July 14, 1925. 1,545,476

A. H. AUSTERMAN

TOY ARROW

Filed Nov. 24, 1924 2 Sheets-Sheet. 1

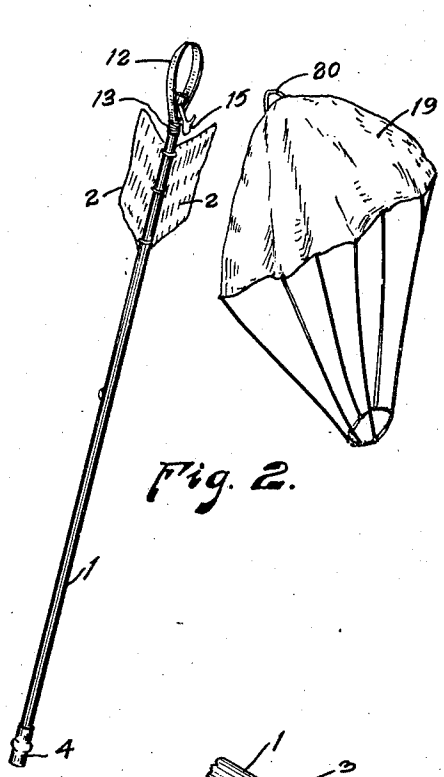


Fig. 2.

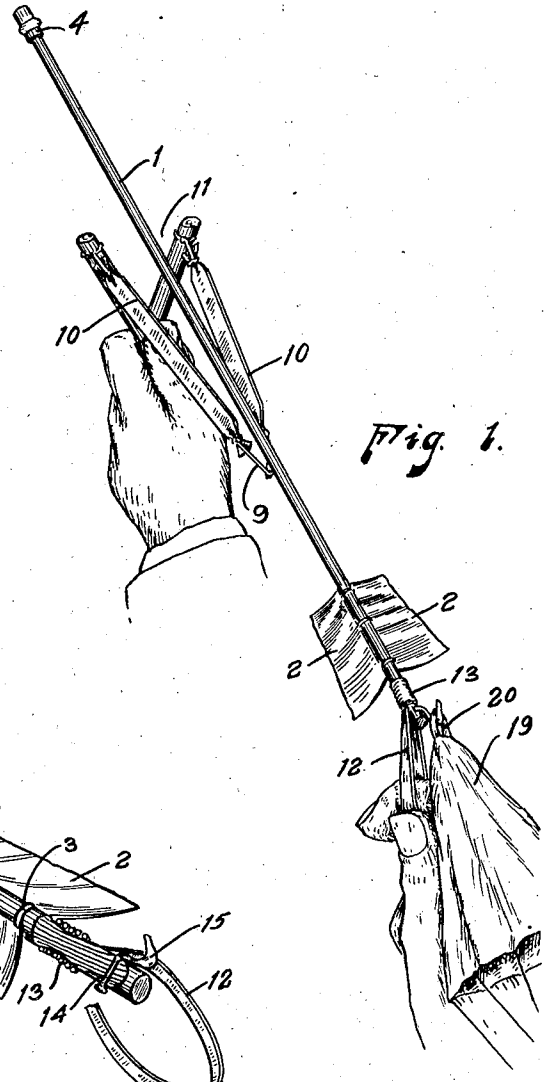


Fig. 1.

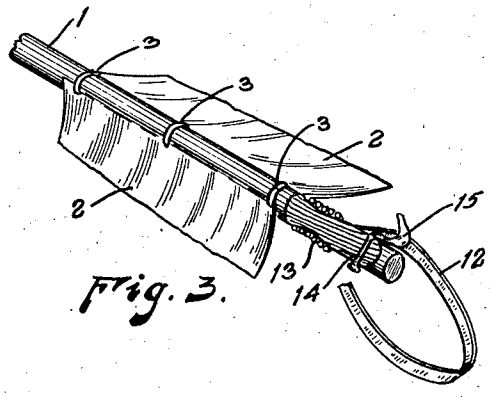


Fig. 3.

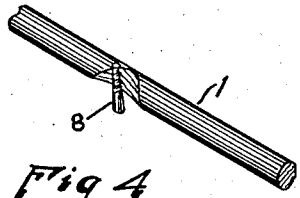


Fig 4

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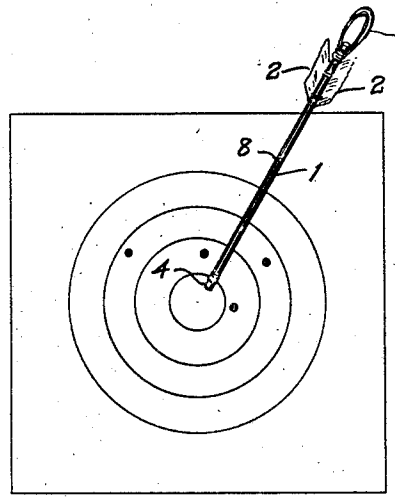


Fig. 5

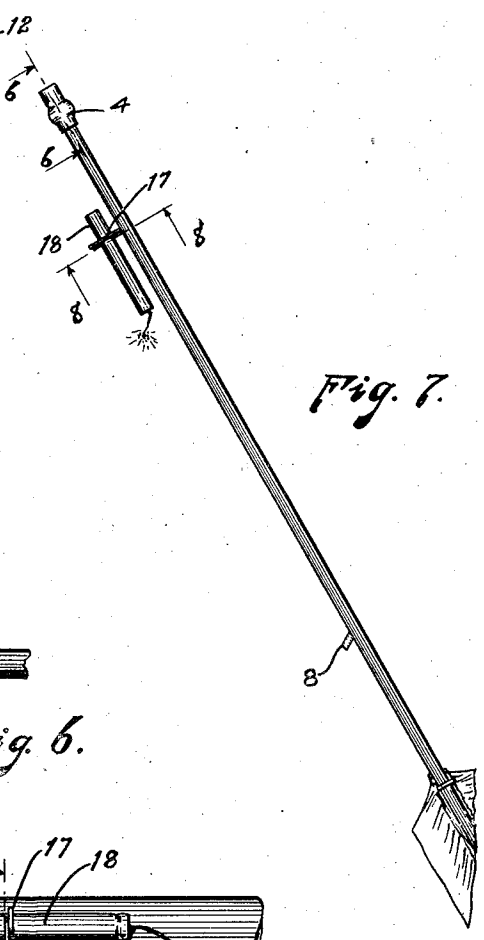


Fig. 7.

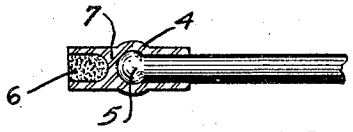


Fig. 6.

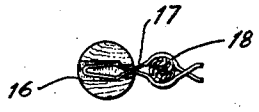


Fig. 8.

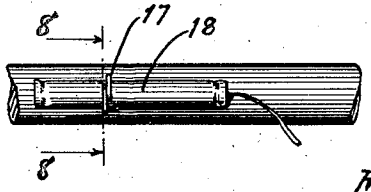


Fig. 9.

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UNITED STATES PATENT OFFICE.

AUGUST H. AUSTERMAN, OF ARVADA, COLORADO.

TOY ARROW.

Application filed November 24, 1924. Serial No. 751,807.

To all whom it may concern:

Be it known that I, AUGUST H. AUSTERMAN, a citizen of the United States, residing at Arvada, county of Jefferson, and State of Colorado, have invented certain new and useful Improvements in Toy Arrows; and I do 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, reference being had to the accompanying drawings, and to the characters of reference marked thereon, which form a part of this specification.

This invention relates to improvements in toys and has particular relation to a new and improved arrow.

Children and grown-ups as well are always interested in marksmanship and especially in archery, as this affords a convenient means for amusement.

The use of arrows has heretofore been confined almost exclusively to use in connection with bows which are difficult to make, expensive to buy and more or less awkward and unhandy, with the result that the shooting with arrows has not been very extensively practiced.

It is the object of this invention to produce an arrow that can be employed in connection with bows of the ordinary construction or with a device popularly referred to as a pea-shooter. It is a further object to so construct my improved arrow that it can be used to convey toy parachutes upwardly into the air and to release the same at the maximum elevation of the arrow's flight. My arrow is also accompanied by means for attaching thereto a fire cracker which may be carried into the air before it is exploded and is, in addition, provided with means for marking on a target the exact point where the arrow struck so as to afford a ready means of comparing the score of the contestants.

The above and other objects, which may become apparent as the description proceeds, are attained by means of a construction and arrangement of parts that I will now describe in detail, reference for this purpose being had to the accompanying drawing, in which the same is illustrated, and in which:

Fig. 1 is a perspective view showing the manner in which my arrow is launched. This view also shows how the toy parachute is attached to the arrow;

Fig. 2 shows the arrow and the parachute as they appear immediately after the arrow has reached its maximum elevation and started on the return passage towards the earth, the parachute being shown released;

Fig. 3 is a detail showing the manner in which the feathers are attached, the manner in which the loop is secured to the end of the arrow, and the means for attaching the parachute;

Fig. 4 is a detail showing the means employed for connecting the pea-shooter to the arrow;

Fig. 5 shows a target that has been struck four times and is being hit for the fifth time by one of my arrows;

Fig. 6 is a section through the tip of my arrow, taken on line 6—6, Fig. 7, and shows how the marking powder is held in place;

Fig. 7 shows a perspective view of my arrow with a fire cracker attached thereto;

Fig. 8 is a section taken on line 8—8, Figs. 7 and 9; and

Fig. 9 is a side elevation of a portion of the arrow showing the fire cracker attached thereto.

My arrow comprises a long, straight, round rod 1 of wood or metal tubing, such as usually employed in the construction of ordinary arrows. Secured near one end of the rod are feathers 2 which are held in place by cords 3. The tip of the arrow, instead of being provided with a sharp point of flint or steel, is provided with a soft rubber tip 4 which is formed from a cylindrical rubber member having an opening at one end for the reception of the end of the arrow which may be slightly enlarged in the manner indicated by numeral 5 in Fig. 6. The other end has a cavity for the reception of some colored powder, such as chalk or talcum powder. A partition 7 preferably separates the cavities and prevents the tip 4 from sliding onto the arrow, as it might readily do if the partition were absent. Near the feathered end I provide a pin 8 that preferably has a threaded connection with the arrow and projects outwardly from the same so as to form a means that can be engaged by the member 9 that joins the free ends of the elastic bands 10 of the pea-shooter 11. Secured to the arrow, to the rear of the feathers, is a loop

12 which is held in place by a wrapping 13 of cord or wire. Extending transversely through the arrow near the extreme rear tip thereof is a metal pin 14, one end of which is bent into a hook 15. This pin is freely rotatable in the arrow and the hook is weighted in the manner indicated in Figs. 2 and 3 so that the open end of the hook will always be upwardly. Near the front end of the arrow I provide a diametrical opening 16 (Fig. 8) which is adapted to receive a wire clamp 17 that has a portion thereof bent double and adapted to be inserted into the opening 16. The outer ends of the clamp 17 are curved and adapted to receive and hold a fire cracker 18.

In Fig. 1 I have shown a toy parachute 19 that is provided with a loop 20 attached to the hook 15. As the arrow is shot upwardly into the air the parachute is carried along. When the arrow has reached the upper limit of its flight, it reverses in the manner indicated in Fig. 2. This releases the parachute which opens and descends independently of the arrow. If it is desired to shoot a fire cracker into the air for the purpose of having it explode above the ground, this is readily accomplished by means of the spring clip 17.

If it is desired to employ the arrow for target practice either in connection with a bow or a pea-shooter, the cavity in the end of the tip 4 is filled with a colored powder or a colored paste which will leave a mark on the target wherever the latter is hit. If several persons compete at target practice, they may each be provided with an arrow or arrows having a distinctive color of powder or paste so that the score of each may be readily determined by an inspection of the target. The soft rubber tip also serves as a cushion and prevents the arrow from injuring anyone or anything that it strikes.

From the above, it will be apparent that I have produced an arrow of peculiar construction that is adapted to be employed in several ways, for which arrows of ordinary construction are unsuited.

Having now described my invention, what I claim as new is:

1. An arrow provided at its forward end with a soft rubber tip separated into two compartments, one of which receives the tip of the arrow and the other of which is adapted to receive a colored powder.

2. An arrow provided at its forward end with a soft rubber tip separated into two compartments, one of which receives the tip of the arrow and the other of which is adapted to receive a colored powder, the tip of the arrow being somewhat enlarged so as to provide means for more securely holding the rubber tip in place.

3. An arrow having a tip and a feathered end, the feathered end having an opening extending transversely therethrough, a hook rotatably mounted in said opening, said hook being adapted to carry a parachute.

4. An arrow having a tip and a feathered end, the feathered end having an opening extending transversely therethrough, a hook rotatably mounted in said opening, said hook being of sufficient weight to be rotated by gravity as the arrow changes its direction.

In testimony whereof I affix my signature.

AUGUST H. AUSTERMAN.