

(No Model.)

G. T. RIBYN.
SPROCKET CHAIN.

No. 542,686.

Patented July 16, 1895.

Fig. 1.

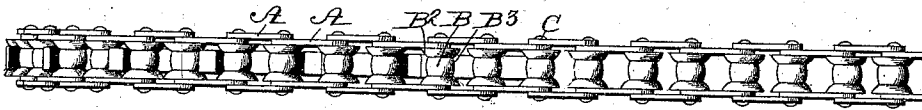


Fig. 2.

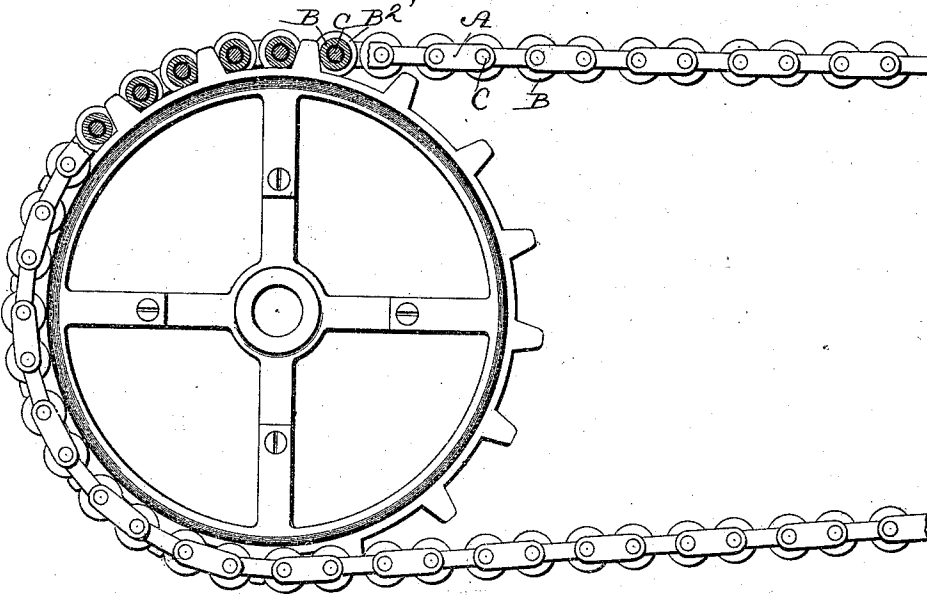


Fig. 3.

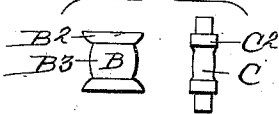


Fig. 4.

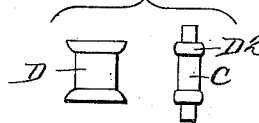
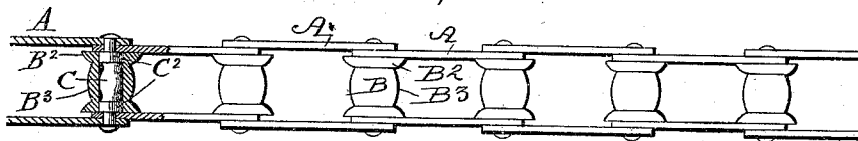


Fig. 5.



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UNITED STATES PATENT OFFICE.

GEORGE T. RIBYN, OF KEOKUK, IOWA.

SPROCKET-CHAIN.

SPECIFICATION forming part of Letters Patent No. 542,686, dated July 16, 1895.

Application filed February 18, 1895. Serial No. 538,886. (No model.)

To all whom it may concern:

Be it known that I, GEORGE T. RIBYN, a citizen of the United States of America, residing at Keokuk, in the county of Lee and State of Iowa, have invented an Improved Sprocket-Chain, of which the following is a specification.

The object of this invention is to provide a simple, strong, and durable chain adapted to automatically ride on the center of the sprocket-wheels, so that as wear of the links or sprocket-teeth takes place the chain cannot wear more on one side than the other.

A further object is to provide a chain in which the contact-surfaces will be as small as possible, to provide an oil-chamber around each journal, and to prevent binding of the rollers on the journals when said journals have become slightly bent on account of excessive strains.

My invention consists in details in the construction of the rollers and journals therefor, as hereinafter set forth, pointed out in my claims, and illustrated in the accompanying drawings, in which—

Figure 1 is a top or plan view of a section of the chain on a sprocket-wheel. Fig. 2 is a vertical sectional view of the same. Fig. 3 is a detail view showing one form of roller and journal. Fig. 4 is a like view of a modification, and Fig. 5 shows a section of chain in which only one roller is adapted to enter between two sprocket-teeth.

Referring to the accompanying drawings, the reference-letter A is used to indicate the links, which are of common form.

B indicates the rollers, of which two are placed close together and adapted to pass between two sprocket-teeth. The surfaces of these rollers are provided with the outwardly-inclined flanges B² and the rounded surfaces B³ at their central portions.

C indicate the journals, composed of straight bars having two annular projections C² at opposite sides of its central portion adapted to engage the interior of the roller. These parts are assembled by passing the journals through the links and rollers, and then riveting the ends thereof.

It is obvious that a chain constructed as above on being passed over a sprocket-wheel

will be held to the central portion of the sprocket-wheel by the inclined flanges B² engaging the edges of the sprocket-teeth. Thus the links are prevented from engaging the sprocket-teeth and all of the wear and friction brought upon the rollers. It is obvious further that the rounded central portion of the rollers will engage the central part of the sprocket-wheel and teeth, so that dust, sand, hardened oil, or other foreign substances coming between the rollers and sprockets may be pressed to one side and the contacting-surfaces of the central portion B³ and flanges B² kept clean and bright.

By forming the annular projections C² on the journals C an annular space is formed between the central portion of the journal and the interior of the roller in which a quantity of oil may be retained to supply oil to the contacting-surface of said projections and said roller.

In the modified forms shown in Fig. 4 the roller D is provided with the outwardly-projecting flanges on its ends and the central portion made cylindrical. The journal has rounded enlargements D² on opposite sides of its center instead of the annular projections in the other form. By this arrangement the roller will be permitted to freely rotate even through the central portion of the journal should become bent.

In the modified form of chain shown in Fig. 5, the rollers are separated, so that only one roller enters between two teeth.

Having thus described my invention, what I claim as new therein, and desire to secure by Letters Patent of the United States therefor, is—

1. The combination in a sprocket chain of suitable journal pins having annular enlargements on opposite sides of their central portions, rollers having smooth bored openings therein of the same diameter as said enlargements throughout their entire length, to admit said journal-pins, and links on the ends of the pins, substantially as set forth.

2. In an improved sprocket chain, the combination with suitable links and rollers mounted on said links, of journals extended through the links and rollers and having rounded annular enlargements on opposite

sides of their central portions, for the purposes stated.

3. An improved sprocket chain comprising
suitable links, journals for connecting them
5 having rounded annular projections on opposite sides of their central portions, rollers mounted thereon having outwardly project-

ing flanges at their ends and rounded central portions and arranged in pairs, substantially as and for the purposes stated.

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