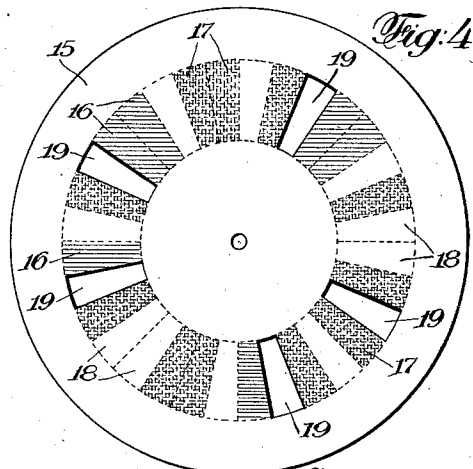
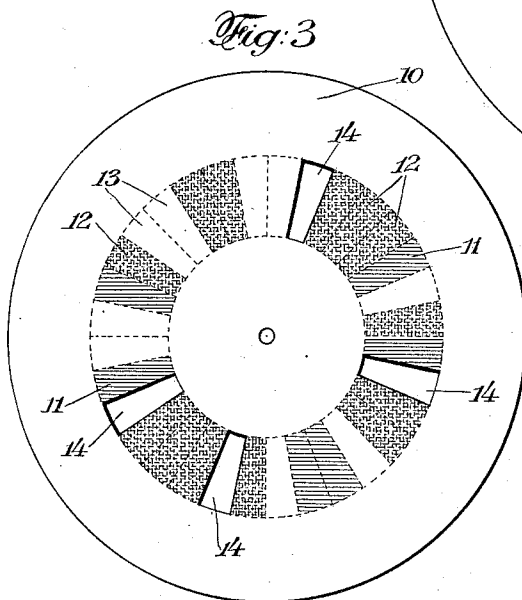
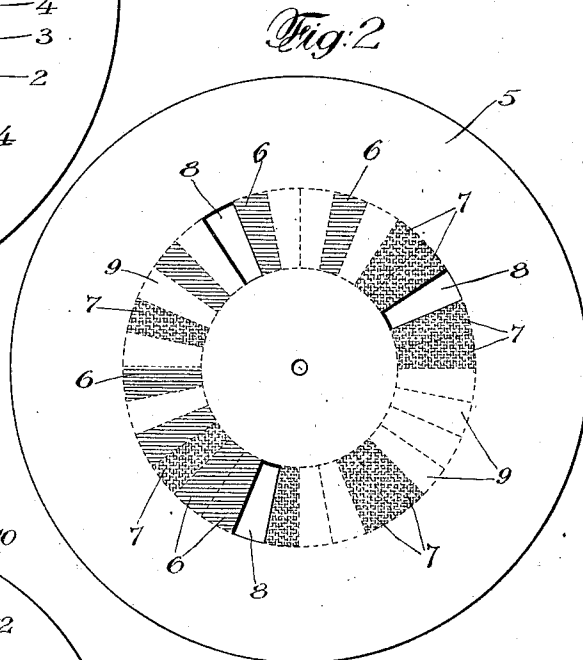
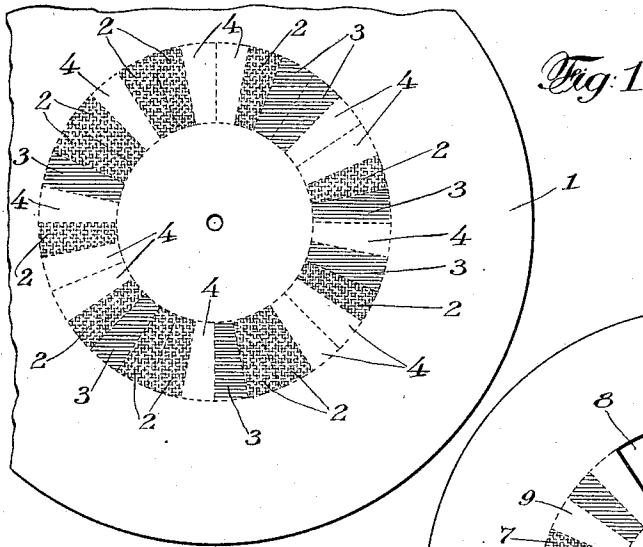


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PUZZLE.
APPLICATION FILED JAN. 3, 1910.

1,049,681.

Patented Jan. 7, 1913.

4 SHEETS—SHEET 1.



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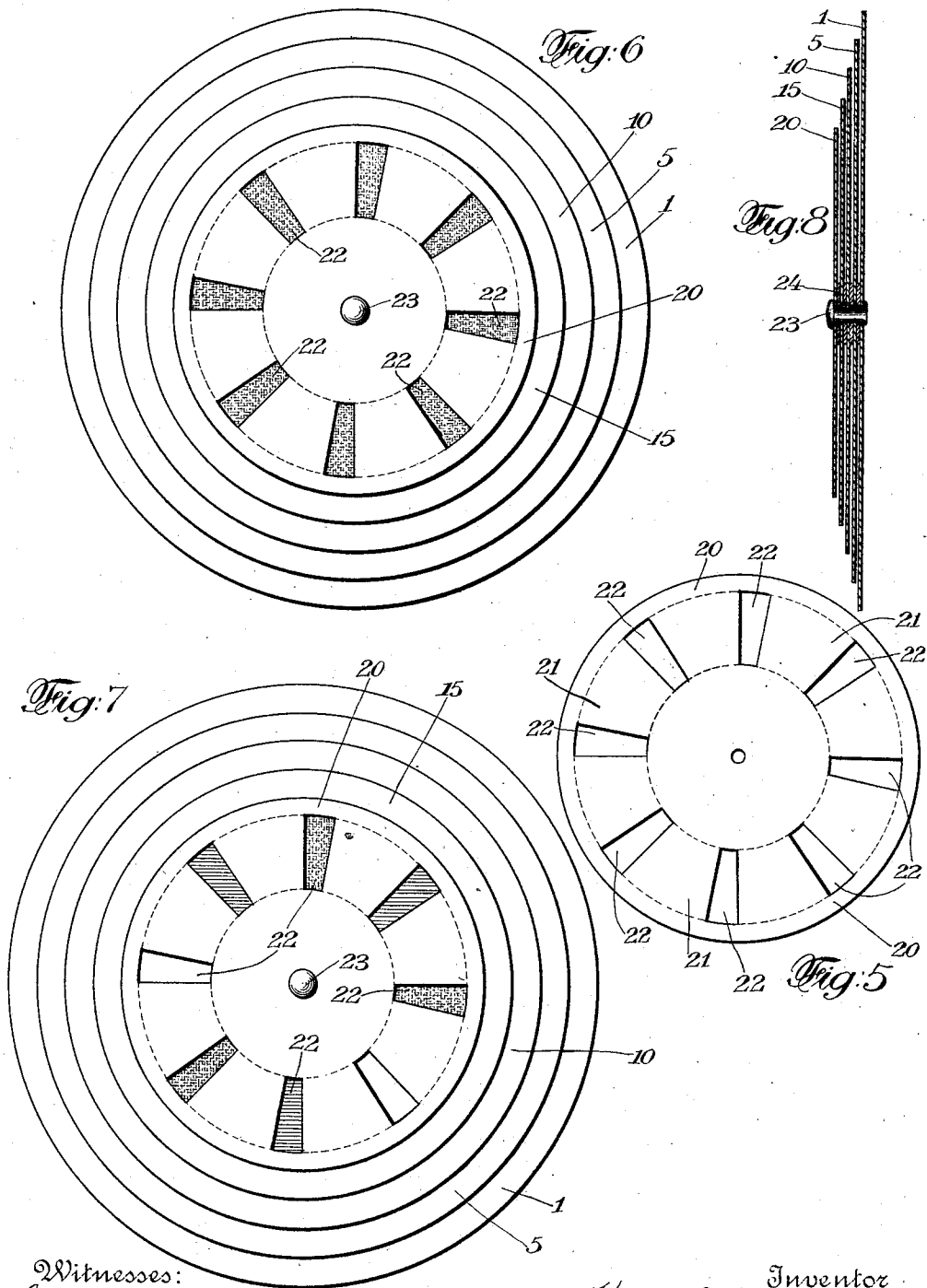
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Patented Jan. 7, 1913.

4 SHEETS-SHEET 2.

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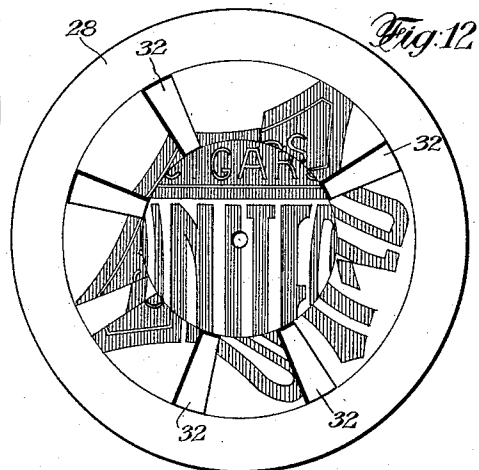
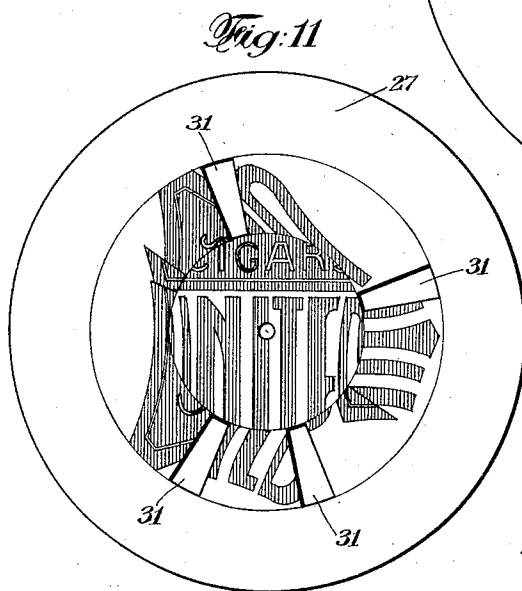
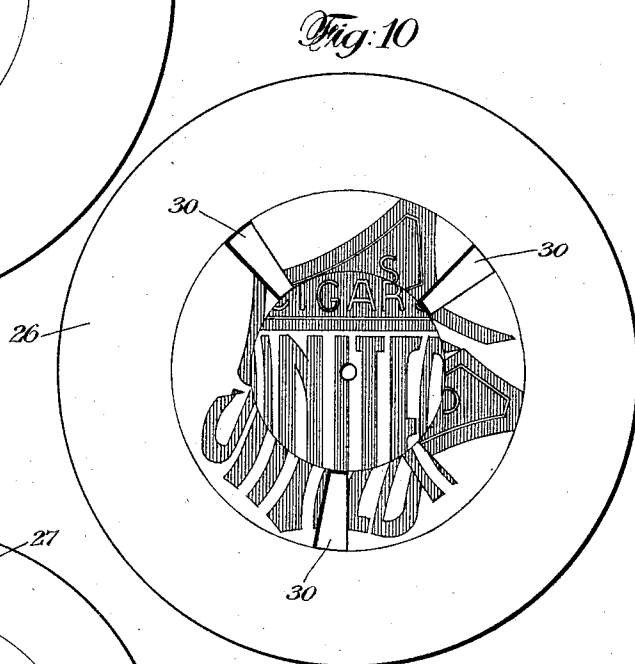
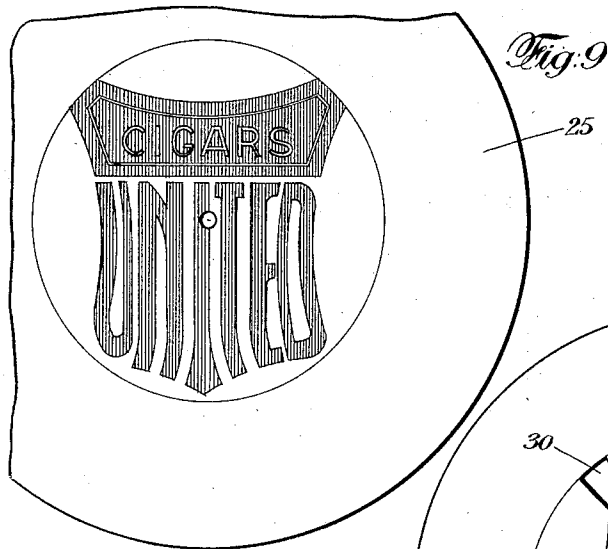
H. C. DAVIDSON.
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4 SHEETS—SHEET 3.

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4 SHEETS—SHEET 4.

Fig. 14

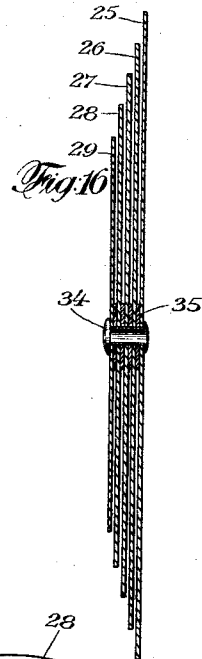
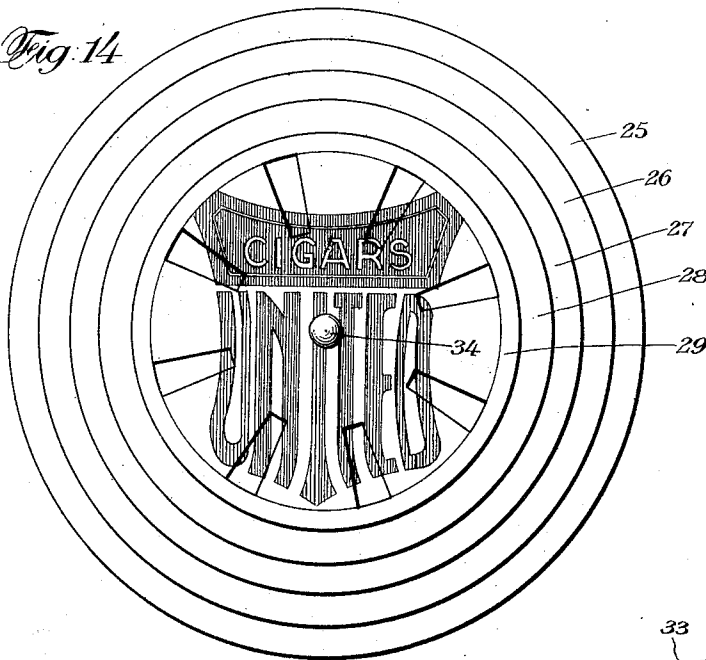


Fig. 15

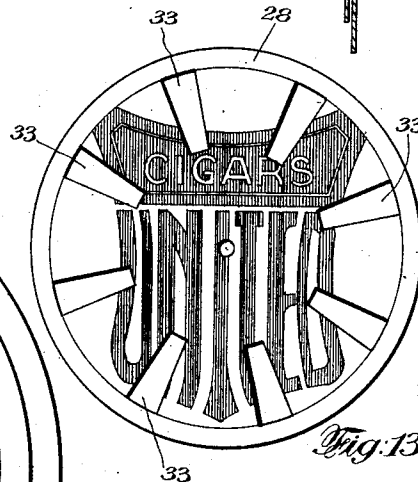
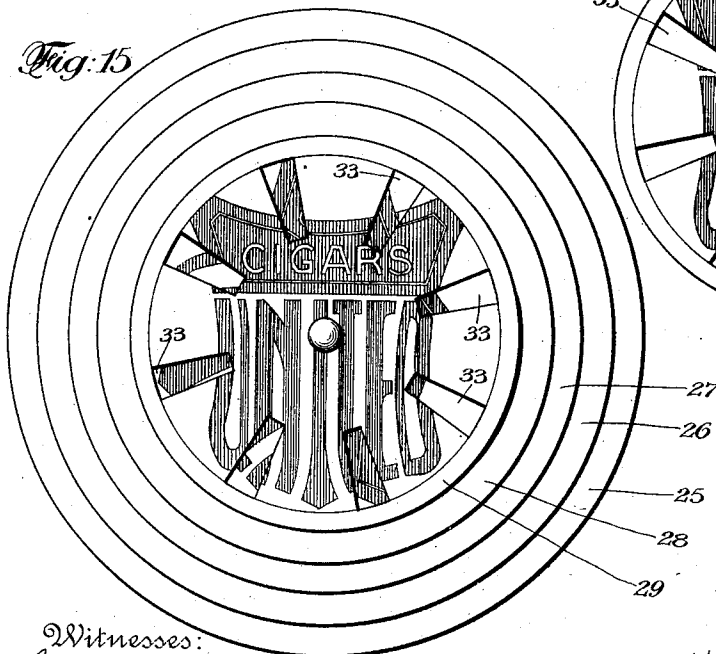


Fig. 13

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UNITED STATES PATENT OFFICE.

HARRY C. DAVIDSON, OF NEW YORK, N. Y.

PUZZLE.

1,049,681.

Specification of Letters Patent.

Patented Jan. 7, 1913.

Application filed January 3, 1910. Serial No. 536,151.

To all whom it may concern:

Be it known that I, HARRY C. DAVIDSON, a citizen of the United States, and a resident of New York city, in the county of New York and State of New York, have invented certain new and useful Improvements in Puzzles, of which the following is a specification.

My invention relates to improvements in puzzles and is more especially directed to that class of puzzles which have for their object the completion of a picture or design.

One object of my invention is to provide a novel device of this character which will exercise the mental faculties and hold interest and attention and which may be made as difficult as desired.

Further objects, features and advantages will more clearly appear from the detailed description given below taken in connection with the accompanying drawings which form a part of this specification.

In the drawings, Figures 1 to 5 inclusive are plan views of various plates or disks which go to form one embodiment of my invention. Figs. 6 and 7 are plan views of the various disks shown in Figs. 1 to 5 inclusive, assembled. Fig. 8 is a cross-section of the parts shown in Fig. 6. Figs. 9 to 13 inclusive are plan views of various plates or disks which go to make up a modified form of my improvements. Figs. 14 and 15 are the assembly plan views of the parts shown in Figs. 9 to 13 inclusive. Fig. 16 is a cross-section of the parts shown in Fig. 14.

Referring to Figs. 1 to 8 inclusive, 1 represents a plate or disk provided with radially arranged truncated sectors arranged in a circle about the center of the disk. Various of these sectors are colored yellow, as at 2. Various others of these sectors are colored blue, as at 3, while others are left white, as at 4.

In Fig. 2 is shown a similar but smaller disk 5 provided with similar truncated sectors arranged on the same kind of a circle, some of these being blue, as at 6, and others yellow, as at 7. Three of the truncated sectors of this disk are cut away, as at 8, while others are left white, as at 9. The disk 10, shown in Fig. 3, is similar but smaller than the disk 5 and is also provided with similar blue sectors 11, yellow sectors 12, white sectors 13, and four cut away sectors 14.

In Fig. 4 is shown a disk 15 similar but

smaller than the disk 10, provided with similar blue sectors 16, yellow sectors 17, white sectors 18, and five cut away sectors 19.

In Fig. 5 is shown still another disk 20 also provided with a similar set of sectors 21. All of these sectors are white. This disk 20 is also provided with eight cut away sectors 22. The various cut away sectors form apertures in the various plates.

In the completed puzzle the various plates or disks 1, 5, 10, 15 and 20 are assembled by placing one above the other, the larger at the bottom and the smaller at the top, as shown in Figs. 6 and 7, and making them coaxially rotatable by pivoting them together by means of a pivot or eyelet 23. Washers 24 may be included about the eyelet 23 between the various disks, as clearly shown in Fig. 8.

As shown in Fig. 6 the disks are so arranged or properly positioned that the only color showing through the openings 22 is yellow. This is the arrangement which it is desired to obtain.

As shown in Fig. 7 the disks have been so rotated that some of the openings 22 show a white color visible therethrough, while some show a yellow color visible therethrough and others show a blue color visible therethrough.

From a consideration of Figs. 1 to 4 inclusive it will be apparent that the disks shown in these figures have many sectors thereon which will not show through the openings 22. Therefore, in taking the arrangement shown in Fig. 7 and rotating the disks one will obtain various colors showing through the openings 22 and it will be very difficult to make the same color, that is, yellow, show through all of these openings. This is the end to be desired by one working out the puzzle.

The provision on the various disks 1 to 4 inclusive of parts or portions of the design which are not needed to complete the design and which are irregularly arranged or displaced thereon, make it all the more difficult to complete the puzzle design or picture.

Referring to Figs. 9 to 13 inclusive the modification there shown consists of a plurality of plates or disks shown properly assembled in Fig. 14. These disks are numbered 25, 26, 27, 28 and 29 respectively. These disks are constructed similarly to the

disks 1, 5, 10, 15, 20 already described, the only material difference being that instead of picturing truncated sectors thereon the disks are provided with any suitable trademark picture or design or portions thereof. The disks 26, 27, 28, 29 are provided with cut away portions 30, 31, 32 and 33 respectively. These cut away portions are in the form of truncated sectors radially arranged, as described in connection with Figs. 2 to 5 inclusive. These cut away portions or apertures 30, 31, 32 and 33 are arranged to cut out portions of this picture or design on their respective disks. By assembling them properly as shown in Fig. 14, by means of a centrally pivoted eyelet 34, and washers 35 and properly positioning them, the complete picture of the design will appear alone. By rotating the plates or disks with respect to one another various portions of the design on the disks below will appear through the cut away apertures so that the picture or design will appear mutilated, as shown in Fig. 15. The object of the puzzle is to so rotate the various disks, as shown in Fig. 15, so that they will produce the complete picture just as shown in Fig. 14.

To make the puzzle harder and more interesting the disks 26, 27 and 28 are provided with portions of the design thereon irregularly displaced with respect to other portions on the same plate, so that when the various disks shown in Fig. 15 are rotated the improper portions are most liable to appear through the apertures 33.

It will be apparent that the various disks 25 to 28 inclusive have thereon large portions of the design which are not needed to make up the complete picture shown in Fig. 14, but this feature only makes the puzzle harder and more interesting.

Thus in both modifications the fact that the under disks have portions of the design or picture thereon which are not needed to make up the complete picture and some of which portions are irregularly displaced with respect to other portions of the same plate, causes the puzzle to be all the more interesting, all the harder and to require much closer attention to solve.

It is not necessary to my invention in its broadest aspects that all of the irregularly displaced portions of the design be hidden (although it is preferable that some of them be hidden) when the puzzle is finally solved. Moreover, the portions cut away from the various plates need not be of the particular shape shown, and the design may be of any character whatever as long as some definite configuration, or configurations, is to be the result.

Although I have described my improvements with great detail, nevertheless I do not desire to be limited to such details ex-

cept as specified hereinafter in the claims, since many changes and modifications may be made without departing from the spirit and scope of my invention. But

Having clearly and fully described my improvements what I claim as new and desirable to secure by Letters Patent, is:

1. The combination of a plurality of coaxially rotatable disks, one above the other, various of the disks being provided with cut-out portions, each disk being provided with portions of a picture or design on its upper face, some of said portions being irregularly displaced with respect to other portions of the design on the same disk and various parts of said portions appearing through the cut-out portions of the disk above when the same is rotated.

2. The combination of a plurality of coaxially rotatable plates, one above the other, the lower plate having a picture or design on its upper surface, the other plates having portions of the same design thereon and apertures therethrough cutting away parts of said portions, some of said portions being irregularly displaced with respect to other portions on the same plate.

3. The combination of a plurality of coaxially rotatable plates, one above the other, the lower plate having a picture or design on its upper surface, the other plates having portions of the same design thereon and apertures therethrough cutting away parts of said portions, some of said portions being irregularly displaced with respect to other portions on the same plate, said apertures being radially arranged and in the form of truncated sectors.

4. The combination of a plurality of coaxially rotatable plates, one above the other, various of said plates being provided with suitable apertures therethrough, said plates being provided each with portions of a picture or design thereon, so arranged that when the plates are properly positioned with respect to one another, the portions of the designs appearing through the apertures will form the complete design with the portion on the top plate, various of said plates being also provided with other portions of the design which will appear through the apertures when the plates are not properly placed.

5. The combination of a plurality of rotatable plates, one above the other, various of said plates being provided with suitable apertures therethrough, said plates being provided each with portions of a picture or design thereon so arranged that when the plates are properly positioned with respect to one another, the portions of the design appearing through the apertures will form the complete design with the portion on the top plate, various of said plates being also provided with other portions of said pic-

ture or design which will appear through the apertures when the plates are not properly placed and the apertures of each plate being substantially of the same size and shape.

6. The combination of a plurality of rotatable plates, one above the other, various of said plates being provided with suitable apertures therethrough, said plates being provided each with portions of a picture or design thereon so arranged that when the plates are properly positioned with respect to one another, the portions of the design appearing through the apertures will form the complete design with the portion on the top plate, various of said plates being also provided with other portions of the same design irregularly displaced with said first portions on the same plate, and which will appear through the apertures when the plates are not properly placed.

7. The combination of a plurality of rotatable plates, one above the other, various of said plates being provided with suitable apertures therethrough, said plates being provided each with portions of a picture or design thereon so arranged that when the plates are properly positioned with respect to one another, the portions of the design appearing through the apertures will form the complete design with the portion on the top plate, various of said plates being also provided with other figures which will appear through the apertures when the plates are not properly placed, each of said plates having more apertures than the one below it.

8. The combination of a plurality of coaxially rotatable plates, one above the other, various of said plates being provided with suitable apertures therethrough, said plates being provided each with portions of a picture or design thereon, so arranged that when the plates are properly positioned with

respect to one another, the portions of the design appearing through the apertures will form the complete design with the portion on the top plate, various of said plates being also provided with other portions of a design which will appear through the apertures when the plates are not properly placed, and the apertures of each plate being substantially of the same size and shape.

9. A plurality of coaxially rotatable plates one above the other, each plate having portions of a definite design thereon, some of said portions being irregularly displaced with respect to other portions on the same plate so that said last mentioned portions can not be used in forming the design, some of said plates having cut away portions so as to uncover certain portions of the design on the plate below, when the plates are rotated, said design portions being so arranged that when the plates are properly positioned with respect to one another, the design will be complete and irregularly displaced portions will be hidden.

10. A plurality of coaxially rotatable plates one above the other, each plate having portions of a definite design thereon, some of said portions being irregularly displaced with respect to other portions on the same plate, so that said last mentioned portions can not be used in forming the design, some of said plates having cut away portions so as to uncover certain portions of the design on the plate below when the plates are rotated.

Signed at New York city, in the county of New York and State of New York this 31st day of December A. D. 1909.

HARRY C. DAVIDSON.

Witnesses:

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EDWIN SEGER.