Aug. 13, 1940. C. J. DUNN 2,211,105

TOY LIE DETECTOR

Filed Dec. 18, 1939

Fig. 1.

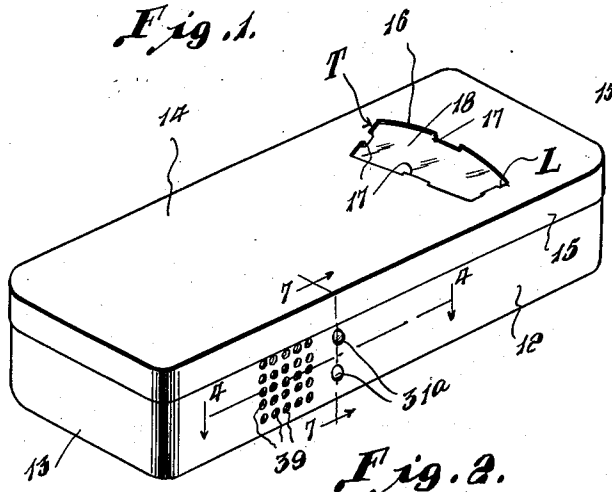


Fig. 2.

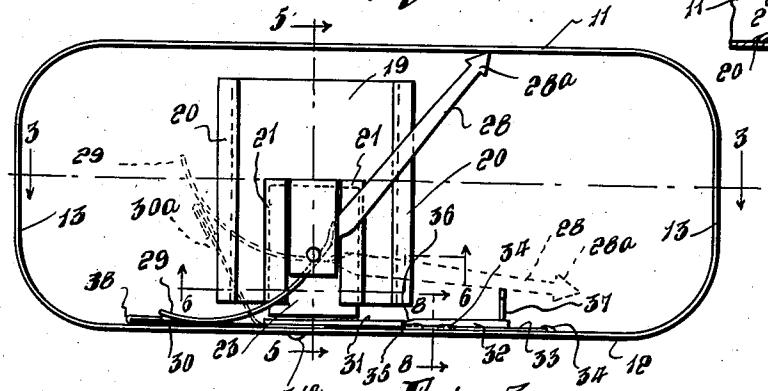


Fig. 3.

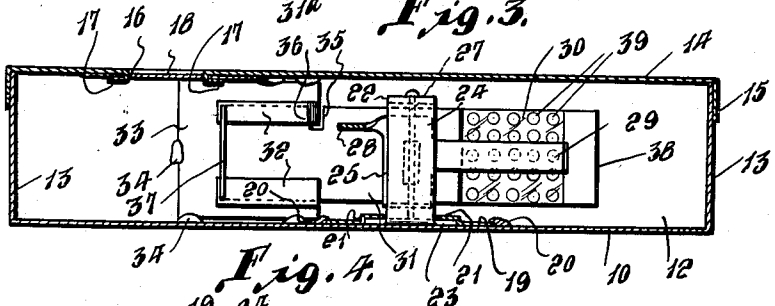


Fig. 4.

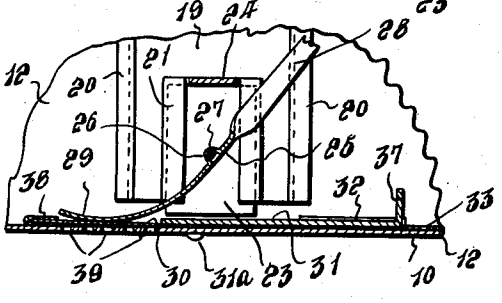


Fig. 5.

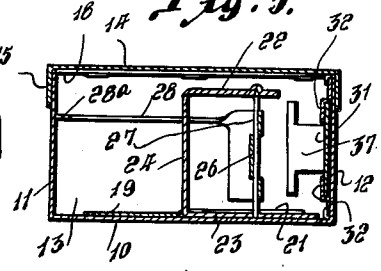


Fig. 6.

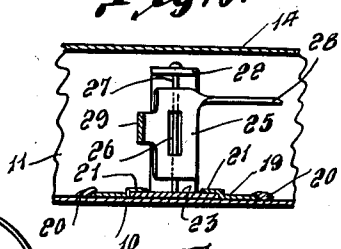


Fig. 7.

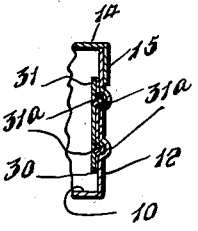
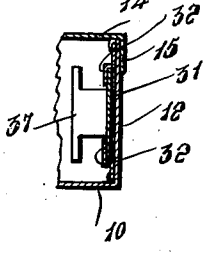


Fig. 8.



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TOY LIE DETECTOR

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Application December 18, 1939, Serial No. 309,837

5 Claims. (Cl. 46—1)

This invention relates to toy lie detectors.

The primary object of the invention is to provide a toy having an indicator hand or needle with which a heat and moisture-responsive device is associated to effect operation of the indicator hand or needle, the position of the indicator hand or needle at the extreme left signifying truth and the shift of the indicator hand or needle to the extreme right indicating that a question asked has been answered falsely.

A further object of the invention is to provide a toy lie detector wherein there is provided a casing of a size to be conveniently held in the hand of the user with a window opening in the top wall of the casing through which a pivotally mounted indicator hand or needle is visible. An operating strip within the casing for the indicator hand or needle may be constructed of any material desired, such as Cellophane, Celluloid, cellulose acetate, or a combination of such materials, so that when a portion of the hand of the user, such as a thumb, is placed in proximity of said strip, the heat and moisture of the hand will be transmitted through a series of perforations in the casing to act upon the strip and effect movement thereof for the operation of the indicator hand or needle.

With the above and other objects in view that will become apparent as the nature of the invention is better understood, the same consists in general of certain novel details of construction and combination of parts hereinafter more fully described, illustrated in the accompanying drawing and claimed.

In the drawing:

Figure 1 is a perspective view of a toy lie detector constructed in accordance with the present invention, showing the window opening in the cover of the casing through which the indicator hand or needle may be viewed,

Figure 2 is a top plan view of the casing with the cover removed illustrating the indicator hand or needle at its extreme movement in one direction indicating truth and further illustrated at its extreme movement in the opposite direction indicating falsehood.

Figure 3 is a vertical longitudinal sectional view taken on line 3—3 of Figure 2, showing the manner of mounting the heat and moisture-responsive strip within the casing,

Figure 4 is a fragmentary horizontal sectional view taken on line 4—4 of Figure 1, showing the mounting for the indicator hand or needle,

Figure 5 is a cross-sectional view taken on line 5—5 of Figure 2,

Figure 6 is a fragmentary longitudinal sectional view taken on line 6—6 of Figure 2,

Figure 7 is a detail sectional view taken on line 7—7 of Figure 1, showing the anchor means for the heat and moisture actuated strip, and

Figure 8 is a detail sectional view taken on line 8—8 of Figure 2.

The toy lie detector comprises a casing of a size to be conveniently gripped in the hand and is of elongated formation, the bottom portion of the casing comprising a bottom wall 10, side walls 11 and 12, respectively, and end walls 13. The cover for the casing comprises a top wall 14 having a depending marginal flange 15 overlying the upper edge of the side and end walls of the bottom section of the casing. An arcuate window opening 16 extends transversely of one end of the top wall 14, and as shown in Figures 1 and 3, fingers 17 bent from the edge walls of said window opening 16 pass through a Cellophane or like sheet 18 at the underside of the top wall 14 to be bent into gripping engagement with said transparent sheet for retaining the latter in position as illustrated.

The mechanism within the casing includes an indicator hand or needle and mounting therefor, the latter comprising a base plate 19 secured at opposite side edges thereof to the bottom wall 10 by welded, soldered or like strips 20 extending transversely of the bottom wall 10 of the casing as clearly shown in Figures 2, 3 and 6. A pair of opposed upstanding guide flanges 21 rise from the base plate 19 adjacent the side wall 12 of the casing, the base plate 19 being cut-away between said flanges 21 as shown in Figures 5 and 6. A U-shaped support comprising upper and lower horizontal legs 22 and 23 connected by a vertical leg 24 has the lower leg 23 slid into position beneath the guide flanges 21 and into the cut-away portion in the base plate 10 between said flanges 21.

The U-shaped support constitutes a bearing for the indicator hand or needle, the latter comprising a central plate portion 25 carrying at one side thereof between the upper and lower ends an offset cylindrical barrel 26 in which a vertical bearing pin 27 is fixed, the upper and lower projecting ends of the bearing pin respectively having free bearing mountings in the upper and lower horizontal legs 22 and 23 of the U-shaped support. One side of the central plate 25 at the upper edge thereof carries an elongated indicator hand or finger 28, while the other side of said plate 25 intermediate the upper and lower ends thereof carries an arcuate arm 29, the bear-

ing for the indicator hand or needle being adjacent the side wall 12 of the casing while the outside arc of the arm 29 is adjacent the side wall 12 of said casing. The mounting for the indicator hand or needle and the construction of the latter are such as to cause the arcuate arm 29 to normally lie adjacent the side wall 12 of the casing while the arrow head 28a of the indicator hand or finger normally lies adjacent the side wall 11 of the casing and at the left-hand side T of the window opening 16.

The operating means for the indicator hand or finger comprises a strip formed of any plastic material desired that is capable of transmitting heat and moisture, and such material may comprise Cellophane, Celluloid, cellulose acetate, or a combination of these materials, such a strip of material being indicated by the reference character 30 underlying the arcuate arm 29 of the indicator hand or needle. The holding means for the heat and moisture-responsive strip 30 comprises a metallic plate 31 slidably anchored to the side wall 12 of the casing by means of flanges 32 overlying opposite side edges of the plate 31 with the flanges carried by a base plate 33 secured as by solder at 34 to the side wall 12. The upper side edge of the plate 31 has a notch 35 cut therein into which the depressed end 36 of the adjacent flange 32 is pressed to hold the plate 31 against longitudinal sliding movement. The end of the plate 31 overlying the base plate 33 is bent at right angles as at 37 to provide an abutment or stop for the indicator handle or needle 28 that is shown in its dotted line position in Figure 2 as engaged with said stop 37. The other end of the metallic plate 31 overlying the adjacent end of the heat and moisture-responsive strip 30, together with the adjacent portion of the side wall 12, as shown in Figure 7, has coacting dents or depressions 31a formed therein for gripping the adjacent end of the heat and moisture-responsive strip 30. The free projecting end of the heat and moisture-responsive strip 30 is reinforced and inclosed by a folded ply of light material 38. As shown in Figures 1 and 3, the side wall 12 of the casing in line with the heat-responsive strip 38 is provided with a plurality of perforations 39 to facilitate the passage of heat and moisture from the hand of the user.

The normal positions of the indicator hand or needle 28 and arm 29 are shown by full lines in Figure 2, the arrow head 28a of the indicator hand or needle being at the end of the window opening 17 indicated at T in Figure 1 to signify "truth." In the use of the toy the casing is gripped in the hand and a question is asked, the thumb of the user overlying the series of openings 39 in the side wall, heat and moisture of the thumb are transmitted through said openings to the heat and moisture-responsive strip 30, the latter in the presence of heat and moisture flexing or bending to assume the dotted line position shown at 30a in Figure 2, movement of the strip 30 moving the arcuate arm 29 of the indicator hand or needle to shift the same to the dotted line position shown in Figure 2, the indicator hand or finger moving on its pivot pin 27 to the dotted line position shown in Figure 2 to the right-hand end of the slot indicated at L in Figure 1 to signify the telling of a falsehood. Of course, the indicator hand or finger always moves to the right-hand side of the window opening 16, the device being a toy and not in any manner being operative as a scientific device or mechanism to indicate the telling of a truth or lie.

From the above detailed description of the invention, it is believed that the construction and operation thereof will at once be apparent, and while there is herein shown and described the preferred embodiment thereof, it is to be understood that minor changes may be made in the details of construction, such as will fall within the scope of the invention as claimed.

I claim:

1. A toy lie detector comprising a casing having a window opening therein, an indicator finger movably mounted in the casing and viewable through the window opening and normally occupying a position adjacent one end of the window opening, and means associated with the movable indicator finger and responsive to heat and moisture conditions of the hand of the user when holding the casing for moving said indicator finger in a direction away from its normal position and toward the other end of the window opening, and wherein the indicator finger is pivotally mounted intermediate its ends with one end normally engaged with the heat and moisture actuated means.

2. A toy lie detector comprising a casing having a window opening therein, an indicator finger movably mounted in the casing and viewable through the window opening and normally occupying a position adjacent one end of the window opening, and means associated with the movable indicator finger and responsive to heat and moisture conditions of the hand of the user when holding the casing for moving said indicator finger in a direction away from its normal position and toward the other end of the window opening, and wherein the heat and moisture actuated means includes a strip of material of the class of Cellophane, Celluloid or cellulose acetate.

3. A toy lie detector comprising a casing having a window opening therein, an indicator finger movably mounted in the casing and viewable through the window opening and normally occupying a position adjacent one end of the window opening, and means associated with the movable indicator finger and responsive to heat and moisture conditions of the hand of the user when holding the casing for moving said indicator finger in a direction away from its normal position and toward the other end of the window opening, and wherein the heat and moisture actuated means includes a strip of material flatly engaged with a side wall of the casing, a holder for the strip secured to the side wall of the casing with one end of the strip extending beyond the holder with one end of the indicator finger normally engaged with the free extended end of the strip.

4. A toy lie detector comprising a casing having a window opening therein, an indicator finger movably mounted in the casing and viewable through the window opening and normally occupying a position adjacent one end of the window opening, and means associated with the movable indicator finger and responsive to heat and moisture conditions of the hand of the user when holding the casing for moving said indicator finger in a direction away from its normal position and toward the other end of the window opening, and wherein the heat and moisture actuated means includes a strip of material flatly engaged with a side wall of the casing, a holder for the strip secured to the side wall of the casing with one end of the strip extending beyond

the holder with one end of the indicator finger normally engaged with the free extended end of said strip and the side wall of the casing having a group of perforations therein overlying said strip to facilitate passage of heat and moisture from the hand of the user to said heat and moisture-responsive strip.

5. A toy lie detector comprising a casing having a window opening therein, an indicator finger movably mounted in the casing and viewable through the window opening and normally occupying a position adjacent one end of the window opening, and means associated with the movable indicator finger and responsive to heat and moisture conditions of the hand of the user when holding the casing for moving said indicator finger in a direction away from its normal position and toward the other end of the window opening, and wherein the heat and moisture actuated means includes a strip of material flatly engaged with a side wall of the casing, a holder for the strip secured to the side wall of the casing with one end of the strip extending beyond the holder with one end of the indicator finger normally engaged with the free extended end of said strip and the side wall of the casing having a group of perforations therein overlying said strip to facilitate passage of heat and moisture from the hand of the user to said heat and moisture-responsive strip, and means carried by said holder in the path of movement of the indicator hand for limiting movement of the latter away from its normal position.

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