Aug. 5, 1930. J. S. VAN GUILDER 1,772,232

ALARM

Filed Dec. 6, 1927

Fig. 1.

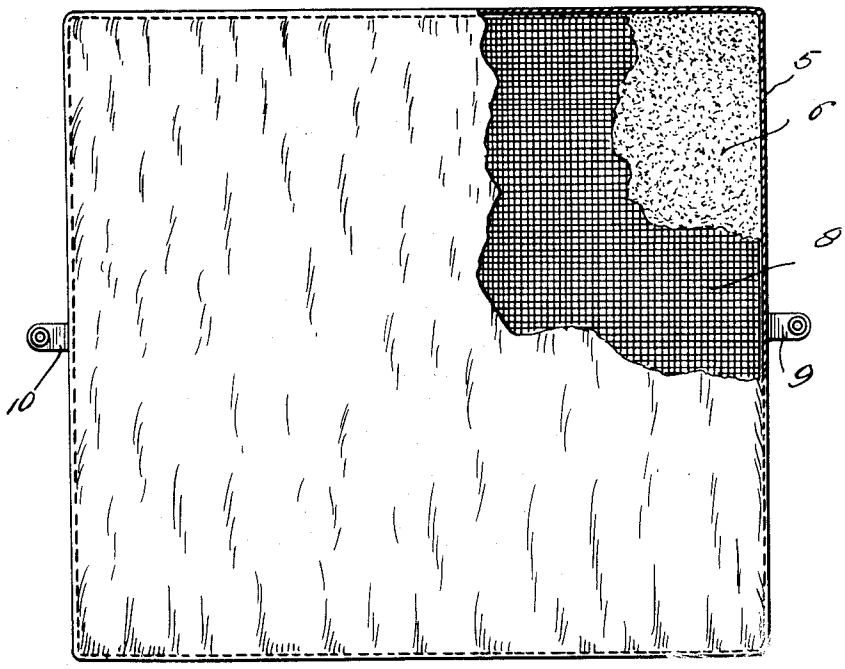
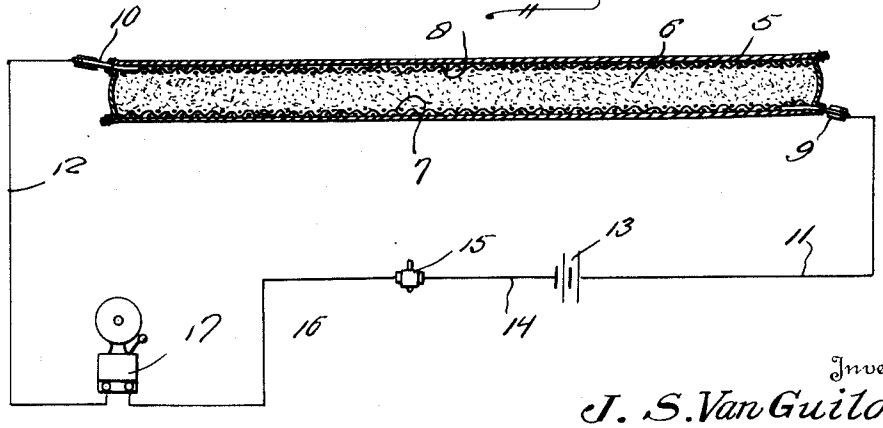


Fig. 2.



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1,772,232

UNITED STATES PATENT OFFICE

JESSE S. VAN GUILDER, OF RED WING, MINNESOTA

ALARM

Application filed December 6, 1927. Serial No. 238,028.

This invention relates to alarms, and has more particular reference to an electrical device of this kind adapted for use as an aid in curing persons of the habit of nocturnal urination or bed-wetting.

The primary object of the invention is to provide means for sounding an alarm when urination starts so as to awaken the sleeper before the bladder is emptied and thereby enable him or her to avoid material wetting of the bed.

A further object is to provide an electrical alarm of the above which is simple in construction and efficient in operation.

The invention consists in the novel features and combination of parts hereinafter more fully described, shown in the accompanying drawing and claimed.

In the drawing:

Figure 1 is a plan view, partly broken away, of a bed pad forming part of the present invention, and

Figure 2 is a view of the alarm device, the bed pad being in section and the remainder of the device being diagrammatically shown.

Referring more in detail to the drawing, the present invention preferably embodies a bed pad adapted to be placed beneath the sleeper as practiced with ordinary bed pads, and comprising a suitable fabric casing 5 pervious to moisture and having a filling of suitable material, as at 6, adapted to be rendered conductive to electricity when moistened with urine. The material 6 is preferably granular and may consist of sodium chloride as the latter, when dry, will not act as a conductor. Arranged within the casing 5, respectively beneath and upon the filling material 6, are foraminous conductor sheets 7 and 8, preferably consisting of sheets of copper wire screening having an area substantially equal to the area of the pad. The conductor sheets 7 and 8 have marginal terminals 9 and 10 adapted to have suitable insulated conductor wires 11 and 12 connected thereto, and the wire 11 is connected to one side of a battery 13 whose other side is connected by wire 14 to one side of a manually operable switch 15. The other side of switch 15 is connected by a wire 16 to one terminal of an electrical signal device or bell 17, and the wire 12 connects to the other terminal of bell 17. In operation, the filling material is normally dry and insulates the sheets 7 and 8 from each other so as to prevent sounding of the bell 17 even though the switch 15 is closed. When the sleeper begins to urinate, the urine runs through the casing 5 and conductor sheet 8 and saturates a portion of the filling material 6 entirely through to the sheet 7. The wetted portion of the material 6 is thus rendered conductive to electrically connect the sheets 7 and 8 and close the alarm circuit, whereby the bell 17 is caused to operate and awaken the sleeper before his or her bladder is emptied. By turning the switch 15 off, the alarm may be rendered silent, and by constructing the casing so that it may be opened, the wet filling material may be replaced by dry material to condition the device for re-use.

Minor changes may be made without departing from the spirit and scope of the invention as claimed.

What I claim as new is:

In an alarm of the character described, a bed pad comprising a flexible fabric casing of flat hollow form and pervious to moisture, a filling of granular material within said casing forming a non-conductor of electricity when dry and a conductor of electricity when wetted, flexible foramious conductor sheets arranged within said casing respectively upon and beneath said filling material so as to be normally spaced apart and insulated from each other by said filling material, said foraminous sheets having an area substantially equal to the area of the pad, and marginal terminals on said foraminous conductor sheets projecting outwardly of the casing for connection with conductor wires of an alarm circuit.

In testimony whereof I affix my signature.

JESSE S. VAN GUILDER.