Nov. 5, 1929. J. F. KELLER 1,734,858

TOY WINDMILL

Filed June 11, 1928 2 Sheets-Sheet 1

Fig. 1.

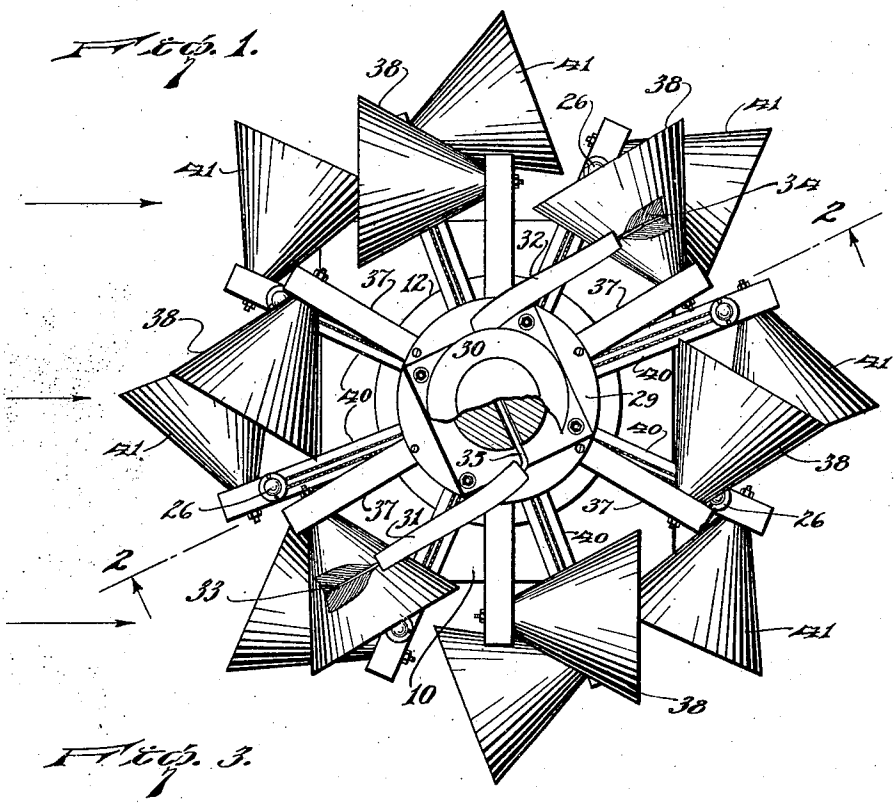
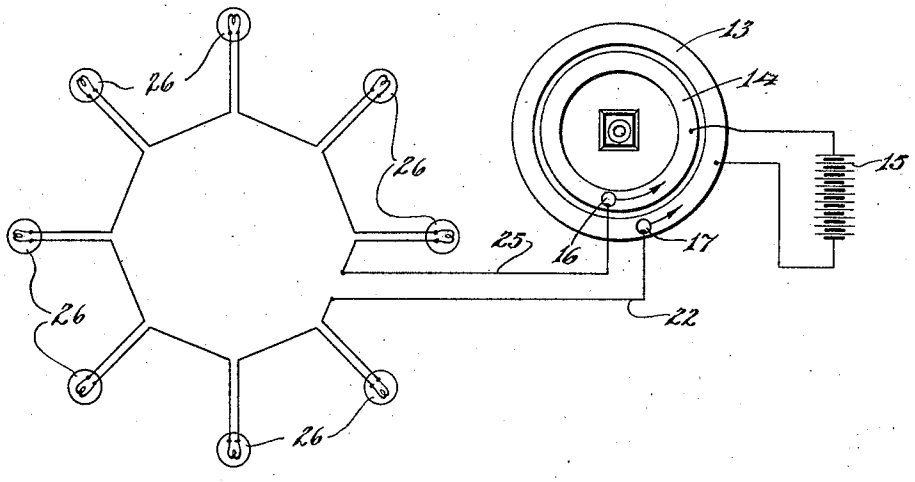


Fig. 3.



WITNESSES

W. S. Martin

INVENTOR

JOHN F. KELLER

BY Munn & Co.

ATTORNEY

Nov. 5, 1929. J. F. KELLER 1,734,858

TOY WINDMILL

Filed June 11, 1928 2 Sheets-Sheet 2

Fig. 2

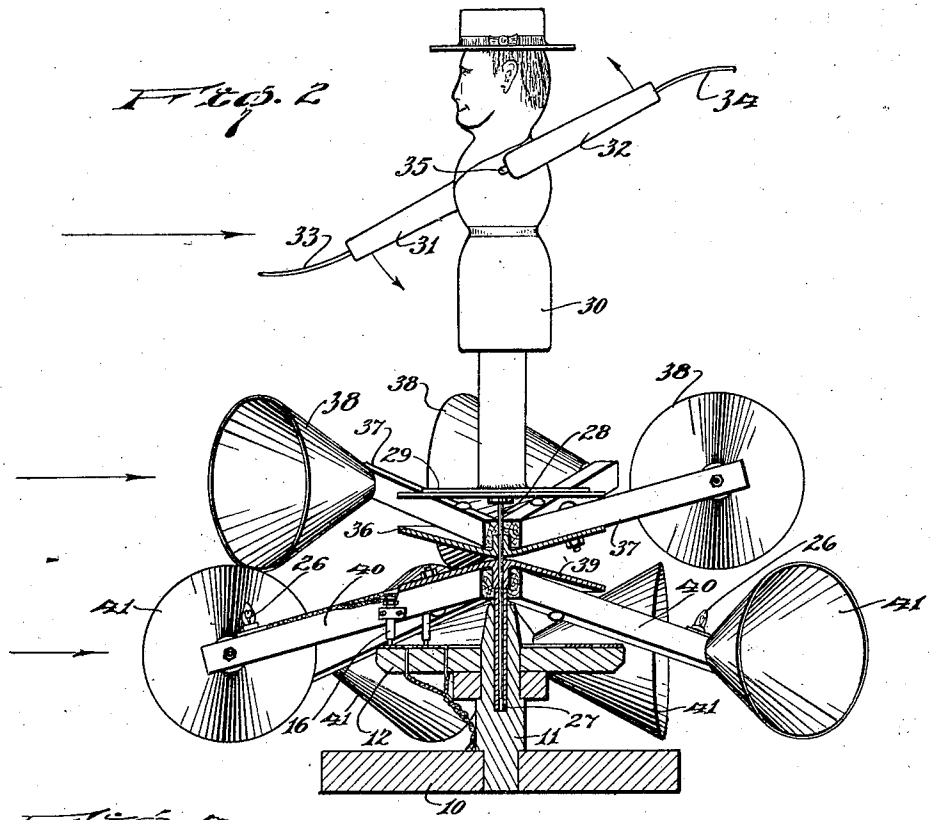


Fig. 4.

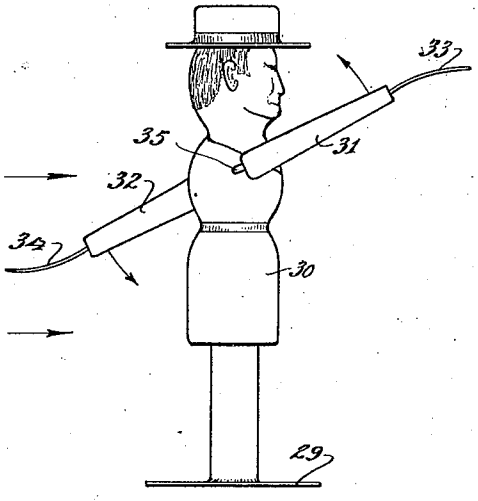
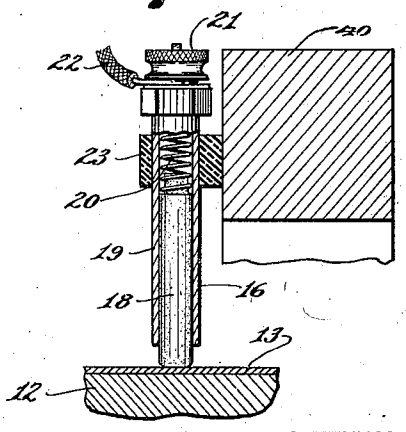


Fig. 5.



WITNESSES

W. S. Martin

INVENTOR

JOHN F. KELLER

BY

ATTORNEY

Patented Nov. 5, 1929 1,734,858

UNITED STATES PATENT OFFICE

JOHN F. KELLER, OF OTTOVILLE, OHIO

TOY WINDMILL

Application filed June 11, 1928. Serial No. 284,582.

This invention concerns a toy windmill, and has for its object to provide a simple and efficient mill which is provided with a figure having waving arms acting in a very life-like manner, and with illuminating means to enhance the attractive effect of the device when in motion.

The invention comprises a plurality of sets of oppositely revolving wind-driven means, such as cups or funnels, with a figure disposed thereabove and rotating with one of said sets, and having wind-driven waving arms. Electric lights mounted on one of said sets illuminate the device while in motion, and produce a diversity of lighting effects due to reflection of the rapidly moving surfaces.

An illustrative form of the invention is shown in the drawings, of which—

Fig. 1 is a plan view of the device with a portion of the figure cut away.

Fig. 2 is a vertical section taken on the line 2—2 of Fig. 1.

Fig. 3 is a diagram of the lighting circuits.

Fig. 4 is a side elevation of the figure shown in the opposite position to that shown in Fig. 2.

Fig. 5 is a detailed section of one of the brushes in circuit with the lights.

As shown in the drawings, the preferred form of the invention is mounted on a base 10 having a pedestal or column 11. Fixed to this column is a plate 12 on the upper surface of which is disposed a pair of closed circular conducting rings 13 and 14 connected respectively to a battery 15. Over these rings a pair of brushes 16 and 17 are adapted to move. One of these brushes is shown in Fig. 5 in detail, and comprises a conducting element 18 slidably disposed in a cylindrical shell 19 and backed by a spring 20 to hold it against the ring. The brush has a binding post 21 at the top to which a suitable wire such as 22 may be connected. The shell 19 is supported by a bracket plate 23 mounted on an arm 40 which may be any one of the arms supporting the wind-driven means hereinafter to be described. As shown in Fig. 3, the brushes are connected by wires 22 and 25 to a plurality of lights 26, which are preferably mounted in series on the above mentioned arms.

Projecting upwardly from the column 11 is a tubular member or pipe 27 in which is rotatably mounted a pin or shaft 28, the upper end of which carries a plate 29 forming a base to support a toy figure 30 having arms 31 and 32, the outer ends of which are provided with oppositely curved wind-driven elements such as 33 and 34 to represent hands. The arms are mounted for rotation on a shaft 35 extending transversely through the body of the figure.

A bracket plate 36 surrounds the shaft 28 below the plate 29 and moves therewith. This bracket plate 36 supports a plurality of arms such as 37 which extend in a plurality of directions therefrom and support on their outer ends wind-driven elements such as conical-shaped cups 38 having their apices connected to the arms with their open ends extending outwardly in a given direction, so that the thrust of the wind against the open ends of the cups will turn the arms and the bracket plate in a given direction, and with them, the figure 30.

Below the bracket plate 36 is another bracket plate 39 similarly formed, but in this case, freely rotatable around the shaft 28. This bracket plate supports another set of arms 40 which extend downwardly as shown and support on their outer ends conical shaped wind-receiving cups 41 similar to the cups 38, but with their open ends facing in the opposite direction, so that under the thrust of the wind, this set of cups will revolve in a direction opposite to that of the upper set. The slope of the upper set of arms being opposite to that of the lower set, will permit the cups to clear each other and not contact. As previously described, the lower set of arms 40 carry brushes to engage with conducting rings, whereby lights 26 on one set of arms, preferably the lower ones, are illuminated.

As a result of this construction therefore, one set of arms will revolve in one direction, and the other set will revolve in the opposite direction at a rate dependent upon the velocity of the wind. The figure will

rotate with one set of arms, and its own arms will wave in a very realistic manner. When the lights are illuminated, being disposed as they are near the ends of the arms adjacent the conical surface of the cups, will cause a variety of lighting effects due to the curvature of these cups, and to the rapid motion thereof. This will enhance the attractiveness of the device, especially when employed for advertising purposes.

I claim:

1. A toy windmill comprising a plurality of sets of arms mounted for rotation around a standard, conical wind-driven cups on said arms near their ends, the cups being disposed with their apices adjacent the arms, the open ends of the cups of one set being directed in a direction opposite to that in which the open ends of the cups of the other set are directed, an electrical circuit and electric lights in said circuit mounted on the arms near the cups to direct the light in a variety of ways as the cups revolve.

2. A toy windmill, comprising a plurality of sets of arms mounted for rotation about a standard, wind-driven elements mounted on said arms adjacent their extremities, an electrical circuit including illuminating devices mounted for rotation with one of said sets of arms, means for energizing said circuit through a stationary portion of said standard, said means including contacts mounted on said arms and conducting rings mounted on said standard, and a figure mounted for rotation with another of said sets of arms.

JOHN F. KELLER.