

(No Model.)

F. H. DONALDSON.
PUZZLE.

No. 602,735.

Patented Apr. 19, 1898.

Fig. 1.

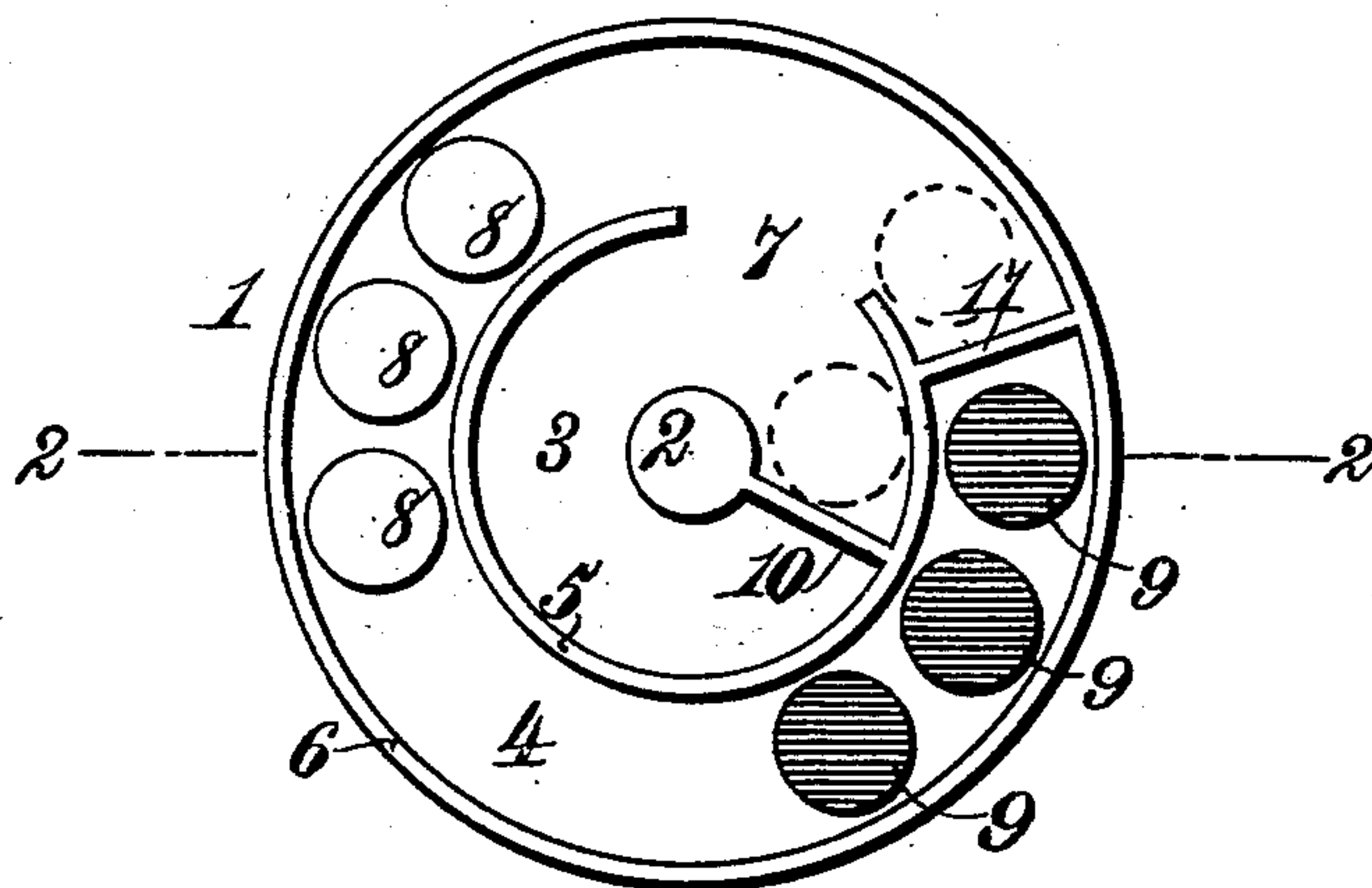


Fig. 2.

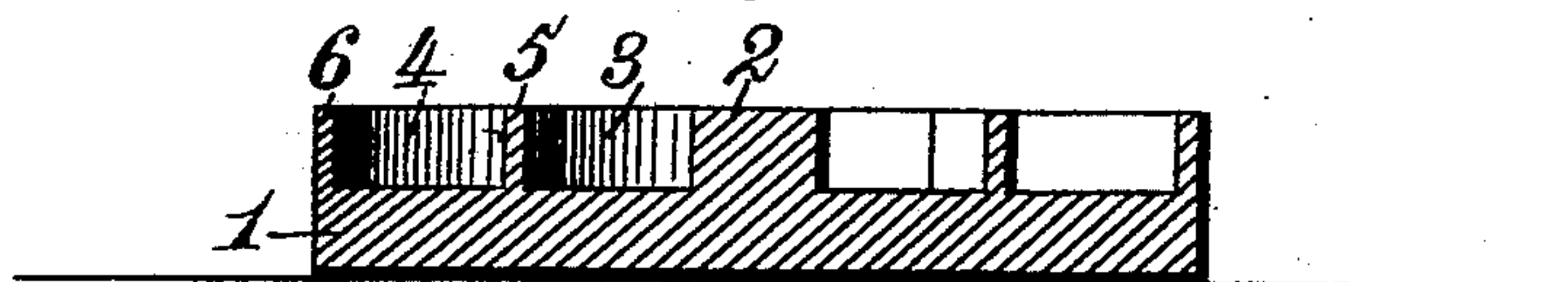


Fig. 3.



Witnesses.

Robert Gruett,
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PUZZLE.

SPECIFICATION forming part of Letters Patent No. 602,735, dated April 19, 1898.

Application filed November 15, 1897. Serial No. 658,592. (No model.)

To all whom it may concern:

Be it known that I, FRED HAMILTON DONALDSON, a citizen of the United States, residing at Garvanza, in the county of Los Angeles and State of California, have invented new and useful Improvements in Puzzles, of which the following is a specification.

This invention relates to puzzles, and primarily to a puzzle wherein two series of disks or men are arranged in ways or grooves in a board or box in certain determinate positions, the problem being to transpose the disks or men by shifting them back and forth in the grooves or ways; and the object of the invention is to provide a puzzle of the type referred to in which the difficulty of solving it is increased, thus calling for an increased exercise of the mental faculty and ingenuity of the person seeking the solution.

To this end my invention consists in the puzzle constructed, arranged, and operated in the manner hereinafter described, and particularly pointed out in the claims following the description, reference being had to the accompanying drawings, forming a part of this specification, wherein—

Figure 1 is a plan view of the puzzle. Fig. 2 is a section on the line 2 2 of Fig. 1, and Fig. 3 is a perspective view of one of the disks or men.

Referring to the drawings, the numeral 1 indicates a board or base, of wood or any other suitable material, having a raised circular boss 2 at its center and two concentric grooves or ways 3 and 4, surrounding the central boss, the numeral 3 indicating the inner groove or way, and 4 the outer. The grooves or ways are preferably formed by turning in a lathe in a well-known manner, leaving annular raised flanges 5 and 6, which form walls or partitions bounding the sides of the ways or grooves. The inner flange 5 is interrupted or cut away at a suitable point, as at 7, forming a passage or gateway which establishes communication between the grooves or ways 3 and 4. The passage or gateway 7 is just of a sufficient size to permit of the free passage therethrough, one at a time, of the disks or men 8 and 9. These disks are of such diameter that they nearly occupy the entire width of the grooves 3 and 4, but are capable of be-

ing freely moved therein. The disks or men consist of two or more series of differently-colored or otherwise characteristically-distinguished flat circular pieces, and in the present example said disks or men are shown as consisting of two series of three pieces each, the disks 8 of one series being of one color—as blue, for example—and the disks 9 of the other series being of another color, as red. The grooves or ways 3 and 4 are each interrupted or blocked by transverse partitions, the partition 10 extending from the central boss 2 to the inner flange 5 and the partition 11 extending from the inner flange 5 to the outer flange 6. The partitions 10 and 11 are arranged at such a distance from the passage or gateway 7 that one disk or man only can lie in each of the grooves 3 and 4 between the partitions and said passage or gateway and leave the latter unobstructed, as shown by dotted lines in Fig. 1, so that the remaining disks or men may be freely transferred therethrough from one groove or way to the other.

The series of disks or men being arranged in the manner shown in the drawings, the problem is to transpose the disks or men, so that the red men shall occupy the position of the blue men, and vice versa. This is accomplished by shifting the disks or men back and forth in the grooves or ways and from one groove to the other until the positions of all the pieces have been reversed.

I have shown the disks as consisting of two series of three disks each; but it will be evident that more than two series may be employed and that the number of disks in each series may be varied. It will also be manifest that the disk of one series may be distinguished from those of another series otherwise than by different colors.

Having described my invention, what I claim is—

1. As an improved article of manufacture, the puzzle herein described and shown, consisting of a board constructed with inner and outer grooves concentric with one another and the inner groove having a portion of its wall provided with an opening or gateway by which it is placed in communication with the outer groove, a boss located at the center of

the inner groove, partitions arranged, respectively, in said grooves at one side of the said opening or gateway, and disks or men constructed to shift back and forth in the
5 grooves and to move from one groove to the other through the opening or gateway, the partitions being located at such distance from the said opening or gateway as to permit one disk or man only to lie in each groove between the partition thereof and the opening
10 or gateway, substantially as and for the purposes described.

2. In a puzzle, the combination with a board provided with two concentric grooves or ways
15 communicating with one another by a passage or gateway, a partition arranged transversely in each of said grooves or ways on one side of said passage or gateway, and disks or men adapted to be shifted back and forth in
20 said grooves or way and from one groove or way to the other, the transverse partitions being located at such distance from the said passage or gateway as to permit one disk or man only to lie in each groove between the
25 partition thereof and the passage or gateway, substantially as described.

3. In a puzzle, the combination with a board provided with two concentric grooves or ways communicating with one another by a pas-
30 sage or gateway, a partition arranged transversely in each of said grooves or ways on one side of the passage or gateway, and a plurality of series of disks or men adapted to be shifted back and forth in said grooves or ways

and from one groove or way to the other, the 35 disk or men of one series being distinguished from the disks or men of another series, and the partitions being located at such distance from the said opening or gateway as to permit one disk or man only to lie in each groove 40 between the partition thereof and the opening or gateway, substantially as described.

4. In a puzzle, the combination with a board provided with two concentric grooves or ways communicating with one another by a pas- 45 sage or gateway, a partition arranged transversely in each of said grooves or ways on one side of the passage or gateway, and two series of disks or men arranged in said grooves or ways and adapted to be shifted back and 50 forth therein and from one groove or way to another, the size of the passage or gateway being such as to permit of the passage there-through of but one disk or man at a time, and the said partitions being arranged at such 55 points that one disk or man only may lie in each of the grooves between the partitions and said passage or gateway and leave the latter unobstructed for the passage there-through of the remaining disks or men, sub- 60 stantially as described.

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.

FRED HAMILTON DONALDSON.

Witnesses:

CHARLES NELSON WILLIAMS,
EDWARD HOPSON OWEN.