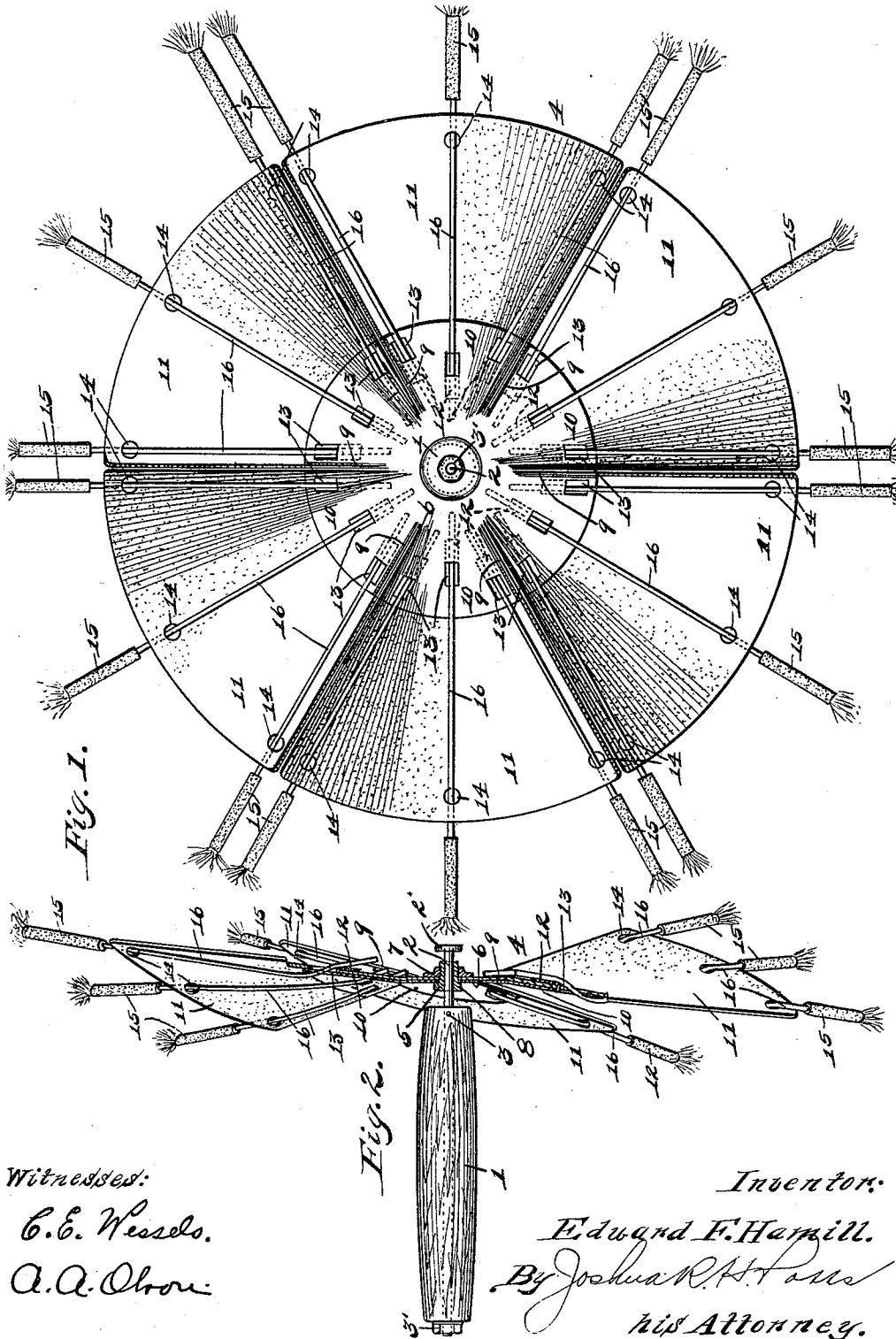


E. F. HAMILL.
TOY FIREWORKS.
APPLICATION FILED AUG. 12, 1910.

993,363.

Patented May 30, 1911.



Witnesses:
C. E. Wessels.
A. A. Olson.

Inventor:
Edward F. Hamill.
By Joshua R. H. Farris
his Attorney.

UNITED STATES PATENT OFFICE.

EDWARD F. HAMILL, OF CHICAGO, ILLINOIS.

TOY FIREWORKS.

993,363.

Specification of Letters Patent. Patented May 30, 1911.

Application filed August 12, 1910. Serial No. 576,878.

To all whom it may concern:

Be it known that I, EDWARD F. HAMILL, a citizen of the United States, residing at Chicago, county of Cook, and State of Illinois, have invented certain new and useful Improvements in Toy Fireworks, of which the following is a specification.

My invention relates to a toy fire work displaying device and more specifically to rotary means for exhibiting pyrotechnic effects resembling a pin wheel.

The object of my invention is the provision of a device of the character mentioned which will be of durable and economical construction and harmless and efficient in operation. Other objects will appear hereinafter.

With these objects in view my invention consists in a toy fire work characterized as above mentioned and in certain details of construction and arrangement of parts all as will be hereinafter fully described and more particularly pointed out in the appended claims.

My invention will be more readily understood by reference to the accompanying drawing forming a part of this specification and in which,

Figure 1 is a rear elevation of a device embodying the preferred form of my invention, and Fig. 2 is a substantially central longitudinal section thereof, the handle being shown in elevation.

Referring now to the drawing the device therein shown comprises a handle 1 through which extends centrally a rod 2, the latter being rigidly secured in said handle by a transversely extending pin 3 which extends through said handle and rod and by a nut 3' threaded upon the rearward exteriorly projecting extremity of said rod. Upon the forward exteriorly projecting end portion of said rod is rotatably mounted a wind-wheel 4, the latter being locked thereon between the forward extremity of said handle and a flaring head 2' formed at the forward extremity of said rod. Said wheel comprises an inner bushing or hub 5 which is freely rotatable upon the rod 2. Upon the member 5 is rigidly secured a metallic disk 6, the latter being secured to said member by means of a nut 7 threaded upon the latter and between which and a circumferential flange 8 formed upon said hub the inner edge portion of said disk is securely clamped. The peripheral portion of the

disk 6 is radially slitted as at 9 forming a plurality of radially projecting arms 10. To said arms 10 are rigidly secured the inner end portions of outwardly or radially projecting wind-arms 11, the latter being preferably formed of paste or card board, said arms as well as the arms 10 of the disk 6 being transversely inclined in the ordinary manner so that when the wind impinges thereon the wheel 4 will be caused to rotate. The connection of the arms 10 is effected through the medium of ears 12 punched from the latter, said ears projecting through the adjacent inner end portions of said arms 11 and being clenched as indicated upon the outer sides thereof. In each of the arms 10 there are formed preferably three ears 12, the radii passing through which being preferably equally spaced apart. The punching of said ears from said disk results in the formation of apertures or perforations 13 therein which register with corresponding apertures in the arms 11. Provided in the arms 11 adjacent the outer extremities thereof are equally spaced apertures 14 preferably three in number, said apertures 14 being in radial alinement with apertures 13.

In use, sticks of punk, fuses, or other similar fire works 15 may be securely attached to the wheel 3 by inserting the shanks 16 thereof through the apertures 13 and 14 in the manner clearly illustrated. When so arranged and the outer extremities of the members 15 lighted, upon the rotation of the wind-wheel by the impingement of the wind thereon, beautiful pyrotechnic effects presenting an appearance similar to that of the conventional pin or catharine-wheel will be produced. If the wind is not of sufficient velocity to cause the rotation of the wind-wheel when the device is held stationary, the latter may be moved against the same with sufficient force to cause rotation. By arranging said sticks 15 so that the outer lighted extremities rotate in different circular paths the beauty of the display will be enhanced.

The device is easily operated, and is harmless, hence may be placed in the hands of children without fear of injury. The same is of simple construction hence may be manufactured at a low cost.

While I have shown what I deem to be the preferable form of my device I do not wish to be limited thereto as there might be

various changes made in the details of construction and arrangement of parts described without departing from the spirit of the invention comprehended within the scope of the appended claims.

Having described my invention what I claim as new and desire to secure by Letters Patent is:

1. In a device for exhibiting pyrotechnic effects, the combination of a handle, a wind-wheel rotatably mounted upon said handle in the forward extremity thereof, said wheel comprising a plurality of radial transversely inclined arms, said arms being perforated adjacent their outer and inner extremities for the reception of the shanks of sticks of punk or other similar fire works to hold the latter with their outer extremities projecting beyond the periphery of said wind-wheel, substantially as described.
2. In a device for exhibiting pyrotechnic

effects, the combination of a handle, a metallic disk rotatably mounted on said handle, the said disk being radially slit to form arms, wind arms of card board or similar material secured to said arms by means of ears punched from the latter and clenched through corresponding apertures formed in said wind arms, there being perforations in the outer portions of said wind arms in radial alinement with the aforementioned apertures, and fire works sticks inserted in said perforations and apertures, substantially as described.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

EDWARD F. HAMILL.

Witnesses:

HELEN F. LILLIS,
JOSHUA R. H. POTTS.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."
