C. TERRY.

LINK CONNECTION FOR DRIVING CHAINS.

APPLICATION FILED OCT. 23, 1913.

1,121,053. Patented Dec. 15, 1914.

Fig. 1.

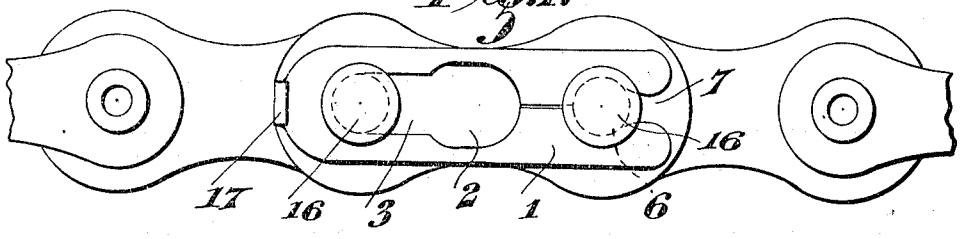
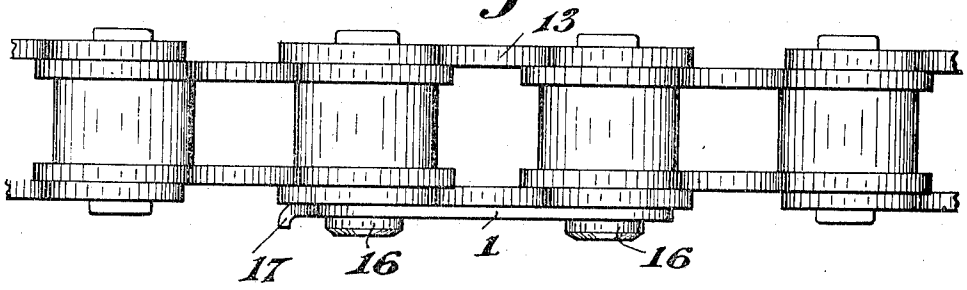


Fig. 2



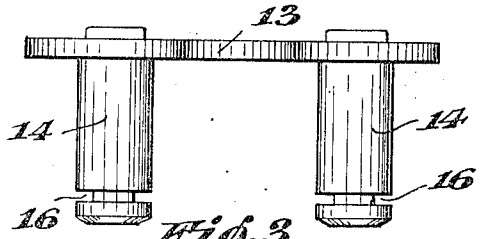


Fig. 3

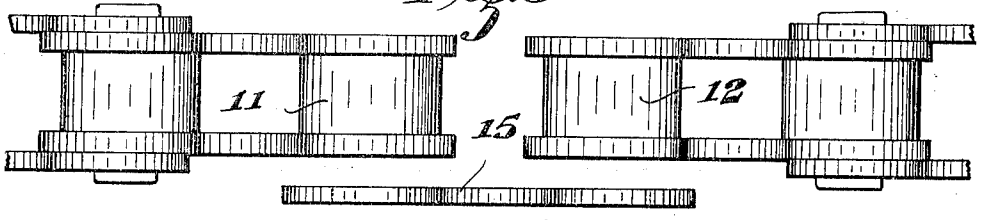
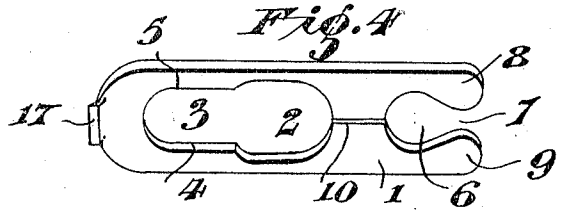


Fig. 4



Witnesses:
H. A. Kelly
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UNITED STATES PATENT OFFICE.

CHARLES TERRY, OF REDDITCH, ENGLAND.

LINK CONNECTION FOR DRIVING-CHAINS.

1,121,053. Specification of Letters Patent. Patented Dec. 15, 1914.

Application filed October 23, 1913. Serial No. 796,876.

To all whom it may concern:

Be it known that I, CHARLES TERRY, a subject of the Kingdom of Great Britain, residing at Novelty Works, Redditch, in the county of Worcester, England, manufacturer, have invented certain new and useful Improvements in Link Connections for Driving-Chains, of which the following is a specification.

The present invention has relation to the fastenings or joints of driving chains and the like, and has for its object to provide a particularly simple form of fastening device which can be readily coupled or uncoupled and which is very secure or safe when coupled.

In the present invention, the connection or fastening between the two extremities of the chain is effected in the usual manner by means of a joint, link or plate carrying two spindles, and these spindles are adapted to pass through the rollers or hollow tubular spindles at each extremity of the chain and be engaged at their projecting extremities by a second or separate link which is perforated at or about each extremity to engage the said spindles, and said second link is retained in position upon the spindles by means of a retaining plate which engages channels in the extremities of the said spindles. It has been proposed to construct such a retaining plate from a sheet metal blank and to provide said blank with one perforation which terminates in a smaller hole or slot and also a second perforation which is connected to the edge of the plate through the medium of a slot which extends from the perforation to the said edge.

According to the present invention, I provide an improved form of retaining plate and in my invention a plate having a large hole or perforation terminating in a smaller hole is employed as hereinbefore, but said large hole is in communication with a third hole through the medium of a slit or slot which extends from the one hole to the other. The third hole or perforation is in communication with the edge of the plate by means of a narrow neck or cutaway portion of metal and the edges of the metal around said cutaway portion are preferably rounded. By the present construction the first or large hole is placed over the head of one of the pins and the plate is moved laterally until the channel in one of the pins engages the smaller or second hole in the usual manner and during such movement the second spindle passes down the narrow neck or passage in the extremity of the plate into the third hole and during such moving the slit between the first or large hole and the third hole is consequently widened or opened so giving the necessary spring to the arms.

In order that this invention may be clearly understood and more easily carried into practice, reference may be had to the appended explanatory sheet of drawings, upon which:—

Figure 1 is a side elevation of a small portion of a driving chain showing the fastening in position. Fig. 2 is a plan view of the chain and fastening illustrated in Fig. 1. Fig. 3 is a plan view illustrating the two ends of the chain separated as also the two portions of the connecting link, and Fig. 4 illustrates in perspective the locking or retaining plate.

In a convenient embodiment of the present invention the retaining plate 1 may be provided with a comparatively large perforation 2 of oblong or circular configuration which terminates in a smaller slot or perforation 3, having parallel sides 4, 5. Provided at one extremity of the plate 1 is a circular hole 6 which is provided with a narrow neck or extension 7 which extends to the edge of the plate and the edges of such neck or extension are preferably of a curved configuration as illustrated.

In order to give the necessary spring to the two arms or parts 8 and 9 of the retaining plate, a slot 10 is provided, and this slot so extends from the perforation 2 to the perforation 6.

In operation the two extremities 11 and 12 of the chain are firstly united by the link 13 having the spindles 14 and the link 15 is placed over the extremities of the spindles in the usual manner. The spindles 14 are provided with annular channels 16 at their extremities and in order to prevent the separation of the links 15 from the spindles 14 the retaining plate 1 is placed flatwise against the face of the link 15 in such a manner that the extremity of one of the spindles 14 lies within the slot 2. The retaining plate is then slid longitudinally until the slot 3 is brought into engagement with the channel 16 on the one spindle 14 and during such movement the narrow neck 7 engages the channel 16 in the other spindle and expands or opens the two arms 8

and 9 of the plate until the perforation 6 embraces the said channel 16 in the second spindle. In this position as illustrated in Figs. 1 and 2 it will be seen that there is no possibility of the retaining link 1 becoming severed from the spindles, and thus it is impossible for the plates or link 15 to move laterally from the spindles and so the coupling is effected. When it is desired however to remove the separable plate 1, the latter is slid longitudinally by means of the handle part 17.

Attention is particularly directed to certain important features of the invention by which it is clearly distinguished from fasteners of the same general character previously known. The fastener has the general form of a yoke, the side members of which are connected only at one end, and near the open end of the yoke, a circularly curved perforation is provided which is adapted to embrace one of the spaced pivot pins of a link chain, a large proportion of the circumference of the pin being closely engaged by the fastener. Another circularly curved perforation is provided adjacent to the closed end of the yoke and its center is spaced from the center of the first perforation by a distance equal to the spacing of the pivot pins of the chain. Since the side members of the yoke are only connected at one end, the open end of the yoke is sufficiently yielding to permit the perforation adjacent thereto to be substantially circular in form. It consequently securely embraces the pivot pin and tends to prevent the accidental removal of the fastener.

What I claim as my invention and desire to secure by Letters Patent is:—

A fastener for link chains having spaced pivot pins, comprising a resilient sheet metal yoke having side members connected at one end, a perforation near the connected ends with a semi-circular section adapted to embrace one of a pair of the spaced pivot pins, an enlarged opening connecting with and adjacent to said perforation, to receive the head of the pivot pin, a substantially circular perforation adjacent to the open end of the yoke adapted to embrace the other pivot pin and a narrow slot connecting the said enlargement and the perforation at the open end of the fastener, the centers of curvature of said perforations being spaced apart to correspond with the spacing of the pivot pins.

In witness whereof I have hereunto set my hand in the presence of two witnesses.

CHARLES TERRY.

Attest:

CHARLES EDWARD LAYTON,

E. M. SPIERS.