June 30, 1936. C. L. McCLELLAN 2,046,080

DEVICE TO PREVENT BED WETTING

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Fig. 1.

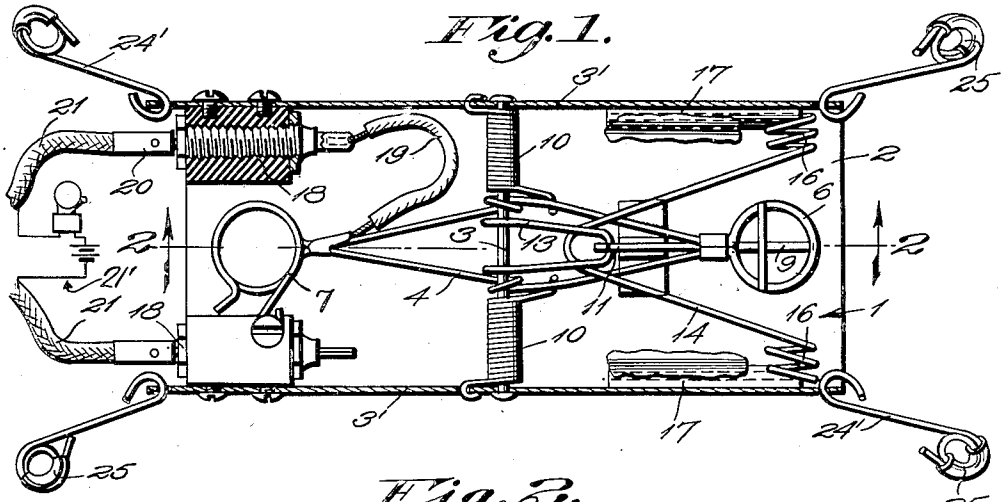


Fig. 2.

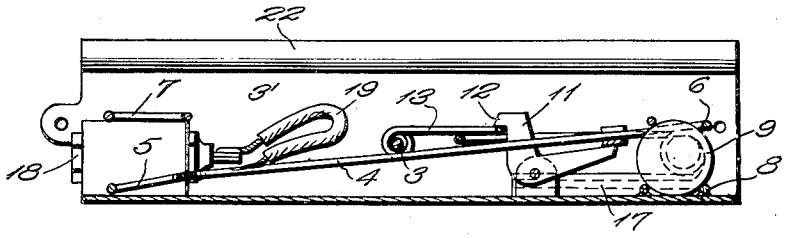


Fig. 3.

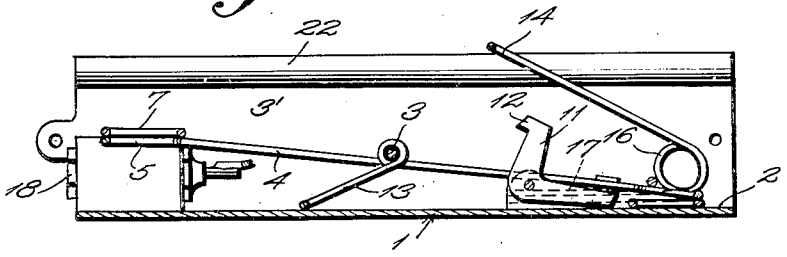
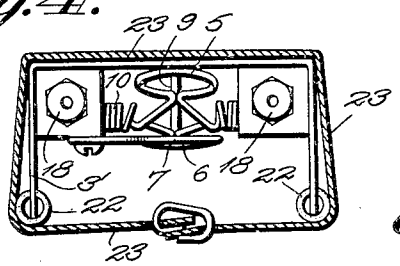


Fig. 4.



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Fig. 5.

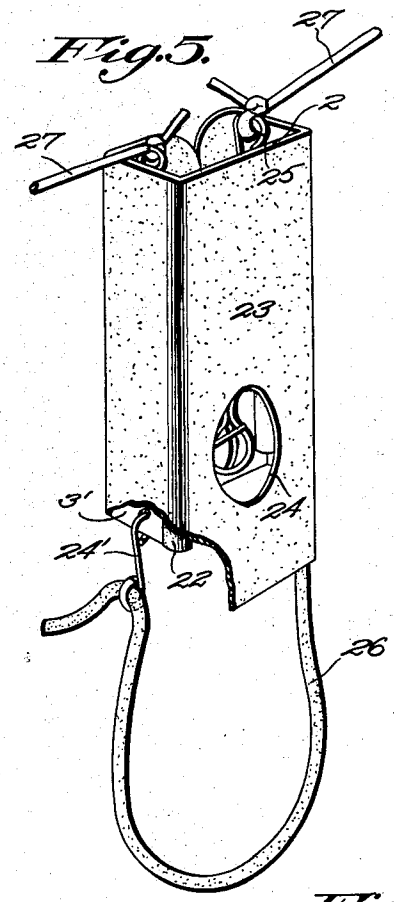


Fig. 6.

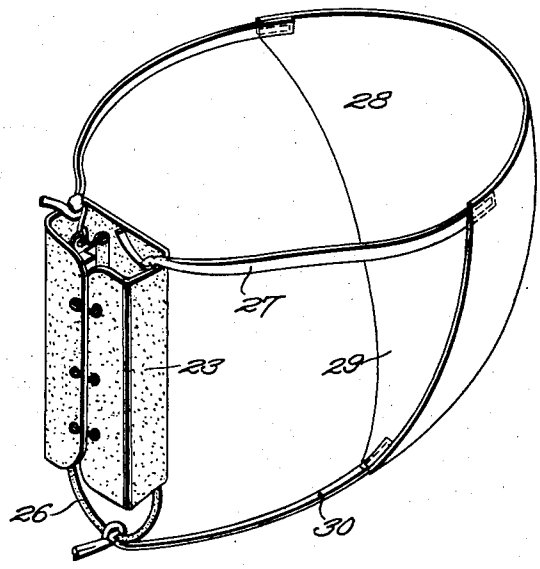
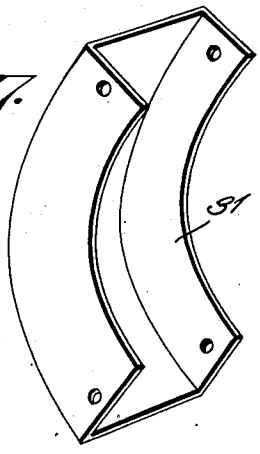


Fig. 7.



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2,046,080

DEVICE TO PREVENT BED WETTING

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Application September 30, 1935, Serial No. 42,927

7 Claims. (Cl. 128—138)

This invention relates to a device to prevent bed wetting by a child or infant while asleep and has for the primary object the provision of a device of this character which is readily adapted to a child for automatically waking a child should voiding begin so that the child will immediately gain control and thereby prevent soiling of the bedding as well as the child's garments.

Another object of this invention is the provision of means whereby the device may be employed in connection with an electrical signal to bring about actuation of the latter should the child void so that the child's attendant will be immediately informed so that the child's clothing may be changed and the child bathed to prevent discomfort and unsanitary conditions to exist, thus adapting the device especially for infant's use.

With these and other objects in view, this invention consists in certain novel features of construction, combination and arrangement of parts to be hereinafter more fully described and claimed.

For a complete understanding of my invention, reference is to be had to the following description and accompanying drawings, in which

Figure 1 is a longitudinal sectional view showing a device to prevent bed wetting and constructed in accordance with my invention.

Figure 2 is a sectional view taken on the line 2—2 of Figure 1, showing the device in a set position.

Figure 3 is a similar view showing the device in a released position.

Figure 4 is a transverse sectional view showing the cover applied to the device.

Figure 5 is a fragmentary perspective view showing an opening in the cover to permit fluid to enter the device for the actuation thereof.

Figure 6 is a perspective view illustrating means of supporting the device to a child.

Figure 7 is a perspective view illustrating a modified form of frame or support so that the device may be adapted to the female sex.

Referring in detail to the drawings, the numeral 1 indicates a rigid mounting or support of channeled construction including a wall 2 and walls 3' disposed angularly to the wall 2 and to which is secured a shaft 3. The shaft is arranged substantially intermediate the ends of the mounting and has journaled thereon a trigger member 4 projecting to opposite sides of the shaft and terminating at one end in a circular-shaped contact 5 and its opposite end terminating in a circular-shaped retaining member 6. The contact 5 cooperates with a fixed contact 7 in completing an electric circuit of an alarm which will be hereinafter more fully described. The retaining member 6 of the trigger element 4 cooperates with a seat 8 on the mounting in retaining a dissolvable element 9 in position. The dissolvable element 9 acts to position the trigger element 4 to disengage the contact 5 from the contact 7 while springs 10 act to urge the trigger element to engage the contacts 5 and 7. The springs 10 are mounted on the shaft 3 and each has one end connected to the mounting and the other end connected to the trigger element 4. The element 9 while shown in disc formation may be of any desirable shape and is preferably made of material which will quickly dissolve when subjected to a very limited amount of liquid or moisture.

The trigger element 4 contacts one end of a pivotally mounted catch 11 while the opposite end thereof is in the form of a bill 12 to engage with a hingedly mounted keeper 13. The keeper journals on the shaft 3 and is adapted to be brought into engagement with the bill 12 of the catch 11 and over a spring actuated striker 14, the latter consisting of a V-shaped portion terminating in spring coils 16 each having an extension anchored to the mounting 1, as shown at 17. The normal tendency of the striker 14 is to move outwardly of the mounting and is retained therein by being overlain by the keeper 13 when in engagement with the catch 11, the latter being held against pivotal movement by the trigger element 4 held in non-circuit closing position by the dissolvable element 9.

Jacks 18 are suitably secured to the mounting 1 and one of said jacks has the contact 7 electrically connected directly thereto while the other jack is electrically connected to the contact 5 by a conductor 19 which will permit said contact 5 to have free movement towards and from the contact 7. The jacks 18 are of conventional construction and have detachably connected thereto contact or terminal tips 20 to which conductors 21 of an electric alarm circuit 21' are connected. The electric circuit includes an electrical signal or alarm and the circuit is opened or closed by the disengagement and the engagement of the contacts 5 and 7.

The edges of the walls 3' of the mounting have secured thereto cushion strips 22 and surrounding the mounting is a suitable cover 23 readily removable therefrom and is provided with an opening 24 disposed opposite the dissolvable element 9 so that moisture or liquid may be

admitted to said element 9 to bring about dissolving thereof and bring about the actuation of the device.

The ends of the mounting 1 are equipped with attaching elements 24' each terminating in an eye 25. The attaching elements 24' are arranged in pairs, one pair having connected thereto a flexible element 26, while the other pair has attached thereto the ends of a waist encircling strap 27 of a child's garment 28. This garment can be of any desired construction, preferably in the form including the waist encircling strap 27 connected to a buttock covering 29 to which is secured a crotch strap 30, the end of which is detachably secured to the flexible member 26 so that the mounting will be supported vertically to the child with the opening 24 of the cover disposed next to the child so that should the child void while asleep, the liquid will immediately contact and dissolve the element 9, setting the device in operation. As soon as the striker 14 is released from a set position, it hits the cover with sufficient force and the latter being in direct contact with the child will awaken the child to permit the child gaining control of the voiding. The cover may be constructed of any suitable flexible material. The mounting 1 is preferably designed for the male sex while the mounting 31 is designed for the female sex and is clearly shown in Figure 7 as being arcuately curved so as to fit the crotch of the child.

The device besides awakening the child may be employed for sounding an alarm by having the conductors 19 connected to the jacks whereby the electric circuit is closed when the contacts 5 and 7 engage. This will notify the child's attendant and permit the attendant to give immediate attention to the child.

Having described the invention, I claim:

1. A device to prevent child bed wetting comprising a mounting, means for attaching said mounting to a child, a spring driven means carried by said mounting and adapted when released to strike the child for the awakening of the latter, and means releasably retaining said spring driven means in a set position and actuated by the engagement of liquid therewith.

2. A device to prevent child bed wetting comprising a mounting, means for attaching said mounting to a child, a spring driven means carried by said mounting and adapted when released to strike the child for the awakening of the latter, means releasably retaining said spring driven means in a set position and actuated by the engagement of liquid therewith, and means actuated by said third means for closing an electric alarm circuit.

3. A device to prevent child bed wetting comising a mounting, means for attaching said mounting to a child, a spring driven striker carried by said mounting and adapted when released to engage a child with force for the awakening of said child, a catch mechanism for releasably retaining the striker in set position and including a spring drive, and liquid dissolvable means retaining said catch mechanism means against actuation.

4. A device to prevent bed wetting comprising a mounting, means for attaching said mounting to a child, a spring driven striker carried by said mounting and adapted to engage a child with force for the awakening thereof when released, a catch mechanism for releasably retaining said striker in a set position, and a spring driven means engageable with the catch mechanism and including a moisture dissolvable element for freeing the catch mechanism.

5. A device to prevent bed wetting comprising a mounting, a supporting means for said mounting, a spring driven striker carried by said mounting, a catch mechanism for retaining the striker in a set position, a spring driven catch holding means and including a circuit maker and breaker, and a dissolvable element for retaining said last means in set position.

6. A device to prevent bed wetting comprising a mounting, a spring driven striker carried by said mounting, a catch mechanism for retaining the striker in a set position, a spring driven catch holding means and including a circuit maker and breaker, a dissolvable element for retaining said last means in set position, and a body encircling element for securing the mounting to a child.

7. A device to prevent bed wetting comprising a mounting, a spring driven striker carried by said mounting, a catch mechanism for retaining the striker in a set position, a spring driven catch holding means and including a circuit maker and breaker, a dissolvable element for retaining said last means in set position, a body encircling element for securing the mounting to a child, and a flexible covering for said mounting and having an opening for the admittance of liquid to the dissolvable element.

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