

UNITED STATES PATENT OFFICE

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VELOCIPEDE ACCESSORY FOR PRODUCING NOISE

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2 Claims. (Cl. 46—191)

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This invention relates to a toy to be attached to a velocipede and, more particularly, to motor-simulating noise makers to be attached to children's velocipedes, such as tricycles and bicycles, for example.

It is the object of this invention to provide a simple toy or accessory which, when vibrated by the spokes of the velocipede, produces a noise that, to the mind of a child at least, simulates the noise of a motorcycle, automobile, motor boat or airplane motor. The device thereby adds to the amusement of the child who, in his imagination, is no longer riding his velocipede but driving a motorcycle, truck, or automobile or piloting a plane or speedboat. It is an advantage of this invention that, in its preferred form, it produces a relatively low-pitched popping or roar, rather than a high-pitched rattle such as is obtained when a piece of paper or a stick is held against the spokes. Another advantage of this invention is that it may be quickly and easily mounted and demounted, but, when mounted, is securely and effectively attached to the velocipede. No journaled operating parts are required in a device made according to this invention; the vibrator element is subject to wear but may be easily replaced.

Other objects and advantages of this invention will be apparent from the following specification, claims and drawings, in which:

Fig. 1 is an elevation showing the device attached to a tricycle,

Fig. 2 is an enlarged detail cross-section taken along the line 2—2 of Fig. 1, and

Fig. 3 is a detail elevation of the device as shown in Fig. 2.

In the drawings, in which like reference characters refer to like parts, the device 10 is shown mounted on an arm of the front fork 2 of tricycle 1. As will be apparent, the device is also adapted to be similarly mounted on bicycles, draisines, or other types of velocipedes having spoked wheels. As shown in detail in Figs. 2 and 3, the device 10 comprises a clamp member 11 formed of a wide metal strap bent to an approximate U-shape to provide a straight inner leaf 12 and an outer leaf 13 curved to return toward the plane of the inner leaf 12. A plurality of pairs of holes 14 are provided in the inner leaf 12 and a corresponding set of pairs of holes 15 are provided in the front leaf 13 so that, by inserting a pair of bolts 16 in corresponding pairs of holes 14 and 15 and tightening the wing nuts 17, the outer leaf 13 may be drawn against the inner leaf 12 to securely tighten the clamp 11

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around the arm of the fork 2, the several corresponding pairs of holes 14 and 15 permitting the clamp 11 to be mounted on various sizes of fork arms. Lock washers 18 are employed, of course, to prevent the clamp 11 from becoming unloosened during use.

As best shown in Fig. 2, the sets of holes 14 and 15 are so located that the marginal end 19 of the outer leaf 13 will project beyond the end of the inner leaf 12, and the end 19 is also curved inwardly so that the tip of the end 19 is located inwardly of the leaf 12 when the two leaves 12 and 13 are drawn together.

The clamp 11 supports and grips between the leaves 12 and 13 a resilient vibrator strip 20, the strip 20 being provided at one end with pairs of holes 21 matching with the holes 14 in the inner leaf 11 and the bolts 16 passing therethrough to secure the vibrator strip mechanically in the clamp 11. The length of the strip 20 is selected so that, when the end projecting beyond the clamp 11 is bent inwardly by the tip 19, it will be struck by the spokes 4 of the wheel 3 and be snapped outwardly to the dotted line position shown in Fig. 2, thereby producing a simulated motor noise as the strip 20 is snapped by successive spokes 4.

The strip 20 may be made of various thin resilient materials having a sufficient resilience to withstand the repeated vibrations for at least a short while without permanent deformation. The suitable materials may vary from thin spring steel, at one extreme, to stiff cardboard at the other. The most satisfactory material and preferred material has been found to be plastic sheet materials such as cellulose acetate, polyvinyl, vinylidene, and similar plastic sheetings varying from 15 to 25 or 30 mils in thickness. Whereas paper, metal, and the like appear to have a coefficient of restitution such that the natural resonance of the strip produces a relatively high-pitched rattle, such plastic sheeting has a natural resonance that produces a relatively low-pitched popping at low speeds of the wheel and more or less of a loud roar at higher speeds, a noise which appears to be most satisfactory to children.

Another advantage of plastic sheeting when used for the vibrator strip 20 is that it will withstand hours of use without fatiguing or cracking and yet is soft and flexible enough so that the spokes 4 are not injured. In due course the ends of the vibrator strip 20 will wear or crack, in which event the strip may be readily replaced. To an extent the plurality of pairs of holes 21 permit the length of the strip beyond the clamp

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11 to be adjusted and thereby "tuned" somewhat. In most instances, the clamp 11 will be adequately secured to the fork 2 before the leaves 12 and 13 are brought together in the manner shown in Fig. 2; by adjusting the wing nuts 17, therefore, the tip 19 will be moved in and out and the abruptness of the angle at which the vibrator strip 20 is struck by the spokes 4 may thereby be adjusted. Further adjustments in this respect may be made by binding the tip 19.

In view of the foregoing disclosure, of a preferred embodiment of my invention, it is to be understood that it may be varied by those skilled in the art and my invention is, therefore, not limited to the embodiment disclosed but only by the following claims.

What is claimed is:

1. A noise maker for velocipedes comprising a clamping strip having two leaves disposed in superimposed relationship and extending in the same general direction, a resilient vibrator strip carried between said leaves and extending beyond the ends thereof and out of the planes thereof, means to draw said leaves together in clamping relationship with said resilient vibrator strip

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and to tighten said clamping strip about a frame member of a velocipede, and deflecting means on the end of one of said leaves to constrain the extending portion of said resilient vibrator strip out of said planes.

2. A noise maker as defined in claim 1 in which said deflection means comprises an inwardly curved tip on the end of said one of said leaves.

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