J. W. CAMERON.

Revolving Game-Apparatus.

No. 169,085. Patented Oct. 26, 1875.

Fig: 1.

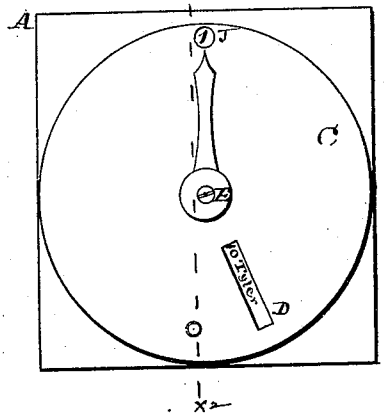


Fig: 2.

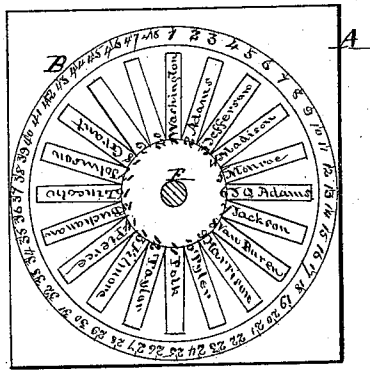


Fig: 3.

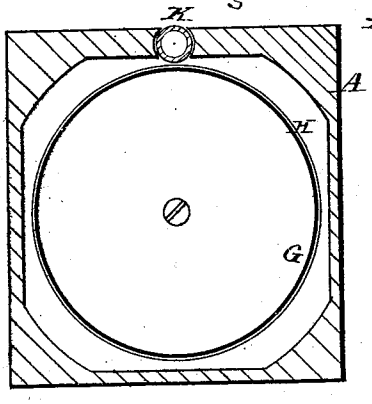


Fig: 4.

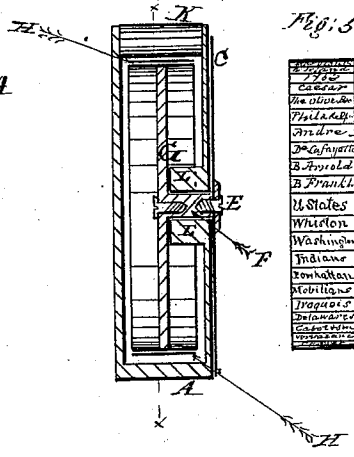


Fig: 5.

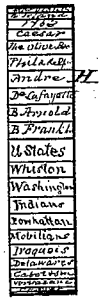


Fig: 6.

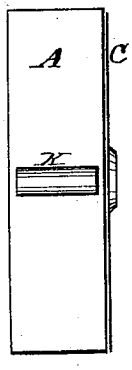


Fig: 7.

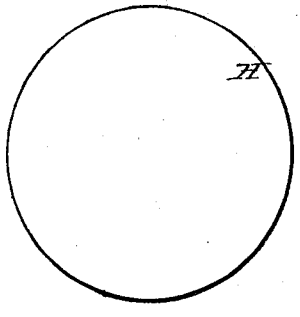
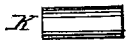


Fig: 8.



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UNITED STATES PATENT OFFICE.

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IMPROVEMENT IN REVOLVING GAME APPARATUS.

Specification forming part of Letters Patent No. **169,085**, dated October 26, 1875; application filed August 19, 1875.

To all whom it may concern:

Be it known that I, JAMES W. CAMERON, of the city, county, and State of New York, have invented a Game Apparatus or Peri-Opticon, of which the following is a specification:

The object of my invention is to make an educational toy for the amusement, as well as instruction, of children, without the aid of an attendant master or teacher, by means of a series of previously-selected questions and answers, numbered from one upward, the questions being printed on cards, and the answers printed upon an endless band, which, on being rotated within the box or case till the corresponding number appears at the aperture in the dial-plate with that of the question, will exhibit the answer through the eye-piece or lens in the top of the case.

But to describe my invention more particularly, I will refer to the accompanying drawings forming a part of this specification, the same letters of reference wherever they occur referring to like parts.

Figure 1 is a face view of the dial-plate and apparatus. Fig. 2 is a face view of the apparatus having the dial-plate removed. Fig. 3 is a sectional view of the apparatus through the line *x x*, Fig. 4. Fig. 4 is a sectional view of the same through the line $x^2 x^2$, Fig. 1. Fig. 5 is a detached view of the perimeter of the rotating wheel, having thereon the adjustable endless band with a series of answers. Fig. 6 is a top view of the apparatus, showing the eye-piece or lens for the inspection of the answer. Fig. 7 is a detached view of the adjustable endless band. Fig. 8 is a detached view of the eye-piece or tubular lens.

Letter A is the frame of the apparatus, which may be made of wood, paper board, or any other convenient and cheap material, as desired. The face of the box or frame is shown in Fig. 2, having an outer circle, B, divided into forty-eight equal points, indicated in numerical order by the figures 1 to 48 inclusive. This number may be varied either more or less, according to the number of questions to be answered. Within this circle, and radiating from a center circle, are twenty radii, upon which are registered the names of the eighteen Presidents of the United States, thus leaving two blanks to be filled by other answers. These names are all blanked by a rotating dial-plate, C, except one, as shown by the name of Tyler, tenth President, through the oblong radiating slot D in the dial plate. Thus, in asking the question "Who was the tenth President of the United States?" the dial is turned until the figure "10" appears, and the answer will be "Tyler." The dial-plate is solidly attached by the screw E to the axle F of a wheel, G, having a broad rim or periphery, and arranged to rotate on its axis within the box or frame of the apparatus.

The object of this arrangement is that the wheel and dial-plate rotate together, so that when the adjustable endless belt or band H is adjusted thereon with the proper answer to the question, as called for by number "1," as shown at the circular opening J in the dial-plate in Fig. 1, the answer will be the "United States," which would appear at the top of the wheel, as represented in Fig. 5, and seen directly under the eye-piece or tubular lens K, as shown in Figs. 3 and 6. Thus, in calling any question numbered from 1 to 48 inclusive, and printed on slips or cards for that purpose, to be used by the child or other person, by turning the dial-plate till the duplicate number appears at the circular opening J the answer will be seen by looking through the eye-piece K. This eye-piece is made by means of a tube of glass filled with spirits and sealed up at both ends. The object of this is twofold: first, to facilitate the printing, in small type, a greater number of answers on the periphery of the rotating wheel than would be possible if large type were used to enable children to read the answers quickly and easily; and, second, because the curvature of the eye-piece is in one direction only, and thus the magnifying-powers extend equally the whole length of the word or answer. With a lens ground in the ordinary way, having a focus of converging rays, a long word at its beginning and ending would be out of focus and not readable, especially by children, unless very large diameters were used, and then they would be impracticable, because of their greater length of focus and of course increased size of box.

It will be obvious that the series of questions and answers may be carried to any number by the substitution of a new set of cards with questions on them, and a new band, with the proper answers printed on it, all numbered as indicated by the numbers 1 to 48. Therefore, as one set of questions are learned and answered a new set may be arranged upon the wheel, and the instruction and novelty of the apparatus perpetuated. To get access to the rotating wheel, to adjust the endless band thereon, the back of the box or frame is opened by a hinge, or any slide device, without interfering with the axis of the wheel, as that is entirely adjusted in bearings L to the inner side of the face of the box, the axis of the wheel, as shown in Fig. 4, passing through the bearing L, and having attached to it the dial-plate, so as to connect the wheel and dial-plate together, and have a constant simultaneous and uniform motion that, when the band, with the answer to a certain number of a question, is once properly adjusted on the wheel, the proper answer will always appear directly under the axis of the tubular magnifying eye-piece in the top of the box.

Having now described my invention, I will proceed to set forth what I claim and desire to secure by Letters Patent of the United States—

1. The dial-plate C, having the opening J and radiating slot D, in combination with the outer face of the box A, having thereon the circle B, with any required series of numbers numerically indicated, and series of radiating name-spaces, substantially as and for the purposes set forth.

2. The combination of the detachable endless belt or band H, having thereon answers to the series of numbered interrogations with the wheel G and dial-plate C, substantially as and for the purposes set forth.

3. The longitudinal magnifying eye-piece, in combination with the top of the box or frame A, detachable belt or band H, and wheel G, substantially as and for the purposes set forth.

JAMES W. CAMERON.

Witnesses:
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