United States Patent

Bynder et al.

[15] **3,663,015**

[45] **May 16, 1972**

[54] BIKE JUMP

[72] Inventors: **Samuel Fred Bynder; Milton T. Swimmer,** both of 10609 Gothic Street, Granada Hills, Calif. 91344

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[52] **U.S. Cl.** .....**272/1 R**

[51] **Int. Cl.**.....**A63g 31/00**

[58] **Field of Search** .....272/1 R, 3, 21, 23, 25, 56.5, 272/56.5 SS, 59; 273/199 A, 25, 26; 104/54; 119/82; 105/436; 214/515

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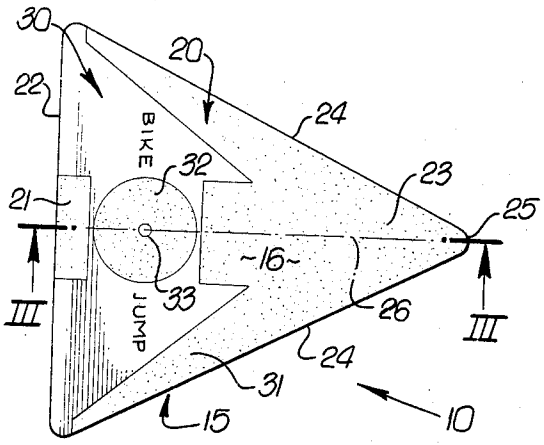
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Primary Examiner—Anton O. Oechsle
Assistant Examiner—Richard J. Apley
Attorney—Miketta, Glenny, Poms & Smith

[57] **ABSTRACT**

The bike jump has a generally wedge shaped body with upwardly inclined top surface having a wide lower entrance zone and a pointed jump departure zone from which the bike departs for maximum leap distance for a selected bike speed.

6 Claims, 6 Drawing Figures



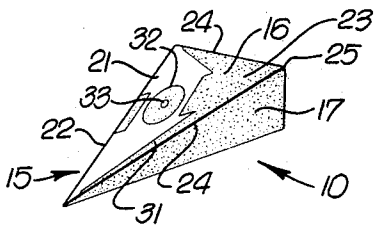


FIG. 5.

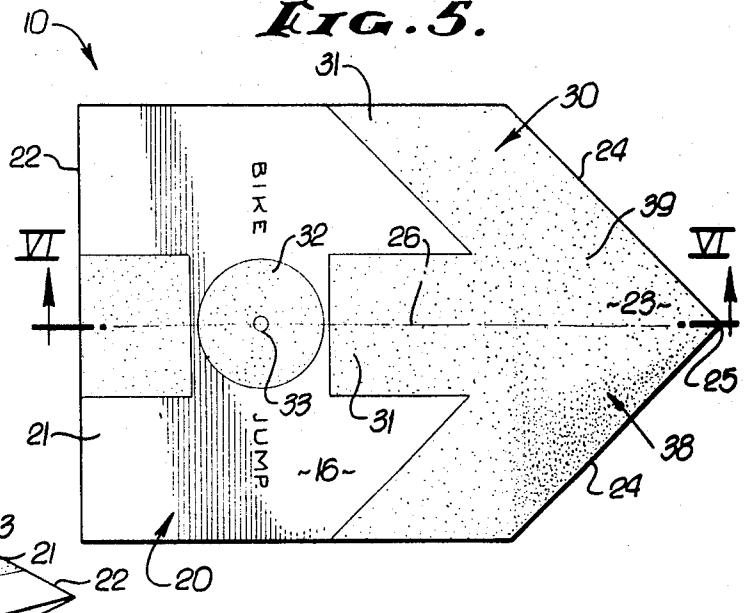


FIG. 4.

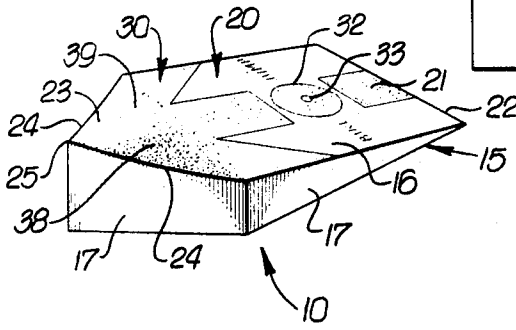


FIG. 6.

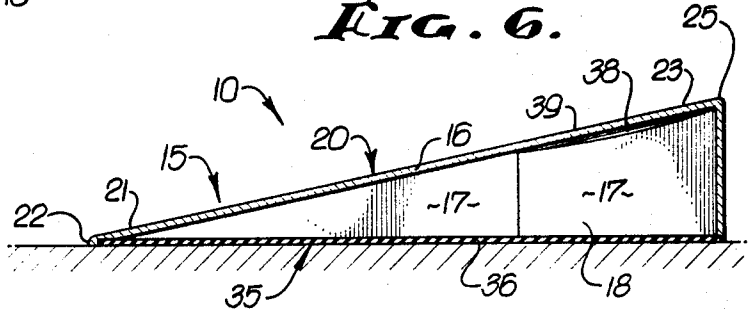


FIG. 2.

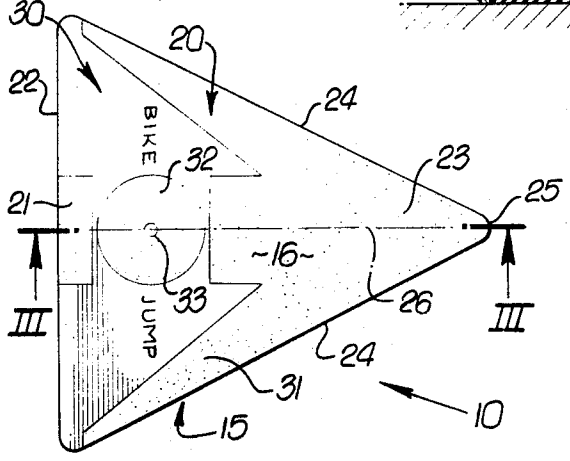


FIG. 1.

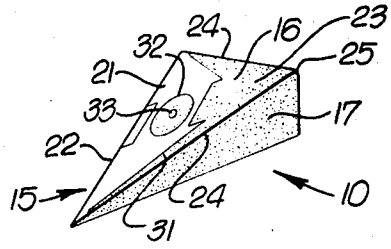
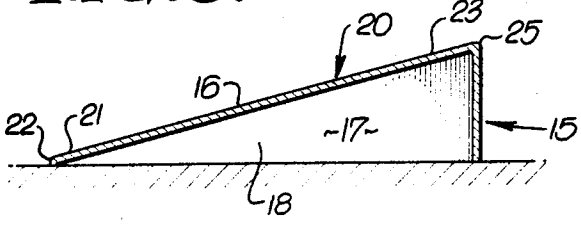


FIG. 3.



INVENTORS.
SAMUEL FRED BYNDER
MILTON I. SWIMMER
BY
Miketta, Glenny, Pons & Smith
ATTORNEYS.

BIKE JUMP

BACKGROUND OF THE INVENTION

This invention relates to vehicle jumps, and more particularly to such jumps for bicycles, motorcycles and other aligned wheel vehicles.

Cycles jumping has long been popular with the more adventurous cycle riders. Kids on their bicycles seek natural bumps in the road or raised areas such as curbs or steps to ride over with their bicycles so as to jump through the air. Motorcyclists seek the roughest terrain with the steepest banks because of the skill required and the thrill of jumping when riding over this terrain. With paved roads, the natural jumps for cycle riders have for the most part disappeared, and artificial jumps are needed for cycle jumping.

Such an artificial cycle jump could be a simple ramp with a right approach area and a wide take-off area raised above the approach area. However, such a jump requires only high speed and very little skill to obtain the greatest leap distance. Thus, the rider who travels the greatest leap distance is the fastest rider. Riders would soon tire of such a simple jump and seek a jump design that requires more skill and concentration, e.g. a jump where the line of approach as well as the speed of the cycle determines the maximum leap distance, just as it does in jumping from bumps or other natural take-off points.

Therefore, it is a primary object of this invention to provide a cycle jump requiring a proper line of approach and high speed for maximum leap distance.

Other and additional objects of this invention are to provide such a jump which may be used in flat areas whether paved or unpaved. to provide such a jump which is readily portable, to provide such a jump which will remain stationary on the generally flat area without being anchored thereto, and to provide such a jump which is economical to manufacture, simple to position, and which demonstrates the skill of the rider by imparting the greatest leap distance to the cycle which has the best approach line with the greatest speed.

BRIEF DESCRIPTION OF THE INVENTION

Generally the jump according to this invention for imparting a variable jumping height and distance to a wheel cycle moving at a selected speed thereover and includes a generally wedge shaped body having an upwardly inclined top surface with a wide lower entrance zone, and a converging jump departure zone reaching a maximum height at the optimum axis of travel thereover whereby a cycle leaving the jump departure zone at the point of convergence will achieve maximum leap distance for a selected cycle speed. The approach portion of the top surface may be quadralinear in shape, or the top surface may be triangular in shape. Visual guide marks may be provided to indicate the optimum axis of travel leading to the point of convergence of the departure zone. The body member may be hollow to provide light weight. The top surface of the body member may be inclined upwardly at a suitable angle to provide a jump which will remain stationary while the cycles pass thereover.

BRIEF DESCRIPTION OF THE DRAWINGS

FIG. **1** is a perspective view of the jump according to this invention;

FIG. **2** is an enlarged top view of the preferred embodiment of FIG. **1**;

FIG. **3** is a side cross-sectional view taken along the plane III—III of FIG. **2** showing the internal construction of the bike jump according to this invention;

FIG. **4** is a perspective view similar to FIG. **1** of an alternative preferred embodiment of the bike jump according to this invention;

FIG. **5** is an enlarged top view of the alternative preferred embodiment of the bike jump; and

FIG. **6** is a side cross-sectional view taken along the plane VI—VI of FIG. **5** showing the internal construction of the alternative preferred embodiment of FIG. **4**.

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENTS

Referring now to FIGS. **1** to **4**, the bike jump according to this invention is generally indicated by the numeral **10**. The bike jump **10** may be positioned on a surface either paved or unpaved, and may be riden over by a wheeled cycle such as a bicycle, motorcycle, or any other cycle having wheels aligned along a single longitudinal axis. The jump **10** will impart a variable jumping height and distance to the cycle moving thereover corresponding to the speed and line of approach. As the most skillful rider will have the best combination of line of approach and greatest speed, the greatest leap distance will indicate the best rider.

Generally the bike jump **10** according to this invention has a vertically wedge shaped body **15** with a top surface **20** having an entrance zone **21** and a jump departure zone **23** with a point of convergence **25** along the optimum axis of travel whereby a cycle leaving the jump departure zone at the point of convergence will achieve maximum leap distance for a selected cycle speed.

The wedge shaped body **15** has a top **16** and side **17** which define a downwardly opening cavity **18** giving a light construction to the body **15**. The sides **17** may be integrally formed with the top, or formed separately and secured thereto by conventional means. If required, suitable braces (not shown) may be provided from the side **17** to the top **16** to prevent the collapse of the top **16**.

The top **16** is provided with a smooth top surface **20** which is inclined upwardly. In practice this incline may be at a 6 inch rise for a 24 inch long top surface **20** or about 15° to the bottom of the body **15**. The lower portion of the top surface is an entrance zone **21** which commences with a transverse edge **22**. The transverse edge **22** is preferably rounded to merge smoothly with the surface on which the support rests. The upper portion of the top surface is the jump departure zone **23**. The jump departure zone **23** is defined by the upper edges **24** of the side **17** which converge inwardly and upwardly towards a point of convergence **25** along the optimum axis of travel **26**. The point of convergence **25** of the jump departure zone **23** is the maximum height of the top surface above the surface on which the body member rests. The point of convergence **25** is also the maximum distance forward that the jump **10** extends.

In order to aid the rider in determining the optimum axis of travel **26**, visual guide marks **30** are provided on the top surface **20**. In the preferred embodiment, the visual guide marks **30** have an arrowhead **31** directed towards the point of convergence **25**. As an additional aid, the visual guide marks **30** include a circle **32** with a center eye **33** located along the optimum axis of travel **26** to aid in aligning the cycle on the wedge shaped body **15**.

The bike jump **10** is shown illustratively in two overall shapes, a triangular shape in FIG. **1** through **3** and a quintazoidal shape shown in FIGS. **4–6**. The advantage of the triangular shape is its simplicity for it can be assembled from three parts cut from a flat sheet of material.

The quintazoidal shape provides more sophistication to the design and illustratively shows different variations. One of these variations is the provision of a holding means **35** in the form of a rubber strip **36** along the lower edge of the sides. This trip **36** will provide additional grip on the surface on which the jump rests, to prevent the jump from sliding forward.

Another of the variations is the provision of a compound curve **38** shown illustrated as a convex surface **39** at the forward edge of the departure zone **23**. This convex surface **39** provides a gentle ridge along the optimum axis of travel **26** which tends to direct the bike away from the optimum axis of travel **26** unless the bike is aligned therewith, thus requiring greater skill on the part of the rider to obtain the maximum leap distance.

In use, the bike jump **10** is positioned on a surface such as a paved driveway, road, etc. with the optimum axis of travel

pointing in a direction the rider wishes to jump. The riders individually ride their cycles along the driveway towards the jump to attain the highest speed possible before entering the lower entrance zone **21**. The rider trys to guide his cycle along a path which is as close to the optimum axis of travel **26** as his skill permits. The cycle passes from the entrance zone **21** to the jump departure zone **23** while the movement of the cycle is maintained as closed to the optimum axis of travel **26** as the rider's skill permits. The cycle will then leave the jump departure zone and be propelled from the body **15** into the air until gravity pulls the bike back to the driveway surface. The point at which the cycle touches the ground can be marked and measured.

If the cycle is not along the optimum axis of travel **26** as it passes over the jump **10** but on another path, for example a path of travel parallel to the optimum axis of travel **26**, the bike leaves the top surface at a point along the upper edge **24** that is lower than the point of convergence **25** and also is rearwardly of the point of convergence **25**. With such a take-off, the rider could not hope to travel as far through the air, as a rider who took off from the point of convergence, unless his speed was substantially greater. Thus the speed and actual path of travel of the cycle determine the leap distance of the cycle. Thus the skill of the rider determines the leap distance which forms an excellent basis for competition among riders.

Thus, the jump according to this invention provides a bike jump requiring a proper line of approach and high speed to obtain a maximum leap distance.

We claim:

1. A portable competition jump for imparting variable jumping height and distance to a wheeled cycle moving at a

selected speed thereover, comprising:

a generally wedge shaped body having an upwardly inclined top surface with a selected width forming a lower entrance zone at the lower portion of the top surface, a jump departure zone at the upper portion of the top surface,

the jump departure zone being defined by side edges upwardly and forwardly converging toward an optimum axis of travel of the top surface and reaching a maximum height and maximum forward extension at said axis, wherein said top surface includes visual guide marks leading to the point of convergence of the departure zone; and

whereby a cycle leaving the jump departure zone at the point of convergence of said side edges with said axis will achieve maximum forward leap distance from the point of convergence for a selected cycle speed.

2. The invention as in claim **1** wherein the top surface has an approach portion quadralinear in shape, and the jump departure zone is triangular in shape.

3. The invention as in claim **1** wherein the top surface is triangular in shape.

4. The invention as in claim **1** wherein the body member is hollow.

5. The invention as in claim **1** wherein the top surface has a compound curve over at least a portion of it.

6. The invention as in claim **1** wherein the body is provided with holding means for holding the body on a surface where positioned.

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