

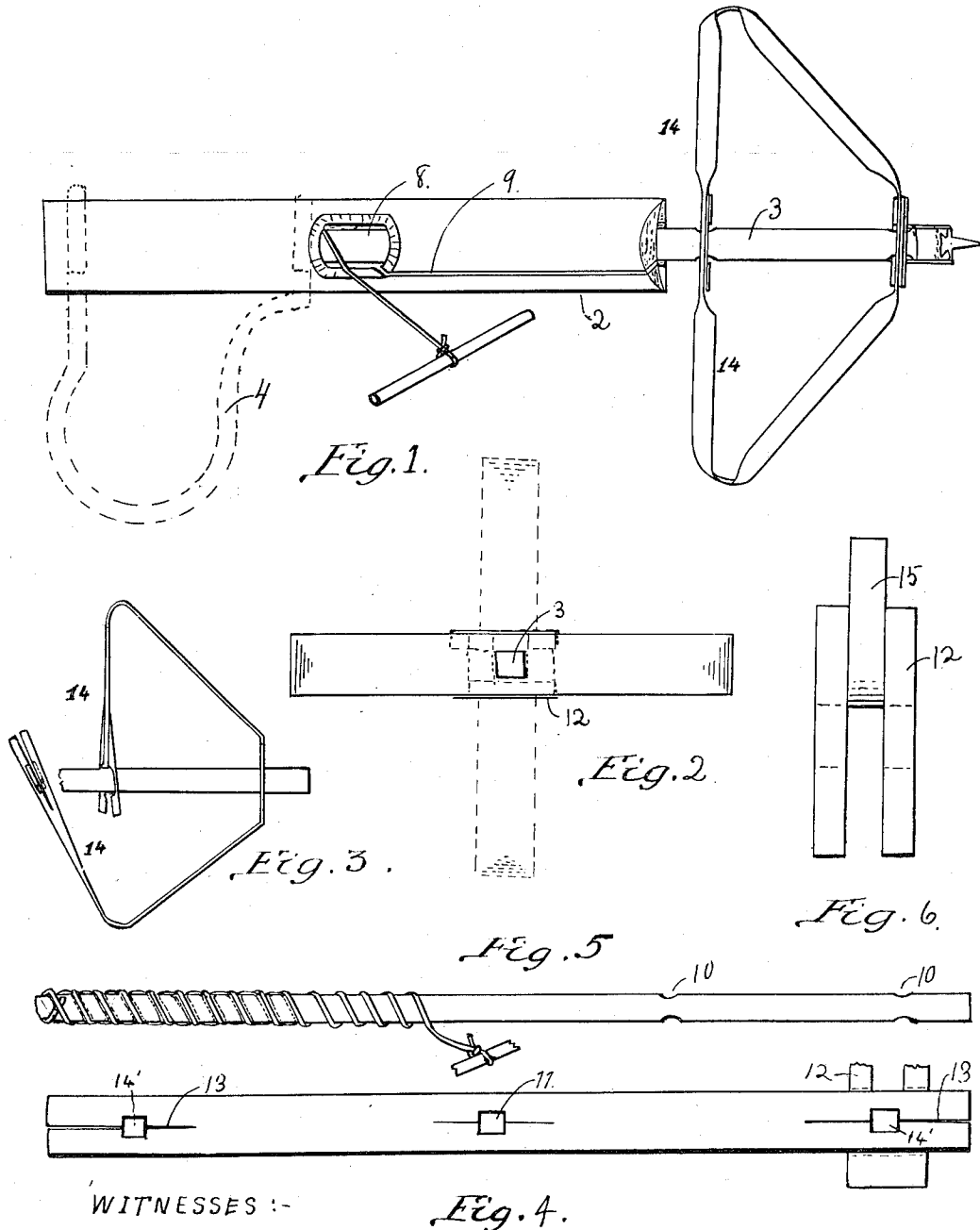
W. H. ALBRIGHT.

AIR GUN.

APPLICATION FILED JUNE 8, 1910.

1,043,657.

Patented Nov. 5, 1912.



WITNESSES :-

Fig. 4.

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AIR-GUN.

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Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, WALTER H. ALBRIGHT, a citizen of the United States, and a resident of Bellevue, in the county of Sandusky and State of Ohio, have invented a new and Improved Air-Gun, of which the following is a specification.

My invention relates to a rotary projectile, and a tube for discharging the same, and my object is to construct a device for indoor and outdoor amusements, that is safe, strong, durable, and also easy to operate and easy and simple to construct.

My invention consists of a tube, which may or may not support a handle, said tube carrying a side opening and a groove. The invention consists also of a shaft fitted to said tube which shaft supports a propeller especially constructed for the purpose as set forth in the claim.

Reference is had to the accompanying drawings forming part of this specification of which:—

Figure 1 is a side view of the tube and projectile. Fig. 2 is an end view of same. Fig. 3 is a side view of the propeller and shaft showing method of construction. Fig. 4 is a pattern view of the blades. Fig. 5 is a view of the shaft, as grooved for accurate shooting. Fig. 6 is a view of a tie clip for tying the ends of the blades together and securing them to the shaft.

Referring more particularly to the parts and the method of operating, in Fig. 1, the tube 2 may be provided with a handle 4 though not necessarily so, and in the cheaper toys would be too expensive, an opening is made in the side at 8 which connected with the central longitudinal opening, a slot 9 connects said opening 8 with the end of the tube, the purpose of which slot is hereinafter stated.

A shaft 3, Fig. 5, and Fig. 1, slides and rotates smoothly within the tube 2; the shaft 3 should be straight and cylindrical, and may be spirally grooved as shown in Fig. 5, or in the cheaper toys it may be plain.

The propeller carried by shaft 3 consists of long flexible blades as in Fig. 4 the ends (14) of which are looped back again to the shaft 3 and tied to each other and to the shaft 3 by the tie clip 12 Fig. 6. Two of

these long flexible blades may be used, and arranged to cross each other at right angles, or in simple "tops" one blade is sufficient. This style of propeller is a great improvement over previous styles in that the blades are much stronger than single blades and are not easily bent out of shape, they also have greater air capacity because they do not follow each other as do single blades arranged in the same plane, and chiefly these blades are not so dangerous to eyes, etc., as are the single blades. In the manufacture of these propellers the aim has been to simplify the work as much as possible. In Fig. 4 the pattern shows an opening 11 at the center and openings 14' at each end; a longitudinal slit 13 is carried outward from these openings in one or both directions; these slits allow the blade to be opened up in slipping it over the shaft 3 until the blade openings are opposite the notches 10 in the shaft 3, Fig. 5; the tie clip 12 then secures the ends while the central opening 11 is firmly closed after the loops are formed. The openings 11, 14', may be rectangular, oblong or star shaped.

The clip 12 is used to connect the ends and secure them to the shaft 3; it is also a reinforcement to the blade where the blade is the weakest, that is where it crosses the shaft. The clip may be U shaped or simply punched for the shaft to enter. If used for a reinforcement the clip may be much wider. The ends are folded on the dotted lines, Fig. 6. The clip in tying simply binds the ends together, but the shaft answers for a key.

The pattern blade Fig. 4 need not necessarily be made of a single piece of material, as a serviceable joint may be effected and each loop be made of a single piece, by using the clip.

After the blades are secured in position they are given the desired pitch, common to such instruments.

In winding the cord on the shaft 3 it is advised that the cord be wound in a spiral manner as shown in Fig. 5. The shaft 3 should be held in the left hand and wound "clockwise" from the end of the shaft, toward the blades, the cord being held in a position to enter the slot 9 as the shaft is set

for an expulsion. This slot is a great saving of time as it would be necessary to draw out the end of the cord through the opening 8.

Knowing that flying projectiles of this nature are old I do not claim such a device broadly, but

I claim:—

An aerial projectile having blades ex-

tending outwardly from a shaft the ends of said blades looped and returned to and united to said shaft, substantially as set forth and for the purpose specified.

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Witnesses:

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