

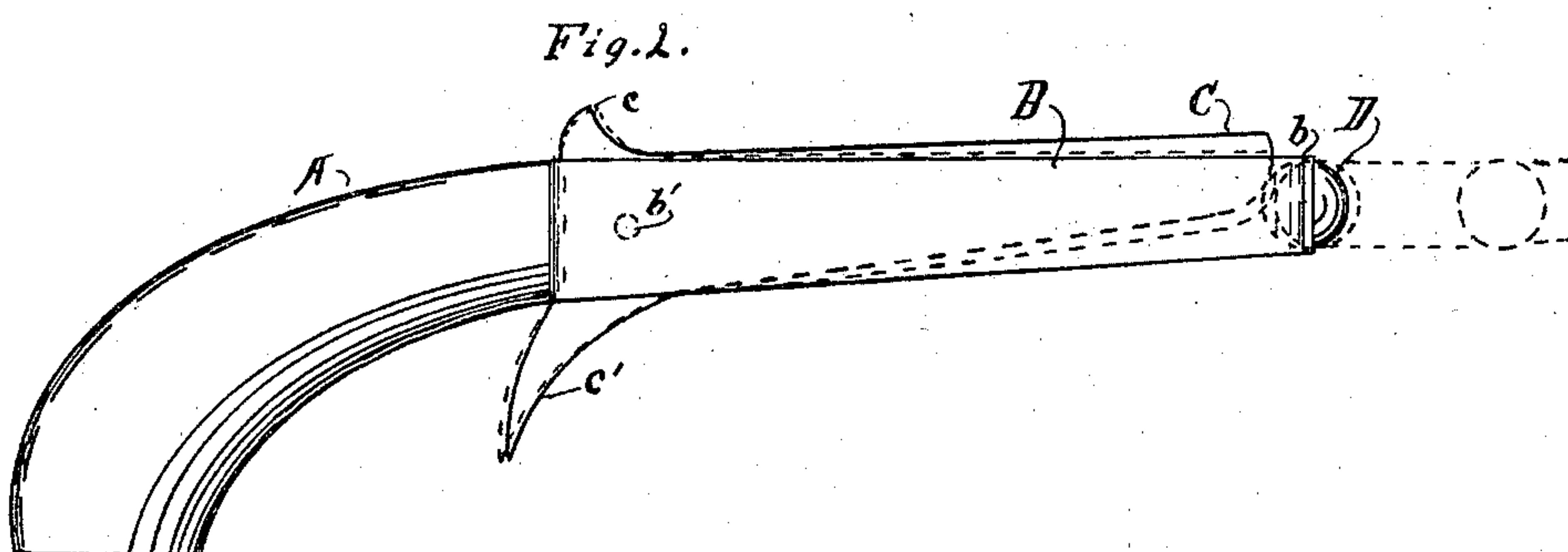
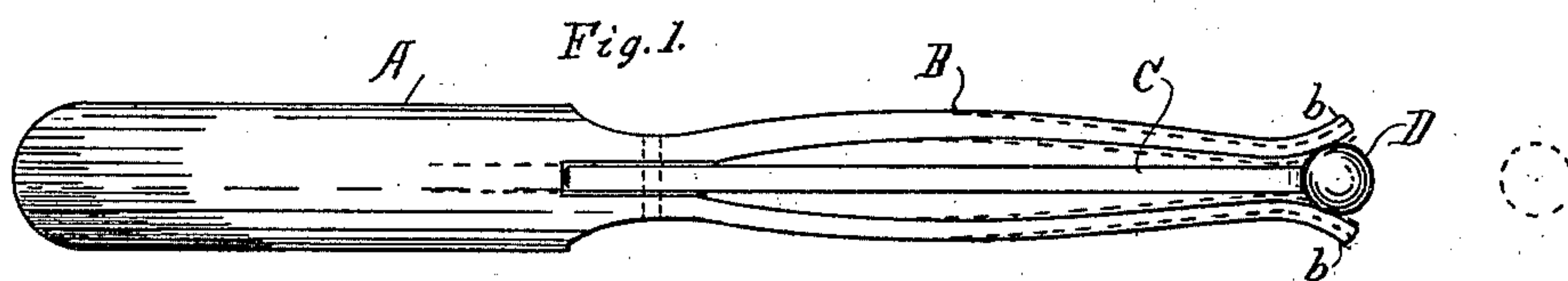
No. 634,980.

Patented Oct. 17, 1899.

J. HEYER.  
TOY MARBLE PROJECTOR.

(Application filed Apr. 4, 1899.)

(No Model.)



Witnesses.

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# UNITED STATES PATENT OFFICE.

JOHN HEYER, OF GRAND RAPIDS, MICHIGAN.

## TOY MARBLE-PROJECTOR.

SPECIFICATION forming part of Letters Patent No. 634,980, dated October 17, 1899.

Application filed April 4, 1899. Serial No. 711,712. (No model.)

*To all whom it may concern:*

Be it known that I, JOHN HEYER, a citizen of the United States, residing at Grand Rapids, in the county of Kent and State of Michigan, have invented certain new and useful Improvements in Toys, of which the following is a specification.

My invention relates to improvements in devices for flipping or shooting marbles; and its objects are, first, to provide a toy with which the marble will be flipped with considerable force, and, second, to provide a marble flip or toy with which a reasonable degree of accuracy may be attained in shooting marbles. I attain these objects by the mechanism illustrated in the accompanying drawings, in which—

Figure 1 is a plan of the toy, and Fig. 2 is an elevation of the same, each of which views shows the position of a marble as it is supported in the toy and an outline of the same as it is being projected from the toy.

In the construction of this toy I prefer to use some firm springy wood, one end of which I form as a pistol-grip, as A, and the other end C sawed out to form two diverging arms, as B, the ends *b* of which are turned out to form a reception for the marble D. I place between these arms a lever C, which is pivoted between the back ends of the arms, as at *b'*, so that the front end may be readily thrown up and down. This lever consists of the long arm C, which projects forward to position to press outward upon the marble when thrown down to the position indicated by the dotted lines in Fig. 2, of an upwardly-projecting thumb-piece *c*, conforming in position with the hammer of a pistol, with which to draw or raise the arm C up to the position indicated by the solid lines in Fig. 1 after it has been drawn down to disengage the marble from between the ends of the arms, and of a downwardly-projecting arm corresponding with the sear or trigger of a pistol, by means of which the lever may be drawn down to disengage the marble.

This toy is operated as follows: Normally the arms B rest, in the position of the dotted lines in Fig. 1, against the sides of the end of the lever C, the ends *b* thereof being made upon proper diverging lines to hold the marble when forced between them, but sufficiently

flaring to forcibly project the marble if it is started but slightly toward the ends. The marble is forced between these ends until the back portion is slightly back of the end of the arm C, so that when said arm is thrown down it will press against the marble and start it slightly toward the end of the arms, and the spring of the arms with the outward incline of the ends *b* will project the marble forward with considerable force, as indicated by the dotted lines.

I do not desire to restrict myself to the particular form and construction herein shown and described, but to cover any form or construction analogous thereto.

Having thus fully described my invention, what I claim as new, and desire to secure by Letters Patent of the United States, is—

1. In a marble-flip, a grip, spring-arms projecting from said grip, the outer ends of said arms made to diverge, to receive the marble, and a lever pivoted between said arms in position to start the marble from between the arms, substantially as and for the purpose set forth.

2. In a marble-flip, a grip, spring-arms integral with said grip and curved for the free action of a lever and the reception and retention of a marble, and a lever pivoted between said arms in position to act upon the marble to force it forward, and the ends of the arms curved to force the marble away from the flip, substantially as and for the purpose set forth.

3. In combination, a grip, spring-arms longitudinally integral therewith, said arms curved for the free action of a lever and the reception and retention of a marble, a lever pivoted between said arms in position to press the marble from between the ends of the arms, an upwardly-projecting portion with which to raise the end of the lever, and a downwardly-projecting arm or trigger with which to draw the end of the lever in contact with the marble, substantially as and for the purpose set forth.

Signed at Grand Rapids, Michigan, April 1, 1899.

JOHN HEYER.

In presence of—

JAMES M. CARNE,  
ITHIEL J. CILLEY.