A. B. TAYLOR.

CHAIN.

APPLICATION FILED DEC. 24, 1915.

1,239,232.

Patented Sept. 4, 1917.

Fig. 1.

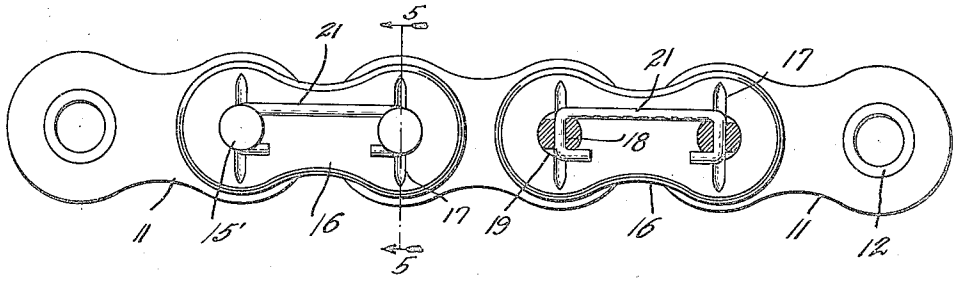


Fig. 2.

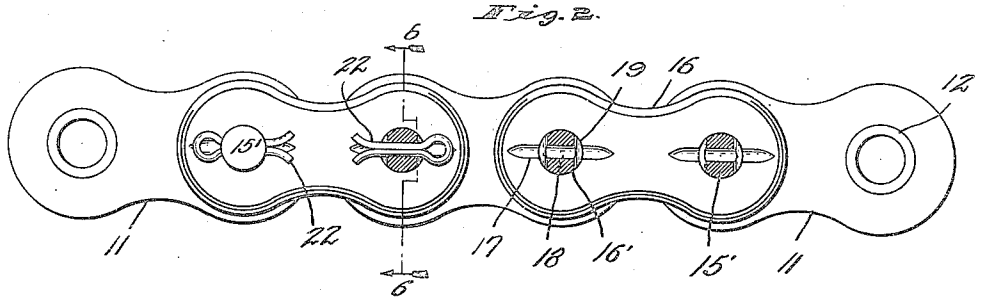


Fig. 3.

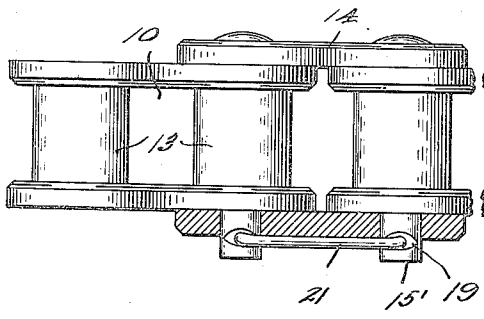


Fig. 4.

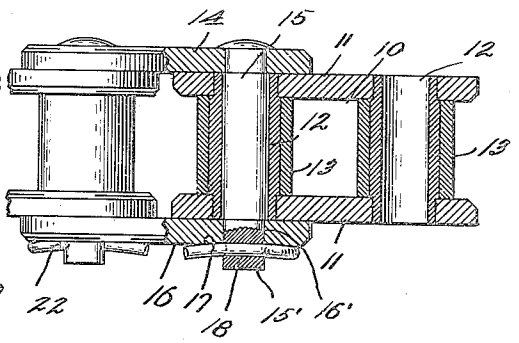


Fig. 5.

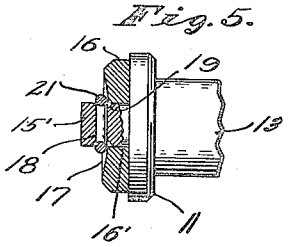
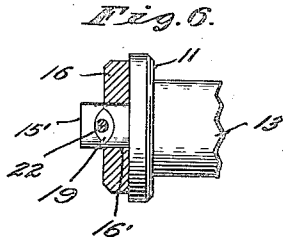


Fig. 6.



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UNITED STATES PATENT OFFICE.

ARTHUR B. TAYLOR, OF DETROIT, MICHIGAN.

CHAIN.

1,239,232. Specification of Letters Patent. Patented Sept. 4, 1917.

Application filed December 24, 1915. Serial No. 68,465.

To all whom it may concern:

Be it known that I, ARTHUR B. TAYLOR, a citizen of the United States, residing at Detroit, in the county of Wayne and State of Michigan, have invented a new and useful Chain, of which the following is a specification.

The object of my invention is to produce means by which separable links of chains may be readily fastened in place to form a chain.

The accompanying drawings illustrate my invention. Figure 1 is a side elevation in partial vertical section of one form of my invention; Fig. 2 a side elevation in partial vertical section of another form of my invention; Fig. 3 a plan in partial horizontal section of the structure shown in Fig. 1; Fig. 4 a plan in partial horizontal section of a structure shown in Fig. 2; Fig. 5 a section on line 5—5 of Fig. 1; and Fig. 6 a section on line 6—6 of Fig. 2.

In the drawings, 10 indicates a chain unit, each of which comprises a pair of side links 11, 11; a pair of perforated cylindrical cross bars 12, 12, to which the side links are attached, and a pair of rollers 13, 13 journaled on the middles of the bars 12, 12. These units 10 are connected in series by connector units comprising a side bar 14 permanently riveted to a pair of cross pins 15, 15 projected through bars 12, 12, and a detachable link 16 provided with perforations 16′ to receive the reduced ends 15′ of the cross pins 15.

To this extent the chain is of the same type as that shown in my Patent 992,740, issued May 16, 1911.

In the outer face of each link 16, extending diametrically relative to the perforations 16′, is a groove 17 having a width substantially equal to the diameter of the fastening pin which is to be used and a depth immediately adjacent the perforation 16′ of half the diameter of the proposed fastening pin, while at the ends of the grooves the depth is tapered so as to disappear before the edge of the link is reached. Extending through the reduced end 15′ of the cross pin 15 is a diametrical perforation 18 substantially equal to the diameter of the proposed fastening pin, and this perforation is so placed that, when the parts are assembled by the ordinary hand pressure, the deepest portion of the groove 17 will be in registery with the innermost portion of the perforation 18.

Formed laterally across each end of the perforation 18 is a notch 19 which is offset inwardly relative to the perforation 18 and groove 17, so that at its innermost portion it will underlie the deepest portion of the groove 17.

The groove 17 may either be set at right angles to the length of the chain, in which case a U-shaped fastening pin 21 is convenient, or may be set at some other position as, for instance, parallel with the length of the chain, in which case an ordinary cotter pin 22 may be conveniently used.

By this arrangement the fastening pin 21 or 22 will first enter groove 17 at an angle, pass through perforation 18 and out along the opposite end of groove 17, becoming laterally sprung in the process so as to press inwardly upon the link 16 and draw outwardly upon the pin 15. The exposed end of the fastening pin may then be bent so as to draw the head and end of the pin down into the groove and thus further tension the parts in a manner shown in my previous patent. By this arrangement, I am able to connect the links 16 to the chain under a condition of pressure which will be maintained throughout the life of the chain and will serve to hold the parts firmly, though yieldingly, in place.

I claim as my invention:

1. A chain comprising a multiplicity of main links each comprising a pair of rigidly connected side bars, and a plurality of connecting links, each consisting of a side bar, a pair of rigidly connected cross pins journaled in the adjacent ends of two of the first-mentioned links, and a removable side bar, the said removable side bar having formed in its outer face grooves radiating from the perforations and having their deepest portions adjacent the perforations, and the pins of each connecting link extending through and beyond the main links, and the projected ends each having a transverse hole formed therethrough to register with one of the grooves in the removable side bar, and having a transverse notch formed in the circumference of the projected end across the transverse hole and offset relative thereto inwardly beneath the deeper por-

tion of the groove in the removable link, and a retaining pin projected through said groove and hole.

2. A chain comprising a multiplicity of main links each comprising a pair of rigidly connected side bars, and a plurality of connecting links, each consisting of a side bar, a pair of rigidly connected cross pins journaled in the adjacent ends of two of the first-mentioned links, and a removable side bar, the said removable side bar having formed in its outer face grooves radiating from the perforations and having their deepest portions adjacent the perforations and shallower portions away from said perforations, and the pins of each connecting link extending through and beyond the main links, and the projected ends each having a transverse hole formed therethrough to register with one of the grooves in the removable side bar, and a retaining pin projected through said groove and hole.

3. A connecting link for chains, comprising a side bar, a transverse pivot pin and a second side bar sleeved over said pivot pin, said second side bar having radiating grooves formed in its outer face adjacent a perforation with the deeper portions of the grooves adjacent the perforation and shallower portions away from said perforation, and the projecting end of the pivot pin having a transverse hole registering with the radiating grooves, and a retaining pin projected through said grooves and hole.

4. A connecting link for chains, comprising a side bar, a transverse pivot pin and a second side bar sleeved over said pivot pin, said second side bar having radiating grooves formed in its outer face adjacent a perforation with the deeper portions of the grooves adjacent the perforation, and the projecting end of the pivot pin having a transverse hole registering with the radiating grooves, and also having a transverse notch formed in the circumference of the projected end across the transverse hole and offset inwardly relative thereto, and a retaining pin projected through said grooves and hole.

In witness whereof, I have hereunto set my hand at Indianapolis, Indiana, this 22d day of December, A. D. one thousand nine hundred and fifteen.

ARTHUR B. TAYLOR.