(No Model.)

T. A. MACDONALD.

TOY WHEEL.

No. 488,944. Patented Dec. 27, 1892.

Fig: 1.

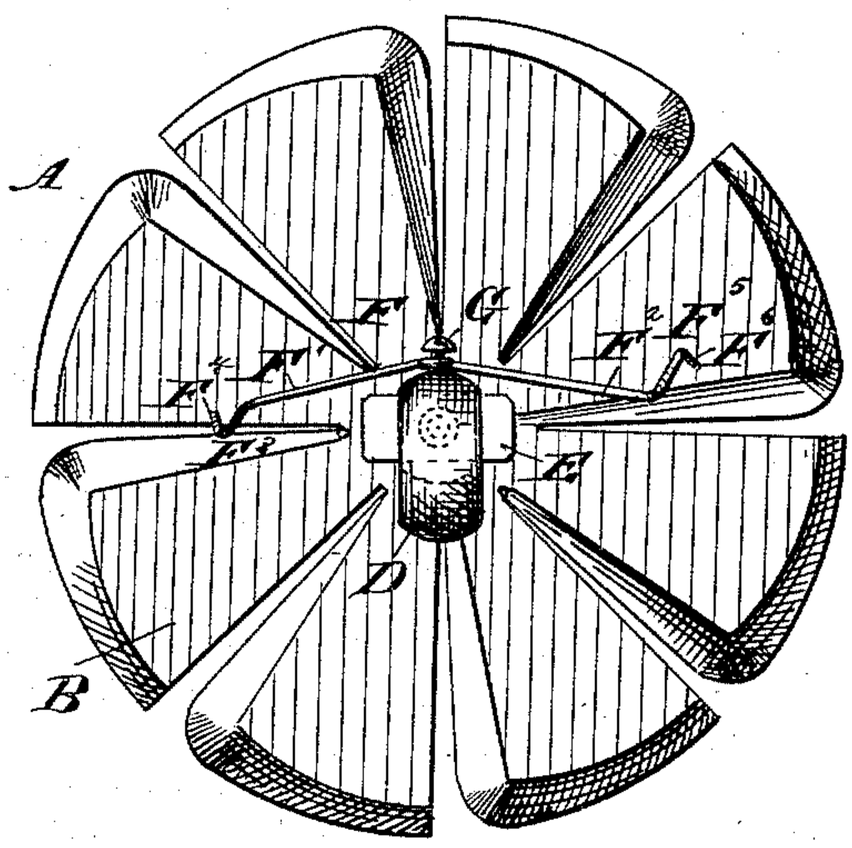

Fig: 3.

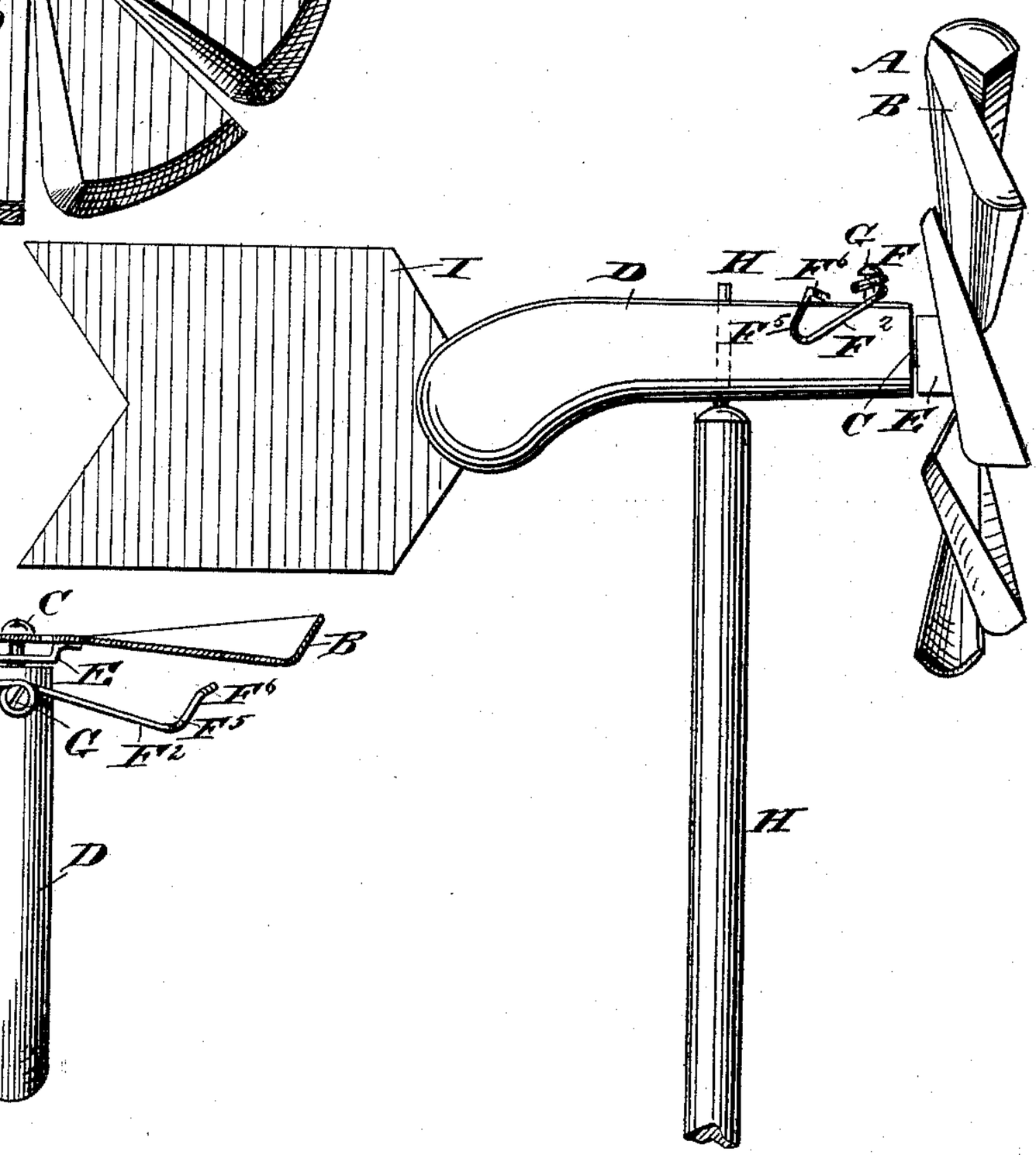

Fig: 2.

WITNESSES:

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THOMAS A. MACDONALD, OF PATERSON, NEW JERSEY.

TOY WHEEL.

SPECIFICATION forming part of Letters Patent No. 488,944, dated December 27, 1892.

Application filed March 23, 1892. Serial No. 426,050. (No model.)

To all whom it may concern:

Be it known that I, THOMAS A. MACDONALD, of Paterson, in the county of Passaic and State of New Jersey, have invented a new and Improved Toy Wheel, of which the following is a full, clear, and exact description.

The object of the invention is to provide a new and improved toy wheel, which is simple and durable in construction, arranged to be readily set in motion by the user, or driven by the force of the air or a current of water, and at the same time producing a rattling noise.

The invention consists of a fan wheel mounted on a handle, and an arm pivoted on the said handle and adapted to engage the blades of the wheel.

The invention also consists of certain parts and details and combinations of the same, as will be fully described hereinafter and then pointed out in the claims.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar letters of reference indicate corresponding parts in all the figures.

Figure 1 is a rear view of the improvement; Fig. 2 is a plan view of the same, with parts in section; and Fig. 3 is a side elevation of a modified form of the improvement.

The improved toy wheel is provided with a fan or propeller wheel A, of any approved construction, provided with suitable fan or propelling blades B, the whole wheel being preferably made of sheet metal. The wheel A is mounted to turn on a pin or screw C, fastened to one end of an arm or handle D, adapted to be taken hold of by the user or operator for turning the wheel A, as hereinafter more fully described.

In order to form a good bearing for the wheel A on the pin C, a bridge or reinforcing strip E, is attached to the rear of the wheel A, at the center thereof, the pin C passing through this bridge which thus forms a good bearing for the wheel.

On the handle D is arranged a lever F, fulcrumed on a pivot G, secured to the said handle preferably at the top, as is plainly illustrated in the drawings. The lever F is provided with the two arms F′ and F^2, extending in opposite directions from the pivot G, the arm F′ being provided with a forward extension F^3 from which extends upward a lug F^4, adapted to engage the rear edge of one of the propeller blades so as to turn the wheel, as hereinafter more fully described. The other arm F^2 is provided with an upward extension F^5 from which extends forward a lug F^6, adapted to bear against the rear surface of the propeller or fan blades B.

The device is used as follows:—The operator takes hold of the handle D, and by moving the wheel A rapidly through the air or subjecting it to a current of water, the said wheel is turned on the pin C, similarly to the ordinary pin-wheel now generally used. The rotation of the wheel A will cause a swinging of the lever F, as the outer ends of the arms F′ and F^2 of the said lever will alternately be engaged by the inclined blades B, and the said blades, on striking the lugs F^4 and F^6 of the said lever, produce a rattling noise. It is understood that when one of the fan blades B engages the lugs F^4, the arm F′ of the lever F swings rearward while the other arm F^2 swings inward. At the time the respective propeller blade passes, with its inner edge over the said lug F^4, the other lug F^6 on the opposite arm F^2, stands at the forward edge of the opposite propeller blade so that this blade, on the further rotation of the wheel, causes a rearward swinging of the arm F^2 and a consequent inward swinging of the arm F′. Thus it will be seen that the lever F is kept in a continuous swinging motion as soon as the wheel A revolves. Now, when it is desired to turn the wheel A without subjecting it to the force of air or a current of water, then the operator takes hold of the handle D and gives a short and quick turning motion to the handle D, so that the extension F^3 and lug F^4 engage the rear edge of the fan blade, and by the jerk given to the handle the said arm F′, by its extension F^3, imparts a rotary motion to the wheel A. In a like manner the other arm F^2 of the lever F may act by its lug F^6 on the edge of the opposite fan blade. It is understood that the respective arm F′ or F^2 acts on the corresponding fan blade according to the forward position of the respective arm. Thus by one sudden jerk of the handle the wheel A can be rotated around its pivot

or pin C quite a number of times before the wheel will stop. By a succession of jerks given to the handle, the wheel may be kept rotating for any desired length of time.

As shown in Fig. 3, the handle D may be mounted to turn on the vertically arranged pin H′ formed on the rod or stick H, adapted to be set in the ground or supported from some other convenient device or place. The rear end of the handle D is in this case, preferably formed or provided with a vane I for holding the wheel A to the wind similarly to the ordinary wind-mills now in use.

It will be seen that this device is very simple in construction, can be cheaply manufactured, and permits the user to rotate the wheel without subjecting the same to a current of air or water.

Having thus described my invention, I claim as new, and desire to secure by Letters Patent:—

1. A toy wheel comprising a fan or propeller wheel a handle on which the said wheel is mounted to turn, and a lever fulcrumed on the said handle and engaging the edges of the blades of the said wheel, substantially as shown and described.

2. A toy wheel comprising a handle, a fan or propeller wheel mounted to turn at one end of the said handle, and a lever pivoted on the said handle and extending across the rear face of the said wheel to engage the blades of the latter at the edges thereof, substantially as shown and described.

3. In a toy wheel, the combination with a handle provided at one end with a pivot pin, of a fan wheel mounted to turn on the said pivot pin, and a lever fulcrumed on the said handle and extending across the rear face of the said wheel, the ends of the said lever being provided with forward extensions adapted to engage the edges of the blades of the said wheel, substantially as shown and described.

4. In a toy wheel, the combination with a handle provided at one end with a pivot pin, of a fan wheel mounted to turn on the said pivot pin, a lever fulcrumed on the said handle and extending across the rear face of the said wheel, the ends of the said lever being provided with forward extensions adapted to engage the edges of the blades of the said wheel, and lugs formed on the extensions of the said lever and adapted to be engaged by the rear faces of the blades, substantially as shown and described.

5. In a toy wheel, the combination with a rod formed with a pivot pin, of a handle mounted to turn on the said pin, a vane held on one end of the said handle, a wheel mounted to turn on the other end of the said handle, and a lever fulcrumed on the said handle and extending across the rear face of the said wheel, the said lever being provided at its ends with forward extensions adapted to engage the edges of the blades of the said wheel, substantially as shown and described.

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Witnesses:

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