

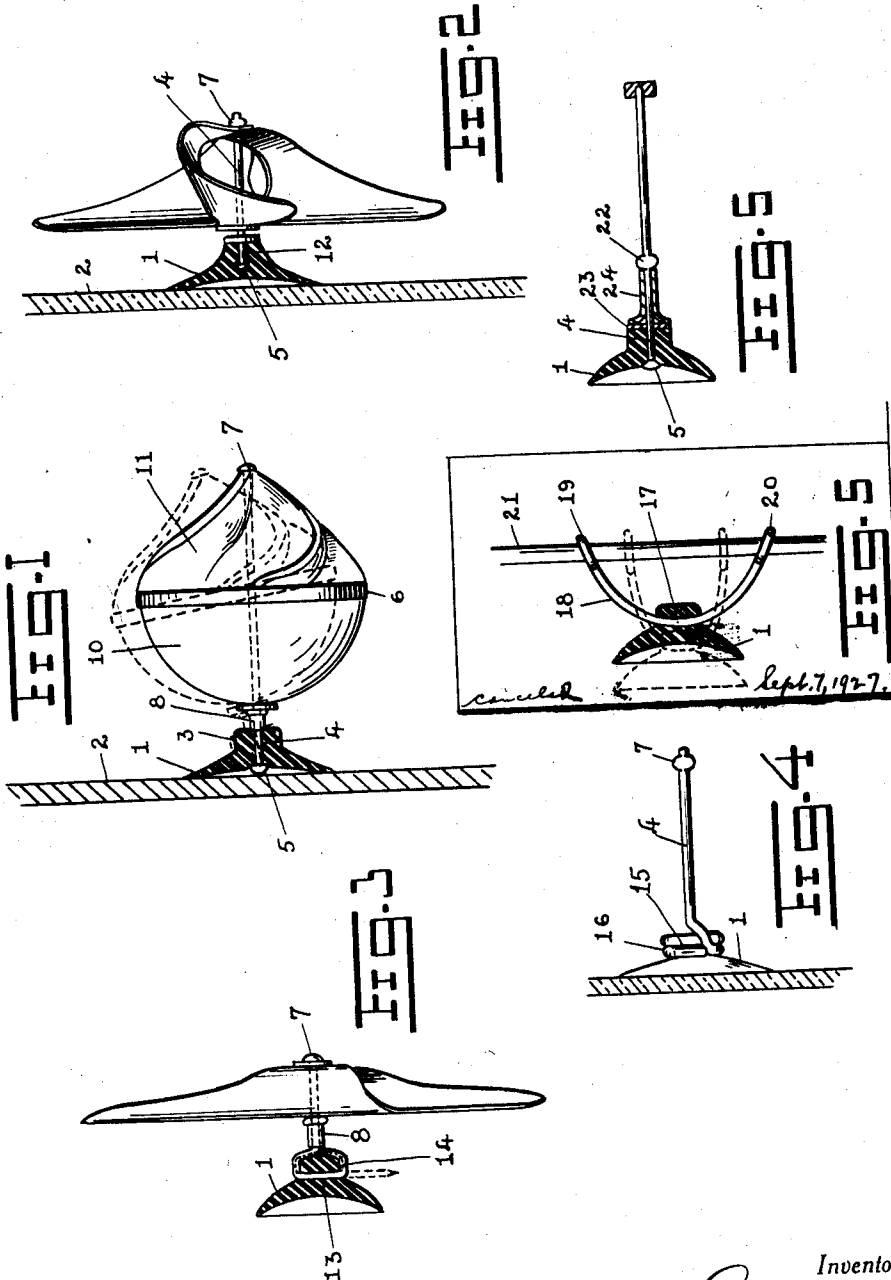
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WIND OPERATED TOY AND MOUNTING THEREFOR

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WIND-OPERATED TOY AND MOUNTING THEREFOR.

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This invention relates to wind operated toys and mountings for such toys so that these toys can be attached to a flat surface such as a windshield, head light or other portion of an automobile where they will be operated by the current of air created on the movement of the car or by the wind when the car is standing still.

These and other objects of this invention will be fully illustrated in the drawing, described in the specification and pointed out in the claims at the end thereof.

In the accompanying drawing:

Figure 1 is a side elevation and partial section of the improved wind operated toy and the mounting therefor.

Figures 2 to 5 inclusive show modified forms of the mountings for the wind operated toy.

In the several figures of the drawing like reference numerals indicate like parts.

Wind operated toys such as pinwheels, propellers, etc. have heretofore been mounted on the end of a rod or stick so that these toys could be easily handled and presented to the best advantage to the wind or current of air that will make them spin. While a rod or stick provides a proper and efficient means for these toys when held in the hand, such a mounting is not suitable when it is desired to mount the wind operated toy on a moving vehicle because the stick or rod cannot very readily be fastened in place at the most advantageous point for the operation of the toy. Furthermore the rod or stick is very apt to turn on its axis and point the wind operated toy away from the air current.

The wind operated toy and its mounting illustrated in the drawing is especially adapted for the mounting of it on a flat surface of a vehicle such as is provided by a windshield, head light lens, etc. and will firmly hold the toy in the most advantageous position in which the air currents will operate it.

As illustrated in the figures of the drawing the base for the mounting of the wind operated toy comprises a rubber suction cup 1. These cups as well as their function are well known and it suffices to say that when properly attached to a flat surface their adhesion thereto is very great for a considerable length of time. It is the manner in which a pivot pin or supporting member is anchored therein so as to form a proper sup-

port and spacing member in combination with a wind operated toy which forms the subject matter of this invention. In the form illustrated in Figure 1 the suction cup 1 has the customary concaved base with which it is made to adhere to a flat surface 2. The lug 3 projects from the center of the cup and is preferably made as an integral part thereof. Projecting thru the cup and its lug is the pivot pin 4. This pin is provided with the head 5 and is forced thru the center of the concaved base of the cup and the lug 3 until the head 5 is tight against the concaved surface of the base surrounding the pivot pin.

The hole thru the suction cup made by the pivot pin 4 would of course destroy the partial vacuum that serves to hold the suction cup in place on the flat surface but it has been found that when the head 5 is forced against the concaved surface surrounding the end of the pivot pin it prevents any possible leakage of air past the pivot pin that would destroy the vacuum. The adhesive force of the suction cup to the surface may thus be utilized to prevent leakage of air past the pivot pin from destroying the partial vacuum in the concaved base of the cup by holding the head of the pin against the mounting surface to which the cup is attached. While the head of the pivot pin may not be constantly held against the mounting surface by the adhesive force, it is forced in place at least momentarily when the suction cup is first forced against the mounting surface, and this is sufficient to place the head of the pivot pin against a suction surface where it will prevent leakage of air past the pivot pin.

After the pivot pin has been inserted into the suction cup as outlined above the wind operated toy 6 is slipped over the portion of the pivot pin projecting from the lug 3 and a second head 7 is struck up on the outer end of the pivot pin or a separate head is fastened thereto to prevent the wind operated toy from sliding off therefrom. It is understood that when the pivot pin is forced thru the suction cup and its lug, the end that is forced therethru is preferably pointed in order to make the pin pass readily thru the cup and its lug until its head is held against the concaved surface. If desired, a spacing collar or washer 8 may be inserted between the rear of the wind operator toy 6 and the outside of the lug 3 in order to

prevent a frictional contact between the toy and the rubber lug that would retard the free movement of the toy.

The wind operated toy illustrated in Figure 1 comprises a semicircular shell 10 that is preferably stamped out of sheet material such as celluloid, metal, etc. To this semicircular shell is attached in any suitable manner a spiral shell 11 which is formed up in such a way that it presents curved wind resisting surfaces. These surfaces are so formed that when an air current strikes them they will rotate the spiral and the semicircular shell on the bearings on which they are mounted to rotate on the pivot pin 4. The stronger the air current that impinges against the spiral, the greater will be the speed with which the toy will rotate on its axis that is anchored in the suction cup 1.

In the modification illustrated in Figure 2, the rubber suction cup and its lug 3 is provided with a small central hole 12 into which the head 5 of the pivot pin 4 is forced until it reaches the end of the hole. As the head 5 is considerably larger in diameter than the diameter of the hole 12 the rubber will close over the head and engage the sides of pivot pin in front of it as the head is forced into the hole. The head is thus securely embedded into the rubber so that only by using force it is possible to again withdraw the pivot pin from the suction cup. A three bladed pinwheel is shown mounted on the suction cup in Figure 2 in place of the spiral toy illustrated in Figure 1.

In Figure 3 I have illustrated another modification of the mounting of the pivot pin. In this form the end of the pivot pin is pointed and bent into a hook that is then forced thru the sides of the lug 3 to form the hole 14 therein after which the pointed end is bent again to form a loop that encircles a portion of the lug and clamps the end of the pivot pin firmly in place thereon. The modification illustrated in Figure 4 shows the pivot pin anchored in the lug by

a loop 16 that encircles the annular groove 15 provided around the lug.

In the modification illustrated in Figure 5 the pivot pin passes thru the suction cup and its lug as illustrated in Figure 1. In order to provide a more rigid mounting for the pivot pin a washer 23 and a sleeve 24 are placed around the pivot pin 4 and this washer and sleeve is then held against the face of the lug 3 by forming the head 22 on the pivot pin. For this purpose the pivot pin may be slightly pulled out of the lug before the head 22 is formed thereon so that when the head is formed and allowed to recede, it will provide a yielding pressure against the sleeve, and hold the sleeve rigidly against the lug so that the sleeve in turn will form a rigid support for the pivot pin.

I claim:

1. A wind operated toy comprising a rubber suction cup having a suction face on the forward side thereof adapted to be mounted on a supporting surface, a shaft supported by said cup and extending from the rearward side thereof, said shaft being substantially perpendicular to said supporting surface, and a wind operated toy mounted to rotate on said shaft and held spaced apart from the supporting surface by said suction cup.

2. A wind operated toy comprising a rubber suction cup having a suction face on the forward side thereof adapted to be mounted on a supporting surface, a shaft supported by said cup and extending from the rearward side thereof, said shaft being substantially perpendicular to said supporting surface, and a wind operated toy mounted to rotate on said shaft and held spaced apart from the supporting surface by said suction cup, one end of said shaft being fully embedded in the rubber cup, leaving the suction face of the cup imperforate.

In testimony whereof I affix my signature.

ERIC ISCHINGER.