No. 644,380. Patented Feb. 27, 1900.

A. VOEGELE.

SWEEPER.

(Application filed Nov. 20, 1899.)

(No Model.)

Fig 1

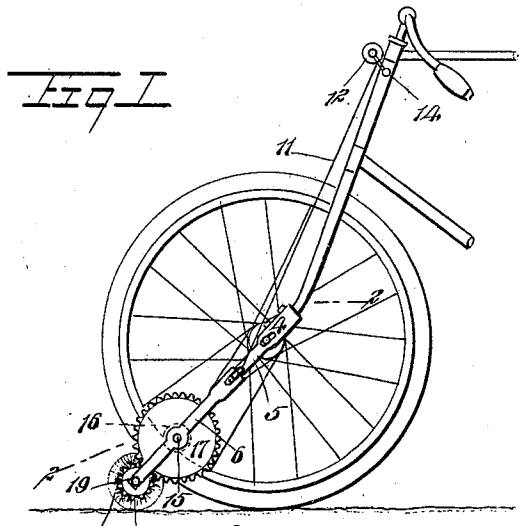


Fig 2

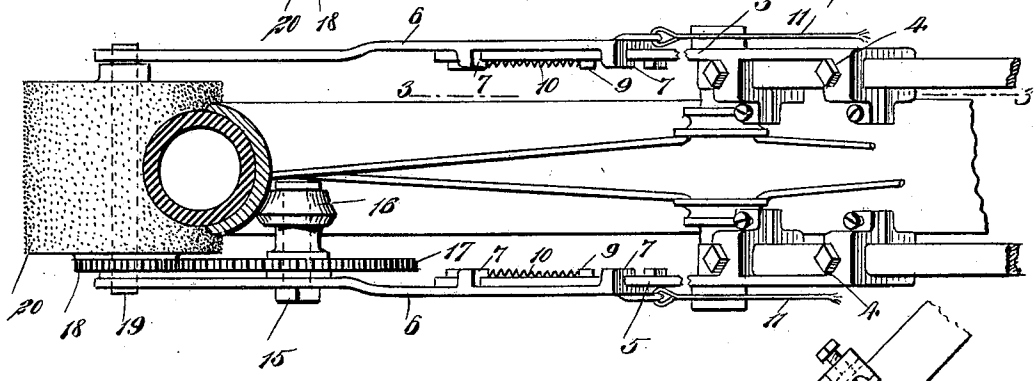
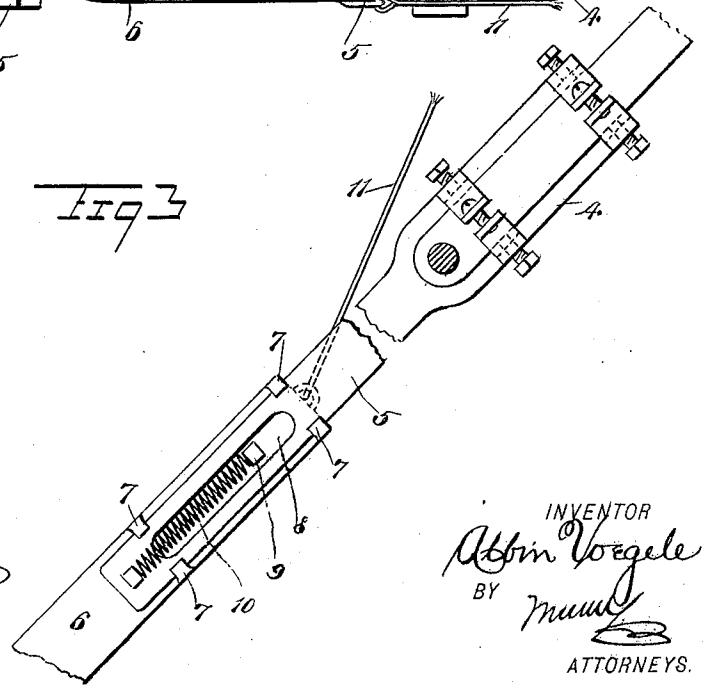


Fig 3



WITNESSES.

H. H. Walker

J. R. Downes

INVENTOR

Albin Voegele

BY

Munn & Co

ATTORNEYS.

THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

ALBIN VOEGELE, OF NEW YORK, N. Y.

SWEEPER.

SPECIFICATION forming part of Letters Patent No. 644,380, dated February 27, 1900.

Application filed November 20, 1899. Serial No. 737,665. (No model.)

To all whom it may concern:

Be it known that I, ALBIN VOEGELE, a citizen of the United States, and a resident of the city of New York, borough of Manhattan, in the county and State of New York, have invented a new and Improved Sweeper, of which the following is a full, clear, and exact description.

The purpose of this invention is to provide a sweeper adapted especially for bicycles and serving to run in front of the steering or pilot wheel to clear the road of such matter as may tend to puncture the tires or otherwise impede the progress of a cyclist.

This specification is the disclosure of one form of my invention, while the claims define the actual scope thereof.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the views.

Figure 1 is a side view of the invention applied. Fig. 2 is a plan view thereof, with parts of the bicycle indicated in section, on the line 2 2 in Fig. 1; and Fig. 3 is an enlarged side elevation showing the frame-bars which I have provided for mounting the sweeper proper.

The apparatus is attached to the steering-fork of a bicycle, and is thereby held in front of the steering-wheel in the manner indicated best in Fig. 1. The attachment is effected by two clamps 4, which are respectively connected with the arms of the steering-fork and fastened rigidly thereto above the axis of the front wheel. The clamps may be adjusted to change the relation of the brush with respect to the bicycle-fork. With respect to this arrangement it will be seen that should the periphery of the brush wear away the frame-bars may be adjusted to move the brush in an arc, thus causing it to be properly disposed with respect to the ground. This adjustment is effected by the clamps 4, as will be understood. These clamps 4 have extensions 5, which with the sections 6 form the frame-bars for supporting the working parts of the device. The sections 6 of the frame-bars have inturned lugs 7, between which and the main portions of the bars the lower ends of the extensions 5 are slidably fitted, such extensions 5 having each a longitudinally-elongated slot 8 therein, in each of which fits a pin 9, formed on the corresponding section 6.

A spiral spring 10 is provided for each frame-bar, the springs being respectively attached to the pins 9 and to the lower extremities of the extensions 5 of the clamps 4. The effect of these springs is to throw the sections 6 of the frame-bars downward to the position shown in Figs. 1 and 2. For the purpose of raising the sections 6 against the springs 10 I have provided two cords or like connections 11, which extend upward to the steering-head and are wound on a small drum 12, provided with a crank 14, facilitating its manipulation. By winding the drum 12 and drawing up the cords 11 it is clear that the sections 6 may be caused to slide on the sections 5, thus raising the sweeper-brush.

The left-hand frame-bar is provided at its section 6 with a shaft 15, on which is loosely mounted a friction-wheel 16, the friction-wheel being disposed to run on the rim of the steering-wheel of the bicycle at one side of the spokes thereof, as best shown in Fig. 2, it being understood that when the sections 6 of the frame-bars are extended to their operative position this engagement between the friction-wheel 16 and the steering-wheel of the bicycle takes place, and when the sections 6 of the frame-bars are raised the friction-wheel 16 is disengaged from the bicycle-wheel. Fastened to and turning with the friction-wheel 16 is a spur-gear 17, which meshes with a pinion 18, fastened to the hub of a circular brush 20. The axle 19 of the brush 20 is mounted fast in the lower extremities of the frame-bars in front of the wheel, as shown, the brush turning loosely on the hub. When the bicycle is driven so that the steering-wheel thereof turns, this wheel imparts movement to the friction-wheel 16, and through the gears 17 and 18 the brush 20 is driven. The parts are so adjusted that when the brush 20 is engaged with the ground, as shown in Fig. 1, the friction-wheel 16 will be engaged with the rim of the bicycle-wheel, and when the brush 20 is raised from the ground to inactive position the friction-wheel 16 is out of contact with the bicycle-wheel. By means of this arrangement I am enabled to effectively sweep the path ahead of a bicycle and to clear it of all light obstructions, especially those which

might tend to puncture the tire of the bicycle-wheel. If desired, the apparatus may be raised to inactive position. The parts are constructed sufficiently light to prevent their becoming an appreciable burden to the wheelman.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

1. A sweeper for vehicle-wheels, comprising a frame, a brush mounted thereon, and a friction-wheel mounted on the frame to engage the inner surface of the rim of the vehicle-wheel and frictionally driven thereby and connected with the brush, to drive the same.

2. A sweeper for vehicles, the sweeper comprising a frame mounted on the vehicle and having movable sections, a brush mounted on the movable sections, a friction-wheel also mounted on one of the movable sections and connected with the brush to drive the same, the friction-wheel being adapted to engage the inner side of the rim of one of the bicycle-wheels, to be driven thereby, and means for moving said movable sections of the frame to engage and disengage said friction-wheel and its driving member.

3. A sweeper for bicycles, the sweeper comprising clamps adapted to be attached to the bicycle-frame, frame-bars carried by the clamps and formed in slidable sections, means for sliding the sections for the purpose described, a brush carried by the outer frame-bars, and a friction-wheel also carried by the outer frame-bars and geared with the brush to drive the same, the friction-wheel being adapted to be engaged with the bicycle-wheel and to be driven thereby.

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

ALBIN VOEGELE.

Witnesses:
I. B. OWENS,
JNO. M. RITTER.