

# PATENT SPECIFICATION

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## 202,152

### COMPLETE SPECIFICATION.

#### Improvements relating to Kaleidoscopes.

I, ALEXANDER PRINGLE, of 12, Springdale Gardens, Belfast, of British nationality, do hereby declare the nature of this invention and in what manner the same is to be performed, to be particularly described and ascertained in and by the following statement:—

This invention relates to kaleidoscopes of the class having mirrors arranged at an angle and hinged together so that they may be placed at certain angles to each other.

A kaleidoscope of the aforesaid type constructed according to this invention is characterized by the feature that the mirrors are provided with a cover or screen across the outer edges of the mirrors and extending from the top thereof to a short distance above the display table. The cover or screen may be arranged to form a hinge or connection between said mirrors, and means may be provided for varying the angle between the same and for holding the mirrors apart at a determined angle.

Forms of the invention are illustrated, by way of example, on the accompanying drawings whereon:—

Figs. 1 and 2 are respectively an elevation and a plan of a fixed angle kaleidoscope in accordance with the invention.

Figs. 3 and 4 are respectively an elevation and a plan of a variable angle kaleidoscope in accordance with the invention.

Fig. 5 is a sectional view on the line XX Fig. 3.

Fig. 6 is an elevation of another form of variable angle kaleidoscope in accordance with the invention, and Fig. 7 is a sectional plan on the line Y Y Fig. 6.

The kaleidoscope shown at Figs. 1 & 2 comprises two mirrors 1 and 2 arranged at an angle to give the desired reflections and secured relatively to each other at said angle by suitable binding or covering material 3 which extends from the

top of the device down to the level 4 at the front and also extends down the backs of the mirrors to the bottom thereof. The space between the mirrors at the top is filled in by means of a block 5 having a hole 6 therein. The mirrors 1 and 2, arranged and bound or covered as described, are shown supported on a wire support 7, having its ends 7<sup>a</sup> and 7<sup>b</sup> set into holes in a base block 8. On this base block 8 a turnable display table or turn-table 9 is provided having, on its under side, a projecting centre pin 10 which turns in a hole or bearing in the base 8. The table 9 may turn on a fixed pin or woodscrew fixed in the base. Preferably the centre of the table 9 is in line with the apex of the angle formed by the mirrors.

The example shown at Figs. 3, 4 and 5 is similarly constructed to the model shown at Figs. 1 and 2 but provision is made for varying the angle between the mirrors. In this case the covering on the mirrors 1 and 2 forms a hinge at the apex of the angle between the mirrors, springs 11 and 12 being provided to keep the edges of the mirrors together at the hinge portion at the different angles to which the mirrors may be moved as hereinafter described. The mirror 2 is fixed to the base block 8 being connected therewith by a support 13. The other mirror 1 is connected to a movable support 14 the end 14<sup>a</sup> of which passes between the outside of the base 8 and a curved plate 15 in which a slot 16 is provided with enlargements or holes 18 at different positions as clearly shown at Fig. 3. A spring locking pin 17 engages the slot 16 and is capable of entering, and being engaged by, the holes 18 in order to hold the movable support 14 at different positions and therefore the movable mirror 1 at the required angle relatively to the other mirror 2. A screen 19 is provided at the top of the device to cover the

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opening between the mirrors at the front thereof down to the level 4 at all angular positions of the mirrors as provided for by the movable support 14, slot 16, holes 18 and the locking pin 17. The top cover of the device is correspondingly extended so as to ensure sufficient cover for all angular positions of the movable mirror 1 relatively to the fixed mirror 2. A hole 6 is formed in the top of the screen 19 immediately in front of the apex of the angle between the mirrors.

In the example shown at Figs. 3 and 4 the base 8 is provided with an opening 8<sup>a</sup> for the more convenient turning of the turn-table 9.

In the construction illustrated by Figures 6 and 7 the mirror 1 is fixed and the mirror 2 is movable. There is no hinge or connection between the mirrors 1 and 2, the mirror 2 being secured to a curved strip 20 which engages in and is capable of movement through a slot 21 in the outer supporting casing 22 of the instrument. The upper portion of this casing 22 forms a curved screen at the front of the instrument as in the model shown at Figs. 3 and 4 and the strip 20 is made with a slightly larger radius than the curved front screen. The movable mirror 2 rests on a projecting ledge 23 and owing to the strip 20, forming a spring or having a spring connection on the mirror 2 the inner end of the latter is kept close against the inner end of the fixed mirror 1. The strip 20 is used to adjust the angle of the mirror 2 relatively to the fixed mirror 1 and, if desired, notches 24, or their equivalent, are provided in the upper edge of the spring strip 20 said notches being capable of engaging the upper edge of the slot 21. These notches are placed to give the desired variations in angle between the mirrors 1 and 2.

Having now particularly described and ascertained the nature of my said inven-

tion and in what manner the same is to be performed, I declare that what I claim is:—

1. A kaleidoscope having two suitably backed mirrors with their reflecting surfaces facing each other at an angle, and a display table supported beyond the mirrors at one end thereof, characterized by the angled mirrors having a cover, or screen, across the outer edges of the angled mirrors and extending from the top of the mirrors to a short distance above the display table, substantially as described.

2. A kaleidoscope as claimed in Claim 1, in which the cover or screen is arranged to form a hinge or connection between the mirrors.

3. In a kaleidoscope as claimed in any of the preceding claims, the provision of means for varying the angle between said mirrors, comprising a support connected to one of the mirrors and a locking pin adapted to engage with notches or slots in a plate secured to the display table so as to hold the mirrors apart at a determined angle.

4. A kaleidoscope having its parts made and combined together as hereinbefore described with reference to Figs. 1 and 2 of the annexed drawings.

5. A kaleidoscope having its parts made and combined together as hereinbefore described with reference to Figs. 3, 4 and 5 of the annexed drawings.

6. A kaleidoscope having its parts made and combined together as hereinbefore described with reference to Figs. 6 and 7 of the annexed drawings.

Dated this 2nd day of March, 1923.

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49, Scottish Provident Buildings,  
Belfast.

Fig. 1.

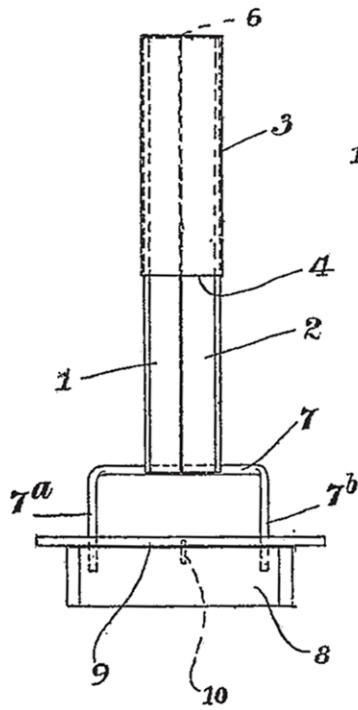


Fig. 5.

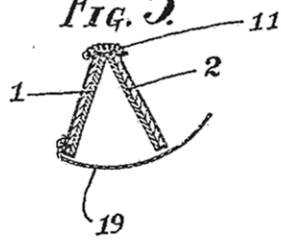


Fig. 3.

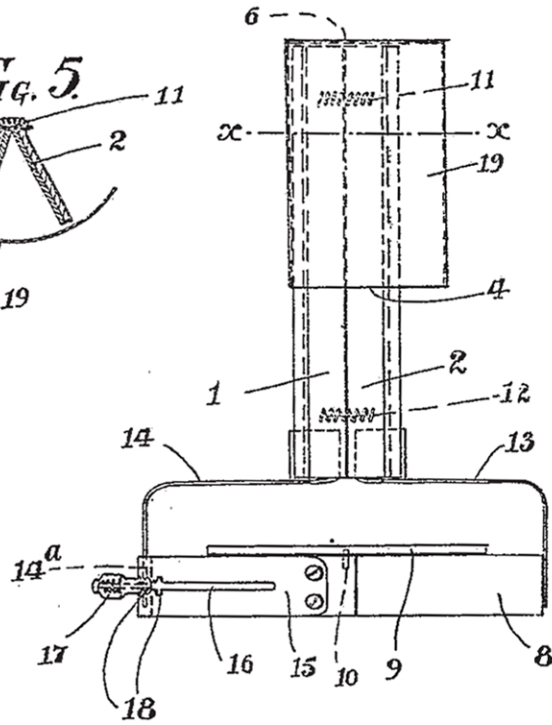


Fig. 4.

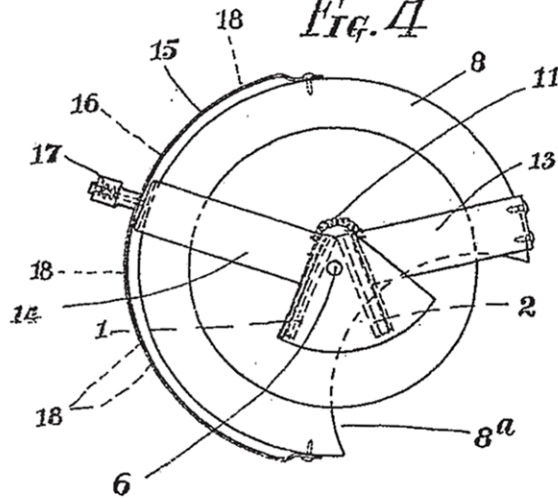


Fig. 2.

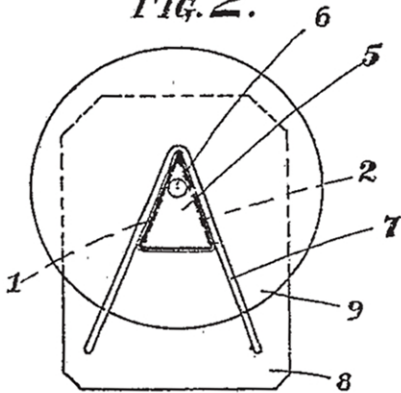


Fig. 6.

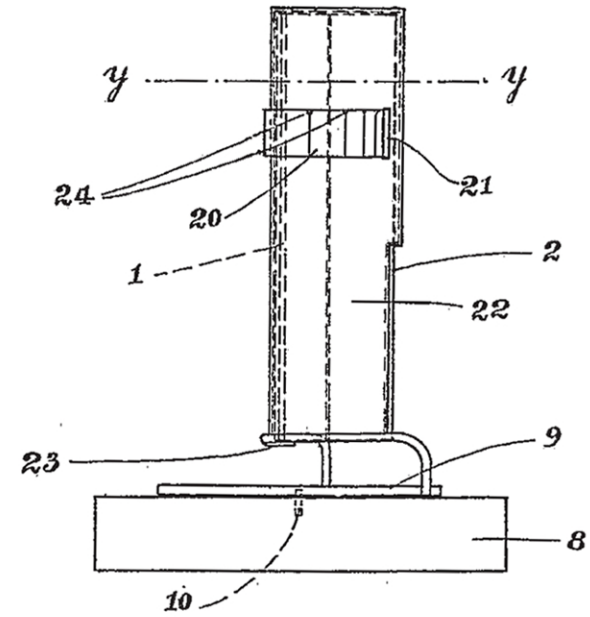
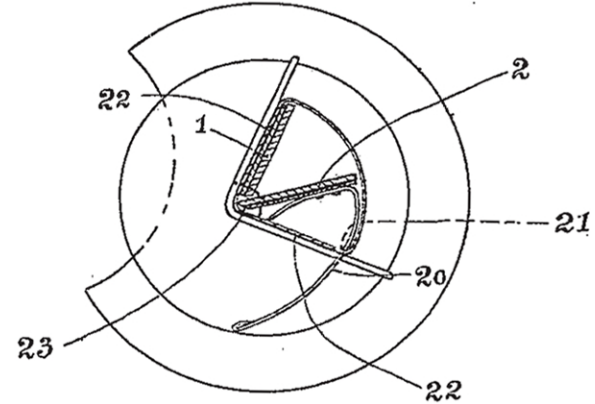


Fig. 7.



[This Drawing is a reproduction of the Original on a reduced scale.]