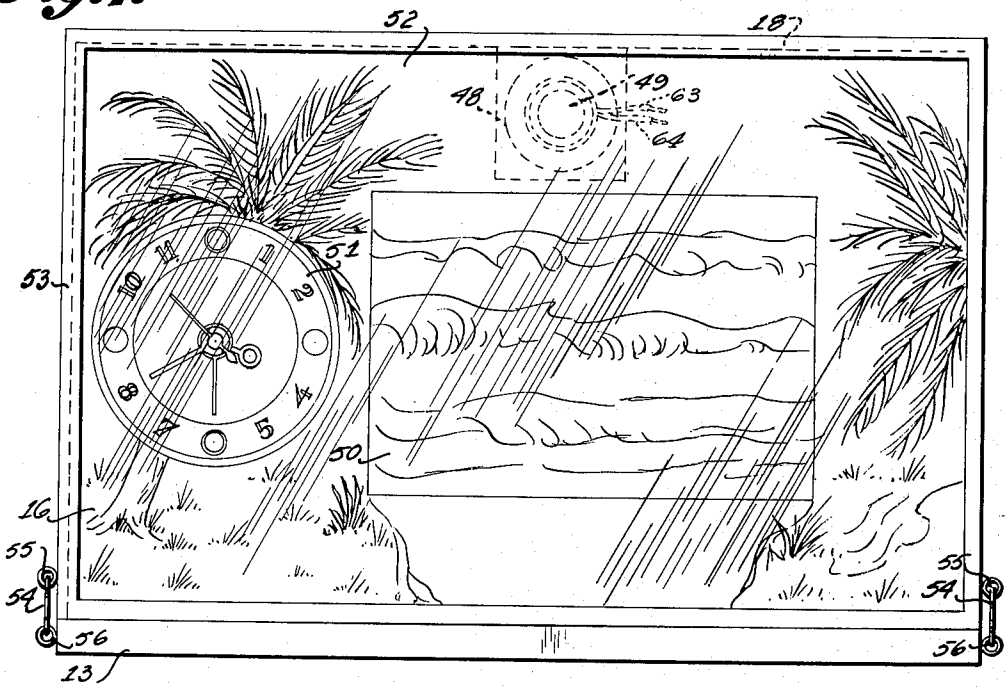
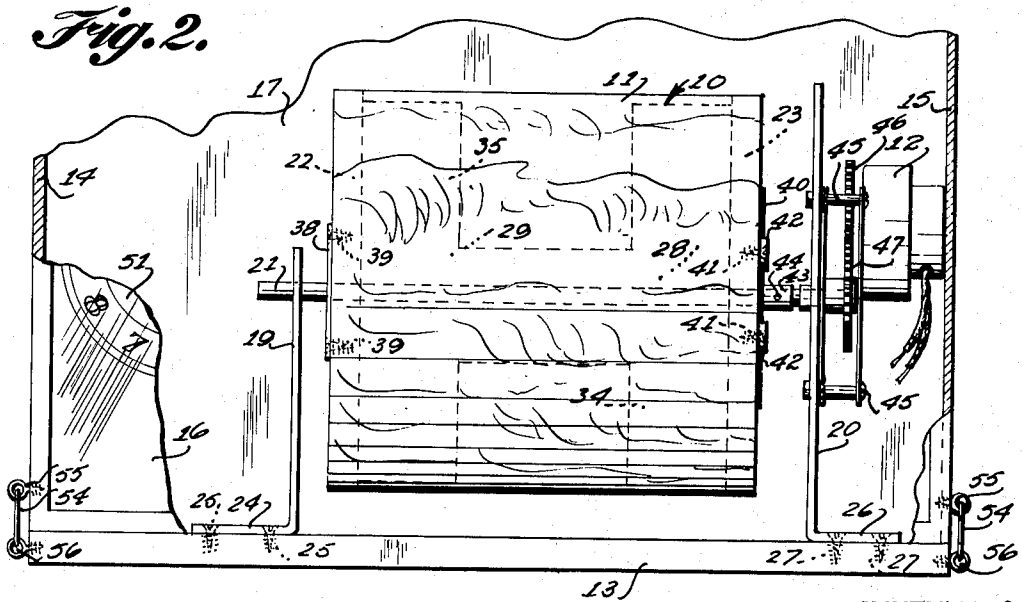


Fig. 2.



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Fig. 3.

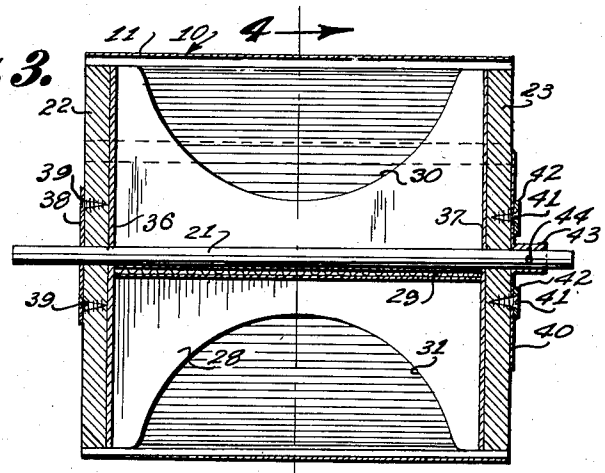


Fig. 4.

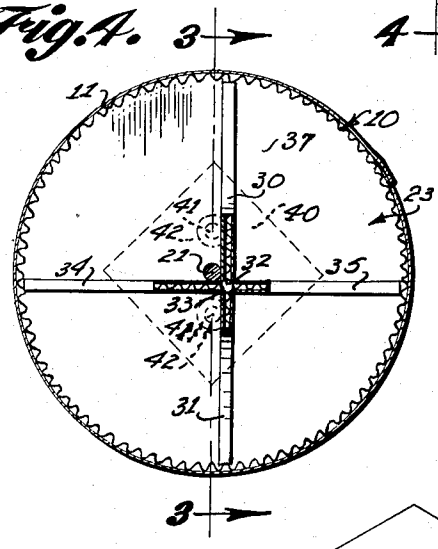


Fig. 5.

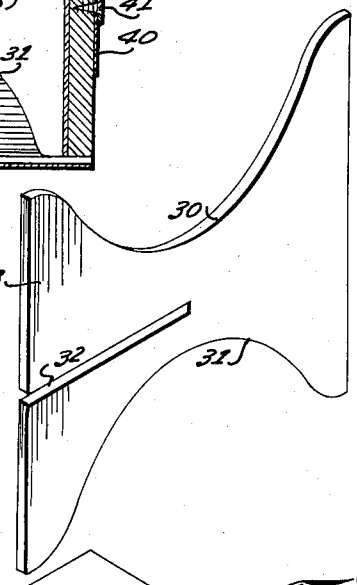


Fig. 6.

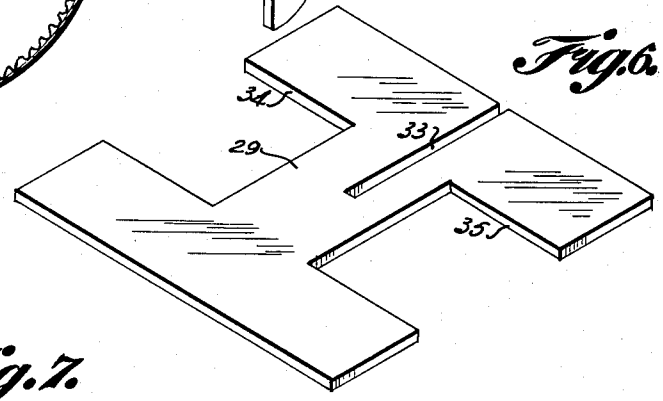
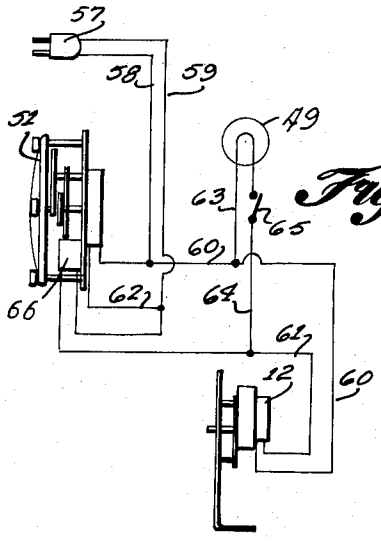


Fig. 7.



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SLEEP INDUCING MACHINE

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4 Claims. (Cl. 40—33)

This invention relates to devices for inducing sleep, and in particular a device reproducing by both vision and sound, the waves of the sea, whereby with the device positioned, such as in a bedroom, in a plane at the elevation of the eyes of a person sleep will be inducted by concentrating thereon.

The purpose of this invention is to provide means for reproducing the action and sound of waves of the sea to expedite bringing on drowsiness and eventually, sleep.

Sleeplessness, in most cases can be attributed to the inability to relax particularly in men and women above the age of 50 or in naturally high strung individuals or because of retaining business matters or worries in the brain. The brain must contain blood to hold such thoughts and as one relaxes the surplus blood begins to recede from the brain. Sleep is induced by reading; however, the effort to follow the story or situation causes blood to remain in the brain. In concentrating on the action of the ocean waves with both sight and sound no thoughts are involved and the result is the gradual reducing of the amount of blood in the brain and as the blood leaves the brain, the action of the waves in combination with the sound, both of which are pleasing and restful results in complete relaxation and sleep is induced.

The object of this invention is, therefore, to provide means for forming a sleep inducing machine which simulates the action and sound of the ocean waves.

Another object of the invention is to provide an improved sleep inducing machine that is adapted to be used in a bedroom of a home or apartment.

A further object of the invention is to provide an improved sleep inducing machine which is of a simple and economical construction.

With these and other objects and advantages in view the invention embodies a substantially box-like casing having a window in one side with a cylinder having representations of ocean waves thereon mounted to rotate in the casing and positioned to be observed through the window, means for rotating the cylinder and means for producing sound, similar to that produced by ocean waves in the cylinder.

Other features and advantages of the invention will appear from the following description taken in connection with the drawings, wherein:

Figure 1 is a front elevational view of the machine with the device illustrated as having a clock incorporated in the face thereof and with waves on the surface of a cylinder being visible through a window in a front wall of the housing.

Figure 2 is a longitudinal section through the housing with parts broken away illustrated the mounting and operating means of the cylinder.

Figure 3 is a longitudinal section through the cylinder taken on line 3—3 of Fig. 4.

Figure 4 is a cross section through the cylinder taken on line 4—4 of Fig. 3.

Figure 5 is a view illustrating one of the baffles extended longitudinally through the cylinder.

Figure 6 is a view illustrating a baffle adapted to be positioned at a right angle to the baffle shown in Fig. 5.

Figure 7 is a view illustrating a wiring diagram showing a circuit for supplying current to the motor of the cylinder.

The drawings show one form of the device, and it will be understood that the casing or housing may be provided in different designs, and the sound may be produced by means other than rice, beans, or the like dropping over the corrugations and baffles on the inner surface of the cylinder.

In the design shown, the rippling or swishing sound of waves is produced by the granular objects rolling over the corrugations of the cylinder wall and this is accentuated by the objects dropping from the baffles at intervals.

Referring now to the drawings wherein like reference characters denote corresponding parts the improved sleep inducing machine of this invention includes a cylinder having a continuous wall **10** preferably formed of corrugated material with a sheet of material as indicated by the numeral **11** and having waves represented thereon positioned on the outer surface, a motor **12** for rotating the cylinder and a housing having a base **13**, end walls **14** and **15**, a front wall **16**, a rear wall **17** and a top panel **18**.

As illustrated in Fig. 2, the cylinder is journalled in standards **19** and **20** with a shaft **21** and the cylindrical wall is mounted on the shaft with discs **22** and **23** providing ends.

The standard **19** is provided with a supporting flange **24** that is secured to the base **13** by screws **25** and the standard **20** is provided with a similar flange **26** which is secured to the base with screws **27**.

The cylinder is provided with baffles **28** and **29**, as shown in Figs. 5 and 6, respectively and, as shown in Fig. 5 the baffle **28** is provided with arcuate surfaces **30** and **31** which extend through the intermediate portion of the baffle and a slot **32** that extends inwardly from one end.

The baffle **29** is provided with a similar slot **33** that also extends inwardly from one end of the baffle and with the baffles assembled, as shown in Fig. 4, the web portions of the baffle **28** is positioned in the slot **33** of the baffle **29** and the web portion of the baffle **29** is positioned in the slot **32** of the baffle **28**. The sides of the baffle **29** are provided with recesses **34** and **35** through which granular particles that may be positioned in the cylinder drop as the cylinder rotates. The inner surfaces of the ends or discs **22** and **23** are provided with rough or corrugated faces, as indicated by the numerals **36** and **37**, respectively and with the parts assembled the surfaces **36** and **37** coact with the corrugations of the cylindrical wall whereby granular objects, such as rice, beans, and the like drop or roll continuously over the rough surfaces thereby providing sound imitating the sound of the waves of the sea. The baffles **28** and **29** may also be formed of corrugated material as shown in the sections illustrated in Figs. 3 and 4.

The disc **22** is provided with a reinforcing or wearing plate **38** that is secured to the disc with screws **39**, and a similar plate **40** is secured to the disc **23** with screws **41**. As illustrated in Fig. 3 the conical-shaped heads of the screws **41** are positioned in countersunk openings in washers **42**. The plate **40** is also provided with a hub **43** and the hub is secured in position on the shaft with a pin **44**.

The motor **12**, which is in the form of a clock motor, is mounted on the standard **20** with studs **45** and a gear **46** extended from the motor **12** meshes with a gear **47** on the end of the shaft **21**, as shown in Fig. 2.

A reflector **48** is also mounted in the upper part of the housing and positioned against the inner surface of the front wall **16** and this reflector is positioned to reflect rays of light from a light bulb **49** on the surface of the

cylinder to facilitate viewing the cylinder through the window **50** in the front wall **16**.

A clock **51** may also be mounted on the front wall of the housing if desired.

In the design shown the front wall is provided with a transparent panel, as indicated by the numeral **52** and the transparent plate or panel is secured in position with a frame **53**.

The upper portion of the housing is secured to the base with hooks **54**, mounted with eyes **55** in the end walls of the housing, and positioned to snap through eyes **56** extended from the ends of the base.

It will be understood that current may be supplied to the motor **12** and light **49** by suitable means; however, as illustrated in Fig. 7 the device may be provided with a plug **57** with wires **58** and **59** extended from the plug and with the wire **58** connected to one terminal of the motor **12** with a wire **60**, the other terminal of the motor being connected by a wire **61** to the wire **59** through the clock **51** and the wire **62**. The light **49** is connected in the circuit with a wire **63** connecting one terminal of the light to the wire **60** and with wire **64** connecting the other terminal of the light to the wire **61**. The wire **64** is provided with a switch **65**.

With the parts arranged in this manner the device is particularly adapted to be used in a bedroom with the housing positioned whereby the window is substantially level with the eyes. Should the device be positioned above the level of the eyes the light reflected on the cylinder would be too bright to relax the eyes.

The motor may be set to run continuously, or the circuit may be provided with a time delay relay or switch, such as the switch **66** that may be actuated by the clock so that after a predetermined period of time the circuit to the motor will be broken. With the cylinder rotating slowly and with the granular objects in the cylinder rolling over the corrugations and dropping from the baffles the sound of the spray of the ocean hitting upon rocks or a bulkhead will be reproduced in the device.

Although the cylinder is painted to represent the waves of the sea it will also be understood that wavy lines representing waving grain in a field where currents of air are blowing over the grain, or leaves waving on branches of trees, or other objects or devices may be represented thereon.

The repetition of the same or similar formations on the surface of the cylinder passing before the eyes results in relaxation and, consequently, induces sleep.

A cylinder has been disclosed as being operated with a motor, such as a clock motor and it will be understood that the cylinder or other parts of the device may be actuated by prime movers or power means of electric or electronic actuated devices or the device may be operated by power derived from other sources; and it will also be understood that sound in the device may be produced by electric or electronic means or by other suitable noise making devices.

It will be understood that modifications, within the scope of the appended claims, may be made in the design and arrangement of the parts without departing from the spirit of the invention.

What is claimed is:

1. In a sleep inducing machine, the combination which comprises a substantially box-like housing having a front wall with a window therein and having a base, end walls, a rear wall and a top, a cylinder having a cylindrical wall with a corrugated inner surface and having a design repeated at equally spaced intervals on the outer surface thereof journaled in the housing, a shaft extended through the cylinder, upon which the cylinder is mounted, means journaling the shaft in the housing with the cylinder positioned whereby the design on the surface thereof is visible through the window in the front wall of the housing spaced longitudinally positioned baffles with recesses in intermediate parts thereof positioned against the inner surface of the cylindrical wall, a clock motor positioned in the housing and means operatively connecting the clock motor to the cylinder for rotating the cylinder.

2. In a sleep inducing machine, the combination which comprises a substantially box-like housing having a front wall with a window therein and having a base, end walls, a rear wall and a top, a cylinder having a cylindrical wall with a corrugated inner surface and having a design repeated at equally spaced intervals on the outer surface thereof pivotally mounted in the housing, a shaft extended through the cylinder, upon which the cylinder is mounted, means journaling the shaft in the housing with the cylinder positioned wherein the design on the surface of the cylinder is visible through the window in the front wall of the housing, spaced longitudinally positioned baffles with recesses in intermediate parts thereof positioned against the inner surface of the cylindrical wall, small objects freely positioned in the cylinder and adapted to drop over said baffles, a clock motor positioned in the housing, means operatively connecting the clock motor to the cylinder for rotating the cylinder, and timing means adapted to be set to stop the clock motor after a predetermined period of time.

3. In a sleep inducing machine, the combination which comprises a substantially box-like housing having a front wall with a window therein and having a base, end walls, a rear wall and a stop, a cylinder having a cylindrical wall with a corrugated inner surface in the housing, right angular positioned baffles having recesses in their intermediate portions extended longitudinally through the cylinder, the outer surface of said cylinder having a design repeated at equally spaced intervals on the surface thereof, a shaft extended through the cylinder, upon which the cylinder is mounted, means journaling the shaft in the housing with the cylinder positioned to be visible through the window in the front wall of the housing seed freely mounted in said cylinder and adapted to drop over the spaced longitudinally disposed baffles with the recesses in intermediate parts thereof to accentuate the sound of the rotating cylinder, a clock motor positioned in the housing, means operatively connecting the clock motor to the cylinder for rotating the cylinder, and timing means adapted to be set to stop the clock motor after a predetermined period of time.

4. A sleep inducing machine comprising a housing having a window therein, a cylinder having a design repeated at equally spaced intervals on the surface thereof journaled in the housing and positioned to be visible through the window, means for rotating the cylinder, the inner surface of the wall of the cylinder having longitudinally disposed ribs thereon, objects in the cylinder adapted to drop over the ribs, and spaced longitudinally positioned baffles with recesses in intermediate parts thereof positioned against the inner surface of the cylinder wall over which said objects drop at intervals to accentuate the sound.

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