

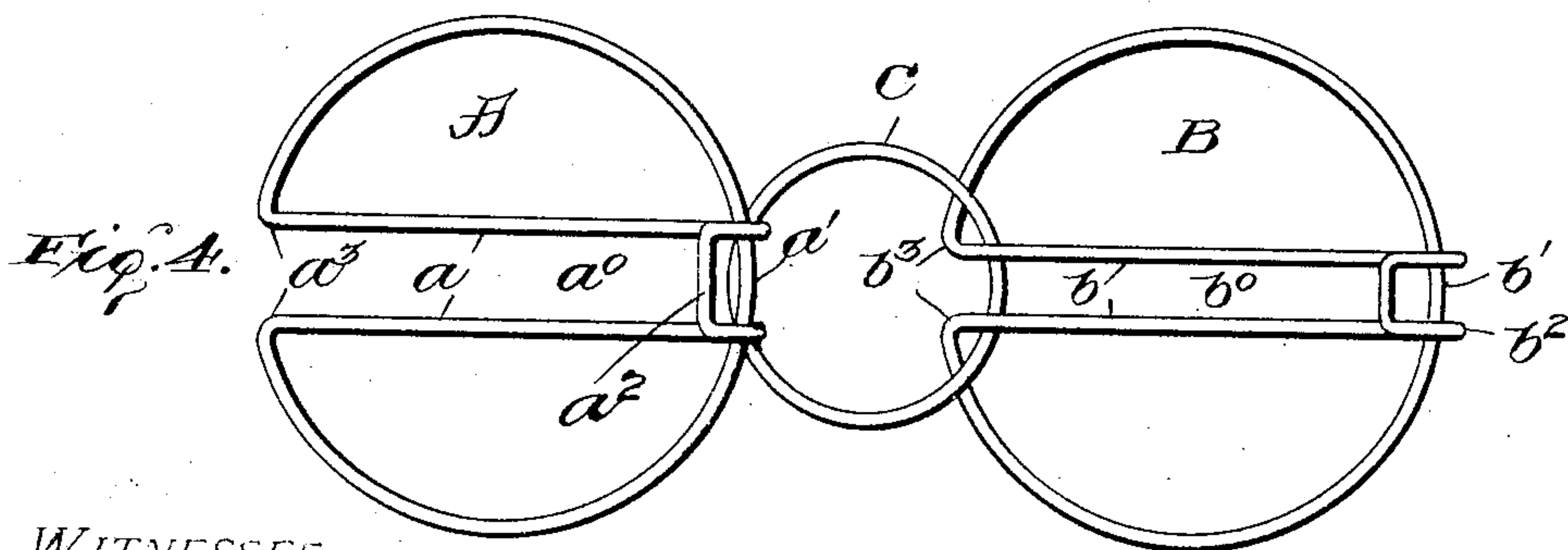
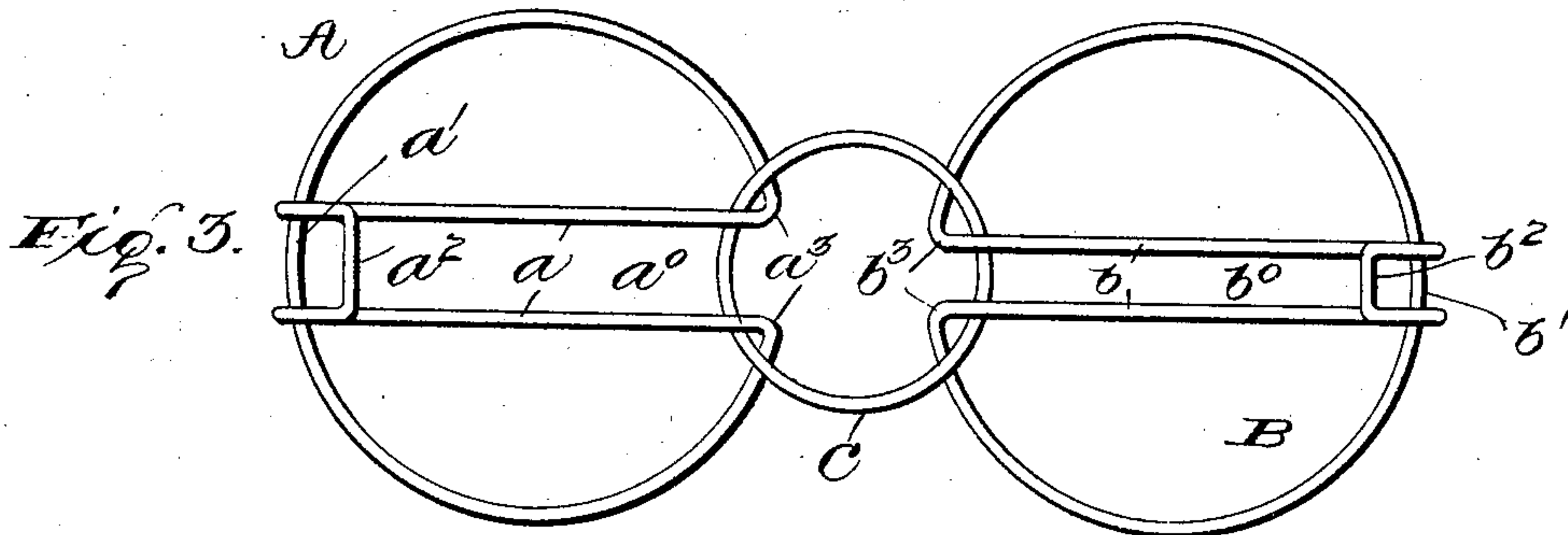
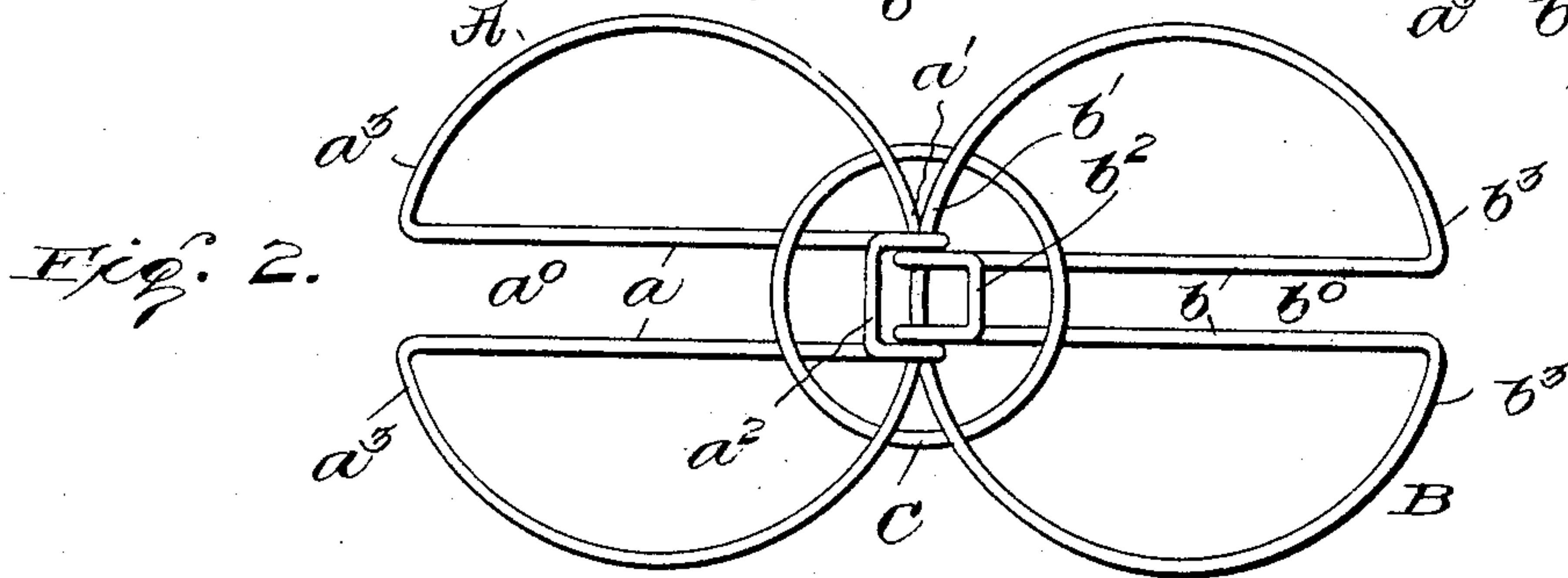
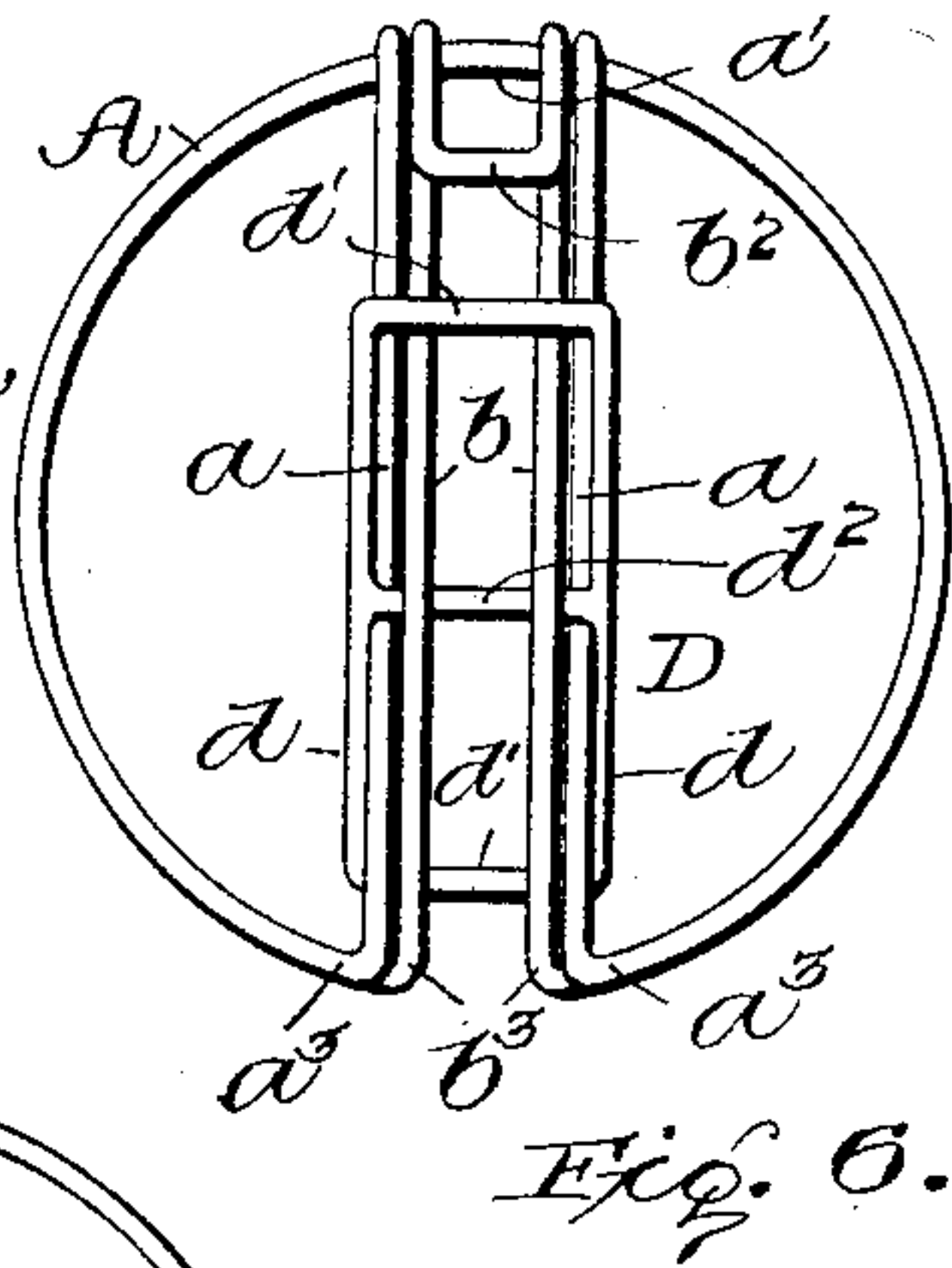
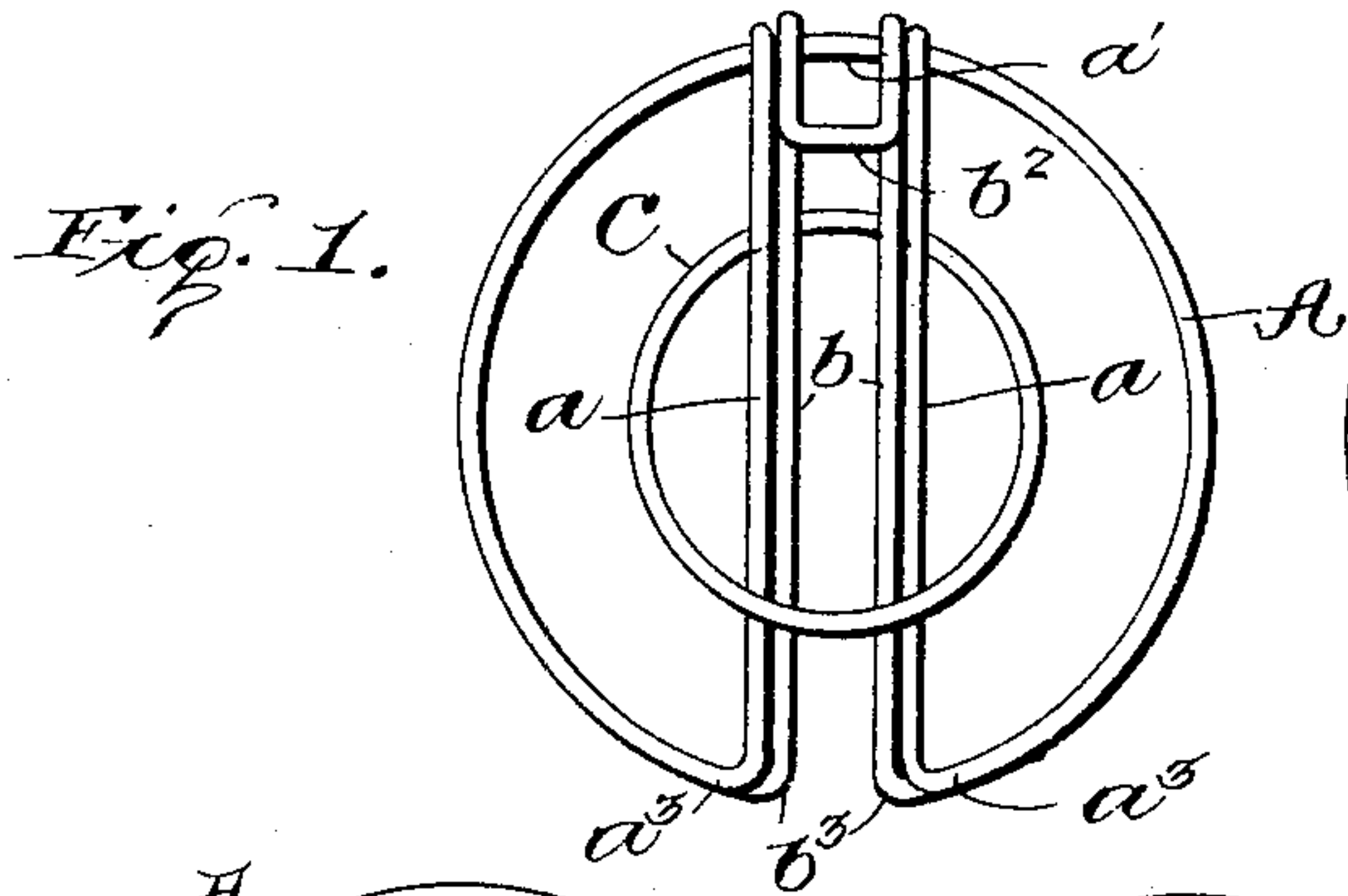
No. 779,874.

PATENTED JAN. 10, 1906.

C. H. SAUNDERS.

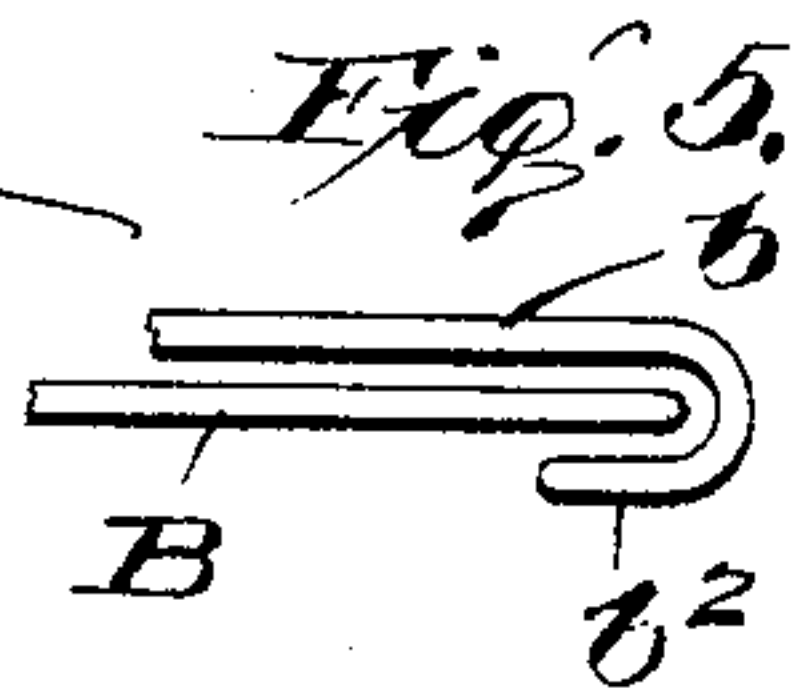
PUZZLE.

APPLICATION FILED MAR. 4, 1904.



WITNESSES:

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# UNITED STATES PATENT OFFICE.

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## PUZZLE.

SPECIFICATION forming part of Letters Patent No. 779,874, dated January 10, 1905.

Application filed March 4, 1904. Serial No. 196,573.

*To all whom it may concern:*

Be it known that I, CHARLES H. SAUNDERS, a citizen of the United States, residing at Melrose, in the county of Middlesex and State of Massachusetts, have invented certain new and useful Improvements in Puzzles; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to improvements in puzzles; and the object of the same is to provide suitable members which by proper manipulation may be interlocked and separated in a number of correct moves, the puzzle consisting in assembling and disengaging the members.

The essential parts of the puzzle comprise two members, each so constructed as to form a pair of hollow forwardly-extending tongues or loop portions, connected at their inner ends and spaced apart longitudinally, each puzzle member being also provided with a hooked portion at its rear adjacent the inner ends of the tongue or loop portions. In actual practice, however, I may also use in conjunction with said members an additional member, which I have designated as the "link" member, adapted to embrace or surround the inside arms of the spaced hollow tongues or loop portions of both main members when in their initial locked position.

To more fully describe the invention, reference is had to the accompanying drawings illustrating the same, in which like letters designate the same parts in the several views, and in which—

Figure 1 is a plan view of the members assembled in their initial position; Figs. 2, 3, and 4, views of the members in various positions they assume when properly manipulated in the solution of the puzzle; Fig. 5, a fragmentary edge view of one of the main members; and Fig. 6 is a view similar to Fig. 1, showing a modified form of the link member.

A designates one main member preferably formed of a single piece of wire bent to a substantially circular or oval shape peripherally, the free ends of which are bent inwardly and suitably brazed or otherwise secured together, forming the centrally-disposed spaced arms  $a$ ,

which in turn are looped around the rear portion  $a'$  of the member and formed into a hook  $a^2$  at the rear end. By this it will be seen that the member comprises a pair of hollow forwardly-extending tongues or loop portions, (designated by  $a^3$ ), separated by the longitudinal space  $a^0$ , and it will also be understood that the hooked portion  $a^2$  is not secured to the rear portion  $a'$ , a small space being provided therebetween, as clearly shown in Fig. 5. B is a similarly-constructed member, except that the longitudinal space  $b^0$  separating the central arms  $b$  of the hollow tongues or loop portions  $b^3$  is slightly less in width than the space  $a^0$ , and the hooked portion  $b^2$  looped around the rear portion  $b'$  is of a correspondingly lesser width than the hook  $a^2$ .

C designates the link member, which may preferably be in the form of a ring. In Fig. 6, however, I have shown the link member as comprising a substantially rectangular frame D, the longitudinal arms  $d$  of which are sufficiently spaced from each other by the transverse arms  $d'$  and  $d^2$  as to be freely movable on the arms  $a$  and  $b$  of the two main members.

It will be seen that when the parts are assembled as illustrated in Fig. 1 the member A is located above the member B, the hook  $b^2$  looping over the rear portion  $a'$  of the member A between the sides of the hook  $a^2$ , which in turn loops over the rear portion  $b'$  of the member B in the reverse direction to the hook  $b^2$ , so that the two members A and B are locked against circumferential movement relatively to each other. In this position the ring C when used encircles the arms  $a$  and  $b$  of the two members. By proper manipulation the positions as shown in Fig. 2 are attained, wherein the hook  $b^2$  loops over the portion  $a'$  of the member A and the hook  $a^2$  loops over the portion  $b'$  of the member B, both hooks extending in substantially the same horizontal plane on the same side of the members A and B and the hook  $b^2$ , contained within the sides of the wider hook  $a^2$ . Correspondingly by proper manipulations the members assume the positions illustrated in Figs. 3 and 4, from which latter figure it will readily appear that the member A may now be detached by working the ring C around and off the hook  $a^2$  over the portion  $a'$  of the



member A. The member A being thus detached, the ring C is then moved along the arms *b* and similarly worked around and off the hook *b*<sup>2</sup> over the portion *b*' of the member B.

- 5 In Fig. 6 the rectangular frame D incloses the arms *a* and *b*, the transverse arm *d*<sup>2</sup> extending between same above and under the arms *a* and *b*, respectively.

I desire it to be understood that I do not  
10 wish to be limited to the exact configuration of the members or to the material out of which they are formed; but

What I claim is—

1. In puzzle apparatus, the combination of a  
15 plurality of puzzle members one of said members comprising a pair of hollow tongue or loop portions connected at their rear ends and provided with spaced arms extending rearwardly from their forward ends and terminating in a hook looped over the rear connecting portion of the tongues.

2. In puzzle apparatus, the combination of a plurality of puzzle members, one of said members being formed from a single piece of wire  
25 bent to form a pair of hollow tongue or loop portions, connected at their rear ends, converging toward each other on their peripheral forward faces and having spaced arms extending rearwardly from their forward ends and terminating in a hook looped over the rear connecting portion of the tongues.

3. In puzzle apparatus, the combination of a plurality of puzzle members, one of said members being formed from a single piece of wire  
35 bent to form a pair of hollow substantially semicircular tongue or loop portions connected at their rear ends, and having diametrical arms spaced apart and terminating in a hook looped over the rear connecting portion of the tongues.

4. In puzzle apparatus, the combination of a pair of puzzle members, each comprising a pair of hollow tongue or loop portions connected at their rear ends and provided with spaced arms extending rearwardly from their forward ends, and a link member adapted to co-  
45 operate with the aforesaid members.

5. In puzzle apparatus, the combination of a pair of puzzle members, each comprising a pair of hollow tongue or loop portions connected at their rear ends and provided with spaced arms extending rearwardly from their forward ends and terminating in a hook looped over the rear connecting portions of the tongues, the hook of one member and the  
55 space between said rearwardly - extending arms being slightly wider than the corresponding hook and space of the other member, and a link member adapted to coöperate with the aforesaid members.

6. In puzzle apparatus, the combination of a pair of puzzle members, each formed from a single piece of wire bent to form a pair of hollow substantially semicircular tongue or loop portions connected at their rear ends and  
65 having diametrical arms spaced apart and ter-

minating in a hook looped over the rear connecting portion of the tongues, the hook of one member and the space between said diametrical arms being slightly wider than the corresponding hook and space of the other member, and a link member adapted to co-  
70 operate with the aforesaid members.

7. In puzzle apparatus, the combination of a pair of puzzle members, each comprising a pair of hollow tongue or loop portions connected at their rear ends and provided with spaced arms extending rearwardly from their forward ends, and a third member, adapted to coöperate with the aforesaid members, being  
80 substantially in the form of a ring.

8. In puzzle apparatus, the combination of a pair of puzzle members, each comprising a pair of hollow tongue or loop portions connected at their rear ends and provided with spaced arms extending rearwardly from their forward ends and terminating in a hook looped over the rear connecting portions of the tongues, the hook of one member and the space between said rearwardly - extending arms being slightly wider than the corresponding hook and space of the other member, and a third member of substantially ring-like form adapted to coöperate with the aforesaid members.

9. In puzzle apparatus, the combination of a pair of puzzle members formed from a single piece of wire bent to form a pair of hollow tongue or loop portions, connected at their rear ends, converging toward each other on their peripheral forward faces, and having spaced arms, extending rearwardly from their forward ends, terminating in a hook looped over the rear connecting portions of the tongues, the hook of one member and the space between said rearwardly - extending arms being slightly wider than the corresponding hook and space of the other member, and a third member of ring-like form adapted to coöperate with the aforesaid members.

10. In puzzle apparatus, the combination of a pair of puzzle members, each formed from a single piece of wire bent to form a pair of hollow substantially semicircular tongue or loop portions connected at their rear ends and having diametrical arms spaced apart and terminating in a hook looped over the rear connecting portion of the tongues, the hook of one member and the space between said diametrical arms being slightly wider than the corresponding hook and space of the other member, and a third member, of substantially ring-like form, adapted to coöperate with the aforesaid members.

In testimony whereof I affix my signature in presence of two witnesses.

CHARLES H. SAUNDERS.

Witnesses:

H. W. BUCHNAUR,

A. B. SWENSSON.