

No. 847,983.

PATENTED MAR. 19, 1907.

R. W. DULL.  
SPROCKET CHAIN.  
APPLICATION FILED JAN. 16, 1907.

Fig. 1.

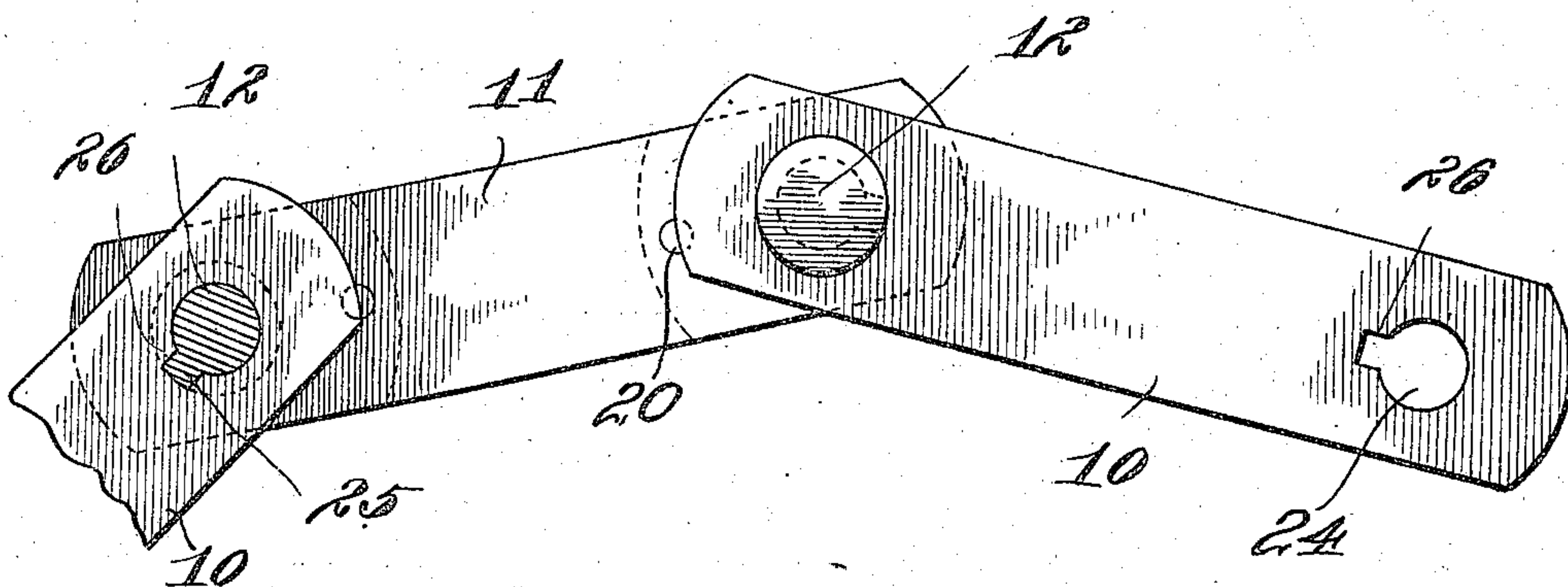


Fig. 2.

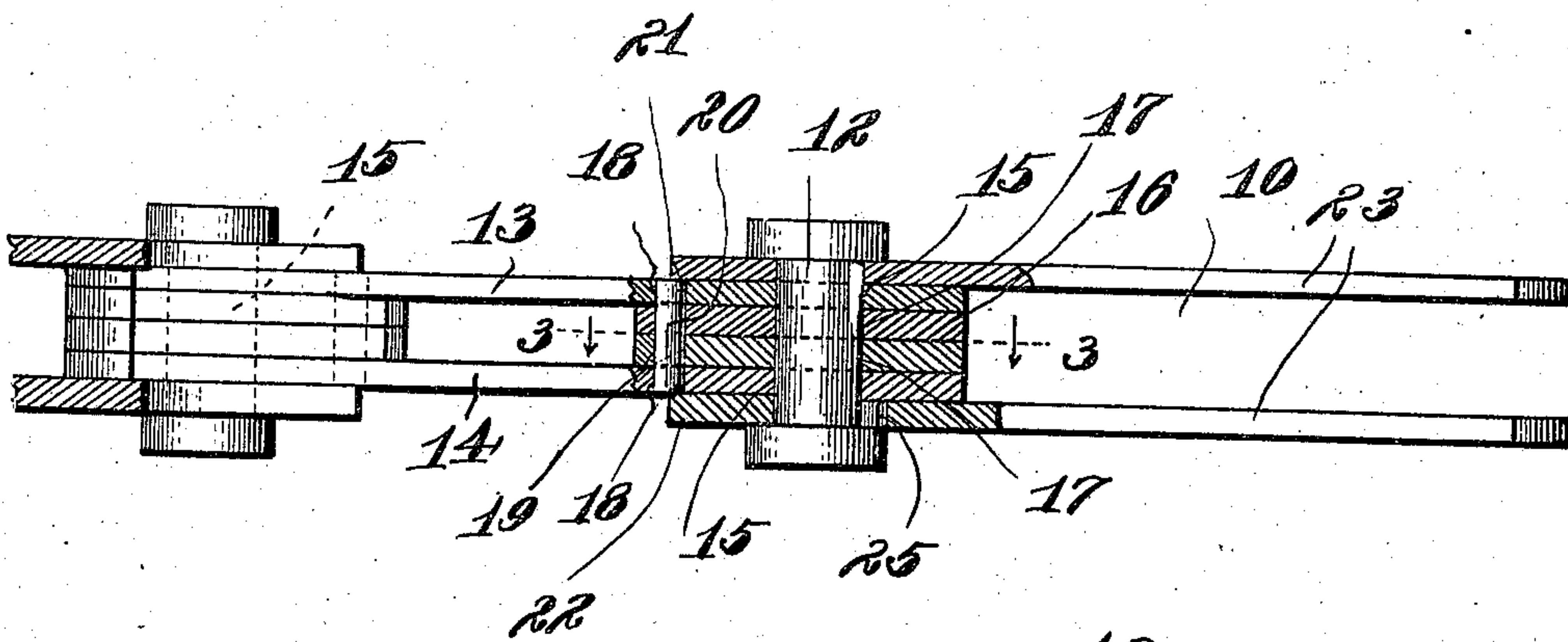
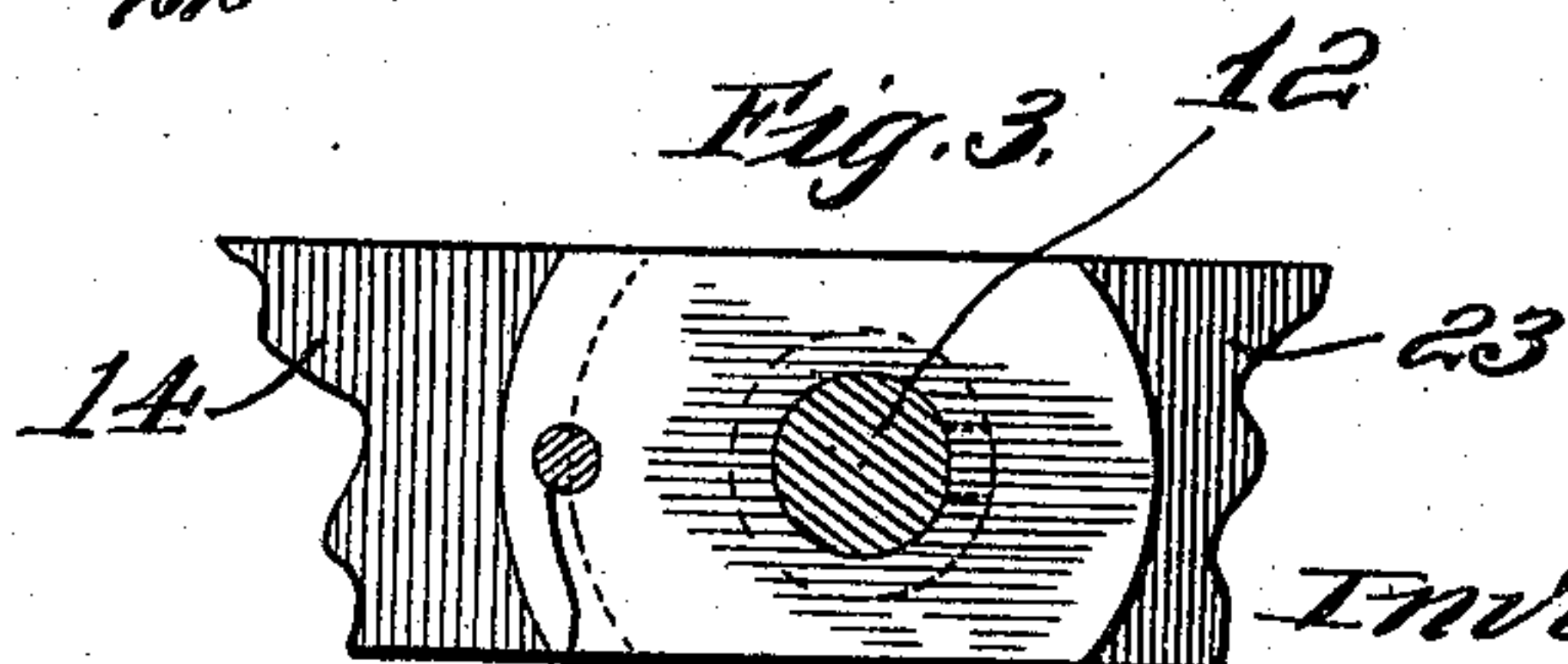


Fig. 3.



Witnesses:

Alfons Schmitt

Charles B. Gilson.

Inventor:

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Att'y



# UNITED STATES PATENT OFFICE.

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## SPROCKET-CHAIN.

No. 847,983.

Specification of Letters Patent.

Patented March 19, 1907.

Original application filed October 15, 1906, Serial No. 339,006. Divided and this application filed January 16, 1907. Serial No. 352,581.

*To all whom it may concern:*

Be it known that I, RAYMOND W. DULL, a citizen of the United States, and a resident of Aurora, county of Kane, and State of Illinois, have invented certain new and useful Improvements in Sprocket-Chains, of which the following is a specification and which are illustrated in the accompanying drawings, forming a part thereof.

This invention has been divided from my pending application for patent on chains, filed October 15, 1906, Serial No. 339,006, and relates to sprocket-chains such as are employed for the transmission of power or for supporting the flights or buckets of elevating and conveying machinery.

The object of the invention is to provide means which may be incorporated in sprocket-chains having adjacent links united by a pivot-pin without adding materially to the cost of manufacturing such chains for increasing their durability by reducing the wear of the pivots and pivot-apertures in use.

The invention contemplates a sprocket-chain having links in which the bearing-surface for engaging the pivot is increased by a filler applied to the body of the link, and consists in improved means for anchoring the filler to the link.

In the accompanying drawings, Figure 1 is a detail side elevation of a sprocket-chain constructed according to the invention, some of the parts being shown in cross-section. Fig. 2 is a plan view of the same, partly in section; and Fig. 3 is a sectional detail viewed from the line 3 3 of Fig. 2.

The particular form of chain illustrated in the drawings is composed of so-called "outside" links 10 10 and "inside" links 11, each of the inside links being connected to the adjacent outside links by headed pivots 12.

The links of one form, as the inside links 11, are composed of parallel metal bars, two, as 13 14, being preferably employed, each having apertures 15 adjacent its ends for receiving the pivot 12. The bearing-surface of the link at the pivot-aperture is increased by a filler 16, having an aperture 17, which registers with the pivot-aperture 15 of the side members 13 14 of the link. As shown, these fillers are short sections of metal bars, similar in form to those from which the side members 13 14 of the link are made, and two are

employed adjacent each end of the inside links 11, these being placed between the side bars 13 14.

An aperture 18 is provided in each of the side bars 13 14, adjacent the pivot-aperture 15 and preferably beyond this aperture from the adjacent end of the link. Similar apertures 19 are formed in the fillers 16, and a pin 20 passes through these apertures for anchoring the fillers to the body of the link.

To prevent the withdrawal of the pin when the links of the chain are assembled, its ends are partially covered, as indicated at 21 22, by those parts of the outside link 10 which project beyond the pivot 12 at each side of the inside link.

The links 10 10 may be of any desired form of construction. As shown, each is comprised of parallel metal bars 23, having pivot-apertures 24, and wear between the pivot and the walls of these apertures is avoided by fixing the pivot against rotation in the side bars of these links. To this end a key 25 is formed on the pivot beneath one of its heads and fits into a notch 26, provided for that purpose in one of the side bars 23.

By means of the invention there is provided a sprocket-chain having great strength and durability and composed of links which may be formed from metal bars by such work as is commonly effected with a punch and die, and the parts of each link can be assembled without the use of rivets or threaded bolts.

I claim as my invention—

1. In a chain, in combination, an inside and an outside link, the inside link comprising a metal bar and a filler each having a pivot-aperture and a second aperture adjacent thereto, the apertures of the bar and the filler being in register, a pivot, and an anchoring-pin passing through the second-named apertures in the bar and the filler of the inside link, the outside link covering the ends of the pin.

2. In a chain, in combination, an inside and an outside link, the inside link comprising a metal bar and a filler each having a pivot-aperture and a second aperture beyond the pivot-aperture from the adjacent end of the link, the apertures of the bar and the filler being in register, a pivot, and an anchoring-pin passing through the second-named

apertures in the bar and the filler of the inside link, the outside link covering the ends of the pin.

3. In a chain, in combination, an inside  
5 and an outside link, the inside link comprising a metal bar and a filler each having a pivot-aperture and a second aperture adjacent thereto, the apertures of the bar and the  
10 filler being in register, a pivot fixed against rotation in the outside link and passing through the pivot-apertures of the bar and the filler of the inside link, and an anchoring-pin passing through the second-named apertures  
15 of the bar and the filler, the outside link covering the ends of the pin.

4. In a chain, in combination, two links having an overlapping end-to-end relation, one of the links comprising a metal bar and a filler each having a pivot-aperture and a second aperture adjacent thereto, the apertures 20 of the bar and of the filler being in register, a pivot fixed against rotation in the other link and passing through the pivot-apertures of the bar and the filler, and an anchoring-pin passing through the second-named apertures 25 of the bar and filler.

RAYMOND W. DULL.

Witnesses:

B. F. GEORGE,

R. H. ROBINSON.