(No Model.)

D. P. THOMSON.

CHAIN PROTECTOR FOR BICYCLES.

No. 593,254. Patented Nov. 9, 1897.

FIG. 1.

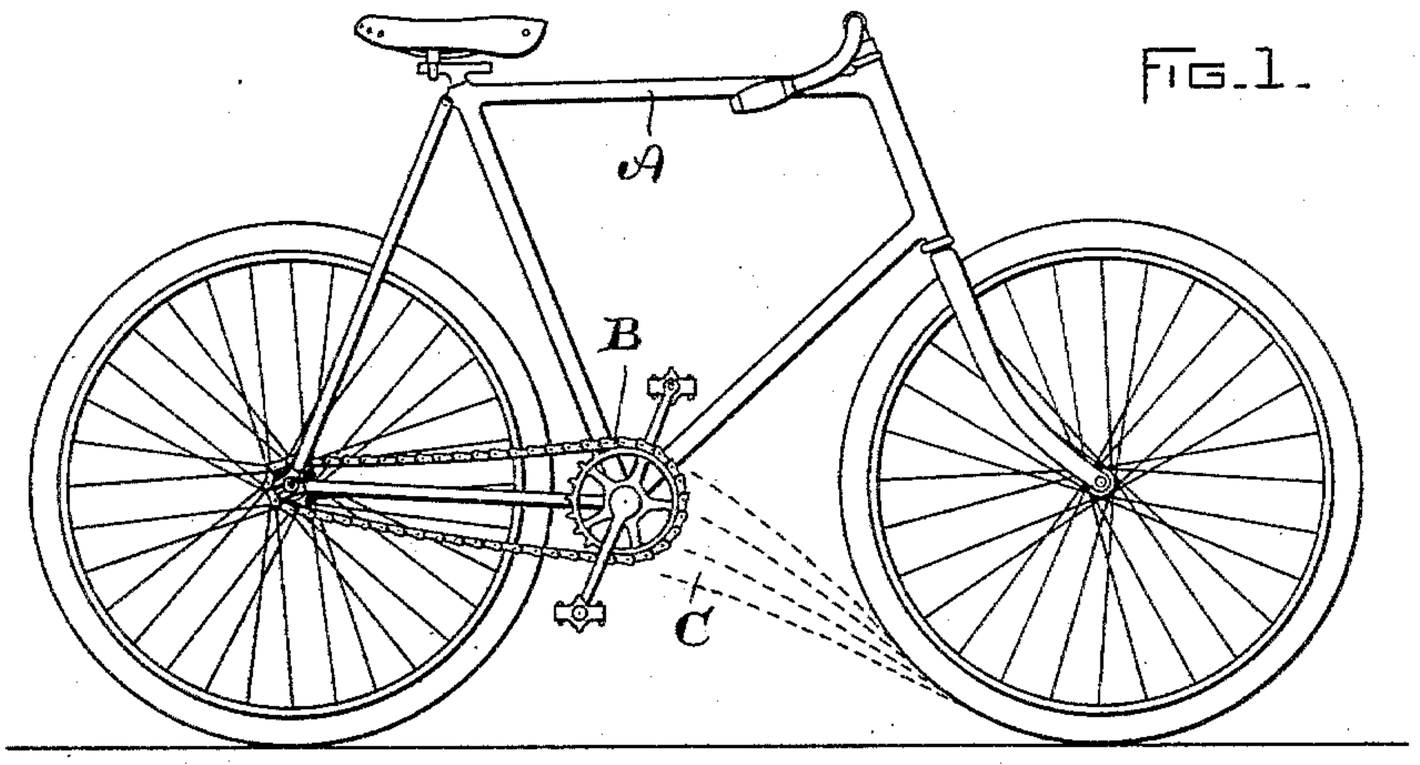


FIG. 2.

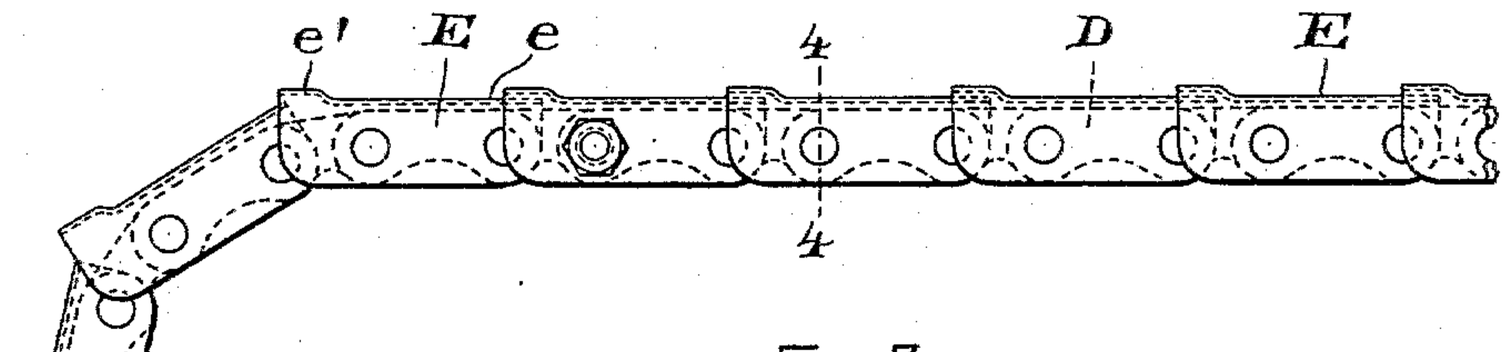


FIG. 3.

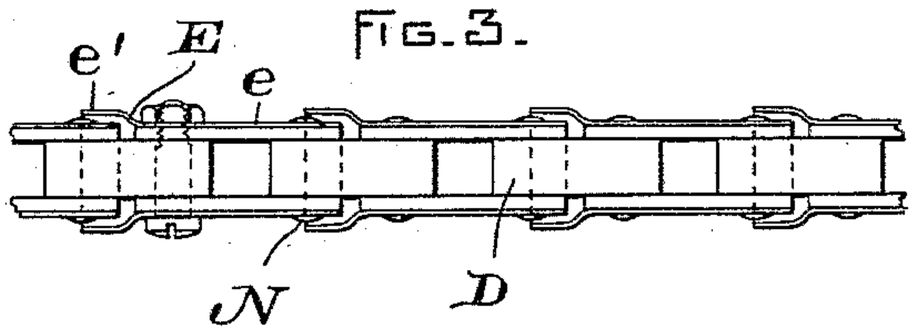


FIG. 4.

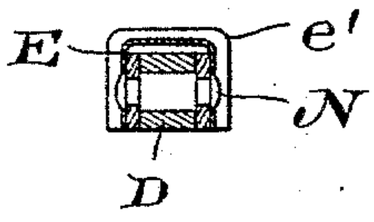


FIG. 5.

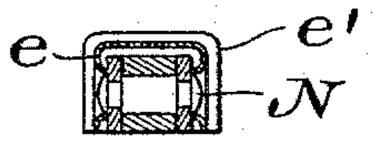
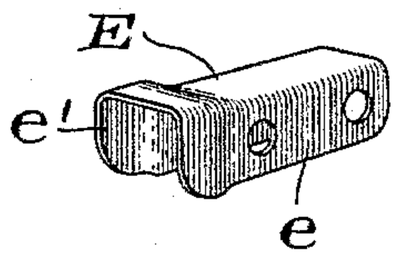


FIG. 6.



WITNESSES.

A. H. Abell.

A. F. Macdonald.

INVENTOR.

David P. Thomson, by

S. J. Johnston.

atty.

UNITED STATES PATENT OFFICE.

DAVID P. THOMSON, OF SCHENECTADY, NEW YORK.

CHAIN-PROTECTOR FOR BICYCLES.

SPECIFICATION forming part of Letters Patent No. 593,254, dated November 9, 1897.

Application filed November 2, 1895. Serial No. 567,691. (No model.)

To all whom it may concern:

Be it known that I, DAVID P. THOMSON, a citizen of the United States, residing at Schenectady, in the county of Schenectady, State of New York, have invented certain new and useful Improvements in Chain-Protectors for Bicycles, of which the following is a specification.

My invention relates to devices for protecting the chains of safety-bicycles or other sprocket-chains, and has for its object to provide a cheap and simple device which may be readily applied to exclude dirt, preventing the unnecessary wear of the chain and sprocket and increasing the efficiency of the lubrication and the length of time during which the machine may be run without cleaning the chain.

To the ends pointed out I construct a flexible or "scale" construction, as it may be called, composed of separate coverings so arranged that they may be slipped on over the links and will be held in place by any desired means. I may and prefer to make this of thin sheet metal. The joints should be so arranged that the different scales will not touch and thus increase the friction of the machine.

The accompanying drawings show my invention, Figure 1 being a bicycle to which the chain is applied; Fig. 2, an enlarged view showing a side elevation of a protector. Fig. 3 is an inverted plan view. Figs. 4 and 5 are detail views in section, and Fig. 6 a perspective view of the scales employed.

A is the bicycle, B the protector, and D the chain. The dotted lines C represent the course which the dirt ordinarily takes when thrown from the front wheel. Some part of the dirt also falls from the top of the rear wheel and is carried over.

Fig. 2 shows, in enlarged form, the device which I have invented for overcoming the trouble. It consists of scales or plates like that shown in Fig. 6, each of which may be slipped over one of the links of the chain.

Fig. 3 is an inverted plan view showing the chain with the protecting device in place. The scales I have respectively marked E, and they consist of narrow portions *e*, embracing the body of the link, and wider portions *e'*, which project from one link to the adjacent one, the narrower portions of one of the scales fitting under the wider portion *e'* of the next adjacent one. The construction is indicated in Figs. 4 and 5.

In Fig. 6 I have shown one of the scales separate.

I have found that the scales of modern safety-bicycles are all of the same pitch, or so nearly so as to render it possible to apply a single form of the device to all machines with which I am acquainted. It may be manufactured and sold at small cost and may be readily applied without skilled labor.

What I claim as new, and desire to secure by Letters Patent of the United States, is—

1. A chain-protector composed of separate scales or protecting devices applied to each link of the chain and traveling with it.

2. A chain-protector comprising scales or protecting devices applied to each link of the chain, each of the scales having a narrow or body portion covering the link, and a broader or enlarged portion lapping over the next scale.

3. As a new article of manufacture, a scale to be applied to a sprocket-chain, composed of sheet metal, having an enlarged portion and a narrower or body portion.

In witness whereof I have hereunto set my hand this 1st day of November, 1895.

DAVID P. THOMSON.

Witnesses:

E. W. CADY,

B. B. HULL.