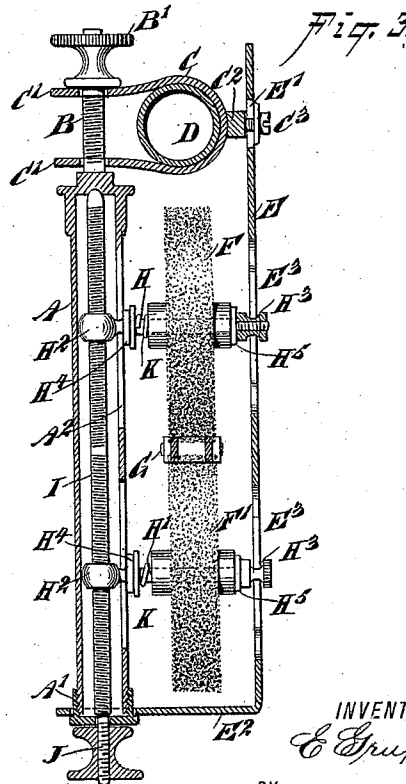
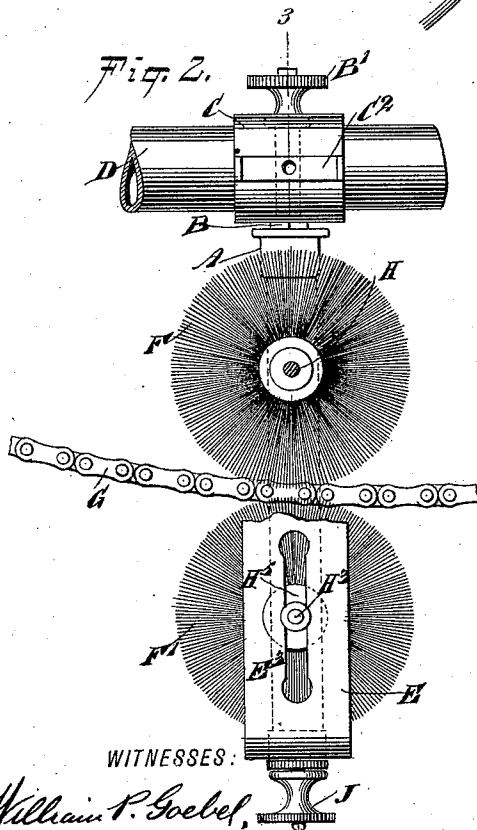
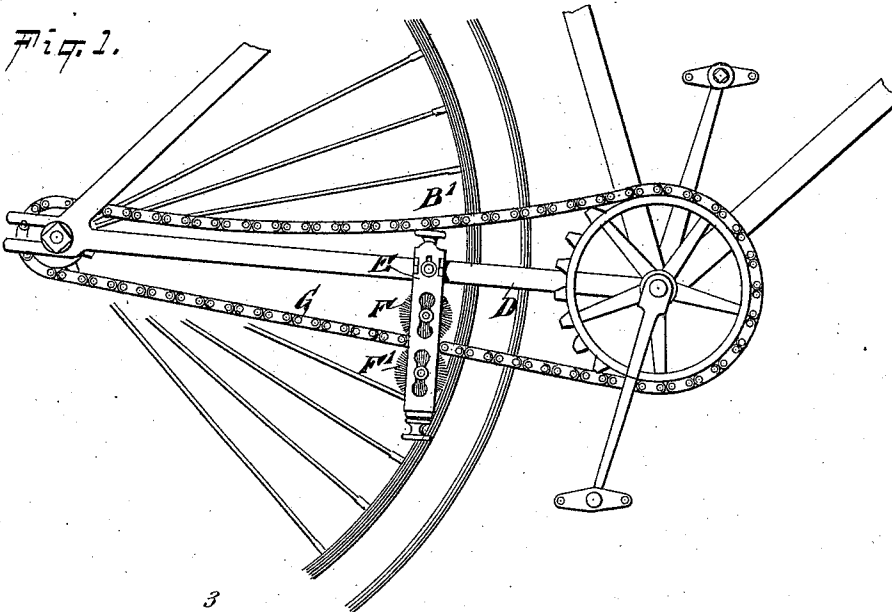


(No Model.)

E. GRUPELLI.  
BICYCLE CHAIN CLEANER.

No. 575,520.

Patented Jan. 19, 1897.



WITNESSES:

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BY

Attorneys.

# UNITED STATES PATENT OFFICE.

ENEY GRUPELLI, OF NEW YORK, N. Y., ASSIGNOR OF ONE-HALF TO  
PASQUALE NARDI, OF SAME PLACE.

## BICYCLE-CHAIN CLEANER.

SPECIFICATION forming part of Letters Patent No. 575,520, dated January 19, 1897.

Application filed April 11, 1896. Serial No. 587,174. (No model.)

*To all whom it may concern:*

Be it known that I, ENEY GRUPELLI, a subject of the King of Italy, at present residing in New York city, in the county and State of New York, have invented a new and Improved Bicycle-Chain Cleaner, of which the following is a full, clear, and exact description.

The object of the invention is to provide a new and improved bicycle-chain cleaner which is simple and durable in construction, very effective in operation, and arranged for conveniently attaching it to or detaching it from the bicycle-frame.

The invention consists principally of two revoluble brushes journaled in a frame adapted to be secured to a part of the bicycle-frame, and between which brushes passes one run of the bicycle-chain to be cleaned.

The invention also consists of certain parts and details and combinations of the same, as will be fully described hereinafter and then pointed out in the claims.

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 figures.

Figure 1 is a side elevation of the improvement as applied. Fig. 2 is an enlarged side elevation of the same with part broken out, and Fig. 3 is a transverse section of the same on the line 3 3 of Fig. 2.

The improved cleaning device is provided with a vertically-disposed tube A, formed at its lower end with a removable cap A' and carrying at its upper end a screw-rod B, engaged loosely by the arms C' of a clip C, adapted to engage the lower rear brace D of the bicycle-frame, the said arms C' of the clip being moved toward each other by a nut B', screwing on the screw-rod B, so as to cause the clip C to firmly engage the brace D. On the front of the clip C is formed a guideway C<sup>2</sup>, engaged by a plate E, extending vertically and parallel to the tube A and forming with the latter the frame for the bicycle-cleaner. The plate E is held in place on the guideway C<sup>2</sup> by a screw C<sup>3</sup>, engaging the guideway C<sup>2</sup> and passing through an elongated slot E' in the plate E to permit of adjusting the latter vertically, if desired.

Between the plate E and the tube A extend

two revoluble brushes F F', located one directly above the other and between which passes the run of the bicycle-chain G, so that when the bicycle is in motion said run is acted on by the two brushes F F', which in revolving clean the chain of any impurities adhering thereto, such as dust and the like.

The two revoluble brushes F F' are arranged for adjustment toward and from each other, so as to engage the bicycle-chain with more or less force, according to the condition of the chain. For this purpose the brushes are journaled on transversely-extending shafts H H', respectively, each extending with its inner end through a slot A<sup>2</sup>, formed in the tube A, with the extreme inner end of each shaft formed into a nut H<sup>2</sup>, screwing on a screw-rod I, mounted to turn in bearings in the upper end of the tube A and the cap A'. A screw-rod I is formed with right-hand and left-hand threads for the two nuts H<sup>2</sup>, so that on turning the screw-rod I by the knob J the two nuts H<sup>2</sup> are moved toward and from each other, according to the direction in which the knob J is turned. Thus the two brushes F and F' can be moved toward or from each other by the operator simply turning the knob J.

The outer reduced ends H<sup>3</sup> of the shafts H H' are fitted to slide in slots E<sup>3</sup>, formed in the plate E, so as to give a proper bearing for the shafts at their outer ends.

In order to prevent the brushes from rotating too loosely on their shafts, I provide springs K, coiled on the shafts H H' and pressing the outer end of the hub of each brush against a collar H<sup>5</sup> on the shaft, the inner end of the spring resting on a similar collar H<sup>4</sup>, likewise held on the shafts.

Now it will be seen that by the arrangement described the device may be readily attached to a part of the bicycle-frame, it being understood that by unscrewing the screw C<sup>3</sup> and the nut B', I am enabled to separate the clip C from the rest of the machine and attach the said clip to the rear brace D, and I again slip the other parts of the cleaning device in place on the clip to hold the entire machine in position, it being also understood that in order to pass the run of the chain between the wheels it is necessary to remove the front plate E temporarily until the chain

is between the brushes. The whole device is very simple and durable in construction, can be cheaply manufactured and readily applied or removed from the bicycle.

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

1. A bicycle-chain cleaner, comprising a main frame made in parts and provided with  
10 a clip adapted to engage a part of the bicycle-frame, a right-hand and left-hand screw-rod journaled in the said main frame, shafts provided with nuts engaging said screw-rods, and  
15 revoluble brushes journaled on said shafts and between which is adapted to pass the bicycle-chain, substantially as shown and described.

2. The combination with a frame having a tube and guide-plate arranged parallel with  
20 each other and having slots therein, of two shafts extending across from the plate to the tube and movable in the slots thereof, a differentially-threaded rod running longitudinally through the tube and extending outside  
25 of the same, a nut connected to each shaft and through which nuts the rod is passed, and a brush mounted on each shaft, the brushes being arranged to have a chain passed  
30 substantially as described.

3. A chain-cleaning device having a clip,

a tube having one end removably connected to the clip, the tube extending downward from the clip and having longitudinal slots in its side, a bent plate having its upper end  
35 removably connected to the clip and having its bent lower portion connected to the tube, the plate having slots corresponding to the slots in the tube, two shafts mounted in the slots and extending across from the plate to  
40 the tube, a nut carried by each shaft and located within the tube, a threaded rod running longitudinally through the tube and mounted revolubly therein, the threaded rod passing through the nuts whereby to adjust  
45 the shaft, and a brush carried by each shaft, substantially as described.

4. A chain-cleaning device having a clip, a tube removably connected to and extending  
50 downward from the clip, a threaded rod running longitudinally through the tube, a plate removably connected to the clip at one end of the plate and having its remaining end connected to the tube, and two brushes  
55 mounted between the plate and tube and having nuts running on the threaded rod whereby the brushes may be adjusted, substantially as described.

ENEY GRUPELLI.

Witnesses:

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