(No Model.)

G. RICHARDS.

PUZZLE.

No. 583,509. Patented June 1, 1897.

FIG. 1.

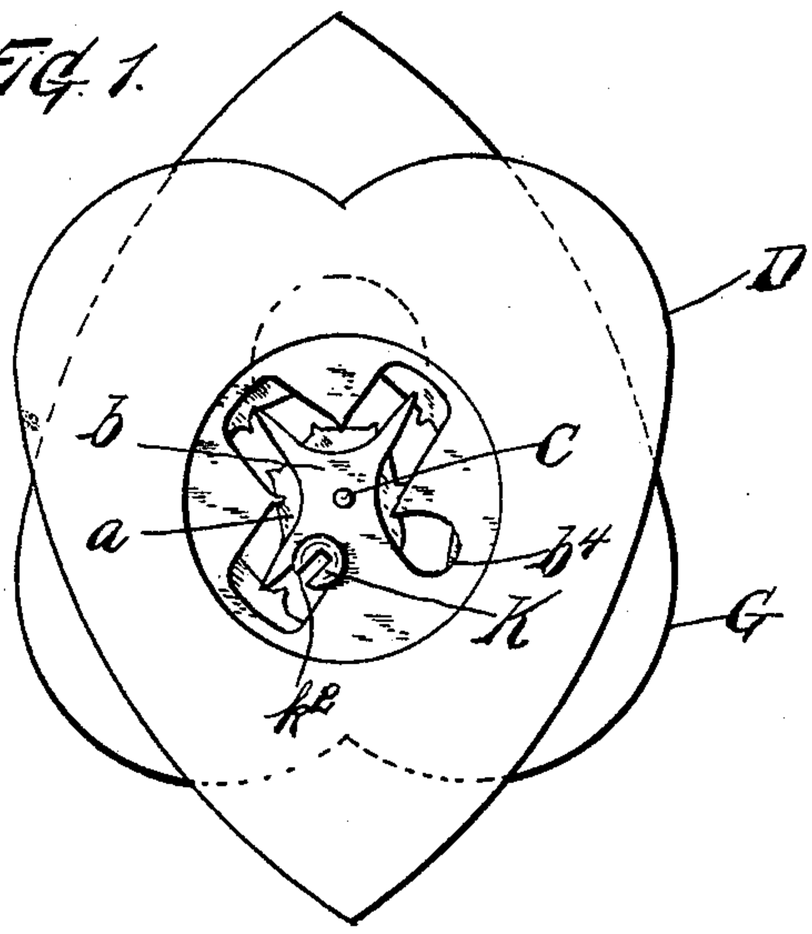


FIG. 2.

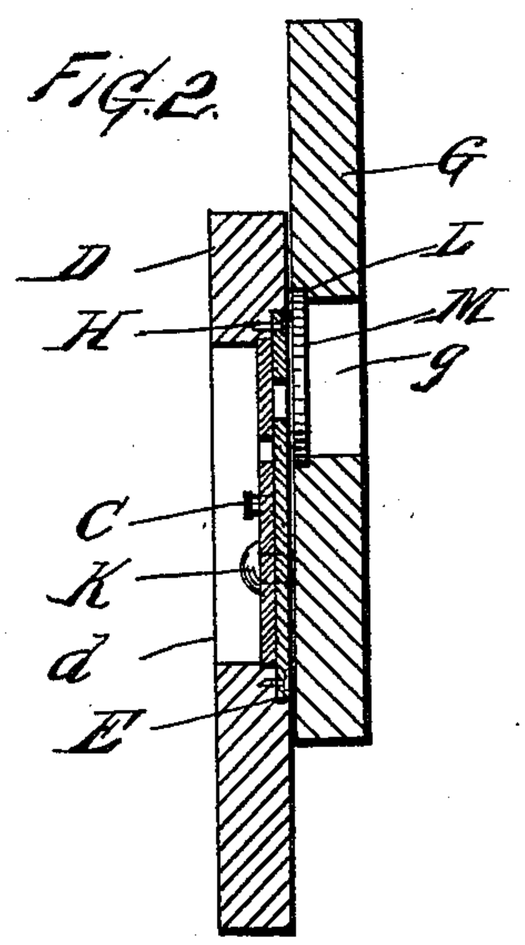


FIG. 5.

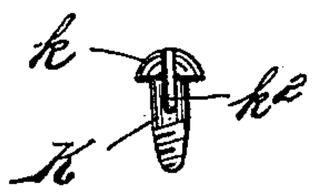


FIG. 3.

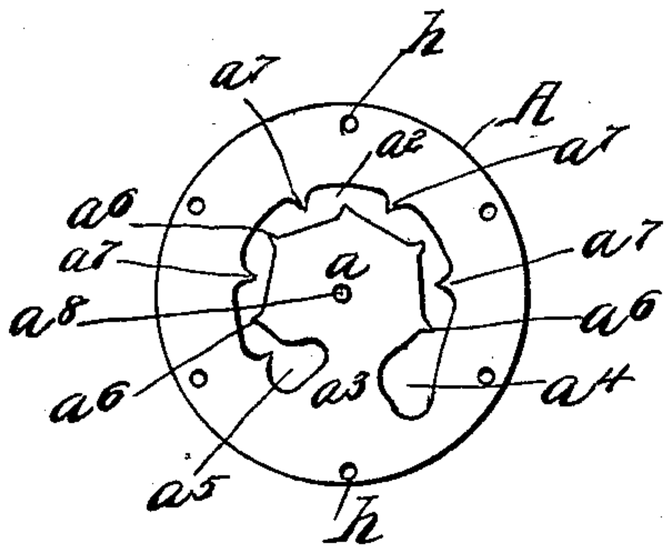
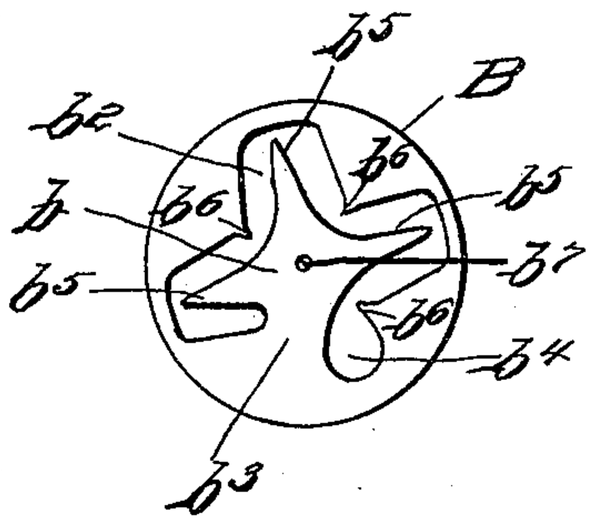


FIG. 4.



WITNESS

J. W. Danielson Jr.

C. Gerth

INVENTOR

Gustav Richards

BY

Edgar Tate & Co

ATTORNEYS.

UNITED STATES PATENT OFFICE.

GUSTAV RICHARDS, OF CHICAGO, ILLINOIS.

PUZZLE.

SPECIFICATION forming part of Letters Patent No. 583,509, dated June 1, 1897.

Application filed March 19, 1897. Serial No. 628,286. (No model.)

To all whom it may concern:

Be it known that I, GUSTAV RICHARDS, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Puzzles, of which the following is a full and complete specification, such as will enable those skilled in the art to which it appertains to make and use the same.

This invention relates to puzzles; and the object thereof is to provide an improved device of this class which is simple in construction, but the solution of which is difficult, said solution, however, being capable of accomplishment by the exercise of care, skill, and ingenuity in the manipulation of the device.

The invention is fully disclosed in the following specification, of which the accompanying drawings form a part, in which—

Figure 1 is a side view of my improved puzzle; Fig. 2, a longitudinal central section thereof; Fig. 3, a side view of a disk or plate which forms a part thereof; Fig. 4, a similar view of another disk or plate which forms a part of said puzzle, and Fig. 5 a side view of a screw which I employ.

In the drawings forming part of this specification the separate parts of my improvement are designated by letters of reference in each of the views, and in the practice of my invention, reference being made to Figs. 3 and 4, I provide two circular disks or plates A and B, the latter being slightly smaller in diameter than the former.

The disk A is provided with a central irregular circular portion a, around which is formed an irregular circular slot a^2, the ends of which are separated by a narrow neck a^3, by means of which the central portion a is connected with the main portion of the disk.

The irregular circular slot a^2 is enlarged at one end, as shown at a^4, and at the opposite end thereof is an oblong opening a^5, which points in the direction of the center of the disk, and formed on the central circular body portion a are a plurality of points a^6, which are preferably five in number, and the outer wall of the circular irregular slot a^2 is provided with a corresponding number of inwardly-directed points a^7, and the walls of the central circular portion a, between the points a^6, are preferably straight, while the outer walls of the slot a^2, between the points a^7, are preferably curved.

The disk B is provided with a central star-shaped portion b, around which is formed a slot b^2, which is similar in form, and the central star-shaped body portion b is connected with the disk proper by a narrow neck b^3.

The slot b^2 is enlarged at one end, as shown at b^4, and the central star-shaped portion b is provided with points or projections b^5, which are preferably three in number, and the outer wall of the slot b^2 is provided with three corresponding inwardly-directed points b^6, and each of said disks A and B is provided centrally with a perforation or opening a^8 and b^7, respectively, through which is passed a pivot-pin C, which is shown in Figs. 1 and 2.

I also provide two plates or boards D and G, which are preferably heart-shaped in form, and the plate or board D is provided centrally with a large circular opening d and the plate or board G with a smaller central circular opening g, and the disk B is adapted to revolve in the central circular opening d of the plate D, and the disk A is secured to said plate D, at one side thereof, and countersunk therein, as shown at E, the connection of the disk A with the plate D being made by pins or screws, as shown at H, which are passed through small holes h, formed in said disk A.

I also provide a screw K, which is shown in Fig. 5, and which is provided with a head k, and said screw is provided at one side thereof with a deep slot k^2, which extends upwardly through the head k thereof, and after the disks A and B have been pivotally connected and the disk B secured to the plate D, as shown and described, said disks are turned so that the enlarged opening a^4 in the disk A registers with the enlarged opening b^4 in the disk B, and the screw K is then passed through said openings and screwed into the plate G.

Formed in the surface of the plate G, adjacent to the plate D and around the central opening g, is an annular groove L, in which is placed a coin M, this coin being placed in position before the parts are connected by the screw K. When the parts are thus connected, the device is manipulated so as to pass the screw K into the opening a^5 in the disk A, and

this is done by turning the parts so as to let the points a^6 and a^7 alternately enter the slot k^2 in the screw K, and the solution of the puzzle consists in manipulating the device so as to pass the screw back into the enlarged openings a^4 and b^4 in said disks, so that the plates D and G may be separated to remove the coin M.

Instead of passing the screw K through the openings a^4 and b^4 the said disks may be turned so as to pass said screw through the opening a^5 in the disk A and the opening b^4 in the disk B, and in this event the solution may consist in manipulating the disks or plates so as to pass the screw back into the opening a^4 in the disk A, when said disks or plates may be separated. Either of these solutions is difficult to one not acquainted with the operation of the device; but said solution may be accomplished by the exercise of care, skill, and ingenuity in the manipulation of the separate parts. It will be understood, however, that the coin M is not an essential feature of my invention, nor is the central opening g in the disk G, and the plates D and G may be of any desired form.

Having fully described my invention, I claim as new and desire to secure by Letters Patent—

1. A puzzle comprising two plates, one of which is provided with an enlarged circular opening, and two disks which are centrally and pivotally connected, and one of which is circular in form, and smaller than the other, and adapted to revolve in said opening, and each of said disks or plates being provided, one with a central circular body portion which is formed by an irregular slot, which extends nearly around the same, said slot being enlarged at both ends, and the walls thereof being provided with teeth or projections which are arranged alternately on the opposite sides thereof, and the other disk being provided with a central star-shaped body portion which is formed by a slot which extends almost around the same, and the outer walls of said slot being provided with inwardly-directed teeth or projections which correspond with the points or projections of the star-shaped body portion, and said slot being also provided at one end with an enlarged opening, and a screw which is provided with a slot which extends through the head thereof, and which is passed through the enlarged end openings in the slots in each disk, and into one of said slots, substantially as shown and described.

2. A puzzle comprising two plates as D, and G, and two metal disks as A, and B, said disks being provided respectively with central body portions as a, and b, and with irregular slots around the same as a^2, and b^2, and a screw as k, substantially as shown and described.

3. A puzzle comprising two disks as A, and B, which are pivotally connected, and one of which is smaller than the other, said disks or plates being each provided with irregular central body portions as a, and b, which are formed by irregular slots as a^2, and b^2, the side walls of each of said slots being provided with teeth or projections, and the slot in one of said disks being enlarged at both ends, and in the other at one end, and a screw which is provided at one side with a slot which extends through the head thereof, and which is adapted to be passed through said enlarged end openings in said slots, substantially as shown and described.

4. A puzzle comprising two disks as D, and G, one of which is provided with a large central circular opening, and the other with a small circular opening, and two metal disks as A, and B, which are constructed as described, and a screw as K, one of said metal disks being adapted to be secured to the plate D, and the other being provided with a coin as M, substantially as shown and described.

In testimony that I claim the foregoing as my invention I have signed my name, in presence of the subscribing witnesses, this 13th day of March, 1897.

GUSTAV RICHARDS.

Witnesses:
CHARLES LINDELL,
WILLIAM BIRN.