No. 717,341. Patented Dec. 30, 1902.

J. B. CAHOON.

BICYCLE TIRE CLEANER.

(Application filed Feb. 28, 1901.)

(No Model.)

Fig. 1.

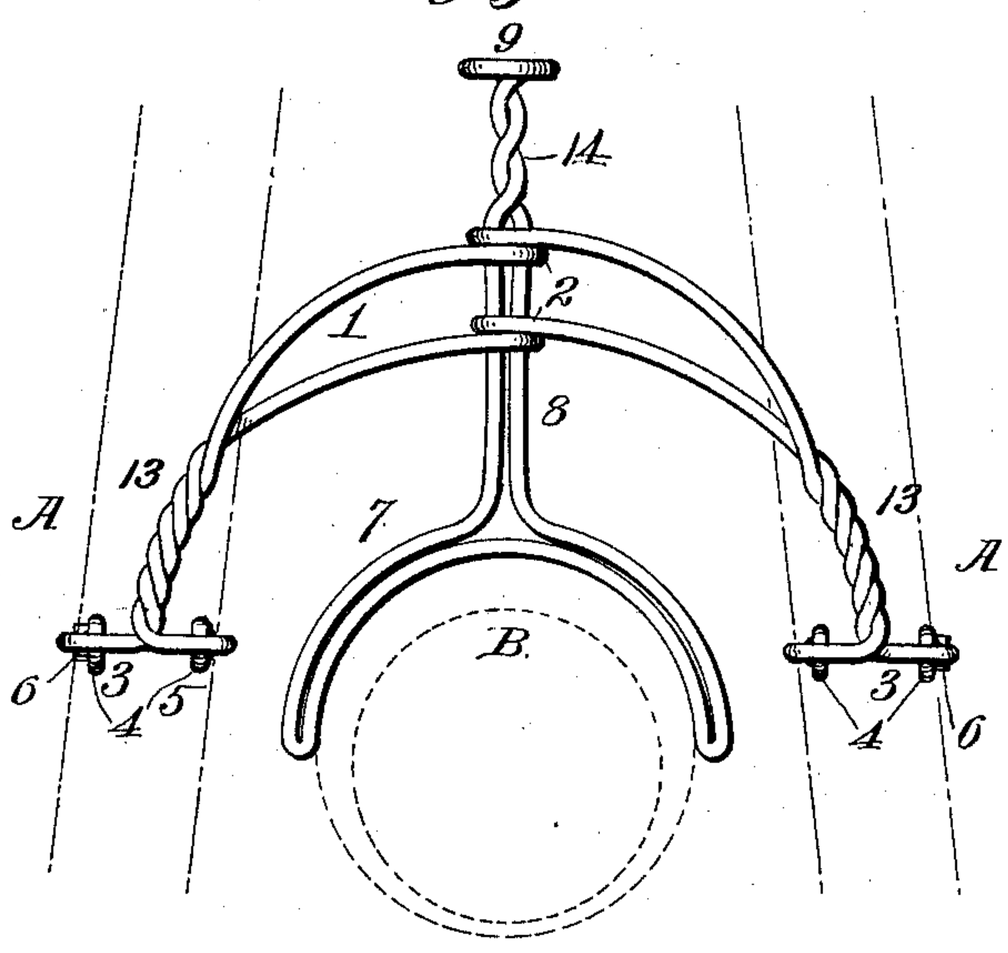


Fig. 2.

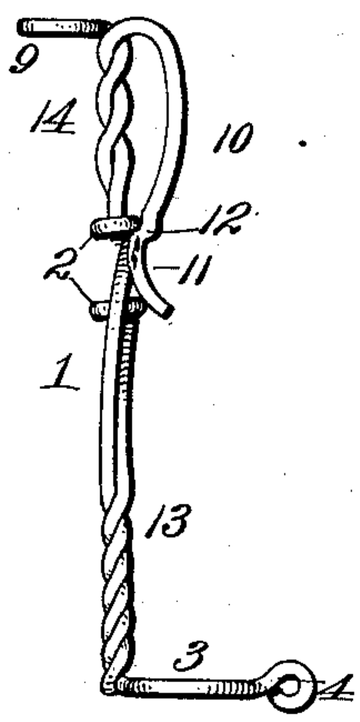


Fig. 3.

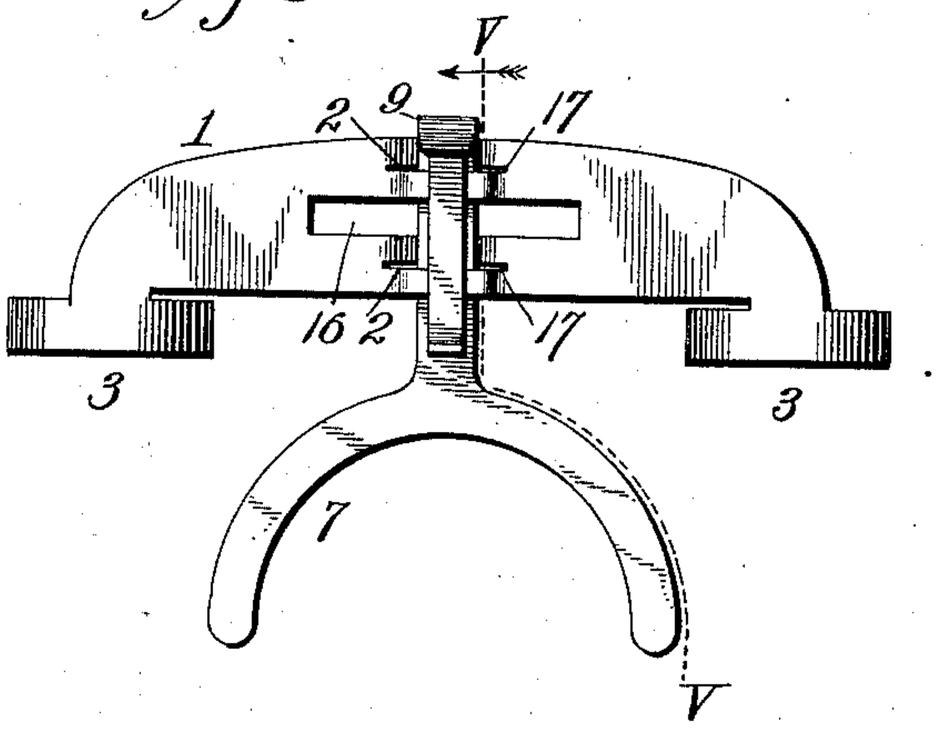


Fig. 5.

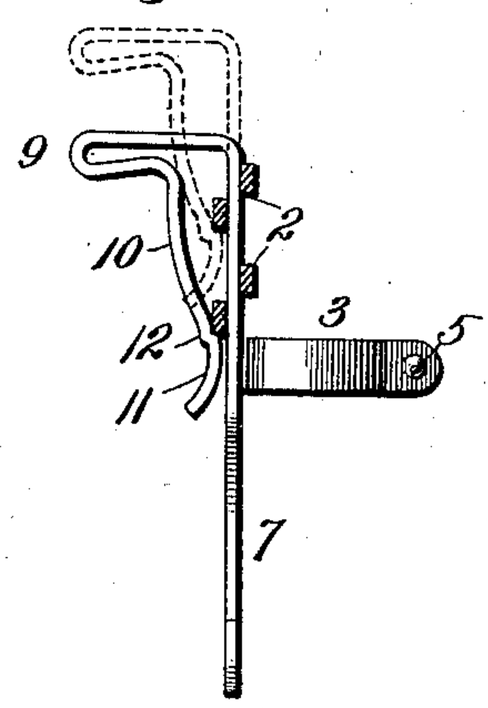
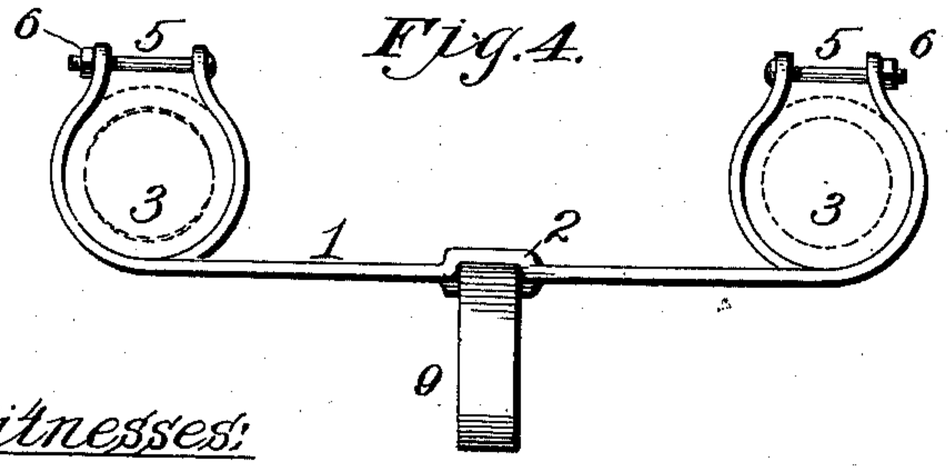


Fig. 4.



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UNITED STATES PATENT OFFICE.

JAMES B. CAHOON, OF KANSAS CITY, MISSOURI.

BICYCLE-TIRE CLEANER.

SPECIFICATION forming part of Letters Patent No. 717,341, dated December 30, 1902.

Application filed February 28, 1901. Serial No. 49,206. (No model.)

To all whom it may concern:

Be it known that I, JAMES B. CAHOON, a citizen of the United States, residing at Kansas City, in the county of Jackson and State of Missouri, have invented a new and useful Bicycle-Tire Cleaner, of which the following is a specification.

My invention relates to bicycle-tire cleaners, and has for its object to produce a device of this character applicable to all styles of the "safety-bicycle," which operates efficiently and can be placed on or removed from the bicycle-frame very quickly.

A further object is to produce a device of this character which adds but little to the weight of the bicycle and which is of neat and attractive appearance.

A still further object is the provision of a tire-cleaner which is of simple, strong, durable, and cheap construction.

With these objects in view the invention consists in certain novel and peculiar features of construction and combinations of parts, as hereinafter described and claimed, and in order that it may be fully understood reference is to be had to the accompanying drawings, in which—

Figure 1 represents an elevation of one form of my cleaner as viewed from the rear of a bicycle. Fig. 2 is an edge view of the same. Fig. 3 is a face view of a slightly-different form of the cleaner. Fig. 4 is a top view of the same. Fig. 5 is a vertical section of the same, taken on the line V V of Fig. 3.

Referring to the drawings in detail, where like reference-numerals designate corresponding parts, 1 designates the bridge or body portion of the cleaner, provided centrally with a pair of vertically-alined loops 2 and terminating at its ends in the approximately horizontal spring-clasps 3, the ends of the clasps being provided with openings 4 to receive bolts 5, clamping-nuts 6 engaging said bolts for the purpose of securing said clasps rigidly upon the front or rear forks A, as the case may be, of the bicycle, with the bridge or body portion contiguous to the tire B of the adjacent wheel.

7 designates a semicircular scraper of spring metal adapted to snugly embrace the tread-surface of the tire and provided with a stem or shank 8, extending slidingly through the vertically-alined loops 2 and provided at its upper end with a handle 9, projecting approximately at right angles therefrom.

10 designates a spring-arm united integrally, as shown, or otherwise to the handle 9 and terminating at its free end in a cam 11 and provided with an upwardly-disposed shoulder 12 at the upper end of the cam.

In Figs. 1 and 2 the cleaner is shown as constructed of three pieces of spring-wire, the body portion consisting of two wires arched so as to outline an inverted crescent and twisted tightly together from the points of the crescent, as shown at 13, the contiguous ends of the opposite wires being then bent horizontally to form the arms of the clasps 3 and the openings 4 of said clasps, each wire being convoluted centrally, as shown, to provide the loops 2. The scraper is composed of the third piece of wire, the same nearer one end than the other being bent to semicircular form and from the ends of said semicircle brought back thereon to a point near its middle, from which point the arms of the wire extend and diverge gradually upward by preference. These upwardly-extending portions extend through the loops 2 and are then twisted tightly together, as shown at 14, the short arm being bent horizontally to form the handle 9 and the long arm to form the spring-arm 10, as described.

Figs. 3, 4, and 5 show the body portion 1 as composed of sheet metal, the loops 2 being produced by cutting a slot 16 therein and parallel slits 17 above and below said slot and pressing the parts above and below said slits in opposite directions in a well-known manner. The scraper is also composed of sheet metal.

In practice, assuming that either of the structures described is secured upon the fork of the bicycle, it will be apparent that when the rider wishes to scrape accumulated mud from his tire it is only necessary for him after dismounting to press downward on handle 9, and thereby cause the spring-arm 10 to yield and permit the scraper to assume the position shown in Figs. 1, 3, and 4—that is, with the scraper 7 snugly embracing the tire of the wheel. The rider then spins said wheel, the result being the accumulated mud is almost instantly scraped therefrom, and in this con-

nection it will be noticed that the friction of the wheel against the scraper will not result in forcing the latter upward to its inoperative position, because such pressure is applied in a lateral direction; but as a precaution against the scraper being slid upward to its inoperative position the shoulder 12 is provided, the same bearing squarely against the under side of the bridge or body portion.

When it is desired to raise the scraper, the operator easily disengages the shoulder from the bridge or body portion by springing the handle upward, with its point of junction with the upper end of the stem as the axis of movement.

When the scraper occupies its inoperative position, which it should always do when the bicycle is in motion, the spring-arm 10 holds its cam 11 pressed tightly between the slots or loops 2, the power of said arm being sufficient to prevent the weight of the scraper from forcing said cam from between said loops and sliding downward into engagement with the tire. As an additional precaution against the scraper working downward the branches or arms of the stem of Fig. 1 diverge upwardly and by pressure outwardly against the ends of the slots eliminate all possibility of the scraper sliding downward accidentally.

From the above description it will be apparent that I have produced a tire-cleaner for bicycles which embodies the features of advantage enumerated as desirable in the statement of invention and which is obviously susceptible of modifications in various particulars without departing from the spirit and scope or sacrificing any of the advantages of the invention.

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

1. A bicycle-tire cleaner, consisting of a body portion bridging the space between the forks of a bicycle, and secured at its ends to said forks, and provided with a plurality of guide-loops, disposed in alinement with each other, and substantially in alinement with the center of the contiguous wheel, and a scraper having a substantially semicircular portion engaging the periphery of said wheel and a stem fitted slidingly and non-rotatably in said loops in order that the scraper may be withdrawn from engagement with the wheel, said scraper and stem being of integral construction, substantially as described.

2. A bicycle-tire cleaner, consisting of a body portion bridging the space between the forks of a bicycle, and provided at its ends with spring-clasps, embracing said forks, and screws and clamping-nuts to clamp said clasps rigidly in such position, and provided also with a plurality of guide-loops disposed in alinement with each other and substantially in alinement with the center of the contiguous wheel, and a scraper having a substantially semicircular portion adapted to engage the periphery of the wheel when the bicycle is not being ridden, and a stem fitting slidingly and non-rotatably in said loops, said scraper and stem being of integral construction, substantially as described.

3. A bicycle-tire cleaner, comprising a body portion, consisting of two wires twisted together near their front ends, and bent at the latter point to form spring-clasps, and midway between said twisted portions to form alined loops, screws and clamping-nuts engaging the ends of said clasps to clamp them rigidly upon the forks of the bicycle, and a reciprocatory scraper consisting of a single piece of spring-wire bent to form a semicircular body portion to snugly engage the tread-surface of the tire, a stem consisting of a pair of approximately parallel arms slidingly and non-rotatably engaging said loops, a handle at its upper end and a twisted portion between said arms and said handle, substantially as described.

In testimony whereof I affix my signature in the presence of two witnesses.

JAMES B. CAHOON.

Witnesses:
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G. Y. THORPE.