

Uncomfortable Mattress Based on Alarm

BACKGROUND OF THE INVENTION

Field of the Invention

[0001] This mattress gets uncomfortable for the user once their alarm goes off to aid in waking the user up.

Description of Related Art Including Information Disclosed Under 37 CFR 1.97 and 37 CFR 1.98

[0002] Waking up at the appropriate time is very important for many individuals for any event whether it be work, school, et cetera, however some individuals may have issues waking up solely with the use of an alarm. There are various mattress devices that may aid the alarm in waking up a person. Mattress devices can work with the alarm set time to make an uncomfortable sleeping environment for the user thus prompting them to wake from sleep. An effective mattress devices that makes an uncomfortable sleeping environment can be used for any individual who is prone to oversleep any or all alarm sounds.

[0003] US Patent 10,182,661 B2 issued 1 October 2009, by Aaron Robert Lema for Shake Awake Mattress (S.A.M) discloses a fire alarm attached to a bed for arousing sleeping deaf or hearing impaired people that consists of: a fire, smoke and carbon monoxide alarm, a secondary alarm featuring a phone jack for dialing emergency services and digital display of the type of emergencies taking place to be read by the deaf or hearing impaired as well as a motorized alarm unit that attaches to the head of the bed providing a lifting and dropping motion to arouse sleeping deaf or hearing impaired people.

[0004] US Patent Publication 2009/0243865 A1 published 22 January 2019, by Rob Nunn et al. for Inflatable Air Mattress Alert and Monitoring System discloses this disclosure describes, among other things, techniques for waking a user by changing the user's sleep environment. In one example, a method includes receiving, at a central controller of an air mattress system, at least one user alarm settings, generating, via the central controller, at least one instruction based on the received user alarm setting, and transmitting, from the central controller, the at least one instruction to a first component of the air mattress system to adjust a feature of the first component.

[0005] The various known mattress apparatuses that create an environment to help arouse the sleeping user, have several disadvantages. Some of the devices require a completely different type of mattress such as an inflatable air mattress which can be considered uncomfortable to regularly sleep on as compared to opposing memory foam, pillow top, or innerspring mattresses. By using a lesser quality mattress to start with, users are less likely to use the product for uncomfortableness, back and neck pain, and for a lack of quality of sleep.

[0006] Other known devices are only compatible with emergency alarms such as fire, smoke, and carbon monoxide alarms. Although this might be useful in some situations, it fails to solve the problem of individuals not readily being woken up by regular clock alarms which are generally quieter and can be set for specific times or multiple times.

[0007] Additionally, there are devices that connect to an alarm to change the sleeping atmosphere using the mattress however, they are focused on helping the sleeping deaf or hearing impaired individuals. This means that the design does not take into consideration all types of customer needs and preferences but rather focuses on solely one group of individuals.

[0008] Historically, some form of mattress has been recorded since prehistoric times. However, the mattress continues to evolve throughout a variety of cultures. The first known mattress began with bedding consisting of leaves and grasses located in certain areas on the ground. As humans evolved into the 3000-1000 BCE era, mattresses consisted of raised surfaces made of wood and a linen became more popular. The mattress was then stuffed with hay or reeds or in the case of the wealthy, wool or feathers. During the Medieval period, mattresses were stuffed with straw and similar materials and placed in a wooden frame.

[0009] The big evolution in mattress was in the 19th century with the creation of mattresses with coil springs. It wasn't until the late 1780s that the first personal alarm clock was created however, it could only be set for certain time. The widely known mattress today is the memory foam mattress was created in the 1970s to further evolve the sleeping industry. However, it is apparent that throughout history there was never a specialized mattress that worked with an alarm clock to create an uncomfortable environment to help aid the user in waking when they have trouble with just an alarm. The proposed uncomfortable mattress apparatus works to evolve the mattress industry further as it helps prompt the user to wake them from sleep.

BRIEF SUMMARY OF THE INVENTION

[0008] The uncomfortable mattress apparatus of the present invention comprises of two main components. This includes the mattress itself wherein eight mechanical pistons packed inside the mattress are packed and evenly distributed inside the mattress which move upon an alarm to wake the user. The second component is a control panel located on the far right side of the mattress which programs the piston's area of movement, pressure, and speed based on the user preferences of the uncomfortable environment. The control panel is powered up via an on/off/ switch button, displays the status via an LCD Screen, has a directional keypad for navigating controls, and an Accept and Back button for confirmation or cancellation of commands. The mattress also has a power cord attached to the edge of the mattress.

BRIEF DESCRIPTION OF THE SEVERAL VIEWS OF THE DRAWING(S)

[0009] **FIG. 1** is top view from above, looking down on the mattress apparatus invention.

[0010] **FIG. 2** is the right side view of the mattress apparatus invention.

[0011] **FIG. 3** is the plain user view of the control panel associated with the mattress apparatus invention.

List of Reference Numerals

[0012] **2 Mattress**

[0013] **4 Power Cord**

| | |
|---------------|------------------------------|
| [0014] | 6 Piston |
| [0015] | 8 Control Panel |
| [0016] | 10 On/Off Switch |
| [0017] | 12 Reset Button |
| [0018] | 14 LCD Screen |
| [0019] | 16 Directional Keypad |
| [0020] | 18 Accept Button |
| [0021] | 20 Back Button |

DETAILED DESCRIPTION OF THE INVENTION

[0022] An uncomfortable mattress apparatus of the present invention is a solution for certain individuals who struggle with waking up to various types of alarm when prompted. This mattress works with a present alarm to provide a reliable way of waking up the user by making an uncomfortable sleeping environment for those who have issues to waking to an alarm alone.

[0023] With reference to **FIG. 1** through **FIG. 3**, the present invention consists of the mattress **2** itself, eight mechanical pistons **6** located throughout the entire mattress **2** which run off electrical power through the mattress power cord **4**, and are programmed to the user's preferences by using the control panel located on the far right side of the mattress **8**.

[0024] With reference to **FIG. 1**, it is ensured that the mechanical pistons **6** are distributed throughout the entire mattress **2** so the user can be reached from whichever

position they are sleeping in. This provides further reliability to make sure that the user can be woken up while using the mattress **2**. Furthermore, it is essential to continually provide safe usage for the user thus the power cord **4** to provide electrical power to the mattress **2** is located at the foot of the bed which is out of the users immediate sleeping area.

[0025] With reference to **FIG. 2**, each of the eight mechanical pistons **6** sink deep into the mattress **2** when they are not activated thus providing full maximum comfort to the user to ensure they still get a good night sleep before their alarm and the mattress **2** wakes them up. Furthermore, the control panel **8** is located on the right side of the foot of the mattress **2** which ensures that there is not unintentional user error of mistyping a command while sleeping.

[0026] With reference to **FIG. 3**, the control panel **8** consists of six simple pieces including the on/off switch **10**, the reset button **12**, the LCD screen **14**, the directional keypad **16**, the accept button **18**, and the back button **20** that allow the mattress **2** to be connected to an existing alarm device. The overall design of the control panel **8** is designed as a simple, user friendly interface to ensure that all users can easily control their mattress **2**. The on/off switch **10** simply controls the entire mattress **2** power. The reset button **12** can be used when there has been an error when configuring the user's mattress **2** system or when the user would like to completely restart their alarm settings. The LCD screen **14** shows the user the settings and options that they can choose including the speed and pressure of the pistons **6** or which pistons **6** to activate. The directional keypad **16** makes the selection process of setting and options simple for the

user. The accept button **18** allows the user to pick the selected setting and option that they have navigated to using the directional keypad **16**. The back button **20** allows the user to easily navigate throughout the entire selections of settings and options before choosing their preference.

[0027] Although the present invention has been described with reference to specific embodiments, it is understood that modifications and variations of the present invention are possible without departing from the scope of the invention, which is defined by the claims set forth below. Unless defined otherwise, all technical and scientific terms used herein have the same meaning as commonly understood by one of ordinary skill in the art to which this invention belongs. Any methods and materials similar or equivalent to those described herein can also be used in the practice or testing of the present invention; however, the preferred methods and materials are now described.

CLAIMS

The invention claimed is:

1. An uncomfortable mattress based on alarm comprising:
 - a. An embedded alarm;
 - b. Eight mechanical pistons packed inside the mattress;
 - c. A control panel attached to the far right side of the mattress; and
 - d. A power cord attached to the edge of the mattress.
2. The mattress as claimed in claim **1**, further comprising eight mechanical pistons; wherein the pistons are packed and evenly distributed inside the mattress.
3. The mattress as claimed in claim **1**, further comprising a control panel; wherein the control panel is attached securely to the far right side of the mattress and controls the piston's area of movement, pressure, and speed.
4. The mattress as claimed in claim **3**, further comprising a control panel; wherein the control panel is powered up via an on/off switch button.
5. The mattress as claimed in claim **3**, further wherein the control panel displays the status via an LCD Screen.
6. The mattress as claimed in claim **3**, further wherein the control panel has a Directional Keypad for navigating controls.
7. The mattress as claimed in claim **3**, further wherein the control panel has an Accept and Back button for confirmation or cancellation of commands.

8. An uncomfortable mattress comprising:
 - a. An embedded alarm;
 - b. Eight mechanical pistons packed inside the mattress; wherein the pistons are evenly distributed inside the mattress.
 - c. A control panel attached to the far right side of the mattress; wherein the control panel controls the piston's area of movement, pressure, and speed.
 - d. A control panel attached to the far right side of the mattress; wherein the control panel is powered up via an on/off switch button; displays status via an LCD Screen; has Directional Keypad for navigating controls; has an Accept and Back button for confirmation or cancellation of commands; and
 - e. A power cord attached to the edge of the mattress.

ABSTRACT

Waking up at the appropriate time is very important for many individuals for any event whether it be work, school, etc, however, some individuals may have issues waking up solely with the use of an alarm. To solve this problem, various inventions and modifications of mattresses were made and patented. Some were connected to alarm devices and were modified to vibrate and wake users up. This existing problem prompted the researchers to design an uncomfortable mattress apparatus that will surely wake up every heavy sleeper in the house. The uncomfortable mattress apparatus consists of two main components: a mattress and a control panel. The mattress contains pistons that are equally distributed throughout the mattress which speeds, pressures, and areas of action can be configured in the control panel. The control panel is designed as a simple, user-friendly interface to ensure that all users can easily control their mattresses.

DRAWINGS

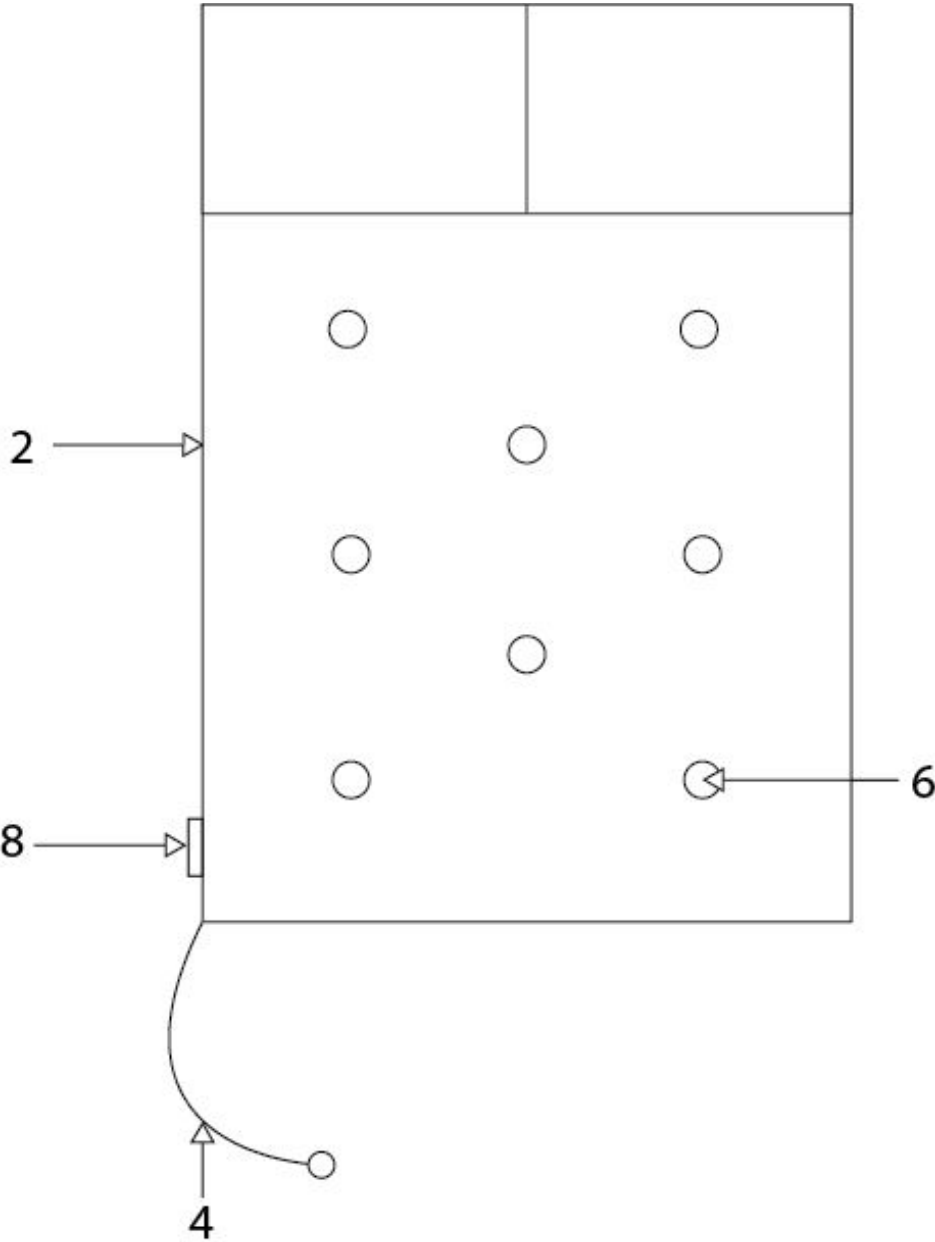


FIG. 1

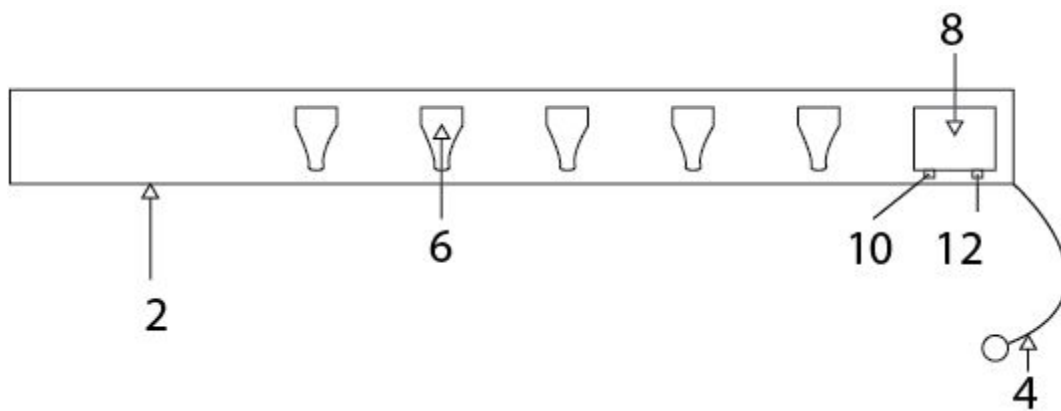


FIG. 2

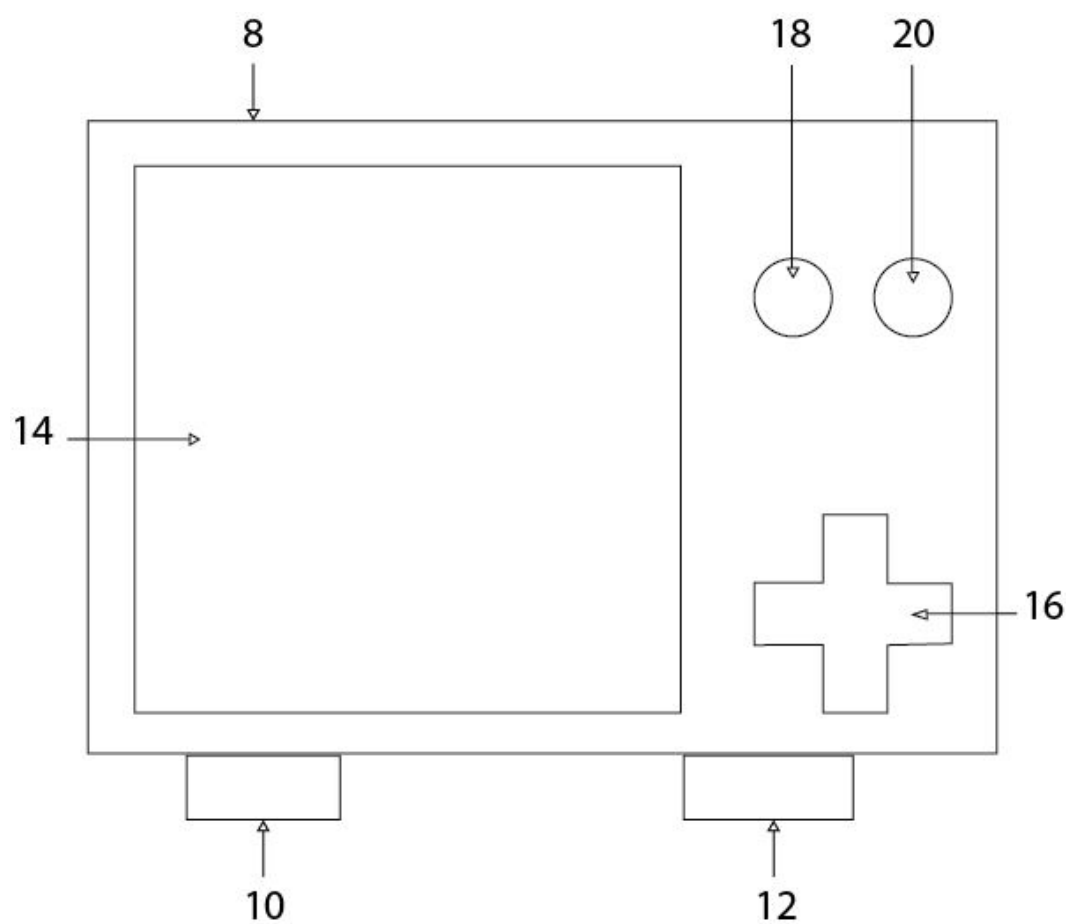


FIG. 3