P. S. HAY.

TOY.

APPLICATION FILED SEPT. 24, 1908.

913,381. Patented Feb. 23, 1909.

Fig. 1.

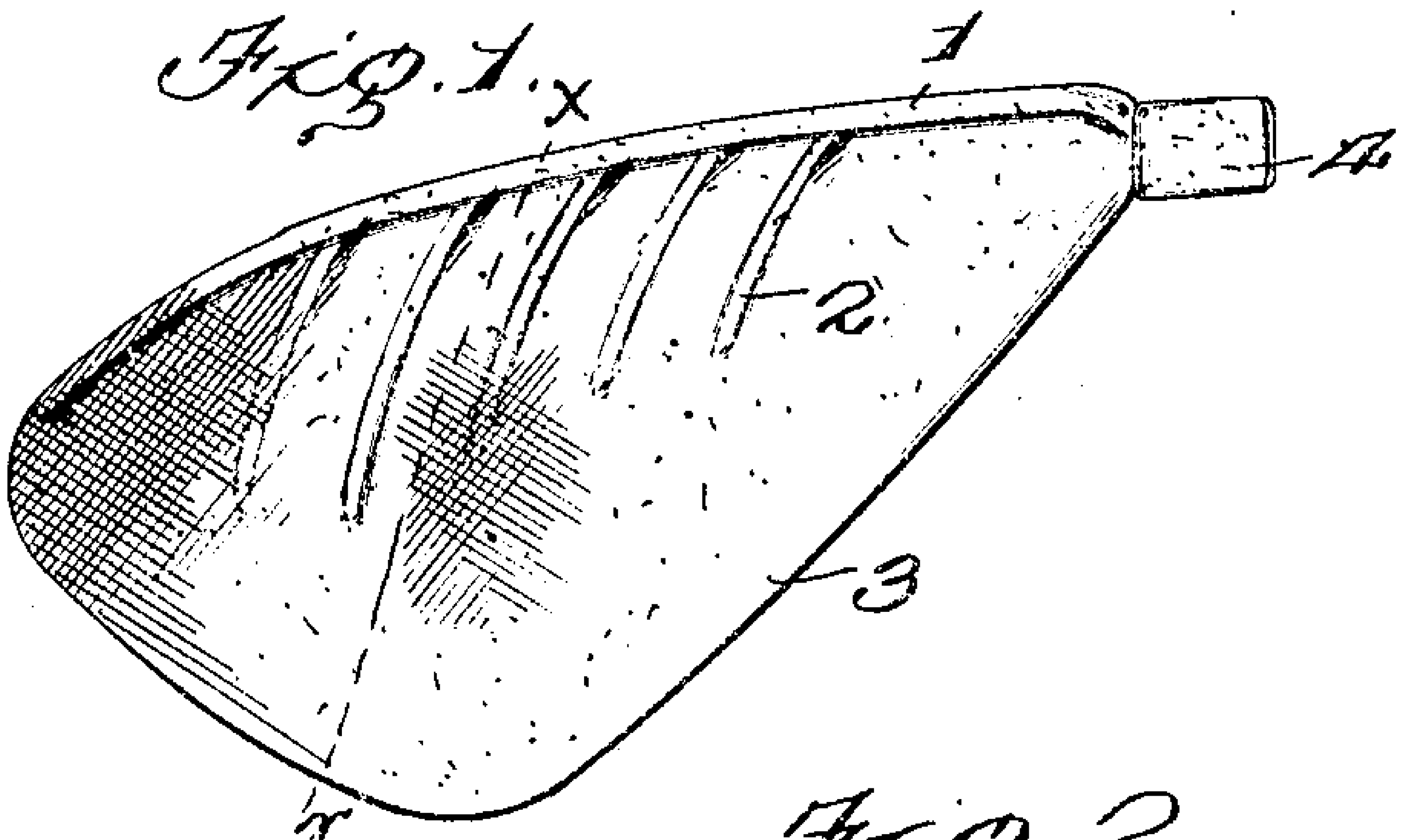


Fig. 2.

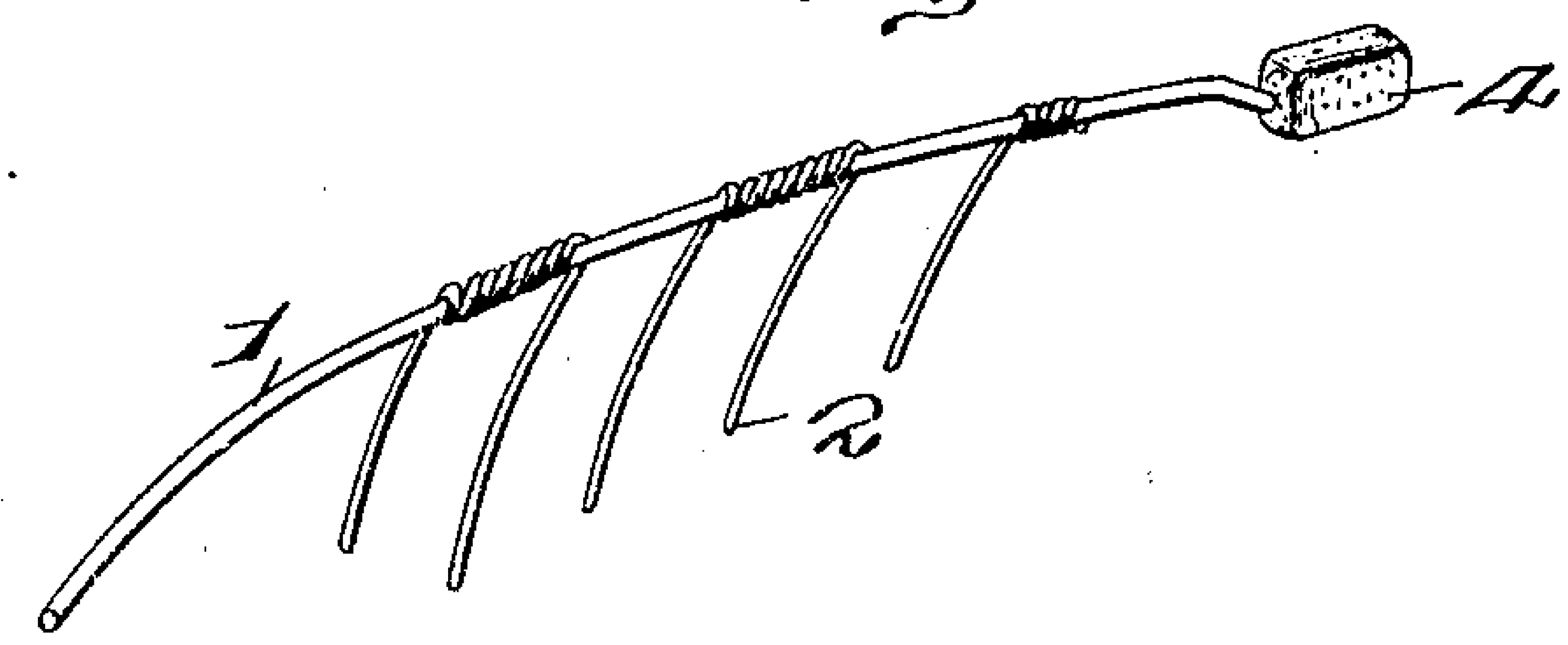


Fig. 3.

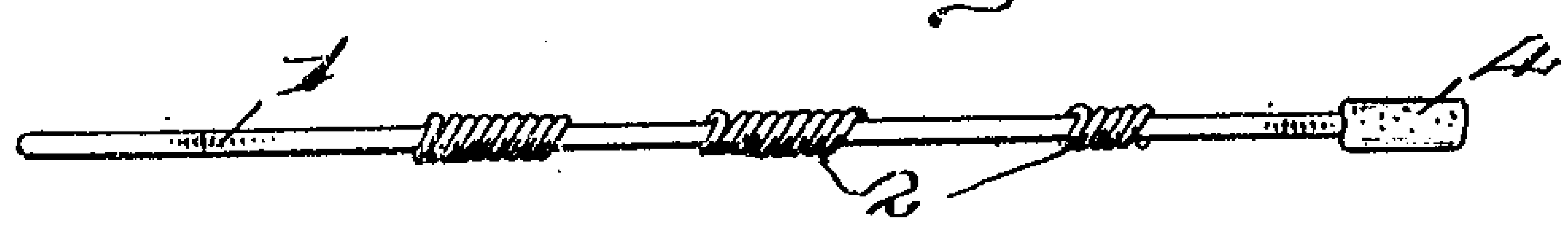


Fig. 5.

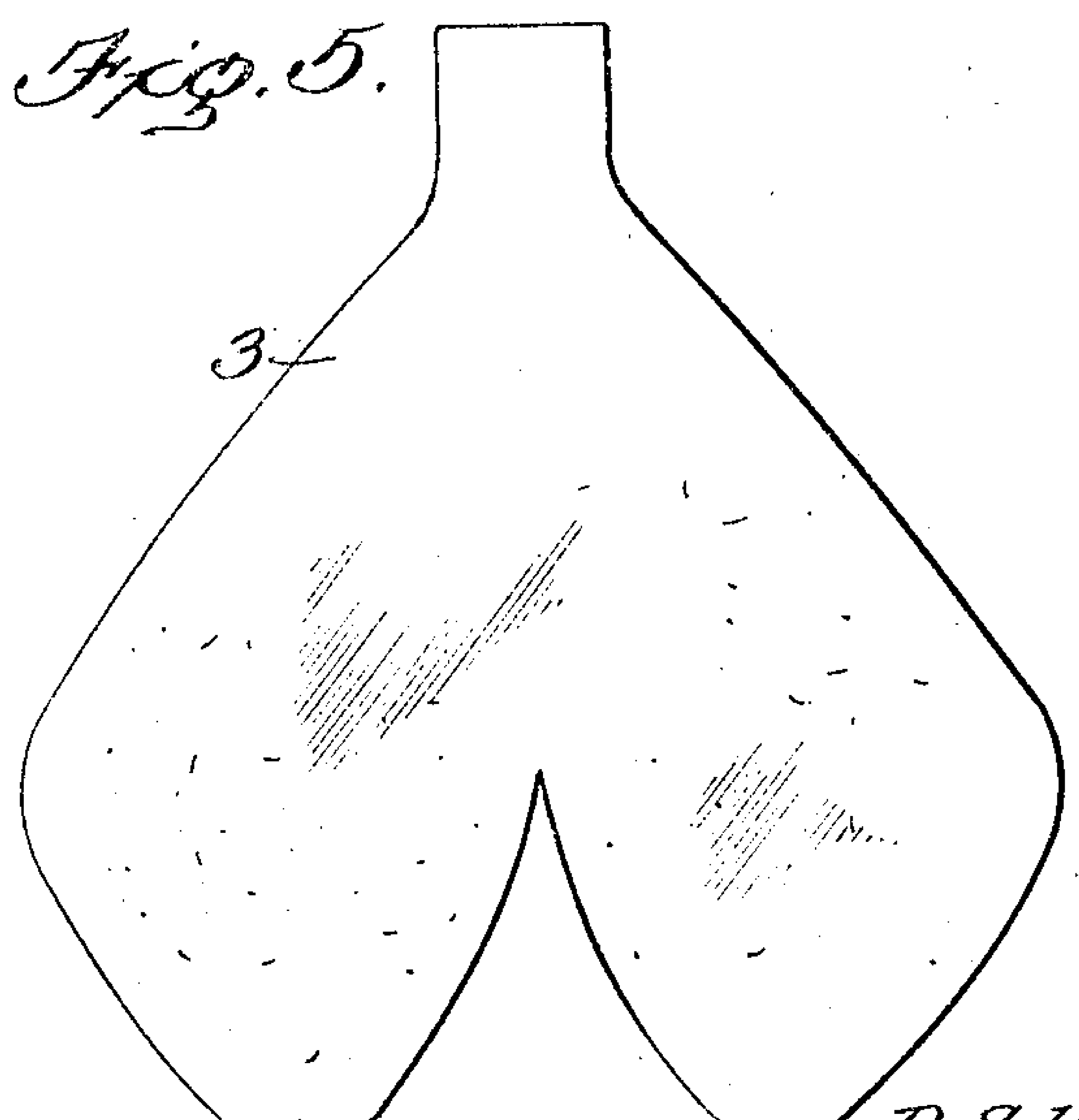
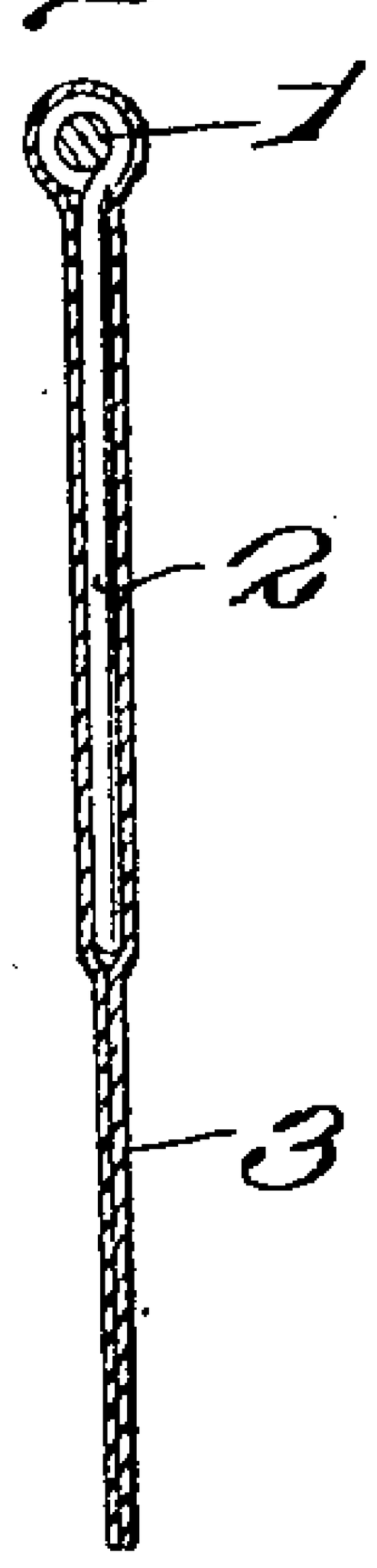


Fig. 4.



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Witnesses

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UNITED STATES PATENT OFFICE.

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TOY.

No. 913,381 Specification of Letters Patent. Patented Feb. 23, 1909.

Application filed September 24, 1908. Serial No. 454,492.

To all whom it may concern:

Be it known that I, PHILIP S. HAY, citizen of the United States, residing at Montgomery, in the county of Montgomery and State of Alabama, have invented certain new and useful Improvements in Toys, of which the following is a specification.

The present invention has for its object to provide a toy which while amusing, instructive and attractive, also provides for advertising purposes, since it presents an extended surface to receive matter to be made public and which may be conveniently printed thereon.

For a full understanding of the invention and the merits thereof and also to acquire a knowledge of the details of construction and the means for effecting the result, reference is to be had to the following description and accompanying drawings.

While the invention may be adapted to different forms and conditions by changes in the structure and minor details without departing from the spirit or essential features thereof, still the preferred embodiment is shown in the accompanying drawings, in which:

Figure 1 is a plan view of a toy embodying the invention; Fig. 2 is a detail view of the skeleton frame, the membrane being omitted; Fig. 3 is an edge view of the frame; Fig. 4 is a cross section on the line *x*—*x* of Fig. 1; and Fig. 5 is a plan view of the blank forming the membrane applied to and covering the frame.

Corresponding and like parts are referred to in the following description and indicated in all the views of the drawings by the same reference characters.

In its general outline, the toy resembles a wing, being contracted at one end and flared at the opposite end, the contracted end being weighted, the parts being so proportioned and arranged as to cause the toy to assume an approximately horizontal position when descending and at the same time to have a whirling motion imparted thereto. The forward edge of the wing is curved outward between its ends and is stiffened by a rib 1. Laterals or branches 2 extend from the rib 1 and curve slightly and act in conjunction with said rib to stiffen the membrane 3 which may consist of a piece of paper or other thin sheet material pasted or otherwise attached to the frame. A weight 4 is provided at the contracted end of the wing and is secured to the rib 1, being preferably a piece of lead molded thereon. The laterals or branches 2 are formed by pieces of wire which are twisted about the rib 1, the end portions projecting in the same direction and forming the parts 2. The laterals or branches 2 vary in length according to their relative position in the formation of the device.

The membrane 3 may consist of a single piece of paper, or sheet material, or may comprise two pieces which are pasted together upon opposite sides of the frame, thereby forming a substantial article. The paper or sheet material may be folded about the rib 1 and the end portions brought together and secured by paste or like material.

It will be understood that the toy is flat and presents an extended surface upon which advertising matter of any character may be printed or otherwise impressed. It is also understood that the wing may be colored or finished in any manner.

The toy constructed substantially as herein set forth is adapted to be thrown into the air to any height and upon descending assumes an approximately horizontal position and at the same time has a whirling motion imparted thereto when descending. When thrown straight into the air, the weight 4 moves foremost, but when descending the article turns and assumes an approximately horizontal position, thereby causing the device to whirl simultaneously with its descent.

The wing 3 of the toy may be considered as a plane tapered throughout its length and having the weight 4 at the narrow end. The rear edge of the plane is straight, whereas the forward edge is outwardly curved. The longer edge of the plane is stiffened by means of the rib 1 and said plane decreases in thickness from the stiffened edge to the opposite longitudinal edge, which latter is flexible so as to yield slightly by the pressure of the air thereon when the toy is descending in an approximately horizontal plane, whereby said toy simultaneously with its descent is caused to travel in a circle, whereby a whirling motion is imparted thereto. The extent of surface presented by the wing or plane is such with reference to the mass of the weight 4 as to cause the toy to assume an approximately horizontal position when

descending, and the flexibility of the rear edge portion of the plane results in the peculiar whirling motion imparted to the toy. The forward edge of the plane may be stiffened in any manner and said plane may be stiffened laterally in any way, the skeleton frame disclosed being preferred.

Having thus described the invention, what is claimed as new is:

1. A toy comprising a plane tapered throughout its length and having a weight at the narrow end, said toy being of such construction as to assume an approximately horizontal position and to have a whirling motion imparted thereto in its descent, after being thrown into the air.

2. A toy comprising a plane tapered in its length, stiffened at or near one longitudinal edge, having its opposite longitudinal edge flexible and having a weight at the narrow end.

3. A toy comprising a plane tapered in its length from front to rear, stiffened at or near one longitudinal edge, having its opposite longitudinal edge flexible and having a weight at the narrow end.

4. An aerial toy comprising a tapered plane weighted at the narrow end, having a longitudinal edge portion stiffened and having the stiffening extending transversely of the plane to within a short distance of the opposite flexible longitudinal edge portion.

5. An aerial toy comprising a tapered plane weighted at the narrow end, having a stiffening rib at one edge and laterals extending from the stiffening rib to brace the plane transversely and terminating a distance from the opposite flexible longitudinal edge.

6. A toy of the character specified, comprising a wing flared at one end, contracted at its opposite end and having a weight at the smaller end and having a rib along one edge and laterals or branches extended from the rib.

7. A toy comprising a frame consisting of a rib weighted at one end, laterals or branches extended from the rib in the same direction, and a membrane attached to the frame.

8. A toy comprising a frame consisting of a rib having a weight at one end and provided with laterals of varying length, and a membrane secured to said rib and laterals.

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

PHILIP S. HAY. [L. S.]

Witnesses:

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